



Schattenwurfprognose
für 12 neue Windenergieanlagen,
Windpark Pritzier-Goldenitz
Ludwigslust-Parchim, Mecklenburg-Vorpommern

(Revision 01)

Hinweis:

Diese Planunterlagen wurden in der Zeit vom 22.12.2025 bis 30.01.2026 auf der Internetseite der Gemeinde sowie dem Bau- und Planungsportal M-V veröffentlicht und haben alternativ im Amt Hagenow-Land öffentlich ausgelegen.

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Hannover, März 2024

Auftrag: Schattenwurfprognose für 12 neue Windenergieanlagen am Standort Pritzier-Goldenitz, Ludwigslust Parchim, Mecklenburg-Vorpommern.

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RECHTLICHER HINWEIS:

planGIS hat diese Schattenwurfimmissionsprognose gewissenhaft und nach dem allgemein anerkannten Stand der Technik erstellt. Die Berechnungsergebnisse der Schattenwurfimmissionsprognose basieren indes auf Datenmaterial, das planGIS von Dritten, beispielsweise von dem Hersteller der Windenergieanlagen, bereitgestellt wurde. planGIS kann diese Daten Dritter nicht auf Richtigkeit, Aktualität und / oder Vollständigkeit prüfen. Folglich kann planGIS auch keine Gewähr und Haftung für diese Daten übernehmen. Der Auftraggeber wird daher darauf hingewiesen und erkennt an, dass sämtliche seiner Entscheidungen, sei es in kommerzieller, technischer, steuerlicher oder rechtlicher Hinsicht, die auf diesem Dokument basieren, in seiner alleinigen Verantwortung liegen. planGIS ist hinsichtlich der Daten Dritter von jeglicher Haftung befreit und der Auftraggeber wird planGIS insoweit von jeder Haftung freistellen.

Revisionsverlauf

Revision	Datum	Details
Revision 00	22.01.2024	Originaler Bericht: 20240122_planGIS_Schattenwurfgutachten_WP_Pritzier-Goldenitz_Rev00
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1 Grundlagen zur Schattenwurfberechnung

1.1 Einleitung

Windenergieanlagen stellen in der heutigen Zeit eine umweltfreundliche Art der Stromerzeugung dar und haben weniger negative Auswirkungen auf den Menschen und seine Umwelt als konventionelle Stromerzeugungsanlagen. Zu den Auswirkungen durch Windenergieanlagen (WEA) gehört der periodische Schattenwurf an Wohn- und Arbeitsstätten. Die Ermittlung dieser Auswirkung erfolgt in einer Prognose.

Der periodische Schattenwurf ist definiert als die wiederkehrende Verschattung des direkten Sonnenlichts durch die Rotorblätter einer Windenergieanlage. Je nach Drehzahl des Rotors verursacht der periodische Schattenwurf hinter der Windenergieanlage starke Lichtwechsel mit einer Frequenz zwischen 0,4 und 3 Hz, was auf den Menschen störend wirkt und auf längere Dauer nicht zumutbar ist. Aus diesem Grund sollte bei jeder WEA-Planung eine Untersuchung des periodischen Schattenwurfs durchgeführt werden.

Durch eine Schattenwurfprognose ist es möglich, die Dauer des periodischen Schattenwurfs durch Windenergieanlagen auf benachbarte Wohngebäude und Arbeitsstätten zu ermitteln. Ist eine Beeinträchtigung durch den periodischen Schattenwurf zu erwarten, wird in der Prognose der Schattenwurf zeitlich vorhergesagt.

In einer Prognose wird zunächst die **astronomisch maximal mögliche Beschattungsdauer (worst case)** ermittelt, d. h. die Beschattung für den Fall, dass die Sonne immer scheint, der Rotor sich kontinuierlich dreht und senkrecht zu den Sonnenstrahlen steht. Dieses Ergebnis ermöglicht eindeutige und vergleichbare Aussagen über das maximale Ausmaß des periodischen Schattenwurfs an einzelnen Tagen sowie die Summe über das Jahr.

Anschließend kann für kritische Bereiche anhand der statistischen Daten über die Sonnenscheindauer und die Windverhältnisse die **meteorologisch wahrscheinliche Beschattungsdauer** über ein Jahr für jeden Immissionspunkt ermittelt werden. Anhand dieser Aussagen können ggf. notwendige Maßnahmen zur Beschränkung des Schattenwurfs abgeleitet werden.

Die vorliegende Prognose macht über die technische Umsetzung einer möglichen Abschaltautomatik keine Aussagen, die Programmierung obliegt dem Hersteller oder Betreiber der Windkraftanlage bzw. dem Hersteller des Schattenwurfabschaltmoduls.

1.2 Sonnenstand

Der Sonnenstand bildet die Grundlage für die Berechnung des Schattenwurfs. Der Stand der Sonne ist im Wesentlichen von der Erdrotation, der Neigung der Erdachse und der elliptischen Laufbahn der Erde um die Sonne abhängig. Weiterhin müssen für jeden beliebigen Standort die geographischen, jahreszeitlichen und tageszeitlichen Daten berücksichtigt werden.

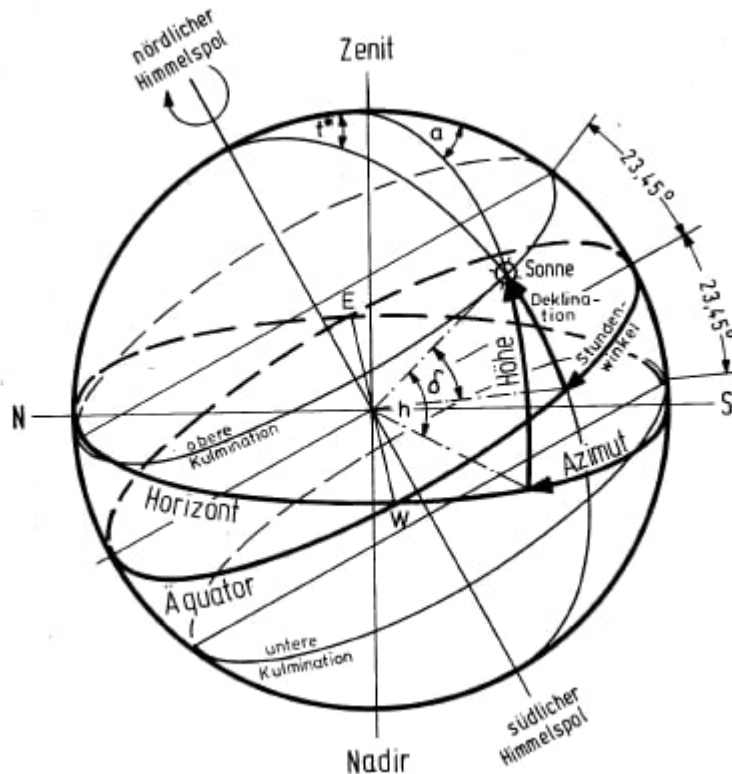


Abbildung 1: Winkelzusammenhänge des Sonnenstands an einem Betrachtungspunkt

Mit diesen Daten werden die Deklination δ , der Stundenwinkel ω , die Sonnenhöhe h , der Azimut γ sowie der Sonnenauf- und Sonnenuntergang t_a und t_u berechnet. Die Begriffe haben folgende Bedeutungen (siehe Abbildung 1):

- **Deklination δ :** Jahresgang der Sonne. Winkel, in welchem sich die Sonne im Verlauf der Jahreszeiten über den Zenit am Äquator in südlicher und nördlicher Richtung hinausbewegt (Winteranfang (21.12.) $-23,45^\circ$, Sommeranfang (21.6.) $23,45^\circ$ und Herbst- (23.9.) sowie Frühlingsanfang (21.3.) 0°);
- **Sonnenhöhe h :** Einfallswinkel der Sonne gegenüber einer horizontalen Fläche;
- **Stundenwinkel ω :** Winkel zwischen dem Sonnenhöchststand und der aktuellen Sonneneinstrahlung.
- **Azimut γ :** Winkel zwischen der Südrichtung und dem auf die horizontale Ebene projizierten Sonnenstand.
- **Sonnenaufgang t_a , Sonnenuntergang t_u :** Aufgang/Untergang in dem Moment, wenn der Sonnenmittelpunkt über der horizontalen Fläche morgens/abends am Horizont sichtbar/verdeckt wird.

Die Berechnungen berücksichtigen die sich verändernde Tageslänge von einem zum nächsten Sonnenhöchststand, die aufgrund der elliptischen Umlaufbahn der Erde um die Sonne um bis zu 16 Minuten variiert. In Abbildung 2 sind die Abweichungen der Tagesdauer von den 24 Stunden (Zeitkorrektur) und die Deklination in Abhängigkeit vom Tag des Jahres dargestellt.

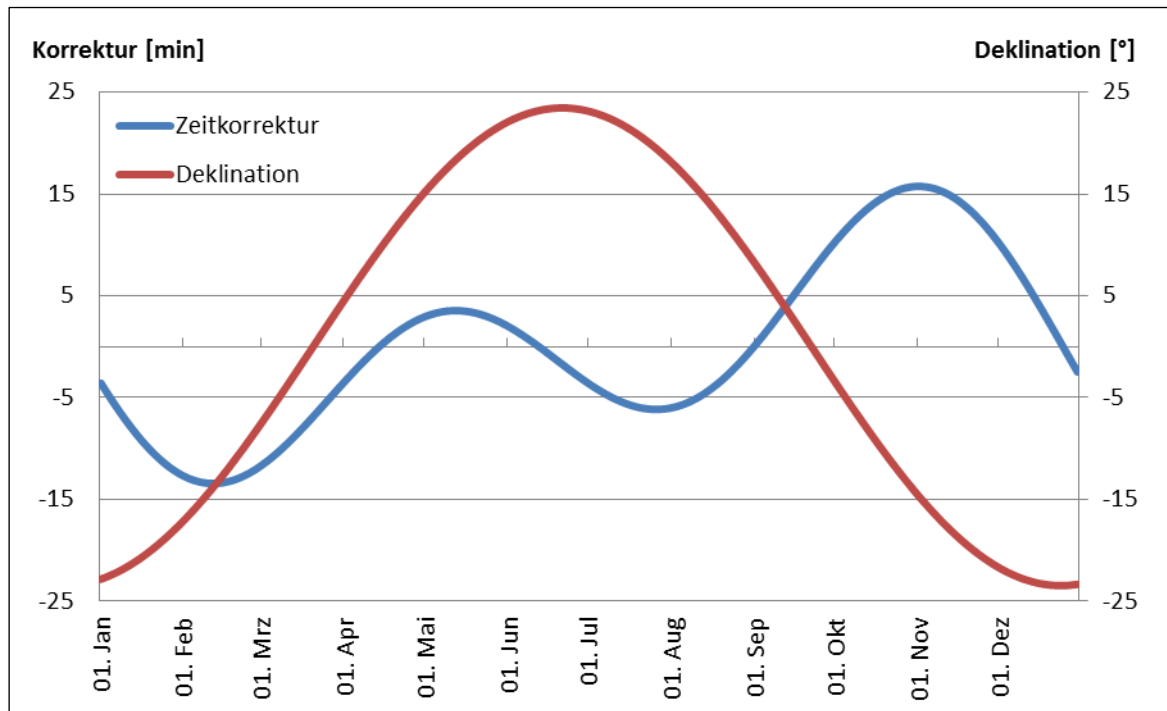


Abbildung 2: Zeitkorrektur und Deklination der Tagesdauer über ein Jahr

Da die Ergebnisse nicht nur für ein Jahr gültig sein sollen, wird in den Berechnungen die Zahl der Tage pro Jahr auf 365,25 Tage gemittelt. Dadurch verschieben sich die Ergebnisse aufgrund des Schaltjahres alle vier Jahre um bis zu einen Tag.

1.3 Schattenwurf

1.3.1 Beschattungsbereich einer Windenergieanlage

Periodischer Schattenwurf wird durch die sich bewegenden Rotorblätter einer WEA erzeugt. Der Bereich, in dem der periodische Schattenwurf einer WEA untersucht werden muss (*Beschattungsbereich*), ist definiert als der Bereich, in dem die Sonnenscheibe zu mehr als 20 % durch sich bewegende Rotorblätter verdeckt wird. Wird durch ein Rotorblatt weniger als 20 % der Sonnenscheibe verdeckt, so ist der dadurch entstehende Helligkeitswechsel nicht mehr relevant. Da die Breite des Rotorblatts nicht über die ganze Länge konstant ist, wird für die Berechnung des Beschattungsbereichs ersatzweise ein rechteckiges Rotorblatt mit einer mittleren Blatattiefe ermittelt und zugrunde gelegt.

1.3.2 Schattenverlauf und Berechnung

Der Verlauf des periodischen Schattenwurfs wird über den Sonnenstand, den Standort bzw. die Standorte der WEA und die Lage der maßgeblichen Immissionsorte ermittelt. Dazu sind die folgenden Daten notwendig:

- Position/Koordinaten der WEA und der Immissionsorte (Rechts- und Hochwerte, Höhe über N.N., Genauigkeit +/- 10 m),
- Ausmaße der WEA (Nabenhöhe und Rotordurchmesser).

Zur Ermittlung des Schattenwurfs an einem Immissionsort wird dort ein virtueller Schattenrezeptor mit den Ausmaßen der zu untersuchenden Fläche platziert. Bei der Simulation des Sonnenstands über ein Jahr registriert der virtuelle Rezeptor den Schattenwurf in diesem Zeitraum. Die Simulation des Verlaufs der Sonne wird mit der Software WindPRO (Modul SHADOW) mit einer zeitlichen Auflösung von einer Minute von Sonnenaufgang bis Sonnenuntergang über das ganze Jahr durchgeführt. Unter Berücksichtigung einer minimalen Sonnenhöhe, der Koordinaten, der Lage und der Größe des Rezeptors sowie der WEA-Daten wird so über die Simulation ermittelt, ob am Rezeptor ein Schattenwurf durch eine oder mehrere Windenergieanlagen auftritt. Tritt ein Schlagschatten auf, werden für diesen das Datum, der Beginn, das Ende und die Dauer sowie die verursachende WEA des Schattens angegeben (siehe die Kalender zu jedem Schattenrezeptor). Daraus werden wiederum über ein ganzes Jahr die Anzahl der Schattentage und die gesamte Schattenwurfdauer berechnet.

Der Schattenwurf für Sonnenstände unter 3° Erhöhung über Horizont kann wegen Bewuchs, Bebauung und der zu durchdringenden Atmosphärenschichten in ebenem Gelände vernachlässigt werden. Ob hier auch ein höherer Wert angesetzt werden kann, hängt von der Orographie, der Bebauung und dem Bewuchs um den WEA-Standort ab und muss im Einzelnen evtl. dann genauer untersucht werden, wenn davon auszugehen ist, dass durch die Gegebenheiten vor Ort eine wesentliche Reduktion der Beeinträchtigung zu erwarten ist.

1.3.3 Richtlinien

Abgeleitet aus Richtlinien und Hinweisen zu immissionsschutzrechtlichen Belangen, wie z. B. den WEA-Schattenwurf-Hinweisen¹ des Länderausschusses für Immissionsschutz vom 23.01.2020, wurden bei der Berechnung der Schattenwurfzeiten an einem Immissionspunkt folgende Annahmen zugrunde gelegt:

- Ein Schattenwurf bei einem Sonnenstand unter 3° ist nicht zu berücksichtigen.
- Der Beschattungsbereich ist der Bereich, in dem die Sonnenscheibe zu mehr als 20 % durch das Rotorblatt verdeckt ist.
- Die astronomisch maximal mögliche Beschattungsdauer (worst case) an einem Immissionsort darf maximal 30 Stunden im Jahr und maximal 30 Minuten am Tag betragen.
- Um die Vergleichbarkeit der Ergebnisse zu ermöglichen, wird die Berechnung des Schattenwurfs für einen punktförmigen Rezeptor in 2 m Höhe ü.G. am Immissionsort empfohlen.

1.4 Wahrscheinlichkeitsbetrachtung

Um aus der *astronomisch maximal möglichen Beschattungsdauer* die *meteorologisch wahrscheinliche Beschattungsdauer* zu ermitteln, müssen statistische Daten zur Sonnenscheinwahrscheinlichkeit, zu den Betriebsstunden der WEA und zur Windrichtung in die Berechnung einfließen.

1.4.1 Sonnenscheinwahrscheinlichkeit

Den Berechnungen der *astronomisch maximal möglichen Beschattungsdauer* wurde die Annahme kontinuierlichen Sonnenscheins zugrunde gelegt. Um dagegen die *meteorologisch*

¹ Länderausschuss für Immissionsschutz (23.01.2020): Hinweise zur Ermittlung und Beurteilung der optischen Immissionen von Windenergieanlagen

wahrscheinliche Beschattungsdauer zu bestimmen, muss die Sonnenscheinwahrscheinlichkeit mit berücksichtigt werden, die in der Praxis gleichzusetzen ist mit der Wahrscheinlichkeit der Existenz eines Schattenwurfs. Die Sonnenscheinwahrscheinlichkeit ist von Region zu Region unterschiedlich und wird an Wetterstationen gemessen. Die dazu notwendigen Daten müssen auf mehrjährigen Messungen basieren. Angegeben wird üblicherweise die mittlere tägliche Sonnenscheindauer in Stunden jeweils bezogen auf die einzelnen Monate. Teilt man diese Sonnenscheindauer durch die mittlere Zeitdauer von Sonnenaufgang bis -untergang im gleichen Monat, erhält man die Sonnenscheinwahrscheinlichkeit im jeweiligen Monat.

Die regionsbezogene Sonnenscheinwahrscheinlichkeit wurde in der vorliegenden Prognose nicht berücksichtigt, da nur eine Berechnung der astronomisch maximal möglichen Beschattungsdauer vorgenommen wurde.

1.4.2 Reduktion der Schattenwurfdauer durch den Azimutwinkel

Bei der Berechnung der *astronomisch maximal möglichen Beschattungsdauer* wird vom ungünstigsten Fall ausgegangen, dass die Windrichtung mit der Richtung der Sonnenstrahlen identisch ist und die Ausrichtung des Rotors damit den größtmöglichen Schatten zur Folge hat. Die dadurch ermittelten Werte reduzieren sich bei Berücksichtigung der Windrichtungsverteilung/Windstatistiken. Wird die statistische Windrichtungsverteilung berücksichtigt, so verkürzt sich die Dauer des Schattenwurfs pro Tag, da ein Winkel zwischen der Windrichtung und den Sonnenstrahlen einen schmaleren, ellipsenförmigen Schattenwurf verursacht.

Die statistische Windrichtungsverteilung wurde in der vorliegenden Prognose nicht berücksichtigt, da nur eine Berechnung der astronomisch maximal möglichen Beschattungsdauer vorgenommen wurde.

1.4.3 Schattenwurf nur bei Betrieb der Anlage

Weiterhin ist die WEA nicht ständig in Betrieb, wodurch sich die Wahrscheinlichkeit eines Schattenwurfs durch den sich drehenden Rotor zusätzlich reduziert. Erst wenn die Windgeschwindigkeit einen Wert über der Anlaufwindgeschwindigkeit erreicht, beginnt sich die WEA zu drehen.

In der vorliegenden Prognose wird davon ausgegangen, dass die Anlage immer in Betrieb ist, d. h. keine Stillstandszeiten vorhanden sind.

2 Schattenwurfprognose

2.1 Aufgabenstellung

Die Windpark Pritzier-Goldenitz GmbH & Co. KG plant die Errichtung und den Betrieb von 12 neuen Windenergieanlagen des Typs Nordex N175/6.X, des Herstellers Nordex SE, mit einer Nabenhöhe von 179,0 m, einem Rotordurchmesser von 175,0 m und einer Leistung von bis zu 6.800 kW in Mecklenburg-Vorpommern, im Kreis Ludwigslust-Parchim nordöstlich von Pritzier und südwestlich von Hagenow.

In der näheren Umgebung sind keine Windparks vorhanden und auch keine in Planung. Somit gibt es keine Vorbelastung.

Für die geplante Errichtung der Anlagen ist in der vorliegenden Prognose der Schattenwurf durch die Windenergieanlagen auf die umliegende Bebauung ermittelt worden. Die Standorte der Windenergieanlagen und die ermittelten Immissionsorte sind in Abbildung 3 dargestellt. Die Schattenrezeptoren sind im Detail in den Abbildungen 4 bis 7 dargestellt.

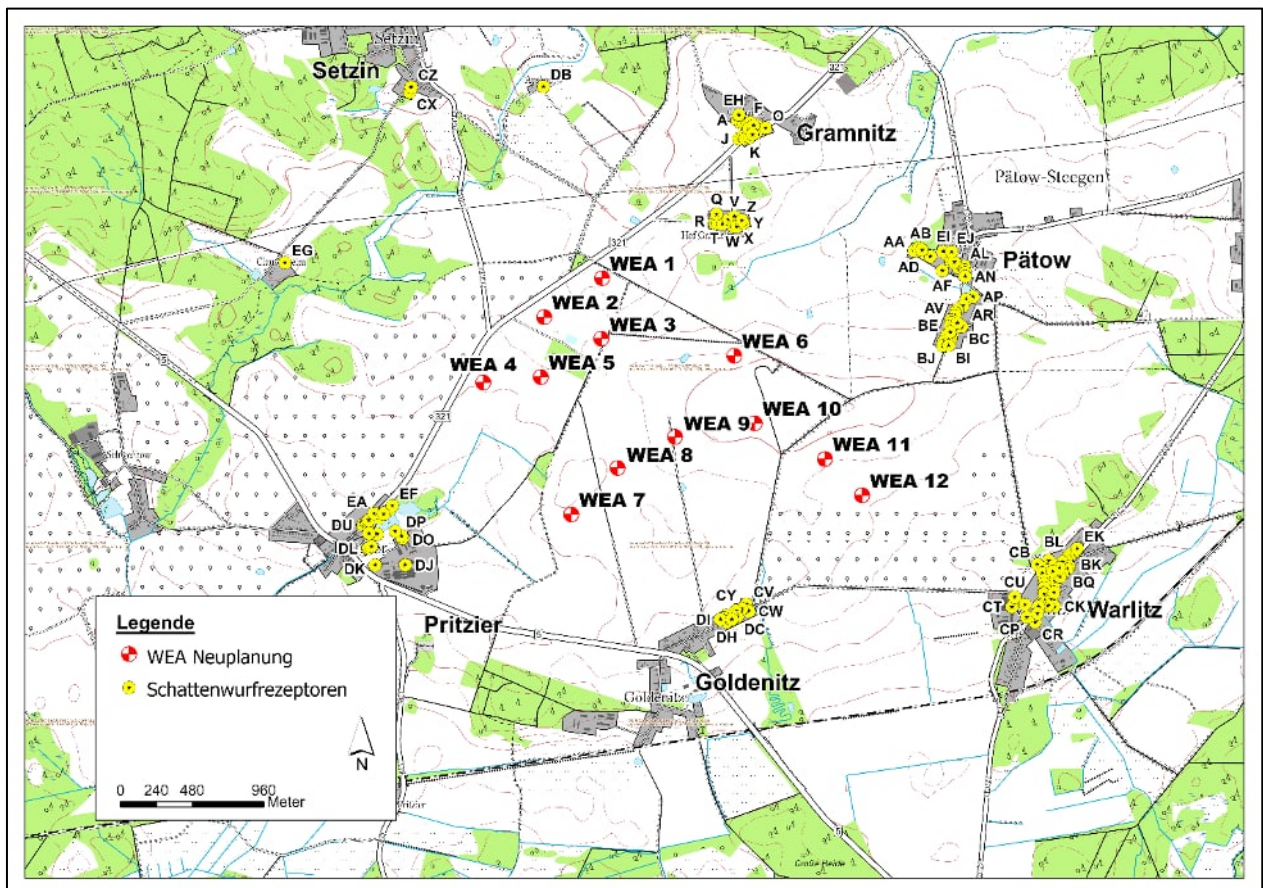


Abbildung 3: Standorte der Windenergieanlagen und der Schattenwurfimmissionsorte

2.2 Immissionsorte und Windenergieanlagen

Die **Berechnung** der Schattenwurfimmissionen erfolgte mit dem Schattenberechnungsmodul SHADOW des Programms WindPRO 4.0.

Das Modul berechnet und dokumentiert den Schattenwurf in der Umgebung einer WEA, der durch sich drehende Rotoren verursacht wird. Das Berechnungsmodell simuliert den Sonnen-

verlauf über ein Jahr in 1-Minuten-Schritten und für jeden Schritt den Schattenwurf auf eine beliebig ausgerichtete Rezeptor-Fläche (z. B. Fenster, Terrasse). Durch Eingabe der statistischen Faktoren, die einen Einfluss auf den Schattenwurf haben (siehe Kapitel 1), können realitätsnahe Werte berechnet werden. Da in der hier erstellten Prognose nur der *worst case* betrachtet wurde, sind keine der genannten Faktoren berücksichtigt worden. Unbedingt notwendige Eingabedaten sind die Bauart (Nabenhöhe, Rotordurchmesser und mittlere Rotorblatttiefe) der geplanten WEA sowie die Lage der Schattenwurf-Rezeptoren.

Es wurde ein hoch aufgelöstes digitales Geländemodell (DGM 10) mit einer Rasterweite von 10 m und einer Oberflächengenauigkeit von wenigstens $\pm 0,5$ m zur Berechnung eingesetzt. Dieses DGM wurde kostenpflichtig vom Amt für Geoinformation, Vermessungs- und Katasterwesen Mecklenburg-Vorpommern bezogen.

Die **Immissionsorte** in der vorliegenden Prognose wurden anhand eines Onmaps WMS Servers anhand einer TK 1:5.000, durch die Auswertung der gültigen Flächennutzungspläne und Bebauungspläne sowie anhand von Luftbildern festgesetzt. Die Immissionsorte sind von einem Gutachter am 05.01.2024 persönlich vor Ort überprüft worden. Es handelt sich bei den Immissionsorten um die umliegende Wohnbebauung in den Gemeinden Pritzier, Warlitz, Toddin und Pätow-Steegen. Insgesamt wurden 141 Schattenrezeptoren festgelegt (siehe Abbildungen 3 bis 7 sowie Tabelle 2). An dieser Stelle sei explizit darauf hingewiesen, dass nicht alle der berücksichtigten Immissionsorte eine klassische Wohnbebauung darstellen (Kirchen, Sportheime und gewerblich genutzte Gebäude etc.). Bei einigen Immissionsorten war ferner eine gewerbliche oder landwirtschaftliche Nutzung vorwiegend, wobei eine Wohnnutzung nicht immer auszuschließen ist. So sind die Immissionsorte DJ, DK, DQ und DR gewerblich bzw. landwirtschaftlich genutzte Hallen oder Häuser. Beim Immissionsort DK wurde die weniger betroffene Südostseite als Aufpunkt genommen, da an der Nordostfassade keine Fenster vorhanden sind. Beim Immissionsort DQ handelt es sich um das Freilichttheater Kulturkate. Der Immissionsort DR repräsentiert ein Dorfgemeinschaftshaus von Pritzier. Weiter sind mehrere Wohnbauflächen noch nicht bebaut, dazu zählen die Immissionsorte AC, BG, CP, CQ, CU und DE. Das Wohnhaus des Immissionsortes W wird aktuell kernsaniert/gebaut, das Wohnhaus am Immissionsort AD befindet sich zum Zeitpunkt des Ortstermines im Bau. Die Rinderanlage am Immissionsort CT scheint aktuell ungenutzt zu sein. Hier wurde trotzdem der Immissionsort auf eine der größeren noch bestehenden Stallungen gesetzt.

Die Rezeptoren wurden obligatorisch in einer Höhe von zwei Metern mit einer Ausdehnung von $0,1 \times 0,1$ Meter festgesetzt. Die Berechnung erfolgt mit dem sogenannten Gewächshausmodus, Schattenwurf kann bei dieser Betrachtung von allen Seiten auf den Immissionspunkt fallen.

Vorbelastungen existieren nicht, wodurch die Zusatzbelastung gleichzeitig die Gesamtbelastung darstellt.

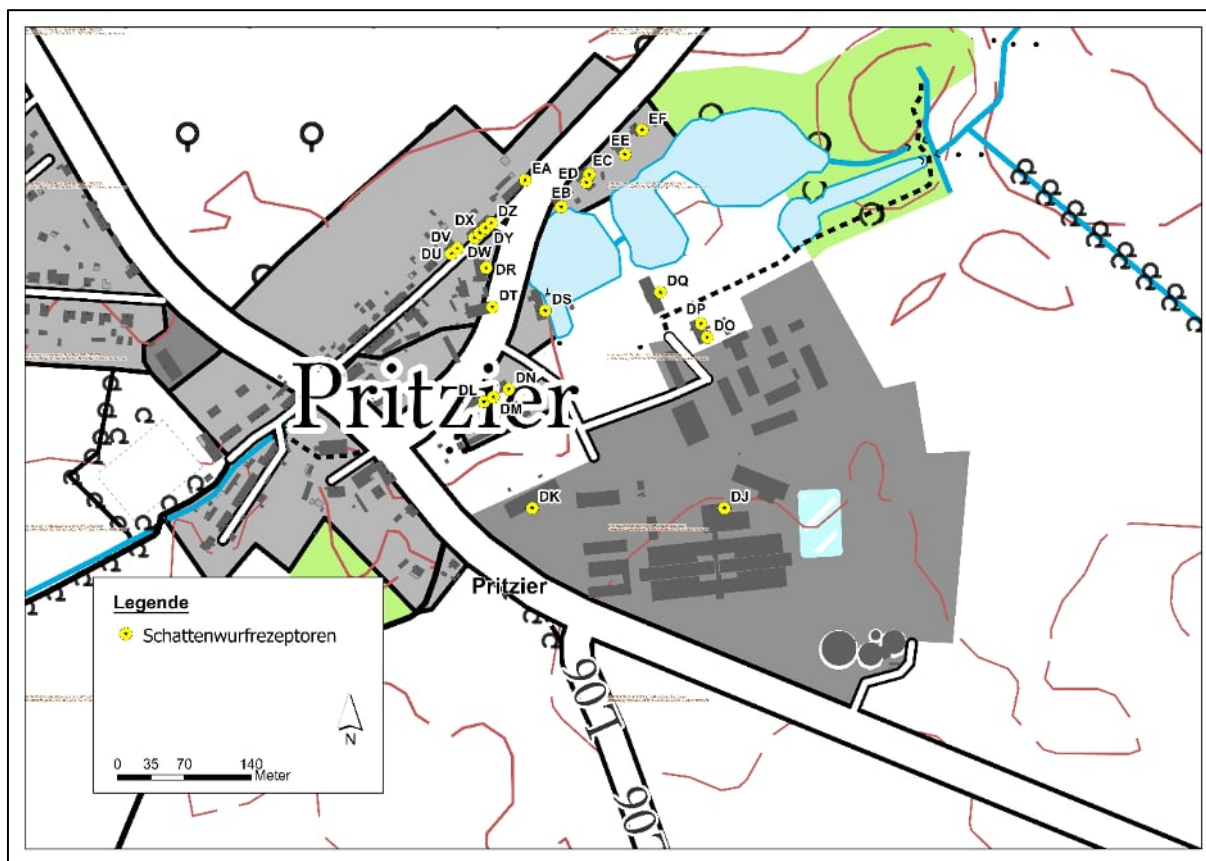


Abbildung 4: Lage der Schattenrezeptoren in der Ortschaft Pritzier

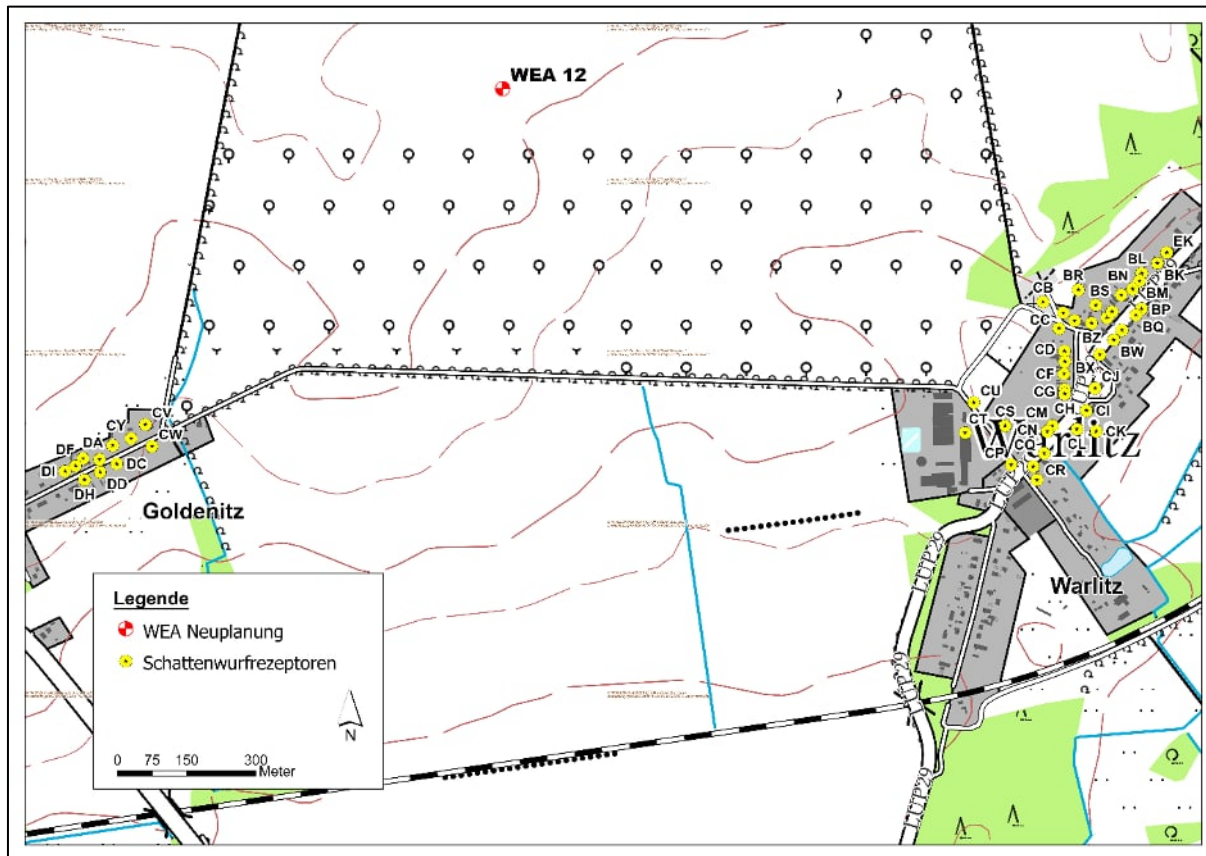


Abbildung 5: Lage der Schattenrezeptoren in den Ortschaften Goldenitz und Warlitz

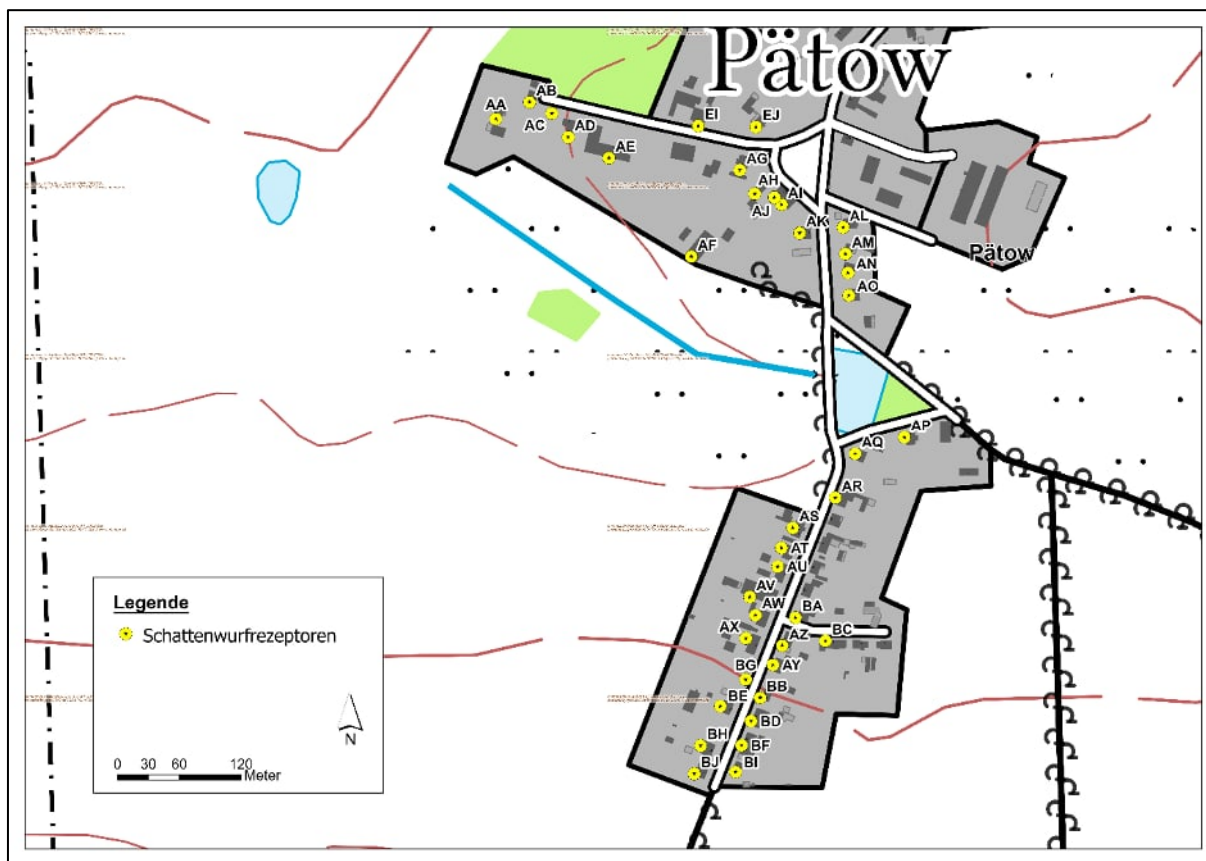


Abbildung 6: Lage der Schattenrezeptoren in der Ortschaft Pätow

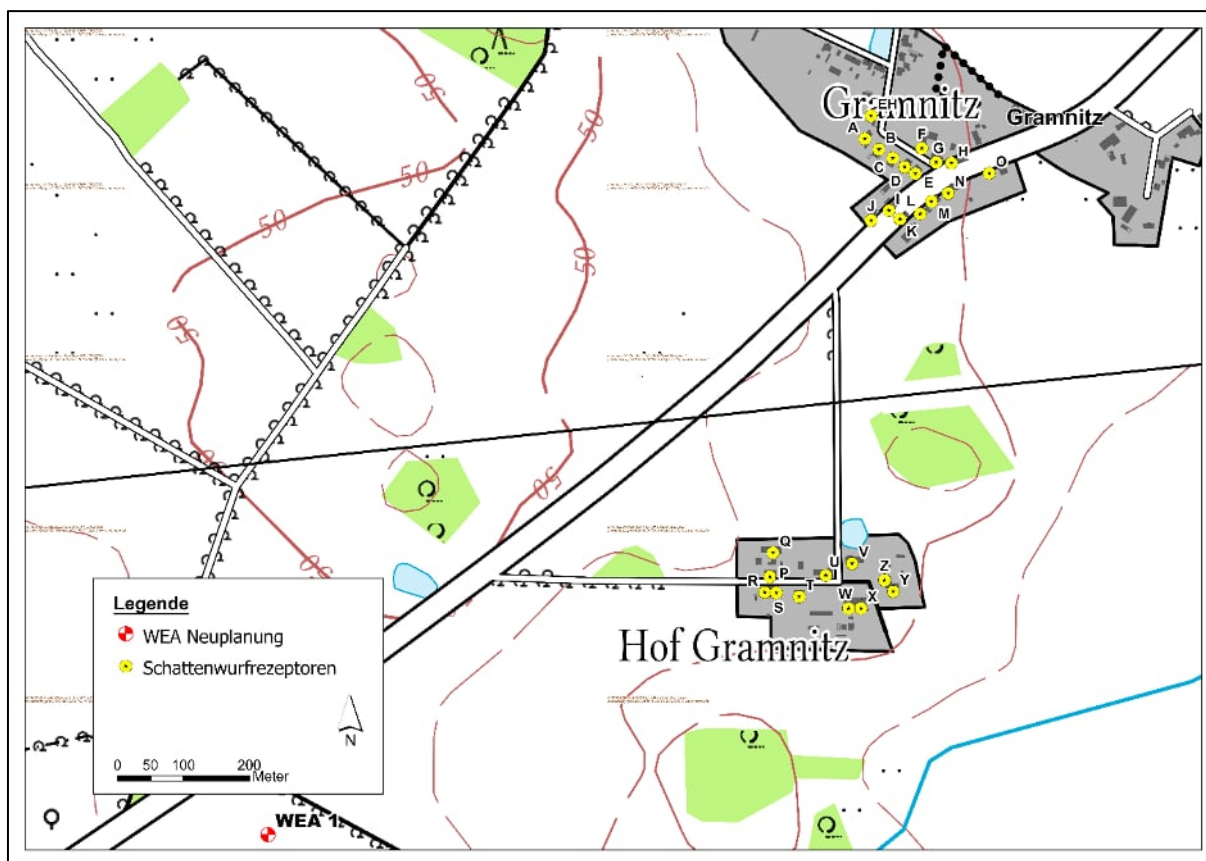


Abbildung 7: Lage der Schattenrezeptoren in der Ortschaft Gramnitz

Tabelle 1: Daten der Windenergieanlagen

WEA - Bezeichnung	Status	UTM-Koordinaten (ETRS 1989) Zone 33		WEA Typ	Nabenhöhe ü. Grund	Rotordurchmesser
		X	Y			
Zusatzbelastung						
WEA 1	Planung	240.924	5.923.411	Nordex N175/6.X	179,0 m	175,0 m
WEA 2	Planung	240.537	5.923.150	Nordex N175/6.X	179,0 m	175,0 m
WEA 3	Planung	240.919	5.923.006	Nordex N175/6.X	179,0 m	175,0 m
WEA 4	Planung	240.129	5.922.713	Nordex N175/6.X	179,0 m	175,0 m
WEA 5	Planung	240.514	5.922.749	Nordex N175/6.X	179,0 m	175,0 m
WEA 6	Planung	241.809	5.922.891	Nordex N175/6.X	179,0 m	175,0 m
WEA 7	Planung	240.718	5.921.830	Nordex N175/6.X	179,0 m	175,0 m
WEA 8	Planung	241.028	5.922.141	Nordex N175/6.X	179,0 m	175,0 m
WEA 9	Planung	241.413	5.922.349	Nordex N175/6.X	179,0 m	175,0 m
WEA 10	Planung	241.946	5.922.440	Nordex N175/6.X	179,0 m	175,0 m
WEA 11	Planung	242.416	5.922.201	Nordex N175/6.X	179,0 m	175,0 m
WEA 12	Planung	242.665	5.921.958	Nordex N175/6.X	179,0 m	175,0 m

Der Beschattungsbereich der neuen WEA vom Typ Nordex N175/6.X-6.800 mit 179,0 m Nabenhöhe beträgt: 1.783 m. Bei den Rotorblättern der N175/6.X beträgt die maximale Profiltiefe 4,15 m und die Profiltiefe bei 90 % des Rotorradius 1,11 m (Dokument: E0004289528, Revision 08 vom 31.01.2023).

2.3 Ergebnisse der Schattenwurfberechnungen

Die Berechnungen der **astronomisch maximal möglichen Beschattungsdauer** ergaben die in Tabelle 2 aufgeführten Werte. Es wurde für die ausgewählten Immissionsorte die Zusatz- und gleichzeitige Gesamtbelastung ermittelt. Die detaillierten Ergebnisse sind in den im Anhang befindlichen Berechnungsausdrücken nachzulesen (siehe Anhang SHADOW-Berechnungen „astron. max. mögl. Beschattungsdauer“).

Grundsätzlich muss beachtet werden, dass es sich bei den berechneten Werten um die astronomisch mögliche Beschattung handelt. **Die tatsächliche meteorologische Beschattung ergibt i. d. R. um ≥ 70 % verringerte Werte.**

Tabelle 2: Berechnungsergebnisse Schattenwurf

Immissionsort	Stunden / Jahr	Max. Stunden / Tag
	Zusatz-/Gesamtbelastung	Zusatz-/Gesamtbelastung
A - Schwarzer Weg 10, Toddin	38:26	0:40
B - Schwarzer Weg 8, Toddin	40:55	0:40
C - Schwarzer Weg 6, Toddin	42:35	0:40
D - Schwarzer Weg 4, Toddin	42:59	0:38
E - Schwarzer Weg 2, Toddin	42:25	0:37

Immissionsort	Stunden / Jahr	Max. Stunden / Tag
	Zusatz-/Gesamtbelas- tung	Zusatz-/Gesamtbelas- tung
F - Schwarzer Weg 3, Toddin	41:25	0:37
G - Schwarzer Weg 1, Toddin	39:42	0:35
H - Gramnitzer Hauptstraße 5, Toddin	38:31	0:35
I - Gramnitzer Hauptstraße 9, Toddin	43:54	0:38
J - Gramnitzer Hauptstraße 11, Toddin	55:04	0:50
K - Gramnitzer Hauptstraße 18, Toddin	43:26	0:36
L - Gramnitzer Hauptstraße 14a, Toddin	42:18	0:35
M - Gramnitzer Hauptstraße 14, Toddin	41:22	0:34
N - Gramnitzer Hauptstraße 12, Toddin	40:04	0:33
O - Gramnitzer Hauptstraße 8, Toddin	21:22	0:29
P - Steindamm 4, Toddin	136:13	1:22
Q - Steindamm 6, Toddin	133:20	1:21
R - Steindamm 3, Toddin	142:28	1:23
S - Steindamm 5, Toddin	137:15	1:21
T - Steindamm 7, Toddin	129:49	1:14
U - Neue Straße 1, Toddin	116:14	1:06
V - Neue Straße 2, Toddin	106:05	0:57
W - Steindamm 11, Toddin	120:13	0:59
X - Steindamm 13, Toddin	117:39	0:55
Y - Steindamm 15, Toddin	105:59	0:48
Z - Steindamm 14, Toddin	104:08	0:46
AA - Am Hofende 13, Pätow-Steegen	43:59	0:29
AB - Am Hofende 8, Pätow-Steegen	42:30	0:29
AC - Am Hofende 11, Pätow-Steegen	40:27	0:28
AD - Am Hofende 9, Pätow-Steegen	37:19	0:28
AE - Am Hofende 7, Pätow-Steegen	37:26	0:28
AF - Am Brink 9, Pätow-Steegen	45:07	0:28
AG - Am Brink 8, Pätow-Steegen	38:13	0:26
AH - Am Brink 11b, Pätow-Steegen	40:07	0:26
AI - Am Brink 11a, Pätow-Steegen	41:01	0:26
AJ - Am Brink 11, Pätow-Steegen	40:20	0:26
AK - Gartenstraße 1, Pätow-Steegen	43:19	0:27
AL - Gartenstraße 2, Pätow-Steegen	43:01	0:27
AM - Gartenstraße 4, Pätow-Steegen	44:50	0:28
AN - Gartenstraße 6, Pätow-Steegen	46:16	0:28

Immissionsort	Stunden / Jahr	Max. Stunden / Tag
	Zusatz-/Gesamtbelas- tung	Zusatz-/Gesamtbelas- tung
AO - Gartenstraße 8, Pätow-Steegen	47:42	0:29
AP - Am Bauernteich 3, Pätow-Steegen	60:13	0:38
AQ - Gartenstraße 12, Pätow-Steegen	62:17	0:41
AR - Gartenstraße 14, Pätow-Steegen	67:16	0:42
AS - Gartenstraße 11, Pätow-Steegen	71:23	0:44
AT - Gartenstraße 13, Pätow-Steegen	73:50	0:45
AU - Gartenstraße 15, Pätow-Steegen	75:41	0:45
AV - Gartenstraße 17, Pätow-Steegen	79:45	0:46
AW - Gartenstraße 19, Pätow-Steegen	79:59	0:45
AX - Gartenstraße 21, Pätow-Steegen	80:42	0:46
AY - Gartenstraße 28, Pätow-Steegen	79:26	0:44
AZ - Gartenstraße 26, Pätow-Steegen	77:42	0:43
BA - Gartenstraße 24, Pätow-Steegen	75:04	0:43
BB - Gartenstraße 30, Pätow-Steegen	82:56	0:46
BC - Forstweg 2, Pätow-Steegen	74:40	0:41
BD - Gartenstraße 32, Pätow-Steegen	85:49	0:45
BE - Gartenstraße 27, Pätow-Steegen	86:37	0:48
BF - Gartenstraße 34, Pätow-Steegen	88:34	0:46
BG - Gartenstraße 23, Pätow-Steegen	82:41	0:46
BH - Gartenstraße 31, Pätow-Steegen	91:43	0:48
BI - Gartenstraße 36, Pätow-Steegen	91:47	0:45
BJ - Gartenstraße 33, Pätow-Steegen	94:59	0:49
BK - Hauptstraße 12, Warlitz	26:23	0:45
BL - Hauptstraße 14, Warlitz	28:00	0:46
BM - Hauptstraße 16, Warlitz	28:25	0:45
BN - Hauptstraße 18, Warlitz	29:11	0:45
BO - Hauptstraße 20, Warlitz	30:41	0:46
BP - Hauptstraße 11, Warlitz	17:09	0:28
BQ - Hauptstraße 13, Warlitz	29:32	0:44
BR - Dorfanger 5, Warlitz	36:37	0:48
BS - Dorfanger 1, Warlitz	34:35	0:47
BT - Hauptstraße 24, Warlitz	33:29	0:45
BU - Hauptstraße 22, Warlitz	32:27	0:45
BV - Hauptstraße 17, Warlitz	31:56	0:44
BW - Hauptstraße 19, Warlitz	33:38	0:43

Immissionsort	Stunden / Jahr	Max. Stunden / Tag
	Zusatz-/Gesamtbelas- tung	Zusatz-/Gesamtbelas- tung
BX - Hauptstraße 21, Warlitz	37:51	0:44
BY - Dorfanger 4, Warlitz	39:49	0:47
BZ - Dorfanger 2, Warlitz	36:20	0:46
CA - Dorfanger 6, Warlitz	41:28	0:48
CB - Dorfanger 7, Warlitz	45:19	0:50
CC - Dorfanger 8, Warlitz	45:26	0:47
CD - Dorfanger 9, Warlitz	51:22	0:45
CE - Dorfanger 10, Warlitz	55:02	0:45
CF - Dorfanger 11, Warlitz	54:16	0:44
CG - Dorfanger 12, Warlitz	51:16	0:43
CH - Dorfanger 13, Warlitz	50:16	0:43
CI - Hauptstraße 23, Warlitz	34:45	0:30
CJ - Kirche Warlitz	49:46	0:42
CK - Hauptstraße 25, Warlitz	32:39	0:29
CL - Hauptstraße 27, Warlitz	32:19	0:30
CM - Hauptstraße 28, Warlitz	39:37	0:41
CN - Hauptstraße 30, Warlitz	36:32	0:41
CO - Zum Schloß 1, Warlitz	19:52	0:33
CP - Goldenitzer Weg 1, Warlitz	13:29	0:29
CQ - Hauptstraße 31, Warlitz	27:43	0:37
CR - Zum Schloß 3, Warlitz	15:33	0:30
CS - Goldenitzer Weg 2, Warlitz	28:29	0:40
CT - Goldenitzer Weg 3, Warlitz	10:25	0:28
CU - Goldenitzer Weg 4, Warlitz	29:01	0:41
CV - Dorfstraße 2a, Warlitz	39:45	0:33
CW - Dorfstraße 3, Warlitz	38:17	0:32
CX - Clausenheimer Weg 2, Toddin	14:38	0:24
CY - Dorfstraße 2, Warlitz	39:37	0:33
CZ - Clausenheimer Weg 1, Toddin	11:56	0:22
DA - Dorfstraße 4, Warlitz	37:14	0:34
DB - Ausbau 1, Toddin	4:07	0:15
DC - Dorfstraße 5, Warlitz	33:17	0:34
DD - Dorfstraße 7, Warlitz	28:04	0:33
DE - Dorfstraße 6, Warlitz	31:47	0:34
DF - Dorfstraße 8, Warlitz	29:06	0:35

Immissionsort	Stunden / Jahr	Max. Stunden / Tag
	Zusatz-/Gesamtbelas- tung	Zusatz-/Gesamtbelas- tung
DG - Dorfstraße 10, Warlitz	24:34	0:33
DH - Dorfstraße 9, Warlitz	21:49	0:31
DI - Dorfstraße 12, Warlitz	19:26	0:30
DJ - Parkweg 6, Pritzier	70:57	1:00
DK - Hamburger Straße 1, Pritzier	39:12	0:50
DL - Hagenower Straße 3, Pritzier	31:16	0:45
DM - Hagenower Straße 5, Pritzier	31:41	0:46
DN - Hagenower Straße 7, Pritzier	32:08	0:45
DO - Parkweg 3, Pritzier	46:03	0:54
DP - Parkweg 2, Pritzier	44:29	0:53
DQ - Parkweg 1, Pritzier	39:20	0:49
DR - Hagenower Straße 12, Pritzier	28:11	0:40
DS - Hagenower Straße 11, Pritzier	32:12	0:44
DT - Hagenower Straße 10, Pritzier	29:23	0:42
DU - Lindenweg 24, Pritzier	26:16	0:37
DV - Lindenweg 26, Pritzier	26:40	0:37
DW - Lindenweg 28, Pritzier	27:12	0:37
DX - Lindenweg 30, Pritzier	27:18	0:38
DY - Lindenweg 32, Pritzier	27:29	0:37
DZ - Lindenweg 34, Pritzier	27:29	0:37
EA - Lindenweg 40, Pritzier	28:21	0:36
EB - Hagenower Straße 13, Pritzier	30:38	0:40
EC - Hagenower Straße 17, Pritzier	31:32	0:39
ED - Hagenower Straße 15, Pritzier	31:32	0:39
EE - Hagenower Straße 19, Pritzier	33:02	0:39
EF - Hagenower Straße 21, Pritzier	33:31	0:38
EG - Clausenheim 1a, Toddin	20:38	0:26
EH – Schwarzer Weg 12, Toddin	34:27	0:36
EI – Am Hofende 4, Pätow-Steegen	34:59	0:26
EJ – Am Brink 7, Pätow-Steegen	35:06	0:26
EK – Hauptstraße 10, Warlitz	14:32	0:27
Anzahl > 30 Std /Jahr		Anzahl > 30 min /Tag
108		110
Max. Wert		Max. Wert
142:28		1:23

Hinweis: Alle Felder, die in der Tabelle rot markiert sind, weisen auf eine Grenzwertüberschreitung hin.

Durch die 12 neuen Anlagen als **Zusatz- und gleichzeitige Gesamtbelastung** kommt es an 108 von 141 Immissionsorten zu Überschreitungen der Beschattungsdauer von 30 Stunden pro Jahr sowie an 110 Immissionsorten auch zur Überschreitung der Beschattungsdauer von 30 Minuten pro Tag. Dabei tritt die maximale Beschattung am Immissionsort R (Steindamm 3, Toddin) mit 142:28 Stunden pro Jahr und 83 Minuten pro Tag auf. Die neuen WEA werden mit Abschaltvorrichtungen zu versehen sein. Die Beschattungszeiten im Untersuchungsgebiet sind insgesamt teilweise als hoch zu bezeichnen.

Durch den Einsatz einer Schattenwurfabschaltautomatik können die definierten Grenzwerte sicher eingehalten werden.

3 Zusammenfassung und Empfehlungen

Die Windpark Pritzier-Goldenitz GmbH & Co. KG plant die Errichtung und den Betrieb von 12 neuen Windenergieanlagen des Typs Nordex N175/6.X, des Herstellers Nordex SE, mit einer Nabenhöhe von 179,0 m, einem Rotordurchmesser von 175,0 m und einer Leistung von bis zu 6.800 kW in Mecklenburg-Vorpommern, im Kreis Ludwigslust-Parchim nordöstlich von Pritzier und südwestlich von Hagenow.

Für die Genehmigung wurden die Auswirkungen der Windenergieanlagen auf die umliegende Bebauung ermittelt. **Dabei wurde die astronomisch maximal mögliche Beschattungsdauer (worst case) errechnet.**

Vorbelastungen der Immissionsorte durch Schattenwurf bestehender oder geplanter WEA existiert nicht.

Für die Berechnung der Beschattungsdauer mit dem Berechnungsmodul SHADOW des Programms WindPRO 4.0 wurden 141 Immissionsorte in der Umgebung der geplanten Anlagen bestimmt.

Es wurden für die ausgewählten Immissionsorte die Zusatz- und Gesamtbelastung ermittelt.

Durch die 12 neuen Anlagen als **Zusatz- und gleichzeitige Gesamtbelastung** kommt es an 108 von 141 Immissionsorten zu Überschreitungen der Beschattungsdauer von 30 Stunden pro Jahr sowie an 110 Immissionsorten auch zur Überschreitung der Beschattungsdauer von 30 Minuten pro Tag. Dabei tritt die maximale Beschattung am Immissionsort R (Steindamm 3, Toddin) mit 142:28 Stunden pro Jahr und 83 Minuten pro Tag auf. Die neuen WEA werden mit Abschaltvorrichtungen zu versehen sein. Die Beschattungszeiten im Untersuchungsgebiet sind insgesamt teilweise als hoch zu bezeichnen.

Durch den Einsatz einer Abschaltautomatik können die Überschreitungen entsprechend reduziert werden. An dieser Stelle soll erwähnt werden, dass durch den Schattenwurf ebenfalls weitere Gebäude betroffen sein können, die sich in „zweiter Reihe“ - aus Richtung der WEA gesehen, also hinter den ausgewählten Immissionsorten - befinden. Somit bedeutet eine Schattenwurfabschaltung für einen näher an der WEA gelegenen Immissionsort auch eine automatische Schattenwurfverhinderung für alle im gleichen Strahlengang befindlichen Immissionsorte weiter von der WEA entfernt. Bei der Programmierung des Schattenabschaltmoduls muss auf diesen Umstand entsprechend reagiert werden. Zudem wird klar ersichtlich, dass einige dieser Gebäude die hier prognostizierte Beschattung nicht erhalten können, da sie durch davorstehende Nebengebäude, Stallungen oder Wohnhäuser vor dieser Beschattung „geschützt“ werden. Zusätzlich sei explizit darauf hingewiesen, dass nicht alle der berücksichtigten Immissionsorte eine klassische Wohnbebauung darstellen (Kirchen, Sportheime und gewerblich genutzte Gebäude etc.). Bei einigen Immissionsorten war ferner eine gewerbliche

oder landwirtschaftliche Nutzung vorwiegend, wobei eine Wohnnutzung nicht immer auszu-schließen ist. So sind die Immissionsorte DJ, DK, DQ und DR gewerblich bzw. landwirtschaftlich genutzte Hallen oder Häuser. Beim Immissionsort DK wurde die weniger betroffene Süd-ostseite als Aufpunkt genommen, da an der Nordostfassade keine Fenster vorhanden sind. Beim Immissionsort DQ handelt es sich um das Freilichttheater Kulturkate. Der Immissionsort DR repräsentiert ein Dorfgemeinschaftshaus von Pritzier. Weiter sind mehrere Wohnbauflächen noch nicht bebaut, dazu zählen die Immissionsorte AC, BG, CP, CQ, CU und DE. Das Wohnhaus des Immissionsortes W wird aktuell kernsaniert/bebaut, das Wohnhaus am Immissionsort AD befindet sich zum Zeitpunkt des Ortstermines im Bau. Die Rinderanlage am Immissionsort CT scheint aktuell ungenutzt zu sein. Hier wurde trotzdem der Immissionsort auf eine der größeren noch bestehenden Stallungen gesetzt.

Der Unterschied bei den Grenzwertüberschreitungen erklärt sich leicht durch die Tatsache, dass sich auch tägliche Beschattungszeiten von weniger als 30 Minuten pro Tag im Jahresverlauf zu mehr als 30 Stunden aufsummieren können bzw. tägliche Beschattungszeiten über 30 Minuten nicht zwangsweise im Jahresverlauf zu einer Überschreitung der 30 Stunden führen müssen. Auf der letzten Karte im Anhang ist dieser Umstand deutlich anhand der hier abgebildeten 30 Minutenlinie pro Tag ersichtlich, welche nicht äquivalent zur 30 Stundenlinie pro Jahr ist.

Durch den Einsatz einer Abschaltautomatik kann die Beschattungsdauer ggf. auf die zulässigen Grenzwerte reduziert werden. An dieser Stelle soll noch einmal darauf hingewiesen werden, dass es sich um die **astronomisch maximal mögliche Beschattungsdauer (worst case)** handelt. In der Realität liegen die Schattenwurfzeiten bei höchstens 30% der hier ausgewiesenen, da Bewölkung oder Windstille einen periodischen Schattenwurf verhindern.

Für die Einhaltung der Grenzwerte der maximalen Beschattungsdauer ist beim vorliegenden Projekt auf eine Abschaltautomatik zurückzugreifen. Dabei ist zu entscheiden, ob eine Abschaltautomatik gewählt wird, die auf die meteorologischen Parameter zurückgreift (z. B. die Intensität des Sonnenlichtes) und dann dementsprechend die tatsächliche Beschattungsdauer von max. 8 Stunden pro Kalenderjahr berücksichtigt wird (mittlerweile technischer Standard). Ist dies nicht der Fall, ist die astronomisch maximal mögliche Beschattungsdauer von 30 Stunden pro Kalenderjahr anzusetzen. Dabei werden die Anlagen mit festen Abschaltzeiten versehen und somit ggf. auch bei bedecktem Himmel abgeschaltet.

Für die Einrichtung einer Abschaltautomatik sind im Schattenwurfgutachten die maßgeblichen Immissionsorte sowie die Schattenwurf verursachenden WEA zu benennen. Für die Immissionsorte und WEA sind im Anhang grafische und tabellarische Schattenwurfkalender wiedergegeben, die einen Überblick geben, wann im Jahres- und Tagesverlauf mit Beschattung zu rechnen ist. Anhand der ermittelten Ergebnisse wird infolgedessen ein Abschaltmechanismus für **ALLE neu geplanten WEA außer für die WEA 4, WEA 5, WEA 9 und WEA 10** vorgeschlagen.

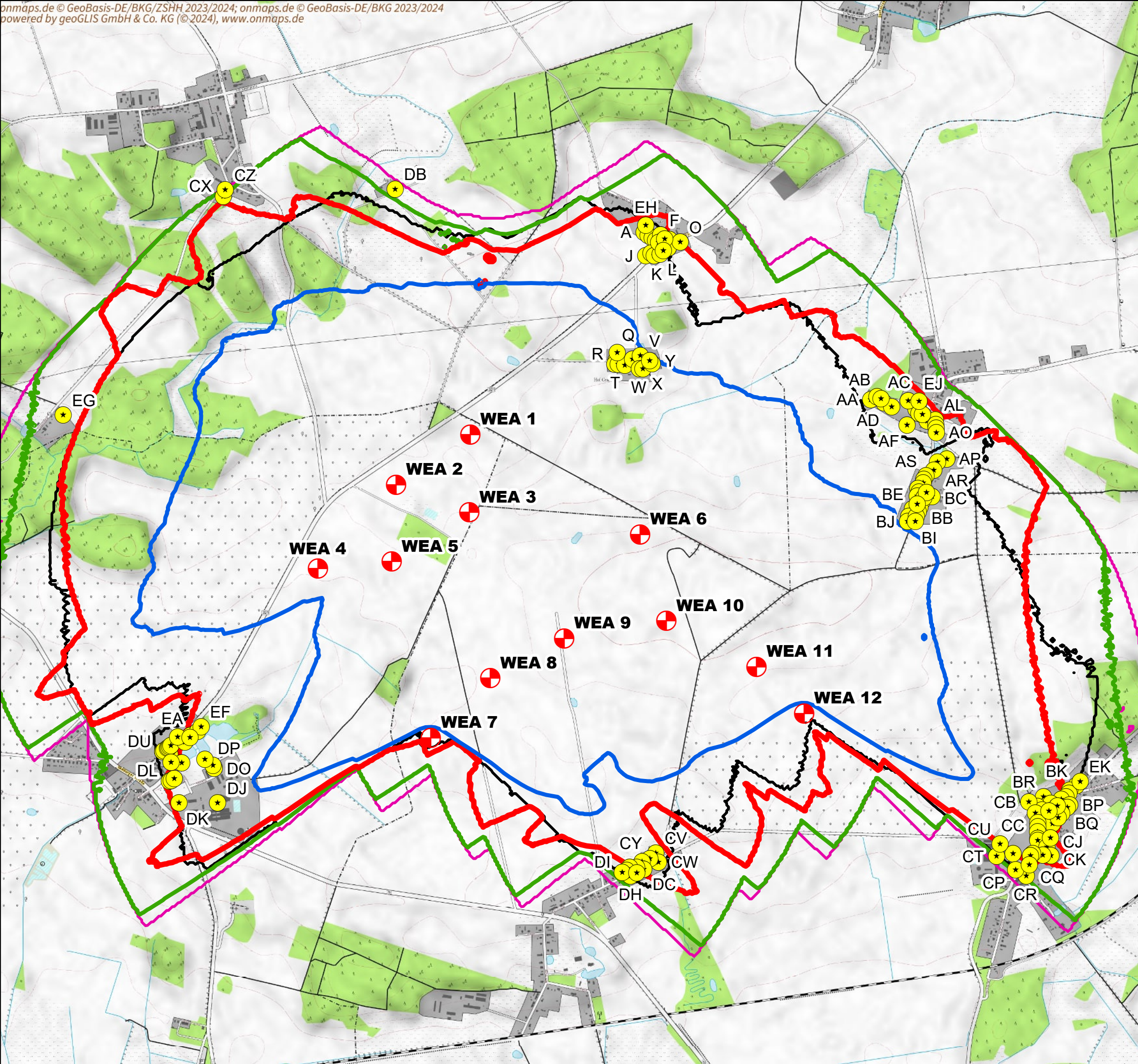
Abschaltautomatiken sind so zu programmieren, dass alle betroffenen Bereiche (Fenster, Balkone usw.) an den Immissionspunkten berücksichtigt werden. Aus den für punktförmige Rezeptoren angegebenen Zeiten kann nicht direkt abgeleitet werden, wie viele Minuten die betreffenden WEA tatsächlich abgeschaltet werden müssten. Die vorliegende Prognose macht über die technische Umsetzung der Abschaltautomatik keine Aussagen, die Programmierung obliegt dem Hersteller oder Betreiber der Windkraftanlage bzw. dem Hersteller des Schattenwurfabschaltmoduls. Betroffene Gebäudebereiche mit nur seltener oder kurzzeitiger räumlicher Nutzung (z. B. Abstellräume o.ä.) sind in der Regel nicht zu berücksichtigen. Darüber hinaus können sichtverschattende Objekte wie bspw. dauerhafter Bewuchs oder

Nebengebäude einen Schattenwurf verhindern, wodurch im Einzelnen auf eine Abschaltung für das jeweilige Gebäude verzichtet werden könnte. Dies kann am einfachsten nach Errichtung der Anlagen dokumentiert und berücksichtigt werden.

Anhang

Kartendarstellung Schattenwurf A3

Detaillierte Berechnungsergebnisse aus WindPRO 4.0 Modul SHADOW



Schattenwurfprognose Zusatz- & Gesamtbelastung

Legende

⊕ WEA Neuplanung

★ Schattenwurfrezeptoren

Schattenwurf - Zusatzbelastung (rev.01)

0 Stunden/Jahr

10 Stunden/Jahr

30 Stunden/Jahr

100 Stunden/Jahr

30 Minuten / Tag

0 300 600 1.200
Meter



WP Pritzier-Goldenitz

Auftraggeber
Windpark Pritzier-Goldenitz
GmbH & Co. KG
Parkweg 1
19230 Pritzier

Auftragnehmer
Podbielskistr. 70
D - 30177 Hannover
Tel. (0511) 450 89 99-0
E-Mail: info@plangis.de



Karte
Schattenwurfprognose
Zusatzbelastung
(rev.01)
WP Pritzier-Goldenitz

A3 quer
Maßstab: 1:20.000

Datum / Bearbeiter
03/2024 / NE

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Hauptergebnis

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)

...(Fortsetzung von vorheriger Seite)

Nr.	Name	Ost	Nord	Z	Breite	Höhe	Höhe ü.Gr.	Neigung des Fensters	Ausrichtungsmodus	Augenhöhe (ZVI) ü.Gr.
					[m]	[m]	[m]	[°]		[m]
W	Steindamm 11	241.805	5.923.754	39,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
X	Steindamm 13	241.824	5.923.754	39,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
Y	Steindamm 15	241.873	5.923.780	38,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
Z	Steindamm 14	241.860	5.923.797	39,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AA	Am Hofende 13	243.012	5.923.594	32,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AB	Am Hofende 8	243.044	5.923.610	33,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AC	Am Hofende 11	243.066	5.923.600	34,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AD	Am Hofende 9	243.082	5.923.576	33,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AE	Am Hofende 7	243.121	5.923.556	34,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AF	Am Brink 9	243.201	5.923.460	35,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AG	Am Brink 8	243.248	5.923.544	36,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AH	Am Brink 11b	243.263	5.923.521	36,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AI	Am Brink 11a	243.289	5.923.511	37,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AJ	Am Brink 11	243.282	5.923.518	37,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AK	Gartenstraße 1	243.307	5.923.483	37,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AL	Gartenstraße 2	243.349	5.923.489	37,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AM	Gartenstraße 4	243.351	5.923.463	37,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AN	Gartenstraße 6	243.353	5.923.445	36,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AO	Gartenstraße 8	243.354	5.923.423	36,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AP	Am Bauernteich 3	243.408	5.923.285	35,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AQ	Gartenstraße 12	243.360	5.923.269	35,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AR	Gartenstraße 14	243.341	5.923.226	35,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AS	Gartenstraße 11	243.300	5.923.197	35,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AT	Gartenstraße 13	243.289	5.923.178	36,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AU	Gartenstraße 15	243.285	5.923.159	36,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AV	Gartenstraße 17	243.258	5.923.130	37,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AW	Gartenstraße 19	243.264	5.923.112	37,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AX	Gartenstraße 21	243.254	5.923.090	37,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AY	Gartenstraße 28	243.281	5.923.064	38,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
AZ	Gartenstraße 26	243.290	5.923.083	37,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BA	Gartenstraße 24	243.302	5.923.110	37,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BB	Gartenstraße 30	243.268	5.923.032	39,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BC	Forstweg 2	243.332	5.923.087	38,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BD	Gartenstraße 32	243.259	5.923.009	39,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BE	Gartenstraße 27	243.229	5.923.024	39,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BF	Gartenstraße 34	243.250	5.922.986	39,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BG	Gartenstraße 23	243.254	5.923.050	38,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BH	Gartenstraße 31	243.210	5.922.985	40,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BI	Gartenstraße 36	243.244	5.922.960	40,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BJ	Gartenstraße 33	243.204	5.922.958	40,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BK	Hauptstraße 12	244.084	5.921.580	20,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BL	Hauptstraße 14	244.050	5.921.557	20,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BM	Hauptstraße 16	244.045	5.921.541	20,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BN	Hauptstraße 18	244.031	5.921.523	20,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BO	Hauptstraße 20	244.006	5.921.511	20,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BP	Hauptstraße 11	244.050	5.921.481	20,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BQ	Hauptstraße 13	244.037	5.921.467	20,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BR	Dorfanger 5	243.913	5.921.522	21,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BS	Dorfanger 1	243.951	5.921.489	21,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BT	Hauptstraße 24	243.975	5.921.461	21,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BU	Hauptstraße 22	243.986	5.921.474	21,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BV	Hauptstraße 17	244.008	5.921.434	20,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BW	Hauptstraße 19	243.990	5.921.413	21,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BX	Hauptstraße 21	243.959	5.921.382	21,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BY	Dorfanger 4	243.905	5.921.455	21,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
BZ	Dorfanger 2	243.941	5.921.450	21,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CA	Dorfanger 6	243.880	5.921.472	22,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CB	Dorfanger 7	243.836	5.921.495	22,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CC	Dorfanger 8	243.871	5.921.438	21,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CD	Dorfanger 9	243.883	5.921.389	21,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CE	Dorfanger 10	243.883	5.921.366	21,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CF	Dorfanger 11	243.882	5.921.340	21,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CG	Dorfanger 12	243.883	5.921.306	21,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CH	Dorfanger 13	243.883	5.921.296	21,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1

(Fortsetzung nächste Seite)...

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Hauptergebnis

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)

...(Fortsetzung von vorheriger Seite)

Nr.	Name	Ost	Nord	Z	Breite	Höhe	Höhe ü.Gr.	Neigung des Fensters	Ausrichtungsmodus	Augenhöhe (ZVI) ü.Gr.
				[m]	[m]	[m]	[m]	[°]		[m]
CI	Hauptstraße 23	243.930	5.921.260	21,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CJ	Kirche Warlitz	243.949	5.921.308	21,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CK	Hauptstraße 25	243.951	5.921.215	20,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CL	Hauptstraße 27	243.910	5.921.219	20,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CM	Hauptstraße 28	243.857	5.921.227	20,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CN	Hauptstraße 30	243.846	5.921.215	20,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CO	Zum Schloß 1	243.815	5.921.139	21,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CP	Goldenitzer Weg 1	243.767	5.921.143	22,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CQ	Hauptstraße 31	243.839	5.921.167	20,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CR	Zum Schloß 3	243.823	5.921.110	20,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CS	Goldenitzer Weg 2	243.754	5.921.227	22,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CT	Goldenitzer Weg 3	243.668	5.921.212	24,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CU	Goldenitzer Weg 4	243.686	5.921.278	23,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CV	Dorfstraße 2a	241.891	5.921.230	32,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CW	Dorfstraße 3	241.905	5.921.182	31,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CX	Clausenheimer Weg 2	239.636	5.924.653	51,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CY	Dorfstraße 2	241.860	5.921.199	32,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
CZ	Clausenheimer Weg 1	239.646	5.924.688	51,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DA	Dorfstraße 4	241.820	5.921.184	33,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DB	Ausbau 1	240.532	5.924.692	45,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DC	Dorfstraße 5	241.828	5.921.145	34,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DD	Dorfstraße 7	241.792	5.921.126	35,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DE	Dorfstraße 6	241.791	5.921.154	34,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DF	Dorfstraße 8	241.755	5.921.156	36,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DG	Dorfstraße 10	241.739	5.921.140	36,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DH	Dorfstraße 9	241.759	5.921.110	36,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DI	Dorfstraße 12	241.716	5.921.128	36,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DJ	Parkweg 6	239.606	5.921.492	36,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DK	Hamburger Straße 1	239.405	5.921.492	33,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DL	Hagenower Straße 3	239.355	5.921.603	28,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DM	Hagenower Straße 5	239.364	5.921.608	28,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DN	Hagenower Straße 7	239.381	5.921.617	28,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DO	Parkweg 3	239.588	5.921.671	31,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DP	Parkweg 2	239.582	5.921.685	31,0	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DQ	Parkweg 1	239.539	5.921.718	30,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DR	Hagenower Straße 12	239.357	5.921.744	27,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DS	Hagenower Straße 11	239.419	5.921.699	28,2	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DT	Hagenower Straße 10	239.363	5.921.703	27,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DU	Lindenweg 24	239.320	5.921.758	27,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DV	Lindenweg 26	239.327	5.921.764	27,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DW	Lindenweg 28	239.345	5.921.775	27,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DX	Lindenweg 30	239.350	5.921.780	27,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DY	Lindenweg 32	239.356	5.921.785	27,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
DZ	Lindenweg 34	239.362	5.921.791	27,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EA	Lindenweg 40	239.398	5.921.836	29,3	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EB	Hagenower Straße 13	239.436	5.921.808	28,5	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EC	Hagenower Straße 17	239.465	5.921.842	29,9	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
ED	Hagenower Straße 15	239.462	5.921.833	29,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EE	Hagenower Straße 19	239.502	5.921.862	30,1	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EF	Hagenower Straße 21	239.520	5.921.888	30,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EG	Clausenheim 1a	238.801	5.923.514	37,7	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EH	Schwarzer Weg 12	241.839	5.924.502	41,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EI	Am Hofende 4	243.208	5.923.587	35,8	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EJ	Am Brink 7	243.264	5.923.586	36,6	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1
EK	Hauptstraße 10	244.105	5.921.602	20,4	0,1	0,1	2,0	90,0	"Gewächshaus-Modus"	2,1

Berechnungsergebnisse

Schattenrezeptor

astron. max. mögl. Beschattungsdauer

Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag
		[h/a]	[d/a]	[h/d]
A	Schwarzer Weg 10	38:26	78	0:40
B	Schwarzer Weg 8	40:55	80	0:40

(Fortsetzung nächste Seite)...

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Hauptergebnis

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)

...(Fortsetzung von vorheriger Seite)

astron. max. mögl. Beschattungsdauer

Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag
		[h/a]	[d/a]	[h/d]
C	Schwarzer Weg 6	42:35	84	0:40
D	Schwarzer Weg 4	42:59	86	0:38
E	Schwarzer Weg 2	42:25	88	0:37
F	Schwarzer Weg 3	41:25	84	0:37
G	Schwarzer Weg 1	39:42	88	0:35
H	Gramnitzer Hauptstraße 5	38:31	88	0:35
I	Gramnitzer Hauptstraße 9	43:54	92	0:38
J	Gramnitzer Hauptstraße 11	55:04	92	0:50
K	Gramnitzer Hauptstraße 18	43:26	94	0:36
L	Gramnitzer Hauptstraße 14a	42:18	96	0:35
M	Gramnitzer Hauptstraße 14	41:22	94	0:34
N	Gramnitzer Hauptstraße 12	40:04	94	0:33
O	Gramnitzer Hauptstraße 8	21:22	60	0:29
P	Steindamm 4	136:13	169	1:22
Q	Steindamm 6	133:20	162	1:21
R	Steindamm 3	142:28	174	1:23
S	Steindamm 5	137:15	174	1:21
T	Steindamm 7	129:49	175	1:14
U	Neue Straße 1	116:14	169	1:06
V	Neue Straße 2	106:05	167	0:57
W	Steindamm 11	120:13	179	0:59
X	Steindamm 13	117:39	179	0:55
Y	Steindamm 15	105:59	174	0:48
Z	Steindamm 14	104:08	171	0:46
AA	Am Hofende 13	43:59	119	0:29
AB	Am Hofende 8	42:30	119	0:29
AC	Am Hofende 11	40:27	121	0:28
AD	Am Hofende 9	37:19	117	0:28
AE	Am Hofende 7	37:26	119	0:28
AF	Am Brink 9	45:07	128	0:28
AG	Am Brink 8	38:13	121	0:26
AH	Am Brink 11b	40:07	122	0:26
AI	Am Brink 11a	41:01	123	0:26
AJ	Am Brink 11	40:20	123	0:26
AK	Gartenstraße 1	43:19	125	0:27
AL	Gartenstraße 2	43:01	125	0:27
AM	Gartenstraße 4	44:50	130	0:28
AN	Gartenstraße 6	46:16	128	0:28
AO	Gartenstraße 8	47:42	130	0:29
AP	Am Bauernteich 3	60:13	147	0:38
AQ	Gartenstraße 12	62:17	148	0:41
AR	Gartenstraße 14	67:16	153	0:42
AS	Gartenstraße 11	71:23	156	0:44
AT	Gartenstraße 13	73:50	158	0:45
AU	Gartenstraße 15	75:41	160	0:45
AV	Gartenstraße 17	79:45	163	0:46
AW	Gartenstraße 19	79:59	165	0:45
AX	Gartenstraße 21	80:42	169	0:46
AY	Gartenstraße 28	79:26	172	0:44
AZ	Gartenstraße 26	77:42	170	0:43
BA	Gartenstraße 24	75:04	165	0:43
BB	Gartenstraße 30	82:56	174	0:46
BC	Forstweg 2	74:40	169	0:41
BD	Gartenstraße 32	85:49	179	0:45
BE	Gartenstraße 27	86:37	175	0:48
BF	Gartenstraße 34	88:34	180	0:46
BG	Gartenstraße 23	82:41	173	0:46
BH	Gartenstraße 31	91:43	182	0:48
BI	Gartenstraße 36	91:47	185	0:45
BJ	Gartenstraße 33	94:59	187	0:49
BK	Hauptstraße 12	26:23	54	0:45
BL	Hauptstraße 14	28:00	56	0:46
BM	Hauptstraße 16	28:25	57	0:45
BN	Hauptstraße 18	29:11	58	0:45

(Fortsetzung nächste Seite)...

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Hauptergebnis

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)

...(Fortsetzung von vorheriger Seite)

astron. max. mögl. Beschattungsdauer

Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag
		[h/a]	[d/a]	[h/d]
BO	Hauptstraße 20	30:41	60	0:46
BP	Hauptstraße 11	17:09	46	0:28
BQ	Hauptstraße 13	29:32	59	0:44
BR	Dorfanger 5	36:37	66	0:48
BS	Dorfanger 1	34:35	65	0:47
BT	Hauptstraße 24	33:29	64	0:45
BU	Hauptstraße 22	32:27	63	0:45
BV	Hauptstraße 17	31:56	63	0:44
BW	Hauptstraße 19	33:38	66	0:43
BX	Hauptstraße 21	37:51	74	0:44
BY	Dorfanger 4	39:49	73	0:47
BZ	Dorfanger 2	36:20	68	0:46
CA	Dorfanger 6	41:28	74	0:48
CB	Dorfanger 7	45:19	79	0:50
CC	Dorfanger 8	45:26	83	0:47
CD	Dorfanger 9	51:22	96	0:45
CE	Dorfanger 10	55:02	93	0:45
CF	Dorfanger 11	54:16	89	0:44
CG	Dorfanger 12	51:16	84	0:43
CH	Dorfanger 13	50:16	82	0:43
CI	Hauptstraße 23	34:45	82	0:30
CJ	Kirche Warlitz	49:46	90	0:42
CK	Hauptstraße 25	32:39	77	0:29
CL	Hauptstraße 27	32:19	73	0:30
CM	Hauptstraße 28	39:37	68	0:41
CN	Hauptstraße 30	36:32	64	0:41
CO	Zum Schloß 1	19:52	45	0:33
CP	Goldenitzer Weg 1	13:29	35	0:29
CQ	Hauptstraße 31	27:43	54	0:37
CR	Zum Schloß 3	15:33	39	0:30
CS	Goldenitzer Weg 2	28:29	53	0:40
CT	Goldenitzer Weg 3	10:25	29	0:28
CU	Goldenitzer Weg 4	29:01	52	0:41
CV	Dorfstraße 2a	39:45	90	0:33
CW	Dorfstraße 3	38:17	84	0:32
CX	Clausenheimer Weg 2	14:38	44	0:24
CY	Dorfstraße 2	39:37	82	0:33
CZ	Clausenheimer Weg 1	11:56	40	0:22
DA	Dorfstraße 4	37:14	75	0:34
DB	Ausbau 1	4:07	20	0:15
DC	Dorfstraße 5	33:17	69	0:34
DD	Dorfstraße 7	28:04	61	0:33
DE	Dorfstraße 6	31:47	66	0:34
DF	Dorfstraße 8	29:06	61	0:35
DG	Dorfstraße 10	24:34	55	0:33
DH	Dorfstraße 9	21:49	52	0:31
DI	Dorfstraße 12	19:26	48	0:30
DJ	Parkweg 6	70:57	104	1:00
DK	Hamburger Straße 1	39:12	81	0:50
DL	Hagenower Straße 3	31:16	70	0:45
DM	Hagenower Straße 5	31:41	70	0:46
DN	Hagenower Straße 7	32:08	71	0:45
DO	Parkweg 3	46:03	86	0:54
DP	Parkweg 2	44:29	84	0:53
DQ	Parkweg 1	39:20	80	0:49
DR	Hagenower Straße 12	28:11	67	0:40
DS	Hagenower Straße 11	32:12	72	0:44
DT	Hagenower Straße 10	29:23	69	0:42
DU	Lindenweg 24	26:16	66	0:37
DV	Lindenweg 26	26:40	66	0:37
DW	Lindenweg 28	27:12	68	0:37
DX	Lindenweg 30	27:18	67	0:38
DY	Lindenweg 32	27:29	67	0:37
DZ	Lindenweg 34	27:29	67	0:37

(Fortsetzung nächste Seite)...

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Hauptergebnis

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)

...(Fortsetzung von vorheriger Seite)

astron. max. mögl. Beschattungsdauer

Nr.	Name	Stunden/Jahr	Schattentage/Jahr	Max.Schattendauer/Tag
		[h/a]	[d/a]	[h/d]
EA	Lindenweg 40	28:21	68	0:36
EB	Hagenower Straße 13	30:38	71	0:40
EC	Hagenower Straße 17	31:32	73	0:39
ED	Hagenower Straße 15	31:32	73	0:39
EE	Hagenower Straße 19	33:02	75	0:39
EF	Hagenower Straße 21	33:31	76	0:38
EG	Clausenheim 1a	20:38	64	0:26
EH	Schwarzer Weg 12	34:27	74	0:36
EI	Am Hofende 4	34:59	117	0:26
EJ	Am Brink 7	35:06	115	0:26
EK	Hauptstraße 10	14:32	40	0:27

Gesamtdauer Beschattung an Rezeptoren pro WEA

Nr.	Name	Maximal [h/a]
WEA 1	NORDEX N175/6.X 6800 NH: 179,0 m	138:20
WEA 10	NORDEX N175/6.X 6800 NH: 179,0 m	103:01
WEA 11	NORDEX N175/6.X 6800 NH: 179,0 m	185:38
WEA 12	NORDEX N175/6.X 6800 NH: 179,0 m	154:14
WEA 2	NORDEX N175/6.X 6800 NH: 179,0 m	73:45
WEA 3	NORDEX N175/6.X 6800 NH: 179,0 m	98:49
WEA 4	NORDEX N175/6.X 6800 NH: 179,0 m	12:16
WEA 5	NORDEX N175/6.X 6800 NH: 179,0 m	38:07
WEA 6	NORDEX N175/6.X 6800 NH: 179,0 m	183:34
WEA 7	NORDEX N175/6.X 6800 NH: 179,0 m	169:45
WEA 8	NORDEX N175/6.X 6800 NH: 179,0 m	78:04
WEA 9	NORDEX N175/6.X 6800 NH: 179,0 m	0:00

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** A - Schwarzer Weg 10

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

			Januar		Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November		Dezember	
1	08:32		14:25 (WEA 3)		08:02	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13		08:07	14:30 (WEA 1)
	16:07	31	15:13 (WEA 1)		16:57	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45		16:02	31 15:01 (WEA 1)
2	08:32		14:46 (WEA 1)		08:01	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15		08:09	14:31 (WEA 1)
	16:08	28	15:14 (WEA 1)		16:59	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44		16:01	30 15:01 (WEA 1)
3	08:32		14:47 (WEA 1)		07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17		08:10	14:32 (WEA 1)
	16:09	28	15:15 (WEA 1)		17:01	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42		16:01	30 15:02 (WEA 1)
4	08:31		14:46 (WEA 1)		07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19		08:12	14:32 (WEA 1)
	16:10	29	15:15 (WEA 1)		17:03	17:58	19:55	20:49	21:37	21:47	21:08	20:01	18:48	16:40		16:00	30 15:02 (WEA 1)
5	08:31		14:47 (WEA 1)		07:56	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21		08:13	14:33 (WEA 1)
	16:12	29	15:16 (WEA 1)		17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38		15:59	30 15:03 (WEA 1)
6	08:31		14:47 (WEA 1)		07:54	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23		08:14	14:33 (WEA 1)
	16:13	29	15:16 (WEA 1)		17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36		15:59	29 15:02 (WEA 1)
7	08:30		14:48 (WEA 1)		07:52	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25		08:16	14:33 (WEA 1)
	16:14	29	15:17 (WEA 1)		17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34		15:58	29 15:02 (WEA 1)
8	08:30		14:48 (WEA 1)		07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27		08:17	14:34 (WEA 1)
	16:16	30	15:18 (WEA 1)		17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32		15:58	29 15:03 (WEA 1)
9	08:29		14:48 (WEA 1)		07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28		08:18	14:35 (WEA 1)
	16:17	30	15:18 (WEA 1)		17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31		15:58	28 15:03 (WEA 1)
10	08:29		14:48 (WEA 1)		07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30		08:19	14:35 (WEA 1)
	16:19	30	15:18 (WEA 1)		17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29		15:57	28 15:03 (WEA 1)
11	08:28		14:48 (WEA 1)		07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32		08:21	14:16 (WEA 3)
	16:20	31	15:19 (WEA 1)		17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27		15:57	31 15:04 (WEA 1)
12	08:27		14:48 (WEA 1)		07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34		08:22	14:15 (WEA 3)
	16:22	31	15:19 (WEA 1)		17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26		15:57	33 15:04 (WEA 1)
13	08:26		14:49 (WEA 1)		07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36		08:23	14:14 (WEA 3)
	16:23	30	15:19 (WEA 1)		17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	6	14:38 (WEA 1)	08:23 14:14 (WEA 3)
14	08:26		14:49 (WEA 1)		07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38		08:24	14:14 (WEA 3)
	16:25	31	15:20 (WEA 1)		17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	13	14:48 (WEA 1)	08:24 14:14 (WEA 3)
15	08:25		14:50 (WEA 1)		07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40		08:25	14:14 (WEA 3)
	16:26	30	15:20 (WEA 1)		17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	17	14:50 (WEA 1)	08:25 14:14 (WEA 3)
16	08:24		14:50 (WEA 1)		07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42		08:26	14:14 (WEA 3)
	16:28	31	15:21 (WEA 1)		17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	19	14:51 (WEA 1)	08:26 14:14 (WEA 3)
17	08:23		14:51 (WEA 1)		07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43		08:26	14:13 (WEA 3)
	16:30	30	15:21 (WEA 1)		17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	22	14:53 (WEA 1)	08:26 14:13 (WEA 3)
18	08:22		14:52 (WEA 1)		07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45		08:27	14:13 (WEA 3)
	16:31	29	15:21 (WEA 1)		17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	24	14:54 (WEA 1)	08:27 14:13 (WEA 3)
19	08:21		14:52 (WEA 1)		07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47		08:28	14:14 (WEA 3)
	16:33	29	15:21 (WEA 1)		17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	26	14:55 (WEA 1)	08:28 14:14 (WEA 3)
20	08:19		14:53 (WEA 1)		07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49		08:29	14:14 (WEA 3)
	16:35	28	15:21 (WEA 1)		17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	27	14:56 (WEA 1)	08:29 14:14 (WEA 3)
21	08:18		14:54 (WEA 1)		07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51		08:29	14:15 (WEA 3)
	16:37	27	15:21 (WEA 1)		17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	27	14:56 (WEA 1)	08:29 14:15 (WEA 3)
22	08:17		14:54 (WEA 1)		07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52		08:30	14:15 (WEA 3)
	16:39	27	15:21 (WEA 1)		17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	28	14:57 (WEA 1)	08:30 14:15 (WEA 3)
23	08:16		14:55 (WEA 1)		07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54		08:30	14:16 (WEA 3)
	16:40	26	15:21 (WEA 1)		17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	29	14:58 (WEA 1)	08:30 14:16 (WEA 3)
24	08:14		14:56 (WEA 1)		07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56		08:31	14:16 (WEA 3)
	16:42	24	15:20 (WEA 1)		17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	29	14:58 (WEA 1)	08:31 14:16 (WEA 3)
25	08:13		14:58 (WEA 1)		07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:00	07:58		08:31	14:16 (WEA 3)
	16:44	22	15:20 (WEA 1)		17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	30	14:59 (WEA 1)	08:31 14:16 (WEA 3)
26	08:12		14:59 (WEA 1)		07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59		08:31	14:18 (WEA 3)
	16:46	19	15:18 (WEA 1)		17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	31	15:00 (WEA 1)	08:31 14:18 (WEA 3)
27	08:10		15:01 (WEA 1)		07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01		08:32	14:18 (WEA 3)
	16:48	17	15:18 (WEA 1)		17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	30	14:59 (WEA 1)	08:32 14:18 (WEA 3)
28	08:09		15:03 (WEA 1)		07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03		08:32	14:19 (WEA 3)
	16:50	13	15:16 (WEA 1)		17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	31	15:00 (WEA 1)	08:32 14:19 (WEA 3)
29	08:07		15:07 (WEA 1)			06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04		08:32	14:20 (WEA 3)
	16:52	5	15:12 (WEA 1)			19:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	31	15:01 (WEA 1)	08:32 14:20 (WEA 3)
30	08:06					06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06		08:32	14:21 (WEA 3)
	16:54					19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	31	15:01 (WEA 1)	08:32 14:21 (WEA 3)
31	08:04					06:54		04:56		05:29	06:22		07:11			08:32	14:23 (WEA 3)
	16:56					19:48		21:32		21:15	20:10		16:47			16:06	34 15:13 (WEA 1)
Sonnenscheinstunden			252		274	367	419	492	507	510	458	382	329	261	451	236	1082
astr.max.mögl.Beschattung			773														

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** B - Schwarzer Weg 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		[Januar		[Februar		[März		[April		[Mai		[Juni		[Juli		[August		[September		[Oktober		[November		[Dezember
1	08:32	14:24 (WEA 3)	08:02	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:35 (WEA 1)							08:07	14:35 (WEA 1)		
16:07	37	15:16 (WEA 1)	16:57	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45	16:02	30	15:05 (WEA 1)						08:09	14:36 (WEA 1)		
2	08:32	14:26 (WEA 3)	08:01	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:36 (WEA 1)							08:10	14:37 (WEA 1)		
16:08	36	15:17 (WEA 1)	16:59	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44	16:01	29	15:05 (WEA 1)						08:10	14:37 (WEA 1)		
3	08:32	14:28 (WEA 3)	07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:37 (WEA 1)							08:10	14:37 (WEA 1)		
16:09	34	15:18 (WEA 1)	17:01	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42	16:01	29	15:06 (WEA 1)						08:12	14:37 (WEA 1)		
4	08:31	14:29 (WEA 3)	07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:37 (WEA 1)							08:12	14:37 (WEA 1)		
16:10	31	15:18 (WEA 1)	17:03	17:58	19:55	20:49	21:37	21:47	21:08	20:01	18:48	16:40	16:00	29	15:06 (WEA 1)						08:13	14:38 (WEA 1)		
5	08:31	14:52 (WEA 1)	07:56	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	08:13	14:38 (WEA 1)							08:13	14:38 (WEA 1)		
16:12	28	15:20 (WEA 1)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	28	15:06 (WEA 1)						08:14	14:38 (WEA 1)		
6	08:31	14:52 (WEA 1)	07:54	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	08:14	14:38 (WEA 1)							08:14	14:38 (WEA 1)		
16:13	28	15:20 (WEA 1)	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	28	15:06 (WEA 1)						08:15	14:38 (WEA 1)		
7	08:30	14:53 (WEA 1)	07:52	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	08:16	14:38 (WEA 1)							08:16	14:38 (WEA 1)		
16:14	28	15:21 (WEA 1)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	15:58	28	15:06 (WEA 1)						08:17	14:38 (WEA 1)		
8	08:30	14:53 (WEA 1)	07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	08:17	14:38 (WEA 1)							08:17	14:38 (WEA 1)		
16:16	28	15:21 (WEA 1)	17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	15:58	31	15:07 (WEA 1)						08:18	14:38 (WEA 1)		
9	08:29	14:53 (WEA 1)	07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28	08:18	14:38 (WEA 1)							08:18	14:38 (WEA 1)		
16:17	29	15:22 (WEA 1)	17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	15:58	34	15:06 (WEA 1)						08:19	14:38 (WEA 1)		
10	08:29	14:53 (WEA 1)	07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	08:19	14:38 (WEA 1)							08:19	14:38 (WEA 1)		
16:19	29	15:22 (WEA 1)	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	15:57	36	15:06 (WEA 1)						08:20	14:38 (WEA 1)		
11	08:28	14:53 (WEA 1)	07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	08:21	14:38 (WEA 1)							08:21	14:38 (WEA 1)		
16:20	30	15:23 (WEA 1)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	15:57	37	15:07 (WEA 1)						08:21	14:38 (WEA 1)		
12	08:27	14:53 (WEA 1)	07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	08:22	14:38 (WEA 1)							08:22	14:38 (WEA 1)		
16:22	30	15:23 (WEA 1)	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	11	14:40 (WEA 1)	15:57	38	15:07 (WEA 1)				08:22	14:38 (WEA 1)		
13	08:26	14:53 (WEA 1)	07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36	08:23	14:38 (WEA 1)							08:23	14:38 (WEA 1)		
16:23	31	15:24 (WEA 1)	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	15	14:53 (WEA 1)	15:57	39	15:08 (WEA 1)				08:23	14:38 (WEA 1)		
14	08:26	14:54 (WEA 1)	07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	08:24	14:38 (WEA 1)							08:24	14:38 (WEA 1)		
16:25	30	15:24 (WEA 1)	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	19	14:55 (WEA 1)	15:57	39	15:08 (WEA 1)				08:24	14:38 (WEA 1)		
15	08:25	14:54 (WEA 1)	07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	08:25	14:38 (WEA 1)							08:25	14:38 (WEA 1)		
16:26	31	15:25 (WEA 1)	17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	21	14:56 (WEA 1)	15:57	40	15:08 (WEA 1)				08:25	14:38 (WEA 1)		
16	08:24	14:54 (WEA 1)	07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	08:26	14:38 (WEA 1)							08:26	14:38 (WEA 1)		
16:28	31	15:25 (WEA 1)	17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	23	14:57 (WEA 1)	15:57	40	15:09 (WEA 1)				08:26	14:38 (WEA 1)		
17	08:23	14:55 (WEA 1)	07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	08:26	14:38 (WEA 1)							08:26	14:38 (WEA 1)		
16:30	31	15:26 (WEA 1)	17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	24	14:58 (WEA 1)	15:57	39	15:08 (WEA 1)				08:26	14:38 (WEA 1)		
18	08:22	14:56 (WEA 1)	07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	08:27	14:38 (WEA 1)							08:27	14:38 (WEA 1)		
16:31	30	15:26 (WEA 1)	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	26	14:59 (WEA 1)	15:57	40	15:09 (WEA 1)				08:27	14:38 (WEA 1)		
19	08:21	14:56 (WEA 1)	07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	08:28	14:38 (WEA 1)							08:28	14:38 (WEA 1)		
16:33	30	15:26 (WEA 1)	17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	27	15:00 (WEA 1)	15:58	39	15:09 (WEA 1)				08:28	14:38 (WEA 1)		
20	08:19	14:56 (WEA 1)	07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	08:29	14:38 (WEA 1)							08:29	14:38 (WEA 1)		
16:35	30	15:26 (WEA 1)	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	29	15:01 (WEA 1)	15:58	40	15:09 (WEA 1)				08:29	14:38 (WEA 1)		
21	08:18	14:57 (WEA 1)	07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	08:29	14:38 (WEA 1)							08:29	14:38 (WEA 1)		
16:37	29	15:26 (WEA 1)	17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	29	15:01 (WEA 1)	15:58	40	15:10 (WEA 1)				08:30	14:38 (WEA 1)		
22	08:17	14:57 (WEA 1)	07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	08:30	14:38 (WEA 1)							08:30	14:38 (WEA 1)		
16:39	29	15:26 (WEA 1)	17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	30	15:02 (WEA 1)	15:59	40	15:10 (WEA 1)				08:30	14:38 (WEA 1)		
23	08:16	14:59 (WEA 1)	07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	08:30	14:38 (WEA 1)							08:30	14:38 (WEA 1)		
16:40	27	15:26 (WEA 1)	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	30	15:03 (WEA 1)	15:59	40	15:11 (WEA 1)				08:30	14:38 (WEA 1)		
24	08:14	14:59 (WEA 1)	07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56	08:31	14:38 (WEA 1)							08:31	14:38 (WEA 1)		
16:42	26	15:25 (WEA 1)	17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	30	15:03 (WEA 1)	16:00	39	15:11 (WEA 1)				08:31	14:38 (WEA 1)		
25	08:13	15:01 (WEA 1)	07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:00	07:58	08:31	14:38 (WEA 1)							08:31	14:38 (WEA 1)		
16:44	24	15:25 (WEA 1)	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	31	15:04 (WEA 1)	16:01	39	15:11 (WEA 1)				08:31	14:38 (WEA 1)		
26	08:12	15:01 (WEA 1)	07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59	08:31	14:38 (WEA 1)							08:31	14:38 (WEA 1)		
16:46	23	15:24 (WEA 1)	17:47																					

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** C - Schwarzer Weg 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember		
1	08:32	14:26 (WEA 3)	18:02	15:17 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:39 (WEA 1)
2	08:32	15:19 (WEA 1)	06:57	3 15:20 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45	16:02	29 15:08 (WEA 1)
3	08:32	14:27 (WEA 3)	08:01		07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:40 (WEA 1)
4	08:31	15:20 (WEA 1)	16:59		17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44	16:01	29 15:09 (WEA 1)
5	08:32	14:29 (WEA 3)	07:59		07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:41 (WEA 1)
6	08:31	15:21 (WEA 1)	17:01		17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42	16:01	28 15:09 (WEA 1)
7	08:31	14:29 (WEA 3)	07:57		06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:41 (WEA 1)
8	08:30	15:21 (WEA 1)	17:03		17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40	16:00	28 15:09 (WEA 1)
9	08:31	14:31 (WEA 3)	07:56		06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	08:13	14:43 (WEA 1)
10	08:31	15:22 (WEA 1)	17:05		18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	26 15:09 (WEA 1)
11	08:31	14:33 (WEA 3)	07:54		06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	08:14	14:19 (WEA 3)
12	08:31	15:23 (WEA 1)	17:07		18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	32 15:09 (WEA 1)
13	08:30	14:58 (WEA 1)	07:52		06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	08:16	14:17 (WEA 3)
14	08:30	15:24 (WEA 1)	17:09		18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	15:58	36 15:09 (WEA 1)
15	08:30	14:57 (WEA 1)	07:50		06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	08:17	14:17 (WEA 3)
16	08:30	15:25 (WEA 1)	17:11		18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	15:58	36 15:09 (WEA 1)
17	08:29	14:58 (WEA 1)	07:48		06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28	08:18	14:17 (WEA 3)
18	08:29	15:25 (WEA 1)	17:13		18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	15:58	37 15:09 (WEA 1)
19	08:29	14:57 (WEA 1)	07:46		06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	14:47 (WEA 1)	08:19
20	08:29	15:26 (WEA 1)	17:15		18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	4 14:51 (WEA 1)	15:57
21	08:28	14:57 (WEA 1)	07:44		06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	14:43 (WEA 1)	08:21
22	08:29	15:26 (WEA 1)	17:17		18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	12 14:55 (WEA 1)	15:57
23	08:27	14:57 (WEA 1)	07:42		06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	14:41 (WEA 1)	08:22
24	08:28	15:27 (WEA 1)	17:19		18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	17 14:58 (WEA 1)	15:57
25	08:26	14:58 (WEA 1)	07:40		06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36	14:40 (WEA 1)	08:23
26	08:23	15:27 (WEA 1)	17:21		18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	19 14:59 (WEA 1)	15:57
27	08:28	14:58 (WEA 1)	07:38		06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	14:38 (WEA 1)	08:24
28	08:25	15:28 (WEA 1)	17:23		18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	23 15:01 (WEA 1)	15:57
29	08:25	14:58 (WEA 1)	07:36		06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	14:38 (WEA 1)	08:25
30	08:26	15:28 (WEA 1)	17:25		18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	24 15:02 (WEA 1)	15:57
31	08:24	14:59 (WEA 1)	07:34		06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	14:37 (WEA 1)	08:26
1	08:28	15:29 (WEA 1)	17:27		18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	25 15:02 (WEA 1)	15:57
2	08:23	14:59 (WEA 1)	07:32		06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	14:36 (WEA 1)	08:26
3	08:30	15:29 (WEA 1)	17:29		18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	27 15:03 (WEA 1)	15:57
4	08:22	15:00 (WEA 1)	07:30		06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	14:36 (WEA 1)	08:27
5	08:31	15:30 (WEA 1)	17:31		18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	28 15:04 (WEA 1)	15:57
6	08:21	14:59 (WEA 1)	07:28		06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	14:36 (WEA 1)	08:28
7	08:29	15:30 (WEA 1)	17:33		18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	29 15:05 (WEA 1)	15:58
8	08:19	15:00 (WEA 1)	07:26		06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	14:36 (WEA 1)	08:29
9	08:35	15:30 (WEA 1)	17:35		18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	29 15:05 (WEA 1)	15:58
10	08:18	15:01 (WEA 1)	07:24		06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	14:36 (WEA 1)	08:29
11	08:37	15:31 (WEA 1)	17:37		18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	30 15:06 (WEA 1)	15:58
12	08:17	15:01 (WEA 1)	07:22		06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	14:36 (WEA 1)	08:30
13	08:39	15:30 (WEA 1)	17:39		18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	30 15:06 (WEA 1)	15:59
14	08:16	15:02 (WEA 1)	07:19		06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	14:36 (WEA 1)	08:30
15	08:40	15:31 (WEA 1)	17:41		18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	31 15:07 (WEA 1)	15:59
16	08:14	15:02 (WEA 1)	07:17		06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56	14:37 (WEA 1)	08:31
17	08:42	15:30 (WEA 1)	17:43		18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	30 15:07 (WEA 1)	16:00
18	08:13	15:04 (WEA 1)	07:15		06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58	14:37 (WEA 1)	08:31
19	08:44	15:30 (WEA 1)	17:45		18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	31 15:08 (WEA 1)	16:01
20	08:12	15:04 (WEA 1)	07:13		06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:59	07:57	14:38 (WEA 1)	08:31
21	08:46	15:29 (WEA 1)	17:47		18:39	20:35	21:25	21:49	21:23	20:22	19:07	18:00	16:07	30 15:08 (WEA 1)	16:01
22	08:10	15:06 (WEA 1)	07:10		06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:54	07:52	14:37 (WEA 1)	08:32
23	08:48	15:30 (WEA 1)	17:48		18:41	20:37	21:27	21:49	21:22	20:19	19:05	18:00	16:06	30 15:07 (WEA 1)	16:02
24	08:09	15:07 (WEA 1)	07:08		06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	14:38 (WEA 1)	08:32
25	08:50	15:29 (WEA 1)	17:50		18:42	20:39	21:28	21:48	21:20	20:17	19:02	18:00	16:05	30 15:08 (WEA 1)	16:03
26	08:07	15:08 (WEA 1)			06:09	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04	14:39 (WEA 1)	08:32
27	08:52	15:27 (WEA 1)			19:44	20:40	21:29	21:48	21:18	20:15	19:00	18:00	16:04	29 15:08 (WEA 1)	16:04
28	08:54	15:26 (WEA 1)			19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	30 15:09 (WEA 1)	16:05
29	08:04	15:12 (WEA 1)			06:54		04:56		05:29	06:22		07:11		08:32	
30	08:56	15:24 (WEA 1)			19:48		21:32		21:15	20:10		16:47		16:06	39 15:19 (WEA 1)
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	538	236	1127	
astr.max.mögl.Beschattung	887	3													

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** D - Schwarzer Weg 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1	08:32	14:28 (WEA 3)	08:02	15:15 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:44 (WEA 1)
2	16:07	38	15:21 (WEA 1)	16:57	14	15:29 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45
3	08:32	14:29 (WEA 3)	08:01	15:19 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:45 (WEA 1)
4	16:08	37	15:22 (WEA 1)	16:59	6	15:25 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44
5	08:32	14:30 (WEA 3)	07:59	15:20 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:46 (WEA 1)
6	16:09	37	15:23 (WEA 1)	17:01	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42	16:01	15:12 (WEA 1)
7	08:31	14:30 (WEA 3)	07:57	15:21 (WEA 1)	07:03	06:59	05:45	04:58	04:53	05:35	06:29	07:21	07:19	08:12	14:21 (WEA 3)
8	16:10	37	15:23 (WEA 1)	17:03	17:58	19:55	20:49	21:37	21:46	21:09	20:01	18:48	16:40	16:00	15:11 (WEA 1)
9	08:31	14:32 (WEA 3)	07:56	15:22 (WEA 1)	07:05	06:57	05:42	04:56	04:54	05:37	06:31	07:23	07:21	08:13	14:20 (WEA 3)
10	16:12	37	15:25 (WEA 1)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	15:12 (WEA 1)
11	08:31	14:33 (WEA 3)	07:54	15:23 (WEA 1)	07:06	06:54	05:40	04:54	04:51	05:39	06:32	07:25	07:23	08:14	14:19 (WEA 3)
12	16:13	35	15:25 (WEA 1)	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	15:11 (WEA 1)
13	08:30	14:35 (WEA 3)	07:52	15:24 (WEA 1)	07:07	06:52	05:37	04:50	04:56	05:40	06:34	07:27	07:25	08:16	14:18 (WEA 3)
14	16:14	35	15:27 (WEA 1)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	15:58	15:11 (WEA 1)
15	08:30	14:37 (WEA 3)	07:50	15:25 (WEA 1)	07:08	06:50	05:35	04:50	04:50	05:42	06:36	07:28	07:27	08:17	14:19 (WEA 3)
16	16:16	32	15:27 (WEA 1)	17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	15:58	15:11 (WEA 1)
17	08:29	15:02 (WEA 1)	07:48	15:26 (WEA 1)	07:09	06:47	05:33	04:48	04:49	05:44	06:38	07:30	07:28	14:49 (WEA 1)	15:57
18	16:17	26	15:28 (WEA 1)	17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	8	14:57 (WEA 1)
19	08:29	15:02 (WEA 1)	07:46	15:27 (WEA 1)	07:07	06:45	05:30	04:45	04:49	05:45	06:39	07:32	07:30	14:46 (WEA 1)	15:58
20	16:19	26	15:28 (WEA 1)	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	14	15:00 (WEA 1)
21	08:28	15:02 (WEA 1)	07:44	15:28 (WEA 1)	07:09	06:43	05:28	04:44	04:48	05:01	05:47	06:41	07:34	14:44 (WEA 1)	15:57
22	16:20	27	15:29 (WEA 1)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	18	15:02 (WEA 1)
23	08:27	15:02 (WEA 1)	07:42	15:29 (WEA 1)	07:10	06:40	05:26	04:42	04:48	05:02	05:49	06:43	07:36	14:43 (WEA 1)	15:57
24	16:22	27	15:29 (WEA 1)	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	20	15:03 (WEA 1)
25	08:26	15:02 (WEA 1)	07:40	15:30 (WEA 1)	07:11	06:38	05:23	04:40	04:48	05:03	05:51	06:44	07:38	14:42 (WEA 1)	15:57
26	16:23	28	15:30 (WEA 1)	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	22	15:04 (WEA 1)
27	08:26	15:02 (WEA 1)	07:38	15:31 (WEA 1)	07:12	06:35	05:21	04:39	04:47	05:04	05:52	06:46	07:39	14:41 (WEA 1)	15:57
28	16:25	29	15:31 (WEA 1)	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	24	15:05 (WEA 1)
29	08:25	15:02 (WEA 1)	07:36	15:32 (WEA 1)	07:13	06:33	05:19	04:38	04:47	05:05	05:54	06:48	07:41	14:40 (WEA 1)	15:57
30	16:26	29	15:31 (WEA 1)	17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	26	15:06 (WEA 1)
31	08:24	15:02 (WEA 1)	07:34	15:33 (WEA 1)	07:14	06:31	05:16	04:37	04:47	05:07	05:56	06:50	07:43	14:40 (WEA 1)	15:57
1	16:28	30	15:32 (WEA 1)	17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	27	15:07 (WEA 1)
2	08:23	15:03 (WEA 1)	07:32	15:34 (WEA 1)	07:15	06:28	05:14	04:37	04:47	05:08	05:58	06:51	07:45	14:39 (WEA 1)	15:57
3	16:30	30	15:33 (WEA 1)	17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	28	15:07 (WEA 1)
4	08:22	15:03 (WEA 1)	07:30	15:35 (WEA 1)	07:16	06:26	05:12	04:35	04:47	05:09	05:59	06:53	07:47	14:39 (WEA 1)	15:57
5	16:31	30	15:33 (WEA 1)	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	29	15:08 (WEA 1)
6	08:21	15:03 (WEA 1)	07:28	15:36 (WEA 1)	07:18	06:23	05:10	04:33	04:47	05:11	06:01	06:55	07:49	14:39 (WEA 1)	15:57
7	16:33	30	15:33 (WEA 1)	17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	30	15:09 (WEA 1)
8	08:19	15:04 (WEA 1)	07:26	15:37 (WEA 1)	07:19	06:21	05:07	04:30	04:47	05:12	06:03	06:57	07:50	14:39 (WEA 1)	15:57
9	16:35	30	15:34 (WEA 1)	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	30	15:09 (WEA 1)
10	08:18	15:04 (WEA 1)	07:24	15:38 (WEA 1)	07:20	06:18	05:05	04:28	04:47	05:13	06:04	06:58	07:52	14:39 (WEA 1)	15:57
11	16:37	30	15:34 (WEA 1)	17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	30	15:09 (WEA 1)
12	08:17	15:04 (WEA 1)	07:22	15:39 (WEA 1)	07:23	06:16	05:03	04:27	04:47	05:15	06:06	07:00	07:54	14:40 (WEA 1)	15:57
13	16:39	30	15:34 (WEA 1)	17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	30	15:10 (WEA 1)
14	08:16	15:05 (WEA 1)	07:19	15:40 (WEA 1)	07:24	06:14	05:01	04:25	04:47	05:16	06:08	07:02	07:56	14:40 (WEA 1)	15:57
15	16:40	30	15:35 (WEA 1)	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	30	15:10 (WEA 1)
16	08:14	15:05 (WEA 1)	07:17	15:41 (WEA 1)	07:25	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	14:40 (WEA 1)	15:57
17	16:42	29	15:34 (WEA 1)	17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	31	15:11 (WEA 1)
18	08:13	15:06 (WEA 1)	07:15	15:42 (WEA 1)	07:26	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:58	14:41 (WEA 1)	15:57
19	16:44	28	15:34 (WEA 1)	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	30	15:11 (WEA 1)
20	08:12	15:07 (WEA 1)	07:13	15:43 (WEA 1)	07:27	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:59	14:41 (WEA 1)	15:57
21	16:46	27	15:34 (WEA 1)	17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	30	15:11 (WEA 1)
22	08:10	15:08 (WEA 1)	07:10	15:44 (WEA 1)	07:28	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	14:41 (WEA 1)	15:57
23	16:48	26	15:34 (WEA 1)	17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	30	15:11 (WEA 1)
24	08:09	15:09 (WEA 1)	07:08	15:45 (WEA 1)	07:29	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	14:42 (WEA 1)	15:57
25	16:50	24	15:33 (WEA 1)	17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	29	15:11 (WEA 1)
26	08:07	15:10 (WEA 1)	07:07	15:46 (WEA 1)	07:30	06:09	05:48	04:58	04:50	05:26	06:18	07:12	07:07	14:43 (WEA 1)	15:57
27	16:52	22	15:32 (WEA 1)	17:51	18:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	28	15:11 (WEA 1)
28	08:06	15:11 (WEA 1)	07:06	15:46 (WEA 1)	07:31	06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	14:44 (WEA 1)	15:57
29	16:54	20	15:31 (WEA 1)	17:52	18:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	28	15:12 (WEA 1)
30	08:04	15:13 (WEA 1)	07:05	15:47 (WEA 1)	07:32	06:54	05:43	04:54	04:48	05:29	06:22	07:11	07:06	14:45 (WEA 1)	15:57
31	16:56	18	15:31 (WEA 1)	17:53	18:48	20:44	21:32	21:49	21:15	20:10	18:57	16:47	16:01	28	15:12 (WEA 1)
Sonnenscheinstunden		252	274	274	274	274	274	274	274	274	274	274	274	274	274
astr.max.mögl.Beschattung		914	914	914	914	914	914	914	914	914	914	914	914	914	914

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

Tag im Monat	Sonnenaufgang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang	(WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)		Zeitpunkt (SS:MM) Schattenende	(WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: E - Schwarzer Weg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1	08:32	14:29 (WEA 3)	08:02	15:16 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:47 (WEA 1)
2	16:07	36	15:22 (WEA 1)	16:57	18	15:34 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45
3	08:32	14:30 (WEA 3)	08:01	15:18 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:25 (WEA 3)
4	16:08	36	15:23 (WEA 1)	16:59	14	15:32 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44
5	08:32	14:32 (WEA 3)	07:59	15:22 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:23 (WEA 3)
6	16:09	35	15:24 (WEA 1)	17:01	6	15:28 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42
7	08:31	14:32 (WEA 3)	07:57	15:26 (WEA 1)	07:01	06:47	05:40	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:21 (WEA 3)
8	16:10	36	15:25 (WEA 1)	17:03	17:58	19:55	20:49	21:37	21:46	21:09	20:01	18:48	16:40	15:00	15:13 (WEA 1)
9	08:31	14:33 (WEA 3)	07:56	15:26 (WEA 1)	07:01	06:47	05:40	04:53	04:54	05:37	06:31	07:23	07:21	08:13	14:21 (WEA 3)
10	16:12	37	15:26 (WEA 1)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	15:14 (WEA 1)
11	08:31	14:34 (WEA 3)	07:54	15:27 (WEA 1)	07:01	06:47	05:40	04:53	04:51	05:45	06:39	07:32	07:23	08:14	14:20 (WEA 3)
12	16:13	36	15:27 (WEA 1)	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	15:13 (WEA 1)
13	08:30	14:36 (WEA 3)	07:52	15:28 (WEA 1)	07:01	06:47	05:40	04:53	04:56	05:40	06:34	07:27	07:25	08:16	14:20 (WEA 3)
14	16:14	36	15:28 (WEA 1)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	15:58	15:12 (WEA 1)
15	08:30	14:37 (WEA 3)	07:50	15:29 (WEA 1)	07:01	06:47	05:40	04:53	04:57	05:42	06:36	07:28	07:27	08:17	14:20 (WEA 3)
16	16:16	35	15:29 (WEA 1)	17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	8	15:00 (WEA 1)
17	08:29	14:39 (WEA 3)	07:48	15:30 (WEA 1)	07:01	06:47	05:40	04:53	04:58	05:44	06:38	07:30	07:28	14:49 (WEA 1)	15:58
18	16:17	32	15:30 (WEA 1)	17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	14	15:03 (WEA 1)
19	08:29	14:41 (WEA 3)	07:46	15:31 (WEA 1)	07:01	06:47	05:40	04:53	04:59	05:45	06:39	07:32	07:30	14:47 (WEA 1)	15:58
20	16:19	29	15:30 (WEA 1)	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	18	15:05 (WEA 1)
21	08:28	15:05 (WEA 1)	07:44	15:32 (WEA 1)	07:01	06:47	05:40	04:53	05:01	05:47	06:41	07:34	07:32	14:45 (WEA 1)	15:57
22	16:20	26	15:31 (WEA 1)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	21	15:06 (WEA 1)
23	08:27	15:05 (WEA 1)	07:42	15:32 (WEA 1)	07:01	06:47	05:40	04:53	05:02	05:49	06:43	07:36	07:34	21	15:06 (WEA 1)
24	16:22	27	15:32 (WEA 1)	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	23	15:07 (WEA 1)
25	08:26	15:05 (WEA 1)	07:40	15:33 (WEA 1)	07:01	06:47	05:40	04:53	05:03	05:51	06:44	07:38	07:36	23	15:07 (WEA 1)
26	16:23	27	15:32 (WEA 1)	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	24	15:08 (WEA 1)
27	08:26	15:05 (WEA 1)	07:38	15:34 (WEA 1)	07:01	06:47	05:40	04:53	05:04	05:52	06:46	07:39	07:38	24	15:08 (WEA 1)
28	16:25	28	15:33 (WEA 1)	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	26	15:09 (WEA 1)
29	08:25	15:05 (WEA 1)	07:36	15:35 (WEA 1)	07:01	06:47	05:40	04:53	05:05	05:54	06:48	07:41	07:40	26	15:09 (WEA 1)
30	16:26	29	15:34 (WEA 1)	17:25	18:19	20:15	21:08	21:46	21:39	20:46	19:34	18:22	16:21	28	15:10 (WEA 1)
31	08:24	15:06 (WEA 1)	07:34	15:36 (WEA 1)	07:01	06:47	05:40	04:53	05:07	05:56	06:50	07:43	07:42	28	15:10 (WEA 1)
1	16:28	29	15:35 (WEA 1)	17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	28	15:10 (WEA 1)
2	08:23	15:06 (WEA 1)	07:32	15:36 (WEA 1)	07:01	06:47	05:40	04:53	05:08	05:58	06:51	07:45	07:43	29	15:11 (WEA 1)
3	16:30	29	15:35 (WEA 1)	17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	29	15:11 (WEA 1)
4	08:22	15:06 (WEA 1)	07:30	15:37 (WEA 1)	07:01	06:47	05:40	04:53	05:09	05:59	06:53	07:47	07:45	29	15:11 (WEA 1)
5	16:31	30	15:36 (WEA 1)	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	29	15:11 (WEA 1)
6	08:21	15:06 (WEA 1)	07:28	15:38 (WEA 1)	07:01	06:47	05:40	04:53	05:11	06:01	06:55	07:49	07:47	30	15:12 (WEA 1)
7	16:33	30	15:36 (WEA 1)	17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	30	15:12 (WEA 1)
8	08:19	15:07 (WEA 1)	07:26	15:39 (WEA 1)	07:01	06:47	05:40	04:53	05:12	06:03	06:57	07:50	07:49	30	15:12 (WEA 1)
9	16:35	30	15:37 (WEA 1)	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	30	15:12 (WEA 1)
10	08:18	15:07 (WEA 1)	07:24	15:40 (WEA 1)	07:01	06:47	05:40	04:53	05:13	06:04	06:58	07:52	07:51	30	15:12 (WEA 1)
11	16:37	30	15:37 (WEA 1)	17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	30	15:12 (WEA 1)
12	08:17	15:07 (WEA 1)	07:22	15:41 (WEA 1)	07:01	06:47	05:40	04:53	05:15	06:06	07:00	07:54	07:52	30	15:13 (WEA 1)
13	16:39	30	15:37 (WEA 1)	17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	30	15:13 (WEA 1)
14	08:16	15:08 (WEA 1)	07:19	15:42 (WEA 1)	07:01	06:47	05:40	04:53	05:16	06:08	07:02	07:56	07:54	30	15:13 (WEA 1)
15	16:40	30	15:38 (WEA 1)	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	30	15:13 (WEA 1)
16	08:14	15:08 (WEA 1)	07:17	15:43 (WEA 1)	07:01	06:47	05:40	04:53	05:18	06:10	07:04	07:58	07:56	30	15:13 (WEA 1)
17	16:42	29	15:37 (WEA 1)	17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	30	15:13 (WEA 1)
18	08:13	15:09 (WEA 1)	07:15	15:44 (WEA 1)	07:01	06:47	05:40	04:53	05:19	06:11	07:05	07:59	07:58	30	15:14 (WEA 1)
19	16:44	29	15:38 (WEA 1)	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	30	15:14 (WEA 1)
20	08:12	15:09 (WEA 1)	07:13	15:45 (WEA 1)	07:01	06:47	05:40	04:53	05:21	06:13	07:07	07:52	07:51	30	15:14 (WEA 1)
21	16:46	28	15:37 (WEA 1)	17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	29	15:14 (WEA 1)
22	08:10	15:11 (WEA 1)	07:10	15:46 (WEA 1)	07:01	06:47	05:40	04:53	05:22	06:15	07:09	07:54	07:53	29	15:14 (WEA 1)
23	16:48	27	15:38 (WEA 1)	17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	28	15:13 (WEA 1)
24	08:09	15:11 (WEA 1)	07:08	15:47 (WEA 1)	07:01	06:47	05:40	04:53	05:24	06:17	07:11	07:06	06:03	28	15:13 (WEA 1)
25	16:50	26	15:37 (WEA 1)	17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	28	15:13 (WEA 1)
26	08:07	15:12 (WEA 1)	07:07	15:48 (WEA 1)	07:01	06:47	05:40	04:53	05:26	06:18	07:12	07:07	06:04	28	15:14 (WEA 1)
27	16:52	24	15:36 (WEA 1)	17:51	18:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	28	15:14 (WEA 1)
28	08:06	15:13 (WEA 1)	07:06	15:49 (WEA 1)	07:01	06:47	05:40	04:53	05:27	06:20	07:14	07:09	06:06	27	15:14 (WEA 1)
29	16:54	22	15:35 (WEA 1)	17:53	18:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	27	15:14 (WEA 1)
30	08:04	15:15 (WEA 1)	07:05	15:50 (WEA 1)	07:01	06:47	05:40	04:53	05:29	06:22	07:16	07:11	06:07	27	15:14 (WEA 1)
31	16:56	20	15:35 (WEA 1)	17:55	18:48	20:44	21:32	21:48	21:15	20:10	18:54	16:47	16:01	27	15:14 (WEA 1)
Sonnenscheinstunden		252	274	38	367	419	492	507	510	458	382	329	261	598	981
astr.max.mögl.Beschattung		928	928	928	928	928	928	928	928	928	928	928	928	928	928

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** F - Schwarzer Weg 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1 08:32	14:29 (WEA 3) 08:02	15:18 (WEA 1) 07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13		08:07	14:44 (WEA 1)
2 08:32	15:21 (WEA 1) 16:57	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45		16:02	15:11 (WEA 1)
3 08:32	14:30 (WEA 3) 08:01	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15		08:09	14:45 (WEA 1)
4 08:31	15:22 (WEA 1) 16:59	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:43		16:01	15:11 (WEA 1)
5 08:31	14:31 (WEA 3) 07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17		08:10	14:46 (WEA 1)
6 08:31	15:23 (WEA 1) 17:01	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42		16:01	15:12 (WEA 1)
7 08:30	14:32 (WEA 3) 07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19		08:12	14:46 (WEA 1)
8 08:30	15:24 (WEA 1) 17:03	17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40		16:00	15:11 (WEA 1)
9 08:29	14:34 (WEA 3) 07:56	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21		08:13	14:42 (WEA 3)
10 08:29	15:25 (WEA 1) 17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38		15:59	15:12 (WEA 1)
11 08:29	14:35 (WEA 3) 07:54	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23		08:14	14:21 (WEA 3)
12 08:28	15:26 (WEA 1) 17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36		15:59	15:12 (WEA 1)
13 08:28	14:37 (WEA 3) 07:52	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25		08:16	14:20 (WEA 3)
14 08:28	15:27 (WEA 1) 17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34		15:58	15:11 (WEA 1)
15 08:28	14:40 (WEA 3) 07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27		08:17	14:20 (WEA 3)
16 08:27	15:27 (WEA 1) 17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32		15:58	15:12 (WEA 1)
17 08:27	15:02 (WEA 1) 07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28		08:18	14:20 (WEA 3)
18 08:27	15:28 (WEA 1) 17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31		15:58	15:11 (WEA 1)
19 08:27	15:02 (WEA 1) 07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30		14:19 (WEA 3)	
20 08:27	15:28 (WEA 1) 17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29		15:57	15:11 (WEA 1)
21 08:27	15:02 (WEA 1) 07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32		14:20 (WEA 3)	
22 08:27	15:29 (WEA 1) 17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27		15:57	15:12 (WEA 1)
23 08:27	15:02 (WEA 1) 07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34		14:20 (WEA 3)	
24 08:27	15:30 (WEA 1) 17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26		15:57	15:12 (WEA 1)
25 08:26	15:02 (WEA 1) 07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36		14:20 (WEA 3)	
26 08:26	15:30 (WEA 1) 17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24		15:57	15:12 (WEA 1)
27 08:26	15:02 (WEA 1) 07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38		14:20 (WEA 3)	
28 08:26	15:31 (WEA 1) 17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22		15:57	15:12 (WEA 1)
29 08:25	15:02 (WEA 1) 07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40		14:21 (WEA 3)	
30 08:25	15:31 (WEA 1) 17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21		15:57	15:12 (WEA 1)
31 08:24	15:03 (WEA 1) 07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42		14:21 (WEA 3)	
1 08:24	15:32 (WEA 1) 17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19		15:57	15:12 (WEA 1)
2 08:23	15:03 (WEA 1) 07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43		14:20 (WEA 3)	
3 08:23	15:33 (WEA 1) 17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18		15:57	15:12 (WEA 1)
4 08:22	15:04 (WEA 1) 07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45		14:21 (WEA 3)	
5 08:22	15:33 (WEA 1) 17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16		15:57	15:12 (WEA 1)
6 08:21	15:03 (WEA 1) 07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47		14:20 (WEA 3)	
7 08:21	15:33 (WEA 1) 17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15		15:58	15:13 (WEA 1)
8 08:21	15:04 (WEA 1) 07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49		14:21 (WEA 3)	
9 08:21	15:34 (WEA 1) 17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14		15:58	15:13 (WEA 1)
10 08:21	15:05 (WEA 1) 07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51		14:20 (WEA 3)	
11 08:21	15:34 (WEA 1) 17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12		15:58	15:13 (WEA 1)
12 08:21	15:05 (WEA 1) 07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52		14:40 (WEA 1)	
13 08:21	15:34 (WEA 1) 17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11		15:59	15:13 (WEA 1)
14 08:21	15:06 (WEA 1) 07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54		14:40 (WEA 1)	
15 08:21	15:34 (WEA 1) 17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10		15:59	15:13 (WEA 1)
16 08:21	15:06 (WEA 1) 07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56		14:41 (WEA 1)	
17 08:21	15:34 (WEA 1) 17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09		15:10 (WEA 1)	
18 08:21	15:07 (WEA 1) 07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58		14:41 (WEA 1)	
19 08:21	15:34 (WEA 1) 17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08		15:11 (WEA 1)	
20 08:21	15:08 (WEA 1) 07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:59	07:58		14:42 (WEA 1)	
21 08:21	15:33 (WEA 1) 17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	18:00	16:07		15:11 (WEA 1)	
22 08:21	15:09 (WEA 1) 07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:54	07:53		14:42 (WEA 1)	
23 08:21	15:33 (WEA 1) 17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	18:00	16:06		15:10 (WEA 1)	
24 08:21	15:10 (WEA 1) 07:08	06:02	05:50	04:59	04:49	05:24	06:17	07:11	07:06	07:05		14:42 (WEA 1)	
25 08:21	15:33 (WEA 1) 17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	18:00	16:05		15:11 (WEA 1)	
26 08:21	15:11 (WEA 1) 07:07	06:05	05:48	04:58	04:50	05:26	06:18	07:12	07:07	07:06		14:43 (WEA 1)	
27 08:21	15:31 (WEA 1) 07:01	19:44	20:40	21:29	21:48	21:18	20:15	19:00	18:00	16:04		15:11 (WEA 1)	
28 08:21	15:12 (WEA 1) 07:00	06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	07:08		14:44 (WEA 1)	
29 08:21	15:30 (WEA 1) 07:00	19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03		15:12 (WEA 1)	
30 08:21	15:15 (WEA 1) 07:00	06:54		04:56		05:29	06:22		07:11			16:06	15:21 (WEA 1)
31 08:21	15:29 (WEA 1) 07:00	19:48		21:32		21:15	20:10		16:47			16:06	15:21 (WEA 1)
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	533	1064
astr.max.mögl.Beschattung	880	8											

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** G - Schwarzer Weg 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	14:31 (WEA 3)	08:02	15:18 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07
2	16:07	33	15:22 (WEA 1)	16:57	17	15:35 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55
3	08:32	14:33 (WEA 3)	08:01	15:20 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09
4	16:08	33	15:24 (WEA 1)	16:59	13	15:33 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53
5	08:32	14:34 (WEA 3)	07:59	15:24 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10
6	16:09	33	15:25 (WEA 1)	17:01	6	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
7	08:31	14:34 (WEA 3)	07:57	15:26 (WEA 1)	07:03	06:59	05:45	04:58	04:53	05:35	06:29	07:21	07:19	08:12
8	16:10	35	15:26 (WEA 1)	17:03	17	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
9	08:31	14:35 (WEA 3)	07:56	15:27 (WEA 1)	07:05	06:57	05:42	04:55	04:52	05:34	06:27	07:19	07:17	08:10
10	16:12	35	15:27 (WEA 1)	17:05	18	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
11	08:31	14:36 (WEA 3)	07:54	15:28 (WEA 1)	07:07	06:54	05:40	04:53	04:51	05:33	06:27	07:25	07:23	08:14
12	16:13	35	15:28 (WEA 1)	17:07	19	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
13	08:30	14:38 (WEA 3)	07:52	15:29 (WEA 1)	07:09	06:52	05:37	04:50	04:56	05:40	06:34	07:27	07:25	08:16
14	16:14	35	15:30 (WEA 1)	17:09	20	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
15	08:30	14:39 (WEA 3)	07:50	15:30 (WEA 1)	07:11	06:50	05:35	04:50	04:57	05:42	06:36	07:28	07:27	08:17
16	16:16	33	15:30 (WEA 1)	17:11	21	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
17	08:29	14:40 (WEA 3)	07:48	15:31 (WEA 1)	07:12	06:47	05:33	04:50	04:58	05:44	06:38	07:30	07:28	08:18
18	16:17	33	15:31 (WEA 1)	17:13	22	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
19	08:29	14:42 (WEA 3)	07:46	15:32 (WEA 1)	07:15	06:45	05:30	04:50	04:59	05:45	06:39	07:32	07:30	08:19
20	16:19	31	15:32 (WEA 1)	17:15	23	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
21	08:28	15:08 (WEA 1)	07:44	15:33 (WEA 1)	07:16	06:43	05:28	04:50	04:58	05:41	06:35	07:28	07:26	08:17
22	16:20	24	15:32 (WEA 1)	17:17	24	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
23	08:27	15:08 (WEA 1)	07:42	15:34 (WEA 1)	07:18	06:40	05:26	04:50	04:58	05:42	06:36	07:28	07:27	08:17
24	16:22	25	15:33 (WEA 1)	17:19	25	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
25	08:26	15:08 (WEA 1)	07:40	15:35 (WEA 1)	07:20	06:38	05:23	04:50	04:58	05:41	06:35	07:28	07:26	08:17
26	16:23	26	15:34 (WEA 1)	17:21	26	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
27	08:26	15:08 (WEA 1)	07:38	15:36 (WEA 1)	07:22	06:35	05:21	04:50	04:58	05:42	06:36	07:28	07:27	08:17
28	16:25	27	15:35 (WEA 1)	17:23	27	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
29	08:25	15:08 (WEA 1)	07:36	15:37 (WEA 1)	07:24	06:33	05:19	04:50	04:58	05:41	06:35	07:28	07:26	08:17
30	16:26	28	15:35 (WEA 1)	17:25	28	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
31	08:24	15:08 (WEA 1)	07:34	15:38 (WEA 1)	07:26	06:31	05:16	04:50	04:58	05:41	06:35	07:28	07:26	08:17
1	16:28	29	15:36 (WEA 1)	17:27	29	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
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3	16:30	29	15:37 (WEA 1)	17:29	30	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
4	08:22	15:09 (WEA 1)	07:30	15:40 (WEA 1)	07:30	06:26	05:12	04:50	04:58	05:41	06:35	07:28	07:26	08:17
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6	08:21	15:08 (WEA 1)	07:28	15:41 (WEA 1)	07:31	06:23	05:10	04:50	04:58	05:41	06:35	07:28	07:26	08:17
7	16:33	29	15:37 (WEA 1)	17:33	1	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
8	08:19	15:09 (WEA 1)	07:26	15:42 (WEA 1)	07:32	06:21	05:07	04:50	04:58	05:41	06:35	07:28	07:26	08:17
9	16:35	29	15:38 (WEA 1)	17:35	2	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
10	08:18	15:09 (WEA 1)	07:24	15:43 (WEA 1)	07:33	06:18	05:05	04:50	04:58	05:41	06:35	07:28	07:26	08:17
11	16:37	30	15:39 (WEA 1)	17:37	3	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
12	08:17	15:09 (WEA 1)	07:22	15:44 (WEA 1)	07:34	06:16	05:03	04:50	04:58	05:41	06:35	07:28	07:26	08:17
13	16:39	30	15:39 (WEA 1)	17:39	4	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
14	08:16	15:10 (WEA 1)	07:19	15:45 (WEA 1)	07:35	06:14	05:01	04:50	04:58	05:41	06:35	07:28	07:26	08:17
15	16:40	29	15:39 (WEA 1)	17:41	5	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
16	08:14	15:10 (WEA 1)	07:17	15:46 (WEA 1)	07:36	06:11	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
17	16:42	29	15:39 (WEA 1)	17:43	6	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
18	08:13	15:11 (WEA 1)	07:15	15:47 (WEA 1)	07:37	06:09	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
19	16:44	28	15:39 (WEA 1)	17:45	7	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
20	08:12	15:11 (WEA 1)	07:13	15:48 (WEA 1)	07:38	06:06	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
21	16:46	28	15:39 (WEA 1)	17:47	8	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
22	08:10	15:13 (WEA 1)	07:10	15:49 (WEA 1)	07:39	06:04	05:02	04:50	04:58	05:41	06:35	07:28	07:26	08:17
23	16:48	26	15:39 (WEA 1)	17:48	9	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
24	08:09	15:13 (WEA 1)	07:08	15:50 (WEA 1)	07:40	06:01	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
25	16:50	26	15:39 (WEA 1)	17:50	10	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
26	08:07	15:14 (WEA 1)	07:07	15:51 (WEA 1)	07:41	05:59	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
27	16:52	24	15:38 (WEA 1)	17:49	11	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
28	08:06	15:15 (WEA 1)	07:06	15:52 (WEA 1)	07:42	05:57	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
29	16:54	22	15:37 (WEA 1)	17:46	12	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
30	08:04	15:17 (WEA 1)	07:05	15:53 (WEA 1)	07:43	05:54	05:00	04:50	04:58	05:41	06:35	07:28	07:26	08:17
31	16:56	20	15:37 (WEA 1)	17:47	13	15:30 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50
Sonnenscheinstunden		252		274		367	419	492	507	510	458	382	329	261
astr.max.mögl.Beschattung		901		36									579	866

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** H - Gramnitzer Hauptstraße 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1	08:32 16:07	14:34 (WEA 3) 08:02 15:22 (WEA 1) 16:57	19	15:20 (WEA 1) 07:06 15:39 (WEA 1) 17:52	06:52 19:50	05:44 20:44	04:55 21:33	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45		08:07 16:02	14:27 (WEA 3) 15:16 (WEA 1)
2	08:32 16:08	14:35 (WEA 3) 08:01 15:24 (WEA 1) 16:59	15	15:22 (WEA 1) 07:04 15:37 (WEA 1) 17:54	06:49 19:52	05:42 20:46	04:54 21:34	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 16:43		08:09 16:01	14:26 (WEA 3) 15:16 (WEA 1)
3	08:32 16:09	14:36 (WEA 3) 07:59 15:26 (WEA 1) 17:01	11	15:24 (WEA 1) 07:01 15:35 (WEA 1) 17:56	06:47 19:53	05:40 20:48	04:53 21:35	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42		08:10 16:01	14:26 (WEA 3) 15:17 (WEA 1)
4	08:31 16:10	14:36 (WEA 3) 07:57 15:26 (WEA 1) 17:03		06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:37	04:54 21:46	05:35 21:09	06:29 20:01	07:21 18:48	07:19 16:40		08:12 16:00	14:25 (WEA 3) 15:16 (WEA 1)
5	08:31 16:12	14:37 (WEA 3) 07:56 15:28 (WEA 1) 17:05		06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38		08:13 16:01	14:25 (WEA 3) 15:16 (WEA 1)
6	08:31 16:13	14:38 (WEA 3) 07:54 15:29 (WEA 1) 17:07		06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36		08:14 16:01	14:24 (WEA 3) 15:15 (WEA 1)
7	08:30 16:14	14:39 (WEA 3) 07:52 15:31 (WEA 1) 17:09		06:52 18:04	06:37 20:01	05:32 20:55	04:50 21:40	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:34		08:16 16:01	14:23 (WEA 3) 15:14 (WEA 1)
8	08:30 16:16	14:40 (WEA 3) 07:50 15:32 (WEA 1) 17:11		06:50 18:06	06:35 20:02	05:30 20:56	04:50 21:41	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 16:32	12	14:54 (WEA 1) 08:17 15:06 (WEA 1) 15:58	14:24 (WEA 3) 15:15 (WEA 1)
9	08:29 16:17	14:41 (WEA 3) 07:48 15:32 (WEA 1) 17:13		06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:31	16	14:52 (WEA 1) 08:18 15:08 (WEA 1) 15:58	14:24 (WEA 3) 15:14 (WEA 1)
10	08:29 16:19	14:43 (WEA 3) 07:46 15:33 (WEA 1) 17:15		06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	04:59 21:43	05:45 20:56	06:39 19:46	07:32 18:34	07:30 16:29	19	14:51 (WEA 1) 08:19 15:10 (WEA 1) 15:57	14:24 (WEA 3) 15:13 (WEA 1)
11	08:28 16:20	14:45 (WEA 3) 07:44 15:34 (WEA 1) 17:17		06:43 18:11	06:28 20:08	05:24 21:02	04:48 21:43	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	22	14:49 (WEA 1) 08:21 15:11 (WEA 1) 15:57	14:25 (WEA 3) 15:13 (WEA 1)
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13	08:26 16:23	15:11 (WEA 1) 07:40 15:36 (WEA 1) 17:21		06:38 18:15	06:23 20:12	05:21 21:05	04:48 21:45	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 16:24	25	14:48 (WEA 1) 08:23 15:13 (WEA 1) 15:57	14:25 (WEA 3) 14:47 (WEA 1) 15:57
14	08:26 16:25	15:11 (WEA 1) 07:38 15:37 (WEA 1) 17:23		06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	27	14:47 (WEA 1) 08:24 15:14 (WEA 1) 15:57	14:25 (WEA 3) 14:47 (WEA 1) 15:57
15	08:25 16:26	15:11 (WEA 1) 07:36 15:37 (WEA 1) 17:25		06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:46	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	27	14:47 (WEA 1) 08:25 15:14 (WEA 1) 15:57	14:26 (WEA 3) 14:47 (WEA 1) 15:57
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17	08:23 16:30	15:11 (WEA 1) 07:32 15:39 (WEA 1) 17:29		06:28 18:22	06:14 20:19	05:14 21:12	04:47 21:47	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:18	28	14:47 (WEA 1) 08:26 15:15 (WEA 1) 15:57	14:26 (WEA 3) 14:47 (WEA 1) 15:57
18	08:22 16:31	15:12 (WEA 1) 07:30 15:40 (WEA 1) 17:31		06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	28	14:47 (WEA 1) 08:27 15:15 (WEA 1) 15:57	14:26 (WEA 3) 14:47 (WEA 1) 15:57
19	08:21 16:33	15:11 (WEA 1) 07:28 15:40 (WEA 1) 17:33		06:23 18:26	06:10 20:22	05:11 21:15	04:47 21:48	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 16:15	29	14:47 (WEA 1) 08:28 15:16 (WEA 1) 15:58	14:27 (WEA 3) 14:47 (WEA 1) 15:58
20	08:19 16:35	15:12 (WEA 1) 07:26 15:41 (WEA 1) 17:35		06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	29	14:47 (WEA 1) 08:29 15:16 (WEA 1) 15:58	14:27 (WEA 3) 14:47 (WEA 1) 15:58
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22	08:17 16:39	15:12 (WEA 1) 07:22 15:41 (WEA 1) 17:39		06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	29	14:48 (WEA 1) 08:30 15:17 (WEA 1) 15:59	14:28 (WEA 3) 14:48 (WEA 1) 15:59
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24	08:14 16:42	15:13 (WEA 1) 07:17 15:41 (WEA 1) 17:43		06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	28	14:49 (WEA 1) 08:31 15:17 (WEA 1) 16:00	14:29 (WEA 3) 14:50 (WEA 1) 16:00
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29	08:07 16:52	15:16 (WEA 1) 07:06 15:41 (WEA 1) 17:51		05:59 18:44	05:48 20:40	04:58 21:29	04:50 21:48	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 16:04	25	14:52 (WEA 1) 08:32 15:17 (WEA 1) 16:04	14:32 (WEA 3) 14:52 (WEA 1) 16:04
30	08:06 16:54	15:17 (WEA 1) 07:04 15:40 (WEA 1) 17:52		05:57 18:46	05:46 20:42	04:57 21:31	04:51 21:48	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 16:03	24	14:53 (WEA 1) 08:32 15:17 (WEA 1) 16:05	14:33 (WEA 3) 14:53 (WEA 1) 16:05
31	08:04 16:56	15:19 (WEA 1) 07:02 15:40 (WEA 1) 17:53		05:54 18:48	05:44 20:46	04:56 21:32	04:52 21:48	05:29 21:15	06:22 20:10	07:11 16:47	07:09 16:47	08:06 16:47	24	14:53 (WEA 1) 08:32 15:17 (WEA 1) 16:05	14:34 (WEA 3) 14:53 (WEA 1) 16:05
Sonnenscheinstunden		252	274	367	419	492	507	510	458	382	329	261	584	236	798
astr.max.mögl.Beschattung		884	45												

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: I - Gramnitzer Hauptstraße 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1	08:32	14:28 (WEA 3)	08:02	15:14 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:20 (WEA 3)
2	16:07	30	15:19 (WEA 1)	16:57	24	15:38 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45
3	08:32	14:29 (WEA 3)	08:01	15:15 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:20 (WEA 3)
4	16:08	32	15:21 (WEA 1)	16:59	22	15:37 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44
5	08:32	14:30 (WEA 3)	07:59	15:16 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:19 (WEA 3)
6	16:09	34	15:23 (WEA 1)	17:01	20	15:36 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42
7	08:31	14:30 (WEA 3)	07:57	15:18 (WEA 1)	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:18 (WEA 3)
8	16:10	36	15:24 (WEA 1)	17:03	16	15:34 (WEA 1)	17:58	19:55	20:49	21:37	21:46	21:09	20:01	18:48	16:40
9	08:31	14:31 (WEA 3)	07:56	15:21 (WEA 1)	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	08:13	14:18 (WEA 3)
10	16:12	37	15:26 (WEA 1)	17:05	10	15:31 (WEA 1)	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38
11	08:31	14:32 (WEA 3)	07:54	15:17 (WEA 1)	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	08:14	14:18 (WEA 3)
12	16:13	37	15:26 (WEA 1)	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	10	14:52 (WEA 1)
13	08:30	14:33 (WEA 3)	07:52	15:17 (WEA 1)	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	14:49 (WEA 1)	08:16
14	16:14	37	15:28 (WEA 1)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	16	15:05 (WEA 1)
15	08:30	14:34 (WEA 3)	07:50	15:17 (WEA 1)	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	14:47 (WEA 1)	08:17
16	16:16	38	15:29 (WEA 1)	17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	20	15:07 (WEA 1)
17	08:29	14:35 (WEA 3)	07:48	15:16 (WEA 1)	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28	14:46 (WEA 1)	08:18
18	16:17	37	15:30 (WEA 1)	17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	22	15:08 (WEA 1)
19	08:29	14:36 (WEA 3)	07:46	15:15 (WEA 1)	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	14:45 (WEA 1)	08:19
20	16:19	37	15:31 (WEA 1)	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	24	15:09 (WEA 1)
21	08:28	14:38 (WEA 3)	07:44	15:14 (WEA 1)	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	14:44 (WEA 1)	08:21
22	16:20	34	15:31 (WEA 1)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	26	15:10 (WEA 1)
23	08:27	14:41 (WEA 3)	07:42	15:13 (WEA 1)	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	14:43 (WEA 1)	08:22
24	16:22	30	15:32 (WEA 1)	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	28	15:11 (WEA 1)
25	08:26	15:07 (WEA 1)	07:40	15:12 (WEA 1)	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36	14:43 (WEA 1)	08:23
26	16:23	26	15:33 (WEA 1)	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	28	15:11 (WEA 1)
27	08:26	15:07 (WEA 1)	07:38	15:11 (WEA 1)	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	14:42 (WEA 1)	08:24
28	16:25	27	15:34 (WEA 1)	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	30	15:12 (WEA 1)
29	08:25	15:07 (WEA 1)	07:36	15:10 (WEA 1)	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	14:42 (WEA 1)	08:25
30	16:26	28	15:35 (WEA 1)	17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	30	15:12 (WEA 1)
31	08:24	15:07 (WEA 1)	07:34	15:09 (WEA 1)	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	14:42 (WEA 1)	08:26
32	16:28	29	15:36 (WEA 1)	17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	31	15:13 (WEA 1)
33	08:23	15:07 (WEA 1)	07:32	15:08 (WEA 1)	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	14:42 (WEA 1)	08:26
34	16:30	30	15:37 (WEA 1)	17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	31	15:13 (WEA 1)
35	08:22	15:07 (WEA 1)	07:30	15:07 (WEA 1)	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	14:42 (WEA 1)	08:27
36	16:31	31	15:38 (WEA 1)	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	31	15:13 (WEA 1)
37	08:21	15:07 (WEA 1)	07:28	15:06 (WEA 1)	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	14:42 (WEA 1)	08:28
38	16:33	30	15:37 (WEA 1)	17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	32	15:14 (WEA 1)
39	08:19	15:07 (WEA 1)	07:26	15:05 (WEA 1)	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	14:42 (WEA 1)	08:29
40	16:35	31	15:38 (WEA 1)	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	32	15:14 (WEA 1)
41	08:18	15:08 (WEA 1)	07:24	15:04 (WEA 1)	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	14:43 (WEA 1)	08:29
42	16:37	31	15:39 (WEA 1)	17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	31	15:14 (WEA 1)
43	08:17	15:07 (WEA 1)	07:22	15:03 (WEA 1)	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	14:43 (WEA 1)	08:30
44	16:39	32	15:39 (WEA 1)	17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	31	15:14 (WEA 1)
45	08:16	15:08 (WEA 1)	07:19	15:02 (WEA 1)	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	14:44 (WEA 1)	08:30
46	16:40	32	15:40 (WEA 1)	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	30	15:14 (WEA 1)
47	08:14	15:08 (WEA 1)	07:17	15:00 (WEA 1)	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56	14:44 (WEA 1)	08:31
48	16:42	31	15:39 (WEA 1)	17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	31	15:15 (WEA 1)
49	08:13	15:09 (WEA 1)	07:15	15:00 (WEA 1)	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58	14:45 (WEA 1)	08:31
50	16:44	31	15:40 (WEA 1)	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	30	15:15 (WEA 1)
51	08:12	15:09 (WEA 1)	07:13	15:00 (WEA 1)	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:52	07:51	14:46 (WEA 1)	08:31
52	16:46	31	15:40 (WEA 1)	17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	29	15:15 (WEA 1)
53	08:10	15:10 (WEA 1)	07:10	15:00 (WEA 1)	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:54	07:53	14:46 (WEA 1)	08:32
54	16:48	30	15:40 (WEA 1)	17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	28	15:14 (WEA 1)
55	08:09	15:10 (WEA 1)	07:08	15:00 (WEA 1)	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	06:03	27	15:14 (WEA 1)
56	16:50	30	15:40 (WEA 1)	17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	27	15:14 (WEA 1)
57	08:07	15:11 (WEA 1)	07:07	15:00 (WEA 1)	06:05	05:48	04:58	04:50	05:26	06:18	07:12	07:07	06:04	26	15:14 (WEA 1)
58	16:52	28	15:39 (WEA 1)	17:51	18:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	26	15:14 (WEA 1)
59	08:06	15:11 (WEA 1)	07:06	15:00 (WEA 1)	06:05	05:46	04:57	04:51	05:27	06:20	07:14	07:09	06:06	30	15:14 (WEA 1)
60	16:54	28	15:39 (WEA 1)	17:51	18:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	30	15:14 (WEA 1)
61	08:04	15:13 (WEA 1)	07:05	15:00 (WEA 1)	06:04	05:46	04:56	04:50	05:29	06:22	07:16	07:11	06:07	30	15:14 (WEA 1)
62	16:56	26	15:39 (WEA 1)	17:53	18:48	20:44	21:32	21:48	21:15	20:10	18:57	16:47	16:01	27	15:14 (WEA 1)
63	Sonnenscheinstunden	252	274	292	307	321	332	342	350	358	362	369	374	378	382
64	astr.max.mögl.Beschattung	981	924	872	820	768	716	664	612	560	508	456	404	352	877

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: J - Gramnitzer Hauptstraße 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember
1	08:32		14:25 (WEA 3)	08:02		15:12 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13							07:13		08:07
	16:07	34	15:19 (WEA 1)	16:57	26	15:40 (WEA 2)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45							16:45		16:02
2	08:32		14:26 (WEA 3)	08:01		15:13 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15							07:15		08:09
	16:08	35	15:21 (WEA 1)	16:59	23	15:36 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44							16:44		16:01
3	08:32		14:27 (WEA 3)	07:59		15:14 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17							07:17		08:10
	16:09	36	15:22 (WEA 1)	17:01	20	15:34 (WEA 1)	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42							16:42		16:01
4	08:31		14:28 (WEA 3)	07:57		15:16 (WEA 1)	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19							07:19		08:12
	16:10	38	15:31 (WEA 2)	17:03	17	15:33 (WEA 1)	17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40							16:40		16:00
5	08:31		14:29 (WEA 3)	07:56		15:19 (WEA 1)	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21							07:21		08:13
	16:12	45	15:34 (WEA 2)	17:05	11	15:30 (WEA 1)	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38							16:38		16:03
6	08:31		14:30 (WEA 3)	07:54		15:20 (WEA 1)	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23			14:49 (WEA 1)				07:23		08:14
	16:13	47	15:36 (WEA 2)	17:07		15:22 (WEA 1)	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36		12	15:01 (WEA 1)				16:36		16:04
7	08:30		14:31 (WEA 3)	07:52		15:23 (WEA 1)	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25			14:47 (WEA 1)				07:25		08:16
	16:14	50	15:38 (WEA 2)	17:09		15:24 (WEA 1)	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34		17	15:04 (WEA 1)				16:34		16:05
8	08:30		14:32 (WEA 3)	07:50		15:25 (WEA 1)	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27			14:45 (WEA 1)				07:27		08:17
	16:16	49	15:39 (WEA 2)	17:11		15:26 (WEA 1)	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32		20	15:05 (WEA 1)				16:32		16:06
9	08:29		14:33 (WEA 3)	07:48		15:27 (WEA 1)	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28			14:43 (WEA 1)				07:28		08:18
	16:17	50	15:40 (WEA 2)	17:13		15:28 (WEA 1)	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31		24	15:07 (WEA 1)				16:31		16:07
10	08:29		14:34 (WEA 3)	07:46		15:29 (WEA 1)	06:45	06:30	05:26	04:49	04:59	05:46	06:39	07:32	07:30			14:42 (WEA 1)				07:30		08:19
	16:19	49	15:41 (WEA 2)	17:15		15:30 (WEA 1)	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29		29	15:12 (WEA 2)				16:29		16:10
11	08:28		14:36 (WEA 3)	07:44		15:31 (WEA 1)	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32			14:42 (WEA 1)				07:32		08:21
	16:20	47	15:42 (WEA 2)	17:17		15:32 (WEA 1)	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27		34	15:16 (WEA 2)				16:27		16:11
12	08:27		14:39 (WEA 3)	07:42		15:33 (WEA 1)	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34			14:41 (WEA 1)				07:34		08:22
	16:22	41	15:42 (WEA 2)	17:19		15:34 (WEA 1)	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26		36	15:17 (WEA 2)				16:26		16:12
13	08:26		15:04 (WEA 1)	07:40		15:35 (WEA 1)	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36			14:40 (WEA 1)				07:36		08:23
	16:23	39	15:43 (WEA 2)	17:21		15:36 (WEA 1)	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24		39	15:19 (WEA 2)				16:24		16:13
14	08:26		15:04 (WEA 1)	07:38		15:37 (WEA 1)	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38			14:40 (WEA 1)				07:38		08:24
	16:25	40	15:44 (WEA 2)	17:23		15:38 (WEA 1)	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22		40	15:20 (WEA 2)				16:22		16:14
15	08:25		15:04 (WEA 1)	07:36		15:39 (WEA 1)	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40			14:40 (WEA 1)				07:40		08:25
	16:26	41	15:45 (WEA 2)	17:25		15:40 (WEA 1)	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21		41	15:21 (WEA 2)				16:21		16:15
16	08:24		15:05 (WEA 1)	07:34		15:41 (WEA 1)	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42			14:40 (WEA 1)				07:42		08:26
	16:28	41	15:46 (WEA 2)	17:27		15:42 (WEA 1)	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19		41	15:21 (WEA 2)				16:19		16:16
17	08:23		15:05 (WEA 1)	07:32		15:43 (WEA 1)	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43			14:40 (WEA 1)				07:43		08:26
	16:30	42	15:47 (WEA 2)	17:29		15:44 (WEA 1)	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18		42	15:22 (WEA 2)				16:18		16:17
18	08:22		15:05 (WEA 1)	07:30		15:45 (WEA 1)	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45			14:40 (WEA 1)				07:45		08:27
	16:31	43	15:48 (WEA 2)	17:31		15:46 (WEA 1)	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16		43	15:23 (WEA 2)				16:16		16:18
19	08:21		15:05 (WEA 1)	07:28		15:47 (WEA 1)	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47			14:40 (WEA 1)				07:47		08:28
	16:33	42	15:47 (WEA 2)	17:33		15:48 (WEA 1)	18:25	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15		43	15:23 (WEA 2)				16:15		16:19
20	08:19		15:05 (WEA 1)	07:26		15:49 (WEA 1)	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49			14:40 (WEA 1)				07:49		08:29
	16:35	43	15:48 (WEA 2)	17:35		15:50 (WEA 1)	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14		43	15:23 (WEA 2)				16:14		16:20
21	08:18		15:06 (WEA 1)	07:24		15:51 (WEA 1)	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51			14:41 (WEA 1)				07:51		08:29
	16:37	43	15:49 (WEA 2)	17:37		15:52 (WEA 1)	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12		43	15:24 (WEA 2)				16:12		16:21
22	08:17		15:05 (WEA 1)	07:22		15:53 (WEA 1)	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52			14:41 (WEA 1)				07:52		08:30
	16:39	43	15:48 (WEA 2)	17:39		15:54 (WEA 1)	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11		43	15:24 (WEA 2)				16:11		16:22
23	08:16		15:06 (WEA 1)	07:19		15:55 (WEA 1)	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54			14:42 (WEA 1)				07:54		08:30
	16:40	43	15:49 (WEA 2)	17:41		15:56 (WEA 1)	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10		42	15:24 (WEA 2)				16:10		16:23
24	08:14		15:06 (WEA 1)	07:17		15:57 (WEA 1)	06:14	06:01	05:04	04:48	05:18	06:10	07:04	07:58	07:56			14:42 (WEA 1)				07:56		08:31
	16:42	43	15:49 (WEA 2)	17:41		15:58 (WEA 1)	18:35	20:31	21:22	21:45	21:26	20:27	19:12	18:02	16:08		43	15:25 (WEA 2)				16:08		16:24
25	08:13		15:07 (WEA 1)	07:15		15:59 (WEA 1)	06:08	05:55	05:03	04:48	05:19	06:11	07:05	07:59	07:57			14:43 (WEA 1)				07:57		08:31
	16:44	42	15:49 (WEA 2)	17:45		16:00 (WEA 1)	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08		42	15:25 (WEA 2)				16:08		16:25
26	08:12		15:07 (WEA 1)	07:13		16:01 (WEA 1)	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59			14:44 (WEA 1)				07:59		08:31
	16:46	42	15:49 (WEA 2)	17:47		16:02 (WEA 1)	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07		41	15:25 (WEA 2)				16:07		16:26
27	08:10		15:08 (WEA 1)	07:10		16:03 (WEA 1)	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01			14:44 (WEA 1)				08:01		16:27
	16:48	41	15:49 (WEA 2)	17:48		16																		

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: K - Gramnitzer Hauptstraße 18

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember		
1	08:32		14:30 (WEA 3)	08:02		15:16 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13						07:13		08:07		14:21 (WEA 3)
2	16:07	24	14:54 (WEA 3)	17:52	27	15:43 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45								16:02	35	15:15 (WEA 1)
3	08:32		14:31 (WEA 3)	08:01		15:17 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15							08:09		14:21 (WEA 3)	
4	16:08	23	14:54 (WEA 3)	16:59	25	15:42 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44							16:01	35	15:15 (WEA 1)	
5	08:32		14:32 (WEA 3)	07:59		15:18 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17							08:10		14:21 (WEA 3)	
6	16:09	23	14:55 (WEA 3)	17:01	23	15:41 (WEA 1)	17:50	19:51	20:45	21:36	21:47	21:13	20:06	18:54	16:45							16:01	35	15:15 (WEA 1)	
7	08:31		14:32 (WEA 3)	07:57		15:19 (WEA 1)	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19							08:12		14:20 (WEA 3)	
8	16:10	24	15:21 (WEA 1)	17:03	20	15:39 (WEA 1)	17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40							16:00	35	15:14 (WEA 1)	
9	08:31		14:33 (WEA 3)	07:56		15:21 (WEA 1)	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21		14:54 (WEA 1)					08:13		14:20 (WEA 3)	
10	16:12	30	15:25 (WEA 1)	17:05	17	15:38 (WEA 1)	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	12	15:06 (WEA 1)					15:59	34	15:14 (WEA 1)	
11	08:31		14:34 (WEA 3)	07:54		15:24 (WEA 1)	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23		14:52 (WEA 1)					08:14		14:20 (WEA 3)	
12	16:13	32	15:26 (WEA 1)	17:07	11	15:35 (WEA 1)	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	17	15:09 (WEA 1)					15:59	33	15:13 (WEA 1)	
13	08:30		14:35 (WEA 3)	07:52			06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25		14:50 (WEA 1)					08:16		14:19 (WEA 3)	
14	16:14	34	15:29 (WEA 1)	17:09			18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	20	15:10 (WEA 1)					15:58	30	15:11 (WEA 1)	
15	08:30		14:36 (WEA 3)	07:50			06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27		14:49 (WEA 1)					08:17		14:20 (WEA 3)	
16	16:16	35	15:30 (WEA 1)	17:11			18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	23	15:12 (WEA 1)					15:58	26	15:10 (WEA 1)	
17	08:29		14:37 (WEA 3)	07:48			06:47	06:33	05:28	04:47	04:58	05:43	06:37	07:30	07:28		14:48 (WEA 1)					15:57	24	14:58 (WEA 3)	
18	16:17	35	15:31 (WEA 1)	17:13			18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	25	15:13 (WEA 1)					15:58	23	14:43 (WEA 3)	
19	08:29		14:37 (WEA 3)	07:46			06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30		14:47 (WEA 1)					08:19		14:20 (WEA 3)	
20	16:19	36	15:32 (WEA 1)	17:15			18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	26	15:13 (WEA 1)					15:57	23	14:43 (WEA 3)	
21	08:28		14:39 (WEA 3)	07:44			06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32		14:46 (WEA 1)					08:21		14:21 (WEA 3)	
22	16:20	35	15:33 (WEA 1)	17:17			18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	28	15:14 (WEA 1)					15:57	24	14:45 (WEA 3)	
23	08:27		14:40 (WEA 3)	07:42			06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34		14:46 (WEA 1)					08:22		14:21 (WEA 3)	
24	16:22	34	15:34 (WEA 1)	17:19			18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	29	15:15 (WEA 1)					15:57	24	14:45 (WEA 3)	
25	08:26		14:42 (WEA 3)	07:40			06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36		14:45 (WEA 1)					08:23		14:21 (WEA 3)	
26	16:23	33	15:35 (WEA 1)	17:21			18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	30	15:15 (WEA 1)					15:57	25	14:46 (WEA 3)	
27	08:26		15:11 (WEA 1)	07:38			06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38		14:45 (WEA 1)					08:24		14:22 (WEA 3)	
28	16:25	25	15:36 (WEA 1)	17:23			18:16	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	31	15:16 (WEA 1)					15:57	27	14:46 (WEA 3)	
29	08:25		15:11 (WEA 1)	07:36			06:33	06:19	05:18	04:47	05:05	05:46	06:48	07:41	07:40		14:45 (WEA 1)					08:25		14:22 (WEA 3)	
30	16:26	26	15:37 (WEA 1)	17:25			18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	31	15:16 (WEA 1)					15:57	25	14:47 (WEA 3)	
31	08:24		15:11 (WEA 1)	07:34			06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42		14:45 (WEA 1)					08:26		14:23 (WEA 3)	
32	16:28	27	15:38 (WEA 1)	17:27			18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	31	15:16 (WEA 1)					15:57	24	14:47 (WEA 3)	
33	08:23		15:11 (WEA 1)	07:32			06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43		14:45 (WEA 1)					08:26		14:22 (WEA 3)	
34	16:30	28	15:39 (WEA 1)	17:29			18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	32	15:17 (WEA 1)					15:57	25	14:47 (WEA 3)	
35	08:22		15:11 (WEA 1)	07:30			06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45		14:45 (WEA 1)					08:27		14:23 (WEA 3)	
36	16:31	29	15:40 (WEA 1)	17:31			18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	32	15:17 (WEA 1)					15:57	25	14:48 (WEA 3)	
37	08:21		15:11 (WEA 1)	07:28			06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47		14:46 (WEA 1)					08:28		14:23 (WEA 3)	
38	16:32	29	15:41 (WEA 1)	17:33			18:25	20:22	21:14	21:47	21:33	20:45	19:33	18:21	16:17	31	15:17 (WEA 1)					15:58	26	14:49 (WEA 3)	
39	08:19		15:11 (WEA 1)	07:26			06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49		14:46 (WEA 1)					08:29		14:23 (WEA 3)	
40	16:35	30	15:41 (WEA 1)	17:35			18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	31	15:17 (WEA 1)					15:58	26	14:49 (WEA 3)	
41	08:18		15:11 (WEA 1)	07:24			06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51		14:46 (WEA 1)					08:29		14:24 (WEA 3)	
42	16:37	31	15:42 (WEA 1)	17:37			18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	31	15:17 (WEA 1)					15:58	26	14:50 (WEA 3)	
43	08:17		15:11 (WEA 1)	07:22			06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52		14:47 (WEA 1)					08:30		14:24 (WEA 3)	
44	16:39	31	15:42 (WEA 1)	17:39			18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	30	15:17 (WEA 1)					15:59	26	14:50 (WEA 3)	
45	08:16		15:12 (WEA 1)	07:19			06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54		14:48 (WEA 1)					08:30		14:25 (WEA 3)	
46	16:40	31	15:43 (WEA 1)	17:41			18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	29	15:17 (WEA 1)					15:59	26	14:51 (WEA 3)	
47	08:14		15:11 (WEA 1)	07:17			06:14	06:01	05:08	04:48	05:18	06:10	07:04	07:58	07:56		14:48 (WEA 1)					08:31		14:25 (WEA 3)	
48	16:42	32	15:43 (WEA 1)	17:43			18:35	20:32	21:23	21:49	21:28	20:29	19:13	18:02	16:09	29	15:17 (WEA 1)					16:00	26	14:52 (WEA 3)	
49	08:13		15:12 (WEA 1)	07:15			06:08	05:58	05:03	04:48	05:19	06:11	07:05	07:59	07:58		14:49 (WEA 1)					08:31		14:26 (WEA 3)	
50	16:44	32	15:44 (WEA 1)	17:45			18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	28	15:17 (WEA 1)					16:01	25	14:51 (WEA 3)	
51	08:12		15:12 (WEA 1)	07:13			06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59		14:50 (WEA 1)					08:31		14:27 (WEA 3)	
52	16:46	31	15:43 (WEA 1)	17:47			18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	27	15:17 (WEA 1)					16:01	25	14:52 (WEA 3)	
53	08:10		15:13 (WEA 1)	07:10			06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01		14:50 (WEA 1)					08:32		14:27 (WEA 3)	
54	16:48	31	15:44 (WEA 1)	17:48			18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	26	15:16 (WEA 1)					16:02	25	14:52 (WEA 3)	
55	08:09		15:13 (WEA 1)	07:08			06:02	05:50	04:49	04:50	05:24	06:17	07:11	07:06	08:03		14:51 (WEA 1)					08:32		14:28 (WEA 3)	
56	16:50	31	15:44 (WEA 1)	17:50			18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	25	15:16 (WEA 1)					16:03	25	14:53 (WEA 3)	
57	08:07		15:13 (WEA 1)				06:59	05:48	04:																

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: L - Gramnitzer Hauptstraße 14a

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	14:33 (WEA 3) 08:02	15:19 (WEA 1) 07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:23 (WEA 3)
2	16:07	24 14:37 (WEA 3) 16:59	26 15:45 (WEA 1) 17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45	16:02	35 15:17 (WEA 1)
3	08:32	14:34 (WEA 3) 08:01	15:19 (WEA 1) 07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:23 (WEA 3)
4	16:08	23 14:37 (WEA 3) 16:59	26 15:45 (WEA 1) 17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44	16:01	33 15:16 (WEA 1)
5	08:32	14:35 (WEA 3) 07:59	15:20 (WEA 1) 07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:23 (WEA 3)
6	16:09	23 14:58 (WEA 3) 17:01	24 15:44 (WEA 1) 17:56	19:53	20:47	21:35	21:47	21:10	20:03	18:50	16:42	16:01	33 15:16 (WEA 1)
7	08:31	14:35 (WEA 3) 07:57	15:22 (WEA 1) 06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:22 (WEA 3)
8	16:10	22 14:57 (WEA 3) 17:03	20 15:42 (WEA 1) 17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40	6 15:05 (WEA 1) 16:00	32 15:15 (WEA 1)
9	08:31	14:36 (WEA 3) 07:56	15:23 (WEA 1) 06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	14:56 (WEA 1) 16:03	14:23 (WEA 3)
10	16:12	22 14:58 (WEA 3) 17:05	18 15:41 (WEA 1) 18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	14 15:10 (WEA 1) 15:59	30 15:14 (WEA 1)
11	08:31	14:36 (WEA 3) 07:54	15:26 (WEA 1) 06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	14:54 (WEA 1) 16:04	14:22 (WEA 3)
12	16:13	23 15:24 (WEA 1) 17:07	13 15:39 (WEA 1) 18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	18 15:12 (WEA 1) 15:59	25 15:11 (WEA 1)
13	08:30	14:38 (WEA 3) 07:52	15:30 (WEA 1) 06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	14:52 (WEA 1) 16:06	14:22 (WEA 3)
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15	08:30	14:38 (WEA 3) 07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	14:51 (WEA 1) 16:07	14:23 (WEA 3)
16	16:16	31 15:30 (WEA 1) 17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	24 15:15 (WEA 1) 15:58	23 14:46 (WEA 3)
17	08:29	14:39 (WEA 3) 07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28	14:50 (WEA 1) 16:08	14:23 (WEA 3)
18	16:17	33 15:32 (WEA 1) 17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	25 15:15 (WEA 1) 15:58	23 14:46 (WEA 3)
19	08:29	14:40 (WEA 3) 07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	14:49 (WEA 1) 16:09	14:23 (WEA 3)
20	16:19	33 15:33 (WEA 1) 17:15	18:09	20:06	21:00	21:42	21:42	20:56	19:46	18:34	16:29	27 15:16 (WEA 1) 15:57	23 14:46 (WEA 3)
21	08:28	14:41 (WEA 3) 07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	14:49 (WEA 1) 16:02	14:24 (WEA 3)
22	16:20	34 15:34 (WEA 1) 17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	28 15:17 (WEA 1) 15:57	24 14:48 (WEA 3)
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27	08:26	14:46 (WEA 3) 07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	14:48 (WEA 1) 16:04	14:24 (WEA 3)
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30	16:26	24 15:39 (WEA 1) 17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	30 15:18 (WEA 1) 15:57	25 14:50 (WEA 3)
31	08:24	15:15 (WEA 1) 07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	14:48 (WEA 1) 16:06	14:25 (WEA 3)
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7	16:33	28 15:42 (WEA 1) 17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	30 15:19 (WEA 1) 15:58	26 14:52 (WEA 3)
8	08:19	15:14 (WEA 1) 07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	14:49 (WEA 1) 16:09	14:26 (WEA 3)
9	16:35	29 15:43 (WEA 1) 17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	30 15:19 (WEA 1) 15:58	25 14:51 (WEA 3)
10	08:18	15:15 (WEA 1) 07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	14:50 (WEA 1) 16:09	14:27 (WEA 3)
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14	08:16	15:15 (WEA 1) 07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	14:51 (WEA 1) 16:10	14:28 (WEA 3)
15	16:40	30 15:45 (WEA 1) 17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	28 15:19 (WEA 1) 15:59	25 14:53 (WEA 3)
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17	16:42	31 15:45 (WEA 1) 17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	27 14:52 (WEA 1) 16:00	26 14:52 (WEA 3)
18	08:13	15:15 (WEA 1) 07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58	14:53 (WEA 1) 16:12	14:29 (WEA 3)
19	16:44	31 15:46 (WEA 1) 17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	26 15:19 (WEA 1) 16:01	25 14:54 (WEA 3)
20	08:12	15:15 (WEA 1) 07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:52	07:59	14:54 (WEA 1) 16:13	14:30 (WEA 3)
21	16:46	31 15:46 (WEA 1) 17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	18:00	16:07	25 15:19 (WEA 1) 16:01	25 14:55 (WEA 3)
22	08:10	15:16 (WEA 1) 07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:54	08:01	14:54 (WEA 1) 16:14	14:30 (WEA 3)
23	16:48	31 15:47 (WEA 1) 17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	18:00	16:06	24 15:18 (WEA 1) 16:02	25 14:55 (WEA 3)
24	08:09	15:16 (WEA 1) 07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	14:26 (WEA 3) 16:03	14:31 (WEA 3)
25	16:50	30 15:46 (WEA 1) 17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	18:04	16:05	31 15:18 (WEA 1) 16:03	25 14:56 (WEA 3)
26	08:07	15:16 (WEA 1) 07:07	06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04	14:25 (WEA 3) 16:04	14:31 (WEA 3)
27	16:52	30 15:46 (WEA 1) 17:51	19:44	20:40	21:29	21:48	21:18	20:15	19:00	18:00	16:04	33 15:18 (WEA 1) 16:04	25 14:56 (WEA 3)
28	08:06	15:17 (WEA 1) 07:06	06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06	30 15:19 (WEA 1) 16:02	24 14:57 (WEA 3)
29	16:54	28 15:45 (WEA 1) 17:49	19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	34 15:18 (WEA 1) 16:05	24 14:56 (WEA 3)
30	08:04	15:18 (WEA 1) 07:05	06:54	04:56	04:56	05:29	06:22	07:11	07:11	07:11	08:06	34 15:18 (WEA 1) 16:05	24 14:57 (WEA 3)
31	16:56	28 15:46 (WEA 1) 17:50	19:48	21:32	21:32	21:15	20:10	16:47	16:47	16:47	16:47	16:06	24 14:57 (WEA 3)
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236	
astr.max.mögl.Beschattung	884	131									721	802	

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: M - Gramnitzer Hauptstraße 14

Annahmen für Schattenwurfberechnung

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Die Sonne scheint täglich von Sonnenauf- bis -untergang

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Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	14:33 (WEA 3) 08:02	15:19 (WEA 1) 07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	14:24 (WEA 3)
2	16:07	24 14:57 (WEA 3) 16:57	26 15:45 (WEA 1) 17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45	16:02	34 15:17 (WEA 1)
3	08:32	14:34 (WEA 3) 08:01	15:20 (WEA 1) 07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	14:24 (WEA 3)
4	16:08	23 14:57 (WEA 3) 16:59	24 15:44 (WEA 1) 17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44	16:01	34 15:17 (WEA 1)
5	08:32	14:35 (WEA 3) 07:59	15:21 (WEA 1) 07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10	14:24 (WEA 3)
6	16:09	23 14:58 (WEA 3) 17:01	22 15:43 (WEA 1) 17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42	16:01	34 15:17 (WEA 1)
7	08:31	14:35 (WEA 3) 07:57	15:23 (WEA 1) 06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	14:23 (WEA 3)
8	16:10	23 14:58 (WEA 3) 17:03	18 15:41 (WEA 1) 17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40	16:00	32 15:15 (WEA 1)
9	08:31	14:37 (WEA 3) 07:56	15:25 (WEA 1) 06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	14:58 (WEA 1) 08:13	14:24 (WEA 3)
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11	08:31	14:37 (WEA 3) 07:54	15:28 (WEA 1) 06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	14:55 (WEA 1) 08:14	14:23 (WEA 3)
12	16:13	28 15:27 (WEA 1) 17:07	8 15:36 (WEA 1) 18:02	19:52	19:59	20:53	21:39	21:45	21:04	19:56	18:43	15 15:10 (WEA 1) 15:59	28 15:13 (WEA 1)
13	08:30	14:38 (WEA 3) 07:52	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	14:53 (WEA 1) 08:16	14:23 (WEA 3)
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15	08:30	14:39 (WEA 3) 07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	14:52 (WEA 1) 08:17	14:24 (WEA 3)
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19	08:29	14:41 (WEA 3) 07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	14:50 (WEA 1) 08:19	14:23 (WEA 3)
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21	08:28	14:42 (WEA 3) 07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	14:49 (WEA 1) 08:21	14:24 (WEA 3)
22	16:20	34 15:35 (WEA 1) 17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	27 15:16 (WEA 1) 15:57	24 14:48 (WEA 3)
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24	16:22	34 15:36 (WEA 1) 17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	28 15:17 (WEA 1) 15:57	23 14:48 (WEA 3)
25	08:26	14:45 (WEA 3) 07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36	14:49 (WEA 1) 08:23	14:25 (WEA 3)
26	16:23	32 15:37 (WEA 1) 17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	28 15:17 (WEA 1) 15:57	24 14:49 (WEA 3)
27	08:26	14:48 (WEA 3) 07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	14:48 (WEA 1) 08:24	14:25 (WEA 3)
28	16:25	28 15:38 (WEA 1) 17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	30 15:18 (WEA 1) 15:57	24 14:49 (WEA 3)
29	08:25	15:15 (WEA 1) 07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	14:48 (WEA 1) 08:25	14:26 (WEA 3)
30	16:26	24 15:39 (WEA 1) 17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	30 15:18 (WEA 1) 15:57	24 14:50 (WEA 3)
31	08:24	15:15 (WEA 1) 07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	14:48 (WEA 1) 08:26	14:26 (WEA 3)
1	16:28	25 15:40 (WEA 1) 17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	30 15:18 (WEA 1) 15:57	25 14:51 (WEA 3)
2	08:23	15:15 (WEA 1) 07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	14:48 (WEA 1) 08:26	14:26 (WEA 3)
3	16:30	26 15:41 (WEA 1) 17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	31 15:19 (WEA 1) 15:57	24 14:50 (WEA 3)
4	08:22	15:15 (WEA 1) 07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	14:49 (WEA 1) 08:27	14:26 (WEA 3)
5	16:31	27 15:42 (WEA 1) 17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	30 15:19 (WEA 1) 15:57	25 14:51 (WEA 3)
6	08:21	15:14 (WEA 1) 07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	14:49 (WEA 1) 08:28	14:27 (WEA 3)
7	16:33	28 15:42 (WEA 1) 17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	30 15:19 (WEA 1) 15:58	25 14:52 (WEA 3)
8	08:19	15:14 (WEA 1) 07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	14:49 (WEA 1) 08:29	14:27 (WEA 3)
9	16:35	29 15:43 (WEA 1) 17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	30 15:19 (WEA 1) 15:58	25 14:52 (WEA 3)
10	08:18	15:15 (WEA 1) 07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	14:50 (WEA 1) 08:29	14:28 (WEA 3)
11	16:37	29 15:44 (WEA 1) 17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	29 15:19 (WEA 1) 15:58	25 14:53 (WEA 3)
12	08:17	15:14 (WEA 1) 07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	14:50 (WEA 1) 08:30	14:28 (WEA 3)
13	16:39	30 15:44 (WEA 1) 17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	29 15:19 (WEA 1) 15:59	25 14:53 (WEA 3)
14	08:16	15:15 (WEA 1) 07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	14:51 (WEA 1) 08:30	14:29 (WEA 3)
15	16:40	30 15:45 (WEA 1) 17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	28 15:19 (WEA 1) 15:59	25 14:54 (WEA 3)
16	08:14	15:15 (WEA 1) 07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56	14:52 (WEA 1) 08:31	14:29 (WEA 3)
17	16:42	30 15:45 (WEA 1) 17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	27 15:19 (WEA 1) 16:00	25 14:54 (WEA 3)
18	08:13	15:15 (WEA 1) 07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58	14:53 (WEA 1) 08:31	14:29 (WEA 3)
19	16:44	31 15:46 (WEA 1) 17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	26 15:19 (WEA 1) 16:01	25 14:54 (WEA 3)
20	08:12	15:15 (WEA 1) 07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:52	07:51	14:54 (WEA 1) 08:31	14:31 (WEA 3)
21	16:46	30 15:45 (WEA 1) 17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	18:00	16:07	25 15:19 (WEA 1) 16:01	24 14:55 (WEA 3)
22	08:10	15:16 (WEA 1) 07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:54	07:53	14:54 (WEA 1) 08:32	14:31 (WEA 3)
23	16:48	30 15:46 (WEA 1) 17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	18:00	16:06	24 15:18 (WEA 1) 16:02	25 14:56 (WEA 3)
24	08:09	15:16 (WEA 1) 07:08	06:01	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	14:28 (WEA 3) 08:32	14:31 (WEA 3)
25	16:50	30 15:46 (WEA 1) 17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	18:00	16:05	28 15:18 (WEA 1) 16:03	25 14:56 (WEA 3)
26	08:07	15:17 (WEA 1) 07:07	06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04	14:26 (WEA 3) 08:32	14:32 (WEA 3)
27	16:52	28 15:45 (WEA 1) 17:52	19:44	20:40	21:29	21:48	21:18	20:15	19:00	18:00	16:04	32 15:18 (WEA 1) 16:04	24 14:56 (WEA 3)
28	08:06	15:17 (WEA 1) 07:06	06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06	14:25 (WEA 3) 08:32	14:33 (WEA 3)
29	16:54	28 15:45 (WEA 1) 17:54	19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	34 15:18 (WEA 1) 16:05	24 14:57 (WEA 3)
30	08:04	15:19 (WEA 1) 07:05	06:54	05:44	04:56	04:50	05:29	06:22	07:11	07:06	08:03	14:25 (WEA 3) 08:32	14:33 (WEA 3)
31	16:56	26 15:45 (WEA 1) 17:56	19:48	20:44	21:32	21:49	21:15	20:10	18:57	16:47	16:01	16:06	24 14:57 (WEA 3)
Sonnenscheinstunden		252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung		882	112								691		797

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: N - Gramnitzer Hauptstraße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember
1	08:32			14:35 (WEA 3) 08:02		15:21 (WEA 1) 07:06		06:52		05:44		04:55		04:51		05:30		06:24		07:16		07:13		08:07
	16:07	24		14:59 (WEA 3) 16:57		15:46 (WEA 1) 17:52		19:50		20:44		21:33		21:48		21:13		20:08		18:55		16:45		16:02
2	08:32			14:36 (WEA 3) 08:01		15:22 (WEA 1) 07:04		06:49		05:42		04:54		04:52		05:32		06:25		07:18		07:15		08:09
	16:08	23		14:59 (WEA 3) 16:59		15:45 (WEA 1) 17:54		19:52		20:46		21:34		21:47		21:12		20:05		18:53		16:43		16:01
3	08:32			14:37 (WEA 3) 07:59		15:23 (WEA 1) 07:01		06:47		05:40		04:53		04:53		05:34		06:27		07:19		07:17		08:10
	16:09	23		15:00 (WEA 3) 17:01		15:44 (WEA 1) 17:56		19:51		20:48		21:36		21:47		21:11		20:04		18:51		16:41		16:01
4	08:31			14:37 (WEA 3) 07:57		15:25 (WEA 1) 06:59		06:45		05:38		04:53		04:54		05:35		06:29		07:21		07:19		08:12
	16:10	23		15:00 (WEA 3) 17:03		15:42 (WEA 1) 17:58		19:55		20:49		21:37		21:46		21:08		20:01		18:48		16:40		16:00
5	08:31			14:39 (WEA 3) 07:56		15:27 (WEA 1) 06:57		06:42		05:36		04:52		04:54		05:37		06:31		07:23		07:21		15:00 (WEA 1) 08:13
	16:12	21		15:00 (WEA 3) 17:05		15:41 (WEA 1) 18:00		19:57		20:51		21:38		21:46		21:06		19:58		18:45		16:38		9 15:09 (WEA 1) 15:59
6	08:31			14:39 (WEA 3) 07:54		15:30 (WEA 1) 06:54		06:40		05:34		04:51		04:55		05:39		06:32		07:25		07:23		29 15:15 (WEA 1) 15:59
	16:13	21		15:00 (WEA 3) 17:07		15:37 (WEA 1) 18:02		19:59		20:53		21:39		21:45		21:04		19:56		18:43		16:36		15 15:12 (WEA 1) 15:59
7	08:30			14:40 (WEA 3) 07:52		15:32 (WEA 1) 18:02		06:52		06:37		05:32		04:50		04:56		05:40		06:34		07:27		22 15:12 (WEA 1) 15:59
	16:14	29		15:30 (WEA 1) 17:09		18:04		20:01		20:55		21:40		21:45		21:02		19:53		18:41		16:34		18 15:13 (WEA 1) 15:58
8	08:30			14:41 (WEA 3) 07:50		06:50		06:35		05:30		04:50		04:57		05:42		06:36		07:28		07:27		21 15:15 (WEA 1) 15:58
	16:16	30		15:32 (WEA 1) 17:11		18:06		20:02		20:56		21:41		21:44		21:00		19:51		18:38		16:32		23 14:48 (WEA 3) 15:58
9	08:29			14:42 (WEA 3) 07:48		06:47		06:33		05:28		04:49		04:58		05:44		06:38		07:30		07:28		24 15:16 (WEA 1) 15:58
	16:17	31		15:33 (WEA 1) 17:13		18:07		20:04		20:58		21:41		21:43		20:58		19:49		18:36		16:31		23 15:16 (WEA 1) 15:58
10	08:29			14:43 (WEA 3) 07:46		06:45		06:30		05:26		04:49		04:59		05:45		06:39		07:32		07:30		24 15:22 (WEA 1) 15:59
	16:19	31		15:34 (WEA 1) 17:15		18:09		20:06		21:00		21:42		21:42		20:56		19:46		18:34		16:29		25 15:17 (WEA 1) 15:57
11	08:28			14:44 (WEA 3) 07:44		06:43		06:28		05:24		04:48		05:01		05:47		06:41		07:34		07:32		26 15:17 (WEA 1) 15:57
	16:20	33		15:36 (WEA 1) 17:17		18:11		20:08		21:02		21:43		21:42		20:54		19:44		18:31		16:27		26 15:17 (WEA 1) 15:57
12	08:27			14:45 (WEA 3) 07:42		06:40		06:26		05:23		04:48		05:02		05:49		06:43		07:36		07:34		27 15:18 (WEA 1) 15:57
	16:22	33		15:37 (WEA 1) 17:19		18:13		20:10		21:03		21:44		21:41		20:52		19:41		18:29		16:26		27 15:18 (WEA 1) 15:57
13	08:26			14:47 (WEA 3) 07:40		06:38		06:23		05:21		04:48		05:03		05:51		06:44		07:38		07:36		28 15:19 (WEA 1) 15:57
	16:23	31		15:38 (WEA 1) 17:21		18:15		20:12		21:05		21:45		21:40		20:50		19:39		18:27		16:24		29 15:19 (WEA 1) 15:57
14	08:26			14:48 (WEA 3) 07:38		06:35		06:21		05:19		04:47		05:04		05:52		06:46		07:40		07:38		30 15:20 (WEA 1) 15:57
	16:25	28		15:39 (WEA 1) 17:23		18:17		20:13		21:07		21:45		21:39		20:48		19:36		18:24		16:22		29 15:19 (WEA 1) 15:57
15	08:25			15:37 (WEA 1) 07:36		06:33		06:19		05:18		04:47		05:05		05:54		06:48		07:41		07:40		30 15:20 (WEA 1) 15:57
	16:26	23		15:40 (WEA 1) 17:25		18:19		20:15		21:08		21:46		21:38		20:46		19:34		18:22		16:21		29 15:19 (WEA 1) 15:57
16	08:24			15:16 (WEA 1) 07:34		06:31		06:16		05:16		04:47		05:07		05:56		06:50		07:43		07:42		30 15:20 (WEA 1) 15:57
	16:28	25		15:41 (WEA 1) 17:27		18:20		20:17		21:10		21:46		21:37		20:44		19:32		18:20		16:19		30 15:20 (WEA 1) 15:57
17	08:23			15:17 (WEA 1) 07:32		06:28		06:14		05:14		04:47		05:08		05:58		06:51		07:45		07:43		31 15:21 (WEA 1) 15:58
	16:30	25		15:42 (WEA 1) 17:29		18:22		20:19		21:12		21:47		21:35		20:42		19:29		18:17		16:18		30 15:20 (WEA 1) 15:57
18	08:22			15:17 (WEA 1) 07:30		06:26		06:12		05:13		04:47		05:09		05:59		06:53		07:47		07:45		30 15:20 (WEA 1) 15:57
	16:31	26		15:43 (WEA 1) 17:31		18:24		20:21		21:13		21:47		21:34		20:40		19:27		18:15		16:16		30 15:20 (WEA 1) 15:57
19	08:21			15:16 (WEA 1) 07:28		06:23		06:10		05:11		04:47		05:11		06:01		06:55		07:49		07:47		31 15:21 (WEA 1) 15:58
	16:32	27		15:42 (WEA 1) 17:33		18:25		20:22		21:14		21:48		21:33		20:37		19:24		18:13		16:15		29 15:20 (WEA 1) 15:58
20	08:19			15:16 (WEA 1) 07:26		06:21		06:07		05:10		04:47		05:12		06:03		06:57		07:50		07:49		30 15:21 (WEA 1) 15:58
	16:35	28		15:44 (WEA 1) 17:35		18:28		20:24		21:16		21:48		21:32		20:35		19:22		18:11		16:14		29 15:20 (WEA 1) 15:58
21	08:18			15:17 (WEA 1) 07:24		06:18		06:05		05:08		04:47		05:13		06:04		06:58		07:52		07:51		30 15:21 (WEA 1) 15:58
	16:37	28		15:45 (WEA 1) 17:37		18:30		20:26		21:18		21:48		21:30		20:33		19:19		18:08		16:12		28 15:20 (WEA 1) 15:58
22	08:17			15:16 (WEA 1) 07:22		06:16		06:03		05:07		04:47		05:15		06:06		07:00		07:54		07:52		30 15:21 (WEA 1) 15:58
	16:39	29		15:45 (WEA 1) 17:39		18:31		20:28		21:19		21:48		21:29		20:31		19:17		18:06		16:11		28 15:20 (WEA 1) 15:59
23	08:16			15:17 (WEA 1) 07:19		06:14		06:01		05:05		04:47		05:16		06:08		07:02		07:56		07:54		31 15:21 (WEA 1) 15:59
	16:40	29		15:46 (WEA 1) 17:41		18:33		20:30		21:21		21:49		21:28		20:29		19:14		18:04		16:10		27 15:20 (WEA 1) 15:59
24	08:14			15:16 (WEA 1) 07:17		06:11		05:58		05:04		04:48		05:18		06:10		07:04		07:58		07:56		30 15:21 (WEA 1) 15:59
	16:42	30		15:46 (WEA 1) 17:43		18:35		20:31		21:22		21:49		21:26		20:26		19:12		18:02		16:09		26 15:20 (WEA 1) 16:01
25	08:13			15:17 (WEA 1) 07:15		06:09		05:56		05:03		04:48		05:19		06:11		07:05		07:59		07:58		25 15:21 (WEA 1) 16:01
	16:44	30		15:47 (WEA 1) 17:45		18:37		20:33		21:24		21:49		21:25		20:24		19:10		18:00		16:08		25 15:20 (WEA 1) 16:01
26	08:12			15:17 (WEA 1) 07:13		06:06		05:54		05:02		04:49		05:21		06:13		07:07		07:52		07:51		24 15:21 (WEA 1) 16:01
	16:46	30		15:47 (WEA 1) 17:47		18:39		20:35		21:25		21:49		21:23		20:22		19:07		18:00		16:07		24 15:20 (WEA 1) 16:01
27	08:10			15:18 (WEA 1) 07:10		06:04		05:52		05:00		04:49		05:22		06:15		07:09		07:54		07:53		24 15:21 (WEA 1) 16:01
	16:48	29		15:47 (WEA 1) 17:48		18:41		20:37		21:27		21:49		21:22		20:19		19:05		18:00		16:06		23 15:19 (WEA 1) 16:02
28	08:09			15:18 (WEA 1) 07:08		06:01		05:50		04:59		04:49		05:24		06:17		07:11		07:06		08:03		23 15:19 (WEA 1) 16:03
	16:50	29		15:47 (WEA 1) 17:50		18:42		20:39		21:28		21:48		21:20		20:17		19:02		18:00		16:05		27 15:19 (WEA 1) 16:03
29	08:07			15:18 (WEA 1) 07:07		06:59		05:48		04:58		04:50		05:26		06:18		07:12		07:07		08:04		27 15:19 (WEA 1) 16:03

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** O - Gramnitzer Hauptstraße 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember	
1	08:32		08:02		15:25 (WEA 1)	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13							08:07		15:05 (WEA 1)	
	16:07		16:57	24	15:49 (WEA 1)	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45							16:02	15	15:20 (WEA 1)	
2	08:32		08:01		15:26 (WEA 1)	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15							08:09		15:07 (WEA 1)	
	16:08		16:59	22	15:48 (WEA 1)	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:43							16:01	12	15:19 (WEA 1)	
3	08:32		07:59		15:27 (WEA 1)	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17							08:10		15:10 (WEA 1)	
	16:09		17:01	20	15:47 (WEA 1)	17:51	19:50	20:45	21:33	21:47	21:10	20:03	18:50	16:40							16:01	8	15:18 (WEA 1)	
4	08:31		07:57		15:29 (WEA 1)	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19							08:12		15:12 (WEA 1)	
	16:10		17:03	16	15:45 (WEA 1)	17:58	19:55	20:49	21:37	21:46	21:08	20:01	18:48	16:40							16:00	3	15:15 (WEA 1)	
5	08:31		07:56		15:31 (WEA 1)	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21							15:05 (WEA 1)		08:13	
	16:12		17:05	12	15:43 (WEA 1)	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	6						15:11 (WEA 1)		15:59	
6	08:31		07:54		15:35 (WEA 1)	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23							15:01 (WEA 1)		08:14	
	16:13		17:07	4	15:39 (WEA 1)	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	13						15:14 (WEA 1)		15:59	
7	08:30		07:52			06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25							14:59 (WEA 1)		08:16	
	16:14		17:09			18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	17						15:16 (WEA 1)		15:58	
8	08:30		15:29 (WEA 1)		07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27							14:58 (WEA 1)		08:17	
	16:16		17:11		17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	20						15:18 (WEA 1)		15:58	
9	08:29	8	15:31 (WEA 1)		07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28							14:54 (WEA 1)		08:18	
	16:17		15:34 (WEA 1)		17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	22						15:19 (WEA 1)		15:58	
10	08:29		15:24 (WEA 1)		07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30							14:56 (WEA 1)		08:19	
	16:19	12	15:36 (WEA 1)		17:15	18:09	20:06	21:00	21:42	21:42	20:56	19:46	18:34	16:29	24						15:20 (WEA 1)		15:57	
11	08:28		15:23 (WEA 1)		07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32							14:55 (WEA 1)		08:21	
	16:20	15	15:38 (WEA 1)		17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	25						15:20 (WEA 1)		15:57	
12	08:27		15:22 (WEA 1)		07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34							14:55 (WEA 1)		08:22	
	16:22	17	15:39 (WEA 1)		17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	26						15:21 (WEA 1)		15:57	
13	08:26		15:22 (WEA 1)		07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36							14:54 (WEA 1)		08:23	
	16:23	18	15:40 (WEA 1)		17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	28						15:22 (WEA 1)		15:57	
14	08:26		15:22 (WEA 1)		07:38	06:35	06:21	05:19	04:47	05:02	05:46	06:39	07:32	07:30							14:54 (WEA 1)		08:24	
	16:25	19	15:41 (WEA 1)		17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:36	18:24	16:22	28						15:22 (WEA 1)		15:57	
15	08:25		15:21 (WEA 1)		07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40							14:54 (WEA 1)		08:25	
	16:26	22	15:43 (WEA 1)		17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	28						15:22 (WEA 1)		15:57	
16	08:24		15:21 (WEA 1)		07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42							14:54 (WEA 1)		08:26	
	16:28	23	15:44 (WEA 1)		17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	29						15:23 (WEA 1)		15:57	
17	08:23		15:21 (WEA 1)		07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43							14:54 (WEA 1)		08:26	
	16:30	24	15:45 (WEA 1)		17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	29						15:23 (WEA 1)		15:57	
18	08:22		15:21 (WEA 1)		07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45							14:55 (WEA 1)		08:27	
	16:31	25	15:46 (WEA 1)		17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	28						15:23 (WEA 1)		15:57	
19	08:21		15:20 (WEA 1)		07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47							14:55 (WEA 1)		08:28	
	16:32	26	15:46 (WEA 1)		17:33	18:26	20:23	21:15	21:49	21:33	20:37	19:24	18:13	16:15	28						15:23 (WEA 1)		15:57	
20	08:19		15:21 (WEA 1)		07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49							14:55 (WEA 1)		08:29	
	16:35	26	15:47 (WEA 1)		17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	28						15:23 (WEA 1)		15:58	
21	08:18		15:21 (WEA 1)		07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51							14:56 (WEA 1)		08:29	
	16:37	27	15:48 (WEA 1)		17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	27						15:23 (WEA 1)		15:58	
22	08:17		15:20 (WEA 1)		07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52							14:57 (WEA 1)		08:30	
	16:39	28	15:48 (WEA 1)		17:39	18:31	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	26						15:23 (WEA 1)		15:59	
23	08:16		15:21 (WEA 1)		07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54							14:57 (WEA 1)		08:30	
	16:40	28	15:49 (WEA 1)		17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	26						15:23 (WEA 1)		15:59	
24	08:14		15:21 (WEA 1)		07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56							14:58 (WEA 1)		08:31	
	16:42	28	15:49 (WEA 1)		17:43	18:35	20:31	21:22	21:49	21:28	20:26	19:12	18:02	16:07	25						15:23 (WEA 1)		16:00	
25	08:13		15:21 (WEA 1)		07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:59	07:58							14:59 (WEA 1)		08:31	
	16:44	29	15:50 (WEA 1)		17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	24						15:23 (WEA 1)		16:01	
26	08:12		15:21 (WEA 1)		07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:52	07:59							15:00 (WEA 1)		08:31	
	16:46	29	15:50 (WEA 1)		17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	23						15:23 (WEA 1)		16:01	
27	08:10		15:22 (WEA 1)		07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01							15:00 (WEA 1)		08:32	
	16:48	28	15:50 (WEA 1)		17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	22						15:22 (WEA 1)		16:02	
28	08:09		15:22 (WEA 1)		07:08	06:01	05:50	04:59	04:49	05:24	06:17	07:11	07:06	08:03							15:02 (WEA 1)		08:32	
	16:50	28	15:50 (WEA 1)		17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	20						15:22 (WEA 1)		16:03	
29	08:07		15:23 (WEA 1)			06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04							15:03 (WEA 1)		08:32	
	16:52	27	15:50 (WEA 1)			19:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	18						15:21 (WEA 1)		16:04	
30	08:06		15:23 (WEA 1)			06:57	05:46	04:57	04:51	05:27	06:21	07:14	07:09	08:06							15:05 (WEA 1)		08:32	
	16:54	26	15:49 (WEA 1)			19:46	20:42	21:31	21:48	21:17	20:12	18:57	16:49	16:03	16						15:21 (WEA 1)		16:05	
31	08:04		15:25 (WEA 1)			06:54		04:56		05:29	06:22		07:11										08:32	
	16:56	25	15:50 (WEA 1)			19:48		21:32		21:15	20:10		16:47										16:06	
Sonnenscheinstunden		252		274		367	419	492	507	510	458	382	329											

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** P - Steindamm 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:09 (WEA 6) 08:02 11:53 (WEA 6) 16:58	15:02 (WEA 3) 07:06 15:50 (WEA 5) 17:52	15:58 (WEA 1) 06:52 16:45 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:09 (WEA 6) 08:01 15:13 (WEA 3) 16:59	15:03 (WEA 3) 07:04 15:49 (WEA 5) 17:54	15:59 (WEA 1) 06:49 16:45 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:10 (WEA 6) 07:59 15:16 (WEA 3) 17:01	15:03 (WEA 3) 07:01 15:47 (WEA 5) 17:56	15:58 (WEA 1) 06:47 16:44 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:10 (WEA 6) 07:57 15:17 (WEA 3) 17:03	15:04 (WEA 3) 06:59 15:44 (WEA 5) 17:58	15:58 (WEA 1) 06:45 16:44 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:12 (WEA 6) 07:56 15:19 (WEA 3) 17:05	15:05 (WEA 3) 06:57 15:35 (WEA 3) 18:00	15:59 (WEA 1) 06:42 16:44 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:12 (WEA 6) 07:54 15:20 (WEA 3) 17:07	15:06 (WEA 3) 06:54 16:27 (WEA 2) 18:02	15:59 (WEA 1) 06:40 16:42 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	11:12 (WEA 6) 07:52 15:34 (WEA 5) 17:09	15:07 (WEA 3) 06:52 16:30 (WEA 2) 18:04	16:00 (WEA 1) 06:37 16:42 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	11:14 (WEA 6) 07:50 15:38 (WEA 5) 17:11	15:09 (WEA 3) 06:50 16:32 (WEA 2) 18:06	16:00 (WEA 1) 06:35 16:40 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	11:14 (WEA 6) 07:48 15:39 (WEA 5) 17:13	15:11 (WEA 3) 06:47 16:34 (WEA 2) 18:07	16:01 (WEA 1) 06:33 16:40 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	11:15 (WEA 6) 07:46 15:41 (WEA 5) 17:15	15:15 (WEA 3) 06:45 16:35 (WEA 2) 18:09	16:02 (WEA 1) 06:30 16:39 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	11:15 (WEA 6) 07:44 15:42 (WEA 5) 17:17	16:09 (WEA 2) 06:43 16:36 (WEA 2) 18:11	16:03 (WEA 1) 06:28 16:37 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	11:16 (WEA 6) 07:42 15:43 (WEA 5) 17:19	16:09 (WEA 2) 06:40 16:37 (WEA 2) 18:13	16:05 (WEA 1) 06:26 16:36 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	11:17 (WEA 6) 07:40 15:44 (WEA 5) 17:21	16:08 (WEA 2) 06:38 16:37 (WEA 2) 18:15	16:06 (WEA 1) 06:23 16:33 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	11:18 (WEA 6) 07:38 15:45 (WEA 5) 17:23	16:08 (WEA 2) 06:35 16:38 (WEA 2) 18:17	16:09 (WEA 1) 06:21 16:31 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	11:19 (WEA 6) 07:36 15:46 (WEA 5) 17:25	16:08 (WEA 2) 06:33 16:38 (WEA 2) 18:19	16:12 (WEA 1) 06:19 16:27 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	11:21 (WEA 6) 07:34 15:47 (WEA 5) 17:27	16:08 (WEA 2) 06:31 16:39 (WEA 2) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	11:22 (WEA 6) 07:32 15:48 (WEA 5) 17:29	16:08 (WEA 2) 06:28 16:39 (WEA 2) 18:22	06:14 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	11:24 (WEA 6) 07:30 15:49 (WEA 5) 17:31	16:07 (WEA 1) 06:26 16:38 (WEA 1) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	11:25 (WEA 6) 07:28 15:49 (WEA 5) 17:33	16:05 (WEA 1) 06:23 16:40 (WEA 1) 18:26	06:10 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	11:27 (WEA 6) 07:26 15:50 (WEA 5) 17:35	16:04 (WEA 1) 06:21 16:41 (WEA 1) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	11:30 (WEA 6) 07:24 15:51 (WEA 5) 17:37	16:04 (WEA 1) 06:18 16:42 (WEA 1) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	11:33 (WEA 6) 07:22 15:51 (WEA 5) 17:39	16:02 (WEA 1) 06:16 16:42 (WEA 1) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	14:59 (WEA 3) 07:19 15:52 (WEA 5) 17:41	16:01 (WEA 1) 06:14 16:43 (WEA 1) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	14:59 (WEA 3) 07:17 15:52 (WEA 5) 17:43	16:01 (WEA 1) 06:11 16:44 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:00 (WEA 3) 07:15 15:52 (WEA 5) 17:45	16:01 (WEA 1) 06:09 16:45 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	14:59 (WEA 3) 07:13 15:52 (WEA 5) 17:47	15:59 (WEA 1) 06:06 16:44 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:00 (WEA 3) 07:10 15:53 (WEA 5) 17:48	15:59 (WEA 1) 06:04 16:45 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:00 (WEA 3) 07:08 15:52 (WEA 5) 17:50	15:59 (WEA 1) 06:02 16:45 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:00 (WEA 3) 15:52 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:00 (WEA 3) 15:51 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	15:02 (WEA 3) 15:51 (WEA 5)	06:54 19:48	04:56 21:32	04:56 21:32	04:56 21:32
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	2003	1060	560			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: P - Steindamm 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember	
1	04:51	05:30	06:24		07:16	16:44 (WEA 1)	07:13	14:44 (WEA 3)	08:07	10:58 (WEA 6)
	21:48	21:13	20:08		18:55	30 17:14 (WEA 1)	16:45	37 16:04 (WEA 2)	16:02	80 15:24 (WEA 5)
2	04:52	05:32	06:25		07:18	16:42 (WEA 1)	07:15	14:41 (WEA 3)	08:09	10:58 (WEA 6)
	21:47	21:12	20:05		18:53	33 17:15 (WEA 1)	16:44	41 16:03 (WEA 2)	16:01	77 15:24 (WEA 5)
3	04:53	05:34	06:27		07:19	16:41 (WEA 1)	07:17	14:39 (WEA 3)	08:10	10:58 (WEA 6)
	21:47	21:10	20:03		18:50	35 17:16 (WEA 1)	16:42	41 16:02 (WEA 2)	16:01	75 15:23 (WEA 5)
4	04:54	05:35	06:29		07:21	16:38 (WEA 1)	07:19	14:37 (WEA 3)	08:12	10:58 (WEA 6)
	21:46	21:08	20:01		18:48	38 17:16 (WEA 1)	16:40	42 16:00 (WEA 2)	16:00	71 15:22 (WEA 5)
5	04:55	05:37	06:31		07:23	16:37 (WEA 1)	07:21	14:37 (WEA 3)	08:13	10:58 (WEA 6)
	21:46	21:06	19:58		18:45	40 17:17 (WEA 1)	16:38	38 15:58 (WEA 2)	15:59	66 15:21 (WEA 5)
6	04:55	05:39	06:32		07:25	16:36 (WEA 1)	07:23	14:35 (WEA 3)	08:14	10:58 (WEA 6)
	21:45	21:04	19:56		18:43	42 17:18 (WEA 1)	16:36	31 15:06 (WEA 3)	15:59	59 15:06 (WEA 3)
7	04:56	05:40	06:34		07:27	16:35 (WEA 1)	07:25	14:35 (WEA 3)	08:16	10:58 (WEA 6)
	21:45	21:02	19:53		18:41	43 17:18 (WEA 1)	16:34	40 15:15 (WEA 5)	15:58	58 15:05 (WEA 3)
8	04:57	05:42	06:36		07:28	16:34 (WEA 1)	07:27	14:34 (WEA 3)	08:17	10:59 (WEA 6)
	21:44	21:00	19:51		18:38	44 17:18 (WEA 1)	16:32	44 15:18 (WEA 5)	15:58	56 15:05 (WEA 3)
9	04:58	05:44	06:38		07:30	16:34 (WEA 1)	07:28	14:33 (WEA 3)	08:18	10:59 (WEA 6)
	21:43	20:58	19:49		18:36	45 17:19 (WEA 1)	16:31	47 15:20 (WEA 5)	15:58	54 15:04 (WEA 3)
10	04:59	05:46	06:39		07:32	16:33 (WEA 1)	07:30	14:33 (WEA 3)	08:19	10:59 (WEA 6)
	21:42	20:56	19:46		18:34	46 17:19 (WEA 1)	16:29	48 15:21 (WEA 5)	15:57	52 15:03 (WEA 3)
11	05:01	05:47	06:41		07:34	16:32 (WEA 1)	07:32	14:32 (WEA 3)	08:21	11:00 (WEA 6)
	21:42	20:54	19:44		18:31	46 17:18 (WEA 1)	16:27	50 15:22 (WEA 5)	15:57	44 11:44 (WEA 6)
12	05:02	05:49	06:43		07:36	16:32 (WEA 1)	07:34	14:32 (WEA 3)	08:22	11:00 (WEA 6)
	21:41	20:52	19:41		18:29	46 17:18 (WEA 1)	16:26	51 15:23 (WEA 5)	15:57	44 11:44 (WEA 6)
13	05:03	05:51	06:44		07:38	16:32 (WEA 1)	07:36	14:32 (WEA 3)	08:23	11:00 (WEA 6)
	21:40	20:50	19:39		18:27	46 17:18 (WEA 1)	16:24	52 15:24 (WEA 5)	15:57	45 11:45 (WEA 6)
14	05:04	05:52	06:46		07:39	16:31 (WEA 1)	07:38	14:32 (WEA 3)	08:24	11:00 (WEA 6)
	21:39	20:48	19:37		18:24	46 17:17 (WEA 1)	16:22	52 15:24 (WEA 5)	15:57	45 11:45 (WEA 6)
15	05:05	05:54	06:48		07:41	16:31 (WEA 1)	07:40	14:32 (WEA 3)	08:25	11:01 (WEA 6)
	21:38	20:46	19:34		18:22	46 17:17 (WEA 1)	16:21	53 15:25 (WEA 5)	15:57	45 11:46 (WEA 6)
16	05:07	05:56	06:50		07:43	16:32 (WEA 1)	07:42	14:32 (WEA 3)	08:25	11:01 (WEA 6)
	21:37	20:44	19:32		18:20	44 17:16 (WEA 1)	16:19	53 15:25 (WEA 5)	15:57	46 11:47 (WEA 6)
17	05:08	05:58	06:51		07:45	16:32 (WEA 1)	07:43	14:32 (WEA 3)	08:26	11:01 (WEA 6)
	21:35	20:42	19:29		18:17	44 17:16 (WEA 1)	16:18	53 15:25 (WEA 5)	15:57	45 11:46 (WEA 6)
18	05:09	05:59	06:53		07:47	16:32 (WEA 1)	07:45	14:33 (WEA 3)	08:27	11:02 (WEA 6)
	21:34	20:40	19:27		18:15	43 17:15 (WEA 1)	16:16	53 15:26 (WEA 5)	15:57	45 11:47 (WEA 6)
19	05:11	06:01	06:55		07:49	16:33 (WEA 1)	07:47	14:33 (WEA 3)	08:28	11:02 (WEA 6)
	21:33	20:37	19:24		18:13	41 17:14 (WEA 1)	16:15	53 15:26 (WEA 5)	15:58	46 11:48 (WEA 6)
20	05:12	06:03	06:57		07:50	16:33 (WEA 1)	07:49	11:08 (WEA 6)	08:28	11:02 (WEA 6)
	21:32	20:35	19:22		18:11	40 17:13 (WEA 1)	16:14	63 15:26 (WEA 5)	15:58	46 11:48 (WEA 6)
21	05:13	06:05	06:58		07:52	16:34 (WEA 1)	07:51	11:05 (WEA 6)	08:29	11:03 (WEA 6)
	21:30	20:33	19:19		18:08	38 17:12 (WEA 1)	16:12	69 15:26 (WEA 5)	15:58	46 11:49 (WEA 6)
22	05:15	06:06	07:00		07:54	16:35 (WEA 1)	07:52	11:03 (WEA 6)	08:30	11:03 (WEA 6)
	21:29	20:31	19:17		18:06	36 17:11 (WEA 1)	16:11	73 15:26 (WEA 5)	15:59	46 11:49 (WEA 6)
23	05:16	06:08	07:02		07:56	16:36 (WEA 1)	07:54	11:02 (WEA 6)	08:30	11:04 (WEA 6)
	21:28	20:29	19:15		18:04	34 17:10 (WEA 1)	16:10	75 15:26 (WEA 5)	15:59	46 11:50 (WEA 6)
24	05:18	06:10	07:04		07:58	16:38 (WEA 1)	07:56	11:01 (WEA 6)	08:31	11:04 (WEA 6)
	21:26	20:26	19:12		18:02	30 17:08 (WEA 1)	16:09	78 15:26 (WEA 5)	16:00	46 11:50 (WEA 6)
25	05:19	06:11	07:05		07:00	15:38 (WEA 2)	07:58	11:00 (WEA 6)	08:31	11:05 (WEA 6)
	21:25	20:24	19:10		17:00	30 16:08 (WEA 2)	16:08	79 15:26 (WEA 5)	16:01	45 11:50 (WEA 6)
26	05:21	06:13	07:07		07:02	15:38 (WEA 2)	07:59	11:00 (WEA 6)	08:31	11:06 (WEA 6)
	21:23	20:22	19:07		16:58	30 16:08 (WEA 2)	16:07	80 15:26 (WEA 5)	16:01	45 11:51 (WEA 6)
27	05:22	06:15	07:09		07:04	15:38 (WEA 2)	08:01	10:59 (WEA 6)	08:32	11:06 (WEA 6)
	21:22	20:19	19:05		16:56	30 16:08 (WEA 2)	16:06	80 15:25 (WEA 5)	16:02	46 11:52 (WEA 6)
28	05:24	06:17	07:11	16:55 (WEA 1)	07:06	15:38 (WEA 2)	08:02	10:58 (WEA 6)	08:32	11:07 (WEA 6)
	21:20	20:17	19:02	11 17:06 (WEA 1)	16:54	29 16:07 (WEA 2)	16:05	82 15:25 (WEA 5)	16:03	45 11:52 (WEA 6)
29	05:26	06:18	07:12	16:50 (WEA 1)	07:07	15:38 (WEA 2)	08:04	10:58 (WEA 6)	08:32	11:07 (WEA 6)
	21:18	20:15	19:00	19 17:09 (WEA 1)	16:51	29 16:07 (WEA 2)	16:04	81 15:25 (WEA 5)	16:04	45 11:52 (WEA 6)
30	05:27	06:20	07:14	16:47 (WEA 1)	07:09	15:39 (WEA 2)	08:06	10:58 (WEA 6)	08:32	11:08 (WEA 6)
	21:17	20:12	18:57	25 17:12 (WEA 1)	16:49	27 16:06 (WEA 2)	16:03	81 15:25 (WEA 5)	16:05	45 11:53 (WEA 6)
31	05:29	06:22			07:11	15:39 (WEA 2)		08:32		11:09 (WEA 6)
	21:15	20:10			16:47	26 16:05 (WEA 2)		16:06	44 11:53 (WEA 6)	
Sonnenscheinstunden	510	458	382		329		261		236	
astr.max.mögl.Beschattung				55		1177		1720		1598

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	(WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende	(WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** Q - Steindamm 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:13 (WEA 6) 08:02 15:14 (WEA 3) 16:58	15:00 (WEA 3) 07:06 15:44 (WEA 5) 17:52	15:53 (WEA 1) 06:52 16:37 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:13 (WEA 6) 08:01 15:16 (WEA 3) 16:59	15:01 (WEA 3) 07:04 15:42 (WEA 5) 17:54	15:54 (WEA 1) 06:49 16:37 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:15 (WEA 6) 07:59 15:30 (WEA 5) 17:01	15:02 (WEA 3) 07:01 15:30 (WEA 3) 17:56	15:54 (WEA 1) 06:47 16:36 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:15 (WEA 6) 07:57 15:32 (WEA 5) 17:03	15:03 (WEA 3) 06:59 16:24 (WEA 2) 17:58	15:55 (WEA 1) 06:45 16:36 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:16 (WEA 6) 07:56 15:34 (WEA 5) 17:05	15:04 (WEA 3) 06:57 16:26 (WEA 2) 18:00	15:56 (WEA 1) 06:42 16:35 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:16 (WEA 6) 07:54 15:35 (WEA 5) 17:07	15:06 (WEA 3) 06:54 16:28 (WEA 2) 18:02	15:56 (WEA 1) 06:40 16:33 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	11:17 (WEA 6) 07:52 15:36 (WEA 5) 17:09	15:09 (WEA 3) 06:52 16:30 (WEA 2) 18:04	15:57 (WEA 1) 06:37 16:32 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	11:18 (WEA 6) 07:50 15:38 (WEA 5) 17:11	15:13 (WEA 3) 06:50 16:31 (WEA 2) 18:06	15:58 (WEA 1) 06:35 16:30 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	11:19 (WEA 6) 07:48 15:39 (WEA 5) 17:13	16:05 (WEA 2) 06:47 16:32 (WEA 2) 18:07	16:00 (WEA 1) 06:33 16:29 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	11:20 (WEA 6) 07:46 15:40 (WEA 5) 17:15	16:05 (WEA 2) 06:45 16:32 (WEA 2) 18:09	16:02 (WEA 1) 06:30 16:27 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	11:20 (WEA 6) 07:44 15:41 (WEA 5) 17:17	16:04 (WEA 2) 06:43 16:33 (WEA 2) 18:11	16:05 (WEA 1) 06:28 16:23 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	11:21 (WEA 6) 07:42 15:42 (WEA 5) 17:19	16:04 (WEA 2) 06:40 16:33 (WEA 2) 18:13	16:10 (WEA 1) 06:26 16:19 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	11:23 (WEA 6) 07:40 15:42 (WEA 5) 17:21	16:04 (WEA 1) 06:38 16:34 (WEA 2) 18:15	06:23 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	11:24 (WEA 6) 07:38 15:43 (WEA 5) 17:23	16:02 (WEA 1) 06:35 16:34 (WEA 2) 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	11:25 (WEA 6) 07:36 15:44 (WEA 5) 17:25	16:01 (WEA 1) 06:33 16:34 (WEA 2) 18:19	06:19 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	11:27 (WEA 6) 07:34 15:45 (WEA 5) 17:27	16:00 (WEA 1) 06:31 16:34 (WEA 1) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	11:29 (WEA 6) 07:32 15:46 (WEA 5) 17:29	15:59 (WEA 1) 06:28 16:35 (WEA 1) 18:22	06:14 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	11:32 (WEA 6) 07:30 15:47 (WEA 5) 17:31	15:57 (WEA 1) 06:26 16:36 (WEA 1) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	11:35 (WEA 6) 07:28 15:47 (WEA 5) 17:33	15:56 (WEA 1) 06:23 16:37 (WEA 1) 18:26	06:10 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	14:55 (WEA 3) 07:26 15:47 (WEA 5) 17:35	15:56 (WEA 1) 06:21 16:37 (WEA 1) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	14:55 (WEA 3) 07:24 15:48 (WEA 5) 17:37	15:55 (WEA 1) 06:18 16:38 (WEA 1) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	14:55 (WEA 3) 07:22 15:48 (WEA 5) 17:39	15:54 (WEA 1) 06:16 16:38 (WEA 1) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	14:55 (WEA 3) 07:19 15:49 (WEA 5) 17:41	15:54 (WEA 1) 06:14 16:38 (WEA 1) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	14:55 (WEA 3) 07:17 15:48 (WEA 5) 17:43	15:54 (WEA 1) 06:11 16:39 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	14:56 (WEA 3) 07:15 15:49 (WEA 5) 17:45	15:54 (WEA 1) 06:09 16:39 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	14:56 (WEA 3) 07:13 15:48 (WEA 5) 17:47	15:53 (WEA 1) 06:06 16:38 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	14:57 (WEA 3) 07:10 15:49 (WEA 5) 17:48	15:53 (WEA 1) 06:04 16:39 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	14:57 (WEA 3) 07:08 15:48 (WEA 5) 17:50	15:54 (WEA 1) 06:02 16:39 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	14:58 (WEA 3) 15:47 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	14:58 (WEA 3) 15:46 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	14:59 (WEA 3) 15:46 (WEA 5)	06:54 19:48	05:45 21:32	04:56 21:32	04:50 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	2000	1054	394			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: Q - Steindamm 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober			November			Dezember	
	1	04:51	05:30	06:24	07:16			07:13		15:34 (WEA 2)	08:07	11:03 (WEA 6)
		21:48	21:13	20:08	18:55			16:45	28	16:02 (WEA 2)	16:02	80 15:23 (WEA 5)
	2	04:52	05:32	06:25	07:18		16:45 (WEA 1)	07:15		15:35 (WEA 2)	08:09	11:03 (WEA 6)
		21:47	21:12	20:05	18:53	16	17:01 (WEA 1)	16:44	26	16:01 (WEA 2)	16:01	79 15:23 (WEA 5)
	3	04:53	05:34	06:27	07:19		16:42 (WEA 1)	07:17		14:42 (WEA 3)	08:10	11:03 (WEA 6)
		21:47	21:10	20:03	18:50	22	17:04 (WEA 1)	16:42	33	16:00 (WEA 2)	16:01	79 15:23 (WEA 5)
	4	04:54	05:35	06:29	07:21		16:38 (WEA 1)	07:19		14:38 (WEA 3)	08:12	11:02 (WEA 6)
		21:46	21:08	20:01	18:48	27	17:05 (WEA 1)	16:40	38	15:59 (WEA 2)	16:00	80 15:22 (WEA 5)
	5	04:55	05:37	06:31	07:23		16:36 (WEA 1)	07:21		14:37 (WEA 3)	08:13	11:03 (WEA 6)
		21:46	21:06	19:58	18:45	31	17:07 (WEA 1)	16:38	40	15:59 (WEA 2)	15:59	77 15:22 (WEA 5)
	6	04:55	05:39	06:32	07:25		16:34 (WEA 1)	07:23		14:35 (WEA 3)	08:14	11:02 (WEA 6)
		21:45	21:04	19:56	18:43	34	17:08 (WEA 1)	16:36	40	15:57 (WEA 2)	15:59	75 15:21 (WEA 5)
	7	04:56	05:40	06:34	07:27		16:33 (WEA 1)	07:25		14:34 (WEA 3)	08:16	11:02 (WEA 6)
		21:45	21:02	19:53	18:41	36	17:09 (WEA 1)	16:34	37	15:54 (WEA 2)	15:58	72 15:20 (WEA 5)
	8	04:57	05:42	06:36	07:28		16:31 (WEA 1)	07:27		14:32 (WEA 3)	08:17	11:03 (WEA 6)
		21:44	21:00	19:51	18:38	39	17:10 (WEA 1)	16:32	29	15:01 (WEA 3)	15:58	69 15:20 (WEA 5)
	9	04:58	05:44	06:38	07:30		16:30 (WEA 1)	07:28		14:32 (WEA 3)	08:18	11:03 (WEA 6)
		21:43	20:58	19:49	18:36	40	17:10 (WEA 1)	16:31	39	15:13 (WEA 5)	15:58	65 15:18 (WEA 5)
	10	04:59	05:46	06:39	07:32		16:29 (WEA 1)	07:30		14:31 (WEA 3)	08:19	11:03 (WEA 6)
		21:42	20:56	19:46	18:34	42	17:11 (WEA 1)	16:29	44	15:15 (WEA 5)	15:57	60 15:05 (WEA 3)
	11	05:01	05:47	06:41	07:34		16:28 (WEA 1)	07:32		14:30 (WEA 3)	08:21	11:04 (WEA 6)
		21:42	20:54	19:44	18:31	42	17:10 (WEA 1)	16:27	47	15:17 (WEA 5)	15:57	58 15:05 (WEA 3)
	12	05:02	05:49	06:43	07:36		16:27 (WEA 1)	07:34		14:30 (WEA 3)	08:22	11:04 (WEA 6)
		21:41	20:52	19:41	18:29	44	17:11 (WEA 1)	16:26	48	15:18 (WEA 5)	15:57	58 15:05 (WEA 3)
	13	05:03	05:51	06:44	07:38		16:26 (WEA 1)	07:36		14:29 (WEA 3)	08:23	11:04 (WEA 6)
		21:40	20:50	19:39	18:27	45	17:11 (WEA 1)	16:24	50	15:19 (WEA 5)	15:57	57 15:05 (WEA 3)
	14	05:04	05:52	06:46	07:39		16:26 (WEA 1)	07:38		14:29 (WEA 3)	08:24	11:04 (WEA 6)
		21:39	20:48	19:37	18:24	45	17:11 (WEA 1)	16:22	51	15:20 (WEA 5)	15:57	57 15:05 (WEA 3)
	15	05:05	05:54	06:48	07:41		16:26 (WEA 1)	07:40		14:29 (WEA 3)	08:25	11:05 (WEA 6)
		21:38	20:46	19:34	18:22	45	17:11 (WEA 1)	16:21	52	15:21 (WEA 5)	15:57	56 15:05 (WEA 3)
	16	05:07	05:56	06:50	07:43		16:25 (WEA 1)	07:42		14:29 (WEA 3)	08:25	11:05 (WEA 6)
		21:37	20:44	19:32	18:20	46	17:11 (WEA 1)	16:19	52	15:21 (WEA 5)	15:57	55 15:05 (WEA 3)
	17	05:08	05:58	06:51	07:45		16:25 (WEA 1)	07:43		14:29 (WEA 3)	08:26	11:05 (WEA 6)
		21:35	20:42	19:29	18:17	45	17:10 (WEA 1)	16:18	53	15:22 (WEA 5)	15:57	53 15:04 (WEA 3)
	18	05:09	05:59	06:53	07:47		16:25 (WEA 1)	07:45		14:29 (WEA 3)	08:27	11:05 (WEA 6)
		21:34	20:40	19:27	18:15	45	17:10 (WEA 1)	16:16	53	15:22 (WEA 5)	15:57	53 15:04 (WEA 3)
	19	05:11	06:01	06:55	07:49		16:25 (WEA 1)	07:47		14:29 (WEA 3)	08:28	11:06 (WEA 6)
		21:33	20:37	19:24	18:13	45	17:10 (WEA 1)	16:15	54	15:23 (WEA 5)	15:58	52 15:04 (WEA 3)
	20	05:12	06:03	06:57	07:50		16:26 (WEA 1)	07:49		14:30 (WEA 3)	08:28	11:06 (WEA 6)
		21:32	20:35	19:22	18:11	43	17:09 (WEA 1)	16:14	53	15:23 (WEA 5)	15:58	51 15:04 (WEA 3)
	21	05:13	06:05	06:58	07:52		16:26 (WEA 1)	07:51		14:30 (WEA 3)	08:29	11:07 (WEA 6)
		21:30	20:33	19:19	18:08	42	17:08 (WEA 1)	16:12	53	15:23 (WEA 5)	15:58	51 15:05 (WEA 3)
	22	05:15	06:06	07:00	07:54		16:26 (WEA 1)	07:52		14:31 (WEA 3)	08:30	11:07 (WEA 6)
		21:29	20:31	19:17	18:06	42	17:08 (WEA 1)	16:11	52	15:23 (WEA 5)	15:59	50 15:04 (WEA 3)
	23	05:16	06:08	07:02	07:56		16:27 (WEA 1)	07:54		11:12 (WEA 6)	08:30	11:08 (WEA 6)
		21:28	20:29	19:15	18:04	40	17:07 (WEA 1)	16:10	63	15:24 (WEA 5)	15:59	51 15:06 (WEA 3)
	24	05:18	06:10	07:04	07:58		16:28 (WEA 1)	07:56		11:09 (WEA 6)	08:31	11:08 (WEA 6)
		21:26	20:26	19:12	18:02	38	17:06 (WEA 1)	16:09	68	15:24 (WEA 5)	16:00	52 15:06 (WEA 3)
	25	05:19	06:11	07:05	07:00		15:29 (WEA 1)	07:58		11:07 (WEA 6)	08:31	11:08 (WEA 6)
		21:25	20:24	19:10	17:00	36	16:05 (WEA 1)	16:08	72	15:24 (WEA 5)	16:01	53 15:07 (WEA 3)
	26	05:21	06:13	07:07	07:02		15:30 (WEA 1)	07:59		11:06 (WEA 6)	08:31	11:10 (WEA 6)
		21:23	20:22	19:07	16:58	34	16:04 (WEA 2)	16:07	75	15:24 (WEA 5)	16:01	52 15:08 (WEA 3)
	27	05:22	06:15	07:09	07:04		15:31 (WEA 1)	08:01		11:05 (WEA 6)	08:32	11:10 (WEA 6)
		21:22	20:19	19:05	16:56	33	16:04 (WEA 2)	16:06	76	15:23 (WEA 5)	16:02	54 15:09 (WEA 3)
	28	05:24	06:17	07:11	07:06		15:32 (WEA 1)	08:02		11:04 (WEA 6)	08:32	11:10 (WEA 6)
		21:20	20:17	19:02	16:54	32	16:04 (WEA 2)	16:05	77	15:23 (WEA 5)	16:03	55 15:10 (WEA 3)
	29	05:26	06:18	07:12	07:07		15:33 (WEA 2)	08:04		11:04 (WEA 6)	08:32	11:11 (WEA 6)
		21:18	20:15	19:00	16:51	30	16:03 (WEA 2)	16:04	79	15:24 (WEA 5)	16:04	56 15:11 (WEA 3)
	30	05:27	06:20	07:14	07:09		15:34 (WEA 2)	08:06		11:04 (WEA 6)	08:32	11:12 (WEA 6)
		21:17	20:12	18:57	16:49	29	16:03 (WEA 2)	16:03	79	15:24 (WEA 5)	16:05	56 15:12 (WEA 3)
	31	05:29	06:22		07:11		15:34 (WEA 2)			08:32		11:12 (WEA 6)
		21:15	20:10		16:47	28	16:02 (WEA 2)			16:06		59 15:14 (WEA 3)
	Sonnenscheinstunden	510	458	382	329			261		236		
	astr.max.mögl.Beschattung				1116			1561		1875		

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** R - Steindamm 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 46	11:05 (WEA 6) 08:02 11:51 (WEA 6) 16:58 11:06 (WEA 6) 08:01	15:03 (WEA 3) 07:06 15:53 (WEA 5) 17:52 15:03 (WEA 3) 07:04	16:02 (WEA 1) 06:52 16:48 (WEA 1) 19:50 16:02 (WEA 1) 06:49	05:44 20:44 05:42	04:55 21:33 04:54
2	08:32 16:08 46	11:06 (WEA 6) 08:01 11:52 (WEA 6) 16:59 11:07 (WEA 6) 07:59	15:04 (WEA 3) 07:01 15:52 (WEA 5) 17:54 15:04 (WEA 3) 07:01	16:01 (WEA 1) 06:47 16:49 (WEA 1) 19:52 16:01 (WEA 1) 06:47	05:40 20:46 05:40	04:53 21:34 04:53
3	08:32 16:09 45	11:07 (WEA 6) 07:57 11:52 (WEA 6) 17:01 11:07 (WEA 6) 07:57	15:04 (WEA 3) 06:59 15:51 (WEA 5) 17:56 15:04 (WEA 3) 06:59	16:01 (WEA 1) 06:45 16:48 (WEA 1) 19:53 16:01 (WEA 1) 06:45	05:38 20:48 05:38	04:53 21:35 04:53
4	08:31 16:11 45	11:07 (WEA 6) 07:57 11:52 (WEA 6) 17:03 11:08 (WEA 6) 07:56	15:04 (WEA 3) 06:59 15:49 (WEA 5) 17:58 15:05 (WEA 3) 06:57	16:01 (WEA 1) 06:45 16:48 (WEA 1) 19:55 16:02 (WEA 1) 06:42	05:38 20:49 05:36	04:53 21:37 04:52
5	08:31 16:12 52	11:08 (WEA 6) 07:56 11:51 (WEA 6) 17:05 11:08 (WEA 6) 07:54	15:05 (WEA 3) 06:57 15:46 (WEA 5) 18:00 15:06 (WEA 3) 06:54	16:02 (WEA 1) 06:42 16:48 (WEA 1) 19:57 16:01 (WEA 1) 06:40	05:36 20:51 05:34	04:52 21:38 04:51
6	08:31 16:13 56	11:08 (WEA 6) 07:54 11:51 (WEA 6) 17:07 11:08 (WEA 6) 07:52	15:06 (WEA 3) 06:54 15:38 (WEA 3) 18:02 15:07 (WEA 3) 06:52	16:01 (WEA 1) 06:40 16:47 (WEA 1) 19:59 16:02 (WEA 1) 06:37	05:34 20:53 05:32	04:51 21:39 04:50
7	08:30 16:14 59	11:08 (WEA 6) 07:52 11:50 (WEA 6) 17:09 11:09 (WEA 6) 07:50	15:07 (WEA 3) 06:52 16:28 (WEA 2) 18:04 15:09 (WEA 3) 06:50	16:02 (WEA 1) 06:37 16:47 (WEA 1) 20:01 16:01 (WEA 1) 06:35	05:32 20:55 05:30	04:50 21:40 04:50
8	08:30 16:16 61	11:09 (WEA 6) 07:50 11:52 (WEA 6) 17:11 11:10 (WEA 6) 07:48	15:09 (WEA 3) 06:50 16:32 (WEA 2) 18:06 15:10 (WEA 3) 06:47	16:01 (WEA 1) 06:35 16:46 (WEA 1) 20:02 16:02 (WEA 1) 06:33	05:30 20:56 05:28	04:50 21:41 04:49
9	08:29 16:17 68	11:10 (WEA 6) 07:48 11:53 (WEA 6) 17:13 11:11 (WEA 6) 07:46	15:10 (WEA 3) 06:47 16:34 (WEA 2) 18:07 15:12 (WEA 3) 06:45	16:02 (WEA 1) 06:33 16:45 (WEA 1) 20:04 16:03 (WEA 1) 06:30	05:28 20:58 05:26	04:49 21:41 04:49
10	08:28 16:19 74	11:10 (WEA 6) 07:46 11:54 (WEA 6) 17:15 11:11 (WEA 6) 07:44	15:12 (WEA 3) 06:45 16:36 (WEA 2) 18:09 15:15 (WEA 3) 06:43	16:03 (WEA 1) 06:30 16:45 (WEA 1) 20:06 16:03 (WEA 1) 06:28	05:26 21:00 05:24	04:49 21:42 04:48
11	08:28 16:20 78	11:11 (WEA 6) 07:44 11:54 (WEA 6) 17:17 11:12 (WEA 6) 07:42	15:15 (WEA 3) 06:43 16:37 (WEA 2) 18:11 15:20 (WEA 3) 06:40	16:03 (WEA 1) 06:28 16:43 (WEA 1) 20:08 16:05 (WEA 1) 06:26	05:24 21:02 05:23	04:48 21:43 04:48
12	08:27 16:22 81	11:12 (WEA 6) 07:42 11:54 (WEA 6) 17:19 11:13 (WEA 6) 07:40	15:20 (WEA 3) 06:40 16:38 (WEA 2) 18:13 16:11 (WEA 2) 06:38	16:05 (WEA 1) 06:26 16:42 (WEA 1) 20:10 16:05 (WEA 1) 06:23	05:23 21:03 05:21	04:48 21:44 04:48
13	08:26 16:23 82	11:13 (WEA 6) 07:40 11:55 (WEA 6) 17:21 11:14 (WEA 6) 07:38	16:11 (WEA 2) 06:38 16:39 (WEA 2) 18:15 16:11 (WEA 2) 06:35	16:06 (WEA 1) 06:23 16:40 (WEA 1) 20:12 16:07 (WEA 1) 06:21	05:21 21:05 05:19	04:48 21:45 04:47
14	08:25 16:25 83	11:14 (WEA 6) 07:38 11:56 (WEA 6) 17:23 11:15 (WEA 6) 07:36	16:11 (WEA 2) 06:35 16:40 (WEA 2) 18:17 16:11 (WEA 2) 06:33	16:07 (WEA 1) 06:21 16:39 (WEA 1) 20:13 16:09 (WEA 1) 06:19	05:19 21:07 05:18	04:47 21:45 04:47
15	08:25 16:26 82	11:15 (WEA 6) 07:36 11:57 (WEA 6) 17:25 11:16 (WEA 6) 07:34	16:11 (WEA 2) 06:33 16:41 (WEA 2) 18:19 16:10 (WEA 2) 06:31	16:09 (WEA 1) 06:19 16:37 (WEA 1) 20:15 16:11 (WEA 1) 06:16	05:18 21:08 05:16	04:47 21:46 04:47
16	08:24 16:28 82	11:16 (WEA 6) 07:34 11:58 (WEA 6) 17:27 11:17 (WEA 6) 07:32	16:10 (WEA 2) 06:31 16:41 (WEA 2) 18:20 16:10 (WEA 2) 06:28	16:11 (WEA 1) 06:16 16:34 (WEA 1) 20:17 16:14 (WEA 1) 06:14	05:16 21:10 05:14	04:47 21:46 04:47
17	08:23 16:30 82	11:17 (WEA 6) 07:32 11:59 (WEA 6) 17:29 11:18 (WEA 6) 07:30	16:10 (WEA 2) 06:28 16:41 (WEA 2) 18:22 16:09 (WEA 2) 06:26	16:14 (WEA 1) 06:14 16:31 (WEA 1) 20:19 16:20 (WEA 1) 06:12	05:14 21:12 05:13	04:47 21:47 04:47
18	08:22 16:32 81	11:19 (WEA 6) 07:30 11:59 (WEA 6) 17:31 11:19 (WEA 6) 07:28	16:10 (WEA 2) 06:26 16:41 (WEA 2) 18:24 16:10 (WEA 2) 06:23	16:20 (WEA 1) 06:12 16:24 (WEA 1) 20:21 16:10 (WEA 1) 06:10	05:13 21:13 05:11	04:47 21:47 04:47
19	08:21 16:33 80	11:19 (WEA 6) 07:28 11:59 (WEA 6) 17:33 11:21 (WEA 6) 07:26	16:10 (WEA 2) 06:23 16:41 (WEA 2) 18:26 16:10 (WEA 1) 06:21	16:20 (WEA 1) 06:12 16:24 (WEA 1) 20:22 16:07 (WEA 1) 06:07	05:11 21:15 05:10	04:47 21:48 04:47
20	08:19 16:35 80	11:21 (WEA 6) 07:26 11:59 (WEA 6) 17:35 11:23 (WEA 6) 07:24	16:10 (WEA 1) 06:21 16:42 (WEA 1) 18:28 16:09 (WEA 1) 06:18	16:07 (WEA 1) 06:16 16:24 (WEA 1) 20:24 16:05 (WEA 1) 06:16	05:10 21:16 05:08	04:47 21:48 04:47
21	08:18 16:37 78	11:23 (WEA 6) 07:24 11:59 (WEA 6) 17:37 11:25 (WEA 6) 07:22	16:09 (WEA 1) 06:18 16:44 (WEA 1) 18:30 16:07 (WEA 1) 06:16	16:05 (WEA 1) 06:16 16:24 (WEA 1) 20:26 16:03 (WEA 1) 06:16	05:08 21:18 05:07	04:47 21:48 04:47
22	08:17 16:39 73	11:25 (WEA 6) 07:22 11:59 (WEA 6) 17:39 11:28 (WEA 6) 07:19	16:07 (WEA 1) 06:16 16:44 (WEA 1) 18:32 16:06 (WEA 1) 06:14	16:03 (WEA 1) 06:16 16:24 (WEA 1) 20:28 16:01 (WEA 1) 06:14	05:07 21:19 05:06	04:47 21:48 04:48
23	08:16 16:40 69	11:28 (WEA 6) 07:19 11:59 (WEA 6) 17:41 11:31 (WEA 6) 07:17	16:06 (WEA 1) 06:14 16:46 (WEA 1) 18:33 16:05 (WEA 1) 06:11	16:01 (WEA 1) 06:14 16:24 (WEA 1) 20:30 16:05 (WEA 1) 06:11	05:06 21:21 05:04	04:48 21:49 04:48
24	08:14 16:42 62	11:31 (WEA 6) 07:17 11:59 (WEA 6) 17:43 11:01 (WEA 3) 07:15	16:05 (WEA 1) 06:11 16:47 (WEA 1) 18:35 16:05 (WEA 1) 06:09	16:05 (WEA 1) 06:11 16:24 (WEA 1) 20:31 16:05 (WEA 1) 06:09	05:04 21:22 05:03	04:48 21:49 04:48
25	08:13 16:44 53	11:01 (WEA 3) 07:15 11:54 (WEA 5) 17:45 11:01 (WEA 3) 07:13	16:05 (WEA 1) 06:09 16:48 (WEA 1) 18:37 16:03 (WEA 1) 06:06	16:05 (WEA 1) 06:09 16:24 (WEA 1) 20:33 16:05 (WEA 1) 06:06	05:03 21:24 05:02	04:48 21:49 04:49
26	08:12 16:46 53	11:01 (WEA 3) 07:13 11:54 (WEA 5) 17:47 11:02 (WEA 3) 07:10	16:03 (WEA 1) 06:06 16:47 (WEA 1) 18:39 16:03 (WEA 1) 06:04	16:05 (WEA 1) 06:06 16:24 (WEA 1) 20:35 16:05 (WEA 1) 06:04	05:02 21:25 05:00	04:49 21:49 04:49
27	08:10 16:48 53	11:02 (WEA 3) 07:10 11:55 (WEA 5) 17:48 11:02 (WEA 3) 07:08	16:04 (WEA 1) 06:04 15:55 (WEA 5) 17:48 16:03 (WEA 1) 06:02	16:05 (WEA 1) 06:04 16:24 (WEA 1) 20:37 16:05 (WEA 1) 06:02	05:00 21:27 04:59	04:49 21:49 04:50
28	08:09 16:50 52	11:02 (WEA 3) 07:08 11:54 (WEA 5) 17:50 11:02 (WEA 3) 07:08	16:02 (WEA 1) 06:02 16:49 (WEA 1) 18:42 16:02 (WEA 1) 06:02	16:05 (WEA 1) 06:02 16:24 (WEA 1) 20:39 16:05 (WEA 1) 06:02	04:59 21:28 04:58	04:50 21:48 04:50
29	08:07 16:52 52	11:02 (WEA 3) 07:08 11:54 (WEA 5) 17:50 11:02 (WEA 3) 07:08	16:02 (WEA 1) 06:02 16:49 (WEA 1) 18:42 16:02 (WEA 1) 06:02	16:05 (WEA 1) 06:02 16:24 (WEA 1) 20:39 16:05 (WEA 1) 06:02	04:58 21:29 04:57	04:50 21:48 04:51
30	08:06 16:54 51	11:02 (WEA 3) 07:08 11:54 (WEA 5) 17:50 11:02 (WEA 3) 07:08	16:02 (WEA 1) 06:02 16:49 (WEA 1) 18:42 16:02 (WEA 1) 06:02	16:05 (WEA 1) 06:02 16:24 (WEA 1) 20:39 16:05 (WEA 1) 06:02	04:57 21:31 04:56	04:51 21:48 04:51
31	08:04 16:56 51	11:02 (WEA 3) 07:08 11:54 (WEA 5) 17:50 11:02 (WEA 3) 07:08	16:02 (WEA 1) 06:02 16:49 (WEA 1) 18:42 16:02 (WEA 1) 06:02	16:05 (WEA 1) 06:02 16:24 (WEA 1) 20:39 16:05 (WEA 1) 06:02	04:56 21:32 04:55	04:51 21:48 04:51
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	2010	1074	670			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: R - Steindamm 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 17:21 (WEA 1) 16:45	08:07 16:05 (WEA 2) 16:02
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 16:43 (WEA 1) 16:44	08:09 14:40 (WEA 3) 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:41 (WEA 1) 16:42	08:10 14:38 (WEA 3) 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:39 (WEA 1) 16:40	08:12 14:37 (WEA 3) 16:00
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:39 (WEA 1) 16:38	08:13 14:37 (WEA 3) 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:38 (WEA 1) 16:36	08:14 14:36 (WEA 3) 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:37 (WEA 1) 16:34	08:16 14:35 (WEA 3) 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 16:37 (WEA 1) 16:32	08:17 14:35 (WEA 3) 15:58
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:36 (WEA 1) 16:31	08:18 14:34 (WEA 3) 15:58
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 16:36 (WEA 1) 16:29	08:19 14:34 (WEA 3) 15:57
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:35 (WEA 1) 16:27	08:21 14:34 (WEA 3) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:35 (WEA 1) 16:26	08:22 14:33 (WEA 3) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 16:35 (WEA 1) 16:24	08:23 14:33 (WEA 3) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 16:35 (WEA 1) 16:22	08:24 14:34 (WEA 3) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:35 (WEA 1) 16:21	08:25 14:34 (WEA 3) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 16:36 (WEA 1) 16:19	08:25 14:34 (WEA 3) 15:57
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:36 (WEA 1) 16:18	08:26 14:34 (WEA 3) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:37 (WEA 1) 16:16	08:27 11:05 (WEA 6) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 16:38 (WEA 1) 16:15	08:28 11:02 (WEA 6) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:39 (WEA 1) 16:14	08:28 11:00 (WEA 6) 15:58
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	07:51 16:40 (WEA 1) 16:12	08:29 10:58 (WEA 6) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:40 (WEA 2) 16:11	08:30 10:57 (WEA 6) 15:59
23	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:54 16:40 (WEA 2) 16:10	08:30 10:56 (WEA 6) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:40 (WEA 2) 16:09	08:31 10:56 (WEA 6) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	07:58 15:40 (WEA 2) 16:08	08:31 10:55 (WEA 6) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:12 (WEA 1) 16:58	07:59 15:40 (WEA 2) 16:07	08:31 10:55 (WEA 6) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:53 (WEA 1) 16:56	08:01 15:40 (WEA 2) 16:06	08:32 10:54 (WEA 6) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:51 (WEA 1) 16:54	08:02 15:41 (WEA 2) 16:05	08:32 10:54 (WEA 6) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:47 (WEA 1) 16:52	08:04 15:41 (WEA 2) 16:04	08:32 10:54 (WEA 6) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:46 (WEA 1) 16:49	08:06 14:48 (WEA 3) 16:03	08:32 10:54 (WEA 6) 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 14:44 (WEA 3) 16:07 (WEA 2)	08:32 10:55 (WEA 6) 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			129	1216	1811	1638

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** S - Steindamm 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 47	11:09 (WEA 6) 08:02 11:56 (WEA 6) 16:58 08:01	15:06 (WEA 3) 07:06 15:55 (WEA 5) 17:52 07:04	16:04 (WEA 1) 06:52 16:50 (WEA 1) 19:50 20:44	05:44 20:44	04:55 21:33
2	08:32 16:08 46	11:10 (WEA 6) 08:01 11:56 (WEA 6) 16:59 07:59	15:06 (WEA 3) 07:04 15:54 (WEA 5) 17:54 07:01	16:04 (WEA 1) 06:49 16:50 (WEA 1) 19:52 20:46	05:42 20:46	04:54 21:34
3	08:32 16:09 46	11:11 (WEA 6) 07:59 11:57 (WEA 6) 17:01 07:57	15:06 (WEA 3) 07:01 15:53 (WEA 5) 17:56 06:59	16:04 (WEA 1) 06:47 16:50 (WEA 1) 19:53 20:48	05:40 20:48	04:53 21:35
4	08:31 16:11 46	11:11 (WEA 6) 07:57 11:57 (WEA 6) 17:03 07:56	15:07 (WEA 3) 06:59 15:51 (WEA 5) 17:58 06:57	16:04 (WEA 1) 06:45 16:50 (WEA 1) 19:55 20:49	05:38 20:49	04:53 21:37
5	08:31 16:12 46	11:12 (WEA 6) 07:56 11:58 (WEA 6) 17:05 07:54	15:08 (WEA 3) 06:57 15:49 (WEA 5) 18:00 06:54	16:04 (WEA 1) 06:42 16:50 (WEA 1) 19:57 20:51	05:36 20:51	04:52 21:38
6	08:31 16:13 44	11:13 (WEA 6) 07:54 11:57 (WEA 6) 17:07 07:52	15:08 (WEA 3) 06:54 15:41 (WEA 5) 18:02 06:52	16:04 (WEA 1) 06:40 16:49 (WEA 1) 19:59 20:53	05:34 20:53	04:51 21:39
7	08:30 16:14 50	11:13 (WEA 6) 07:52 15:19 (WEA 3) 17:09 07:50	15:09 (WEA 3) 06:52 15:40 (WEA 5) 18:04 06:50	16:04 (WEA 1) 06:37 16:49 (WEA 1) 20:01 20:55	05:32 20:55	04:50 21:40
8	08:30 16:16 55	11:14 (WEA 6) 07:50 15:23 (WEA 3) 17:11 07:48	15:11 (WEA 3) 06:50 16:32 (WEA 2) 18:06 06:47	16:04 (WEA 1) 06:35 16:48 (WEA 1) 20:02 20:56	05:30 20:56	04:50 21:41
9	08:29 16:17 57	11:15 (WEA 6) 07:48 15:24 (WEA 3) 17:13 07:46	15:12 (WEA 3) 06:47 16:34 (WEA 2) 18:07 06:45	16:05 (WEA 1) 06:33 16:47 (WEA 1) 20:04 20:58	05:28 20:58	04:49 21:41
10	08:28 16:19 64	11:15 (WEA 6) 07:46 15:39 (WEA 5) 17:15 07:44	15:14 (WEA 3) 06:45 16:36 (WEA 2) 18:09 06:43	16:05 (WEA 1) 06:30 16:47 (WEA 1) 20:06 20:52	05:26 21:00	04:49 21:42
11	08:28 16:20 70	11:16 (WEA 6) 07:44 15:42 (WEA 5) 17:17 07:42	15:16 (WEA 3) 06:43 16:38 (WEA 2) 18:11 06:40	16:06 (WEA 1) 06:28 16:45 (WEA 1) 20:08 20:53	05:24 21:02	04:48 21:43
12	08:27 16:22 76	11:17 (WEA 6) 07:42 15:44 (WEA 5) 17:19 07:40	15:20 (WEA 3) 06:40 16:39 (WEA 2) 18:13 06:38	16:07 (WEA 1) 06:26 16:44 (WEA 1) 20:10 20:51	05:23 21:03	04:48 21:44
13	08:26 16:23 78	11:17 (WEA 6) 07:40 15:45 (WEA 5) 17:21 07:38	16:13 (WEA 2) 06:38 16:40 (WEA 2) 18:15 06:35	16:07 (WEA 1) 06:23 16:42 (WEA 1) 20:12 20:59	05:21 21:05	04:48 21:45
14	08:25 16:25 80	11:18 (WEA 6) 07:38 15:47 (WEA 5) 17:23 07:36	16:13 (WEA 2) 06:35 16:41 (WEA 2) 18:17 06:33	16:09 (WEA 1) 06:21 16:41 (WEA 1) 20:13 20:58	05:19 21:07	04:47 21:45
15	08:25 16:26 80	11:19 (WEA 6) 07:36 15:48 (WEA 5) 17:25 07:34	16:12 (WEA 2) 06:33 16:42 (WEA 2) 18:19 06:31	16:11 (WEA 1) 06:19 16:40 (WEA 1) 20:15 20:56	05:18 21:08	04:47 21:46
16	08:24 16:28 79	11:21 (WEA 6) 07:34 15:49 (WEA 5) 17:27 07:32	16:12 (WEA 2) 06:31 16:42 (WEA 2) 18:20 06:28	16:13 (WEA 1) 06:16 16:37 (WEA 1) 20:17 20:54	05:16 21:10	04:47 21:46
17	08:23 16:30 80	11:22 (WEA 6) 07:32 15:50 (WEA 5) 17:29 07:30	16:12 (WEA 2) 06:28 16:43 (WEA 2) 18:22 06:26	16:16 (WEA 1) 06:14 16:34 (WEA 1) 20:19 20:53	05:14 21:12	04:47 21:47
18	08:22 16:32 79	11:24 (WEA 6) 07:30 15:52 (WEA 5) 17:31 07:28	16:11 (WEA 2) 06:26 16:42 (WEA 2) 18:24 06:23	16:21 (WEA 1) 06:12 16:28 (WEA 1) 20:21 20:51	05:13 21:13	04:47 21:47
19	08:21 16:33 79	11:24 (WEA 6) 07:28 15:52 (WEA 5) 17:33 07:26	16:11 (WEA 2) 06:23 16:42 (WEA 2) 18:26 06:21	06:10 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35 77	11:26 (WEA 6) 07:26 15:53 (WEA 5) 17:35 07:24	16:12 (WEA 2) 06:21 16:43 (WEA 1) 18:28 06:18	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37 74	11:28 (WEA 6) 07:24 15:54 (WEA 5) 17:37 07:22	16:12 (WEA 1) 06:18 16:45 (WEA 1) 18:30 06:16	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39 71	11:30 (WEA 6) 07:22 15:54 (WEA 5) 17:39 07:19	16:10 (WEA 1) 06:16 16:46 (WEA 1) 18:32 06:14	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40 67	11:33 (WEA 6) 07:19 15:55 (WEA 5) 17:41 07:17	16:09 (WEA 1) 06:14 16:47 (WEA 1) 18:33 06:11	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42 58	11:37 (WEA 6) 07:17 15:55 (WEA 5) 17:43 07:15	16:08 (WEA 1) 06:11 16:48 (WEA 1) 18:35 06:09	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44 52	15:04 (WEA 3) 07:15 15:56 (WEA 5) 17:45 07:13	16:08 (WEA 1) 06:09 16:49 (WEA 1) 18:37 06:06	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46 52	15:04 (WEA 3) 07:13 15:56 (WEA 5) 17:47 07:10	16:06 (WEA 1) 06:06 16:49 (WEA 1) 18:39 06:04	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48 51	15:05 (WEA 3) 07:10 15:56 (WEA 5) 17:48 07:08	16:06 (WEA 1) 06:04 16:50 (WEA 1) 18:41 06:02	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50 51	15:05 (WEA 3) 07:08 15:56 (WEA 5) 17:50 07:04	16:06 (WEA 1) 06:02 16:50 (WEA 1) 18:42 06:59	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52 52	15:04 (WEA 3) 07:04 15:56 (WEA 5) 17:44 07:03	06:59 19:44 06:57	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54 51	15:04 (WEA 3) 07:03 15:55 (WEA 5) 17:46 07:02	06:57 19:46 06:54	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56 50	15:06 (WEA 3) 07:02 15:56 (WEA 5) 17:48 07:00	06:54 19:48 06:52	04:56 21:32	04:56 21:32	04:56 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1908	1051	669			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** S - Steindamm 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:46 (WEA 1) 16:45 17:23 (WEA 1) 16:45	08:07 16:06 (WEA 2) 16:02 14:41 (WEA 3) 08:09
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 16:45 (WEA 1) 16:44 17:24 (WEA 1) 16:44	08:09 14:40 (WEA 3) 08:10 16:04 (WEA 2) 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:44 (WEA 1) 16:42 17:24 (WEA 1) 16:42	08:10 14:40 (WEA 3) 08:12 16:01 (WEA 2) 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:42 (WEA 1) 16:36 17:24 (WEA 1) 16:40	08:12 14:39 (WEA 3) 08:13 15:10 (WEA 3) 16:00
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:41 (WEA 1) 16:38 17:24 (WEA 1) 16:38	08:13 14:39 (WEA 3) 08:14 15:16 (WEA 5) 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:40 (WEA 1) 16:36 17:25 (WEA 1) 16:36	08:14 14:38 (WEA 3) 08:16 15:20 (WEA 5) 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:40 (WEA 1) 16:34 17:25 (WEA 1) 16:34	08:16 14:38 (WEA 3) 08:17 15:22 (WEA 5) 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 16:39 (WEA 1) 16:32 17:25 (WEA 1) 16:32	08:17 14:37 (WEA 3) 08:18 15:24 (WEA 5) 15:58
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:39 (WEA 1) 16:31 17:25 (WEA 1) 16:31	08:18 14:37 (WEA 3) 08:19 15:25 (WEA 5) 15:58
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 16:39 (WEA 1) 16:29 17:25 (WEA 1) 16:29	08:19 14:37 (WEA 3) 08:21 15:26 (WEA 5) 15:57
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:38 (WEA 1) 16:27 17:24 (WEA 1) 16:27	08:21 14:36 (WEA 3) 08:22 15:27 (WEA 5) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:38 (WEA 1) 16:26 17:24 (WEA 1) 16:26	08:22 14:36 (WEA 3) 08:23 15:27 (WEA 5) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 16:38 (WEA 1) 16:24 17:23 (WEA 1) 16:24	08:23 14:36 (WEA 3) 08:24 15:28 (WEA 5) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 16:38 (WEA 1) 16:22 17:22 (WEA 1) 16:22	08:24 14:36 (WEA 3) 08:25 15:28 (WEA 5) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:38 (WEA 1) 16:21 17:22 (WEA 1) 16:21	08:25 14:37 (WEA 3) 08:26 15:29 (WEA 5) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 16:39 (WEA 1) 16:19 17:21 (WEA 1) 16:19	08:25 14:37 (WEA 3) 08:26 15:29 (WEA 5) 15:57
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:39 (WEA 1) 16:18 17:20 (WEA 1) 16:18	08:26 14:37 (WEA 3) 08:27 15:29 (WEA 5) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:40 (WEA 1) 16:16 17:19 (WEA 1) 16:16	08:27 11:11 (WEA 6) 08:28 15:29 (WEA 5) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 16:41 (WEA 1) 16:15 17:18 (WEA 1) 16:15	08:28 11:07 (WEA 6) 08:29 15:29 (WEA 5) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:42 (WEA 1) 16:14 17:16 (WEA 1) 16:14	08:28 11:05 (WEA 6) 08:29 15:29 (WEA 5) 15:58
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	07:51 16:42 (WEA 2) 16:12 17:15 (WEA 1) 16:12	08:29 11:03 (WEA 6) 08:30 15:29 (WEA 5) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:42 (WEA 2) 16:11 17:13 (WEA 1) 16:11	08:30 11:02 (WEA 6) 08:31 15:29 (WEA 5) 15:59
23	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:54 16:42 (WEA 2) 16:10 17:12 (WEA 2) 16:10	08:31 11:01 (WEA 6) 08:32 15:29 (WEA 5) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:42 (WEA 2) 16:09 17:12 (WEA 2) 16:09	08:31 11:01 (WEA 6) 08:32 15:29 (WEA 5) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	07:58 15:42 (WEA 2) 16:08 16:12 (WEA 2) 16:08	08:31 11:00 (WEA 6) 08:32 15:29 (WEA 5) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:14 (WEA 1) 16:58 16:59 (WEA 1) 16:58	07:59 15:42 (WEA 2) 16:07 16:12 (WEA 2) 16:07	08:31 11:00 (WEA 6) 08:32 15:28 (WEA 5) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:55 (WEA 1) 16:56 17:18 (WEA 1) 16:56	08:01 15:42 (WEA 2) 16:06 16:11 (WEA 2) 16:06	08:32 10:59 (WEA 6) 08:33 15:27 (WEA 5) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:53 (WEA 1) 16:54 17:20 (WEA 1) 16:54	08:02 15:43 (WEA 2) 16:05 16:10 (WEA 2) 16:05	08:32 10:59 (WEA 6) 08:33 15:27 (WEA 5) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:50 (WEA 1) 16:51 17:20 (WEA 1) 16:51	08:04 15:43 (WEA 2) 16:04 16:10 (WEA 2) 16:04	08:32 10:59 (WEA 6) 08:33 15:26 (WEA 5) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:48 (WEA 1) 16:49 17:22 (WEA 1) 16:49	08:06 14:48 (WEA 3) 16:03 16:08 (WEA 2) 16:03	08:32 10:59 (WEA 6) 08:33 15:26 (WEA 5) 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	07:11 14:45 (WEA 3) 16:07 (WEA 2)	08:32 10:59 (WEA 6) 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			129	1192	1759	1527

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: T - Steindamm 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 46	11:19 (WEA 6) 08:02 12:05 (WEA 6) 16:58 11:20 (WEA 6) 08:01 12:06 (WEA 6) 16:59	15:12 (WEA 3) 07:06 15:59 (WEA 5) 17:52 15:12 (WEA 3) 07:04 15:59 (WEA 5) 17:54	16:11 (WEA 1) 06:52 16:54 (WEA 1) 19:50 16:11 (WEA 1) 06:49 16:54 (WEA 1) 19:52	05:44 20:44 05:42 20:46	04:55 21:33 04:54 21:34
2	08:32 16:08 46	11:20 (WEA 6) 08:01 12:06 (WEA 6) 16:59 11:20 (WEA 6) 07:59 12:07 (WEA 6) 17:01	15:12 (WEA 3) 07:01 15:59 (WEA 5) 17:56 15:12 (WEA 3) 06:59 15:57 (WEA 5) 17:58	16:09 (WEA 1) 06:47 16:54 (WEA 1) 19:53 16:10 (WEA 1) 06:45 16:54 (WEA 1) 19:55	05:40 20:48 05:38 20:49	04:53 21:35 04:53 21:37
3	08:31 16:11 46	11:21 (WEA 6) 07:57 12:07 (WEA 6) 17:03 11:22 (WEA 6) 07:56 12:07 (WEA 6) 17:05	15:12 (WEA 3) 06:59 15:57 (WEA 5) 17:58 15:13 (WEA 3) 06:57 15:55 (WEA 5) 18:00	16:10 (WEA 1) 06:42 16:54 (WEA 1) 19:57 16:10 (WEA 1) 06:40 16:54 (WEA 1) 19:59	05:36 20:51 05:30 20:53	04:52 21:38 04:51 21:39
4	08:31 16:12 45	11:22 (WEA 6) 07:54 12:07 (WEA 6) 17:07 11:22 (WEA 6) 07:52 12:07 (WEA 6) 17:09	15:13 (WEA 3) 06:54 15:53 (WEA 5) 18:02 15:14 (WEA 3) 06:52 15:49 (WEA 5) 18:04	16:09 (WEA 1) 06:40 16:53 (WEA 1) 19:59 16:09 (WEA 1) 06:37 16:53 (WEA 1) 20:01	05:34 20:53 05:32 20:55	04:51 21:39 04:50 21:40
5	08:30 16:14 45	11:23 (WEA 6) 07:50 12:08 (WEA 6) 17:11 11:24 (WEA 6) 07:48 12:08 (WEA 6) 17:13	15:15 (WEA 3) 06:50 15:46 (WEA 3) 18:06 15:16 (WEA 3) 06:47 16:33 (WEA 2) 18:07	16:09 (WEA 1) 06:35 16:52 (WEA 1) 20:02 16:10 (WEA 1) 06:33 16:52 (WEA 1) 20:04	05:30 20:56 05:28 20:58	04:50 21:41 04:49 21:41
6	08:30 16:16 45	11:24 (WEA 6) 07:46 12:07 (WEA 6) 17:15 11:25 (WEA 6) 07:44 12:07 (WEA 6) 17:17	15:18 (WEA 3) 06:45 16:37 (WEA 2) 18:09 15:19 (WEA 3) 06:43 16:39 (WEA 2) 18:11	16:10 (WEA 1) 06:30 16:52 (WEA 1) 20:06 16:10 (WEA 1) 06:28 16:50 (WEA 1) 20:08	05:26 21:00 05:24 21:02	04:49 21:42 04:48 21:43
7	08:28 16:19 43	11:25 (WEA 6) 07:44 12:07 (WEA 6) 17:15 11:26 (WEA 6) 07:42 12:22 (WEA 6) 17:19	15:19 (WEA 3) 06:43 16:39 (WEA 2) 18:11 15:21 (WEA 3) 06:40 16:41 (WEA 2) 18:13	16:10 (WEA 1) 06:28 16:50 (WEA 1) 20:08 16:12 (WEA 1) 06:26 16:50 (WEA 1) 20:10	05:24 21:00 05:23 21:03	04:48 21:42 04:48 21:44
8	08:28 16:20 47	11:26 (WEA 6) 07:42 12:22 (WEA 6) 17:19 11:27 (WEA 6) 07:40 12:23 (WEA 6) 17:21	15:24 (WEA 3) 06:38 16:42 (WEA 2) 18:15 16:17 (WEA 2) 06:35 16:43 (WEA 2) 18:17	16:12 (WEA 1) 06:23 16:48 (WEA 1) 20:12 16:13 (WEA 1) 06:21 16:47 (WEA 1) 20:13	05:21 21:05 05:19 21:07	04:48 21:45 04:47 21:45
9	08:25 16:25 67	11:29 (WEA 6) 07:36 12:26 (WEA 6) 17:25 11:30 (WEA 6) 07:34 12:28 (WEA 6) 17:27	16:17 (WEA 2) 06:33 16:44 (WEA 2) 18:19 16:16 (WEA 2) 06:31 16:45 (WEA 2) 18:20	16:15 (WEA 1) 06:19 16:45 (WEA 1) 20:15 16:16 (WEA 1) 06:16 16:43 (WEA 1) 20:17	05:18 21:08 05:16 21:10	04:47 21:46 04:47 21:46
10	08:25 16:26 71	11:31 (WEA 6) 07:32 12:28 (WEA 6) 17:32 11:31 (WEA 6) 07:32 12:29 (WEA 6) 17:29	16:17 (WEA 2) 06:33 16:45 (WEA 2) 18:19 16:16 (WEA 2) 06:28 16:45 (WEA 2) 18:22	16:15 (WEA 1) 06:19 16:45 (WEA 1) 20:15 16:16 (WEA 1) 06:16 16:43 (WEA 1) 20:17	05:18 21:08 05:16 21:10	04:47 21:46 04:47 21:46
11	08:24 16:28 73	11:33 (WEA 6) 07:30 12:30 (WEA 6) 17:31 11:34 (WEA 6) 07:28 12:31 (WEA 6) 17:33	16:15 (WEA 2) 06:26 16:45 (WEA 2) 18:24 16:15 (WEA 2) 06:23 16:45 (WEA 2) 18:26	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
12	08:22 16:32 74	11:34 (WEA 6) 07:28 12:31 (WEA 6) 17:33 11:35 (WEA 6) 07:26 12:32 (WEA 6) 17:35	16:15 (WEA 2) 06:23 16:45 (WEA 2) 18:26 16:15 (WEA 2) 06:21 16:45 (WEA 1) 18:28	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
13	08:21 16:33 72	11:35 (WEA 6) 07:26 12:32 (WEA 6) 17:35 11:38 (WEA 6) 07:24 12:33 (WEA 6) 17:37	16:15 (WEA 2) 06:23 16:45 (WEA 2) 18:26 16:15 (WEA 2) 06:21 16:45 (WEA 1) 18:28	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
14	08:19 16:35 72	11:38 (WEA 6) 07:24 12:33 (WEA 6) 17:37 11:39 (WEA 6) 07:22 12:34 (WEA 6) 17:39	16:15 (WEA 2) 06:21 16:45 (WEA 1) 18:28 16:16 (WEA 2) 06:18 16:47 (WEA 1) 18:30	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
15	08:18 16:37 70	11:39 (WEA 6) 07:22 12:34 (WEA 6) 17:39 11:43 (WEA 6) 07:19 12:35 (WEA 6) 17:41	16:16 (WEA 2) 06:18 16:47 (WEA 1) 18:30 16:15 (WEA 2) 06:16 16:48 (WEA 1) 18:32	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
16	08:17 16:39 67	11:43 (WEA 6) 07:19 12:35 (WEA 6) 17:41 11:44 (WEA 6) 07:17 12:36 (WEA 6) 17:43	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
17	08:16 16:40 63	11:44 (WEA 6) 07:17 12:36 (WEA 6) 17:43 11:45 (WEA 6) 07:15 12:37 (WEA 6) 17:45	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
18	08:16 16:41 63	11:45 (WEA 6) 07:17 12:37 (WEA 6) 17:45 11:46 (WEA 6) 07:15 12:38 (WEA 6) 17:47	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
19	08:15 16:42 54	11:46 (WEA 6) 07:15 12:38 (WEA 6) 17:47 11:47 (WEA 6) 07:13 12:39 (WEA 6) 17:49	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
20	08:13 16:44 48	11:47 (WEA 6) 07:13 12:39 (WEA 6) 17:49 11:48 (WEA 6) 07:11 12:40 (WEA 6) 17:51	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
21	08:12 16:46 48	11:48 (WEA 6) 07:11 12:40 (WEA 6) 17:51 11:49 (WEA 6) 07:09 12:41 (WEA 6) 17:53	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
22	08:12 16:48 49	11:49 (WEA 6) 07:09 12:41 (WEA 6) 17:53 11:50 (WEA 6) 07:07 12:42 (WEA 6) 17:55	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
23	08:10 16:48 49	11:50 (WEA 6) 07:07 12:42 (WEA 6) 17:55 11:51 (WEA 6) 07:05 12:43 (WEA 6) 17:57	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
24	08:09 16:50 49	11:51 (WEA 6) 07:05 12:43 (WEA 6) 17:57 11:52 (WEA 6) 07:03 12:44 (WEA 6) 17:59	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
25	08:09 16:50 49	11:52 (WEA 6) 07:03 12:44 (WEA 6) 17:59 11:53 (WEA 6) 07:01 12:45 (WEA 6) 18:01	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
26	08:07 16:52 49	11:53 (WEA 6) 07:01 12:45 (WEA 6) 18:01 11:54 (WEA 6) 06:59 12:46 (WEA 6) 18:03	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
27	08:06 16:54 48	11:54 (WEA 6) 06:59 12:46 (WEA 6) 18:03 11:55 (WEA 6) 06:57 12:47 (WEA 6) 18:05	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
28	08:04 16:56 49	11:55 (WEA 6) 06:57 12:47 (WEA 6) 18:05 11:56 (WEA 6) 06:55 12:48 (WEA 6) 18:07	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
29	08:04 16:56 49	11:56 (WEA 6) 06:55 12:48 (WEA 6) 18:07 11:57 (WEA 6) 06:53 12:49 (WEA 6) 18:09	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
30	08:04 16:56 49	11:57 (WEA 6) 06:53 12:49 (WEA 6) 18:09 11:58 (WEA 6) 06:51 12:50 (WEA 6) 18:11	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
31	08:04 16:56 49	11:58 (WEA 6) 06:51 12:50 (WEA 6) 18:11 11:59 (WEA 6) 06:49 12:51 (WEA 6) 18:13	16:16 (WEA 2) 06:14 16:50 (WEA 1) 18:33 16:16 (WEA 1) 06:11 16:51 (WEA 1) 18:35	16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21 16:22 (WEA 1) 06:12 16:36 (WEA 1) 20:21	05:13 21:13 05:11 21:15	04:47 21:47 04:47 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1707	1023	675			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** T - Steindamm 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 17:28 (WEA 1)	08:07 16:06 (WEA 2)
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 17:29 (WEA 1)	08:09 16:02 (WEA 2)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 17:29 (WEA 1)	08:10 15:16 (WEA 3)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 17:29 (WEA 1)	08:12 15:20 (WEA 5)
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 17:29 (WEA 1)	08:13 15:25 (WEA 5)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 17:29 (WEA 1)	08:14 15:26 (WEA 5)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 17:29 (WEA 1)	08:16 15:28 (WEA 5)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 17:29 (WEA 1)	08:17 15:29 (WEA 5)
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 17:29 (WEA 1)	08:18 15:30 (WEA 5)
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 17:29 (WEA 1)	08:19 15:30 (WEA 5)
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 17:28 (WEA 1)	08:21 15:31 (WEA 5)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 17:27 (WEA 1)	08:22 15:31 (WEA 5)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 17:27 (WEA 1)	08:23 15:32 (WEA 5)
14	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 17:26 (WEA 1)	08:24 15:32 (WEA 5)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 17:25 (WEA 1)	08:25 15:32 (WEA 5)
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 17:24 (WEA 1)	08:25 15:32 (WEA 5)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 17:23 (WEA 1)	08:26 15:32 (WEA 5)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 17:22 (WEA 1)	08:27 15:32 (WEA 5)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 17:20 (WEA 1)	08:28 15:32 (WEA 5)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 17:19 (WEA 1)	08:28 15:32 (WEA 5)
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	07:51 17:17 (WEA 1)	08:29 15:32 (WEA 5)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 17:16 (WEA 2)	08:30 15:32 (WEA 5)
23	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:54 17:16 (WEA 2)	08:30 15:31 (WEA 5)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 17:15 (WEA 2)	08:31 15:31 (WEA 5)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:17 (WEA 1)	07:58 16:15 (WEA 2)	08:31 15:30 (WEA 5)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:21 (WEA 1)	07:59 16:14 (WEA 2)	08:31 15:30 (WEA 5)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:59 (WEA 1)	08:01 16:13 (WEA 2)	08:32 15:28 (WEA 5)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:57 (WEA 1)	08:02 16:13 (WEA 2)	08:32 15:27 (WEA 5)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:54 (WEA 1)	08:04 16:11 (WEA 2)	08:32 15:26 (WEA 5)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:52 (WEA 1)	08:06 16:10 (WEA 2)	08:32 15:12 (WEA 3)
31	05:29 21:15	06:22 20:10		07:11 16:47		08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			151	1163	1623	1447

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** U - Neue Straße 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai		Juni	
1	08:32	11:32 (WEA 6)	08:02	15:14 (WEA 3)	07:06	16:10 (WEA 1)	06:52	05:44	04:55		
	16:07	44	12:16 (WEA 6)	16:57	45	15:59 (WEA 5)	17:52	42	16:52 (WEA 1)	19:50	20:44
2	08:32	11:33 (WEA 6)	08:01	15:14 (WEA 3)	07:04	16:10 (WEA 1)	06:49	05:42	04:54		
	16:08	43	12:16 (WEA 6)	16:59	44	15:58 (WEA 5)	17:54	42	16:52 (WEA 1)	19:52	20:46
3	08:32	11:34 (WEA 6)	07:59	15:14 (WEA 3)	07:01	16:09 (WEA 1)	06:47	05:40	04:53		
	16:09	43	12:17 (WEA 6)	17:01	44	15:58 (WEA 5)	17:56	42	16:51 (WEA 1)	19:53	20:48
4	08:31	11:34 (WEA 6)	07:57	15:15 (WEA 3)	06:59	16:09 (WEA 1)	06:45	05:38	04:53		
	16:11	42	12:16 (WEA 6)	17:03	41	15:56 (WEA 5)	17:58	43	16:52 (WEA 1)	19:55	20:49
5	08:31	11:35 (WEA 6)	07:56	15:15 (WEA 3)	06:57	16:10 (WEA 1)	06:42	05:36	04:52		
	16:12	42	12:17 (WEA 6)	17:05	40	15:55 (WEA 5)	18:00	41	16:51 (WEA 1)	19:57	20:51
6	08:31	11:35 (WEA 6)	07:54	15:16 (WEA 3)	06:54	16:09 (WEA 1)	06:40	05:34	04:51		
	16:13	42	12:17 (WEA 6)	17:07	36	15:52 (WEA 5)	18:02	41	16:50 (WEA 1)	19:59	20:53
7	08:30	11:36 (WEA 6)	07:52	15:17 (WEA 3)	06:52	16:10 (WEA 1)	06:37	05:32	04:50		
	16:14	40	12:16 (WEA 6)	17:09	30	15:47 (WEA 3)	18:04	40	16:50 (WEA 1)	20:01	20:55
8	08:30	11:37 (WEA 6)	07:50	15:18 (WEA 3)	06:50	16:10 (WEA 1)	06:35	05:30	04:50		
	16:16	40	12:17 (WEA 6)	17:11	33	16:31 (WEA 2)	18:06	39	16:49 (WEA 1)	20:02	20:56
9	08:29	11:38 (WEA 6)	07:48	15:20 (WEA 3)	06:47	16:11 (WEA 1)	06:33	05:28	04:49		
	16:17	39	12:17 (WEA 6)	17:13	38	16:35 (WEA 2)	18:07	37	16:48 (WEA 1)	20:04	20:58
10	08:28	11:38 (WEA 6)	07:46	15:21 (WEA 3)	06:45	16:12 (WEA 1)	06:30	05:26	04:49		
	16:19	39	12:17 (WEA 6)	17:15	40	16:38 (WEA 2)	18:09	35	16:47 (WEA 1)	20:06	21:00
11	08:28	11:39 (WEA 6)	07:44	15:23 (WEA 3)	06:43	16:13 (WEA 1)	06:28	05:24	04:48		
	16:20	43	15:28 (WEA 3)	17:17	38	16:39 (WEA 2)	18:11	32	16:45 (WEA 1)	20:08	21:02
12	08:27	11:40 (WEA 6)	07:42	15:27 (WEA 3)	06:40	16:14 (WEA 1)	06:26	05:23	04:48		
	16:22	47	15:31 (WEA 3)	17:19	35	16:41 (WEA 2)	18:13	30	16:44 (WEA 1)	20:10	21:03
13	08:26	11:41 (WEA 6)	07:40	16:17 (WEA 2)	06:38	16:15 (WEA 1)	06:23	05:21	04:48		
	16:23	56	15:45 (WEA 5)	17:21	25	16:42 (WEA 2)	18:15	27	16:42 (WEA 1)	20:12	21:05
14	08:25	11:42 (WEA 6)	07:38	16:16 (WEA 2)	06:35	16:18 (WEA 1)	06:21	05:19	04:47		
	16:25	63	15:48 (WEA 5)	17:23	27	16:43 (WEA 2)	18:17	22	16:40 (WEA 1)	20:13	21:07
15	08:25	11:43 (WEA 6)	07:36	16:16 (WEA 2)	06:33	16:21 (WEA 1)	06:19	05:18	04:47		
	16:26	66	15:50 (WEA 5)	17:25	27	16:43 (WEA 2)	18:19	16	16:37 (WEA 1)	20:15	21:08
16	08:24	11:45 (WEA 6)	07:34	16:16 (WEA 2)	06:31		06:16	05:16	04:47		
	16:28	65	15:51 (WEA 5)	17:27	28	16:44 (WEA 2)	18:20		20:17	21:10	21:46
17	08:23	11:47 (WEA 6)	07:32	16:16 (WEA 2)	06:28		06:14	05:14	04:47		
	16:30	65	15:53 (WEA 5)	17:29	28	16:44 (WEA 2)	18:22		20:19	21:12	21:47
18	08:22	11:49 (WEA 6)	07:30	16:15 (WEA 2)	06:26		06:12	05:13	04:47		
	16:32	63	15:54 (WEA 5)	17:31	29	16:44 (WEA 2)	18:24		20:21	21:13	21:47
19	08:21	11:50 (WEA 6)	07:28	16:15 (WEA 2)	06:23		06:10	05:11	04:47		
	16:33	62	15:55 (WEA 5)	17:33	29	16:44 (WEA 1)	18:26		20:22	21:15	21:48
20	08:19	11:53 (WEA 6)	07:26	16:15 (WEA 2)	06:21		06:07	05:10	04:47		
	16:35	58	15:56 (WEA 5)	17:35	31	16:46 (WEA 1)	18:28		20:24	21:16	21:48
21	08:18	11:57 (WEA 6)	07:24	16:16 (WEA 2)	06:18		06:05	05:08	04:47		
	16:37	52	15:57 (WEA 5)	17:37	32	16:48 (WEA 1)	18:30		20:26	21:18	21:48
22	08:17	15:13 (WEA 3)	07:22	16:15 (WEA 1)	06:16		06:03	05:07	04:47		
	16:39	44	15:57 (WEA 5)	17:39	33	16:48 (WEA 1)	18:32		20:28	21:19	21:48
23	08:16	15:13 (WEA 3)	07:19	16:14 (WEA 1)	06:14		06:01	05:06	04:48		
	16:40	45	15:58 (WEA 5)	17:41	35	16:49 (WEA 1)	18:33		20:30	21:21	21:49
24	08:14	15:13 (WEA 3)	07:17	16:13 (WEA 1)	06:11		05:58	05:04	04:48		
	16:42	45	15:58 (WEA 5)	17:43	38	16:51 (WEA 1)	18:35		20:31	21:22	21:49
25	08:13	15:13 (WEA 3)	07:15	16:13 (WEA 1)	06:09		05:56	05:03	04:48		
	16:44	46	15:59 (WEA 5)	17:45	38	16:51 (WEA 1)	18:37		20:33	21:24	21:49
26	08:12	15:13 (WEA 3)	07:13	16:11 (WEA 1)	06:06		05:54	05:02	04:49		
	16:46	46	15:59 (WEA 5)	17:47	40	16:51 (WEA 1)	18:39		20:35	21:25	21:49
27	08:10	15:13 (WEA 3)	07:10	16:11 (WEA 1)	06:04		05:52	05:00	04:49		
	16:48	47	16:00 (WEA 5)	17:48	41	16:52 (WEA 1)	18:41		20:37	21:27	21:49
28	08:09	15:13 (WEA 3)	07:08	16:11 (WEA 1)	06:02		05:50	04:59	04:50		
	16:50	47	16:00 (WEA 5)	17:50	41	16:52 (WEA 1)	18:42		20:39	21:28	21:48
29	08:07	15:13 (WEA 3)			06:59		05:48	04:58	04:50		
	16:52	47	16:00 (WEA 5)		19:44		20:40	21:29	21:48		
30	08:06	15:13 (WEA 3)			06:57		05:46	04:57	04:51		
	16:54	46	15:59 (WEA 5)		19:46		20:42	21:31	21:48		
31	08:04	15:14 (WEA 3)			06:54			04:56			
	16:56	46	16:00 (WEA 5)		19:48			21:32			
Sonnenscheinstunden		252		274		367		419		492	507
astr.max.mögl.Beschattung		1513		986		529					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: U - Neue Straße 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember		
1	04:51 21:48	05:30 21:13	06:24 20:08		07:16 18:55	28	16:54 (WEA 1) 07:13 17:22 (WEA 1) 16:45	39	14:51 (WEA 3) 08:07 16:07 (WEA 2) 16:02	44	11:21 (WEA 6) 15:10 (WEA 3)
2	04:52 21:47	05:32 21:12	06:25 20:05		07:18 18:53	32	16:52 (WEA 1) 07:15 17:24 (WEA 1) 16:44	38	14:49 (WEA 3) 08:09 16:05 (WEA 2) 16:01	39	11:21 (WEA 6) 12:00 (WEA 6)
3	04:53 21:47	05:34 21:10	06:27 20:03		07:19 18:50	34	16:51 (WEA 1) 07:17 17:25 (WEA 1) 16:42	30	14:48 (WEA 3) 08:10 15:59 (WEA 2) 16:01	39	11:22 (WEA 6) 12:01 (WEA 6)
4	04:54 21:46	05:35 21:08	06:29 20:01		07:21 18:48	37	16:48 (WEA 1) 07:19 17:25 (WEA 1) 16:40	29	14:47 (WEA 3) 08:12 15:16 (WEA 3) 16:00	40	11:21 (WEA 6) 12:01 (WEA 6)
5	04:55 21:46	05:37 21:06	06:31 19:58		07:23 18:45	38	16:47 (WEA 1) 07:21 17:25 (WEA 1) 16:38	36	14:47 (WEA 3) 08:13 15:23 (WEA 5) 15:59	41	11:22 (WEA 6) 12:03 (WEA 6)
6	04:55 21:45	05:39 21:04	06:32 19:56		07:25 18:43	40	16:46 (WEA 1) 07:23 17:26 (WEA 1) 16:36	40	14:46 (WEA 3) 08:14 15:26 (WEA 5) 15:59	42	11:21 (WEA 6) 12:03 (WEA 6)
7	04:56 21:45	05:40 21:02	06:34 19:53		07:27 18:41	40	16:46 (WEA 1) 07:25 17:26 (WEA 1) 16:34	41	14:46 (WEA 3) 08:16 15:27 (WEA 5) 15:58	42	11:21 (WEA 6) 12:03 (WEA 6)
8	04:57 21:44	05:42 21:00	06:36 19:51		07:28 18:38	41	16:45 (WEA 1) 07:27 17:26 (WEA 1) 16:32	43	14:45 (WEA 3) 08:17 15:28 (WEA 5) 15:58	42	11:22 (WEA 6) 12:04 (WEA 6)
9	04:58 21:43	05:44 20:58	06:38 19:49		07:30 18:36	42	16:45 (WEA 1) 07:28 17:27 (WEA 1) 16:31	44	14:45 (WEA 3) 08:18 15:29 (WEA 5) 15:58	43	11:22 (WEA 6) 12:05 (WEA 6)
10	04:59 21:42	05:46 20:56	06:39 19:46		07:32 18:34	43	16:44 (WEA 1) 07:30 17:27 (WEA 1) 16:29	45	14:45 (WEA 3) 08:19 15:30 (WEA 5) 15:57	43	11:22 (WEA 6) 12:05 (WEA 6)
11	05:01 21:42	05:47 20:54	06:41 19:44		07:34 18:31	42	16:43 (WEA 1) 07:32 17:25 (WEA 1) 16:27	46	14:45 (WEA 3) 08:21 15:31 (WEA 5) 15:57	44	11:23 (WEA 6) 12:07 (WEA 6)
12	05:02 21:41	05:49 20:52	06:43 19:41		07:36 18:29	42	16:43 (WEA 1) 07:34 17:25 (WEA 1) 16:26	46	14:45 (WEA 3) 08:22 15:31 (WEA 5) 15:57	44	11:23 (WEA 6) 12:07 (WEA 6)
13	05:03 21:40	05:51 20:50	06:44 19:39		07:38 18:27	42	16:43 (WEA 1) 07:36 17:25 (WEA 1) 16:24	47	14:45 (WEA 3) 08:23 15:32 (WEA 5) 15:57	45	11:23 (WEA 6) 12:08 (WEA 6)
14	05:04 21:39	05:52 20:48	06:46 19:37		07:39 18:24	41	16:43 (WEA 1) 07:38 17:24 (WEA 1) 16:22	47	14:45 (WEA 3) 08:24 15:32 (WEA 5) 15:57	44	11:24 (WEA 6) 12:08 (WEA 6)
15	05:05 21:38	05:54 20:46	06:48 19:34		07:41 18:22	41	16:43 (WEA 1) 07:40 17:24 (WEA 1) 16:21	47	14:45 (WEA 3) 08:25 15:32 (WEA 5) 15:57	45	11:24 (WEA 6) 12:09 (WEA 6)
16	05:07 21:37	05:56 20:44	06:50 19:32		07:43 18:20	39	16:44 (WEA 1) 07:42 17:23 (WEA 1) 16:19	46	14:46 (WEA 3) 08:25 15:32 (WEA 5) 15:57	45	11:24 (WEA 6) 12:09 (WEA 6)
17	05:08 21:35	05:58 20:42	06:51 19:29		07:45 18:17	38	16:44 (WEA 1) 07:43 17:22 (WEA 1) 16:18	46	14:46 (WEA 3) 08:26 15:32 (WEA 5) 15:57	45	11:24 (WEA 6) 12:09 (WEA 6)
18	05:09 21:34	05:59 20:40	06:53 19:27		07:47 18:15	36	16:45 (WEA 1) 07:45 17:21 (WEA 1) 16:16	45	14:47 (WEA 3) 08:27 15:32 (WEA 5) 15:57	45	11:25 (WEA 6) 12:10 (WEA 6)
19	05:11 21:33	06:01 20:37	06:55 19:24		07:49 18:13	35	16:45 (WEA 1) 07:47 17:20 (WEA 1) 16:15	45	14:47 (WEA 3) 08:28 15:32 (WEA 5) 15:58	46	11:25 (WEA 6) 12:11 (WEA 6)
20	05:12 21:32	06:03 20:35	06:57 19:22		07:50 18:11	33	16:46 (WEA 1) 07:49 17:19 (WEA 1) 16:14	44	14:48 (WEA 3) 08:28 15:32 (WEA 5) 15:58	45	11:25 (WEA 6) 12:10 (WEA 6)
21	05:13 21:30	06:05 20:33	06:58 19:19		07:52 18:08	32	16:46 (WEA 2) 07:51 17:18 (WEA 1) 16:12	52	11:32 (WEA 6) 08:29 15:32 (WEA 5) 15:58	45	11:26 (WEA 6) 12:11 (WEA 6)
22	05:15 21:29	06:06 20:31	07:00 19:17		07:54 18:06	31	16:45 (WEA 2) 07:52 17:16 (WEA 1) 16:11	58	11:29 (WEA 6) 08:30 15:32 (WEA 5) 15:59	45	11:26 (WEA 6) 12:11 (WEA 6)
23	05:16 21:28	06:08 20:29	07:02 19:14		07:56 18:04	29	16:45 (WEA 2) 07:54 17:14 (WEA 1) 16:10	62	11:27 (WEA 6) 08:30 15:32 (WEA 5) 15:59	45	11:27 (WEA 6) 12:12 (WEA 6)
24	05:18 21:26	06:10 20:26	07:04 19:12		07:58 18:02	29	16:45 (WEA 2) 07:56 17:14 (WEA 2) 16:09	63	11:26 (WEA 6) 08:31 15:31 (WEA 5) 16:00	46	11:27 (WEA 6) 12:13 (WEA 6)
25	05:19 21:25	06:11 20:24	07:05 19:10		07:00 17:00	29	15:45 (WEA 2) 07:58 16:14 (WEA 2) 16:08	65	11:25 (WEA 6) 08:31 15:31 (WEA 5) 16:01	45	11:28 (WEA 6) 12:13 (WEA 6)
26	05:21 21:23	06:13 20:22	07:07 19:07		07:02 16:58	28	15:45 (WEA 2) 07:59 16:13 (WEA 2) 16:07	65	11:24 (WEA 6) 08:31 15:30 (WEA 5) 16:01	45	11:29 (WEA 6) 12:14 (WEA 6)
27	05:22 21:22	06:15 20:19	07:09 19:05		07:04 16:56	27	15:46 (WEA 2) 08:01 16:13 (WEA 2) 16:06	65	11:23 (WEA 6) 08:32 15:29 (WEA 5) 16:02	45	11:29 (WEA 6) 12:14 (WEA 6)
28	05:24 21:20	06:17 20:17	07:11 19:02	12	17:04 (WEA 1) 07:06 17:16 (WEA 1) 16:54	26	15:46 (WEA 2) 08:02 16:12 (WEA 2) 16:05	63	11:22 (WEA 6) 08:32 15:28 (WEA 5) 16:03	45	11:30 (WEA 6) 12:15 (WEA 6)
29	05:26 21:18	06:18 20:15	07:12 19:00	19	16:59 (WEA 1) 07:07 17:18 (WEA 1) 16:51	24	15:47 (WEA 2) 08:04 16:11 (WEA 2) 16:04	56	11:22 (WEA 6) 08:32 15:26 (WEA 5) 16:04	45	11:30 (WEA 6) 12:15 (WEA 6)
30	05:27 21:17	06:20 20:12	07:14 18:57	25	16:56 (WEA 1) 07:09 17:21 (WEA 1) 16:49	36	14:55 (WEA 3) 08:06 16:10 (WEA 2) 16:03	47	11:22 (WEA 6) 08:32 15:13 (WEA 3) 16:05	44	11:31 (WEA 6) 12:15 (WEA 6)
31	05:29 21:15	06:22 20:10	 		07:11 16:47	38	14:53 (WEA 3) 16:09 (WEA 2)		08:32 16:06	44	11:32 (WEA 6) 12:16 (WEA 6)
Sonnenscheinstunden	510	458	382		329		261		236		
astr.max.mögl.Beschattung			56		1093		1440		1357		

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: V - Neue Straße 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:44 (WEA 6) 16:57	15:17 (WEA 3) 17:52	16:12 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:45 (WEA 6) 16:59	15:18 (WEA 3) 17:54	16:12 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:46 (WEA 6) 17:01	15:18 (WEA 3) 17:56	16:11 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:46 (WEA 6) 17:03	15:18 (WEA 3) 17:58	16:12 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:47 (WEA 6) 17:05	15:19 (WEA 3) 18:00	16:12 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:47 (WEA 6) 17:07	15:20 (WEA 3) 18:02	16:12 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	11:48 (WEA 6) 17:09	15:21 (WEA 3) 18:04	16:13 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	11:49 (WEA 6) 17:11	15:22 (WEA 3) 18:06	16:13 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	11:50 (WEA 6) 17:13	15:23 (WEA 3) 18:07	16:14 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	11:51 (WEA 6) 17:15	15:25 (WEA 3) 18:09	16:16 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	11:52 (WEA 6) 17:17	15:27 (WEA 3) 18:11	16:16 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	11:53 (WEA 6) 17:19	15:31 (WEA 3) 18:13	16:19 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	11:54 (WEA 6) 17:21	16:18 (WEA 2) 18:15	16:20 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	11:55 (WEA 6) 17:23	16:17 (WEA 2) 18:17	16:25 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	11:57 (WEA 6) 17:25	16:17 (WEA 2) 18:19	16:35 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	11:58 (WEA 6) 17:27	16:17 (WEA 2) 18:20	16:17 (WEA 2) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	12:01 (WEA 6) 17:29	16:17 (WEA 2) 18:22	16:17 (WEA 2) 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	12:03 (WEA 6) 17:31	16:16 (WEA 2) 18:24	16:16 (WEA 2) 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	12:06 (WEA 6) 17:33	16:16 (WEA 2) 18:26	16:16 (WEA 2) 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	15:18 (WEA 3) 17:35	16:17 (WEA 2) 18:28	16:17 (WEA 2) 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:18 (WEA 3) 17:37	16:17 (WEA 2) 18:30	16:17 (WEA 2) 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:17 (WEA 3) 17:39	16:16 (WEA 1) 18:32	16:16 (WEA 1) 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:17 (WEA 3) 17:41	16:15 (WEA 1) 18:33	16:15 (WEA 1) 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	15:16 (WEA 3) 17:43	16:14 (WEA 1) 18:35	16:14 (WEA 1) 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:17 (WEA 3) 17:45	16:14 (WEA 1) 18:37	16:14 (WEA 1) 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:16 (WEA 3) 17:47	16:13 (WEA 1) 18:39	16:13 (WEA 1) 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:17 (WEA 3) 17:48	16:13 (WEA 1) 18:41	16:13 (WEA 1) 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:17 (WEA 3) 17:50	16:13 (WEA 1) 18:42	16:13 (WEA 1) 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:16 (WEA 3) 17:51	16:13 (WEA 1) 18:44	16:13 (WEA 1) 20:41	04:58 21:29	04:50 21:48
30	08:06 16:54	15:16 (WEA 3) 17:52	16:13 (WEA 1) 18:46	16:13 (WEA 1) 20:43	04:57 21:31	04:51 21:48
31	08:04 16:56	15:17 (WEA 3) 17:53	16:13 (WEA 1) 18:48	16:13 (WEA 1) 20:45	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1339	951	451			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: V - Neue Straße 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember	
1	04:51	05:30	06:24		07:16	16:58 (WEA 1)	07:13	14:54 (WEA 3)	08:07	11:34 (WEA 6)
	21:48	21:13	20:08		18:55	22 17:20 (WEA 1)	16:45	38 16:08 (WEA 2)	16:02	34 12:08 (WEA 6)
2	04:52	05:32	06:25		07:18	16:56 (WEA 1)	07:15	14:53 (WEA 3)	08:09	11:34 (WEA 6)
	21:47	21:12	20:05		18:53	26 17:22 (WEA 1)	16:44	36 16:05 (WEA 2)	16:01	35 12:09 (WEA 6)
3	04:53	05:34	06:27		07:19	16:54 (WEA 1)	07:17	14:51 (WEA 3)	08:10	11:34 (WEA 6)
	21:47	21:10	20:03		18:50	30 17:24 (WEA 1)	16:42	30 16:01 (WEA 2)	16:01	36 12:10 (WEA 6)
4	04:54	05:35	06:29		07:21	16:52 (WEA 1)	07:19	14:50 (WEA 3)	08:12	11:33 (WEA 6)
	21:46	21:08	20:01		18:48	32 17:24 (WEA 1)	16:40	29 15:19 (WEA 3)	16:00	38 12:11 (WEA 6)
5	04:55	05:37	06:31		07:23	16:50 (WEA 1)	07:21	14:50 (WEA 3)	08:13	11:34 (WEA 6)
	21:46	21:06	19:58		18:45	35 17:25 (WEA 1)	16:38	34 15:24 (WEA 5)	15:59	38 12:12 (WEA 6)
6	04:55	05:39	06:32		07:25	16:49 (WEA 1)	07:23	14:50 (WEA 3)	08:14	11:33 (WEA 6)
	21:45	21:04	19:56		18:43	36 17:25 (WEA 1)	16:36	37 15:27 (WEA 5)	15:59	39 12:12 (WEA 6)
7	04:56	05:40	06:34		07:27	16:48 (WEA 1)	07:25	14:49 (WEA 3)	08:16	11:33 (WEA 6)
	21:45	21:02	19:53		18:41	38 17:26 (WEA 1)	16:34	40 15:29 (WEA 5)	15:58	40 12:13 (WEA 6)
8	04:57	05:42	06:36		07:28	16:48 (WEA 1)	07:27	14:49 (WEA 3)	08:17	11:34 (WEA 6)
	21:44	21:00	19:51		18:38	38 17:26 (WEA 1)	16:32	41 15:30 (WEA 5)	15:58	40 12:14 (WEA 6)
9	04:58	05:44	06:38		07:30	16:47 (WEA 1)	07:28	14:48 (WEA 3)	08:18	11:34 (WEA 6)
	21:43	20:58	19:49		18:36	39 17:26 (WEA 1)	16:31	43 15:31 (WEA 5)	15:58	40 12:14 (WEA 6)
10	04:59	05:46	06:39		07:32	16:46 (WEA 1)	07:30	14:48 (WEA 3)	08:19	11:34 (WEA 6)
	21:42	20:56	19:46		18:34	41 17:27 (WEA 1)	16:29	44 15:32 (WEA 5)	15:57	41 12:15 (WEA 6)
11	05:01	05:47	06:41		07:34	16:45 (WEA 1)	07:32	14:48 (WEA 3)	08:21	11:35 (WEA 6)
	21:42	20:54	19:44		18:31	41 17:26 (WEA 1)	16:27	44 15:32 (WEA 5)	15:57	41 12:16 (WEA 6)
12	05:02	05:49	06:43		07:36	16:45 (WEA 1)	07:34	14:48 (WEA 3)	08:22	11:35 (WEA 6)
	21:41	20:52	19:41		18:29	40 17:25 (WEA 1)	16:26	45 15:33 (WEA 5)	15:57	42 12:17 (WEA 6)
13	05:03	05:51	06:44		07:38	16:45 (WEA 1)	07:36	14:48 (WEA 3)	08:23	11:35 (WEA 6)
	21:40	20:50	19:39		18:27	40 17:25 (WEA 1)	16:24	45 15:33 (WEA 5)	15:57	42 12:17 (WEA 6)
14	05:04	05:52	06:46		07:39	16:45 (WEA 1)	07:38	14:49 (WEA 3)	08:24	11:35 (WEA 6)
	21:39	20:48	19:37		18:24	40 17:25 (WEA 1)	16:22	44 15:33 (WEA 5)	15:57	43 12:18 (WEA 6)
15	05:05	05:54	06:48		07:41	16:45 (WEA 1)	07:40	14:49 (WEA 3)	08:25	11:36 (WEA 6)
	21:38	20:46	19:34		18:22	39 17:24 (WEA 1)	16:21	44 15:33 (WEA 5)	15:57	43 12:19 (WEA 6)
16	05:07	05:56	06:50		07:43	16:45 (WEA 1)	07:42	14:49 (WEA 3)	08:25	11:36 (WEA 6)
	21:37	20:44	19:32		18:20	39 17:24 (WEA 1)	16:19	45 15:34 (WEA 5)	15:57	43 12:19 (WEA 6)
17	05:08	05:58	06:51		07:45	16:45 (WEA 1)	07:43	14:50 (WEA 3)	08:26	11:36 (WEA 6)
	21:35	20:42	19:29		18:17	38 17:23 (WEA 1)	16:18	44 15:34 (WEA 5)	15:57	43 12:19 (WEA 6)
18	05:09	05:59	06:53		07:47	16:46 (WEA 1)	07:45	14:50 (WEA 3)	08:27	11:36 (WEA 6)
	21:34	20:40	19:27		18:15	36 17:22 (WEA 1)	16:16	44 15:34 (WEA 5)	15:57	44 12:20 (WEA 6)
19	05:11	06:01	06:55		07:49	16:47 (WEA 1)	07:47	14:51 (WEA 3)	08:28	11:37 (WEA 6)
	21:33	20:37	19:24		18:13	34 17:21 (WEA 1)	16:15	43 15:34 (WEA 5)	15:58	44 12:21 (WEA 6)
20	05:12	06:03	06:57		07:50	16:47 (WEA 1)	07:49	14:52 (WEA 3)	08:28	11:37 (WEA 6)
	21:32	20:35	19:22		18:11	33 17:20 (WEA 1)	16:14	41 15:33 (WEA 5)	15:58	43 12:20 (WEA 6)
21	05:13	06:05	06:58		07:52	16:47 (WEA 2)	07:51	14:53 (WEA 3)	08:29	11:38 (WEA 6)
	21:30	20:33	19:19		18:08	32 17:19 (WEA 1)	16:12	40 15:33 (WEA 5)	15:58	43 12:21 (WEA 6)
22	05:15	06:06	07:00		07:54	16:47 (WEA 2)	07:52	14:54 (WEA 3)	08:30	11:38 (WEA 6)
	21:29	20:31	19:17		18:06	30 17:17 (WEA 1)	16:11	39 15:33 (WEA 5)	15:59	43 12:21 (WEA 6)
23	05:16	06:08	07:02		07:56	16:46 (WEA 2)	07:54	11:43 (WEA 6)	08:30	11:39 (WEA 6)
	21:28	20:29	19:14		18:04	29 17:15 (WEA 1)	16:10	49 15:33 (WEA 5)	15:59	43 12:22 (WEA 6)
24	05:18	06:10	07:04		07:58	16:46 (WEA 2)	07:56	11:40 (WEA 6)	08:31	11:39 (WEA 6)
	21:26	20:26	19:12		18:02	28 17:14 (WEA 2)	16:09	53 15:32 (WEA 5)	16:00	43 12:22 (WEA 6)
25	05:19	06:11	07:05		07:00	15:46 (WEA 2)	07:58	11:39 (WEA 6)	08:31	11:39 (WEA 6)
	21:25	20:24	19:10		17:00	28 16:14 (WEA 2)	16:08	56 15:32 (WEA 5)	16:01	44 12:23 (WEA 6)
26	05:21	06:13	07:07		07:02	15:46 (WEA 2)	07:59	11:38 (WEA 6)	08:31	11:41 (WEA 6)
	21:23	20:22	19:07		16:58	28 16:14 (WEA 2)	16:07	56 15:31 (WEA 5)	16:01	43 12:24 (WEA 6)
27	05:22	06:15	07:09		07:04	15:47 (WEA 2)	08:01	11:36 (WEA 6)	08:32	11:41 (WEA 6)
	21:22	20:19	19:05		16:56	26 16:13 (WEA 2)	16:06	55 15:29 (WEA 5)	16:02	43 12:24 (WEA 6)
28	05:24	06:17	07:11		07:06	15:47 (WEA 2)	08:02	11:35 (WEA 6)	08:32	11:42 (WEA 6)
	21:20	20:17	19:02		16:54	26 16:13 (WEA 2)	16:05	50 15:28 (WEA 5)	16:03	42 12:24 (WEA 6)
29	05:26	06:18	07:12	17:08 (WEA 1)	07:07	15:48 (WEA 2)	08:04	11:35 (WEA 6)	08:32	11:42 (WEA 6)
	21:18	20:15	19:00	3 17:11 (WEA 1)	16:51	24 16:12 (WEA 2)	16:04	42 15:15 (WEA 3)	16:04	43 12:25 (WEA 6)
30	05:27	06:20	07:14	17:02 (WEA 1)	07:09	15:00 (WEA 3)	08:06	11:35 (WEA 6)	08:32	11:43 (WEA 6)
	21:17	20:12	18:57	15 17:17 (WEA 1)	16:49	34 16:11 (WEA 2)	16:03	37 15:13 (WEA 3)	16:05	42 12:25 (WEA 6)
31	05:29	06:22			07:11	14:56 (WEA 3)			08:32	11:44 (WEA 6)
	21:15	20:10			16:47	36 16:09 (WEA 2)			16:06	42 12:26 (WEA 6)
Sonnenscheinstunden	510	458	382		329		261		236	
astr.max.mögl.Beschattung			18		1038		1288		1280	

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** W - Steindamm 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:39 (WEA 6) 08:02 12:27 (WEA 6) 16:57	15:25 (WEA 3) 07:06 16:08 (WEA 5) 17:52	16:25 (WEA 1) 06:52 17:01 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:40 (WEA 6) 08:01 12:28 (WEA 6) 16:59	15:25 (WEA 3) 07:04 16:08 (WEA 5) 17:54	16:24 (WEA 1) 06:49 17:02 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:41 (WEA 6) 07:59 12:29 (WEA 6) 17:01	15:25 (WEA 3) 07:01 16:08 (WEA 5) 17:56	16:23 (WEA 1) 06:47 17:02 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:41 (WEA 6) 07:57 12:28 (WEA 6) 17:03	15:25 (WEA 3) 06:59 16:07 (WEA 5) 17:58	16:22 (WEA 1) 06:45 17:03 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:42 (WEA 6) 07:56 12:29 (WEA 6) 17:05	15:25 (WEA 3) 06:57 16:07 (WEA 5) 18:00	16:22 (WEA 1) 06:42 17:03 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:42 (WEA 6) 07:54 12:29 (WEA 6) 17:07	15:25 (WEA 3) 06:54 16:06 (WEA 5) 18:02	16:21 (WEA 1) 06:40 17:03 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	11:42 (WEA 6) 07:52 12:29 (WEA 6) 17:09	15:25 (WEA 3) 06:52 16:05 (WEA 5) 18:04	16:21 (WEA 1) 06:37 17:03 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	11:44 (WEA 6) 07:50 12:30 (WEA 6) 17:11	15:26 (WEA 3) 06:50 16:03 (WEA 5) 18:06	16:21 (WEA 1) 06:35 17:02 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	11:44 (WEA 6) 07:48 12:29 (WEA 6) 17:13	15:26 (WEA 3) 06:47 16:01 (WEA 5) 18:07	16:21 (WEA 1) 06:33 17:02 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	11:45 (WEA 6) 07:46 12:29 (WEA 6) 17:15	15:27 (WEA 3) 06:45 15:59 (WEA 3) 18:09	16:21 (WEA 1) 06:30 17:02 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	11:45 (WEA 6) 07:44 12:29 (WEA 6) 17:17	15:28 (WEA 3) 06:43 15:58 (WEA 3) 18:11	16:21 (WEA 1) 06:28 17:01 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	11:46 (WEA 6) 07:42 12:29 (WEA 6) 17:19	15:29 (WEA 3) 06:40 16:40 (WEA 2) 18:13	16:22 (WEA 1) 06:26 17:01 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	11:47 (WEA 6) 07:40 12:29 (WEA 6) 17:21	15:30 (WEA 3) 06:38 16:44 (WEA 2) 18:15	16:22 (WEA 1) 06:23 16:59 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	11:48 (WEA 6) 07:38 12:29 (WEA 6) 17:23	15:32 (WEA 3) 06:35 16:47 (WEA 2) 18:17	16:23 (WEA 1) 06:21 16:59 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	11:49 (WEA 6) 07:36 12:29 (WEA 6) 17:25	15:34 (WEA 3) 06:33 16:48 (WEA 2) 18:19	16:24 (WEA 1) 06:19 16:58 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	11:50 (WEA 6) 07:34 12:29 (WEA 6) 17:27	15:37 (WEA 3) 06:31 16:50 (WEA 2) 18:20	16:25 (WEA 1) 06:16 16:56 (WEA 1) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	11:51 (WEA 6) 07:32 12:28 (WEA 6) 17:29	15:39 (WEA 3) 06:28 16:51 (WEA 2) 18:22	16:26 (WEA 1) 06:14 16:54 (WEA 1) 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	11:53 (WEA 6) 07:30 15:53 (WEA 5) 17:31	16:24 (WEA 2) 06:26 16:51 (WEA 2) 18:24	16:28 (WEA 1) 06:12 16:52 (WEA 1) 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	11:53 (WEA 6) 07:28 15:57 (WEA 5) 17:33	16:24 (WEA 2) 06:23 16:51 (WEA 2) 18:26	16:30 (WEA 1) 06:10 16:49 (WEA 1) 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	11:55 (WEA 6) 07:26 15:59 (WEA 5) 17:35	16:24 (WEA 2) 06:21 16:52 (WEA 2) 18:28	16:34 (WEA 1) 06:07 16:44 (WEA 1) 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	11:57 (WEA 6) 07:24 16:01 (WEA 5) 17:37	16:24 (WEA 2) 06:18 16:52 (WEA 2) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	11:58 (WEA 6) 07:22 16:02 (WEA 5) 17:39	16:23 (WEA 2) 06:16 16:52 (WEA 2) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	12:01 (WEA 6) 07:19 16:04 (WEA 5) 17:41	16:23 (WEA 2) 06:14 16:53 (WEA 1) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	12:04 (WEA 6) 07:17 16:04 (WEA 5) 17:43	16:24 (WEA 2) 06:11 16:55 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	12:10 (WEA 6) 07:15 16:06 (WEA 5) 17:45	16:24 (WEA 2) 06:09 16:58 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:26 (WEA 3) 07:13 16:06 (WEA 5) 17:47	16:24 (WEA 2) 06:06 16:58 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:26 (WEA 3) 07:10 16:07 (WEA 5) 17:48	16:25 (WEA 2) 06:04 17:00 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:26 (WEA 3) 07:08 16:07 (WEA 5) 17:50	16:26 (WEA 1) 06:02 17:01 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:25 (WEA 3) 16:07 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:24 (WEA 3) 16:08 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	15:25 (WEA 3) 16:08 (WEA 5)	06:54 19:48	 21:32	04:56 21:32	 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1423	979	700			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** W - Steindamm 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 17:39 (WEA 1) 16:45	08:07 15:28 (WEA 3) 16:02
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 17:00 (WEA 1) 16:44	08:09 14:56 (WEA 3) 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 17:00 (WEA 1) 16:42	08:10 14:55 (WEA 3) 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:58 (WEA 1) 16:40	08:12 14:55 (WEA 3) 16:00
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:58 (WEA 1) 16:38	08:13 14:56 (WEA 3) 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:57 (WEA 1) 16:36	08:14 14:55 (WEA 3) 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:57 (WEA 1) 16:34	08:16 14:55 (WEA 3) 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 16:57 (WEA 1) 16:32	08:17 14:55 (WEA 3) 15:58
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:57 (WEA 1) 16:31	08:18 14:55 (WEA 3) 15:58
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 16:58 (WEA 1) 16:29	08:19 14:56 (WEA 3) 15:57
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:57 (WEA 1) 16:27	08:21 14:56 (WEA 3) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:57 (WEA 1) 16:26	08:22 14:56 (WEA 3) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 16:58 (WEA 1) 16:24	08:23 14:57 (WEA 3) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 16:58 (WEA 2) 16:22	08:24 14:58 (WEA 3) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:57 (WEA 2) 16:21	08:25 14:58 (WEA 3) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 16:56 (WEA 2) 16:19	08:25 14:59 (WEA 3) 15:57
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:55 (WEA 2) 16:18	08:26 11:43 (WEA 6) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:55 (WEA 2) 16:16	08:27 11:38 (WEA 6) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 16:54 (WEA 2) 16:15	08:28 11:35 (WEA 6) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:54 (WEA 2) 16:14	08:28 11:33 (WEA 6) 15:58
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	07:51 16:54 (WEA 2) 16:12	08:29 11:32 (WEA 6) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:54 (WEA 2) 16:11	08:30 11:31 (WEA 6) 15:59
23	05:16 21:28	06:08 20:29	07:02 19:14	07:56 18:04	07:54 16:54 (WEA 2) 16:10	08:30 11:30 (WEA 6) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 17:32 (WEA 1) 18:02	07:56 16:55 (WEA 2) 16:09	08:31 11:30 (WEA 6) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:11 (WEA 1) 17:00	07:58 15:11 (WEA 3) 16:08	08:31 11:29 (WEA 6) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:09 (WEA 1) 16:58	07:59 15:06 (WEA 3) 16:07	08:31 11:29 (WEA 6) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 17:07 (WEA 1) 16:56	08:01 15:03 (WEA 3) 16:06	08:32 11:28 (WEA 6) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 17:05 (WEA 1) 16:54	08:02 15:01 (WEA 3) 16:05	08:32 11:28 (WEA 6) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 17:03 (WEA 1) 16:51	08:04 15:00 (WEA 3) 16:04	08:32 11:28 (WEA 6) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 17:02 (WEA 1) 16:49	08:06 14:58 (WEA 3) 16:03	08:32 11:28 (WEA 6) 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 15:27 (WEA 3) 16:03	08:32 12:11 (WEA 6) 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			207	1103	1314	1487

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: X - Steindamm 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:44 (WEA 6) 08:02 12:33 (WEA 6) 16:57	15:28 (WEA 3) 07:06 16:10 (WEA 5) 17:52	16:27 (WEA 1) 06:52 17:02 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:45 (WEA 6) 08:01 12:33 (WEA 6) 16:59	15:27 (WEA 3) 07:04 16:10 (WEA 5) 17:54	16:26 (WEA 1) 06:49 17:03 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:46 (WEA 6) 07:59 12:34 (WEA 6) 17:01	15:27 (WEA 3) 07:01 16:09 (WEA 5) 17:56	16:25 (WEA 1) 06:47 17:03 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:46 (WEA 6) 07:57 12:34 (WEA 6) 17:03	15:27 (WEA 3) 06:59 16:09 (WEA 5) 17:58	16:25 (WEA 1) 06:45 17:04 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:47 (WEA 6) 07:56 12:34 (WEA 6) 17:05	15:27 (WEA 3) 06:57 16:08 (WEA 5) 18:00	16:24 (WEA 1) 06:42 17:05 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:47 (WEA 6) 07:54 12:34 (WEA 6) 17:07	15:27 (WEA 3) 06:54 16:08 (WEA 5) 18:02	16:23 (WEA 1) 06:40 17:04 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	11:48 (WEA 6) 07:52 12:34 (WEA 6) 17:09	15:28 (WEA 3) 06:52 16:07 (WEA 5) 18:04	16:23 (WEA 1) 06:37 17:04 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	11:49 (WEA 6) 07:50 12:35 (WEA 6) 17:11	15:28 (WEA 3) 06:50 16:05 (WEA 5) 18:06	16:23 (WEA 1) 06:35 17:04 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	11:50 (WEA 6) 07:48 12:35 (WEA 6) 17:13	15:29 (WEA 3) 06:47 16:03 (WEA 5) 18:07	16:23 (WEA 1) 06:33 17:04 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	11:50 (WEA 6) 07:46 12:35 (WEA 6) 17:15	15:29 (WEA 3) 06:45 16:01 (WEA 5) 18:09	16:23 (WEA 1) 06:30 17:04 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	11:51 (WEA 6) 07:44 12:35 (WEA 6) 17:17	15:30 (WEA 3) 06:43 16:01 (WEA 5) 18:11	16:23 (WEA 1) 06:28 17:02 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	11:51 (WEA 6) 07:42 12:34 (WEA 6) 17:19	15:31 (WEA 3) 06:40 16:00 (WEA 5) 18:13	16:24 (WEA 1) 06:26 17:02 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	11:52 (WEA 6) 07:40 12:34 (WEA 6) 17:21	15:32 (WEA 3) 06:38 16:44 (WEA 2) 18:15	16:24 (WEA 1) 06:23 17:01 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	11:53 (WEA 6) 07:38 12:34 (WEA 6) 17:23	15:34 (WEA 3) 06:35 16:47 (WEA 2) 18:17	16:25 (WEA 1) 06:21 17:00 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	11:54 (WEA 6) 07:36 12:34 (WEA 6) 17:25	15:36 (WEA 3) 06:33 16:49 (WEA 2) 18:19	16:25 (WEA 1) 06:19 16:58 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	11:55 (WEA 6) 07:34 12:34 (WEA 6) 17:27	15:38 (WEA 3) 06:31 16:50 (WEA 2) 18:20	16:26 (WEA 1) 06:16 16:57 (WEA 1) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	11:57 (WEA 6) 07:32 12:34 (WEA 6) 17:29	15:43 (WEA 3) 06:28 16:52 (WEA 2) 18:22	16:28 (WEA 1) 06:14 16:56 (WEA 1) 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	11:58 (WEA 6) 07:30 12:33 (WEA 6) 17:31	16:26 (WEA 2) 06:26 16:52 (WEA 2) 18:24	16:29 (WEA 1) 06:12 16:53 (WEA 1) 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	11:59 (WEA 6) 07:28 15:55 (WEA 5) 17:33	16:26 (WEA 2) 06:23 16:52 (WEA 2) 18:26	16:32 (WEA 1) 06:10 16:51 (WEA 1) 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	12:00 (WEA 6) 07:26 15:59 (WEA 5) 17:35	16:25 (WEA 2) 06:21 16:53 (WEA 2) 18:28	16:36 (WEA 1) 06:07 16:46 (WEA 1) 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	12:03 (WEA 6) 07:24 16:02 (WEA 5) 17:37	16:25 (WEA 2) 06:18 16:53 (WEA 2) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	12:04 (WEA 6) 07:22 16:03 (WEA 5) 17:39	16:24 (WEA 2) 06:16 16:53 (WEA 2) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	12:07 (WEA 6) 07:19 16:04 (WEA 5) 17:41	16:25 (WEA 2) 06:14 16:53 (WEA 2) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	12:09 (WEA 6) 07:17 16:05 (WEA 5) 17:43	16:25 (WEA 2) 06:11 16:56 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	12:16 (WEA 6) 07:15 16:07 (WEA 5) 17:45	16:25 (WEA 2) 06:09 16:57 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:29 (WEA 3) 07:13 16:07 (WEA 5) 17:47	16:25 (WEA 2) 06:06 16:59 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:29 (WEA 3) 07:10 16:08 (WEA 5) 17:48	16:26 (WEA 2) 06:04 17:01 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:29 (WEA 3) 07:08 16:09 (WEA 5) 17:50	16:28 (WEA 2) 06:02 17:02 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:28 (WEA 3) 16:09 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:27 (WEA 3) 16:09 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	15:28 (WEA 3) 16:10 (WEA 5)	06:54 19:48	 21:32	04:56 21:32	 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1373	969	689			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: X - Steindamm 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember	
1	04:51	05:30	06:24		07:16	17:03 (WEA 1)	07:13	14:59 (WEA 3)	08:07	11:33 (WEA 6)
	21:48	21:13	20:08		18:55	38 17:41 (WEA 1)	16:45	32 15:31 (WEA 3)	16:02	44 12:17 (WEA 6)
2	04:52	05:32	06:25		07:18	17:02 (WEA 1)	07:15	14:58 (WEA 3)	08:09	11:33 (WEA 6)
	21:47	21:12	20:05		18:53	39 17:41 (WEA 1)	16:44	35 15:33 (WEA 5)	16:01	45 12:18 (WEA 6)
3	04:53	05:34	06:27		07:19	17:02 (WEA 1)	07:17	14:58 (WEA 3)	08:10	11:34 (WEA 6)
	21:47	21:10	20:03		18:50	39 17:41 (WEA 1)	16:42	37 15:35 (WEA 5)	16:01	45 12:19 (WEA 6)
4	04:54	05:35	06:29		07:21	17:00 (WEA 1)	07:19	14:57 (WEA 3)	08:12	11:33 (WEA 6)
	21:46	21:08	20:01		18:48	40 17:40 (WEA 1)	16:40	40 15:37 (WEA 5)	16:00	46 12:19 (WEA 6)
5	04:55	05:37	06:31		07:23	17:00 (WEA 1)	07:21	14:58 (WEA 3)	08:13	11:34 (WEA 6)
	21:46	21:06	19:58		18:45	40 17:40 (WEA 1)	16:38	41 15:39 (WEA 5)	15:59	46 12:20 (WEA 6)
6	04:55	05:39	06:32		07:25	16:59 (WEA 1)	07:23	14:58 (WEA 3)	08:14	11:34 (WEA 6)
	21:45	21:04	19:56		18:43	41 17:40 (WEA 1)	16:36	41 15:39 (WEA 5)	15:59	46 12:20 (WEA 6)
7	04:56	05:40	06:34		07:27	16:59 (WEA 1)	07:25	14:58 (WEA 3)	08:16	11:33 (WEA 6)
	21:45	21:02	19:53		18:41	41 17:40 (WEA 1)	16:34	42 15:40 (WEA 5)	15:58	47 12:20 (WEA 6)
8	04:57	05:42	06:36		07:28	16:59 (WEA 1)	07:27	14:58 (WEA 3)	08:17	11:34 (WEA 6)
	21:44	21:00	19:51		18:38	41 17:40 (WEA 1)	16:32	42 15:40 (WEA 5)	15:58	48 12:22 (WEA 6)
9	04:58	05:44	06:38		07:30	16:59 (WEA 1)	07:28	14:58 (WEA 3)	08:18	11:34 (WEA 6)
	21:43	20:58	19:49		18:36	40 17:39 (WEA 1)	16:31	42 15:40 (WEA 5)	15:58	48 12:22 (WEA 6)
10	04:59	05:46	06:39		07:32	17:00 (WEA 1)	07:30	14:58 (WEA 3)	08:19	11:34 (WEA 6)
	21:42	20:56	19:46		18:34	39 17:39 (WEA 1)	16:29	43 15:41 (WEA 5)	15:57	48 12:22 (WEA 6)
11	05:01	05:47	06:41		07:34	16:59 (WEA 1)	07:32	14:59 (WEA 3)	08:21	11:35 (WEA 6)
	21:42	20:54	19:44		18:31	38 17:37 (WEA 1)	16:27	42 15:41 (WEA 5)	15:57	49 12:24 (WEA 6)
12	05:02	05:49	06:43		07:36	17:00 (WEA 1)	07:34	14:59 (WEA 3)	08:22	11:36 (WEA 6)
	21:41	20:52	19:41		18:29	36 17:36 (WEA 1)	16:26	42 15:41 (WEA 5)	15:57	48 12:24 (WEA 6)
13	05:03	05:51	06:44		07:38	17:00 (WEA 1)	07:36	15:00 (WEA 3)	08:23	11:36 (WEA 6)
	21:40	20:50	19:39		18:27	35 17:35 (WEA 1)	16:24	41 15:41 (WEA 5)	15:57	48 12:24 (WEA 6)
14	05:04	05:52	06:46		07:39	16:59 (WEA 2)	07:38	15:01 (WEA 3)	08:24	11:36 (WEA 6)
	21:39	20:48	19:37		18:24	35 17:34 (WEA 1)	16:22	39 15:40 (WEA 5)	15:57	49 12:25 (WEA 6)
15	05:05	05:54	06:48		07:41	16:58 (WEA 2)	07:40	15:01 (WEA 3)	08:25	11:37 (WEA 6)
	21:38	20:46	19:34		18:22	35 17:33 (WEA 1)	16:21	39 15:40 (WEA 5)	15:57	49 12:26 (WEA 6)
16	05:07	05:56	06:50		07:43	16:57 (WEA 2)	07:42	15:02 (WEA 3)	08:25	11:37 (WEA 6)
	21:37	20:44	19:32		18:20	34 17:31 (WEA 1)	16:19	38 15:40 (WEA 5)	15:57	49 12:26 (WEA 6)
17	05:08	05:58	06:51		07:45	16:57 (WEA 2)	07:43	11:48 (WEA 6)	08:26	11:37 (WEA 6)
	21:35	20:42	19:29		18:17	32 17:29 (WEA 1)	16:18	42 15:40 (WEA 5)	15:57	49 12:26 (WEA 6)
18	05:09	05:59	06:53		07:47	16:56 (WEA 2)	07:45	11:43 (WEA 6)	08:27	11:38 (WEA 6)
	21:34	20:40	19:27		18:15	30 17:26 (WEA 1)	16:16	50 15:39 (WEA 5)	15:57	49 12:27 (WEA 6)
19	05:11	06:01	06:55		07:49	16:56 (WEA 2)	07:47	11:41 (WEA 6)	08:28	11:38 (WEA 6)
	21:33	20:37	19:24		18:13	28 17:24 (WEA 2)	16:15	53 15:38 (WEA 5)	15:58	49 12:27 (WEA 6)
20	05:12	06:03	06:57		07:50	16:56 (WEA 2)	07:49	11:39 (WEA 6)	08:28	11:38 (WEA 6)
	21:32	20:35	19:22		18:11	28 17:24 (WEA 2)	16:14	55 15:38 (WEA 5)	15:58	49 12:27 (WEA 6)
21	05:13	06:05	06:58		07:52	16:56 (WEA 2)	07:51	11:38 (WEA 6)	08:29	11:39 (WEA 6)
	21:30	20:33	19:19		18:08	28 17:24 (WEA 2)	16:12	55 15:37 (WEA 5)	15:58	49 12:28 (WEA 6)
22	05:15	06:06	07:00		07:54	16:56 (WEA 2)	07:52	11:37 (WEA 6)	08:30	11:39 (WEA 6)
	21:29	20:31	19:17		18:06	27 17:23 (WEA 2)	16:11	50 15:35 (WEA 5)	15:59	49 12:28 (WEA 6)
23	05:16	06:08	07:02	17:23 (WEA 1)	07:56	16:56 (WEA 2)	07:54	11:36 (WEA 6)	08:30	11:40 (WEA 6)
	21:28	20:29	19:14	5 17:28 (WEA 1)	18:04	27 17:23 (WEA 2)	16:10	36 15:32 (WEA 5)	15:59	49 12:29 (WEA 6)
24	05:18	06:10	07:04	17:17 (WEA 1)	07:58	16:57 (WEA 2)	07:56	11:35 (WEA 6)	08:31	11:40 (WEA 6)
	21:26	20:26	19:12	16 17:33 (WEA 1)	18:02	25 17:22 (WEA 2)	16:09	35 12:10 (WEA 6)	16:00	49 12:29 (WEA 6)
25	05:19	06:11	07:05	17:13 (WEA 1)	07:00	15:11 (WEA 3)	07:58	11:35 (WEA 6)	08:31	11:40 (WEA 6)
	21:25	20:24	19:10	22 17:35 (WEA 1)	17:00	34 16:21 (WEA 2)	16:08	37 12:12 (WEA 6)	16:01	49 12:29 (WEA 6)
26	05:21	06:13	07:07	17:11 (WEA 1)	07:02	15:07 (WEA 3)	07:59	11:34 (WEA 6)	08:31	11:42 (WEA 6)
	21:23	20:22	19:07	26 17:37 (WEA 1)	16:58	39 16:20 (WEA 2)	16:07	39 12:13 (WEA 6)	16:01	49 12:31 (WEA 6)
27	05:22	06:15	07:09	17:09 (WEA 1)	07:04	15:05 (WEA 3)	08:01	11:33 (WEA 6)	08:31	11:42 (WEA 6)
	21:22	20:19	19:05	29 17:38 (WEA 1)	16:56	39 16:18 (WEA 2)	16:06	40 12:13 (WEA 6)	16:02	49 12:31 (WEA 6)
28	05:24	06:17	07:11	17:07 (WEA 1)	07:06	15:03 (WEA 3)	08:02	11:33 (WEA 6)	08:32	11:43 (WEA 6)
	21:20	20:17	19:02	33 17:40 (WEA 1)	16:54	40 16:16 (WEA 2)	16:05	41 12:14 (WEA 6)	16:03	48 12:31 (WEA 6)
29	05:26	06:18	07:12	17:05 (WEA 1)	07:07	15:02 (WEA 3)	08:04	11:33 (WEA 6)	08:32	11:43 (WEA 6)
	21:18	20:15	19:00	34 17:39 (WEA 1)	16:51	36 16:13 (WEA 2)	16:04	42 12:15 (WEA 6)	16:04	49 12:32 (WEA 6)
30	05:27	06:20	07:14	17:04 (WEA 1)	07:09	15:00 (WEA 3)	08:06	11:34 (WEA 6)	08:32	11:44 (WEA 6)
	21:17	20:12	18:57	36 17:40 (WEA 1)	16:49	30 15:30 (WEA 3)	16:03	43 12:17 (WEA 6)	16:05	48 12:32 (WEA 6)
31	05:29	06:22			07:11	14:59 (WEA 3)			08:32	11:44 (WEA 6)
	21:15	20:10			16:47	31 15:30 (WEA 3)			16:06	49 12:33 (WEA 6)
Sonnenscheinstunden	510	458	382		329		261		236	
astr.max.mögl.Beschattung			201		1085		1254		1488	

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: Y - Steindamm 15

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:59 (WEA 6) 08:02 12:45 (WEA 6) 16:57	15:31 (WEA 3) 07:06 16:11 (WEA 5) 17:52	16:27 (WEA 1) 06:52 17:02 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	12:00 (WEA 6) 08:01 12:45 (WEA 6) 16:59	15:31 (WEA 3) 07:04 16:11 (WEA 5) 17:54	16:26 (WEA 1) 06:49 17:03 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	12:01 (WEA 6) 07:59 12:46 (WEA 6) 17:01	15:30 (WEA 3) 07:01 16:10 (WEA 5) 17:56	16:25 (WEA 1) 06:47 17:03 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	12:01 (WEA 6) 07:57 12:46 (WEA 6) 17:03	15:30 (WEA 3) 06:59 16:10 (WEA 5) 17:58	16:25 (WEA 1) 06:45 17:03 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	12:02 (WEA 6) 07:56 12:46 (WEA 6) 17:05	15:30 (WEA 3) 06:57 16:09 (WEA 5) 18:00	16:25 (WEA 1) 06:42 17:04 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	12:02 (WEA 6) 07:54 12:46 (WEA 6) 17:07	15:31 (WEA 3) 06:54 16:09 (WEA 5) 18:02	16:24 (WEA 1) 06:40 17:03 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	12:03 (WEA 6) 07:52 12:46 (WEA 6) 17:09	15:31 (WEA 3) 06:52 16:08 (WEA 5) 18:04	16:24 (WEA 1) 06:37 17:03 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	12:04 (WEA 6) 07:50 12:47 (WEA 6) 17:11	15:31 (WEA 3) 06:50 16:06 (WEA 5) 18:06	16:24 (WEA 1) 06:35 17:02 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	12:04 (WEA 6) 07:48 12:47 (WEA 6) 17:13	15:32 (WEA 3) 06:47 16:04 (WEA 5) 18:07	16:24 (WEA 1) 06:33 17:02 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	12:05 (WEA 6) 07:46 12:46 (WEA 6) 17:15	15:33 (WEA 3) 06:45 16:03 (WEA 5) 18:09	16:25 (WEA 1) 06:30 17:02 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	12:06 (WEA 6) 07:44 12:46 (WEA 6) 17:17	15:34 (WEA 3) 06:43 16:02 (WEA 5) 18:11	16:25 (WEA 1) 06:28 17:00 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	12:07 (WEA 6) 07:42 12:46 (WEA 6) 17:19	15:35 (WEA 3) 06:40 16:41 (WEA 2) 18:13	16:26 (WEA 1) 06:26 17:00 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	12:08 (WEA 6) 07:40 12:46 (WEA 6) 17:21	15:36 (WEA 3) 06:38 16:45 (WEA 2) 18:15	16:26 (WEA 1) 06:23 16:58 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	12:09 (WEA 6) 07:38 12:46 (WEA 6) 17:23	15:38 (WEA 3) 06:35 16:48 (WEA 2) 18:17	16:28 (WEA 1) 06:21 16:57 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	12:10 (WEA 6) 07:36 12:45 (WEA 6) 17:25	15:40 (WEA 3) 06:33 16:49 (WEA 2) 18:19	16:28 (WEA 1) 06:19 16:55 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	12:11 (WEA 6) 07:34 12:45 (WEA 6) 17:27	15:43 (WEA 3) 06:31 16:51 (WEA 2) 18:20	16:31 (WEA 1) 06:16 16:53 (WEA 1) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	12:13 (WEA 6) 07:32 12:45 (WEA 6) 17:29	16:28 (WEA 2) 06:28 16:52 (WEA 2) 18:22	16:34 (WEA 1) 06:14 16:50 (WEA 1) 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	12:14 (WEA 6) 07:30 12:44 (WEA 6) 17:31	16:26 (WEA 2) 06:26 16:52 (WEA 2) 18:24	16:38 (WEA 1) 06:12 16:45 (WEA 1) 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	12:15 (WEA 6) 07:28 12:43 (WEA 6) 17:33	16:26 (WEA 2) 06:23 16:52 (WEA 2) 18:26	06:10 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	12:17 (WEA 6) 07:26 15:59 (WEA 5) 17:35	16:26 (WEA 2) 06:21 16:53 (WEA 2) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	12:20 (WEA 6) 07:24 16:02 (WEA 5) 17:37	16:26 (WEA 2) 06:18 16:53 (WEA 2) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	12:22 (WEA 6) 07:22 16:03 (WEA 5) 17:39	16:25 (WEA 2) 06:16 16:52 (WEA 1) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	12:28 (WEA 6) 07:19 16:05 (WEA 5) 17:41	16:25 (WEA 2) 06:14 16:55 (WEA 1) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	15:34 (WEA 3) 07:17 16:06 (WEA 5) 17:43	16:26 (WEA 2) 06:11 16:58 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:34 (WEA 3) 07:15 16:08 (WEA 5) 17:45	16:26 (WEA 2) 06:09 16:59 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:33 (WEA 3) 07:13 16:08 (WEA 5) 17:47	16:27 (WEA 2) 06:06 17:00 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:33 (WEA 3) 07:10 16:09 (WEA 5) 17:48	16:28 (WEA 2) 06:04 17:01 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:32 (WEA 3) 07:08 16:10 (WEA 5) 17:50	16:28 (WEA 1) 06:02 17:03 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:31 (WEA 3) 16:10 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:31 (WEA 3) 16:10 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	15:31 (WEA 3) 16:11 (WEA 5)	06:54 19:48	 21:32	04:56 21:32	 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1195	924	580			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: Y - Steindamm 15

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 17:38 (WEA 1)	08:07 15:32 (WEA 3)
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 17:39 (WEA 1)	08:09 15:34 (WEA 5)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 17:39 (WEA 1)	08:10 15:36 (WEA 5)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 17:39 (WEA 1)	08:12 15:38 (WEA 5)
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 17:39 (WEA 1)	08:13 15:40 (WEA 5)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 17:39 (WEA 1)	08:14 15:40 (WEA 5)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 17:39 (WEA 1)	08:16 15:41 (WEA 5)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:27 17:39 (WEA 1)	08:17 15:41 (WEA 5)
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 17:39 (WEA 1)	08:18 15:42 (WEA 5)
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 17:38 (WEA 1)	08:19 15:42 (WEA 5)
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 17:37 (WEA 1)	08:21 15:42 (WEA 5)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 17:36 (WEA 1)	08:22 15:42 (WEA 5)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 17:35 (WEA 1)	08:23 15:42 (WEA 5)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 17:34 (WEA 1)	08:24 15:42 (WEA 5)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 17:33 (WEA 1)	08:25 15:41 (WEA 5)
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 17:32 (WEA 1)	08:25 15:41 (WEA 5)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 17:30 (WEA 1)	08:26 15:41 (WEA 5)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 17:28 (WEA 1)	08:27 15:40 (WEA 5)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 17:26 (WEA 1)	08:28 15:39 (WEA 5)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 17:24 (WEA 2)	08:28 15:38 (WEA 5)
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	07:51 17:23 (WEA 2)	08:29 15:37 (WEA 5)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 17:23 (WEA 2)	08:30 15:35 (WEA 5)
23	05:16 21:28	06:08 20:29	07:02 19:14	07:56 18:04	07:54 17:23 (WEA 2)	08:30 15:32 (WEA 6)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 17:22 (WEA 2)	08:31 15:31 (WEA 6)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	07:58 16:21 (WEA 2)	08:31 15:31 (WEA 6)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:31 (WEA 1)	07:59 15:12 (WEA 3)	08:31 15:30 (WEA 6)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 17:13 (WEA 1)	08:01 15:09 (WEA 3)	08:31 15:29 (WEA 6)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 17:11 (WEA 1)	08:02 15:07 (WEA 3)	08:32 15:28 (WEA 6)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 17:08 (WEA 1)	08:04 15:05 (WEA 3)	08:32 15:27 (WEA 6)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 17:07 (WEA 1)	08:06 15:04 (WEA 3)	08:32 15:26 (WEA 6)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:06 15:32 (WEA 3)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			118	1035	1091	1416

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: Z - Steindamm 14

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	11:56 (WEA 6) 08:02 12:40 (WEA 6) 16:57	15:27 (WEA 3) 07:06 16:08 (WEA 5) 17:52	16:22 (WEA 1) 06:52 17:00 (WEA 1) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	11:57 (WEA 6) 08:01 12:41 (WEA 6) 16:59	15:27 (WEA 3) 07:04 16:08 (WEA 5) 17:54	16:22 (WEA 1) 06:49 17:00 (WEA 1) 19:52	05:42 20:46	04:54 21:34
3	08:32 16:09	11:58 (WEA 6) 07:59 12:41 (WEA 6) 17:01	15:27 (WEA 3) 07:01 16:07 (WEA 5) 17:56	16:21 (WEA 1) 06:47 17:00 (WEA 1) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:11	11:58 (WEA 6) 07:57 12:41 (WEA 6) 17:03	15:27 (WEA 3) 06:59 16:07 (WEA 5) 17:58	16:21 (WEA 1) 06:45 17:00 (WEA 1) 19:55	05:38 20:49	04:53 21:37
5	08:31 16:12	11:59 (WEA 6) 07:56 12:42 (WEA 6) 17:05	15:27 (WEA 3) 06:57 16:06 (WEA 5) 18:00	16:21 (WEA 1) 06:42 17:00 (WEA 1) 19:57	05:36 20:51	04:52 21:38
6	08:31 16:13	11:59 (WEA 6) 07:54 12:41 (WEA 6) 17:07	15:27 (WEA 3) 06:54 16:05 (WEA 5) 18:02	16:20 (WEA 1) 06:40 16:59 (WEA 1) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	12:00 (WEA 6) 07:52 12:41 (WEA 6) 17:09	15:28 (WEA 3) 06:52 16:03 (WEA 5) 18:04	16:21 (WEA 1) 06:37 16:59 (WEA 1) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	12:01 (WEA 6) 07:50 12:42 (WEA 6) 17:11	15:29 (WEA 3) 06:50 16:01 (WEA 5) 18:06	16:20 (WEA 1) 06:35 16:58 (WEA 1) 20:02	05:30 20:56	04:50 21:41
9	08:29 16:17	12:02 (WEA 6) 07:48 12:42 (WEA 6) 17:13	15:29 (WEA 3) 06:47 15:59 (WEA 3) 18:07	16:21 (WEA 1) 06:33 16:57 (WEA 1) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	12:02 (WEA 6) 07:46 12:41 (WEA 6) 17:15	15:30 (WEA 3) 06:45 15:58 (WEA 3) 18:09	16:22 (WEA 1) 06:30 16:57 (WEA 1) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	12:03 (WEA 6) 07:44 12:41 (WEA 6) 17:17	15:32 (WEA 3) 06:43 16:40 (WEA 2) 18:11	16:22 (WEA 1) 06:28 16:55 (WEA 1) 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	12:04 (WEA 6) 07:42 12:41 (WEA 6) 17:19	15:33 (WEA 3) 06:40 16:43 (WEA 2) 18:13	16:24 (WEA 1) 06:26 16:54 (WEA 1) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	12:05 (WEA 6) 07:40 12:41 (WEA 6) 17:21	15:35 (WEA 3) 06:38 16:45 (WEA 2) 18:15	16:24 (WEA 1) 06:23 16:52 (WEA 1) 20:12	05:21 21:05	04:48 21:45
14	08:25 16:25	12:06 (WEA 6) 07:38 12:40 (WEA 6) 17:23	15:37 (WEA 3) 06:35 16:47 (WEA 2) 18:17	16:26 (WEA 1) 06:21 16:51 (WEA 1) 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	12:08 (WEA 6) 07:36 12:40 (WEA 6) 17:25	15:42 (WEA 3) 06:33 16:48 (WEA 2) 18:19	16:28 (WEA 1) 06:19 16:48 (WEA 1) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	12:09 (WEA 6) 07:34 12:39 (WEA 6) 17:27	16:25 (WEA 2) 06:31 16:49 (WEA 2) 18:20	16:31 (WEA 1) 06:16 16:44 (WEA 1) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	12:11 (WEA 6) 07:32 12:39 (WEA 6) 17:29	16:24 (WEA 2) 06:28 16:50 (WEA 2) 18:22	06:14 20:19	05:14 21:12	04:47 21:47
18	08:22 16:32	12:13 (WEA 6) 07:30 15:56 (WEA 5) 17:31	16:23 (WEA 2) 06:26 16:50 (WEA 2) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:21 16:33	12:14 (WEA 6) 07:28 15:58 (WEA 5) 17:33	16:23 (WEA 2) 06:23 16:50 (WEA 2) 18:26	06:10 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	12:17 (WEA 6) 07:26 16:00 (WEA 5) 17:35	16:23 (WEA 2) 06:21 16:50 (WEA 2) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	12:21 (WEA 6) 07:24 16:02 (WEA 5) 17:37	16:23 (WEA 2) 06:18 16:51 (WEA 1) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:30 (WEA 3) 07:22 16:02 (WEA 5) 17:39	16:22 (WEA 2) 06:16 16:53 (WEA 1) 18:32	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:30 (WEA 3) 07:19 16:04 (WEA 5) 17:41	16:23 (WEA 2) 06:14 16:55 (WEA 1) 18:33	06:01 20:30	05:06 21:21	04:48 21:49
24	08:14 16:42	15:28 (WEA 3) 07:17 16:04 (WEA 5) 17:43	16:24 (WEA 2) 06:11 16:57 (WEA 1) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:28 (WEA 3) 07:15 16:06 (WEA 5) 17:45	16:24 (WEA 2) 06:09 16:57 (WEA 1) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:28 (WEA 3) 07:13 16:06 (WEA 5) 17:47	16:24 (WEA 1) 06:06 16:58 (WEA 1) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:28 (WEA 3) 07:10 16:07 (WEA 5) 17:48	16:24 (WEA 1) 06:04 16:59 (WEA 1) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:27 (WEA 3) 07:08 16:07 (WEA 5) 17:50	16:23 (WEA 1) 06:02 17:00 (WEA 1) 18:42	05:50 20:39	04:59 21:28	04:50 21:48
29	08:07 16:52	15:27 (WEA 3) 16:07 (WEA 5)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:26 (WEA 3) 16:07 (WEA 5)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:56	15:27 (WEA 3) 16:08 (WEA 5)	06:54 19:48	 21:32	04:56 21:32	 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1203	929	528			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** Z - Steindamm 14

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	17:03 (WEA 1) 07:13 17:33 (WEA 1) 16:45	15:00 (WEA 3) 08:07 15:28 (WEA 3) 16:02
2	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	17:02 (WEA 1) 07:15 17:34 (WEA 1) 16:44	14:59 (WEA 3) 08:09 15:28 (WEA 3) 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	17:01 (WEA 1) 07:17 17:35 (WEA 1) 16:42	14:58 (WEA 3) 08:10 15:31 (WEA 5) 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	16:59 (WEA 1) 07:19 17:34 (WEA 1) 16:40	14:58 (WEA 3) 08:12 15:33 (WEA 5) 16:00
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	16:58 (WEA 1) 07:21 17:35 (WEA 1) 16:38	14:58 (WEA 3) 08:13 15:36 (WEA 5) 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	16:57 (WEA 1) 07:23 17:35 (WEA 1) 16:36	14:58 (WEA 3) 08:14 15:37 (WEA 5) 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	16:57 (WEA 1) 07:25 17:35 (WEA 1) 16:34	14:58 (WEA 3) 08:16 15:38 (WEA 5) 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	16:56 (WEA 1) 07:27 17:35 (WEA 1) 16:32	14:58 (WEA 3) 08:17 15:38 (WEA 5) 15:58
9	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	16:56 (WEA 1) 07:28 17:35 (WEA 1) 16:31	14:58 (WEA 3) 08:18 15:39 (WEA 5) 15:58
10	04:59 21:42	05:46 20:56	06:39 19:46	07:32 18:34	16:56 (WEA 1) 07:30 17:35 (WEA 1) 16:29	14:58 (WEA 3) 08:19 15:39 (WEA 5) 15:57
11	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	16:55 (WEA 1) 07:32 17:34 (WEA 1) 16:27	14:58 (WEA 3) 08:21 15:39 (WEA 5) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	16:55 (WEA 1) 07:34 17:33 (WEA 1) 16:26	14:58 (WEA 3) 08:22 15:39 (WEA 5) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	16:55 (WEA 1) 07:36 17:32 (WEA 1) 16:24	14:59 (WEA 3) 08:23 15:39 (WEA 5) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	16:56 (WEA 1) 07:38 17:32 (WEA 1) 16:22	14:59 (WEA 3) 08:24 15:39 (WEA 5) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	16:56 (WEA 1) 07:40 17:31 (WEA 1) 16:21	15:00 (WEA 3) 08:25 15:39 (WEA 5) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	16:57 (WEA 1) 07:42 17:30 (WEA 1) 16:19	15:01 (WEA 3) 08:25 15:39 (WEA 5) 15:57
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	16:56 (WEA 2) 07:43 17:29 (WEA 1) 16:18	15:01 (WEA 3) 08:26 15:39 (WEA 5) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	16:55 (WEA 2) 07:45 17:27 (WEA 1) 16:16	15:02 (WEA 3) 08:27 15:38 (WEA 5) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	16:54 (WEA 2) 07:47 17:26 (WEA 1) 16:15	15:04 (WEA 3) 08:28 15:38 (WEA 5) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	16:54 (WEA 2) 07:49 17:24 (WEA 1) 16:14	15:05 (WEA 3) 08:28 15:38 (WEA 5) 15:58
21	05:13 21:30	06:05 20:33	06:58 19:19	07:52 18:08	16:53 (WEA 2) 07:51 17:21 (WEA 1) 16:12	11:56 (WEA 6) 08:29 15:37 (WEA 5) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	16:53 (WEA 2) 07:52 17:21 (WEA 2) 16:11	11:53 (WEA 6) 08:30 15:36 (WEA 5) 15:59
23	05:16 21:28	06:08 20:29	07:02 19:14	07:56 18:04	16:53 (WEA 2) 07:54 17:20 (WEA 2) 16:10	11:51 (WEA 6) 08:30 15:35 (WEA 5) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	16:53 (WEA 2) 07:56 17:20 (WEA 2) 16:09	11:50 (WEA 6) 08:31 15:33 (WEA 5) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	15:54 (WEA 2) 07:58 16:19 (WEA 2) 16:08	11:49 (WEA 6) 08:31 12:17 (WEA 6) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	15:54 (WEA 2) 07:59 16:18 (WEA 2) 16:07	11:48 (WEA 6) 08:31 12:18 (WEA 6) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	15:10 (WEA 3) 08:01 16:17 (WEA 2) 16:06	11:47 (WEA 6) 08:31 12:19 (WEA 6) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:54	15:06 (WEA 3) 08:02 16:16 (WEA 2) 16:05	11:46 (WEA 6) 08:32 12:20 (WEA 6) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	15:04 (WEA 3) 08:04 16:15 (WEA 2) 16:04	11:46 (WEA 6) 08:32 12:22 (WEA 6) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	15:02 (WEA 3) 08:06 16:12 (WEA 2) 16:03	11:46 (WEA 6) 08:32 12:23 (WEA 6) 16:05
31	05:29 21:15	06:22 20:10	 	07:11 16:47	15:01 (WEA 3) 16:09 (WEA 2)	11:47 (WEA 6) 08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			75	1039	1111	1363

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AA - Am Hofende 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:58 (WEA 10) 08:02 15:18 (WEA 10) 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:58 (WEA 10) 08:01 15:19 (WEA 10) 16:59	07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:59 (WEA 10) 07:59 15:20 (WEA 10) 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:58 (WEA 10) 07:57 15:20 (WEA 10) 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:59 (WEA 10) 07:55 15:22 (WEA 10) 17:05	16:18 (WEA 6) 06:57 16:21 (WEA 6) 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	14:59 (WEA 10) 07:54 15:22 (WEA 10) 17:07	16:13 (WEA 6) 06:54 16:26 (WEA 6) 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:58 (WEA 10) 07:52 15:22 (WEA 10) 17:09	16:11 (WEA 6) 06:52 16:28 (WEA 6) 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:59 (WEA 10) 07:50 15:24 (WEA 10) 17:11	16:10 (WEA 6) 06:50 16:30 (WEA 6) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:59 (WEA 10) 07:48 15:24 (WEA 10) 17:13	16:09 (WEA 6) 06:47 16:31 (WEA 6) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:59 (WEA 10) 07:46 15:25 (WEA 10) 17:15	16:08 (WEA 6) 06:45 16:32 (WEA 6) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:59 (WEA 10) 07:44 15:25 (WEA 10) 17:17	16:07 (WEA 6) 06:42 16:33 (WEA 6) 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:59 (WEA 10) 07:42 15:26 (WEA 10) 17:19	16:07 (WEA 6) 06:40 16:34 (WEA 6) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	15:00 (WEA 10) 07:40 15:26 (WEA 10) 17:21	16:06 (WEA 6) 06:38 16:34 (WEA 6) 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	15:00 (WEA 10) 07:38 15:27 (WEA 10) 17:23	16:06 (WEA 6) 06:35 16:35 (WEA 6) 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	15:00 (WEA 10) 07:36 15:27 (WEA 10) 17:25	16:06 (WEA 6) 06:33 16:35 (WEA 6) 18:19	06:19 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	15:01 (WEA 10) 07:34 15:28 (WEA 10) 17:27	16:06 (WEA 6) 06:30 16:35 (WEA 6) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	15:01 (WEA 10) 07:32 15:28 (WEA 10) 17:29	16:06 (WEA 6) 06:28 16:34 (WEA 6) 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	15:02 (WEA 10) 07:30 15:29 (WEA 10) 17:31	16:06 (WEA 6) 06:26 16:34 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	15:02 (WEA 10) 07:28 15:28 (WEA 10) 17:33	16:07 (WEA 6) 06:23 16:34 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	15:02 (WEA 10) 07:26 15:29 (WEA 10) 17:35	16:07 (WEA 6) 06:21 16:34 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:03 (WEA 10) 07:24 15:29 (WEA 10) 17:37	16:08 (WEA 6) 06:18 16:33 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:04 (WEA 10) 07:21 15:29 (WEA 10) 17:39	16:09 (WEA 6) 06:16 16:31 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:05 (WEA 10) 07:19 15:29 (WEA 10) 17:41	16:10 (WEA 6) 06:14 16:30 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:05 (WEA 10) 07:17 15:28 (WEA 10) 17:43	16:12 (WEA 6) 06:11 16:28 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:07 (WEA 10) 07:15 15:28 (WEA 10) 17:45	16:14 (WEA 6) 06:09 16:25 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:07 (WEA 10) 07:13 15:27 (WEA 10) 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:08 (WEA 10) 07:10 15:26 (WEA 10) 17:48	06:04 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:11 (WEA 10) 07:08 15:25 (WEA 10) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:13 (WEA 10) 07:06 15:23 (WEA 10) 17:52	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:55		06:54 19:48		04:56 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	678	471				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AA - Am Hofende 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober		November		Dezember			
1	04:51	05:30	06:24	07:16		07:13	15:38 (WEA 6)	08:07	14:41 (WEA 10)			
	21:48	21:13	20:08	18:55		16:45	24	16:02 (WEA 6)	16:02	26	15:07 (WEA 10)	
2	04:52	05:32	06:25	07:18		07:15		15:39 (WEA 6)	08:09		14:42 (WEA 10)	
	21:47	21:11	20:05	18:53		16:43	22	16:01 (WEA 6)	16:01	26	15:08 (WEA 10)	
3	04:53	05:34	06:27	07:19		07:17		15:40 (WEA 6)	08:10		14:42 (WEA 10)	
	21:47	21:10	20:03	18:50		16:42	19	15:59 (WEA 6)	16:01	25	15:07 (WEA 10)	
4	04:54	05:35	06:29	07:21		07:19		15:41 (WEA 6)	08:12		14:43 (WEA 10)	
	21:46	21:08	20:01	18:48		16:40	17	15:58 (WEA 6)	16:00	25	15:08 (WEA 10)	
5	04:54	05:37	06:31	07:23		07:21		15:44 (WEA 6)	08:13		14:45 (WEA 10)	
	21:46	21:06	19:58	18:45		16:38	11	15:55 (WEA 6)	15:59	23	15:08 (WEA 10)	
6	04:55	05:39	06:32	07:25		07:23			08:14		14:45 (WEA 10)	
	21:45	21:04	19:56	18:43		16:36			15:59	23	15:08 (WEA 10)	
7	04:56	05:40	06:34	07:27		07:25			08:16		14:45 (WEA 10)	
	21:45	21:02	19:53	18:41		16:34			15:58	23	15:08 (WEA 10)	
8	04:57	05:42	06:36	07:28		07:26			08:17		14:47 (WEA 10)	
	21:44	21:00	19:51	18:38		16:32			15:58	22	15:09 (WEA 10)	
9	04:58	05:44	06:37	07:30		07:28			08:18		14:47 (WEA 10)	
	21:43	20:58	19:49	18:36		16:31			15:58	21	15:08 (WEA 10)	
10	04:59	05:45	06:39	07:32		07:30			08:19		14:47 (WEA 10)	
	21:42	20:56	19:46	18:33		16:29			15:57	21	15:08 (WEA 10)	
11	05:00	05:47	06:41	07:34		07:32			08:20		14:48 (WEA 10)	
	21:42	20:54	19:44	18:31		16:27			15:57	20	15:08 (WEA 10)	
12	05:02	05:49	06:43	07:36		07:34			08:22		14:50 (WEA 10)	
	21:41	20:52	19:41	18:29		16:25			15:57	19	15:09 (WEA 10)	
13	05:03	05:51	06:44	07:37		07:36		14:45 (WEA 10)	08:23		14:50 (WEA 10)	
	21:40	20:50	19:39	18:26		16:24	10	14:55 (WEA 10)	15:57	19	15:09 (WEA 10)	
14	05:04	05:52	06:46	07:39		07:38		14:43 (WEA 10)	08:24		14:51 (WEA 10)	
	21:39	20:48	19:36	18:24		16:22	14	14:57 (WEA 10)	15:57	18	15:09 (WEA 10)	
15	05:05	05:54	06:48	07:41		07:40		14:41 (WEA 10)	08:25		14:52 (WEA 10)	
	21:38	20:46	19:34	18:22		16:21	18	14:59 (WEA 10)	15:57	17	15:09 (WEA 10)	
16	05:07	05:56	06:50	07:43		07:41		14:40 (WEA 10)	08:25		14:52 (WEA 10)	
	21:37	20:44	19:32	18:20		16:19	20	15:00 (WEA 10)	15:57	17	15:09 (WEA 10)	
17	05:08	05:58	06:51	07:45	16:45 (WEA 6)	07:43		14:40 (WEA 10)	08:26		14:53 (WEA 10)	
	21:35	20:42	19:29	18:17	13	16:58 (WEA 6)	21	15:01 (WEA 10)	15:57	16	15:09 (WEA 10)	
18	05:09	05:59	06:53	07:47		16:43 (WEA 6)	07:45	14:39 (WEA 10)	08:27		14:53 (WEA 10)	
	21:34	20:40	19:27	18:15	17	17:00 (WEA 6)	16:16	23	15:02 (WEA 10)	15:57	17	15:10 (WEA 10)
19	05:11	06:01	06:55	07:49		16:41 (WEA 6)	07:47		14:39 (WEA 10)	08:28		14:54 (WEA 10)
	21:33	20:37	19:24	18:13	21	17:02 (WEA 6)	16:15	24	15:03 (WEA 10)	15:58	16	15:10 (WEA 10)
20	05:12	06:03	06:57	07:50		16:40 (WEA 6)	07:49		14:39 (WEA 10)	08:28		14:54 (WEA 10)
	21:32	20:35	19:22	18:11	23	17:03 (WEA 6)	16:14	25	15:04 (WEA 10)	15:58	16	15:10 (WEA 10)
21	05:13	06:04	06:58	07:52		16:38 (WEA 6)	07:51		14:38 (WEA 10)	08:29		14:55 (WEA 10)
	21:30	20:33	19:19	18:08	26	17:04 (WEA 6)	16:12	26	15:04 (WEA 10)	15:58	16	15:11 (WEA 10)
22	05:15	06:06	07:00	07:54		16:38 (WEA 6)	07:52		14:39 (WEA 10)	08:30		14:55 (WEA 10)
	21:29	20:31	19:17	18:06	26	17:04 (WEA 6)	16:11	26	15:05 (WEA 10)	15:59	16	15:11 (WEA 10)
23	05:16	06:08	07:02	07:56		16:37 (WEA 6)	07:54		14:39 (WEA 10)	08:30		14:56 (WEA 10)
	21:28	20:28	19:14	18:04	28	17:05 (WEA 6)	16:10	26	15:05 (WEA 10)	15:59	16	15:12 (WEA 10)
24	05:18	06:10	07:04	07:58		16:36 (WEA 6)	07:56		14:39 (WEA 10)	08:30		14:56 (WEA 10)
	21:26	20:26	19:12	18:02	29	17:05 (WEA 6)	16:09	27	15:06 (WEA 10)	16:00	16	15:12 (WEA 10)
25	05:19	06:11	07:05	07:00		15:36 (WEA 6)	07:57		14:39 (WEA 10)	08:31		14:56 (WEA 10)
	21:25	20:24	19:10	17:00	29	16:05 (WEA 6)	16:08	27	15:06 (WEA 10)	16:01	17	15:13 (WEA 10)
26	05:21	06:13	07:07	07:02		15:36 (WEA 6)	07:59		14:40 (WEA 10)	08:31		14:58 (WEA 10)
	21:23	20:22	19:07	16:58	29	16:05 (WEA 6)	16:07	27	15:07 (WEA 10)	16:01	16	15:14 (WEA 10)
27	05:22	06:15	07:09	07:04		15:36 (WEA 6)	08:01		14:39 (WEA 10)	08:31		14:58 (WEA 10)
	21:22	20:19	19:05	16:56	29	16:05 (WEA 6)	16:06	27	15:06 (WEA 10)	16:02	17	15:15 (WEA 10)
28	05:24	06:17	07:11	07:05		15:36 (WEA 6)	08:02		14:40 (WEA 10)	08:32		14:58 (WEA 10)
	21:20	20:17	19:02	16:53	28	16:04 (WEA 6)	16:05	27	15:07 (WEA 10)	16:03	17	15:15 (WEA 10)
29	05:26	06:18	07:12	07:07		15:36 (WEA 6)	08:04		14:41 (WEA 10)	08:32		14:58 (WEA 10)
	21:18	20:15	19:00	16:51	28	16:04 (WEA 6)	16:04	26	15:07 (WEA 10)	16:04	18	15:16 (WEA 10)
30	05:27	06:20	07:14	07:09		15:36 (WEA 6)	08:06		14:41 (WEA 10)	08:32		14:58 (WEA 10)
	21:17	20:12	18:57	16:49	27	16:03 (WEA 6)	16:03	27	15:08 (WEA 10)	16:05	19	15:17 (WEA 10)
31	05:29	06:22		07:11		15:37 (WEA 6)				08:32		14:59 (WEA 10)
	21:15	20:10		16:47	26	16:03 (WEA 6)				16:06	19	15:18 (WEA 10)
Sonnenscheinstunden	510	458	382	329			261			236		
astr.max.mögl.Beschattung				379			514			597		

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AB - Am Hofende 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	15:01 (WEA 10) 08:02 15:20 (WEA 10) 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	15:01 (WEA 10) 08:01 15:21 (WEA 10) 16:59	07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	15:01 (WEA 10) 07:59 15:22 (WEA 10) 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	15:01 (WEA 10) 07:57 15:22 (WEA 10) 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	15:02 (WEA 10) 07:55 15:23 (WEA 10) 17:05	16:17 (WEA 6) 06:57 16:24 (WEA 6) 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	15:01 (WEA 10) 07:54 15:24 (WEA 10) 17:07	16:14 (WEA 6) 06:54 16:27 (WEA 6) 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	15:01 (WEA 10) 07:52 15:24 (WEA 10) 17:09	16:12 (WEA 6) 06:52 16:29 (WEA 6) 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	15:02 (WEA 10) 07:50 15:26 (WEA 10) 17:11	16:11 (WEA 6) 06:50 16:31 (WEA 6) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	15:02 (WEA 10) 07:48 15:26 (WEA 10) 17:13	16:09 (WEA 6) 06:47 16:32 (WEA 6) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	15:02 (WEA 10) 07:46 15:26 (WEA 10) 17:15	16:09 (WEA 6) 06:45 16:33 (WEA 6) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	15:02 (WEA 10) 07:44 15:27 (WEA 10) 17:17	16:08 (WEA 6) 06:42 16:34 (WEA 6) 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	15:02 (WEA 10) 07:42 15:27 (WEA 10) 17:19	16:08 (WEA 6) 06:40 16:35 (WEA 6) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	15:02 (WEA 10) 07:40 15:28 (WEA 10) 17:21	16:07 (WEA 6) 06:38 16:35 (WEA 6) 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	15:02 (WEA 10) 07:38 15:29 (WEA 10) 17:23	16:07 (WEA 6) 06:35 16:36 (WEA 6) 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	15:03 (WEA 10) 07:36 15:29 (WEA 10) 17:25	16:07 (WEA 6) 06:33 16:36 (WEA 6) 18:19	06:19 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	15:03 (WEA 10) 07:34 15:30 (WEA 10) 17:27	16:08 (WEA 6) 06:30 16:36 (WEA 6) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	15:04 (WEA 10) 07:32 15:30 (WEA 10) 17:29	16:07 (WEA 6) 06:28 16:35 (WEA 6) 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	15:04 (WEA 10) 07:30 15:31 (WEA 10) 17:31	16:07 (WEA 6) 06:26 16:35 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	15:04 (WEA 10) 07:28 15:30 (WEA 10) 17:33	16:08 (WEA 6) 06:23 16:34 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	15:05 (WEA 10) 07:26 15:31 (WEA 10) 17:35	16:09 (WEA 6) 06:21 16:34 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:06 (WEA 10) 07:24 15:31 (WEA 10) 17:37	16:10 (WEA 6) 06:18 16:33 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:06 (WEA 10) 07:21 15:30 (WEA 10) 17:39	16:10 (WEA 6) 06:16 16:31 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:07 (WEA 10) 07:19 15:31 (WEA 10) 17:41	16:12 (WEA 6) 06:14 16:30 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:08 (WEA 10) 07:17 15:30 (WEA 10) 17:43	16:15 (WEA 6) 06:11 16:28 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:09 (WEA 10) 07:15 15:30 (WEA 10) 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:10 (WEA 10) 07:13 15:29 (WEA 10) 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:11 (WEA 10) 07:10 15:28 (WEA 10) 17:48	06:04 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:13 (WEA 10) 07:08 15:27 (WEA 10) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:16 (WEA 10) 07:07 15:25 (WEA 10) 17:50	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:55		06:54 19:48		04:56 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	656	453				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
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N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AB - Am Hofende 8

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Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober		November		Dezember
1	04:51	05:30	06:24	07:16		07:13	15:38 (WEA 6)	08:07	14:44 (WEA 10)
	21:48	21:13	20:08	18:55		16:45	25 16:03 (WEA 6)	16:02	25 15:09 (WEA 10)
2	04:52	05:32	06:25	07:18		07:15	15:39 (WEA 6)	08:09	14:45 (WEA 10)
	21:47	21:11	20:05	18:53		16:43	23 16:02 (WEA 6)	16:01	25 15:10 (WEA 10)
3	04:53	05:34	06:27	07:19		07:17	15:40 (WEA 6)	08:10	14:45 (WEA 10)
	21:47	21:10	20:03	18:50		16:42	20 16:00 (WEA 6)	16:01	24 15:09 (WEA 10)
4	04:54	05:35	06:29	07:21		07:19	15:42 (WEA 6)	08:12	14:46 (WEA 10)
	21:46	21:08	20:01	18:48		16:40	17 15:59 (WEA 6)	16:00	24 15:10 (WEA 10)
5	04:54	05:37	06:31	07:23		07:21	15:44 (WEA 6)	08:13	14:47 (WEA 10)
	21:46	21:06	19:58	18:45		16:38	13 15:57 (WEA 6)	15:59	23 15:10 (WEA 10)
6	04:55	05:39	06:32	07:25		07:23	15:49 (WEA 6)	08:14	14:47 (WEA 10)
	21:45	21:04	19:56	18:43		16:36	5 15:54 (WEA 6)	15:59	23 15:10 (WEA 10)
7	04:56	05:40	06:34	07:27		07:25		08:16	14:48 (WEA 10)
	21:45	21:02	19:53	18:41		16:34		15:58	22 15:10 (WEA 10)
8	04:57	05:42	06:36	07:28		07:26		08:17	14:49 (WEA 10)
	21:44	21:00	19:51	18:38		16:32		15:58	21 15:10 (WEA 10)
9	04:58	05:44	06:37	07:30		07:28		08:18	14:50 (WEA 10)
	21:43	20:58	19:49	18:36		16:31		15:58	20 15:10 (WEA 10)
10	04:59	05:45	06:39	07:32		07:30		08:19	14:50 (WEA 10)
	21:42	20:56	19:46	18:33		16:29		15:57	20 15:10 (WEA 10)
11	05:00	05:47	06:41	07:34		07:32		08:20	14:51 (WEA 10)
	21:42	20:54	19:44	18:31		16:27		15:57	19 15:10 (WEA 10)
12	05:02	05:49	06:43	07:36		07:34		08:22	14:52 (WEA 10)
	21:41	20:52	19:41	18:29		16:25		15:57	19 15:11 (WEA 10)
13	05:03	05:51	06:44	07:37		07:36	14:47 (WEA 10)	08:23	14:53 (WEA 10)
	21:40	20:50	19:39	18:26		16:24	10 14:57 (WEA 10)	15:57	18 15:11 (WEA 10)
14	05:04	05:52	06:46	07:39		07:38	14:45 (WEA 10)	08:24	14:54 (WEA 10)
	21:39	20:48	19:36	18:24		16:22	14 14:59 (WEA 10)	15:57	17 15:11 (WEA 10)
15	05:05	05:54	06:48	07:41		07:40	14:44 (WEA 10)	08:25	14:55 (WEA 10)
	21:38	20:46	19:34	18:22		16:21	17 15:01 (WEA 10)	15:57	16 15:11 (WEA 10)
16	05:07	05:56	06:50	07:43		07:41	14:43 (WEA 10)	08:25	14:54 (WEA 10)
	21:37	20:44	19:32	18:20		16:19	19 15:02 (WEA 10)	15:57	16 15:10 (WEA 10)
17	05:08	05:58	06:51	07:45	16:49 (WEA 6)	07:43	14:42 (WEA 10)	08:26	14:55 (WEA 10)
	21:35	20:42	19:29	18:17	7 16:56 (WEA 6)	16:18	21 15:03 (WEA 10)	15:57	16 15:11 (WEA 10)
18	05:09	05:59	06:53	07:47	16:45 (WEA 6)	07:45	14:41 (WEA 10)	08:27	14:56 (WEA 10)
	21:34	20:40	19:27	18:15	15 17:00 (WEA 6)	16:16	23 15:04 (WEA 10)	15:57	15 15:11 (WEA 10)
19	05:11	06:01	06:55	07:49	16:43 (WEA 6)	07:47	14:41 (WEA 10)	08:28	14:57 (WEA 10)
	21:33	20:37	19:24	18:13	19 17:02 (WEA 6)	16:15	24 15:05 (WEA 10)	15:58	15 15:12 (WEA 10)
20	05:12	06:03	06:57	07:50	16:41 (WEA 6)	07:49	14:41 (WEA 10)	08:28	14:57 (WEA 10)
	21:32	20:35	19:22	18:11	22 17:03 (WEA 6)	16:14	24 15:05 (WEA 10)	15:58	15 15:12 (WEA 10)
21	05:13	06:04	06:58	07:52	16:40 (WEA 6)	07:50	14:41 (WEA 10)	08:29	14:58 (WEA 10)
	21:30	20:33	19:19	18:08	24 17:04 (WEA 6)	16:12	25 15:06 (WEA 10)	15:58	14 15:12 (WEA 10)
22	05:15	06:06	07:00	07:54	16:39 (WEA 6)	07:52	14:41 (WEA 10)	08:30	14:58 (WEA 10)
	21:29	20:31	19:17	18:06	25 17:04 (WEA 6)	16:11	26 15:07 (WEA 10)	15:59	14 15:12 (WEA 10)
23	05:16	06:08	07:02	07:56	16:38 (WEA 6)	07:54	14:41 (WEA 10)	08:30	14:59 (WEA 10)
	21:28	20:28	19:14	18:04	27 17:05 (WEA 6)	16:10	26 15:07 (WEA 10)	15:59	15 15:14 (WEA 10)
24	05:18	06:10	07:04	07:58	16:38 (WEA 6)	07:56	14:41 (WEA 10)	08:30	14:59 (WEA 10)
	21:26	20:26	19:12	18:02	27 17:05 (WEA 6)	16:09	27 15:08 (WEA 10)	16:00	15 15:14 (WEA 10)
25	05:19	06:11	07:05	07:00	15:37 (WEA 6)	07:57	14:42 (WEA 10)	08:31	14:59 (WEA 10)
	21:25	20:24	19:10	17:00	28 16:05 (WEA 6)	16:08	26 15:08 (WEA 10)	16:01	15 15:14 (WEA 10)
26	05:21	06:13	07:07	07:02	15:37 (WEA 6)	07:59	14:42 (WEA 10)	08:31	15:00 (WEA 10)
	21:23	20:22	19:07	16:58	28 16:05 (WEA 6)	16:07	27 15:09 (WEA 10)	16:01	16 15:16 (WEA 10)
27	05:22	06:15	07:09	07:04	15:37 (WEA 6)	08:01	14:42 (WEA 10)	08:31	15:00 (WEA 10)
	21:22	20:19	19:05	16:56	28 16:05 (WEA 6)	16:06	26 15:08 (WEA 10)	16:02	16 15:16 (WEA 10)
28	05:24	06:17	07:11	07:05	15:37 (WEA 6)	08:02	14:42 (WEA 10)	08:32	15:01 (WEA 10)
	21:20	20:17	19:02	16:53	28 16:05 (WEA 6)	16:05	27 15:09 (WEA 10)	16:03	16 15:17 (WEA 10)
29	05:26	06:18	07:12	07:07	15:37 (WEA 6)	08:04	14:43 (WEA 10)	08:32	15:01 (WEA 10)
	21:18	20:15	19:00	16:51	28 16:05 (WEA 6)	16:04	26 15:09 (WEA 10)	16:04	17 15:18 (WEA 10)
30	05:27	06:20	07:14	07:09	15:37 (WEA 6)	08:06	14:44 (WEA 10)	08:32	15:01 (WEA 10)
	21:17	20:12	18:57	16:49	27 16:04 (WEA 6)	16:03	26 15:10 (WEA 10)	16:05	17 15:18 (WEA 10)
31	05:29	06:22		07:11	15:38 (WEA 6)			08:32	15:01 (WEA 10)
	21:15	20:10		16:47	25 16:03 (WEA 6)			16:06	18 15:19 (WEA 10)
Sonnenscheinstunden	510	458	382	329		261		236	
astr.max.mögl.Beschattung				358		517		566	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AC - Am Hofende 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	15:05 (WEA 10) 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	15:06 (WEA 10) 16:59	07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	15:06 (WEA 10) 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	15:05 (WEA 10) 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	15:06 (WEA 10) 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	15:06 (WEA 10) 17:07	16:21 (WEA 6) 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	15:05 (WEA 10) 17:09	16:17 (WEA 6) 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	15:06 (WEA 10) 17:11	16:15 (WEA 6) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	15:06 (WEA 10) 17:13	16:14 (WEA 6) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	15:06 (WEA 10) 17:15	16:13 (WEA 6) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	15:06 (WEA 10) 17:17	16:12 (WEA 6) 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	15:06 (WEA 10) 17:19	16:11 (WEA 6) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	15:06 (WEA 10) 17:21	16:11 (WEA 6) 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	15:06 (WEA 10) 17:23	16:11 (WEA 6) 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	15:06 (WEA 10) 17:25	16:11 (WEA 6) 18:19	06:19 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	15:07 (WEA 10) 17:27	16:11 (WEA 6) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	15:07 (WEA 10) 17:29	16:10 (WEA 6) 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	15:08 (WEA 10) 17:31	16:10 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	15:07 (WEA 10) 17:33	16:11 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	15:08 (WEA 10) 17:35	16:11 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:09 (WEA 10) 17:37	16:12 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:09 (WEA 10) 17:39	16:13 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:10 (WEA 10) 17:41	16:14 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:10 (WEA 10) 17:43	16:16 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:12 (WEA 10) 17:45	16:18 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:12 (WEA 10) 17:46	16:29 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:13 (WEA 10) 17:48	06:04 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:15 (WEA 10) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:17 (WEA 10) 17:50	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:30 (WEA 10) 17:50	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:55	15:28 (WEA 10) 17:50	06:54 19:48	05:44 20:42	04:56 21:32	04:50 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	657	440				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AC - Am Hofende 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober			November			Dezember	
	1	04:51	05:30	06:24	07:16			07:13	15:43 (WEA 6)	08:07		14:48 (WEA 10)
		21:48	21:13	20:08	18:55		22	16:45	16:05 (WEA 6)	16:02	24	15:12 (WEA 10)
	2	04:52	05:32	06:25	07:18			07:15	15:44 (WEA 6)	08:09		14:49 (WEA 10)
		21:47	21:11	20:05	18:53		19	16:43	16:03 (WEA 6)	16:01	23	15:12 (WEA 10)
	3	04:53	05:34	06:27	07:19			07:17	15:45 (WEA 6)	08:10		14:49 (WEA 10)
		21:47	21:10	20:03	18:50		17	16:42	16:02 (WEA 6)	16:01	23	15:12 (WEA 10)
	4	04:54	05:35	06:29	07:21			07:19	15:47 (WEA 6)	08:12		14:50 (WEA 10)
		21:46	21:08	20:01	18:48		12	16:40	15:59 (WEA 6)	16:00	22	15:12 (WEA 10)
	5	04:54	05:37	06:31	07:23			07:21	15:52 (WEA 6)	08:13		14:51 (WEA 10)
		21:46	21:06	19:58	18:45		3	16:38	15:55 (WEA 6)	15:59	22	15:13 (WEA 10)
	6	04:55	05:39	06:32	07:25			07:23		08:14		14:52 (WEA 10)
		21:45	21:04	19:56	18:43			16:36		15:59	20	15:12 (WEA 10)
	7	04:56	05:40	06:34	07:27			07:25		08:16		14:52 (WEA 10)
		21:45	21:02	19:53	18:41			16:34		15:58	20	15:12 (WEA 10)
	8	04:57	05:42	06:36	07:28			07:26		08:17		14:54 (WEA 10)
		21:44	21:00	19:51	18:38			16:32		15:58	18	15:12 (WEA 10)
	9	04:58	05:44	06:37	07:30			07:28		08:18		14:54 (WEA 10)
		21:43	20:58	19:49	18:36			16:31		15:58	18	15:12 (WEA 10)
	10	04:59	05:45	06:39	07:32			07:30		08:19		14:55 (WEA 10)
		21:42	20:56	19:46	18:33			16:29		15:57	17	15:12 (WEA 10)
	11	05:00	05:47	06:41	07:34			07:32		08:20		14:55 (WEA 10)
		21:42	20:54	19:44	18:31			16:27		15:57	17	15:12 (WEA 10)
	12	05:02	05:49	06:43	07:36			07:34	14:51 (WEA 10)	08:22		14:57 (WEA 10)
		21:41	20:52	19:41	18:29		9	16:25	15:00 (WEA 10)	15:57	15	15:12 (WEA 10)
	13	05:03	05:51	06:44	07:37			07:36	14:48 (WEA 10)	08:23		14:58 (WEA 10)
		21:40	20:50	19:39	18:26		14	16:24	15:02 (WEA 10)	15:57	14	15:12 (WEA 10)
	14	05:04	05:52	06:46	07:39			07:38	14:47 (WEA 10)	08:24		14:59 (WEA 10)
		21:39	20:48	19:36	18:24		17	16:22	15:04 (WEA 10)	15:57	13	15:12 (WEA 10)
	15	05:05	05:54	06:48	07:41			07:40	14:46 (WEA 10)	08:25		15:00 (WEA 10)
		21:38	20:46	19:34	18:22		19	16:21	15:05 (WEA 10)	15:57	12	15:12 (WEA 10)
	16	05:07	05:56	06:50	07:43	16:54 (WEA 6)	07:41	07:41	14:45 (WEA 10)	08:25		15:00 (WEA 10)
		21:37	20:44	19:32	18:20	4	16:58 (WEA 6)	16:19	15:06 (WEA 10)	15:57	12	15:12 (WEA 10)
	17	05:08	05:57	06:51	07:45		16:49 (WEA 6)	07:43	14:45 (WEA 10)	08:26		15:01 (WEA 10)
		21:35	20:42	19:29	18:17	13	17:02 (WEA 6)	16:18	15:07 (WEA 10)	15:57	11	15:12 (WEA 10)
	18	05:09	05:59	06:53	07:47		16:47 (WEA 6)	07:45	14:44 (WEA 10)	08:27		15:02 (WEA 10)
		21:34	20:40	19:27	18:15	17	17:04 (WEA 6)	16:16	15:08 (WEA 10)	15:57	10	15:12 (WEA 10)
	19	05:11	06:01	06:55	07:49		16:45 (WEA 6)	07:47	14:44 (WEA 10)	08:28		15:03 (WEA 10)
		21:33	20:37	19:24	18:13	21	17:06 (WEA 6)	16:15	15:09 (WEA 10)	15:58	10	15:13 (WEA 10)
	20	05:12	06:03	06:57	07:50		16:44 (WEA 6)	07:49	14:44 (WEA 10)	08:28		15:03 (WEA 10)
		21:32	20:35	19:22	18:11	23	17:07 (WEA 6)	16:14	15:09 (WEA 10)	15:58	9	15:12 (WEA 10)
	21	05:13	06:04	06:58	07:52		16:42 (WEA 6)	07:50	14:44 (WEA 10)	08:29		15:04 (WEA 10)
		21:30	20:33	19:19	18:08	25	17:07 (WEA 6)	16:12	15:10 (WEA 10)	15:58	9	15:13 (WEA 10)
	22	05:15	06:06	07:00	07:54		16:42 (WEA 6)	07:52	14:44 (WEA 10)	08:30		15:04 (WEA 10)
		21:29	20:31	19:17	18:06	26	17:08 (WEA 6)	16:11	15:10 (WEA 10)	15:59	9	15:13 (WEA 10)
	23	05:16	06:08	07:02	07:56		16:41 (WEA 6)	07:54	14:44 (WEA 10)	08:30		15:05 (WEA 10)
		21:28	20:28	19:14	18:04	27	17:08 (WEA 6)	16:10	15:11 (WEA 10)	15:59	9	15:14 (WEA 10)
	24	05:18	06:10	07:04	07:58		16:41 (WEA 6)	07:56	14:45 (WEA 10)	08:30		15:05 (WEA 10)
		21:26	20:26	19:12	18:02	27	17:08 (WEA 6)	16:09	15:11 (WEA 10)	16:00	10	15:15 (WEA 10)
	25	05:19	06:11	07:05	07:00		15:40 (WEA 6)	07:57	14:45 (WEA 10)	08:31		15:05 (WEA 10)
		21:25	20:24	19:10	17:00	28	16:08 (WEA 6)	16:08	15:11 (WEA 10)	16:01	10	15:15 (WEA 10)
	26	05:21	06:13	07:07	07:02		15:40 (WEA 6)	07:59	14:46 (WEA 10)	08:31		15:06 (WEA 10)
		21:23	20:22	19:07	16:58	28	16:08 (WEA 6)	16:07	15:12 (WEA 10)	16:01	11	15:17 (WEA 10)
	27	05:22	06:15	07:09	07:04		15:40 (WEA 6)	08:01	14:45 (WEA 10)	08:31		15:06 (WEA 10)
		21:22	20:19	19:05	16:56	28	16:08 (WEA 6)	16:06	15:11 (WEA 10)	16:02	11	15:17 (WEA 10)
	28	05:24	06:17	07:11	07:05		15:40 (WEA 6)	08:02	15:46 (WEA 10)	08:32		15:06 (WEA 10)
		21:20	20:17	19:02	16:53	28	16:08 (WEA 6)	16:05	15:12 (WEA 10)	16:03	12	15:18 (WEA 10)
	29	05:26	06:18	07:12	07:07		15:41 (WEA 6)	08:04	14:47 (WEA 10)	08:32		15:06 (WEA 10)
		21:18	20:15	19:00	16:51	26	16:07 (WEA 6)	16:04	15:12 (WEA 10)	16:04	13	15:19 (WEA 10)
	30	05:27	06:20	07:14	07:09		15:41 (WEA 6)	08:06	14:48 (WEA 10)	08:32		15:06 (WEA 10)
		21:17	20:12	18:57	16:49	25	16:06 (WEA 6)	16:03	15:12 (WEA 10)	16:05	14	15:20 (WEA 10)
	31	05:29	06:22		07:11		15:42 (WEA 6)			08:32		15:06 (WEA 10)
		21:15	20:10		16:47	24	16:06 (WEA 6)			16:06	15	15:21 (WEA 10)
Sonnenscheinstunden		510	458	382	329			261		236		
astr.max.mögl.Beschattung					370			507			453	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AD - Am Hofende 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	15:13 (WEA 10) 08:02 15:22 (WEA 10) 16:57	15:25 (WEA 10) 07:06 15:31 (WEA 10) 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	15:12 (WEA 10) 08:01 15:23 (WEA 10) 16:59	07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	15:12 (WEA 10) 07:59 15:25 (WEA 10) 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	15:12 (WEA 10) 07:57 15:26 (WEA 10) 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	15:12 (WEA 10) 07:55 15:27 (WEA 10) 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	15:11 (WEA 10) 07:54 15:28 (WEA 10) 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	15:11 (WEA 10) 07:52 15:29 (WEA 10) 17:09	06:52 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	15:11 (WEA 10) 07:50 15:30 (WEA 10) 17:11	06:50 16:24 (WEA 6) 18:05 16:31 (WEA 6) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	15:11 (WEA 10) 07:48 15:31 (WEA 10) 17:13	06:47 16:21 (WEA 6) 18:07 16:34 (WEA 6) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	15:10 (WEA 10) 07:46 15:32 (WEA 10) 17:15	06:45 16:19 (WEA 6) 18:09 16:36 (WEA 6) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	15:10 (WEA 10) 07:44 15:32 (WEA 10) 17:17	06:42 16:18 (WEA 6) 18:11 16:38 (WEA 6) 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	15:10 (WEA 10) 07:42 15:33 (WEA 10) 17:19	06:40 16:17 (WEA 6) 18:13 16:39 (WEA 6) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	15:10 (WEA 10) 07:40 15:34 (WEA 10) 17:21	06:38 16:16 (WEA 6) 18:15 16:40 (WEA 6) 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	15:10 (WEA 10) 07:38 15:35 (WEA 10) 17:23	06:35 16:15 (WEA 6) 18:17 16:41 (WEA 6) 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	15:10 (WEA 10) 07:36 15:35 (WEA 10) 17:25	06:33 16:15 (WEA 6) 18:19 16:42 (WEA 6) 18:19	06:19 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28	15:11 (WEA 10) 07:34 15:36 (WEA 10) 17:27	06:30 16:15 (WEA 6) 18:20 16:42 (WEA 6) 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	15:11 (WEA 10) 07:32 15:37 (WEA 10) 17:29	06:28 16:14 (WEA 6) 18:22 16:42 (WEA 6) 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	15:11 (WEA 10) 07:30 15:38 (WEA 10) 17:31	06:26 16:14 (WEA 6) 18:24 16:42 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	15:11 (WEA 10) 07:28 15:37 (WEA 10) 17:33	06:23 16:14 (WEA 6) 18:26 16:42 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	15:12 (WEA 10) 07:26 15:38 (WEA 10) 17:35	06:21 16:15 (WEA 6) 18:28 16:42 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:12 (WEA 10) 07:24 15:39 (WEA 10) 17:37	06:18 16:15 (WEA 6) 18:30 16:42 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:12 (WEA 10) 07:21 15:38 (WEA 10) 17:39	06:16 16:15 (WEA 6) 18:31 16:40 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:13 (WEA 10) 07:19 15:39 (WEA 10) 17:41	06:14 16:16 (WEA 6) 18:33 16:40 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:13 (WEA 10) 07:17 15:38 (WEA 10) 17:43	06:11 16:17 (WEA 6) 18:35 16:39 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:14 (WEA 10) 07:15 15:39 (WEA 10) 17:45	06:09 16:18 (WEA 6) 18:37 16:36 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:15 (WEA 10) 07:13 15:38 (WEA 10) 17:46	06:06 16:20 (WEA 6) 18:39 16:35 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48	15:15 (WEA 10) 07:10 15:37 (WEA 10) 17:48	06:04 16:24 (WEA 6) 18:41 16:31 (WEA 6) 18:41	05:52 20:37	05:00 21:27	04:49 21:49
28	08:09 16:50	15:17 (WEA 10) 07:08 15:37 (WEA 10) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:18 (WEA 10) 15:36 (WEA 10)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:19 (WEA 10) 15:35 (WEA 10)	06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:55	15:22 (WEA 10) 15:34 (WEA 10)	06:54 19:48	 21:32	04:56 21:32	 21:32
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	647	438				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AD - Am Hofende 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober		November		Dezember
1	04:51	05:30	06:24	07:16		07:13	15:49 (WEA 6)	08:07	14:52 (WEA 10)
	21:48	21:13	20:08	18:55		16:45	17 16:06 (WEA 6)	16:02	22 15:14 (WEA 10)
2	04:52	05:32	06:25	07:18		07:15	15:51 (WEA 6)	08:09	14:53 (WEA 10)
	21:47	21:11	20:05	18:53		16:43	13 16:04 (WEA 6)	16:01	22 15:15 (WEA 10)
3	04:53	05:34	06:27	07:19		07:17	15:55 (WEA 6)	08:10	14:54 (WEA 10)
	21:47	21:10	20:03	18:50		16:42	4 15:59 (WEA 6)	16:01	20 15:14 (WEA 10)
4	04:54	05:35	06:29	07:21		07:19		08:12	14:55 (WEA 10)
	21:46	21:08	20:01	18:48		16:40		16:00	19 15:14 (WEA 10)
5	04:54	05:37	06:31	07:23		07:21		08:13	14:56 (WEA 10)
	21:46	21:06	19:58	18:45		16:38		15:59	18 15:14 (WEA 10)
6	04:55	05:39	06:32	07:25		07:23		08:14	14:57 (WEA 10)
	21:45	21:04	19:56	18:43		16:36		15:59	17 15:14 (WEA 10)
7	04:56	05:40	06:34	07:27		07:25		08:16	14:58 (WEA 10)
	21:45	21:02	19:53	18:41		16:34		15:58	15 15:13 (WEA 10)
8	04:57	05:42	06:36	07:28		07:26		08:17	15:00 (WEA 10)
	21:44	21:00	19:51	18:38		16:32		15:58	14 15:14 (WEA 10)
9	04:58	05:44	06:37	07:30		07:28		08:18	15:00 (WEA 10)
	21:43	20:58	19:49	18:36		16:31		15:58	13 15:13 (WEA 10)
10	04:59	05:45	06:39	07:32		07:30	14:55 (WEA 10)	08:19	15:01 (WEA 10)
	21:42	20:56	19:46	18:33		16:29	7 15:02 (WEA 10)	15:57	11 15:12 (WEA 10)
11	05:00	05:47	06:41	07:34		07:32	14:52 (WEA 10)	08:20	15:03 (WEA 10)
	21:42	20:54	19:44	18:31		16:27	13 15:05 (WEA 10)	15:57	9 15:12 (WEA 10)
12	05:02	05:49	06:43	07:36		07:34	14:51 (WEA 10)	08:22	15:05 (WEA 10)
	21:41	20:52	19:41	18:29		16:25	16 15:07 (WEA 10)	15:57	7 15:12 (WEA 10)
13	05:03	05:51	06:44	07:37		07:36	14:50 (WEA 10)	08:23	15:07 (WEA 10)
	21:40	20:50	19:39	18:26		16:24	18 15:08 (WEA 10)	15:57	4 15:11 (WEA 10)
14	05:04	05:52	06:46	07:39		07:38	14:49 (WEA 10)	08:24	
	21:39	20:48	19:36	18:24		16:22	20 15:09 (WEA 10)	15:57	
15	05:05	05:54	06:48	07:41	16:55 (WEA 6)	07:40	14:48 (WEA 10)	08:25	
	21:38	20:46	19:34	18:22	10 17:05 (WEA 6)	16:21	22 15:10 (WEA 10)	15:57	
16	05:07	05:56	06:50	07:43	16:52 (WEA 6)	07:41	14:48 (WEA 10)	08:25	
	21:37	20:44	19:32	18:20	16 17:08 (WEA 6)	16:19	23 15:11 (WEA 10)	15:57	
17	05:08	05:57	06:51	07:45	16:50 (WEA 6)	07:43	14:47 (WEA 10)	08:26	
	21:35	20:42	19:29	18:17	19 17:09 (WEA 6)	16:18	25 15:12 (WEA 10)	15:57	
18	05:09	05:59	06:53	07:47	16:48 (WEA 6)	07:45	14:47 (WEA 10)	08:27	13:51 (WEA 11)
	21:34	20:40	19:27	18:15	22 17:10 (WEA 6)	16:16	25 15:12 (WEA 10)	15:57	4 13:55 (WEA 11)
19	05:11	06:01	06:55	07:49	16:47 (WEA 6)	07:47	14:47 (WEA 10)	08:28	13:51 (WEA 11)
	21:33	20:37	19:24	18:13	24 17:11 (WEA 6)	16:15	26 15:13 (WEA 10)	15:58	5 13:56 (WEA 11)
20	05:12	06:03	06:57	07:50	16:46 (WEA 6)	07:49	14:47 (WEA 10)	08:28	13:51 (WEA 11)
	21:32	20:35	19:22	18:11	26 17:12 (WEA 6)	16:14	26 15:13 (WEA 10)	15:58	5 13:56 (WEA 11)
21	05:13	06:04	06:58	07:52	16:45 (WEA 6)	07:50	14:47 (WEA 10)	08:29	13:51 (WEA 11)
	21:30	20:33	19:19	18:08	27 17:12 (WEA 6)	16:12	27 15:14 (WEA 10)	15:58	7 13:58 (WEA 11)
22	05:15	06:06	07:00	07:54	16:45 (WEA 6)	07:52	15:48 (WEA 10)	08:30	13:51 (WEA 11)
	21:29	20:31	19:17	18:06	27 17:12 (WEA 6)	16:11	26 15:14 (WEA 10)	15:59	7 13:58 (WEA 11)
23	05:16	06:08	07:02	07:56	16:44 (WEA 6)	07:54	15:48 (WEA 10)	08:30	13:53 (WEA 11)
	21:28	20:28	19:14	18:04	28 17:12 (WEA 6)	16:10	26 15:14 (WEA 10)	15:59	5 13:58 (WEA 11)
24	05:18	06:10	07:04	07:58	16:44 (WEA 6)	07:56	14:48 (WEA 10)	08:30	13:53 (WEA 11)
	21:26	20:26	19:12	18:02	28 17:12 (WEA 6)	16:09	27 15:15 (WEA 10)	16:00	5 13:58 (WEA 11)
25	05:19	06:11	07:05	07:00	15:44 (WEA 6)	07:57	14:49 (WEA 10)	08:31	13:54 (WEA 11)
	21:25	20:24	19:10	17:00	28 16:12 (WEA 6)	16:08	26 15:15 (WEA 10)	16:01	4 13:58 (WEA 11)
26	05:21	06:13	07:07	07:02	15:44 (WEA 6)	07:59	14:50 (WEA 10)	08:31	13:57 (WEA 11)
	21:23	20:22	19:07	16:58	28 16:12 (WEA 6)	16:07	25 15:15 (WEA 10)	16:01	1 13:58 (WEA 11)
27	05:22	06:15	07:09	07:04	15:45 (WEA 6)	08:01	14:49 (WEA 10)	08:31	
	21:22	20:19	19:05	16:56	26 16:11 (WEA 6)	16:06	25 15:14 (WEA 10)	16:02	
28	05:24	06:17	07:11	07:05	15:45 (WEA 6)	08:02	14:50 (WEA 10)	08:32	
	21:20	20:17	19:02	16:53	26 16:11 (WEA 6)	16:05	25 15:15 (WEA 10)	16:03	
29	05:26	06:18	07:12	07:07	15:46 (WEA 6)	08:04	14:51 (WEA 10)	08:32	
	21:18	20:15	19:00	16:51	24 16:10 (WEA 6)	16:04	24 15:15 (WEA 10)	16:04	
30	05:27	06:20	07:14	07:09	15:46 (WEA 6)	08:06	14:52 (WEA 10)	08:32	15:15 (WEA 10)
	21:17	20:12	18:57	16:49	23 16:09 (WEA 6)	16:03	23 15:15 (WEA 10)	16:05	3 15:18 (WEA 10)
31	05:29	06:22		07:11	15:47 (WEA 6)			08:32	15:14 (WEA 10)
	21:15	20:10		16:47	20 16:07 (WEA 6)			16:06	6 15:20 (WEA 10)
Sonnenscheinstunden	510	458	382	329		261		236	
astr.max.mögl.Beschattung				402		509		243	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AE - Am Hofende 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar			Februar			März		April		Mai		Juni	
1	08:32		14:04 (WEA 11)	08:02		15:26 (WEA 10)	07:06		06:52		05:44		04:55	
	16:07	5	14:09 (WEA 11)	16:57	16	15:42 (WEA 10)	17:52		19:50		20:44		21:33	
2	08:32			08:01		15:28 (WEA 10)	07:04		06:49		05:42		04:54	
	16:08			16:59	12	15:40 (WEA 10)	17:54		19:51		20:46		21:34	
3	08:31			07:59		15:32 (WEA 10)	07:01		06:47		05:40		04:53	
	16:09			17:01	4	15:36 (WEA 10)	17:56		19:53		20:48		21:35	
4	08:31			07:57			06:59		06:45		05:38		04:52	
	16:10			17:03			17:58		19:55		20:49		21:36	
5	08:31			07:55			06:57		06:42		05:36		04:52	
	16:12			17:05			18:00		19:57		20:51		21:38	
6	08:30		15:22 (WEA 10)	07:54			06:54		06:40		05:34		04:51	
	16:13	7	15:29 (WEA 10)	17:07			18:02		19:59		20:53		21:39	
7	08:30		15:20 (WEA 10)	07:52			06:52		06:37		05:32		04:50	
	16:14	10	15:30 (WEA 10)	17:09			18:04		20:01		20:55		21:40	
8	08:30		15:20 (WEA 10)	07:50			06:50		06:35		05:30		04:50	
	16:16	13	15:33 (WEA 10)	17:11			18:05		20:02		20:56		21:40	
9	08:29		15:20 (WEA 10)	07:48			06:47		06:33		05:28		04:49	
	16:17	14	15:34 (WEA 10)	17:13			18:07		20:04		20:58		21:41	
10	08:28		15:19 (WEA 10)	07:46		16:30 (WEA 6)	06:45		06:30		05:26		04:49	
	16:19	16	15:35 (WEA 10)	17:15	6	16:36 (WEA 6)	18:09		20:06		21:00		21:42	
11	08:28		15:18 (WEA 10)	07:44		16:27 (WEA 6)	06:42		06:28		05:24		04:48	
	16:20	18	15:36 (WEA 10)	17:17	13	16:40 (WEA 6)	18:11		20:08		21:02		21:43	
12	08:27		15:18 (WEA 10)	07:42		16:25 (WEA 6)	06:40		06:26		05:23		04:48	
	16:22	19	15:37 (WEA 10)	17:19	17	16:42 (WEA 6)	18:13		20:10		21:03		21:44	
13	08:26		15:18 (WEA 10)	07:40		16:23 (WEA 6)	06:38		06:23		05:21		04:48	
	16:23	20	15:38 (WEA 10)	17:21	20	16:43 (WEA 6)	18:15		20:11		21:05		21:44	
14	08:25		15:18 (WEA 10)	07:38		16:22 (WEA 6)	06:35		06:21		05:19		04:47	
	16:25	21	15:39 (WEA 10)	17:23	23	16:45 (WEA 6)	18:17		20:13		21:07		21:45	
15	08:25		15:17 (WEA 10)	07:36		16:22 (WEA 6)	06:33		06:19		05:18		04:47	
	16:26	23	15:40 (WEA 10)	17:25	24	16:46 (WEA 6)	18:19		20:15		21:08		21:46	
16	08:24		15:18 (WEA 10)	07:34		16:21 (WEA 6)	06:30		06:16		05:16		04:47	
	16:28	23	15:41 (WEA 10)	17:27	26	16:47 (WEA 6)	18:20		20:17		21:10		21:46	
17	08:23		15:18 (WEA 10)	07:32		16:20 (WEA 6)	06:28		06:14		05:14		04:47	
	16:30	24	15:42 (WEA 10)	17:29	26	16:46 (WEA 6)	18:22		20:19		21:11		21:47	
18	08:22		15:18 (WEA 10)	07:30		16:20 (WEA 6)	06:26		06:12		05:13		04:47	
	16:31	25	15:43 (WEA 10)	17:31	27	16:47 (WEA 6)	18:24		20:21		21:13		21:47	
19	08:20		15:17 (WEA 10)	07:28		16:20 (WEA 6)	06:23		06:09		05:11		04:47	
	16:33	26	15:43 (WEA 10)	17:33	27	16:47 (WEA 6)	18:26		20:22		21:15		21:48	
20	08:19		15:18 (WEA 10)	07:26		16:20 (WEA 6)	06:21		06:07		05:10		04:47	
	16:35	25	15:43 (WEA 10)	17:35	27	16:47 (WEA 6)	18:28		20:24		21:16		21:48	
21	08:18		15:18 (WEA 10)	07:24		16:20 (WEA 6)	06:18		06:05		05:08		04:47	
	16:37	26	15:44 (WEA 10)	17:37	27	16:47 (WEA 6)	18:30		20:26		21:18		21:48	
22	08:17		15:18 (WEA 10)	07:21		16:20 (WEA 6)	06:16		06:03		05:07		04:47	
	16:39	26	15:44 (WEA 10)	17:39	26	16:46 (WEA 6)	18:31		20:28		21:19		21:48	
23	08:16		15:19 (WEA 10)	07:19		16:20 (WEA 6)	06:14		06:01		05:05		04:47	
	16:40	26	15:45 (WEA 10)	17:41	26	16:46 (WEA 6)	18:33		20:30		21:21		21:48	
24	08:14		15:19 (WEA 10)	07:17		16:21 (WEA 6)	06:11		05:58		05:04		04:48	
	16:42	25	15:44 (WEA 10)	17:43	24	16:45 (WEA 6)	18:35		20:31		21:22		21:49	
25	08:13		15:20 (WEA 10)	07:15		16:21 (WEA 6)	06:09		05:56		05:03		04:48	
	16:44	25	15:45 (WEA 10)	17:45	23	16:44 (WEA 6)	18:37		20:33		21:24		21:49	
26	08:12		15:20 (WEA 10)	07:13		16:23 (WEA 6)	06:06		05:54		05:02		04:49	
	16:46	25	15:45 (WEA 10)	17:46	19	16:42 (WEA 6)	18:39		20:35		21:25		21:49	
27	08:10		15:20 (WEA 10)	07:10		16:25 (WEA 6)	06:04		05:52		05:00		04:49	
	16:48	24	15:44 (WEA 10)	17:48	16	16:41 (WEA 6)	18:41		20:37		21:27		21:48	
28	08:09		15:21 (WEA 10)	07:08		16:27 (WEA 6)	06:01		05:50		04:59		04:49	
	16:50	24	15:45 (WEA 10)	17:50	10	16:37 (WEA 6)	18:42		20:39		21:28		21:48	
29	08:07		15:22 (WEA 10)				06:59		05:48		04:58		04:50	
	16:52	22	15:44 (WEA 10)				19:44		20:40		21:29		21:48	
30	08:06		15:23 (WEA 10)				06:57		05:46		04:57		04:51	
	16:54	20	15:43 (WEA 10)				19:46		20:42		21:31		21:48	
31	08:04		15:25 (WEA 10)				06:54				04:56			
	16:55	18	15:43 (WEA 10)				19:48				21:32			
Sonnenscheinstunden	252			274			367		419		492		507	
astr.max.mögl.Beschattung		550			439									

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AE - Am Hofende 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45		08:07 15:00 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43	3	16:04 (WEA 6) 08:09 15:02 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42		16:01 15:03 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40		16:01 15:17 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38		16:00 15:05 (WEA 10)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36		15:59 15:08 (WEA 10)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41		07:25 16:34		15:59 15:15 (WEA 10)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38		07:26 16:32		15:58 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36		07:28 16:31	5	15:07 (WEA 10) 08:18 14:59 (WEA 10) 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33		07:30 16:29	12	15:11 (WEA 10) 08:19 14:57 (WEA 10) 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31		07:32 16:27	16	15:13 (WEA 10) 08:20 14:55 (WEA 10) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29		07:34 16:25	19	15:14 (WEA 10) 08:22 14:54 (WEA 10) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	5	07:36 17:03 (WEA 6) 16:24	21	15:15 (WEA 10) 08:23 14:54 (WEA 10) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	13	07:38 16:59 (WEA 6) 16:22	22	15:16 (WEA 10) 08:24 14:53 (WEA 10) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	18	07:40 17:14 (WEA 6) 16:21	24	15:17 (WEA 10) 08:25 14:53 (WEA 10) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	21	07:41 17:15 (WEA 6) 16:19	25	15:18 (WEA 10) 08:26 14:53 (WEA 10) 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	23	07:43 17:16 (WEA 6) 16:18	26	15:18 (WEA 10) 08:27 14:53 (WEA 10) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	25	07:45 17:17 (WEA 6) 16:16	28	15:18 (WEA 10) 08:28 14:53 (WEA 10) 15:58
19	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	26	07:47 17:17 (WEA 6) 16:15	30	15:19 (WEA 10) 08:28 14:53 (WEA 10) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	27	07:49 17:18 (WEA 6) 16:14	31	15:19 (WEA 10) 08:29 14:53 (WEA 10) 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	28	07:50 17:18 (WEA 6) 16:12	1	15:19 (WEA 10) 08:30 14:54 (WEA 10) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	29	07:52 17:18 (WEA 6) 16:11	2	15:19 (WEA 10) 08:30 14:54 (WEA 10) 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	30	07:54 17:17 (WEA 6) 16:10	3	15:19 (WEA 10) 08:30 14:54 (WEA 10) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	31	07:56 17:17 (WEA 6) 16:09	4	15:20 (WEA 10) 08:30 14:55 (WEA 10) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:00	1	07:57 17:18 (WEA 6) 16:08	5	15:20 (WEA 10) 08:31 14:56 (WEA 10) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:00	2	07:59 17:16 (WEA 6) 16:07	6	15:20 (WEA 10) 08:31 14:57 (WEA 10) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:00	3	08:01 17:15 (WEA 6) 16:06	7	15:20 (WEA 10) 08:31 14:57 (WEA 10) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:00	4	08:02 17:14 (WEA 6) 16:05	8	15:20 (WEA 10) 08:32 14:58 (WEA 10) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:00	5	08:04 17:13 (WEA 6) 16:04	9	15:20 (WEA 10) 08:32 14:59 (WEA 10) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:00	6	08:06 17:11 (WEA 6) 16:03	10	15:20 (WEA 10) 08:32 15:00 (WEA 10) 16:05
31	05:29 21:15	06:22 20:10		07:11 18:00	7	08:08 17:09 (WEA 6) 16:02	11	15:20 (WEA 10) 08:32 15:01 (WEA 10) 16:06
	Sonnenscheinstunden	510	458	382	329	261	236	339
	astr.max.mögl.Beschattung				414	504		

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AF - Am Brink 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai	Juni
1	08:32	14:12 (WEA 11)	08:02	15:38 (WEA 10)	07:06	16:36 (WEA 6)	06:52	05:44	04:55
	16:07	25	14:37 (WEA 11)	16:57	25	16:03 (WEA 10)	17:52	19:50	20:44
2	08:32	14:13 (WEA 11)	08:01	15:38 (WEA 10)	07:04	16:37 (WEA 6)	06:49	05:42	04:54
	16:08	25	14:38 (WEA 11)	16:59	25	16:03 (WEA 10)	17:54	19:51	20:46
3	08:31	14:14 (WEA 11)	07:59	15:38 (WEA 10)	07:01	16:37 (WEA 6)	06:47	05:40	04:53
	16:09	25	14:39 (WEA 11)	17:01	24	16:02 (WEA 10)	17:56	19:53	20:48
4	08:31	14:15 (WEA 11)	07:57	15:39 (WEA 10)	06:59	16:38 (WEA 6)	06:45	05:38	04:52
	16:10	23	14:38 (WEA 11)	17:03	23	16:02 (WEA 10)	17:58	19:55	20:49
5	08:31	14:16 (WEA 11)	07:55	15:40 (WEA 10)	06:57	16:41 (WEA 6)	06:42	05:36	04:52
	16:12	23	14:39 (WEA 11)	17:05	21	16:01 (WEA 10)	18:00	19:57	20:51
6	08:30	14:16 (WEA 11)	07:54	15:41 (WEA 10)	06:54	16:43 (WEA 6)	06:40	05:34	04:51
	16:13	22	14:38 (WEA 11)	17:07	19	16:00 (WEA 10)	18:02	19:59	20:53
7	08:30	14:17 (WEA 11)	07:52	15:42 (WEA 10)	06:52		06:37	05:32	04:50
	16:14	21	14:38 (WEA 11)	17:09	17	15:59 (WEA 10)	18:04	20:01	20:55
8	08:30	14:19 (WEA 11)	07:50	15:44 (WEA 10)	06:50		06:35	05:30	04:50
	16:16	19	14:38 (WEA 11)	17:11	13	15:57 (WEA 10)	18:05	20:02	20:56
9	08:29	14:20 (WEA 11)	07:48	15:47 (WEA 10)	06:47		06:33	05:28	04:49
	16:17	18	14:38 (WEA 11)	17:13	8	15:55 (WEA 10)	18:07	20:04	20:58
10	08:28	14:21 (WEA 11)	07:46		06:45		06:30	05:26	04:49
	16:19	16	14:37 (WEA 11)	17:15		18:09	20:06	21:00	21:42
11	08:28	14:22 (WEA 11)	07:44		06:42		06:28	05:24	04:48
	16:20	14	14:36 (WEA 11)	17:17		18:11	20:08	21:02	21:43
12	08:27	14:24 (WEA 11)	07:42		06:40		06:26	05:23	04:48
	16:22	11	14:35 (WEA 11)	17:19		18:13	20:10	21:03	21:44
13	08:26	14:27 (WEA 11)	07:40		06:38		06:23	05:21	04:48
	16:23	6	14:33 (WEA 11)	17:21		18:15	20:11	21:05	21:44
14	08:25		07:38		06:35		06:21	05:19	04:47
	16:25		17:23		18:17		20:13	21:07	21:45
15	08:25		07:36		06:33		06:19	05:18	04:47
	16:26		17:25		18:19		20:15	21:08	21:46
16	08:24		07:34		06:30		06:16	05:16	04:47
	16:28		17:27		18:20		20:17	21:10	21:46
17	08:23		07:32	16:46 (WEA 6)	06:28		06:14	05:14	04:47
	16:30		17:29	6	16:52 (WEA 6)	18:22	20:19	21:11	21:47
18	08:22	15:43 (WEA 10)	07:30		16:43 (WEA 6)	06:26	06:12	05:13	04:47
	16:31	7	15:50 (WEA 10)	17:31	13	16:56 (WEA 6)	18:24	20:21	21:13
19	08:20	15:41 (WEA 10)	07:28		16:41 (WEA 6)	06:23	06:09	05:11	04:47
	16:33	11	15:52 (WEA 10)	17:33	17	16:58 (WEA 6)	18:26	20:22	21:15
20	08:19	15:40 (WEA 10)	07:26		16:39 (WEA 6)	06:21	06:07	05:10	04:47
	16:35	14	15:54 (WEA 10)	17:35	21	17:00 (WEA 6)	18:28	20:24	21:16
21	08:18	15:39 (WEA 10)	07:24		16:39 (WEA 6)	06:18	06:05	05:08	04:47
	16:37	17	15:56 (WEA 10)	17:37	22	17:01 (WEA 6)	18:30	20:26	21:18
22	08:17	15:38 (WEA 10)	07:21		16:37 (WEA 6)	06:16	06:03	05:07	04:47
	16:39	19	15:57 (WEA 10)	17:39	24	17:01 (WEA 6)	18:31	20:28	21:19
23	08:16	15:38 (WEA 10)	07:19		16:36 (WEA 6)	06:14	06:01	05:05	04:47
	16:40	21	15:59 (WEA 10)	17:41	26	17:02 (WEA 6)	18:33	20:30	21:21
24	08:14	15:37 (WEA 10)	07:17		16:36 (WEA 6)	06:11	05:58	05:04	04:48
	16:42	22	15:59 (WEA 10)	17:43	26	17:02 (WEA 6)	18:35	20:31	21:22
25	08:13	15:37 (WEA 10)	07:15		16:35 (WEA 6)	06:09	05:56	05:03	04:48
	16:44	23	16:00 (WEA 10)	17:45	27	17:02 (WEA 6)	18:37	20:33	21:24
26	08:12	15:37 (WEA 10)	07:13		16:35 (WEA 6)	06:06	05:54	05:02	04:49
	16:46	24	16:01 (WEA 10)	17:46	27	17:02 (WEA 6)	18:39	20:35	21:25
27	08:10	15:36 (WEA 10)	07:10		16:36 (WEA 6)	06:04	05:52	05:00	04:49
	16:48	25	16:01 (WEA 10)	17:48	26	17:02 (WEA 6)	18:41	20:37	21:27
28	08:09	15:37 (WEA 10)	07:08		16:35 (WEA 6)	06:01	05:50	04:59	04:49
	16:50	25	16:02 (WEA 10)	17:50	26	17:01 (WEA 6)	18:42	20:39	21:28
29	08:07	15:37 (WEA 10)			06:59		05:48	04:58	04:50
	16:52	25	16:02 (WEA 10)		19:44		20:40	21:29	21:48
30	08:06	15:36 (WEA 10)			06:57		05:46	04:57	04:51
	16:54	26	16:02 (WEA 10)		19:46		20:42	21:30	21:48
31	08:04	15:37 (WEA 10)			06:54			04:56	
	16:55	26	16:03 (WEA 10)		19:48			21:32	
Sonnenscheinstunden		252		274		367		419	507
astr.max.mögl.Beschattung		533		436		112			

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AF - Am Brink 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45		08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43	15:16 (WEA 10)	08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42	15:13 (WEA 10)	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40	15:11 (WEA 10)	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38	15:10 (WEA 10)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36	15:10 (WEA 10)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	17:23 (WEA 6)	07:25 16:34	15:10 (WEA 10)	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	17:24 (WEA 6)	07:26 16:32	15:33 (WEA 10)	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	17:30 (WEA 6)	07:28 16:31	15:33 (WEA 10)	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	17:32 (WEA 6)	07:30 16:29	15:34 (WEA 10)	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	17:32 (WEA 6)	07:32 16:27	15:08 (WEA 10)	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	17:33 (WEA 6)	07:34 16:25	15:34 (WEA 10)	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	17:34 (WEA 6)	07:36 16:24	15:08 (WEA 10)	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	17:34 (WEA 6)	07:38 16:22	15:34 (WEA 10)	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	17:08 (WEA 6)	07:40 16:21	15:09 (WEA 10)	08:24 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	17:34 (WEA 6)	07:41 16:19	15:34 (WEA 10)	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	17:34 (WEA 6)	07:43 16:18	15:10 (WEA 10)	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	17:34 (WEA 6)	07:45 16:16	15:33 (WEA 10)	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	17:08 (WEA 6)	07:47 16:15	15:12 (WEA 10)	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	17:33 (WEA 6)	07:49 16:14	15:33 (WEA 10)	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	17:32 (WEA 6)	07:50 16:12	15:32 (WEA 10)	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	17:09 (WEA 6)	07:52 16:11	15:16 (WEA 10)	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	17:30 (WEA 6)	07:54 16:10	15:31 (WEA 10)	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	17:28 (WEA 6)	07:56 16:09	15:29 (WEA 10)	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	17:14 (WEA 6)	07:57 16:08	15:27 (WEA 10)	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58		07:59 16:07		08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56		08:01 16:06		08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		08:02 16:05		08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		08:04 16:04	14:08 (WEA 11)	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49		08:06 16:03	14:14 (WEA 11)	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47			14:17 (WEA 11)	08:32 16:06
Sonnenscheinstunden	510	458	382	329		261		236
astr.max.mögl.Beschattung					374	485		767

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AG - Am Brink 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:15 (WEA 11) 08:02 14:35 (WEA 11) 16:57	15:36 (WEA 10) 07:06 15:57 (WEA 10) 17:52	16:35 (WEA 6) 06:52 16:49 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:16 (WEA 11) 08:01 14:35 (WEA 11) 16:59	15:37 (WEA 10) 07:04 15:57 (WEA 10) 17:54	16:39 (WEA 6) 06:49 16:45 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:18 (WEA 11) 07:59 14:35 (WEA 11) 17:01	15:38 (WEA 10) 07:01 15:56 (WEA 10) 17:56	16:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:18 (WEA 11) 07:57 14:35 (WEA 11) 17:03	15:39 (WEA 10) 06:59 15:54 (WEA 10) 17:58	16:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:20 (WEA 11) 07:55 14:35 (WEA 11) 17:05	15:41 (WEA 10) 06:57 15:53 (WEA 10) 18:00	16:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	14:20 (WEA 11) 07:54 14:34 (WEA 11) 17:07	15:45 (WEA 10) 06:54 15:49 (WEA 10) 18:02	16:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:22 (WEA 11) 07:52 14:33 (WEA 11) 17:09	16:41 (WEA 6) 06:38 16:45 (WEA 6) 18:15	16:37 19:59	05:32 20:55	04:50 21:40
8	08:30 16:16	14:24 (WEA 11) 07:50 14:33 (WEA 11) 17:11	16:40 18:05	16:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:27 (WEA 11) 07:48 14:30 (WEA 11) 17:13	16:47 18:07	16:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:27 (WEA 11) 07:46 14:30 (WEA 11) 17:15	16:45 18:09	16:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:27 (WEA 11) 07:44 14:30 (WEA 11) 17:17	16:42 18:11	16:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:27 (WEA 11) 07:42 14:30 (WEA 11) 17:19	16:40 18:13	16:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:27 (WEA 11) 07:40 14:30 (WEA 11) 17:21	16:38 18:15	16:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:27 (WEA 11) 07:38 14:30 (WEA 11) 17:23	16:37 18:17	16:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	14:27 (WEA 11) 07:36 14:30 (WEA 11) 17:25	16:35 18:19	16:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:27 (WEA 11) 07:34 14:30 (WEA 11) 17:27	16:34 18:20	16:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:27 (WEA 11) 07:32 14:30 (WEA 11) 17:29	16:32 18:22	16:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:27 (WEA 11) 07:30 14:30 (WEA 11) 17:31	16:31 18:24	16:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:27 (WEA 11) 07:28 14:30 (WEA 11) 17:33	16:31 18:26	16:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	14:27 (WEA 11) 07:26 14:30 (WEA 11) 17:35	16:31 18:28	16:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	14:27 (WEA 11) 07:24 14:30 (WEA 11) 17:37	16:31 18:30	16:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	14:27 (WEA 11) 07:21 14:30 (WEA 11) 17:39	16:30 18:31	16:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	14:27 (WEA 11) 07:19 14:30 (WEA 11) 17:41	16:30 18:33	16:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	14:27 (WEA 11) 07:17 14:30 (WEA 11) 17:43	16:30 18:35	15:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	14:27 (WEA 11) 07:15 14:30 (WEA 11) 17:45	16:30 18:37	15:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	14:27 (WEA 11) 07:13 14:30 (WEA 11) 17:46	16:31 18:39	15:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	14:27 (WEA 11) 07:10 14:30 (WEA 11) 17:48	16:32 18:41	15:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	14:27 (WEA 11) 07:08 14:30 (WEA 11) 17:50	16:33 18:42	15:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	14:27 (WEA 11) 07:06 14:30 (WEA 11) 17:52	16:33 18:44	15:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	14:27 (WEA 11) 07:04 14:30 (WEA 11) 17:54	16:33 18:46	15:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	14:27 (WEA 11) 07:02 14:30 (WEA 11) 17:56	16:33 18:48	15:46 20:42	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	485	418	20			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schatteneende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AG - Am Brink 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:59 18:00	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	08:00 17:58	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	08:01 17:56	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	08:02 17:53	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	08:04 17:51	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	08:06 17:49	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10	07:16 18:55	08:08 17:47	08:08 16:02	08:33 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung				353	456	561

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AH - Am Brink 11b

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:17 (WEA 11) 08:02 16:57	15:38 (WEA 10) 07:06 17:52	16:36 (WEA 6) 06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:18 (WEA 11) 08:01 16:59	15:39 (WEA 10) 07:04 17:54	16:38 (WEA 6) 06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:20 (WEA 11) 07:59 17:01	15:40 (WEA 10) 07:01 17:56	16:40 (WEA 6) 06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:20 (WEA 11) 07:57 17:03	15:41 (WEA 10) 06:59 17:58	16:49 (WEA 6) 06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:21 (WEA 11) 07:55 17:05	15:42 (WEA 10) 06:57 18:00	16:53 (WEA 6) 06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	14:22 (WEA 11) 07:54 17:07	15:44 (WEA 10) 06:54 18:02	16:54 (WEA 6) 06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:23 (WEA 11) 07:52 17:09	15:46 (WEA 10) 06:52 18:04	16:55 (WEA 6) 06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:25 (WEA 11) 07:50 17:11	15:54 (WEA 10) 06:50 18:05	16:56 (WEA 6) 06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:26 (WEA 11) 07:48 17:13	15:57 (WEA 10) 06:47 18:07	16:57 (WEA 6) 06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:27 (WEA 11) 07:46 17:15	15:58 (WEA 10) 06:45 18:09	16:58 (WEA 6) 06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:30 (WEA 11) 07:44 17:17	16:00 (WEA 10) 06:42 18:11	16:59 (WEA 6) 06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:36 (WEA 11) 07:42 17:19	16:02 (WEA 10) 06:40 18:13	16:59 (WEA 6) 06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:40 (WEA 11) 07:40 17:21	16:03 (WEA 10) 06:38 18:15	16:59 (WEA 6) 06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:43 (WEA 11) 07:38 17:23	16:04 (WEA 10) 06:35 18:17	16:59 (WEA 6) 06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	14:46 (WEA 11) 07:36 17:25	16:05 (WEA 10) 06:33 18:19	16:59 (WEA 6) 06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:48 (WEA 11) 07:34 17:27	16:06 (WEA 10) 06:30 18:20	16:59 (WEA 6) 06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:51 (WEA 10) 07:32 17:29	16:07 (WEA 10) 06:28 18:22	16:59 (WEA 6) 06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:54 (WEA 10) 07:30 17:31	16:08 (WEA 10) 06:26 18:24	16:59 (WEA 6) 06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:57 (WEA 10) 07:28 17:33	16:09 (WEA 10) 06:23 18:26	16:59 (WEA 6) 06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	15:00 (WEA 10) 07:26 17:35	16:10 (WEA 10) 06:21 18:28	16:59 (WEA 6) 06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:03 (WEA 10) 07:24 17:37	16:11 (WEA 10) 06:18 18:30	16:59 (WEA 6) 06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:06 (WEA 10) 07:21 17:39	16:12 (WEA 10) 06:16 18:31	16:59 (WEA 6) 06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:09 (WEA 10) 07:19 17:41	16:13 (WEA 10) 06:14 18:33	16:59 (WEA 6) 06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:12 (WEA 10) 07:17 17:43	16:14 (WEA 10) 06:11 18:35	16:59 (WEA 6) 05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:15 (WEA 10) 07:15 17:45	16:15 (WEA 10) 06:09 18:37	16:59 (WEA 6) 05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:18 (WEA 10) 07:13 17:46	16:16 (WEA 10) 06:06 18:39	16:59 (WEA 6) 05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	15:21 (WEA 10) 07:10 17:48	16:17 (WEA 10) 06:04 18:41	16:59 (WEA 6) 05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	15:24 (WEA 10) 07:08 17:50	16:18 (WEA 10) 06:01 18:42	16:59 (WEA 6) 05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:27 (WEA 10) 07:06 17:52	16:19 (WEA 10) 05:59 18:44	16:59 (WEA 6) 05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:30 (WEA 10) 07:04 17:54	16:20 (WEA 10) 05:57 18:46	16:59 (WEA 6) 05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	15:33 (WEA 10) 07:02 17:56	16:21 (WEA 10) 05:54 18:48	16:59 (WEA 6) 05:44 20:44	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	500	421	42			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AH - Am Brink 11b

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober		November		Dezember	
	1	04:51	05:30	06:24	07:16		07:13		08:07	14:12 (WEA 11)
		21:48	21:13	20:08	18:55		16:45		16:02	5 14:17 (WEA 11)
	2	04:52	05:32	06:25	07:18		07:15		08:09	14:11 (WEA 11)
		21:47	21:11	20:05	18:53		16:43		16:01	10 14:21 (WEA 11)
	3	04:53	05:34	06:27	07:19		07:17		08:10	14:09 (WEA 11)
		21:47	21:10	20:03	18:50		16:42		16:01	13 14:22 (WEA 11)
	4	04:54	05:35	06:29	07:21		07:19	15:16 (WEA 10)	08:12	14:09 (WEA 11)
		21:46	21:08	20:01	18:48		16:40	8 15:24 (WEA 10)	16:00	15 14:24 (WEA 11)
	5	04:54	05:37	06:31	07:23		07:21	15:13 (WEA 10)	08:13	14:08 (WEA 11)
		21:46	21:06	19:58	18:45		16:38	14 15:27 (WEA 10)	15:59	16 14:24 (WEA 11)
	6	04:55	05:39	06:32	07:25		07:23	15:12 (WEA 10)	08:14	14:08 (WEA 11)
		21:45	21:04	19:56	18:43		16:36	17 15:29 (WEA 10)	15:59	18 14:26 (WEA 11)
	7	04:56	05:40	06:34	07:27		07:25	15:11 (WEA 10)	08:16	14:07 (WEA 11)
		21:45	21:02	19:53	18:41		16:34	19 15:30 (WEA 10)	15:58	20 14:27 (WEA 11)
	8	04:57	05:42	06:36	07:28		07:26	15:10 (WEA 10)	08:17	14:08 (WEA 11)
		21:44	21:00	19:51	18:38		16:32	21 15:31 (WEA 10)	15:58	20 14:28 (WEA 11)
	9	04:58	05:44	06:37	07:30		07:28	15:10 (WEA 10)	08:18	14:08 (WEA 11)
		21:43	20:58	19:49	18:36		16:31	22 15:32 (WEA 10)	15:58	21 14:29 (WEA 11)
	10	04:59	05:45	06:39	07:32		07:30	15:09 (WEA 10)	08:19	14:08 (WEA 11)
		21:42	20:56	19:46	18:33		16:29	23 15:32 (WEA 10)	15:57	21 14:29 (WEA 11)
	11	05:00	05:47	06:41	07:34	17:13 (WEA 6)	07:32	15:09 (WEA 10)	08:20	14:07 (WEA 11)
		21:42	20:54	19:44	18:31	12 17:25 (WEA 6)	16:27	24 15:33 (WEA 10)	15:57	23 14:30 (WEA 11)
	12	05:02	05:49	06:43	07:36	17:10 (WEA 6)	07:34	15:09 (WEA 10)	08:22	14:09 (WEA 11)
		21:41	20:52	19:41	18:29	17 17:27 (WEA 6)	16:25	24 15:33 (WEA 10)	15:57	22 14:31 (WEA 11)
	13	05:03	05:51	06:44	07:37	17:09 (WEA 6)	07:36	15:09 (WEA 10)	08:23	14:09 (WEA 11)
		21:40	20:50	19:39	18:26	19 17:28 (WEA 6)	16:24	24 15:33 (WEA 10)	15:57	23 14:32 (WEA 11)
	14	05:04	05:52	06:46	07:39	17:07 (WEA 6)	07:38	15:09 (WEA 10)	08:24	14:09 (WEA 11)
		21:39	20:48	19:36	18:24	22 17:29 (WEA 6)	16:22	24 15:33 (WEA 10)	15:57	23 14:32 (WEA 11)
	15	05:05	05:54	06:48	07:41	17:06 (WEA 6)	07:40	15:09 (WEA 10)	08:24	14:09 (WEA 11)
		21:38	20:46	19:34	18:22	24 17:30 (WEA 6)	16:21	24 15:33 (WEA 10)	15:57	24 14:33 (WEA 11)
	16	05:07	05:56	06:50	07:43	17:06 (WEA 6)	07:41	15:09 (WEA 10)	08:25	14:09 (WEA 11)
		21:37	20:44	19:32	18:20	24 17:30 (WEA 6)	16:19	24 15:33 (WEA 10)	15:57	24 14:33 (WEA 11)
	17	05:08	05:57	06:51	07:45	17:05 (WEA 6)	07:43	15:10 (WEA 10)	08:26	14:09 (WEA 11)
		21:35	20:42	19:29	18:17	25 17:30 (WEA 6)	16:18	23 15:33 (WEA 10)	15:57	25 14:34 (WEA 11)
	18	05:09	05:59	06:53	07:47	17:05 (WEA 6)	07:45	15:10 (WEA 10)	08:27	14:10 (WEA 11)
		21:34	20:40	19:27	18:15	25 17:30 (WEA 6)	16:16	23 15:33 (WEA 10)	15:57	24 14:34 (WEA 11)
	19	05:11	06:01	06:55	07:48	17:05 (WEA 6)	07:47	15:11 (WEA 10)	08:28	14:11 (WEA 11)
		21:33	20:37	19:24	18:13	25 17:30 (WEA 6)	16:15	22 15:33 (WEA 10)	15:58	24 14:35 (WEA 11)
	20	05:12	06:03	06:57	07:50	17:05 (WEA 6)	07:49	15:12 (WEA 10)	08:28	14:10 (WEA 11)
		21:32	20:35	19:22	18:11	25 17:30 (WEA 6)	16:14	21 15:33 (WEA 10)	15:58	25 14:35 (WEA 11)
	21	05:13	06:04	06:58	07:52	17:05 (WEA 6)	07:50	15:13 (WEA 10)	08:29	14:11 (WEA 11)
		21:30	20:33	19:19	18:08	24 17:29 (WEA 6)	16:12	19 15:32 (WEA 10)	15:58	25 14:36 (WEA 11)
	22	05:15	06:06	07:00	07:54	17:05 (WEA 6)	07:52	15:14 (WEA 10)	08:30	14:11 (WEA 11)
		21:29	20:31	19:17	18:06	24 17:29 (WEA 6)	16:11	18 15:32 (WEA 10)	15:59	25 14:36 (WEA 11)
	23	05:16	06:08	07:02	07:56	17:06 (WEA 6)	07:54	15:15 (WEA 10)	08:30	14:12 (WEA 11)
		21:28	20:28	19:14	18:04	22 17:28 (WEA 6)	16:10	16 15:31 (WEA 10)	15:59	25 14:37 (WEA 11)
	24	05:18	06:10	07:04	07:58	17:07 (WEA 6)	07:56	15:17 (WEA 10)	08:30	14:12 (WEA 11)
		21:26	20:26	19:12	18:02	19 17:26 (WEA 6)	16:09	13 15:30 (WEA 10)	16:00	25 14:37 (WEA 11)
	25	05:19	06:11	07:05	07:00	16:08 (WEA 6)	07:57	15:19 (WEA 10)	08:31	14:13 (WEA 11)
		21:25	20:24	19:10	17:00	17 16:25 (WEA 6)	16:08	10 15:29 (WEA 10)	16:01	24 14:37 (WEA 11)
	26	05:21	06:13	07:07	07:02	16:10 (WEA 6)	07:59	15:22 (WEA 10)	08:31	14:14 (WEA 11)
		21:23	20:22	19:07	16:58	13 16:23 (WEA 6)	16:07	5 15:27 (WEA 10)	16:01	24 14:38 (WEA 11)
	27	05:22	06:15	07:09	07:04	16:13 (WEA 6)	08:01		08:31	14:15 (WEA 11)
		21:22	20:19	19:05	16:56	7 16:20 (WEA 6)	16:06		16:02	24 14:39 (WEA 11)
	28	05:24	06:17	07:11	07:05		08:02		08:32	14:15 (WEA 11)
		21:20	20:17	19:02	16:53		16:05		16:03	24 14:39 (WEA 11)
	29	05:26	06:18	07:12	07:07		08:04		08:32	14:16 (WEA 11)
		21:18	20:15	19:00	16:51		16:04		16:04	23 14:39 (WEA 11)
	30	05:27	06:20	07:14	07:09		08:06		08:32	14:16 (WEA 11)
		21:17	20:12	18:57	16:49		16:03		16:05	24 14:40 (WEA 11)
	31	05:29	06:22		07:11				08:32	14:16 (WEA 11)
		21:15	20:10		16:47				16:06	23 14:39 (WEA 11)
Sonnenscheinstunden		510	458	382	329		261		236	
astr.max.mögl.Beschattung					344		438		662	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AI - Am Brink 11a

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai	Juni
1	08:32	14:21 (WEA 11)	08:02	15:41 (WEA 10)	07:06	16:38 (WEA 6)	06:52	05:44	04:55
	16:07	24	14:45 (WEA 11)	16:57	20	16:58 (WEA 6)	19:50	20:44	21:33
2	08:32	14:22 (WEA 11)	08:01	15:42 (WEA 10)	07:04	16:39 (WEA 6)	06:49	05:42	04:54
	16:08	23	14:45 (WEA 11)	16:59	23	16:57 (WEA 6)	19:51	20:46	21:34
3	08:31	14:23 (WEA 11)	07:59	15:42 (WEA 10)	07:01	16:41 (WEA 6)	06:47	05:40	04:53
	16:09	23	14:46 (WEA 11)	17:01	22	16:54 (WEA 6)	19:53	20:48	21:35
4	08:31	14:23 (WEA 11)	07:57	15:43 (WEA 10)	06:59	16:45 (WEA 6)	06:45	05:38	04:52
	16:10	22	14:45 (WEA 11)	17:03	21	16:50 (WEA 6)	19:55	20:49	21:36
5	08:31	14:24 (WEA 11)	07:55	15:44 (WEA 10)	06:57		06:42	05:36	04:52
	16:12	22	14:46 (WEA 11)	17:05	19	16:03 (WEA 10)	18:00	19:57	20:51
6	08:30	14:25 (WEA 11)	07:54	15:45 (WEA 10)	06:54		06:40	05:34	04:51
	16:13	20	14:45 (WEA 11)	17:07	17	16:02 (WEA 10)	18:02	19:59	20:53
7	08:30	14:25 (WEA 11)	07:52	15:47 (WEA 10)	06:52		06:37	05:32	04:50
	16:14	20	14:45 (WEA 11)	17:09	13	16:00 (WEA 10)	18:04	20:01	20:55
8	08:30	14:27 (WEA 11)	07:50	15:50 (WEA 10)	06:50		06:35	05:30	04:50
	16:16	18	14:45 (WEA 11)	17:11	7	15:57 (WEA 10)	18:05	20:02	20:56
9	08:29	14:28 (WEA 11)	07:48		06:47		06:33	05:28	04:49
	16:17	17	14:45 (WEA 11)	17:13		18:07	20:04	20:58	21:41
10	08:28	14:29 (WEA 11)	07:46		06:45		06:30	05:26	04:49
	16:19	15	14:44 (WEA 11)	17:15		18:09	20:06	21:00	21:42
11	08:28	14:31 (WEA 11)	07:44		06:42		06:28	05:24	04:48
	16:20	12	14:43 (WEA 11)	17:17		18:11	20:08	21:01	21:43
12	08:27	14:33 (WEA 11)	07:42		06:40		06:26	05:23	04:48
	16:22	9	14:42 (WEA 11)	17:19		18:13	20:10	21:03	21:44
13	08:26	14:37 (WEA 11)	07:40		06:38		06:23	05:21	04:48
	16:23	1	14:38 (WEA 11)	17:21		18:15	20:11	21:05	21:44
14	08:25		07:38		06:35		06:21	05:19	04:47
	16:25		17:23		18:17		20:13	21:07	21:45
15	08:25		07:36		06:33		06:19	05:17	04:47
	16:26		17:25		18:19		20:15	21:08	21:46
16	08:24		07:34	16:45 (WEA 6)	06:30		06:16	05:16	04:47
	16:28		17:27	9	16:54 (WEA 6)	18:20	20:17	21:10	21:46
17	08:23		07:32	16:41 (WEA 6)	06:28		06:14	05:14	04:47
	16:30		17:29	15	16:56 (WEA 6)	18:22	20:19	21:11	21:47
18	08:22	15:47 (WEA 10)	07:30	16:40 (WEA 6)	06:26		06:12	05:13	04:47
	16:31	6	15:53 (WEA 10)	17:31	18	16:58 (WEA 6)	20:21	21:13	21:47
19	08:20	15:44 (WEA 10)	07:28	16:39 (WEA 6)	06:23		06:09	05:11	04:47
	16:33	11	15:55 (WEA 10)	17:33	20	16:59 (WEA 6)	20:22	21:15	21:47
20	08:19	15:43 (WEA 10)	07:26	16:38 (WEA 6)	06:21		06:07	05:10	04:47
	16:35	14	15:57 (WEA 10)	17:35	22	17:00 (WEA 6)	20:24	21:16	21:48
21	08:18	15:43 (WEA 10)	07:24	16:38 (WEA 6)	06:18		06:05	05:08	04:47
	16:37	16	15:59 (WEA 10)	17:37	23	17:01 (WEA 6)	20:26	21:18	21:48
22	08:17	15:41 (WEA 10)	07:21	16:36 (WEA 6)	06:16		06:03	05:07	04:47
	16:39	19	16:00 (WEA 10)	17:39	25	17:01 (WEA 6)	20:28	21:19	21:48
23	08:16	15:41 (WEA 10)	07:19	16:36 (WEA 6)	06:14		06:01	05:05	04:47
	16:40	20	16:01 (WEA 10)	17:41	25	17:01 (WEA 6)	20:30	21:21	21:48
24	08:14	15:40 (WEA 10)	07:17	16:36 (WEA 6)	06:11		05:58	05:04	04:48
	16:42	22	16:02 (WEA 10)	17:43	25	17:01 (WEA 6)	20:31	21:22	21:49
25	08:13	15:41 (WEA 10)	07:15	16:36 (WEA 6)	06:09		05:56	05:03	04:48
	16:44	22	16:03 (WEA 10)	17:45	25	17:01 (WEA 6)	20:33	21:24	21:49
26	08:12	15:40 (WEA 10)	07:13	16:36 (WEA 6)	06:06		05:54	05:02	04:48
	16:46	23	16:03 (WEA 10)	17:46	24	17:00 (WEA 6)	20:35	21:25	21:49
27	08:10	15:40 (WEA 10)	07:10	16:37 (WEA 6)	06:04		05:52	05:00	04:49
	16:48	23	16:03 (WEA 10)	17:48	23	17:00 (WEA 6)	20:37	21:27	21:48
28	08:09	15:40 (WEA 10)	07:08	16:37 (WEA 6)	06:01		05:50	04:59	04:49
	16:50	24	16:04 (WEA 10)	17:50	22	16:59 (WEA 6)	20:39	21:28	21:48
29	08:07	15:40 (WEA 10)			06:59		05:48	04:58	04:50
	16:52	24	16:04 (WEA 10)		19:44		20:40	21:29	21:48
30	08:06	15:40 (WEA 10)			06:57		05:46	04:57	04:51
	16:54	24	16:04 (WEA 10)		19:46		20:42	21:30	21:48
31	08:04	15:41 (WEA 10)			06:54			04:56	
	16:55	24	16:05 (WEA 10)		19:48			21:32	
Sonnenscheinstunden		252		274		367		419	507
astr.max.mögl.Beschattung		498		422		56		492	

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)		Zeitpunkt (SS:MM) Schatteneende (WEA mit letztem Schatten)	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AI - Am Brink 11a

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45		08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43		08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42	15:19 (WEA 10)	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40	15:16 (WEA 10)	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38	15:15 (WEA 10)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36	15:15 (WEA 10)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41		07:25 16:34	15:14 (WEA 10)	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38		07:26 16:32	15:13 (WEA 10)	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36		07:28 16:31	15:12 (WEA 10)	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	9	07:30 16:29	15:12 (WEA 10)	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	15	07:32 16:27	15:12 (WEA 10)	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	18	07:34 16:25	15:12 (WEA 10)	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	21	07:36 16:24	15:12 (WEA 10)	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	23	07:38 16:22	15:12 (WEA 10)	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	23	07:40 16:21	15:13 (WEA 10)	08:24 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	25	07:41 16:19	15:13 (WEA 10)	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	25	07:43 16:18	15:14 (WEA 10)	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	25	07:45 16:16	15:14 (WEA 10)	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	25	07:47 16:15	15:15 (WEA 10)	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	24	07:49 16:14	15:16 (WEA 10)	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	23	07:50 16:12	15:18 (WEA 10)	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	21	07:52 16:11	15:19 (WEA 10)	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	20	07:54 16:10	15:21 (WEA 10)	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	17	07:56 16:09	15:23 (WEA 10)	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	14	07:57 16:08	15:30 (WEA 10)	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	8	07:59 16:07	16:01 (WEA 10)	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56		08:01 16:06	16:02 (WEA 10)	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		08:02 16:05	16:03 (WEA 10)	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		08:04 16:04	16:04 (WEA 10)	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49		08:06 16:03	14:15 (WEA 11)	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47			14:24 (WEA 11)	08:32 16:06
Sonnenscheinstunden	510	458	382	329		261		236
astr.max.mögl.Beschattung				336		429		720

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AJ - Am Brink 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:20 (WEA 11) 08:02 14:43 (WEA 11) 16:57	15:40 (WEA 10) 07:06 16:04 (WEA 10) 17:52	16:37 (WEA 6) 06:52 16:56 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:21 (WEA 11) 08:01 14:43 (WEA 11) 16:59	15:41 (WEA 10) 07:04 16:03 (WEA 10) 17:54	16:39 (WEA 6) 06:49 16:55 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:22 (WEA 11) 07:59 14:44 (WEA 11) 17:01	15:41 (WEA 10) 07:01 16:03 (WEA 10) 17:56	16:41 (WEA 6) 06:47 16:52 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:22 (WEA 11) 07:57 14:43 (WEA 11) 17:03	15:42 (WEA 10) 06:59 16:02 (WEA 10) 17:58	16:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:23 (WEA 11) 07:55 14:44 (WEA 11) 17:05	15:43 (WEA 10) 06:57 16:01 (WEA 10) 18:00	16:47 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:24 (WEA 11) 07:54 14:43 (WEA 11) 17:07	15:45 (WEA 10) 06:54 16:00 (WEA 10) 18:02	16:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:25 (WEA 11) 07:52 14:43 (WEA 11) 17:09	15:47 (WEA 10) 06:52 15:58 (WEA 10) 18:04	16:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:26 (WEA 11) 07:50 14:43 (WEA 11) 17:11	16:00 18:05	16:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:27 (WEA 11) 07:48 14:43 (WEA 11) 17:13	16:07 18:07	16:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:29 (WEA 11) 07:46 14:42 (WEA 11) 17:15	16:09 18:09	16:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:31 (WEA 11) 07:44 14:41 (WEA 11) 17:17	16:11 18:11	16:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:33 (WEA 11) 07:42 14:38 (WEA 11) 17:19	16:13 18:13	16:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:40 17:21	16:38 18:15	16:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	17:21 17:23	16:35 18:17	16:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	17:36 17:25	16:33 16:46 (WEA 6) 06:33 16:50 (WEA 6) 18:19	16:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	17:34 17:27	16:30 16:54 (WEA 6) 18:20	16:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	17:32 15:46 (WEA 10) 17:29	16:28 16:39 (WEA 6) 18:22	16:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	17:30 15:44 (WEA 10) 17:31	16:26 16:38 (WEA 6) 18:24	16:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	17:28 15:54 (WEA 10) 17:33	16:23 16:57 (WEA 6) 18:26	16:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	17:26 15:55 (WEA 10) 17:33	16:21 16:37 (WEA 6) 18:28	16:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	17:24 15:57 (WEA 10) 17:35	16:18 16:59 (WEA 6) 18:30	16:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	17:21 15:58 (WEA 10) 17:37	16:16 16:35 (WEA 6) 18:31	16:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	17:19 15:59 (WEA 10) 17:39	16:14 17:00 (WEA 6) 18:33	16:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	17:17 16:00 (WEA 10) 17:41	16:11 16:35 (WEA 6) 18:35	15:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	17:15 16:01 (WEA 10) 17:43	16:09 16:34 (WEA 6) 18:37	15:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	17:13 15:39 (WEA 10) 17:45	16:06 16:59 (WEA 6) 18:39	15:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	17:10 16:02 (WEA 10) 17:46	16:04 16:36 (WEA 6) 18:41	15:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	17:08 15:38 (WEA 10) 17:48	16:01 16:59 (WEA 6) 18:42	15:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	17:50 16:03 (WEA 10) 17:50	16:59 16:57 (WEA 6) 18:42	15:48 20:42	04:58 21:30	04:50 21:48
30	08:06 16:54	17:50 16:03 (WEA 10) 17:50	16:59 16:57 (WEA 6) 18:42	15:46 20:42	04:57 21:32	04:51 21:48
31	08:04 16:55	17:50 16:04 (WEA 10) 17:50	16:59 16:57 (WEA 6) 18:42	15:46 20:42	04:57 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	494	420	46			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AJ - Am Brink 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45		08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43		08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42	15:20 (WEA 10)	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40	15:16 (WEA 10)	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38	15:14 (WEA 10)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36	15:14 (WEA 10)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41		07:25 16:34	15:13 (WEA 10)	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38		07:26 16:32	15:12 (WEA 10)	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36		07:28 16:31	15:11 (WEA 10)	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	6	07:30 17:23 (WEA 6)	15:11 (WEA 10)	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	14	07:32 17:27 (WEA 6)	15:11 (WEA 10)	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	18	07:34 17:29 (WEA 6)	15:11 (WEA 10)	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	20	07:36 17:30 (WEA 6)	15:11 (WEA 10)	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	22	07:38 17:31 (WEA 6)	15:11 (WEA 10)	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	23	07:40 17:31 (WEA 6)	15:11 (WEA 10)	08:24 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	24	07:41 17:31 (WEA 6)	15:12 (WEA 10)	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	25	07:43 17:32 (WEA 6)	15:12 (WEA 10)	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	26	07:45 17:32 (WEA 6)	15:13 (WEA 10)	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	25	07:47 17:31 (WEA 6)	15:14 (WEA 10)	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	25	07:49 17:31 (WEA 6)	15:15 (WEA 10)	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	23	07:50 17:30 (WEA 6)	15:16 (WEA 10)	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	23	07:52 17:30 (WEA 6)	15:17 (WEA 10)	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	21	07:54 17:29 (WEA 6)	15:19 (WEA 10)	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	18	07:56 17:27 (WEA 6)	15:21 (WEA 10)	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	16	07:57 16:10 (WEA 6)	15:31 (WEA 10)	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	11	07:59 16:12 (WEA 6)	15:24 (WEA 10)	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56		16:07 16:06	16:01 16:02	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		08:02 16:05	08:32 16:03	14:18 (WEA 11) 14:42 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		08:04 16:04	08:32 16:04	14:18 (WEA 11) 14:42 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49		08:06 16:03	14:16 (WEA 11) 14:20 (WEA 11)	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47			08:32 16:06	14:19 (WEA 11) 14:42 (WEA 11)
Sonnenscheinstunden	510	458	382	329		261		236
astr.max.mögl.Beschattung				340		430		690

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AK - Gartenstraße 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:24 (WEA 11) 08:02 14:50 (WEA 11) 16:57	15:45 (WEA 10) 07:06 16:09 (WEA 10) 17:52	16:40 (WEA 6) 06:52 17:03 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:25 (WEA 11) 08:01 14:51 (WEA 11) 16:59	15:45 (WEA 10) 07:04 16:09 (WEA 10) 17:54	16:41 (WEA 6) 06:49 17:02 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:26 (WEA 11) 07:59 14:51 (WEA 11) 17:01	15:45 (WEA 10) 07:01 16:09 (WEA 10) 17:56	16:42 (WEA 6) 06:47 17:01 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:26 (WEA 11) 07:57 14:51 (WEA 11) 17:03	15:46 (WEA 10) 06:59 16:09 (WEA 10) 17:58	16:44 (WEA 6) 06:45 16:59 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:27 (WEA 11) 07:55 14:52 (WEA 11) 17:05	15:46 (WEA 10) 06:57 16:08 (WEA 10) 18:00	16:46 (WEA 6) 06:42 16:57 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:28 (WEA 11) 07:54 14:51 (WEA 11) 17:07	15:47 (WEA 10) 06:54 16:07 (WEA 10) 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:28 (WEA 11) 07:52 14:51 (WEA 11) 17:09	15:48 (WEA 10) 06:52 16:06 (WEA 10) 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:30 (WEA 11) 07:50 14:52 (WEA 11) 17:11	15:50 (WEA 10) 06:50 16:05 (WEA 10) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:30 (WEA 11) 07:48 14:51 (WEA 11) 17:13	15:52 (WEA 10) 06:47 16:03 (WEA 10) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:31 (WEA 11) 07:46 14:51 (WEA 11) 17:15	15:56 (WEA 10) 06:45 15:59 (WEA 10) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:32 (WEA 11) 07:44 14:51 (WEA 11) 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22	14:33 (WEA 11) 07:42 14:50 (WEA 11) 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:35 (WEA 11) 07:40 14:49 (WEA 11) 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:37 (WEA 11) 07:38 14:48 (WEA 11) 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	14:39 (WEA 11) 07:36 14:47 (WEA 11) 17:25	06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	07:30 17:31	16:47 (WEA 6) 06:26 16:58 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	07:28 17:33	16:45 (WEA 6) 06:23 17:01 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	07:26 17:35	16:44 (WEA 6) 06:21 17:02 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	15:50 (WEA 10) 07:24 15:59 (WEA 10) 17:37	16:43 (WEA 6) 06:18 17:04 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:48 (WEA 10) 07:21 16:01 (WEA 10) 17:39	16:41 (WEA 6) 06:16 17:04 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:47 (WEA 10) 07:19 16:03 (WEA 10) 17:41	16:41 (WEA 6) 06:14 17:04 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:46 (WEA 10) 07:17 16:04 (WEA 10) 17:43	16:40 (WEA 6) 06:11 17:05 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:46 (WEA 10) 07:15 16:06 (WEA 10) 17:45	16:39 (WEA 6) 06:09 17:04 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:45 (WEA 10) 07:13 16:06 (WEA 10) 17:46	16:40 (WEA 6) 06:06 17:05 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	15:44 (WEA 10) 07:10 16:06 (WEA 10) 17:48	16:40 (WEA 6) 06:04 17:05 (WEA 6) 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	15:45 (WEA 10) 07:08 16:08 (WEA 10) 17:50	16:40 (WEA 6) 06:01 17:03 (WEA 6) 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:44 (WEA 10) 07:07 16:08 (WEA 10) 17:51	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:44 (WEA 10) 07:06 16:08 (WEA 10) 17:52	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	15:45 (WEA 10) 07:05 16:09 (WEA 10) 17:53	06:54 19:48	05:45 20:43	04:56 21:31	04:50 21:49
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	519	419	89			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AK - Gartenstraße 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Juli	August	September	Oktober		November		Dezember	
	1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45	15:24 (WEA 10)	08:07 16:02	14:14 (WEA 11)
	2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43	15:21 (WEA 10)	08:09 16:01	14:14 (WEA 11)
	3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42	15:19 (WEA 10)	08:10 16:01	14:13 (WEA 11)
	4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40	15:18 (WEA 10)	08:12 16:00	14:14 (WEA 11)
	5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38	15:17 (WEA 10)	08:13 15:59	14:13 (WEA 11)
	6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36	15:17 (WEA 10)	08:14 15:59	14:14 (WEA 11)
	7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41		07:25 16:34	15:16 (WEA 10)	08:16 15:58	14:14 (WEA 11)
	8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	6	07:26 17:30 (WEA 6)	15:16 (WEA 10)	08:17 15:58	14:14 (WEA 11)
	9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	13	07:28 17:33 (WEA 6)	15:16 (WEA 10)	08:18 15:58	14:14 (WEA 11)
	10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	17	07:30 17:34 (WEA 6)	15:16 (WEA 10)	08:19 15:57	14:14 (WEA 11)
	11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	20	07:32 17:35 (WEA 6)	15:16 (WEA 10)	08:20 15:57	14:14 (WEA 11)
	12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	22	07:34 17:36 (WEA 6)	15:16 (WEA 10)	08:22 15:57	14:15 (WEA 11)
	13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	23	07:36 17:36 (WEA 6)	15:16 (WEA 10)	08:23 15:57	14:16 (WEA 11)
	14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	25	07:38 17:37 (WEA 6)	15:17 (WEA 10)	08:24 15:57	14:16 (WEA 11)
	15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	25	07:40 17:37 (WEA 6)	15:17 (WEA 10)	08:24 15:57	14:16 (WEA 11)
	16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	25	07:41 17:37 (WEA 6)	15:18 (WEA 10)	08:25 15:57	14:16 (WEA 11)
	17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	25	07:43 17:37 (WEA 6)	15:19 (WEA 10)	08:26 15:57	14:17 (WEA 11)
	18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	24	07:45 17:36 (WEA 6)	15:20 (WEA 10)	08:27 15:57	14:17 (WEA 11)
	19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	24	07:47 17:36 (WEA 6)	15:21 (WEA 10)	08:28 15:58	14:18 (WEA 11)
	20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	22	07:49 17:35 (WEA 6)	15:23 (WEA 10)	08:28 15:58	14:18 (WEA 11)
	21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	21	07:50 17:34 (WEA 6)	15:25 (WEA 10)	08:29 15:58	14:19 (WEA 11)
	22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	17	07:52 17:32 (WEA 6)	15:34 (WEA 10)	08:30 15:59	14:19 (WEA 11)
	23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	14	07:54 17:30 (WEA 6)	15:38 (WEA 10)	08:30 15:59	14:20 (WEA 11)
	24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	9	07:56 17:28 (WEA 6)	15:37 (WEA 10)	08:30 16:00	14:20 (WEA 11)
	25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00		07:57 16:08	15:34 (WEA 10)	08:31 16:01	14:20 (WEA 11)
	26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58		07:59 16:07	15:34 (WEA 10)	08:31 16:01	14:21 (WEA 11)
	27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56		08:01 16:06	14:19 (WEA 11)	08:31 16:02	14:22 (WEA 11)
	28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		08:02 16:05	14:17 (WEA 11)	08:32 16:03	14:22 (WEA 11)
	29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		08:04 16:04	14:16 (WEA 11)	08:32 16:04	14:23 (WEA 11)
	30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49		08:06 16:03	14:16 (WEA 11)	08:32 16:05	14:23 (WEA 11)
	31	05:29 21:15	06:22 20:10		07:11 16:47			14:32 (WEA 11)	08:32 16:06	14:23 (WEA 11)
Sonnenscheinstunden		510	458	382	329		261		236	
astr.max.mögl.Beschattung					332		450		790	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AL - Gartenstraße 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:29 (WEA 11) 08:02 14:55 (WEA 11) 16:57	15:48 (WEA 10) 07:06 16:12 (WEA 10) 17:52	16:42 (WEA 6) 06:52 17:04 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:30 (WEA 11) 08:01 14:56 (WEA 11) 16:59	15:48 (WEA 10) 07:04 16:12 (WEA 10) 17:54	16:43 (WEA 6) 06:49 17:04 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:31 (WEA 11) 07:59 14:56 (WEA 11) 17:01	15:48 (WEA 10) 07:01 16:12 (WEA 10) 17:56	16:44 (WEA 6) 06:47 17:02 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:31 (WEA 11) 07:57 14:56 (WEA 11) 17:03	15:49 (WEA 10) 06:59 16:11 (WEA 10) 17:58	16:45 (WEA 6) 06:45 17:00 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:32 (WEA 11) 07:55 14:57 (WEA 11) 17:05	15:49 (WEA 10) 06:57 16:11 (WEA 10) 18:00	16:48 (WEA 6) 06:42 16:58 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:32 (WEA 11) 07:54 14:56 (WEA 11) 17:07	15:50 (WEA 10) 06:54 16:10 (WEA 10) 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:33 (WEA 11) 07:52 14:56 (WEA 11) 17:09	15:51 (WEA 10) 06:52 16:10 (WEA 10) 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:34 (WEA 11) 07:50 14:57 (WEA 11) 17:11	15:52 (WEA 10) 06:50 16:09 (WEA 10) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:35 (WEA 11) 07:48 14:57 (WEA 11) 17:13	15:54 (WEA 10) 06:47 16:07 (WEA 10) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:35 (WEA 11) 07:46 14:57 (WEA 11) 17:15	15:57 (WEA 10) 06:45 16:04 (WEA 10) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:36 (WEA 11) 07:44 14:56 (WEA 11) 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22	14:37 (WEA 11) 07:42 14:56 (WEA 11) 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:38 (WEA 11) 07:40 14:55 (WEA 11) 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:40 (WEA 11) 07:38 14:55 (WEA 11) 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26	14:42 (WEA 11) 07:36 14:54 (WEA 11) 17:25	06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:44 (WEA 11) 07:34 14:52 (WEA 11) 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	07:30 17:31	16:50 (WEA 6) 06:26 16:59 (WEA 6) 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	07:28 17:33	16:48 (WEA 6) 06:23 17:01 (WEA 6) 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	07:26 17:35	16:46 (WEA 6) 06:21 17:03 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	07:24 17:37	16:45 (WEA 6) 06:18 17:05 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	15:53 (WEA 10) 07:21 16:02 (WEA 10) 17:39	16:43 (WEA 6) 06:16 17:05 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:52 (WEA 10) 07:19 16:04 (WEA 10) 17:41	16:43 (WEA 6) 06:14 17:06 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:50 (WEA 10) 07:17 16:05 (WEA 10) 17:43	16:42 (WEA 6) 06:11 17:06 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:50 (WEA 10) 07:15 16:07 (WEA 10) 17:45	16:41 (WEA 6) 06:09 17:06 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:49 (WEA 10) 07:13 16:08 (WEA 10) 17:46	16:42 (WEA 6) 06:06 17:06 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	15:48 (WEA 10) 07:10 16:09 (WEA 10) 17:48	16:42 (WEA 6) 06:04 17:06 (WEA 6) 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	15:48 (WEA 10) 07:08 16:10 (WEA 10) 17:50	16:41 (WEA 6) 06:01 17:05 (WEA 6) 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:48 (WEA 10) 16:10 (WEA 10)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:47 (WEA 10) 16:11 (WEA 10)	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	15:48 (WEA 10) 16:12 (WEA 10)	06:54 19:48		04:56 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	517	417	86			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schatteneende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AL - Gartenstraße 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember	
1	04:51	05:30	06:24	07:16		07:13	15:26 (WEA 10)	08:07	14:18 (WEA 11)
	21:48	21:13	20:08	18:55		16:45	9 15:35 (WEA 10)	16:02	20 14:38 (WEA 11)
2	04:52	05:32	06:25	07:18		07:15	15:23 (WEA 10)	08:09	14:18 (WEA 11)
	21:47	21:11	20:05	18:53		16:43	14 15:37 (WEA 10)	16:01	22 14:40 (WEA 11)
3	04:53	05:34	06:27	07:19		07:17	15:22 (WEA 10)	08:10	14:18 (WEA 11)
	21:47	21:10	20:03	18:50		16:42	16 15:38 (WEA 10)	16:01	22 14:40 (WEA 11)
4	04:54	05:35	06:29	07:21		07:19	15:20 (WEA 10)	08:12	14:18 (WEA 11)
	21:46	21:08	20:01	18:48		16:40	19 15:39 (WEA 10)	16:00	23 14:41 (WEA 11)
5	04:54	05:37	06:31	07:23		07:21	15:19 (WEA 10)	08:13	14:18 (WEA 11)
	21:46	21:06	19:58	18:45		16:38	21 15:40 (WEA 10)	15:59	23 14:41 (WEA 11)
6	04:55	05:39	06:32	07:25		07:23	15:20 (WEA 10)	08:14	14:18 (WEA 11)
	21:45	21:04	19:56	18:43		16:36	22 15:42 (WEA 10)	15:59	25 14:43 (WEA 11)
7	04:56	05:40	06:34	07:27		07:25	15:19 (WEA 10)	08:16	14:18 (WEA 11)
	21:45	21:02	19:53	18:41		16:34	23 15:42 (WEA 10)	15:58	25 14:43 (WEA 11)
8	04:57	05:42	06:36	07:28		07:26	15:19 (WEA 10)	08:17	14:19 (WEA 11)
	21:44	21:00	19:51	18:38	5	17:31 (WEA 6)	24 15:43 (WEA 10)	15:58	25 14:44 (WEA 11)
9	04:58	05:44	06:37	07:30		07:28	15:19 (WEA 10)	08:18	14:19 (WEA 11)
	21:43	20:58	19:49	18:36	12	17:34 (WEA 6)	24 15:43 (WEA 10)	15:58	25 14:44 (WEA 11)
10	04:59	05:45	06:39	07:32		07:30	15:19 (WEA 10)	08:19	14:19 (WEA 11)
	21:42	20:56	19:46	18:33	16	17:35 (WEA 6)	24 15:43 (WEA 10)	15:57	26 14:45 (WEA 11)
11	05:00	05:47	06:41	07:34		07:32	15:19 (WEA 10)	08:20	14:19 (WEA 11)
	21:42	20:54	19:44	18:31	19	17:36 (WEA 6)	24 15:43 (WEA 10)	15:57	26 14:45 (WEA 11)
12	05:02	05:49	06:43	07:36		07:34	15:19 (WEA 10)	08:22	14:20 (WEA 11)
	21:41	20:52	19:41	18:29	21	17:37 (WEA 6)	24 15:43 (WEA 10)	15:57	27 14:47 (WEA 11)
13	05:03	05:51	06:44	07:37		07:36	15:20 (WEA 10)	08:23	14:20 (WEA 11)
	21:40	20:50	19:39	18:26	23	17:38 (WEA 6)	22 15:42 (WEA 10)	15:57	27 14:47 (WEA 11)
14	05:04	05:52	06:46	07:39		07:38	15:20 (WEA 10)	08:24	14:21 (WEA 11)
	21:39	20:48	19:36	18:24	24	17:38 (WEA 6)	22 15:42 (WEA 10)	15:57	26 14:47 (WEA 11)
15	05:05	05:54	06:48	07:41		07:40	15:21 (WEA 10)	08:24	14:21 (WEA 11)
	21:38	20:46	19:34	18:22	24	17:38 (WEA 6)	21 15:42 (WEA 10)	15:57	27 14:48 (WEA 11)
16	05:07	05:56	06:50	07:43		07:41	15:22 (WEA 10)	08:25	14:21 (WEA 11)
	21:37	20:44	19:32	18:20	24	17:38 (WEA 6)	19 15:41 (WEA 10)	15:57	27 14:48 (WEA 11)
17	05:08	05:57	06:51	07:45		07:43	15:23 (WEA 10)	08:26	14:21 (WEA 11)
	21:35	20:42	19:29	18:17	24	17:38 (WEA 6)	17 15:40 (WEA 10)	15:57	27 14:48 (WEA 11)
18	05:09	05:59	06:53	07:47		07:45	15:24 (WEA 10)	08:27	14:22 (WEA 11)
	21:34	20:40	19:27	18:15	23	17:37 (WEA 6)	15 15:39 (WEA 10)	15:57	27 14:49 (WEA 11)
19	05:11	06:01	06:55	07:48		07:47	15:26 (WEA 10)	08:28	14:23 (WEA 11)
	21:33	20:37	19:24	18:13	23	17:37 (WEA 6)	12 15:38 (WEA 10)	15:58	27 14:50 (WEA 11)
20	05:12	06:03	06:57	07:50		07:49	15:28 (WEA 10)	08:28	14:23 (WEA 11)
	21:32	20:35	19:22	18:11	21	17:36 (WEA 6)	9 15:37 (WEA 10)	15:58	27 14:50 (WEA 11)
21	05:13	06:04	06:58	07:52		07:50	15:29 (WEA 10)	08:29	14:24 (WEA 11)
	21:30	20:33	19:19	18:08	19	17:35 (WEA 6)	16:12	15:58	27 14:51 (WEA 11)
22	05:15	06:06	07:00	07:54		07:52	15:30 (WEA 10)	08:30	14:24 (WEA 11)
	21:29	20:31	19:17	18:06	16	17:33 (WEA 6)	16:11	15:59	27 14:51 (WEA 11)
23	05:16	06:08	07:02	07:56		07:54	15:31 (WEA 10)	08:30	14:25 (WEA 11)
	21:28	20:28	19:14	18:04	12	17:31 (WEA 6)	16:10	15:59	27 14:52 (WEA 11)
24	05:18	06:10	07:04	07:58		07:56	15:32 (WEA 10)	08:30	14:25 (WEA 11)
	21:26	20:26	19:12	18:02	6	17:28 (WEA 6)	16:09	16:00	27 14:52 (WEA 11)
25	05:19	06:11	07:05	07:00		07:57	15:33 (WEA 10)	08:31	14:25 (WEA 11)
	21:25	20:24	19:10	17:00		16:08	15:34 (WEA 10)	16:01	27 14:52 (WEA 11)
26	05:21	06:13	07:07	07:02		07:59	14:24 (WEA 11)	08:31	14:26 (WEA 11)
	21:23	20:22	19:07	16:58		16:07	7 14:31 (WEA 11)	16:01	27 14:53 (WEA 11)
27	05:22	06:15	07:09	07:04		08:01	14:21 (WEA 11)	08:31	14:27 (WEA 11)
	21:22	20:19	19:05	16:56		16:06	12 14:33 (WEA 11)	16:02	27 14:54 (WEA 11)
28	05:24	06:17	07:11	07:05		08:02	14:20 (WEA 11)	08:32	14:27 (WEA 11)
	21:20	20:17	19:02	16:53		16:05	15 14:35 (WEA 11)	16:03	27 14:54 (WEA 11)
29	05:25	06:18	07:12	07:07		08:04	14:20 (WEA 11)	08:32	14:28 (WEA 11)
	21:18	20:15	19:00	16:51		16:04	16 14:36 (WEA 11)	16:04	26 14:54 (WEA 11)
30	05:27	06:20	07:14	07:09		08:06	14:19 (WEA 11)	08:32	14:28 (WEA 11)
	21:17	20:12	18:57	16:49		16:03	19 14:38 (WEA 11)	16:05	27 14:55 (WEA 11)
31	05:29	06:22	07:16	07:11		08:08	14:20 (WEA 11)	08:32	14:28 (WEA 11)
	21:15	20:10	19:00	16:47		16:06	26 14:54 (WEA 11)		
Sonnenscheinstunden	510	458	382	329		261	450	236	799
astr.max.mögl.Beschattung				312					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AM - Gartenstraße 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar			Februar			März			April			Mai		Juni	
1	08:32		14:31 (WEA 11)	08:02		15:51 (WEA 10)	07:06		16:44 (WEA 6)	06:52		05:44		04:55		
	16:07	27	14:58 (WEA 11)	16:57	23	16:14 (WEA 10)	17:52	24	17:08 (WEA 6)	19:50		20:44		21:33		
2	08:32		14:32 (WEA 11)	08:01		15:51 (WEA 10)	07:04		16:45 (WEA 6)	06:49		05:42		04:54		
	16:08	27	14:59 (WEA 11)	16:59	23	16:14 (WEA 10)	17:54	23	17:08 (WEA 6)	19:51		20:46		21:34		
3	08:31		14:32 (WEA 11)	07:59		15:51 (WEA 10)	07:01		16:45 (WEA 6)	06:47		05:40		04:53		
	16:09	27	14:59 (WEA 11)	17:01	23	16:14 (WEA 10)	17:56	21	17:06 (WEA 6)	19:53		20:48		21:35		
4	08:31		14:32 (WEA 11)	07:57		15:51 (WEA 10)	06:59		16:46 (WEA 6)	06:45		05:38		04:52		
	16:10	27	14:59 (WEA 11)	17:03	23	16:14 (WEA 10)	17:58	19	17:05 (WEA 6)	19:55		20:49		21:36		
5	08:31		14:34 (WEA 11)	07:55		15:51 (WEA 10)	06:57		16:48 (WEA 6)	06:42		05:36		04:52		
	16:12	26	15:00 (WEA 11)	17:05	23	16:14 (WEA 10)	18:00	16	17:04 (WEA 6)	19:57		20:51		21:37		
6	08:30		14:34 (WEA 11)	07:54		15:51 (WEA 10)	06:54		16:49 (WEA 6)	06:40		05:34		04:51		
	16:13	26	15:00 (WEA 11)	17:07	23	16:14 (WEA 10)	18:02	12	17:01 (WEA 6)	19:59		20:53		21:39		
7	08:30		14:34 (WEA 11)	07:52		15:52 (WEA 10)	06:52		16:54 (WEA 6)	06:37		05:32		04:50		
	16:14	25	14:59 (WEA 11)	17:09	21	16:13 (WEA 10)	18:04	2	16:56 (WEA 6)	20:01		20:55		21:40		
8	08:30		14:35 (WEA 11)	07:50		15:53 (WEA 10)	06:50			06:35		05:30		04:50		
	16:16	25	15:00 (WEA 11)	17:11	20	16:13 (WEA 10)	18:05			20:02		20:56		21:40		
9	08:29		14:36 (WEA 11)	07:48		15:54 (WEA 10)	06:47			06:33		05:28		04:49		
	16:17	24	15:00 (WEA 11)	17:13	18	16:12 (WEA 10)	18:07			20:04		20:58		21:41		
10	08:28		14:36 (WEA 11)	07:46		15:56 (WEA 10)	06:45			06:30		05:26		04:49		
	16:19	24	15:00 (WEA 11)	17:15	14	16:10 (WEA 10)	18:09			20:06		21:00		21:42		
11	08:28		14:37 (WEA 11)	07:44		15:58 (WEA 10)	06:42			06:28		05:24		04:48		
	16:20	23	15:00 (WEA 11)	17:17	10	16:08 (WEA 10)	18:11			20:08		21:01		21:43		
12	08:27		14:38 (WEA 11)	07:42			06:40			06:26		05:23		04:48		
	16:22	22	15:00 (WEA 11)	17:19			18:13			20:10		21:03		21:44		
13	08:26		14:39 (WEA 11)	07:40			06:38			06:23		05:21		04:48		
	16:23	20	14:59 (WEA 11)	17:21			18:15			20:11		21:05		21:44		
14	08:25		14:40 (WEA 11)	07:38			06:35			06:21		05:19		04:47		
	16:25	19	14:59 (WEA 11)	17:23			18:17			20:13		21:07		21:45		
15	08:24		14:42 (WEA 11)	07:36			06:33			06:19		05:17		04:47		
	16:26	17	14:59 (WEA 11)	17:25			18:19			20:15		21:08		21:46		
16	08:24		14:43 (WEA 11)	07:34			06:30			06:16		05:16		04:47		
	16:28	15	14:58 (WEA 11)	17:27			18:20			20:17		21:10		21:46		
17	08:23		14:45 (WEA 11)	07:32			06:28			06:14		05:14		04:47		
	16:30	12	14:57 (WEA 11)	17:29			18:22			20:19		21:11		21:47		
18	08:22		14:48 (WEA 11)	07:30			06:26			06:12		05:13		04:47		
	16:31	7	14:55 (WEA 11)	17:31			18:24			20:21		21:13		21:47		
19	08:20			07:28		16:56 (WEA 6)	06:23			06:09		05:11		04:47		
	16:33			17:33	3	16:59 (WEA 6)	18:26			20:22		21:15		21:47		
20	08:19			07:26		16:51 (WEA 6)	06:21			06:07		05:10		04:47		
	16:35			17:35	12	17:03 (WEA 6)	18:28			20:24		21:16		21:48		
21	08:18			07:24		16:50 (WEA 6)	06:18			06:05		05:08		04:47		
	16:37			17:37	16	17:06 (WEA 6)	18:30			20:26		21:18		21:48		
22	08:17			07:21		16:47 (WEA 6)	06:16			06:03		05:07		04:47		
	16:39			17:39	19	17:06 (WEA 6)	18:31			20:28		21:19		21:48		
23	08:16		15:59 (WEA 10)	07:19		16:46 (WEA 6)	06:14			06:01		05:05		04:47		
	16:40	3	16:02 (WEA 10)	17:41	22	17:08 (WEA 6)	18:33			20:30		21:21		21:48		
24	08:14		15:55 (WEA 10)	07:17		16:46 (WEA 6)	06:11			05:58		05:04		04:48		
	16:42	10	16:05 (WEA 10)	17:43	22	17:08 (WEA 6)	18:35			20:31		21:22		21:49		
25	08:13		15:54 (WEA 10)	07:15		16:45 (WEA 6)	06:09			05:56		05:03		04:48		
	16:44	14	16:08 (WEA 10)	17:45	23	17:08 (WEA 6)	18:37			20:33		21:24		21:49		
26	08:12		15:53 (WEA 10)	07:13		16:44 (WEA 6)	06:06			05:54		05:02		04:48		
	16:46	16	16:09 (WEA 10)	17:46	25	17:09 (WEA 6)	18:39			20:35		21:25		21:49		
27	08:10		15:52 (WEA 10)	07:10		16:44 (WEA 6)	06:04			05:52		05:00		04:49		
	16:48	18	16:10 (WEA 10)	17:48	25	17:09 (WEA 6)	18:41			20:37		21:27		21:48		
28	08:09		15:52 (WEA 10)	07:08		16:44 (WEA 6)	06:01			05:50		04:59		04:49		
	16:50	20	16:12 (WEA 10)	17:50	24	17:08 (WEA 6)	18:42			20:39		21:28		21:48		
29	08:07		15:51 (WEA 10)				06:59			05:48		04:58		04:50		
	16:52	21	16:12 (WEA 10)				19:44			20:40		21:29		21:48		
30	08:06		15:50 (WEA 10)				06:57			05:46		04:57		04:51		
	16:54	23	16:13 (WEA 10)				19:46			20:42		21:30		21:48		
31	08:04		15:51 (WEA 10)				06:54					04:56				
	16:55	23	16:14 (WEA 10)				19:48					21:32				
Sonnenscheinstunden	252			274			367			419		492			507	
astr.max.mögl.Beschattung		541			412			117								

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	(WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende	(WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AM - Gartenstraße 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember	
1	04:51	05:30	06:24	07:16		07:13	15:25 (WEA 10)	08:07	14:19 (WEA 11)
	21:48	21:13	20:08	18:55		16:45	15	15:40 (WEA 10)	16:02 23
2	04:52	05:32	06:25	07:18		07:15	15:24 (WEA 10)	08:09	14:20 (WEA 11)
	21:47	21:11	20:05	18:53		16:43	17	15:41 (WEA 10)	16:01 23
3	04:53	05:34	06:27	07:19		07:17	15:23 (WEA 10)	08:10	14:19 (WEA 11)
	21:47	21:10	20:03	18:50		16:42	19	15:42 (WEA 10)	16:01 24
4	04:54	05:35	06:29	07:21		07:19	15:22 (WEA 10)	08:12	14:20 (WEA 11)
	21:46	21:08	20:01	18:48		16:40	21	15:43 (WEA 10)	16:00 24
5	04:54	05:37	06:31	07:23		07:21	15:21 (WEA 10)	08:13	14:19 (WEA 11)
	21:46	21:06	19:58	18:45		16:38	23	15:44 (WEA 10)	15:59 26
6	04:55	05:39	06:32	07:25		07:23	15:22 (WEA 10)	08:14	14:20 (WEA 11)
	21:45	21:04	19:56	18:43		16:36	23	15:45 (WEA 10)	15:59 26
7	04:56	05:40	06:34	07:27	17:27 (WEA 6)	07:25	15:21 (WEA 10)	08:16	14:20 (WEA 11)
	21:45	21:02	19:53	18:41	9	17:36 (WEA 6)	16:34 24	15:45 (WEA 10)	15:58 26
8	04:57	05:42	06:36	07:28	17:24 (WEA 6)	07:26	15:21 (WEA 10)	08:17	14:21 (WEA 11)
	21:44	21:00	19:51	18:38	14	17:38 (WEA 6)	16:32 24	15:45 (WEA 10)	15:58 26
9	04:58	05:44	06:37	07:30	17:22 (WEA 6)	07:28	15:21 (WEA 10)	08:18	14:21 (WEA 11)
	21:43	20:58	19:49	18:36	18	17:40 (WEA 6)	16:31 24	15:45 (WEA 10)	15:58 26
10	04:59	05:45	06:39	07:32	17:20 (WEA 6)	07:30	15:22 (WEA 10)	08:19	14:21 (WEA 11)
	21:42	20:56	19:46	18:33	20	17:40 (WEA 6)	16:29 23	15:45 (WEA 10)	15:57 27
11	05:00	05:47	06:41	07:34	17:18 (WEA 6)	07:32	15:22 (WEA 10)	08:20	14:21 (WEA 11)
	21:42	20:54	19:44	18:31	23	17:41 (WEA 6)	16:27 23	15:45 (WEA 10)	15:57 27
12	05:02	05:49	06:43	07:36	17:18 (WEA 6)	07:34	15:22 (WEA 10)	08:22	14:22 (WEA 11)
	21:41	20:52	19:41	18:29	23	17:41 (WEA 6)	16:25 23	15:45 (WEA 10)	15:57 27
13	05:03	05:51	06:44	07:37	17:17 (WEA 6)	07:36	15:23 (WEA 10)	08:23	14:22 (WEA 11)
	21:40	20:50	19:39	18:26	24	17:41 (WEA 6)	16:24 21	15:44 (WEA 10)	15:57 28
14	05:04	05:52	06:46	07:39	17:17 (WEA 6)	07:38	15:24 (WEA 10)	08:24	14:23 (WEA 11)
	21:39	20:48	19:36	18:24	24	17:41 (WEA 6)	16:22 20	15:44 (WEA 10)	15:57 27
15	05:05	05:54	06:48	07:41	17:17 (WEA 6)	07:40	15:25 (WEA 10)	08:24	14:23 (WEA 11)
	21:38	20:46	19:34	18:22	24	17:41 (WEA 6)	16:21 18	15:43 (WEA 10)	15:57 28
16	05:07	05:56	06:50	07:43	17:17 (WEA 6)	07:41	15:26 (WEA 10)	08:25	14:23 (WEA 11)
	21:37	20:44	19:32	18:20	24	17:41 (WEA 6)	16:19 16	15:42 (WEA 10)	15:57 27
17	05:08	05:57	06:51	07:45	17:17 (WEA 6)	07:43	15:27 (WEA 10)	08:26	14:23 (WEA 11)
	21:35	20:42	19:29	18:17	23	17:40 (WEA 6)	16:18 14	15:41 (WEA 10)	15:57 28
18	05:09	05:59	06:53	07:47	17:17 (WEA 6)	07:45	15:29 (WEA 10)	08:27	14:24 (WEA 11)
	21:34	20:40	19:27	18:15	22	17:39 (WEA 6)	16:16 10	15:39 (WEA 10)	15:57 28
19	05:11	06:01	06:55	07:48	17:18 (WEA 6)	07:47	15:33 (WEA 10)	08:28	14:25 (WEA 11)
	21:33	20:37	19:24	18:13	20	17:38 (WEA 6)	16:15 3	15:36 (WEA 10)	15:58 27
20	05:12	06:03	06:57	07:50	17:19 (WEA 6)	07:49	15:34 (WEA 10)	08:28	14:25 (WEA 11)
	21:32	20:35	19:22	18:11	18	17:37 (WEA 6)	16:14	15:58	27
21	05:13	06:04	06:58	07:52	17:20 (WEA 6)	07:50	15:35 (WEA 10)	08:29	14:26 (WEA 11)
	21:30	20:33	19:19	18:08	15	17:35 (WEA 6)	16:12	15:58	27
22	05:15	06:06	07:00	07:54	17:23 (WEA 6)	07:52	15:36 (WEA 10)	08:30	14:26 (WEA 11)
	21:29	20:31	19:17	18:06	10	17:33 (WEA 6)	16:11	15:59	27
23	05:16	06:08	07:02	07:56		07:54	15:37 (WEA 10)	08:30	14:27 (WEA 11)
	21:28	20:28	19:14	18:04		16:10	15:38 (WEA 10)	15:59	27
24	05:18	06:10	07:04	07:58		07:56	14:26 (WEA 11)	08:30	14:27 (WEA 11)
	21:26	20:26	19:12	18:02		16:09	6	14:32 (WEA 11)	16:00 27
25	05:19	06:11	07:05	07:00		07:57	14:24 (WEA 11)	08:31	14:27 (WEA 11)
	21:25	20:24	19:10	17:00		16:08	11	14:35 (WEA 11)	16:01 28
26	05:21	06:13	07:07	07:02		07:59	14:22 (WEA 11)	08:31	14:28 (WEA 11)
	21:23	20:22	19:07	16:58		16:07	15	14:37 (WEA 11)	16:01 28
27	05:22	06:15	07:09	07:04		08:01	14:21 (WEA 11)	08:31	14:29 (WEA 11)
	21:22	20:19	19:05	16:56		16:06	17	14:38 (WEA 11)	16:02 27
28	05:24	06:17	07:11	07:05		08:02	14:20 (WEA 11)	08:32	14:29 (WEA 11)
	21:20	20:17	19:02	16:53		16:05	19	14:39 (WEA 11)	16:03 28
29	05:26	06:18	07:12	07:07		08:04	14:20 (WEA 11)	08:32	14:30 (WEA 11)
	21:18	20:15	19:00	16:51		16:04	20	14:40 (WEA 11)	16:04 27
30	05:27	06:20	07:14	07:09	15:32 (WEA 10)	08:06	14:20 (WEA 11)	08:32	14:30 (WEA 11)
	21:17	20:12	18:57	16:49	1	15:33 (WEA 10)	16:03 22	14:42 (WEA 11)	16:05 28
31	05:29	06:22	16:47	07:11	15:27 (WEA 10)	16:03		08:32	14:30 (WEA 11)
	21:15	20:10	16:47	11	15:38 (WEA 10)	16:06		16:06	27
Sonnenscheinstunden	510	458	382	329		261		236	
astr.max.mögl.Beschattung				323		471		826	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AN - Gartenstraße 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:32 (WEA 11) 08:02 15:00 (WEA 11) 16:57	15:53 (WEA 10) 07:06 16:16 (WEA 10) 17:52	16:46 (WEA 6) 06:52 17:10 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:33 (WEA 11) 08:01 15:01 (WEA 11) 16:59	15:53 (WEA 10) 07:04 16:16 (WEA 10) 17:54	16:46 (WEA 6) 06:49 17:10 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:34 (WEA 11) 07:59 15:01 (WEA 11) 17:01	15:52 (WEA 10) 07:01 16:16 (WEA 10) 17:56	16:46 (WEA 6) 06:47 17:09 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:34 (WEA 11) 07:57 15:01 (WEA 11) 17:03	15:52 (WEA 10) 06:59 16:16 (WEA 10) 17:58	16:47 (WEA 6) 06:45 17:08 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:35 (WEA 11) 07:55 15:02 (WEA 11) 17:05	15:53 (WEA 10) 06:57 16:16 (WEA 10) 18:00	16:48 (WEA 6) 06:42 17:08 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:35 (WEA 11) 07:54 15:02 (WEA 11) 17:07	15:53 (WEA 10) 06:54 16:16 (WEA 10) 18:02	16:49 (WEA 6) 06:40 17:05 (WEA 6) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:35 (WEA 11) 07:52 15:02 (WEA 11) 17:09	15:53 (WEA 10) 06:52 16:16 (WEA 10) 18:04	16:51 (WEA 6) 06:37 17:03 (WEA 6) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:37 (WEA 11) 07:50 15:03 (WEA 11) 17:11	15:54 (WEA 10) 06:50 16:15 (WEA 10) 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:37 (WEA 11) 07:48 15:03 (WEA 11) 17:13	15:55 (WEA 10) 06:47 16:15 (WEA 10) 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:38 (WEA 11) 07:46 15:02 (WEA 11) 17:15	15:56 (WEA 10) 06:45 16:14 (WEA 10) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:38 (WEA 11) 07:44 15:02 (WEA 11) 17:17	15:58 (WEA 10) 06:42 16:12 (WEA 10) 18:11	06:28 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22	14:39 (WEA 11) 07:42 15:02 (WEA 11) 17:19	16:00 (WEA 10) 06:40 16:10 (WEA 10) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:40 (WEA 11) 07:40 15:02 (WEA 11) 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:41 (WEA 11) 07:38 15:02 (WEA 11) 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26	14:42 (WEA 11) 07:36 15:02 (WEA 11) 17:25	06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:44 (WEA 11) 07:34 15:01 (WEA 11) 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:45 (WEA 11) 07:32 15:01 (WEA 11) 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:47 (WEA 11) 07:30 15:00 (WEA 11) 17:31	06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:49 (WEA 11) 07:28 14:57 (WEA 11) 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	07:26 17:35	16:58 (WEA 6) 06:21 17:01 (WEA 6) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	07:24 17:37	16:54 (WEA 6) 06:18 17:06 (WEA 6) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	07:21 17:39	16:51 (WEA 6) 06:16 17:07 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	07:19 17:41	16:50 (WEA 6) 06:14 17:09 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	07:17 17:43	16:49 (WEA 6) 06:11 17:10 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	07:15 16:08 (WEA 10) 17:45	16:47 (WEA 6) 06:09 17:10 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	07:13 15:56 (WEA 10) 17:46	16:47 (WEA 6) 06:06 17:10 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	07:10 15:55 (WEA 10) 17:48	16:47 (WEA 6) 06:04 17:11 (WEA 6) 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	07:08 15:54 (WEA 10) 17:50	16:46 (WEA 6) 06:01 17:10 (WEA 6) 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	07:06 15:53 (WEA 10) 17:50	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	07:05 15:53 (WEA 10) 17:50	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	07:04 15:53 (WEA 10) 17:50	06:54 19:48	05:45 21:32	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	554	411	140			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AN - Gartenstraße 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember		
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45	17	15:26 (WEA 10) 16:02 15:43 (WEA 10) 16:02	24	14:20 (WEA 11) 14:44 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43	20	15:24 (WEA 10) 16:01 15:44 (WEA 10) 16:01	25	14:21 (WEA 11) 14:46 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42	21	15:24 (WEA 10) 16:01 15:45 (WEA 10) 16:01	26	14:20 (WEA 11) 14:46 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40	23	15:23 (WEA 10) 16:00 15:46 (WEA 10) 16:00	26	14:21 (WEA 11) 14:47 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38	23	15:23 (WEA 10) 15:59 15:46 (WEA 10) 15:59	27	14:20 (WEA 11) 14:47 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	9	17:29 (WEA 6) 16:36 17:38 (WEA 6) 16:36	24	15:23 (WEA 10) 15:59 15:47 (WEA 10) 15:59	27	14:21 (WEA 11) 14:48 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	14	17:26 (WEA 6) 16:34 17:40 (WEA 6) 16:34	24	15:23 (WEA 10) 15:58 15:47 (WEA 10) 15:58	27	14:21 (WEA 11) 14:48 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	18	17:24 (WEA 6) 16:32 17:42 (WEA 6) 16:32	24	15:23 (WEA 10) 15:58 15:47 (WEA 10) 15:58	27	14:22 (WEA 11) 14:49 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	20	17:23 (WEA 6) 16:31 17:43 (WEA 6) 16:31	24	15:23 (WEA 10) 15:58 15:47 (WEA 10) 15:58	27	14:22 (WEA 11) 14:49 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	22	17:21 (WEA 6) 16:29 17:43 (WEA 6) 16:29	23	15:24 (WEA 10) 15:57 15:47 (WEA 10) 15:57	28	14:22 (WEA 11) 14:50 (WEA 11)
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	23	17:20 (WEA 6) 16:27 17:43 (WEA 6) 16:27	22	15:24 (WEA 10) 15:57 15:46 (WEA 10) 15:57	28	14:22 (WEA 11) 14:50 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	24	17:19 (WEA 6) 16:25 17:43 (WEA 6) 16:25	21	15:25 (WEA 10) 08:22 15:46 (WEA 10) 15:57	27	14:24 (WEA 11) 14:51 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	24	17:19 (WEA 6) 16:24 17:43 (WEA 6) 16:24	20	15:25 (WEA 10) 08:23 15:45 (WEA 10) 15:57	28	14:24 (WEA 11) 14:52 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	24	17:19 (WEA 6) 16:22 17:43 (WEA 6) 16:22	19	15:26 (WEA 10) 08:24 15:45 (WEA 10) 15:57	28	14:24 (WEA 11) 14:52 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	24	17:19 (WEA 6) 16:21 17:43 (WEA 6) 16:21	16	15:28 (WEA 10) 08:24 15:44 (WEA 10) 15:57	28	14:25 (WEA 11) 14:53 (WEA 11)
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	23	17:19 (WEA 6) 16:19 17:42 (WEA 6) 16:19	13	15:29 (WEA 10) 08:25 15:42 (WEA 10) 15:57	28	14:24 (WEA 11) 14:52 (WEA 11)
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	22	17:20 (WEA 6) 16:18 17:42 (WEA 6) 16:18	10	15:31 (WEA 10) 08:26 15:41 (WEA 10) 15:57	28	14:25 (WEA 11) 14:53 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	21	17:20 (WEA 6) 16:16 17:41 (WEA 6) 16:16		08:27 15:57	28	14:26 (WEA 11) 14:54 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	18	17:21 (WEA 6) 16:15 17:39 (WEA 6) 16:15		08:28 15:58	27	14:27 (WEA 11) 14:54 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	15	17:23 (WEA 6) 16:14 17:38 (WEA 6) 16:14		08:28 15:58	28	14:26 (WEA 11) 14:54 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	10	17:25 (WEA 6) 16:12 17:35 (WEA 6) 16:12		08:29 15:58	28	14:27 (WEA 11) 14:55 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06		07:52 16:11		08:30 15:59	28	14:27 (WEA 11) 14:55 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04		07:54 16:10	8	14:26 (WEA 11) 08:30 14:34 (WEA 11) 15:59	28	14:28 (WEA 11) 14:56 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02		07:56 16:09	13	14:24 (WEA 11) 08:30 14:37 (WEA 11) 16:00	28	14:28 (WEA 11) 14:56 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00		07:57 16:08	16	14:23 (WEA 11) 08:31 14:39 (WEA 11) 16:01	28	14:29 (WEA 11) 14:57 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58		07:59 16:07	17	14:23 (WEA 11) 08:31 14:40 (WEA 11) 16:01	28	14:30 (WEA 11) 14:58 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56		08:01 16:06	20	14:21 (WEA 11) 08:31 14:41 (WEA 11) 16:02	28	14:30 (WEA 11) 14:58 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		08:02 16:05	21	14:21 (WEA 11) 08:32 14:42 (WEA 11) 16:03	28	14:31 (WEA 11) 14:59 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		08:04 16:04	22	14:21 (WEA 11) 08:32 14:43 (WEA 11) 16:04	28	14:31 (WEA 11) 14:59 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	11	15:29 (WEA 10) 16:03 15:40 (WEA 10) 16:03	23	14:21 (WEA 11) 08:32 14:44 (WEA 11) 16:05	28	14:32 (WEA 11) 15:00 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	15	15:27 (WEA 10) 16:03 15:42 (WEA 10) 16:03		08:32 16:06	28	14:31 (WEA 11) 14:59 (WEA 11)
Sonnenscheinstunden	510	458	382	329		261		236		
astr.max.mögl.Beschattung				337		484		850		

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AO - Gartenstraße 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:34 (WEA 11) 08:02 15:02 (WEA 11) 16:57	15:55 (WEA 10) 07:06 16:18 (WEA 10) 17:52	16:48 (WEA 6) 06:52 17:13 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:35 (WEA 11) 08:01 15:03 (WEA 11) 16:59	15:55 (WEA 10) 07:04 16:18 (WEA 10) 17:54	16:48 (WEA 6) 06:49 17:13 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:36 (WEA 11) 07:59 15:04 (WEA 11) 17:01	15:55 (WEA 10) 07:01 16:18 (WEA 10) 17:56	16:48 (WEA 6) 06:47 17:12 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:36 (WEA 11) 07:57 15:03 (WEA 11) 17:03	15:54 (WEA 10) 06:59 16:19 (WEA 10) 17:58	16:49 (WEA 6) 06:45 17:12 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:37 (WEA 11) 07:55 15:04 (WEA 11) 17:05	15:54 (WEA 10) 06:57 16:19 (WEA 10) 18:00	16:49 (WEA 6) 06:42 17:11 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:37 (WEA 11) 07:54 15:04 (WEA 11) 17:07	15:55 (WEA 10) 06:54 16:19 (WEA 10) 18:02	16:50 (WEA 6) 06:40 17:09 (WEA 6) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:37 (WEA 11) 07:52 15:04 (WEA 11) 17:09	15:55 (WEA 10) 06:52 16:18 (WEA 10) 18:04	16:51 (WEA 6) 06:37 17:08 (WEA 6) 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:38 (WEA 11) 07:50 15:05 (WEA 11) 17:11	15:55 (WEA 10) 06:50 16:18 (WEA 10) 18:05	16:53 (WEA 6) 06:35 17:05 (WEA 6) 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:38 (WEA 11) 07:48 15:05 (WEA 11) 17:13	15:56 (WEA 10) 06:47 16:18 (WEA 10) 18:07	16:57 (WEA 6) 06:33 17:01 (WEA 6) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:39 (WEA 11) 07:46 15:05 (WEA 11) 17:15	15:57 (WEA 10) 06:45 16:17 (WEA 10) 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:39 (WEA 11) 07:44 15:05 (WEA 11) 17:17	15:58 (WEA 10) 06:42 16:16 (WEA 10) 18:11	06:28 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22	14:40 (WEA 11) 07:42 15:05 (WEA 11) 17:19	16:00 (WEA 10) 06:40 16:15 (WEA 10) 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:41 (WEA 11) 07:40 15:05 (WEA 11) 17:21	16:02 (WEA 10) 06:38 16:12 (WEA 10) 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:42 (WEA 11) 07:38 15:05 (WEA 11) 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26	14:43 (WEA 11) 07:36 15:05 (WEA 11) 17:25	06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:44 (WEA 11) 07:34 15:05 (WEA 11) 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:46 (WEA 11) 07:32 15:04 (WEA 11) 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:47 (WEA 11) 07:30 15:04 (WEA 11) 17:31	06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:48 (WEA 11) 07:28 15:02 (WEA 11) 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35	14:51 (WEA 11) 07:26 15:01 (WEA 11) 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	07:21 17:39	16:56 (WEA 6) 06:16 17:07 (WEA 6) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	07:19 17:41	16:54 (WEA 6) 06:14 17:09 (WEA 6) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	07:17 17:43	16:52 (WEA 6) 06:11 17:11 (WEA 6) 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	07:15 17:45	16:50 (WEA 6) 06:09 17:11 (WEA 6) 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	07:13 17:46	16:50 (WEA 6) 06:06 17:12 (WEA 6) 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	16:01 (WEA 10) 07:10 15:58 (WEA 10) 17:48	16:49 (WEA 6) 06:04 17:13 (WEA 6) 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	16:11 (WEA 10) 07:08 15:58 (WEA 10) 17:50	16:48 (WEA 6) 06:01 17:12 (WEA 6) 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	16:14 (WEA 10) 07:07 15:57 (WEA 10) 17:50	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	16:15 (WEA 10) 07:06 15:56 (WEA 10) 17:50	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	16:15 (WEA 10) 07:05 15:56 (WEA 10) 17:50	06:54 19:48	05:46 21:32	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	567	410	171			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AO - Gartenstraße 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Jul	August	September	Oktober		November		Dezember	
1	04:51	05:30	06:24	07:16		07:13	15:27 (WEA 10)	08:07	14:22 (WEA 11)	
	21:48	21:13	20:08	18:55		16:45	20 15:47 (WEA 10)	16:02	25 14:47 (WEA 11)	
2	04:52	05:32	06:25	07:18		07:15	15:26 (WEA 10)	08:09	14:22 (WEA 11)	
	21:47	21:11	20:05	18:53		16:43	21 15:47 (WEA 10)	16:01	26 14:48 (WEA 11)	
3	04:53	05:34	06:27	07:19		07:17	15:25 (WEA 10)	08:10	14:22 (WEA 11)	
	21:47	21:10	20:03	18:50		16:42	23 15:48 (WEA 10)	16:01	26 14:48 (WEA 11)	
4	04:54	05:35	06:29	07:21		07:19	15:25 (WEA 10)	08:12	14:22 (WEA 11)	
	21:46	21:08	20:01	18:48		16:40	23 15:48 (WEA 10)	16:00	27 14:49 (WEA 11)	
5	04:54	05:37	06:31	07:23	17:31 (WEA 6)	07:21	15:24 (WEA 10)	08:13	14:22 (WEA 11)	
	21:46	21:06	19:58	18:45	10 17:41 (WEA 6)	16:38	24 15:48 (WEA 10)	15:59	27 14:49 (WEA 11)	
6	04:55	05:39	06:32	07:25	17:28 (WEA 6)	07:23	15:25 (WEA 10)	08:14	14:23 (WEA 11)	
	21:45	21:04	19:56	18:43	15 17:43 (WEA 6)	16:36	24 15:49 (WEA 10)	15:59	27 14:50 (WEA 11)	
7	04:56	05:40	06:34	07:27	17:26 (WEA 6)	07:25	15:25 (WEA 10)	08:16	14:23 (WEA 11)	
	21:45	21:02	19:53	18:41	19 17:45 (WEA 6)	16:34	24 15:49 (WEA 10)	15:58	27 14:50 (WEA 11)	
8	04:57	05:42	06:36	07:28	17:25 (WEA 6)	07:26	15:25 (WEA 10)	08:17	14:24 (WEA 11)	
	21:44	21:00	19:51	18:38	21 17:46 (WEA 6)	16:32	24 15:49 (WEA 10)	15:58	28 14:52 (WEA 11)	
9	04:58	05:44	06:37	07:30	17:24 (WEA 6)	07:28	15:26 (WEA 10)	08:18	14:24 (WEA 11)	
	21:43	20:58	19:49	18:36	22 17:46 (WEA 6)	16:31	23 15:49 (WEA 10)	15:58	28 14:52 (WEA 11)	
10	04:59	05:45	06:39	07:32	17:22 (WEA 6)	07:30	15:26 (WEA 10)	08:19	14:24 (WEA 11)	
	21:42	20:56	19:46	18:33	24 17:46 (WEA 6)	16:29	22 15:48 (WEA 10)	15:57	28 14:52 (WEA 11)	
11	05:00	05:47	06:41	07:34	17:22 (WEA 6)	07:32	15:27 (WEA 10)	08:20	14:24 (WEA 11)	
	21:42	20:54	19:44	18:31	24 17:46 (WEA 6)	16:27	21 15:48 (WEA 10)	15:57	28 14:52 (WEA 11)	
12	05:02	05:49	06:43	07:36	17:21 (WEA 6)	07:34	15:28 (WEA 10)	08:22	14:25 (WEA 11)	
	21:41	20:52	19:41	18:29	25 17:46 (WEA 6)	16:25	19 15:47 (WEA 10)	15:57	29 14:54 (WEA 11)	
13	05:03	05:51	06:44	07:37	17:21 (WEA 6)	07:36	15:29 (WEA 10)	08:23	14:26 (WEA 11)	
	21:40	20:50	19:39	18:26	25 17:46 (WEA 6)	16:24	17 15:46 (WEA 10)	15:57	28 14:54 (WEA 11)	
14	05:04	05:52	06:46	07:39	17:21 (WEA 6)	07:38	15:30 (WEA 10)	08:24	14:26 (WEA 11)	
	21:39	20:48	19:36	18:24	24 17:45 (WEA 6)	16:22	15 15:45 (WEA 10)	15:57	28 14:54 (WEA 11)	
15	05:05	05:54	06:48	07:41	17:22 (WEA 6)	07:40	15:31 (WEA 10)	08:24	14:27 (WEA 11)	
	21:38	20:46	19:34	18:22	23 17:45 (WEA 6)	16:21	13 15:44 (WEA 10)	15:57	28 14:55 (WEA 11)	
16	05:07	05:56	06:50	07:43	17:22 (WEA 6)	07:41	15:34 (WEA 10)	08:25	14:26 (WEA 11)	
	21:37	20:44	19:32	18:20	22 17:44 (WEA 6)	16:19	8 15:42 (WEA 10)	15:57	28 14:54 (WEA 11)	
17	05:08	05:57	06:51	07:45	17:23 (WEA 6)	07:43		08:26	14:27 (WEA 11)	
	21:35	20:42	19:29	18:17	20 17:43 (WEA 6)	16:18		15:57	28 14:55 (WEA 11)	
18	05:09	05:59	06:53	07:47	17:24 (WEA 6)	07:45		08:27	14:28 (WEA 11)	
	21:34	20:40	19:27	18:15	18 17:42 (WEA 6)	16:16		15:57	28 14:56 (WEA 11)	
19	05:11	06:01	06:55	07:48	17:25 (WEA 6)	07:47		08:28	14:28 (WEA 11)	
	21:33	20:37	19:24	18:13	15 17:40 (WEA 6)	16:15		15:58	28 14:56 (WEA 11)	
20	05:12	06:03	06:57	07:50	17:28 (WEA 6)	07:49		08:28	14:28 (WEA 11)	
	21:32	20:35	19:22	18:11	9 17:37 (WEA 6)	16:14		15:58	28 14:56 (WEA 11)	
21	05:13	06:04	06:58	07:52		07:50		08:29	14:29 (WEA 11)	
	21:30	20:33	19:19	18:08		16:12		15:58	28 14:57 (WEA 11)	
22	05:15	06:06	07:00	07:54		07:52	14:27 (WEA 11)	08:30	14:29 (WEA 11)	
	21:29	20:31	19:17	18:06		16:11	10 14:37 (WEA 11)	15:59	28 14:57 (WEA 11)	
23	05:16	06:08	07:02	07:56		07:54	14:25 (WEA 11)	08:30	14:30 (WEA 11)	
	21:28	20:28	19:14	18:04		16:10	14 14:39 (WEA 11)	15:59	28 14:58 (WEA 11)	
24	05:18	06:10	07:03	07:58		07:56	14:24 (WEA 11)	08:30	14:30 (WEA 11)	
	21:26	20:26	19:12	18:02		16:09	17 14:41 (WEA 11)	16:00	28 14:58 (WEA 11)	
25	05:19	06:11	07:05	07:00		07:57	14:24 (WEA 11)	08:31	14:31 (WEA 11)	
	21:25	20:24	19:10	17:00		16:08	18 14:42 (WEA 11)	16:01	28 14:59 (WEA 11)	
26	05:21	06:13	07:07	07:02		07:59	14:23 (WEA 11)	08:31	14:32 (WEA 11)	
	21:23	20:22	19:07	16:58		16:07	21 14:44 (WEA 11)	16:01	28 15:00 (WEA 11)	
27	05:22	06:15	07:09	07:04		08:01	14:22 (WEA 11)	08:31	14:32 (WEA 11)	
	21:22	20:19	19:05	16:56		16:06	22 14:44 (WEA 11)	16:02	28 15:00 (WEA 11)	
28	05:24	06:17	07:11	07:05		08:02	14:22 (WEA 11)	08:32	14:33 (WEA 11)	
	21:20	20:17	19:02	16:53		16:05	23 14:45 (WEA 11)	16:03	28 15:01 (WEA 11)	
29	05:26	06:18	07:12	07:07	15:31 (WEA 10)	08:04	14:22 (WEA 11)	08:32	14:33 (WEA 11)	
	21:18	20:15	19:00	16:51	12 15:43 (WEA 10)	16:04	24 14:46 (WEA 11)	16:04	28 15:01 (WEA 11)	
30	05:27	06:20	07:14	07:09	15:29 (WEA 10)	08:06	14:22 (WEA 11)	08:32	14:34 (WEA 11)	
	21:17	20:12	18:57	16:49	15 15:44 (WEA 10)	16:03	25 14:47 (WEA 11)	16:05	28 15:02 (WEA 11)	
31	05:29	06:22		07:11	15:28 (WEA 10)			08:32	14:33 (WEA 11)	
	21:15	20:10		16:47	18 15:46 (WEA 10)			16:06	28 15:01 (WEA 11)	
Sonnenscheinstunden	510	458	382	329		261		236		
astr.max.mögl.Beschattung				361		495		858		

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AP - Am Bauernteich 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 36	14:07 (WEA 12) 08:02 15:18 (WEA 11) 16:57	07:06 17:52	17:15 (WEA 6) 06:52 17:20 (WEA 6) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08 35	14:09 (WEA 12) 08:01 15:19 (WEA 11) 16:59	07:03 17:54	17:11 (WEA 6) 06:49 17:24 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09 33	14:11 (WEA 12) 07:59 15:20 (WEA 11) 17:01	07:01 17:56	17:09 (WEA 6) 06:47 17:25 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10 32	14:12 (WEA 12) 07:57 15:21 (WEA 11) 17:03	06:59 17:58	17:07 (WEA 6) 06:45 17:27 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12 25	14:57 (WEA 11) 07:55 15:22 (WEA 11) 17:05	06:57 18:00	17:07 (WEA 6) 06:42 17:28 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13 25	14:57 (WEA 11) 07:54 15:22 (WEA 11) 17:07	06:54 18:02	17:05 (WEA 6) 06:40 17:28 (WEA 6) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14 26	14:56 (WEA 11) 07:52 15:22 (WEA 11) 17:09	06:52 18:04	17:05 (WEA 6) 06:37 17:28 (WEA 6) 20:01	05:32 20:55	04:50 21:39
8	08:30 16:16 27	14:57 (WEA 11) 07:50 15:24 (WEA 11) 17:11	06:50 18:05	17:04 (WEA 6) 06:35 17:28 (WEA 6) 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17 27	14:57 (WEA 11) 07:48 15:24 (WEA 11) 17:13	06:47 18:07	17:04 (WEA 6) 06:33 17:28 (WEA 6) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19 28	14:57 (WEA 11) 07:46 15:25 (WEA 11) 17:15	06:45 18:09	17:04 (WEA 6) 06:30 17:28 (WEA 6) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20 28	14:57 (WEA 11) 07:44 15:25 (WEA 11) 17:17	06:42 18:11	17:04 (WEA 6) 06:28 17:27 (WEA 6) 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22 29	14:57 (WEA 11) 07:42 15:26 (WEA 11) 17:19	06:40 18:13	17:05 (WEA 6) 06:26 17:26 (WEA 6) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23 28	14:58 (WEA 11) 07:40 15:26 (WEA 11) 17:21	06:38 18:15	17:05 (WEA 6) 06:23 17:25 (WEA 6) 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25 29	14:58 (WEA 11) 07:38 15:27 (WEA 11) 17:23	06:35 18:17	17:06 (WEA 6) 06:21 17:24 (WEA 6) 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26 29	14:58 (WEA 11) 07:36 15:27 (WEA 11) 17:25	06:33 18:19	17:07 (WEA 6) 06:19 17:21 (WEA 6) 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28 29	14:59 (WEA 11) 07:34 15:28 (WEA 11) 17:27	06:30 18:20	17:11 (WEA 6) 06:16 17:18 (WEA 6) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30 29	14:59 (WEA 11) 07:32 15:28 (WEA 11) 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31 29	15:00 (WEA 11) 07:30 15:29 (WEA 11) 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47
19	08:20 16:33 28	15:00 (WEA 11) 07:28 15:28 (WEA 11) 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35 28	15:01 (WEA 11) 07:26 15:29 (WEA 11) 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37 28	15:01 (WEA 11) 07:24 15:29 (WEA 11) 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39 27	15:02 (WEA 11) 07:21 15:29 (WEA 11) 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40 26	15:03 (WEA 11) 07:19 15:29 (WEA 11) 17:41	06:14 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42 25	15:03 (WEA 11) 07:17 15:28 (WEA 11) 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44 23	15:05 (WEA 11) 07:15 15:28 (WEA 11) 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46 22	15:05 (WEA 11) 07:13 15:27 (WEA 11) 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48 20	15:06 (WEA 11) 07:10 15:26 (WEA 11) 17:48	06:04 18:41	05:52 20:37	05:00 21:26	04:49 21:48
28	08:09 16:50 18	15:08 (WEA 11) 07:08 15:26 (WEA 11) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52 14	15:10 (WEA 11) 15:24 (WEA 11)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54 8	15:13 (WEA 11) 15:21 (WEA 11)	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	 	06:54 19:48	 	04:56 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	791	341	296			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AP - Am Bauerteich 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember	
1	04:51	05:30	06:24		07:16	17:44 (WEA 6)	07:13	15:42 (WEA 10)	08:07	14:39 (WEA 11)
	21:48	21:13	20:08		18:55	21 18:05 (WEA 6)	16:45	23 16:05 (WEA 10)	16:02	28 15:07 (WEA 11)
2	04:52	05:32	06:25		07:18	17:43 (WEA 6)	07:15	15:43 (WEA 10)	08:09	14:40 (WEA 11)
	21:47	21:11	20:05		18:53	23 18:06 (WEA 6)	16:43	21 16:04 (WEA 10)	16:01	28 15:08 (WEA 11)
3	04:53	05:34	06:27		07:19	17:42 (WEA 6)	07:17	15:43 (WEA 10)	08:10	14:40 (WEA 11)
	21:47	21:10	20:03		18:50	24 18:06 (WEA 6)	16:42	21 16:04 (WEA 10)	16:01	27 15:07 (WEA 11)
4	04:54	05:35	06:29		07:21	17:41 (WEA 6)	07:19	15:44 (WEA 10)	08:12	14:41 (WEA 11)
	21:46	21:08	20:01		18:48	24 18:05 (WEA 6)	16:40	19 16:03 (WEA 10)	16:00	27 15:08 (WEA 11)
5	04:54	05:37	06:31		07:23	17:41 (WEA 6)	07:21	15:45 (WEA 10)	08:13	14:41 (WEA 11)
	21:46	21:06	19:58		18:45	24 18:05 (WEA 6)	16:38	16 16:01 (WEA 10)	15:59	27 15:08 (WEA 11)
6	04:55	05:39	06:32		07:25	17:41 (WEA 6)	07:23	15:48 (WEA 10)	08:14	14:43 (WEA 11)
	21:45	21:04	19:56		18:43	24 18:05 (WEA 6)	16:36	13 16:01 (WEA 10)	15:59	25 15:08 (WEA 11)
7	04:56	05:40	06:34		07:27	17:41 (WEA 6)	07:24	15:51 (WEA 10)	08:16	14:43 (WEA 11)
	21:45	21:02	19:53		18:41	23 18:04 (WEA 6)	16:34	7 15:58 (WEA 10)	15:58	25 15:08 (WEA 11)
8	04:57	05:42	06:36		07:28	17:41 (WEA 6)	07:26		08:17	14:00 (WEA 12)
	21:44	21:00	19:51		18:38	22 18:03 (WEA 6)	16:32		15:58	32 15:09 (WEA 11)
9	04:58	05:44	06:37		07:30	17:42 (WEA 6)	07:28		08:18	13:59 (WEA 12)
	21:43	20:58	19:49		18:36	20 18:02 (WEA 6)	16:31		15:58	34 15:09 (WEA 11)
10	04:59	05:45	06:39		07:32	17:42 (WEA 6)	07:30		08:19	13:58 (WEA 12)
	21:42	20:56	19:46		18:33	18 18:00 (WEA 6)	16:29		15:57	36 15:09 (WEA 11)
11	05:00	05:47	06:41		07:34	17:43 (WEA 6)	07:32		08:20	13:58 (WEA 12)
	21:42	20:54	19:44		18:31	15 17:58 (WEA 6)	16:27		15:57	35 15:08 (WEA 11)
12	05:02	05:49	06:43		07:36	17:46 (WEA 6)	07:34	14:45 (WEA 11)	08:22	13:58 (WEA 12)
	21:41	20:52	19:41		18:29	10 17:56 (WEA 6)	16:25	8 14:53 (WEA 11)	15:57	37 15:09 (WEA 11)
13	05:03	05:51	06:44		07:37		07:36	14:42 (WEA 11)	08:23	13:58 (WEA 12)
	21:40	20:50	19:39		18:26		16:24	14 14:56 (WEA 11)	15:57	38 15:10 (WEA 11)
14	05:04	05:52	06:46		07:39		07:38	14:40 (WEA 11)	08:24	13:58 (WEA 12)
	21:39	20:48	19:36		18:24		16:22	18 14:58 (WEA 11)	15:57	38 15:10 (WEA 11)
15	05:05	05:54	06:48		07:41		07:40	14:39 (WEA 11)	08:24	13:58 (WEA 12)
	21:38	20:46	19:34		18:22		16:21	20 14:59 (WEA 11)	15:57	38 15:10 (WEA 11)
16	05:07	05:56	06:50		07:43		07:41	14:38 (WEA 11)	08:25	13:58 (WEA 12)
	21:36	20:44	19:32		18:20		16:19	22 15:00 (WEA 11)	15:57	37 15:09 (WEA 11)
17	05:08	05:57	06:51		07:45		07:43	14:38 (WEA 11)	08:26	13:58 (WEA 12)
	21:35	20:42	19:29		18:17		16:18	23 15:01 (WEA 11)	15:57	38 15:10 (WEA 11)
18	05:09	05:59	06:53		07:47		07:45	14:37 (WEA 11)	08:27	13:58 (WEA 12)
	21:34	20:40	19:27		18:15		16:16	25 15:02 (WEA 11)	15:57	38 15:10 (WEA 11)
19	05:11	06:01	06:55		07:48		07:47	14:37 (WEA 11)	08:28	13:59 (WEA 12)
	21:33	20:37	19:24		18:13		16:15	26 15:03 (WEA 11)	15:58	38 15:11 (WEA 11)
20	05:12	06:03	06:57		07:50		07:49	14:37 (WEA 11)	08:28	13:59 (WEA 12)
	21:32	20:35	19:22		18:11		16:14	27 15:04 (WEA 11)	15:58	38 15:11 (WEA 11)
21	05:13	06:04	06:58		07:52	16:51 (WEA 10)	07:50	14:37 (WEA 11)	08:29	14:00 (WEA 12)
	21:30	20:33	19:19		18:08	8 16:59 (WEA 10)	16:12	27 15:04 (WEA 11)	15:58	38 15:12 (WEA 11)
22	05:15	06:06	07:00		07:54	16:48 (WEA 10)	07:52	14:37 (WEA 11)	08:30	14:00 (WEA 12)
	21:29	20:31	19:17		18:06	14 17:02 (WEA 10)	16:11	28 15:05 (WEA 11)	15:59	38 15:12 (WEA 11)
23	05:16	06:08	07:02		07:56	16:46 (WEA 10)	07:54	14:37 (WEA 11)	08:30	14:01 (WEA 12)
	21:28	20:28	19:14		18:04	17 17:03 (WEA 10)	16:10	28 15:05 (WEA 11)	15:59	38 15:13 (WEA 11)
24	05:18	06:10	07:03		07:58	16:45 (WEA 10)	07:56	14:37 (WEA 11)	08:30	14:01 (WEA 12)
	21:26	20:26	19:12		18:02	19 17:04 (WEA 10)	16:09	29 15:06 (WEA 11)	16:00	38 15:13 (WEA 11)
25	05:19	06:11	07:05		07:00	15:44 (WEA 10)	07:57	14:37 (WEA 11)	08:31	14:01 (WEA 12)
	21:25	20:24	19:10		17:00	21 16:05 (WEA 10)	16:08	29 15:06 (WEA 11)	16:01	38 15:13 (WEA 11)
26	05:21	06:13	07:07		07:02	15:43 (WEA 10)	07:59	14:38 (WEA 11)	08:31	14:03 (WEA 12)
	21:23	20:22	19:07		16:58	23 16:06 (WEA 10)	16:07	29 15:07 (WEA 11)	16:01	38 15:15 (WEA 11)
27	05:22	06:15	07:09		07:04	15:42 (WEA 10)	08:01	14:37 (WEA 11)	08:31	14:03 (WEA 12)
	21:22	20:19	19:05		16:56	24 16:06 (WEA 10)	16:06	29 15:06 (WEA 11)	16:02	38 15:15 (WEA 11)
28	05:24	06:17	07:11	17:50 (WEA 6)	07:05	15:42 (WEA 10)	08:02	14:38 (WEA 11)	08:32	14:04 (WEA 12)
	21:20	20:17	19:02	12 18:02 (WEA 6)	16:53	24 16:06 (WEA 10)	16:05	29 15:07 (WEA 11)	16:03	38 15:16 (WEA 11)
29	05:26	06:18	07:12	17:47 (WEA 6)	07:07	15:42 (WEA 10)	08:04	14:39 (WEA 11)	08:32	14:05 (WEA 12)
	21:18	20:15	19:00	16 18:03 (WEA 6)	16:51	24 16:06 (WEA 10)	16:04	28 15:07 (WEA 11)	16:04	38 15:16 (WEA 11)
30	05:27	06:20	07:14	17:45 (WEA 6)	07:09	15:42 (WEA 10)	08:06	14:39 (WEA 11)	08:32	14:06 (WEA 12)
	21:17	20:12	18:57	19 18:04 (WEA 6)	16:49	24 16:06 (WEA 10)	16:03	29 15:08 (WEA 11)	16:05	37 15:17 (WEA 11)
31	05:29	06:22			07:11	15:42 (WEA 10)			08:32	14:06 (WEA 12)
	21:15	20:10			16:47	24 16:06 (WEA 10)			16:06	37 15:17 (WEA 11)
Sonnenscheinstunden	510	458	382		329		261		236	
astr.max.mögl.Beschattung			47		470		588		1080	

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AQ - Gartenstraße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 36	14:03 (WEA 12) 08:02 15:15 (WEA 11) 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08 35	14:04 (WEA 12) 08:01 15:16 (WEA 11) 16:59	07:03 17:54 10	17:13 (WEA 6) 06:49 17:23 (WEA 6) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09 32	14:07 (WEA 12) 07:59 15:17 (WEA 11) 17:01	07:01 17:56 15	17:09 (WEA 6) 06:47 17:24 (WEA 6) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10 26	14:51 (WEA 11) 07:57 15:17 (WEA 11) 17:03	16:17 (WEA 10) 06:59 16:27 (WEA 10) 17:58	17:08 (WEA 6) 06:45 17:26 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12 27	14:52 (WEA 11) 07:55 15:19 (WEA 11) 17:05	16:15 (WEA 10) 06:57 16:29 (WEA 10) 18:00	17:07 (WEA 6) 06:42 17:28 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13 28	14:51 (WEA 11) 07:54 15:19 (WEA 11) 17:07	16:13 (WEA 10) 06:54 16:31 (WEA 10) 18:02	17:05 (WEA 6) 06:40 17:28 (WEA 6) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14 28	14:51 (WEA 11) 07:52 15:19 (WEA 11) 17:09	16:12 (WEA 10) 06:52 16:32 (WEA 10) 18:04	17:05 (WEA 6) 06:37 17:29 (WEA 6) 20:01	05:32 20:55	04:50 21:39
8	08:30 16:16 28	14:52 (WEA 11) 07:50 15:20 (WEA 11) 17:11	16:11 (WEA 10) 06:50 16:33 (WEA 10) 18:05	17:03 (WEA 6) 06:35 17:28 (WEA 6) 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17 29	14:52 (WEA 11) 07:48 15:21 (WEA 11) 17:13	16:11 (WEA 10) 06:47 16:34 (WEA 10) 18:07	17:03 (WEA 6) 06:33 17:28 (WEA 6) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19 29	14:52 (WEA 11) 07:46 15:21 (WEA 11) 17:15	16:10 (WEA 10) 06:45 16:34 (WEA 10) 18:09	17:04 (WEA 6) 06:30 17:29 (WEA 6) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20 30	14:52 (WEA 11) 07:44 15:22 (WEA 11) 17:17	16:10 (WEA 10) 06:42 16:35 (WEA 10) 18:11	17:03 (WEA 6) 06:28 17:28 (WEA 6) 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22 30	14:52 (WEA 11) 07:42 15:22 (WEA 11) 17:19	16:10 (WEA 10) 06:40 16:35 (WEA 10) 18:13	17:04 (WEA 6) 06:26 17:27 (WEA 6) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23 29	14:53 (WEA 11) 07:40 15:22 (WEA 11) 17:21	16:10 (WEA 10) 06:38 16:35 (WEA 10) 18:15	17:04 (WEA 6) 06:23 17:26 (WEA 6) 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25 30	14:53 (WEA 11) 07:38 15:23 (WEA 11) 17:23	16:11 (WEA 10) 06:35 16:35 (WEA 10) 18:17	17:05 (WEA 6) 06:21 17:25 (WEA 6) 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26 29	14:54 (WEA 11) 07:36 15:23 (WEA 11) 17:25	16:11 (WEA 10) 06:33 16:35 (WEA 10) 18:19	17:05 (WEA 6) 06:19 17:23 (WEA 6) 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28 30	14:54 (WEA 11) 07:34 15:24 (WEA 11) 17:27	16:12 (WEA 10) 06:30 16:35 (WEA 10) 18:20	17:08 (WEA 6) 06:16 17:21 (WEA 6) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30 29	14:55 (WEA 11) 07:32 15:24 (WEA 11) 17:29	16:11 (WEA 10) 06:28 16:33 (WEA 10) 18:22	17:11 (WEA 6) 06:14 17:17 (WEA 6) 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31 30	14:55 (WEA 11) 07:30 15:25 (WEA 11) 17:31	16:13 (WEA 10) 06:26 16:32 (WEA 10) 18:24	06:12 20:20	05:13 21:13	04:47 21:47
19	08:20 16:33 29	14:55 (WEA 11) 07:28 15:24 (WEA 11) 17:33	16:14 (WEA 10) 06:23 16:31 (WEA 10) 18:26	06:09 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35 29	14:56 (WEA 11) 07:26 15:25 (WEA 11) 17:35	16:16 (WEA 10) 06:21 16:30 (WEA 10) 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37 28	14:57 (WEA 11) 07:24 15:25 (WEA 11) 17:37	16:19 (WEA 10) 06:18 16:27 (WEA 10) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39 27	14:57 (WEA 11) 07:21 15:24 (WEA 11) 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40 27	14:58 (WEA 11) 07:19 15:25 (WEA 11) 17:41	06:14 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42 25	14:59 (WEA 11) 07:17 15:24 (WEA 11) 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44 24	15:00 (WEA 11) 07:15 15:24 (WEA 11) 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46 22	15:01 (WEA 11) 07:13 15:23 (WEA 11) 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48 20	15:02 (WEA 11) 07:10 15:22 (WEA 11) 17:48	06:04 18:41	05:52 20:37	05:00 21:26	04:49 21:48
28	08:09 16:50 16	15:05 (WEA 11) 07:08 15:21 (WEA 11) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52 12	15:07 (WEA 11) 15:19 (WEA 11)	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54 5	15:10 (WEA 11) 15:15 (WEA 11)	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	 	06:54 19:48	 	04:56 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	799	357	313			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AQ - Gartenstraße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:06 (WEA 6)	08:07 16:04 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:06 (WEA 6)	08:09 16:03 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:06 (WEA 6)	08:10 16:02 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:05 (WEA 6)	08:12 16:01 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:05 (WEA 6)	08:13 16:00 (WEA 10)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 18:05 (WEA 6)	08:14 16:00 (WEA 10)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 18:04 (WEA 6)	08:16 15:57 (WEA 10)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 18:03 (WEA 6)	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 18:02 (WEA 6)	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 18:00 (WEA 6)	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 17:58 (WEA 6)	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 17:48 (WEA 6)	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 17:54 (WEA 6)	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:14 (WEA 10)	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:05 (WEA 10)	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 17:02 (WEA 10)	08:30 15:59
24	05:18 21:26	06:10 20:26	07:03 19:12	07:58 18:02	07:56 16:43 (WEA 10)	08:30 15:02 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	07:57 15:42 (WEA 10)	08:31 15:02 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:59 16:04 (WEA 10)	08:31 15:03 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	08:01 15:40 (WEA 10)	08:31 15:03 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53	08:02 15:40 (WEA 10)	08:32 15:03 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 15:40 (WEA 10)	08:32 15:04 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 15:40 (WEA 10)	08:32 15:04 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 16:04 (WEA 10)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			68	481	601	1118

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AR - Gartenstraße 14

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 40	14:00 (WEA 12) 08:02 15:16 (WEA 11) 16:57 4	15:14 (WEA 11) 07:06 15:18 (WEA 11) 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08 40	14:01 (WEA 12) 08:01 15:17 (WEA 11) 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09 39	14:03 (WEA 12) 07:59 15:18 (WEA 11) 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10 39	14:04 (WEA 12) 07:57 15:19 (WEA 11) 17:03	06:59 17:58	17:16 (WEA 6) 06:45 17:26 (WEA 6) 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12 36	14:06 (WEA 12) 07:55 15:20 (WEA 11) 17:05	06:57 18:00	17:14 (WEA 6) 06:42 17:29 (WEA 6) 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13 33	14:08 (WEA 12) 07:54 15:20 (WEA 11) 17:07	06:54 18:02	17:11 (WEA 6) 06:40 17:30 (WEA 6) 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14 28	14:53 (WEA 11) 07:52 15:21 (WEA 11) 17:09	16:31 (WEA 10) 06:52 16:33 (WEA 10) 18:04	17:10 (WEA 6) 06:37 17:31 (WEA 6) 20:01	05:32 20:55	04:50 21:39
8	08:30 16:16 28	14:54 (WEA 11) 07:50 15:22 (WEA 11) 17:11	16:16 (WEA 10) 06:50 16:34 (WEA 10) 18:05	17:08 (WEA 6) 06:35 17:31 (WEA 6) 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17 28	14:54 (WEA 11) 07:48 15:22 (WEA 11) 17:13	16:15 (WEA 10) 06:47 16:36 (WEA 10) 18:07	17:08 (WEA 6) 06:33 17:32 (WEA 6) 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19 29	14:54 (WEA 11) 07:46 15:23 (WEA 11) 17:15	16:14 (WEA 10) 06:45 16:37 (WEA 10) 18:09	17:08 (WEA 6) 06:30 17:33 (WEA 6) 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20 29	14:54 (WEA 11) 07:44 15:23 (WEA 11) 17:17	16:14 (WEA 10) 06:42 16:37 (WEA 10) 18:11	17:07 (WEA 6) 06:28 17:32 (WEA 6) 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22 30	14:54 (WEA 11) 07:42 15:24 (WEA 11) 17:19	16:13 (WEA 10) 06:40 16:38 (WEA 10) 18:13	17:07 (WEA 6) 06:26 17:32 (WEA 6) 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23 30	14:54 (WEA 11) 07:40 15:24 (WEA 11) 17:21	16:13 (WEA 10) 06:38 16:38 (WEA 10) 18:15	17:06 (WEA 6) 06:23 17:31 (WEA 6) 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25 30	14:55 (WEA 11) 07:38 15:25 (WEA 11) 17:23	16:13 (WEA 10) 06:35 16:39 (WEA 10) 18:17	17:07 (WEA 6) 06:21 17:31 (WEA 6) 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26 31	14:55 (WEA 11) 07:36 15:26 (WEA 11) 17:25	16:13 (WEA 10) 06:33 16:39 (WEA 10) 18:19	17:07 (WEA 6) 06:19 17:30 (WEA 6) 20:15	05:18 21:08	04:47 21:46
16	08:24 16:28 31	14:55 (WEA 11) 07:34 15:26 (WEA 11) 17:27	16:14 (WEA 10) 06:30 16:39 (WEA 10) 18:20	17:08 (WEA 6) 06:16 17:29 (WEA 6) 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30 31	14:56 (WEA 11) 07:32 15:27 (WEA 11) 17:29	16:13 (WEA 10) 06:28 16:38 (WEA 10) 18:22	17:09 (WEA 6) 06:14 17:28 (WEA 6) 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31 30	14:57 (WEA 11) 07:30 15:27 (WEA 11) 17:31	16:14 (WEA 10) 06:26 16:37 (WEA 10) 18:24	17:10 (WEA 6) 06:12 17:25 (WEA 6) 20:20	05:13 21:13	04:47 21:47
19	08:20 16:33 31	14:56 (WEA 11) 07:28 15:27 (WEA 11) 17:33	16:15 (WEA 10) 06:23 16:37 (WEA 10) 18:26	17:13 (WEA 6) 06:09 17:22 (WEA 6) 20:22	05:11 21:15	04:47 21:47
20	08:19 16:35 30	14:57 (WEA 11) 07:26 15:27 (WEA 11) 17:35	16:16 (WEA 10) 06:21 16:36 (WEA 10) 18:28	9 17:22 (WEA 6) 06:07 20:24	21:15 21:16	04:47 21:48
21	08:18 16:37 30	14:58 (WEA 11) 07:24 15:28 (WEA 11) 17:37	16:17 (WEA 10) 06:18 16:35 (WEA 10) 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39 29	14:58 (WEA 11) 07:21 15:27 (WEA 11) 17:39	16:19 (WEA 10) 06:16 16:32 (WEA 10) 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40 29	14:59 (WEA 11) 07:19 15:28 (WEA 11) 17:41	16:22 (WEA 10) 06:14 16:29 (WEA 10) 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42 28	14:59 (WEA 11) 07:17 15:27 (WEA 11) 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44 27	15:01 (WEA 11) 07:15 15:28 (WEA 11) 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46 26	15:01 (WEA 11) 07:13 15:27 (WEA 11) 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49
27	08:10 16:48 24	15:02 (WEA 11) 07:10 15:26 (WEA 11) 17:48	06:04 18:41	05:52 20:37	05:00 21:26	04:49 21:48
28	08:09 16:50 22	15:04 (WEA 11) 07:08 15:26 (WEA 11) 17:50	06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52 20	15:05 (WEA 11) 07:06 15:25 (WEA 11) 17:52	06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54 17	15:06 (WEA 11) 07:04 15:23 (WEA 11) 17:54	06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55 13	15:09 (WEA 11) 07:02 15:22 (WEA 11) 17:56	06:54 19:48	05:45 20:41	04:56 21:32	04:50 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	908	370	323			

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AR - Gartenstraße 14

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:11 (WEA 6)	08:07 16:06 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:11 (WEA 6)	08:09 16:05 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:11 (WEA 6)	08:10 16:04 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:08 (WEA 6)	08:12 16:02 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:09 (WEA 6)	08:13 15:50 (WEA 10)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 18:08 (WEA 6)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 18:07 (WEA 6)	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 18:05 (WEA 6)	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 18:03 (WEA 6)	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 17:53 (WEA 6)	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:29	08:20 14:44 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 14:40 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 14:38 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 14:35 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 14:35 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 14:34 (WEA 11)
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 14:33 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 14:33 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 14:33 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 14:33 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 14:33 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 14:33 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 14:33 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:05 (WEA 6)	07:56 16:09	08:30 14:34 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:07 (WEA 6)	07:57 16:08 (WEA 10)	08:31 14:34 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:09 (WEA 6)	07:59 16:07 (WEA 10)	08:31 14:35 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:10 (WEA 6)	08:01 16:06 (WEA 10)	08:31 14:34 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:11 (WEA 6)	08:02 16:05 (WEA 10)	08:32 14:35 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:11 (WEA 6)	08:04 16:04 (WEA 10)	08:32 14:36 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:11 (WEA 6)	08:06 16:03 (WEA 10)	08:32 15:06 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	15:43 (WEA 10) 16:07 (WEA 10)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			129	483	631	1192

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AS - Gartenstraße 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 43	13:55 (WEA 12) 08:02 15:14 (WEA 11) 16:57 11	15:08 (WEA 11) 07:06 15:19 (WEA 11) 17:52		06:52 05:44 19:50 20:44 21:33	
2	08:32 16:08 42	13:56 (WEA 12) 08:01 15:15 (WEA 11) 16:59	07:04 17:54 07:01	06:49 05:42 19:51 20:46 21:34	04:54	
3	08:31 16:09 42	13:58 (WEA 12) 07:59 15:17 (WEA 11) 17:01	07:01 17:56 06:59	06:47 05:40 19:53 20:48 21:35	04:53	
4	08:31 16:10 40	13:59 (WEA 12) 07:57 15:17 (WEA 11) 17:03	06:59 17:58 06:57	06:45 05:38 19:55 20:49 21:36	04:52	
5	08:31 16:12 39	14:01 (WEA 12) 07:55 15:18 (WEA 11) 17:05	06:57 18:00 06:54	06:42 05:36 19:57 20:51 21:37	04:52	
6	08:30 16:13 37	14:02 (WEA 12) 07:54 15:18 (WEA 11) 17:07	06:54 18:02 16:22 (WEA 10) 06:54	06:40 05:34 17:16 (WEA 6) 06:40	04:51	
7	08:30 16:14 32	14:05 (WEA 12) 07:52 15:19 (WEA 11) 17:09	06:52 18:04 16:19 (WEA 10) 06:52	06:37 05:32 17:14 (WEA 6) 06:37	04:50	
8	08:30 16:16 28	14:52 (WEA 11) 07:50 15:20 (WEA 11) 17:11	06:50 18:05 16:17 (WEA 10) 06:50	06:35 05:30 17:11 (WEA 6) 06:35	04:50	
9	08:29 16:17 30	14:51 (WEA 11) 07:48 15:21 (WEA 11) 17:13	06:47 18:07 16:16 (WEA 10) 06:47	06:33 05:28 17:11 (WEA 6) 06:33	04:49	
10	08:28 16:19 30	14:51 (WEA 11) 07:46 15:21 (WEA 11) 17:15	06:45 18:09 16:15 (WEA 10) 06:45	06:30 05:26 17:10 (WEA 6) 06:30	04:49	
11	08:28 16:20 31	14:51 (WEA 11) 07:42 15:21 (WEA 11) 17:15	06:42 18:11 16:14 (WEA 10) 06:42	06:28 05:24 17:09 (WEA 6) 06:28	04:48	
12	08:27 16:22 31	14:51 (WEA 11) 07:42 15:22 (WEA 11) 17:19	06:40 18:13 16:14 (WEA 10) 06:40	06:26 05:23 17:09 (WEA 6) 06:26	04:48	
13	08:26 16:23 31	14:52 (WEA 11) 07:40 15:23 (WEA 11) 17:21	06:38 18:15 16:13 (WEA 10) 06:38	06:23 05:21 17:08 (WEA 6) 06:23	04:48	
14	08:25 16:25 31	14:52 (WEA 11) 07:38 15:23 (WEA 11) 17:23	06:35 18:17 16:13 (WEA 10) 06:35	06:21 05:19 17:08 (WEA 6) 06:21	04:47	
15	08:24 16:26 32	14:52 (WEA 11) 07:36 15:24 (WEA 11) 17:25	06:33 18:19 16:13 (WEA 10) 06:33	06:19 05:18 17:07 (WEA 6) 06:19	04:47	
16	08:24 16:28 31	14:53 (WEA 11) 07:34 15:24 (WEA 11) 17:27	06:30 18:20 16:13 (WEA 10) 06:30	06:16 05:16 17:08 (WEA 6) 06:16	04:47	
17	08:23 16:30 32	14:53 (WEA 11) 07:32 15:25 (WEA 11) 17:29	06:28 18:22 16:13 (WEA 10) 06:28	06:14 05:14 17:09 (WEA 6) 06:14	04:47	
18	08:22 16:31 32	14:54 (WEA 11) 07:30 15:26 (WEA 11) 17:31	06:26 18:24 16:13 (WEA 10) 06:26	06:12 05:13 17:09 (WEA 6) 06:12	04:47	
19	08:20 16:33 32	14:53 (WEA 11) 07:28 15:25 (WEA 11) 17:33	06:23 18:26 16:14 (WEA 10) 06:23	06:09 05:11 17:11 (WEA 6) 06:09	04:47	
20	08:19 16:35 32	14:54 (WEA 11) 07:26 15:26 (WEA 11) 17:35	06:21 18:28 16:16 (WEA 10) 06:18	06:07 05:10 17:12 (WEA 6) 06:07	04:47	
21	08:18 16:37 31	14:55 (WEA 11) 07:24 15:26 (WEA 11) 17:37	06:18 18:30 16:17 (WEA 10) 06:16	06:05 05:08 17:16 (WEA 6) 06:05	04:47	
22	08:17 16:39 31	14:55 (WEA 11) 07:21 15:26 (WEA 11) 17:39	06:16 18:31 16:17 (WEA 10) 06:16	06:03 05:07 17:23 (WEA 6) 06:03	04:47	
23	08:16 16:40 30	14:56 (WEA 11) 07:19 15:26 (WEA 11) 17:41	06:14 18:33 16:19 (WEA 10) 06:14	06:01 05:05 17:20 (WEA 6) 06:01	04:47	
24	08:14 16:42 30	14:56 (WEA 11) 07:17 15:26 (WEA 11) 17:43	06:11 18:35 16:22 (WEA 10) 06:11	05:58 05:04 17:22 (WEA 6) 05:58	04:48	
25	08:13 16:44 29	14:57 (WEA 11) 07:15 15:26 (WEA 11) 17:45	06:09 18:37 16:13 (WEA 10) 06:09	05:56 05:03 17:23 (WEA 6) 05:56	04:48	
26	08:12 16:46 27	14:58 (WEA 11) 07:13 15:25 (WEA 11) 17:46	06:06 18:39 16:14 (WEA 10) 06:06	05:54 05:02 17:24 (WEA 6) 05:54	04:49	
27	08:10 16:48 26	14:58 (WEA 11) 07:10 15:24 (WEA 11) 17:48	06:04 18:41 16:15 (WEA 10) 06:04	05:52 05:00 17:25 (WEA 6) 05:52	04:49	
28	08:09 16:50 25	15:00 (WEA 11) 07:08 15:25 (WEA 11) 17:50	06:01 18:42 16:16 (WEA 10) 06:01	05:50 04:59 17:26 (WEA 6) 05:50	04:49	
29	08:07 16:52 22	15:01 (WEA 11) 07:06 15:25 (WEA 11) 17:50	06:59 19:44 16:17 (WEA 10) 06:59	05:48 04:58 17:27 (WEA 6) 05:48	04:50	
30	08:06 16:54 19	15:03 (WEA 11) 07:04 15:26 (WEA 11) 17:51	06:57 19:46 16:18 (WEA 10) 06:57	05:46 04:57 17:28 (WEA 6) 05:46	04:51	
31	08:04 16:55 16	15:05 (WEA 11) 07:02 15:27 (WEA 11) 17:52	06:54 19:48 16:19 (WEA 10) 06:54	05:44 04:56 17:29 (WEA 6) 05:44	04:51	
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	964	397	341			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AS - Gartenstraße 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:13 (WEA 6)	08:07 16:06 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:13 (WEA 6)	08:09 16:05 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:13 (WEA 6)	08:10 16:03 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:11 (WEA 6)	08:12 16:01 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:10 (WEA 6)	08:13 15:52 (WEA 10)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 18:08 (WEA 6)	08:14 15:59 (WEA 10)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 18:07 (WEA 6)	08:16 15:58 (WEA 10)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 18:04 (WEA 6)	08:17 15:58 (WEA 10)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 18:04 (WEA 6)	08:18 15:58 (WEA 10)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 18:04 (WEA 6)	08:19 15:57 (WEA 10)
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 18:04 (WEA 6)	08:20 15:57 (WEA 10)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 18:04 (WEA 6)	08:22 15:57 (WEA 10)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 18:04 (WEA 6)	08:23 15:57 (WEA 10)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 18:04 (WEA 6)	08:24 15:57 (WEA 10)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 18:04 (WEA 6)	08:24 15:57 (WEA 10)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 18:04 (WEA 6)	08:25 15:57 (WEA 10)
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 18:04 (WEA 6)	08:26 15:57 (WEA 10)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 18:04 (WEA 6)	08:27 15:57 (WEA 10)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 18:04 (WEA 6)	08:28 15:57 (WEA 10)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 18:04 (WEA 6)	08:28 15:57 (WEA 10)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 18:04 (WEA 6)	08:29 15:57 (WEA 10)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:03 (WEA 6)	07:52 18:04 (WEA 6)	08:30 15:57 (WEA 10)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:00 (WEA 6)	07:54 18:04 (WEA 6)	08:30 15:57 (WEA 10)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:12 (WEA 6)	07:56 18:04 (WEA 6)	08:30 15:57 (WEA 10)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:58 18:12 (WEA 6)	07:57 18:04 (WEA 6)	08:31 15:57 (WEA 10)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:58 18:13 (WEA 6)	07:59 18:04 (WEA 6)	08:31 15:57 (WEA 10)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:58 18:14 (WEA 6)	08:01 18:04 (WEA 6)	08:31 15:57 (WEA 10)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:58 18:14 (WEA 6)	08:02 18:04 (WEA 6)	08:32 15:57 (WEA 10)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:58 18:14 (WEA 6)	08:04 18:04 (WEA 6)	08:32 15:57 (WEA 10)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:58 18:14 (WEA 6)	08:06 18:04 (WEA 6)	08:32 15:57 (WEA 10)
31	05:29 21:15	06:22 20:10	07:15 18:57	07:58 18:14 (WEA 6)	08:06 18:04 (WEA 6)	08:32 15:57 (WEA 10)
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			175	487	655	1264

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AT - Gartenstraße 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar			Februar			März			April	Mai	Juni
1	08:32		13:54 (WEA 12)	08:02		15:06 (WEA 11)	07:06		06:52	05:44	04:55
	16:07	44	15:15 (WEA 11)	16:57	16	15:22 (WEA 11)	17:52		19:50	20:44	21:33
2	08:32		13:55 (WEA 12)	08:01		15:09 (WEA 11)	07:04		06:49	05:42	04:54
	16:08	44	15:16 (WEA 11)	16:59	10	15:19 (WEA 11)	17:54		19:51	20:46	21:34
3	08:31		13:57 (WEA 12)	07:59			07:01		06:47	05:40	04:53
	16:09	43	15:17 (WEA 11)	17:01			17:56		19:53	20:48	21:35
4	08:31		13:57 (WEA 12)	07:57			06:59		06:45	05:38	04:52
	16:10	42	15:17 (WEA 11)	17:03			17:58		19:55	20:49	21:36
5	08:31		13:59 (WEA 12)	07:55			06:57		06:42	05:36	04:52
	16:12	41	15:18 (WEA 11)	17:05			18:00		19:57	20:51	21:37
6	08:30		14:00 (WEA 12)	07:54			06:54	17:21 (WEA 6)	06:40	05:34	04:51
	16:13	40	15:19 (WEA 11)	17:07			18:02	7 17:28 (WEA 6)	19:59	20:53	21:39
7	08:30		14:01 (WEA 12)	07:52		16:22 (WEA 10)	06:52	17:18 (WEA 6)	06:37	05:32	04:50
	16:14	39	15:19 (WEA 11)	17:09	9	16:31 (WEA 10)	18:04	14 17:32 (WEA 6)	20:01	20:55	21:39
8	08:30		14:05 (WEA 12)	07:50		16:20 (WEA 10)	06:50	17:15 (WEA 6)	06:35	05:30	04:50
	16:16	35	15:21 (WEA 11)	17:11	14	16:34 (WEA 10)	18:05	18 17:33 (WEA 6)	20:02	20:56	21:40
9	08:29		14:52 (WEA 11)	07:48		16:18 (WEA 10)	06:47	17:13 (WEA 6)	06:33	05:28	04:49
	16:17	29	15:21 (WEA 11)	17:13	18	16:36 (WEA 10)	18:07	21 17:34 (WEA 6)	20:04	20:58	21:41
10	08:28		14:52 (WEA 11)	07:46		16:17 (WEA 10)	06:45	17:13 (WEA 6)	06:30	05:26	04:49
	16:19	30	15:22 (WEA 11)	17:15	20	16:37 (WEA 10)	18:09	23 17:36 (WEA 6)	20:06	21:00	21:42
11	08:28		14:52 (WEA 11)	07:44		16:16 (WEA 10)	06:42	17:11 (WEA 6)	06:28	05:24	04:48
	16:20	30	15:22 (WEA 11)	17:17	22	16:38 (WEA 10)	18:11	25 17:36 (WEA 6)	20:08	21:01	21:43
12	08:27		14:52 (WEA 11)	07:42		16:15 (WEA 10)	06:40	17:11 (WEA 6)	06:26	05:23	04:48
	16:22	31	15:23 (WEA 11)	17:19	24	16:39 (WEA 10)	18:13	25 17:36 (WEA 6)	20:10	21:03	21:44
13	08:26		14:52 (WEA 11)	07:40		16:15 (WEA 10)	06:38	17:10 (WEA 6)	06:23	05:21	04:48
	16:23	31	15:23 (WEA 11)	17:21	25	16:40 (WEA 10)	18:15	26 17:36 (WEA 6)	20:11	21:05	21:44
14	08:25		14:52 (WEA 11)	07:38		16:15 (WEA 10)	06:35	17:10 (WEA 6)	06:21	05:19	04:47
	16:25	32	15:24 (WEA 11)	17:23	25	16:40 (WEA 10)	18:17	26 17:36 (WEA 6)	20:13	21:07	21:45
15	08:24		14:53 (WEA 11)	07:36		16:14 (WEA 10)	06:33	17:09 (WEA 6)	06:19	05:18	04:47
	16:26	31	15:24 (WEA 11)	17:25	27	16:41 (WEA 10)	18:19	26 17:35 (WEA 6)	20:15	21:08	21:46
16	08:24		14:53 (WEA 11)	07:34		16:14 (WEA 10)	06:30	17:09 (WEA 6)	06:16	05:16	04:47
	16:28	32	15:25 (WEA 11)	17:27	27	16:41 (WEA 10)	18:20	26 17:35 (WEA 6)	20:17	21:10	21:46
17	08:23		14:54 (WEA 11)	07:32		16:14 (WEA 10)	06:28	17:10 (WEA 6)	06:14	05:14	04:47
	16:30	32	15:26 (WEA 11)	17:29	26	16:40 (WEA 10)	18:22	25 17:35 (WEA 6)	20:19	21:11	21:47
18	08:22		14:54 (WEA 11)	07:30		16:14 (WEA 10)	06:26	17:10 (WEA 6)	06:12	05:13	04:47
	16:31	32	15:26 (WEA 11)	17:31	26	16:40 (WEA 10)	18:24	23 17:33 (WEA 6)	20:20	21:13	21:47
19	08:20		14:54 (WEA 11)	07:28		16:15 (WEA 10)	06:23	17:11 (WEA 6)	06:09	05:11	04:47
	16:33	32	15:26 (WEA 11)	17:33	25	16:40 (WEA 10)	18:26	21 17:32 (WEA 6)	20:22	21:15	21:47
20	08:19		14:54 (WEA 11)	07:26		16:15 (WEA 10)	06:21	17:12 (WEA 6)	06:07	05:10	04:47
	16:35	33	15:27 (WEA 11)	17:35	25	16:40 (WEA 10)	18:28	18 17:30 (WEA 6)	20:24	21:16	21:48
21	08:18		14:55 (WEA 11)	07:24		16:16 (WEA 10)	06:18	17:14 (WEA 6)	06:05	05:08	04:47
	16:37	32	15:27 (WEA 11)	17:37	23	16:39 (WEA 10)	18:30	14 17:28 (WEA 6)	20:26	21:18	21:48
22	08:17		14:55 (WEA 11)	07:21		16:17 (WEA 10)	06:16	17:16 (WEA 6)	06:03	05:07	04:47
	16:39	32	15:27 (WEA 11)	17:39	20	16:37 (WEA 10)	18:31	8 17:24 (WEA 6)	20:28	21:19	21:48
23	08:16		14:56 (WEA 11)	07:19		16:18 (WEA 10)	06:14		06:01	05:05	04:47
	16:40	31	15:27 (WEA 11)	17:41	18	16:36 (WEA 10)	18:33		20:30	21:21	21:48
24	08:14		14:56 (WEA 11)	07:17		16:21 (WEA 10)	06:11		05:58	05:04	04:48
	16:42	31	15:27 (WEA 11)	17:43	13	16:34 (WEA 10)	18:35		20:31	21:22	21:49
25	08:13		14:57 (WEA 11)	07:15		16:24 (WEA 10)	06:09		05:56	05:03	04:48
	16:44	30	15:27 (WEA 11)	17:45	5	16:29 (WEA 10)	18:37		20:33	21:24	21:49
26	08:12		14:58 (WEA 11)	07:13			06:06		05:54	05:02	04:49
	16:46	29	15:27 (WEA 11)	17:46			18:39		20:35	21:25	21:49
27	08:10		14:58 (WEA 11)	07:10			06:04		05:52	05:00	04:49
	16:48	28	15:26 (WEA 11)	17:48			18:41		20:37	21:26	21:48
28	08:09		15:00 (WEA 11)	07:08			06:01		05:50	04:59	04:49
	16:50	26	15:26 (WEA 11)	17:50			18:42		20:39	21:28	21:48
29	08:07		15:01 (WEA 11)				06:59		05:48	04:58	04:50
	16:52	24	15:25 (WEA 11)				19:44		20:40	21:29	21:48
30	08:06		15:02 (WEA 11)				06:57		05:46	04:57	04:51
	16:54	22	15:24 (WEA 11)				19:46		20:42	21:30	21:48
31	08:04		15:04 (WEA 11)				06:54			04:56	
	16:55	20	15:24 (WEA 11)				19:48			21:32	
Sonnenscheinstunden			252	274		367		419	492	507	
astr.max.mögl.Beschattung			1008	418		346					

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

Tag im Monat	Sonnenaufgang (SS:MM)		Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)			Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AT - Gartenstraße 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:15 (WEA 6)	08:07 16:06 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:15 (WEA 6)	08:09 16:05 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:14 (WEA 6)	08:10 16:03 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:12 (WEA 6)	08:12 16:00 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:11 (WEA 6)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 18:09 (WEA 6)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 18:06 (WEA 6)	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 17:03 (WEA 10)	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 17:06 (WEA 10)	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 17:08 (WEA 10)	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 17:09 (WEA 10)	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08 (WEA 6)	07:50 17:10 (WEA 10)	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:12 (WEA 6)	07:52 17:10 (WEA 10)	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:14 (WEA 6)	07:54 17:10 (WEA 10)	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:16 (WEA 6)	07:56 17:11 (WEA 10)	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:16 (WEA 6)	07:57 16:11 (WEA 10)	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:16 (WEA 6)	07:59 16:11 (WEA 10)	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:17 (WEA 6)	08:01 16:10 (WEA 10)	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:17 (WEA 6)	08:02 16:10 (WEA 10)	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:16 (WEA 6)	08:04 16:09 (WEA 10)	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:16 (WEA 6)	08:06 16:09 (WEA 10)	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	15:46 (WEA 10) 16:08 (WEA 10)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			209	485	674	1290

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenden (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AU - Gartenstraße 15

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar			Februar			März			April			Mai			Juni		
1	08:32		13:54 (WEA 12)	08:02		15:06 (WEA 11)	07:06		06:52		05:44	04:55					
	16:07	44	15:15 (WEA 11)	16:57	19	15:25 (WEA 11)	17:52		19:50		20:44	21:33					
2	08:32		13:55 (WEA 12)	08:01		15:07 (WEA 11)	07:04		06:49		05:42	04:54					
	16:08	43	15:16 (WEA 11)	16:59	16	15:23 (WEA 11)	17:54		19:51		20:46	21:34					
3	08:31		13:56 (WEA 12)	07:59		15:10 (WEA 11)	07:01		06:47		05:40	04:53					
	16:09	45	15:18 (WEA 11)	17:01	10	15:20 (WEA 11)	17:56		19:53		20:48	21:35					
4	08:31		13:57 (WEA 12)	07:57					06:59		05:38	04:53					
	16:10	43	15:18 (WEA 11)	17:03					19:55		20:49	21:36					
5	08:31		13:58 (WEA 12)	07:55					06:42		05:36	04:52					
	16:12	43	15:19 (WEA 11)	17:05					19:57		20:51	21:37					
6	08:30		13:59 (WEA 12)	07:54					06:40		05:34	04:51					
	16:13	43	15:20 (WEA 11)	17:07					19:59		20:53	21:39					
7	08:30		14:00 (WEA 12)	07:52					06:52		05:32	04:50					
	16:14	42	15:20 (WEA 11)	17:09					17:23 (WEA 6)	06:37	20:01	21:39					
8	08:30		14:03 (WEA 12)	07:50		16:24 (WEA 10)	06:50	7	17:30 (WEA 6)	20:01	20:55	21:39					
	16:16	39	15:22 (WEA 11)	17:11	9	16:33 (WEA 10)	18:05	14	17:19 (WEA 6)	06:35	05:30	04:50					
9	08:29		14:05 (WEA 12)	07:48		16:21 (WEA 10)	06:47		17:33 (WEA 6)	20:02	20:56	21:40					
	16:17	36	15:22 (WEA 11)	17:13	15	16:36 (WEA 10)	18:07	18	17:17 (WEA 6)	06:33	05:28	04:49					
10	08:28		14:54 (WEA 11)	07:46		16:20 (WEA 10)	06:45		17:35 (WEA 6)	20:04	20:58	21:41					
	16:19	29	15:23 (WEA 11)	17:15	18	16:38 (WEA 10)	18:09	21	17:16 (WEA 6)	06:30	05:26	04:49					
11	08:28		14:54 (WEA 11)	07:44		16:19 (WEA 10)	06:42		17:37 (WEA 6)	20:06	21:00	21:42					
	16:20	29	15:23 (WEA 11)	17:17	20	16:39 (WEA 10)	18:11	23	17:14 (WEA 6)	06:28	05:24	04:48					
12	08:27		14:54 (WEA 11)	07:42		16:39 (WEA 10)	18:11		17:37 (WEA 6)	20:08	21:01	21:43					
	16:22	30	15:24 (WEA 11)	17:19	22	16:40 (WEA 10)	18:13	25	17:13 (WEA 6)	06:26	05:23	04:48					
13	08:26		14:54 (WEA 11)	07:40		16:40 (WEA 10)	18:13		17:38 (WEA 6)	20:10	21:03	21:44					
	16:23	31	15:25 (WEA 11)	17:21	24	16:41 (WEA 10)	18:15	26	17:12 (WEA 6)	06:23	05:21	04:48					
14	08:25		14:54 (WEA 11)	07:38		16:17 (WEA 10)	06:35		17:38 (WEA 6)	20:11	21:05	21:44					
	16:25	31	15:25 (WEA 11)	17:23	25	16:42 (WEA 10)	18:17	26	17:12 (WEA 6)	06:21	05:19	04:47					
15	08:24		14:54 (WEA 11)	07:36		16:42 (WEA 10)	18:17		17:38 (WEA 6)	20:13	21:07	21:45					
	16:26	32	15:26 (WEA 11)	17:25	26	16:16 (WEA 10)	06:33		17:11 (WEA 6)	06:19	05:18	04:47					
16	08:24		14:55 (WEA 11)	07:34		16:42 (WEA 10)	18:19	26	17:37 (WEA 6)	20:15	21:08	21:46					
	16:28	32	15:27 (WEA 11)	17:27	27	16:16 (WEA 10)	06:30		17:11 (WEA 6)	06:16	05:16	04:47					
17	08:23		14:55 (WEA 11)	07:32		16:43 (WEA 10)	18:20	26	17:37 (WEA 6)	20:17	21:10	21:46					
	16:30	32	15:27 (WEA 11)	17:29	27	16:15 (WEA 10)	06:28		17:11 (WEA 6)	06:14	05:14	04:47					
18	08:22		14:55 (WEA 11)	07:30		16:42 (WEA 10)	18:22	26	17:37 (WEA 6)	20:19	21:11	21:47					
	16:31	33	15:28 (WEA 11)	17:31	26	16:16 (WEA 10)	06:26		17:11 (WEA 6)	06:12	05:13	04:47					
19	08:20		14:55 (WEA 11)	07:28		16:42 (WEA 10)	18:24	25	17:36 (WEA 6)	20:20	21:13	21:47					
	16:33	33	15:28 (WEA 11)	17:33	26	16:16 (WEA 10)	06:23		17:12 (WEA 6)	06:09	05:11	04:47					
20	08:19		14:56 (WEA 11)	07:26		16:42 (WEA 10)	18:26	23	17:35 (WEA 6)	20:22	21:15	21:47					
	16:35	32	15:28 (WEA 11)	17:35	25	16:17 (WEA 10)	06:21		17:12 (WEA 6)	06:07	05:10	04:47					
21	08:18		14:56 (WEA 11)	07:24		16:42 (WEA 10)	18:28	22	17:34 (WEA 6)	20:24	21:16	21:48					
	16:37	33	15:29 (WEA 11)	17:37	24	16:17 (WEA 10)	06:18		17:14 (WEA 6)	06:05	05:08	04:47					
22	08:17		14:56 (WEA 11)	07:21		16:41 (WEA 10)	18:30	18	17:32 (WEA 6)	20:26	21:18	21:48					
	16:39	33	15:29 (WEA 11)	17:39	23	16:17 (WEA 10)	06:16		17:15 (WEA 6)	06:03	05:07	04:47					
23	08:16		14:57 (WEA 11)	07:19		16:40 (WEA 10)	18:31	15	17:30 (WEA 6)	20:28	21:19	21:48					
	16:40	32	15:29 (WEA 11)	17:41	20	16:19 (WEA 10)	06:14		17:18 (WEA 6)	06:01	05:05	04:47					
24	08:14		14:57 (WEA 11)	07:17		16:39 (WEA 10)	18:33	9	17:27 (WEA 6)	20:30	21:21	21:48					
	16:42	32	15:29 (WEA 11)	17:43	18	16:20 (WEA 10)	06:11			05:58	05:04	04:48					
25	08:13		14:58 (WEA 11)	07:15		16:38 (WEA 10)	18:35		20:31	21:22	21:19	21:49					
	16:44	31	15:29 (WEA 11)	17:45	13	16:22 (WEA 10)	06:09		05:56	05:03	04:48						
26	08:12		14:59 (WEA 11)	07:13		16:35 (WEA 10)	18:37		20:33	21:24	21:19	21:49					
	16:46	30	15:29 (WEA 11)	17:46	5	16:26 (WEA 10)	06:06		05:54	05:02	04:49						
27	08:10		14:59 (WEA 11)	07:10		16:31 (WEA 10)	18:39		20:35	21:25	21:19	21:49					
	16:48	29	15:28 (WEA 11)	17:48					05:52	05:00	04:49						
28	08:09		15:00 (WEA 11)	07:08					20:37	21:26	21:18	21:48					
	16:50	28	15:28 (WEA 11)	17:50					05:50	04:59	04:49						
29	08:07		15:01 (WEA 11)						20:39	21:28	21:18	21:48					
	16:52	27	15:28 (WEA 11)						05:48	04:58	04:50						
30	08:06		15:02 (WEA 11)						20:40	21:29	21:18	21:48					
	16:54	25	15:27 (WEA 11)						05:46	04:57	04:51						
31	08:04		15:04 (WEA 11)						20:42	21:30	21:18	21:48					
	16:55	22	15:26 (WEA 11)							04:56							
Sonnenscheinstunden			252		274		367		419		492	507					
astr.max.mögl.Beschattung			1044		438		350										

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AU - Gartenstraße 15

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:17 (WEA 6)	08:07 16:07 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:16 (WEA 6)	08:09 16:05 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:15 (WEA 6)	08:10 16:02 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:13 (WEA 6)	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:11 (WEA 6)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 18:08 (WEA 6)	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:12 (WEA 6)	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:10 (WEA 6)	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:15 (WEA 6)	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:18 (WEA 6)	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:19 (WEA 6)	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:18 (WEA 6)	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:19 (WEA 6)	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:19 (WEA 6)	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:19 (WEA 6)	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:18 (WEA 6)	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:18 (WEA 6)	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 16:08 (WEA 10)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			237	479	695	1298

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AV - Gartenstraße 17

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar			Februar			März			April			Mai			Juni		
1	08:32		13:51 (WEA 12)	08:02		15:03 (WEA 11)	07:06			06:52		05:44		04:55				
	16:07	46	15:15 (WEA 11)	16:57	23	15:26 (WEA 11)	17:52			19:50		20:44		21:33				
2	08:32		13:52 (WEA 12)	08:01		15:05 (WEA 11)	07:04			06:49		05:42		04:54				
	16:08	45	15:16 (WEA 11)	16:59	20	15:25 (WEA 11)	17:54			19:51		20:46		21:34				
3	08:31		13:53 (WEA 12)	07:59		15:07 (WEA 11)	07:01			06:47		05:40		04:53				
	16:09	46	15:17 (WEA 11)	17:01	16	15:23 (WEA 11)	17:56			19:53		20:48		21:35				
4	08:31		13:53 (WEA 12)	07:57		15:10 (WEA 11)	06:59			06:45		05:38		04:53				
	16:10	46	15:17 (WEA 11)	17:03	10	15:20 (WEA 11)	17:58			19:55		20:49		21:36				
5	08:31		13:55 (WEA 12)	07:55			06:57			06:42		05:36		04:52				
	16:12	45	15:19 (WEA 11)	17:05			18:00			19:57		20:51		21:37				
6	08:30		13:56 (WEA 12)	07:54			06:54			06:40		05:34		04:51				
	16:13	45	15:19 (WEA 11)	17:07			18:02			19:59		20:53		21:39				
7	08:30		13:57 (WEA 12)	07:52			06:52			06:37		05:32		04:50				
	16:14	44	15:20 (WEA 11)	17:09			18:04			20:01		20:55		21:39				
8	08:30		13:59 (WEA 12)	07:50			06:50			06:35		05:30		04:50				
	16:16	42	15:21 (WEA 11)	17:11			18:05			20:02		20:56		21:40				
9	08:29		14:00 (WEA 12)	07:48		16:25 (WEA 10)	06:47		17:23 (WEA 6)	06:33		05:28		04:49				
	16:17	42	15:22 (WEA 11)	17:13	10	16:35 (WEA 10)	18:07	11	17:34 (WEA 6)	20:04		20:58		21:41				
10	08:28		14:02 (WEA 12)	07:46		16:23 (WEA 10)	06:45		17:21 (WEA 6)	06:30		05:26		04:49				
	16:19	38	15:22 (WEA 11)	17:15	15	16:38 (WEA 10)	18:09	16	17:37 (WEA 6)	20:06		21:00		21:42				
11	08:28		14:53 (WEA 11)	07:44		16:21 (WEA 10)	06:42		17:18 (WEA 6)	06:28		05:24		04:48				
	16:20	30	15:23 (WEA 11)	17:17	18	16:39 (WEA 10)	18:11	20	17:38 (WEA 6)	20:08		21:01		21:43				
12	08:27		14:53 (WEA 11)	07:42		16:20 (WEA 10)	06:40		17:17 (WEA 6)	06:26		05:23		04:48				
	16:22	31	15:24 (WEA 11)	17:19	21	16:41 (WEA 10)	18:13	23	17:40 (WEA 6)	20:10		21:03		21:44				
13	08:26		14:53 (WEA 11)	07:40		16:19 (WEA 10)	06:38		17:15 (WEA 6)	06:23		05:21		04:48				
	16:23	31	15:24 (WEA 11)	17:21	23	16:42 (WEA 10)	18:15	25	17:40 (WEA 6)	20:11		21:05		21:44				
14	08:25		14:53 (WEA 11)	07:38		16:18 (WEA 10)	06:35		17:15 (WEA 6)	06:21		05:19		04:47				
	16:25	32	15:25 (WEA 11)	17:23	25	16:43 (WEA 10)	18:17	25	17:40 (WEA 6)	20:13		21:07		21:45				
15	08:24		14:54 (WEA 11)	07:36		16:18 (WEA 10)	06:33		17:13 (WEA 6)	06:19		05:18		04:47				
	16:26	32	15:26 (WEA 11)	17:25	26	16:44 (WEA 10)	18:19	27	17:40 (WEA 6)	20:15		21:08		21:46				
16	08:24		14:54 (WEA 11)	07:34		16:18 (WEA 10)	06:30		17:13 (WEA 6)	06:16		05:16		04:47				
	16:28	32	15:26 (WEA 11)	17:27	26	16:44 (WEA 10)	18:20	27	17:40 (WEA 6)	20:17		21:10		21:46				
17	08:23		14:54 (WEA 11)	07:32		16:17 (WEA 10)	06:28		17:14 (WEA 6)	06:14		05:14		04:47				
	16:30	33	15:27 (WEA 11)	17:29	27	16:44 (WEA 10)	18:22	27	17:41 (WEA 6)	20:19		21:11		21:47				
18	08:22		14:55 (WEA 11)	07:30		16:17 (WEA 10)	06:26		17:13 (WEA 6)	06:12		05:13		04:47				
	16:31	33	15:28 (WEA 11)	17:31	27	16:44 (WEA 10)	18:24	27	17:40 (WEA 6)	20:20		21:13		21:47				
19	08:20		14:54 (WEA 11)	07:28		16:17 (WEA 10)	06:23		17:13 (WEA 6)	06:09		05:11		04:47				
	16:33	34	15:28 (WEA 11)	17:33	27	16:44 (WEA 10)	18:26	26	17:39 (WEA 6)	20:22		21:15		21:47				
20	08:19		14:55 (WEA 11)	07:26		16:17 (WEA 10)	06:21		17:13 (WEA 6)	06:07		05:10		04:47				
	16:35	33	15:28 (WEA 11)	17:35	27	16:44 (WEA 10)	18:28	25	17:38 (WEA 6)	20:24		21:16		21:48				
21	08:18		14:55 (WEA 11)	07:24		16:18 (WEA 10)	06:18		17:14 (WEA 6)	06:05		05:08		04:47				
	16:37	34	15:29 (WEA 11)	17:37	26	16:44 (WEA 10)	18:30	23	17:37 (WEA 6)	20:26		21:18		21:48				
22	08:17		14:55 (WEA 11)	07:21		16:17 (WEA 10)	06:16		17:14 (WEA 6)	06:03		05:07		04:47				
	16:39	34	15:29 (WEA 11)	17:39	26	16:43 (WEA 10)	18:31	22	17:36 (WEA 6)	20:28		21:19		21:48				
23	08:16		14:56 (WEA 11)	07:19		16:18 (WEA 10)	06:14		17:16 (WEA 6)	06:01		05:05		04:47				
	16:40	33	15:29 (WEA 11)	17:41	24	16:42 (WEA 10)	18:33	18	17:34 (WEA 6)	20:30		21:21		21:48				
24	08:14		14:56 (WEA 11)	07:17		16:20 (WEA 10)	06:11		17:17 (WEA 6)	05:58		05:04		04:48				
	16:42	33	15:29 (WEA 11)	17:43	21	16:41 (WEA 10)	18:35	14	17:31 (WEA 6)	20:31		21:22		21:49				
25	08:13		14:57 (WEA 11)	07:15		16:20 (WEA 10)	06:09		17:21 (WEA 6)	05:56		05:03		04:48				
	16:44	33	15:30 (WEA 11)	17:45	19	16:39 (WEA 10)	18:37	7	17:28 (WEA 6)	20:33		21:24		21:49				
26	08:12		14:57 (WEA 11)	07:13		16:22 (WEA 10)	06:06			05:54		05:02		04:49				
	16:46	32	15:29 (WEA 11)	17:46	15	16:37 (WEA 10)	18:39			20:35		21:25		21:49				
27	08:10		14:57 (WEA 11)	07:10		16:26 (WEA 10)	06:04			05:52		05:00		04:49				
	16:48	32	15:29 (WEA 11)	17:48	8	16:34 (WEA 10)	18:41			20:37		21:26		21:48				
28	08:09		14:59 (WEA 11)	07:08			06:01			05:50		04:59		04:49				
	16:50	30	15:29 (WEA 11)	17:50			18:42			20:39		21:28		21:48				
29	08:07		14:59 (WEA 11)				06:59			05:48		04:58		04:50				
	16:52	29	15:28 (WEA 11)				19:44			20:40		21:29		21:48				
30	08:06		15:00 (WEA 11)				06:57			05:46		04:57		04:51				
	16:54	27	15:27 (WEA 11)				19:46			20:42		21:30		21:48				
31	08:04		15:02 (WEA 11)				06:54					04:56						
	16:55	26	15:28 (WEA 11)				19:48					21:32						
Sonnenscheinstunden	252			274			367			419		492		507				
astr.max.mögl.Beschattung		1103			480			363										

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AV - Gartenstraße 17

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:19 (WEA 6)	08:07 16:07 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:18 (WEA 6)	08:09 16:04 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:16 (WEA 6)	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 18:13 (WEA 6)	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 18:02 (WEA 6)	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:59 18:00	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	08:00 17:58	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	08:01 17:56	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	08:02 17:55	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	08:03 17:54	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	08:04 17:53	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10		08:05 17:52	08:07 16:02	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			286	473	729	1351

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AW - Gartenstraße 19

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar			Februar			März			April	Mai	Juni
1	08:32		13:52 (WEA 12)	08:02		15:05 (WEA 11)	07:06		06:52	05:44	04:55
	16:07	43	15:15 (WEA 11)	16:57	26	15:31 (WEA 11)	17:52		19:50	20:44	21:33
2	08:32		13:53 (WEA 12)	08:01		15:06 (WEA 11)	07:04		06:49	05:42	04:54
	16:08	45	15:17 (WEA 11)	16:59	23	15:29 (WEA 11)	17:54		19:51	20:46	21:34
3	08:31		13:54 (WEA 12)	07:59		15:07 (WEA 11)	07:01		06:47	05:40	04:53
	16:09	45	15:18 (WEA 11)	17:01	21	15:28 (WEA 11)	17:56		19:53	20:48	21:35
4	08:31		13:55 (WEA 12)	07:57		15:09 (WEA 11)	06:59		06:45	05:38	04:53
	16:10	45	15:19 (WEA 11)	17:03	17	15:26 (WEA 11)	17:58		19:55	20:49	21:36
5	08:31		13:56 (WEA 12)	07:55		15:12 (WEA 11)	06:57		06:42	05:36	04:52
	16:12	45	15:20 (WEA 11)	17:05	12	15:24 (WEA 11)	18:00		19:57	20:51	21:37
6	08:30		13:57 (WEA 12)	07:54			06:54		06:40	05:34	04:51
	16:13	45	15:21 (WEA 11)	17:07			18:02		19:59	20:53	21:39
7	08:30		13:57 (WEA 12)	07:52			06:52		06:37	05:32	04:50
	16:14	45	15:21 (WEA 11)	17:09			18:04		20:01	20:55	21:39
8	08:30		13:59 (WEA 12)	07:50			06:50		06:35	05:30	04:50
	16:16	45	15:23 (WEA 11)	17:11			18:05		20:02	20:56	21:40
9	08:29		14:00 (WEA 12)	07:48			06:47		06:33	05:28	04:49
	16:17	44	15:24 (WEA 11)	17:13			18:07		20:04	20:58	21:41
10	08:28		14:02 (WEA 12)	07:46		16:28 (WEA 10)	06:45		06:30	05:26	04:49
	16:19	41	15:24 (WEA 11)	17:15	9	16:37 (WEA 10)	18:09	11	17:37 (WEA 6)	20:06	21:42
11	08:28		14:04 (WEA 12)	07:44		16:26 (WEA 10)	06:42		06:28	05:24	04:48
	16:20	39	15:25 (WEA 11)	17:17	14	16:40 (WEA 10)	18:11	17	17:39 (WEA 6)	20:08	21:43
12	08:27		14:07 (WEA 12)	07:42		16:24 (WEA 10)	06:40		06:26	05:23	04:48
	16:22	35	15:26 (WEA 11)	17:19	18	16:42 (WEA 10)	18:13	20	17:41 (WEA 6)	20:10	21:44
13	08:26		14:57 (WEA 11)	07:40		16:23 (WEA 10)	06:38		06:23	05:21	04:48
	16:23	30	15:27 (WEA 11)	17:21	20	16:43 (WEA 10)	18:15	22	17:41 (WEA 6)	20:11	21:44
14	08:25		14:57 (WEA 11)	07:38		16:22 (WEA 10)	06:35		06:21	05:19	04:47
	16:25	30	15:27 (WEA 11)	17:23	23	16:45 (WEA 10)	18:17	24	17:42 (WEA 6)	20:13	21:45
15	08:24		14:57 (WEA 11)	07:36		16:21 (WEA 10)	06:33		06:19	05:18	04:47
	16:26	31	15:28 (WEA 11)	17:25	24	16:45 (WEA 10)	18:19	26	17:42 (WEA 6)	20:15	21:46
16	08:24		14:57 (WEA 11)	07:34		16:21 (WEA 10)	06:30		06:16	05:16	04:47
	16:28	32	15:29 (WEA 11)	17:27	25	16:46 (WEA 10)	18:20	27	17:43 (WEA 6)	20:17	21:46
17	08:23		14:57 (WEA 11)	07:32		16:19 (WEA 10)	06:28		06:14	05:14	04:47
	16:30	33	15:30 (WEA 11)	17:29	27	16:46 (WEA 10)	18:22	27	17:43 (WEA 6)	20:19	21:47
18	08:22		14:58 (WEA 11)	07:30		16:19 (WEA 10)	06:26		06:12	05:13	04:47
	16:31	32	15:30 (WEA 11)	17:31	27	16:46 (WEA 10)	18:24	27	17:42 (WEA 6)	20:20	21:47
19	08:20		14:57 (WEA 11)	07:28		16:19 (WEA 10)	06:23		06:09	05:11	04:47
	16:33	33	15:30 (WEA 11)	17:33	28	16:47 (WEA 10)	18:26	27	17:42 (WEA 6)	20:22	21:47
20	08:19		14:57 (WEA 11)	07:26		16:19 (WEA 10)	06:21		06:07	05:10	04:47
	16:35	34	15:31 (WEA 11)	17:35	28	16:47 (WEA 10)	18:28	26	17:41 (WEA 6)	20:24	21:48
21	08:18		14:58 (WEA 11)	07:24		16:20 (WEA 10)	06:18		06:05	05:08	04:47
	16:37	34	15:32 (WEA 11)	17:37	27	16:47 (WEA 10)	18:30	25	17:41 (WEA 6)	20:26	21:48
22	08:17		14:58 (WEA 11)	07:21		16:19 (WEA 10)	06:16		06:03	05:07	04:47
	16:39	34	15:32 (WEA 11)	17:39	26	16:45 (WEA 10)	18:31	23	17:39 (WEA 6)	20:28	21:48
23	08:16		14:59 (WEA 11)	07:19		16:20 (WEA 10)	06:14		06:01	05:05	04:47
	16:40	33	15:32 (WEA 11)	17:41	25	16:45 (WEA 10)	18:33	21	17:38 (WEA 6)	20:30	21:48
24	08:14		14:58 (WEA 11)	07:17		16:21 (WEA 10)	06:11		05:58	05:04	04:48
	16:42	34	15:32 (WEA 11)	17:43	24	16:45 (WEA 10)	18:35	19	17:36 (WEA 6)	20:31	21:49
25	08:13		14:59 (WEA 11)	07:15		16:21 (WEA 10)	06:09		05:56	05:03	04:48
	16:44	34	15:33 (WEA 11)	17:45	22	16:43 (WEA 10)	18:37	14	17:34 (WEA 6)	20:33	21:49
26	08:12		14:59 (WEA 11)	07:13		16:23 (WEA 10)	06:06		05:54	05:02	04:49
	16:46	33	15:32 (WEA 11)	17:46	19	16:42 (WEA 10)	18:39	6	17:30 (WEA 6)	20:35	21:49
27	08:10		15:00 (WEA 11)	07:10		16:25 (WEA 10)	06:04		05:52	05:00	04:49
	16:48	32	15:32 (WEA 11)	17:48	15	16:40 (WEA 10)	18:41		20:37	21:26	21:48
28	08:09		15:01 (WEA 11)	07:08		16:28 (WEA 10)	06:01		05:50	04:59	04:49
	16:50	31	15:32 (WEA 11)	17:50	8	16:36 (WEA 10)	18:42		20:39	21:28	21:48
29	08:07		15:01 (WEA 11)				06:59		05:48	04:58	04:50
	16:52	31	15:32 (WEA 11)				19:44		20:40	21:29	21:48
30	08:06		15:02 (WEA 11)				06:57		05:46	04:57	04:51
	16:54	29	15:31 (WEA 11)				19:46		20:42	21:30	21:48
31	08:04		15:04 (WEA 11)				06:54			04:56	
	16:55	27	15:31 (WEA 11)				19:48			21:32	
Sonnenscheinstunden	252			274			367		419	492	507
astr.max.mögl.Beschattung		1124			508			362			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AW - Gartenstraße 19

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember			
1	04:51 21:48	05:30 21:13	06:24 20:08		07:16 18:55	21	17:59 (WEA 6) 07:13 18:20 (WEA 6) 16:45	7	15:59 (WEA 10) 08:07 16:06 (WEA 10) 16:02	39	13:46 (WEA 12) 15:07 (WEA 11)	
2	04:52 21:47	05:32 21:11	06:25 20:05		07:18 18:53	19	18:00 (WEA 6) 16:43 18:19 (WEA 6) 16:43		07:15 16:01	41	13:45 (WEA 12) 15:07 (WEA 11)	
3	04:53 21:47	05:34 21:10	06:27 20:03		07:19 18:50	14	18:02 (WEA 6) 16:42 18:16 (WEA 6) 16:42		07:17 16:01	43	13:44 (WEA 12) 15:07 (WEA 11)	
4	04:54 21:46	05:35 21:08	06:29 20:01		07:21 18:48	6	18:05 (WEA 6) 16:40 18:11 (WEA 6) 16:40		07:19 16:00	44	13:43 (WEA 12) 15:07 (WEA 11)	
5	04:54 21:46	05:37 21:06	06:31 19:58		07:23 18:45		07:21 16:38		08:13 15:59	45	13:42 (WEA 12) 15:06 (WEA 11)	
6	04:55 21:45	05:39 21:04	06:32 19:56		07:25 18:43		07:23 16:36	13	14:42 (WEA 11) 08:14 14:55 (WEA 11) 15:59	45	13:43 (WEA 12) 15:07 (WEA 11)	
7	04:56 21:45	05:40 21:02	06:34 19:53		07:27 18:41		07:24 16:34	17	14:40 (WEA 11) 08:16 14:57 (WEA 11) 15:58	45	13:42 (WEA 12) 15:06 (WEA 11)	
8	04:57 21:44	05:42 21:00	06:36 19:51		07:28 18:38		07:26 16:32	21	14:38 (WEA 11) 08:17 14:59 (WEA 11) 15:58	45	13:43 (WEA 12) 15:07 (WEA 11)	
9	04:58 21:43	05:44 20:58	06:37 19:49		07:30 18:36		07:28 16:31	24	14:36 (WEA 11) 08:18 15:00 (WEA 11) 15:58	45	13:42 (WEA 12) 15:06 (WEA 11)	
10	04:59 21:42	05:45 20:56	06:39 19:46		07:32 18:33		07:30 16:29	26	14:35 (WEA 11) 08:19 15:01 (WEA 11) 15:57	45	13:42 (WEA 12) 15:06 (WEA 11)	
11	05:00 21:42	05:47 20:54	06:41 19:44		07:34 18:31		07:32 16:27	28	14:34 (WEA 11) 08:20 15:02 (WEA 11) 15:57	44	13:42 (WEA 12) 15:06 (WEA 11)	
12	05:02 21:41	05:49 20:52	06:43 19:41		07:36 18:29		07:34 16:25	29	14:34 (WEA 11) 08:22 15:03 (WEA 11) 15:57	43	13:43 (WEA 12) 15:06 (WEA 11)	
13	05:03 21:40	05:51 20:50	06:44 19:39		07:37 18:26		07:36 16:24	31	14:33 (WEA 11) 08:23 15:04 (WEA 11) 15:57	42	13:43 (WEA 12) 15:06 (WEA 11)	
14	05:04 21:39	05:52 20:48	06:46 19:36		07:39 18:24	11	16:59 (WEA 10) 07:38 17:10 (WEA 10) 16:22	31	14:33 (WEA 11) 08:24 15:04 (WEA 11) 15:57	42	13:43 (WEA 12) 15:06 (WEA 11)	
15	05:05 21:38	05:54 20:46	06:48 19:34		07:41 18:22	17	16:56 (WEA 10) 07:40 17:13 (WEA 10) 16:21	32	14:33 (WEA 11) 08:24 15:05 (WEA 11) 15:57	41	13:44 (WEA 12) 15:06 (WEA 11)	
16	05:07 21:36	05:56 20:44	06:50 19:32		07:43 18:20	19	16:55 (WEA 10) 07:41 17:14 (WEA 10) 16:19	33	14:32 (WEA 11) 08:25 15:05 (WEA 11) 15:57	40	13:43 (WEA 12) 15:05 (WEA 11)	
17	05:08 21:35	05:57 20:42	06:51 19:29	3	18:14 (WEA 6) 07:45 18:17 (WEA 6) 18:17	22	16:53 (WEA 10) 07:43 17:15 (WEA 10) 16:18	34	14:32 (WEA 11) 08:26 15:06 (WEA 11) 15:57	39	13:44 (WEA 12) 15:05 (WEA 11)	
18	05:09 21:34	05:59 20:40	06:53 19:27	13	18:08 (WEA 6) 07:47 18:21 (WEA 6) 18:15	24	16:52 (WEA 10) 07:45 17:16 (WEA 10) 16:16	34	14:32 (WEA 11) 08:27 15:06 (WEA 11) 15:57	39	13:44 (WEA 12) 15:05 (WEA 11)	
19	05:11 21:33	06:01 20:37	06:55 19:24	18	18:05 (WEA 6) 07:48 18:23 (WEA 6) 18:13	26	16:51 (WEA 10) 07:47 17:17 (WEA 10) 16:15	33	14:33 (WEA 11) 08:28 15:06 (WEA 11) 15:58	39	13:45 (WEA 12) 15:06 (WEA 11)	
20	05:12 21:32	06:03 20:35	06:57 19:22	20	18:04 (WEA 6) 07:50 18:24 (WEA 6) 18:11	27	16:50 (WEA 10) 07:49 17:17 (WEA 10) 16:14	34	14:33 (WEA 11) 08:28 15:07 (WEA 11) 15:58	38	13:45 (WEA 12) 15:05 (WEA 11)	
21	05:13 21:30	06:04 20:33	06:58 19:19	23	18:01 (WEA 6) 07:52 18:24 (WEA 6) 18:08	27	16:50 (WEA 10) 07:50 17:17 (WEA 10) 16:12	34	14:33 (WEA 11) 08:29 15:07 (WEA 11) 15:58	38	13:46 (WEA 12) 15:06 (WEA 11)	
22	05:15 21:29	06:06 20:31	07:00 19:17	25	18:00 (WEA 6) 07:54 18:25 (WEA 6) 18:06	27	16:50 (WEA 10) 07:52 17:17 (WEA 10) 16:11	33	14:34 (WEA 11) 08:30 15:07 (WEA 11) 15:59	38	13:46 (WEA 12) 15:06 (WEA 11)	
23	05:16 21:28	06:08 20:28	07:02 19:14	25	18:00 (WEA 6) 07:56 18:25 (WEA 6) 18:04	27	16:50 (WEA 10) 07:54 17:17 (WEA 10) 16:10	33	14:34 (WEA 11) 08:30 15:07 (WEA 11) 15:59	38	13:47 (WEA 12) 15:07 (WEA 11)	
24	05:18 21:26	06:10 20:26	07:04 19:12	27	17:59 (WEA 6) 07:58 18:26 (WEA 6) 18:02	27	16:50 (WEA 10) 07:56 17:17 (WEA 10) 16:09	33	14:35 (WEA 11) 08:30 15:08 (WEA 11) 16:00	39	13:47 (WEA 12) 15:08 (WEA 11)	
25	05:19 21:25	06:11 20:24	07:05 19:10	27	17:58 (WEA 6) 07:00 18:25 (WEA 6) 17:00	26	15:50 (WEA 10) 07:57 16:16 (WEA 10) 16:08	33	14:35 (WEA 11) 08:31 15:08 (WEA 11) 16:01	39	13:47 (WEA 12) 15:08 (WEA 11)	
26	05:21 21:23	06:13 20:22	07:07 19:07	27	17:58 (WEA 6) 07:02 18:25 (WEA 6) 16:58	26	15:50 (WEA 10) 07:59 16:16 (WEA 10) 16:07	32	14:36 (WEA 11) 08:31 15:08 (WEA 11) 16:01	39	13:49 (WEA 12) 15:10 (WEA 11)	
27	05:22 21:22	06:15 20:19	07:09 19:05	26	17:58 (WEA 6) 07:04 18:24 (WEA 6) 16:56	24	15:51 (WEA 10) 08:01 16:15 (WEA 10) 16:06	31	14:36 (WEA 11) 08:31 15:07 (WEA 11) 16:02	40	13:49 (WEA 12) 15:11 (WEA 11)	
28	05:24 21:20	06:17 20:17	07:11 19:02	26	17:58 (WEA 6) 07:05 18:24 (WEA 6) 16:53	23	15:51 (WEA 10) 08:02 16:14 (WEA 10) 16:05	30	14:37 (WEA 11) 08:32 15:07 (WEA 11) 16:03	41	13:50 (WEA 12) 15:12 (WEA 11)	
29	05:26 21:18	06:18 20:15	07:12 19:00	25	17:57 (WEA 6) 07:07 18:22 (WEA 6) 16:51	21	15:52 (WEA 10) 08:04 16:13 (WEA 10) 16:04	30	14:38 (WEA 11) 08:32 15:08 (WEA 11) 16:04	42	13:50 (WEA 12) 15:13 (WEA 11)	
30	05:27 21:17	06:20 20:12	07:14 18:57	23	17:58 (WEA 6) 07:09 18:21 (WEA 6) 16:49	17	15:54 (WEA 10) 08:06 16:11 (WEA 10) 16:03	34	13:49 (WEA 12) 08:32 15:08 (WEA 11) 16:05	42	13:51 (WEA 12) 15:14 (WEA 11)	
31	05:29 21:15	06:22 20:10			07:11 16:47	13	15:56 (WEA 10) 16:09 (WEA 10)		08:32 16:06	43	13:51 (WEA 12) 15:14 (WEA 11)	
Sonnenscheinstunden	510	458	382		329	464		261		236		1283
astr.max.mögl.Beschattung			308					750				

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AX - Gartenstraße 21

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar			Februar			März			April			Mai			Juni		
1	08:32		13:51 (WEA 12)	08:02		15:05 (WEA 11)	07:06		16:29 (WEA 10)	06:52		05:44			04:55		
	16:07	42	15:15 (WEA 11)	16:57	28	15:33 (WEA 11)	17:52	9	16:38 (WEA 10)	19:50		20:44			21:33		
2	08:32		13:52 (WEA 12)	08:01		15:05 (WEA 11)	07:04			06:49		05:42			04:54		
	16:08	44	15:17 (WEA 11)	16:59	27	15:32 (WEA 11)	17:54			19:51		20:46			21:34		
3	08:31		13:52 (WEA 12)	07:59		15:07 (WEA 11)	07:01			06:47		05:40			04:53		
	16:09	44	15:17 (WEA 11)	17:01	24	15:31 (WEA 11)	17:56			19:53		20:48			21:35		
4	08:31		13:54 (WEA 12)	07:57		15:08 (WEA 11)	06:59			06:45		05:38			04:53		
	16:10	45	15:19 (WEA 11)	17:03	22	15:30 (WEA 11)	17:58			19:55		20:49			21:36		
5	08:31		13:55 (WEA 12)	07:55		15:10 (WEA 11)	06:57			06:42		05:36			04:52		
	16:12	45	15:20 (WEA 11)	17:05	18	15:28 (WEA 11)	18:00			19:57		20:51			21:37		
6	08:30		13:56 (WEA 12)	07:54		15:12 (WEA 11)	06:54			06:40		05:34			04:51		
	16:13	45	15:21 (WEA 11)	17:07	14	15:26 (WEA 11)	18:02			19:59		20:53			21:39		
7	08:30		13:56 (WEA 12)	07:52		15:18 (WEA 11)	06:52			06:37		05:32			04:50		
	16:14	46	15:22 (WEA 11)	17:09	2	15:20 (WEA 11)	18:04			20:01		20:55			21:39		
8	08:30		13:58 (WEA 12)	07:50			06:50			06:35		05:30			04:50		
	16:16	45	15:23 (WEA 11)	17:11			18:05			20:02		20:56			21:40		
9	08:29		13:59 (WEA 12)	07:48			06:47			06:33		05:28			04:49		
	16:17	45	15:24 (WEA 11)	17:13			18:07			20:04		20:58			21:41		
10	08:28		14:00 (WEA 12)	07:46			06:45			06:30		05:26			04:49		
	16:19	44	15:25 (WEA 11)	17:15			18:09			20:06		21:00			21:42		
11	08:28		14:02 (WEA 12)	07:44		16:31 (WEA 10)	06:42		17:28 (WEA 6)	06:28		05:24			04:48		
	16:20	43	15:26 (WEA 11)	17:17	8	16:39 (WEA 10)	18:11	10	17:38 (WEA 6)	20:08		21:01			21:43		
12	08:27		14:03 (WEA 12)	07:42		16:28 (WEA 10)	06:40		17:25 (WEA 6)	06:26		05:23			04:48		
	16:22	42	15:27 (WEA 11)	17:19	14	16:42 (WEA 10)	18:13	16	17:41 (WEA 6)	20:10		21:03			21:44		
13	08:26		14:06 (WEA 12)	07:40		16:26 (WEA 10)	06:38		17:23 (WEA 6)	06:23		05:21			04:48		
	16:23	37	15:27 (WEA 11)	17:21	18	16:44 (WEA 10)	18:15	19	17:42 (WEA 6)	20:11		21:05			21:44		
14	08:25		14:58 (WEA 11)	07:38		16:25 (WEA 10)	06:35		17:21 (WEA 6)	06:21		05:19			04:47		
	16:25	30	15:28 (WEA 11)	17:23	20	16:45 (WEA 10)	18:17	23	17:44 (WEA 6)	20:13		21:07			21:45		
15	08:24		14:58 (WEA 11)	07:36		16:24 (WEA 10)	06:33		17:20 (WEA 6)	06:19		05:18			04:47		
	16:26	31	15:29 (WEA 11)	17:25	23	16:47 (WEA 10)	18:19	24	17:44 (WEA 6)	20:15		21:08			21:46		
16	08:24		14:58 (WEA 11)	07:34		16:23 (WEA 10)	06:30		17:19 (WEA 6)	06:16		05:16			04:47		
	16:28	32	15:30 (WEA 11)	17:27	25	16:48 (WEA 10)	18:20	26	17:45 (WEA 6)	20:17		21:10			21:46		
17	08:23		14:59 (WEA 11)	07:32		16:22 (WEA 10)	06:28		17:19 (WEA 6)	06:14		05:14			04:47		
	16:30	32	15:31 (WEA 11)	17:29	25	16:47 (WEA 10)	18:22	26	17:45 (WEA 6)	20:19		21:11			21:47		
18	08:22		14:59 (WEA 11)	07:30		16:21 (WEA 10)	06:26		17:18 (WEA 6)	06:12		05:13			04:47		
	16:31	33	15:32 (WEA 11)	17:31	27	16:48 (WEA 10)	18:24	27	17:45 (WEA 6)	20:20		21:13			21:47		
19	08:20		14:58 (WEA 11)	07:28		16:21 (WEA 10)	06:23		17:18 (WEA 6)	06:09		05:11			04:47		
	16:33	34	15:32 (WEA 11)	17:33	28	16:49 (WEA 10)	18:26	27	17:45 (WEA 6)	20:22		21:15			21:47		
20	08:19		14:59 (WEA 11)	07:26		16:21 (WEA 10)	06:21		17:17 (WEA 6)	06:07		05:10			04:47		
	16:35	33	15:32 (WEA 11)	17:35	28	16:49 (WEA 10)	18:28	27	17:44 (WEA 6)	20:24		21:16			21:48		
21	08:18		14:59 (WEA 11)	07:24		16:21 (WEA 10)	06:18		17:17 (WEA 6)	06:05		05:08			04:47		
	16:37	34	15:33 (WEA 11)	17:37	28	16:49 (WEA 10)	18:30	27	17:44 (WEA 6)	20:26		21:18			21:48		
22	08:17		14:59 (WEA 11)	07:21		16:21 (WEA 10)	06:16		17:17 (WEA 6)	06:03		05:07			04:47		
	16:39	34	15:33 (WEA 11)	17:39	27	16:48 (WEA 10)	18:31	25	17:42 (WEA 6)	20:28		21:19			21:48		
23	08:16		15:00 (WEA 11)	07:19		16:21 (WEA 10)	06:14		17:18 (WEA 6)	06:01		05:05			04:47		
	16:40	34	15:34 (WEA 11)	17:41	27	16:48 (WEA 10)	18:33	24	17:42 (WEA 6)	20:30		21:21			21:48		
24	08:14		14:59 (WEA 11)	07:17		16:22 (WEA 10)	06:11		17:18 (WEA 6)	05:58		05:04			04:48		
	16:42	35	15:34 (WEA 11)	17:43	25	16:47 (WEA 10)	18:35	22	17:40 (WEA 6)	20:31		21:22			21:49		
25	08:13		15:00 (WEA 11)	07:15		16:22 (WEA 10)	06:09		17:19 (WEA 6)	05:56		05:03			04:48		
	16:44	34	15:34 (WEA 11)	17:45	24	16:46 (WEA 10)	18:37	20	17:39 (WEA 6)	20:33		21:24			21:49		
26	08:12		15:00 (WEA 11)	07:13		16:23 (WEA 10)	06:06		17:21 (WEA 6)	05:54		05:02			04:49		
	16:46	34	15:34 (WEA 11)	17:46	22	16:45 (WEA 10)	18:39	16	17:37 (WEA 6)	20:35		21:25			21:49		
27	08:10		15:00 (WEA 11)	07:10		16:25 (WEA 10)	06:04		17:23 (WEA 6)	05:52		05:00			04:49		
	16:48	34	15:34 (WEA 11)	17:48	19	16:44 (WEA 10)	18:41	11	17:34 (WEA 6)	20:37		21:26			21:48		
28	08:09		15:01 (WEA 11)	07:08		16:26 (WEA 10)	06:01			05:50		04:59			04:49		
	16:50	33	15:34 (WEA 11)	17:50	15	16:41 (WEA 10)	18:42			20:39		21:28			21:48		
29	08:07		15:02 (WEA 11)				06:59			05:48		04:58			04:50		
	16:52	32	15:34 (WEA 11)				19:44			20:40		21:29			21:48		
30	08:06		15:02 (WEA 11)				06:57			05:46		04:57			04:51		
	16:54	31	15:33 (WEA 11)				19:46			20:42		21:30			21:48		
31	08:04		15:04 (WEA 11)				06:54					04:56					
	16:55	30	15:34 (WEA 11)				19:48					21:32					
Sonnenscheinstunden			252		274		367		419		492		507				
astr.max.mögl.Beschattung			1157		538		379										

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AX - Gartenstraße 21

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:21 (WEA 6)	08:07 16:45
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:18 (WEA 6)	08:09 16:43
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:11 (WEA 6)	08:10 16:42
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 14:46 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 14:52 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 14:42 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 14:56 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 14:39 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:01 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 14:36 (WEA 11)
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 14:35 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:05 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 17:01 (WEA 10)	08:23 14:34 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 17:13 (WEA 10)	08:24 15:06 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:58 (WEA 10)	08:24 14:33 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 17:17 (WEA 10)	08:25 15:07 (WEA 11)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:55 (WEA 10)	08:26 14:33 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 17:18 (WEA 10)	08:27 15:07 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:46 16:53 (WEA 10)	08:28 14:33 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 17:19 (WEA 10)	08:28 15:08 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:52 (WEA 10)	08:29 14:34 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 17:19 (WEA 10)	08:30 15:08 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:52 (WEA 10)	08:30 14:35 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 17:19 (WEA 10)	08:30 15:09 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:00 (WEA 6)	07:57 16:52 (WEA 10)	08:31 14:36 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:00 (WEA 6)	07:59 16:18 (WEA 10)	08:31 15:09 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:01 (WEA 6)	08:01 15:53 (WEA 10)	08:31 14:37 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:01 (WEA 6)	08:02 15:54 (WEA 10)	08:32 14:38 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:02 (WEA 6)	08:04 16:13 (WEA 10)	08:32 15:08 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:22 (WEA 6)	08:06 16:11 (WEA 10)	08:32 15:09 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 16:07 (WEA 10)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			340	445	811	1172

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AY - Gartenstraße 28

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	13:56 (WEA 12) 14:27 (WEA 12)	08:02 16:57	15:10 (WEA 11) 17:52	06:52 19:50	05:44 20:44
2	08:32 16:08	13:57 (WEA 12) 14:28 (WEA 12)	08:01 16:59	15:10 (WEA 11) 17:54	06:49 19:51	05:42 20:46
3	08:31 16:09	13:57 (WEA 12) 14:27 (WEA 12)	07:59 17:01	15:11 (WEA 11) 17:56	06:47 19:53	05:40 20:48
4	08:31 16:10	13:59 (WEA 12) 14:28 (WEA 12)	07:57 17:03	15:12 (WEA 11) 17:58	06:45 19:55	05:38 20:49
5	08:31 16:12	14:00 (WEA 12) 15:20 (WEA 11)	07:55 17:05	15:13 (WEA 11) 18:00	06:42 19:57	05:36 20:51
6	08:30 16:13	14:00 (WEA 12) 15:22 (WEA 11)	07:54 17:07	15:14 (WEA 11) 18:02	06:40 19:59	05:34 20:53
7	08:30 16:14	14:01 (WEA 12) 15:23 (WEA 11)	07:52 17:09	15:16 (WEA 11) 18:04	06:37 20:01	05:32 20:55
8	08:30 16:16	14:02 (WEA 12) 15:26 (WEA 11)	07:50 17:11	15:19 (WEA 11) 18:05	06:35 20:02	05:30 20:56
9	08:29 16:17	14:03 (WEA 12) 15:27 (WEA 11)	07:48 17:13	15:23 (WEA 11) 18:07	06:33 20:04	05:28 20:58
10	08:28 16:19	14:04 (WEA 12) 15:28 (WEA 11)	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00
11	08:28 16:20	14:05 (WEA 12) 15:29 (WEA 11)	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01
12	08:27 16:22	14:06 (WEA 12) 15:30 (WEA 11)	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03
13	08:26 16:23	14:07 (WEA 12) 15:32 (WEA 11)	07:40 17:21	16:36 (WEA 10) 18:15	06:23 20:11	05:21 21:05
14	08:25 16:25	14:09 (WEA 12) 15:33 (WEA 11)	07:38 17:23	16:33 (WEA 10) 18:17	06:21 20:13	05:19 21:07
15	08:24 16:26	14:11 (WEA 12) 15:34 (WEA 11)	07:36 17:25	16:31 (WEA 10) 18:19	06:19 20:15	05:18 21:08
16	08:24 16:28	14:15 (WEA 12) 15:35 (WEA 11)	07:34 17:27	16:30 (WEA 10) 18:20	06:16 20:17	05:16 21:10
17	08:23 16:30	15:07 (WEA 11) 15:36 (WEA 11)	07:32 17:29	16:28 (WEA 10) 18:22	06:14 20:19	05:14 21:11
18	08:22 16:31	15:07 (WEA 11) 15:37 (WEA 11)	07:30 17:31	16:27 (WEA 10) 18:24	06:12 20:20	05:13 21:13
19	08:20 16:33	15:06 (WEA 11) 15:37 (WEA 11)	07:28 17:33	16:27 (WEA 10) 18:26	06:09 20:22	05:11 21:15
20	08:19 16:35	15:06 (WEA 11) 15:38 (WEA 11)	07:26 17:35	16:26 (WEA 10) 18:28	06:07 20:24	05:10 21:16
21	08:18 16:37	15:07 (WEA 11) 15:39 (WEA 11)	07:24 17:37	16:26 (WEA 10) 18:30	06:05 20:26	05:08 21:18
22	08:17 16:39	15:06 (WEA 11) 15:39 (WEA 11)	07:21 17:39	16:25 (WEA 10) 18:31	06:03 20:28	05:07 21:19
23	08:16 16:40	15:07 (WEA 11) 15:40 (WEA 11)	07:19 17:41	16:26 (WEA 10) 18:33	06:01 20:30	05:05 21:21
24	08:14 16:42	15:06 (WEA 11) 15:40 (WEA 11)	07:17 17:43	16:26 (WEA 10) 18:35	05:58 20:31	05:04 21:22
25	08:13 16:44	15:07 (WEA 11) 15:41 (WEA 11)	07:15 17:45	16:26 (WEA 10) 18:37	05:56 20:33	05:03 21:24
26	08:12 16:46	15:07 (WEA 11) 15:41 (WEA 11)	07:13 17:46	16:26 (WEA 10) 18:39	05:54 20:35	05:02 21:25
27	08:10 16:48	15:07 (WEA 11) 15:41 (WEA 11)	07:10 17:48	16:28 (WEA 10) 18:41	05:52 20:37	05:00 21:26
28	08:09 16:50	15:08 (WEA 11) 15:42 (WEA 11)	07:08 17:50	16:28 (WEA 10) 18:42	05:50 20:39	04:59 21:28
29	08:07 16:52	15:08 (WEA 11) 15:41 (WEA 11)	07:06 17:44	06:59 19:44	05:48 20:40	04:58 21:29
30	08:06 16:54	15:08 (WEA 11) 15:41 (WEA 11)	07:04 17:46	06:57 19:46	05:46 20:42	04:57 21:30
31	08:04 16:55	15:09 (WEA 11) 15:42 (WEA 11)	07:02 17:48	06:54 19:48	05:44 20:44	04:56 21:32
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1098	569	390			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: AY - Gartenstraße 28

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:01	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:00	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:00	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:00	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:00	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:00	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47		08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			351	413	902	1043

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AZ - Gartenstraße 26

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 30	13:57 (WEA 12) 14:27 (WEA 12) 16:57	08:02 15:09 (WEA 11) 17:52	16:30 (WEA 10) 16:44 (WEA 10) 19:50	05:44 20:44 21:33	04:55 20:44 21:33
2	08:32 16:08 29	13:58 (WEA 12) 14:27 (WEA 12) 16:59	08:01 15:10 (WEA 11) 17:54	16:34 (WEA 10) 16:40 (WEA 10) 19:51	05:42 20:46 21:34	04:54 20:46 21:34
3	08:31 16:09 30	13:58 (WEA 12) 15:15 (WEA 11) 17:01	07:59 15:11 (WEA 11) 17:56	16:40 (WEA 10) 19:51 20:47	05:40 20:48 21:35	04:53 20:48 21:35
4	08:31 16:10 36	13:59 (WEA 12) 15:19 (WEA 11) 17:03	07:57 15:12 (WEA 11) 17:58	16:45 19:55 20:49	05:38 20:49 21:36	04:53 20:49 21:36
5	08:31 16:12 39	14:00 (WEA 12) 15:21 (WEA 11) 17:05	07:55 15:13 (WEA 11) 18:00	16:42 19:57 20:51	05:36 20:51 21:37	04:52 20:51 21:37
6	08:30 16:13 41	14:01 (WEA 12) 15:23 (WEA 11) 17:07	07:54 15:15 (WEA 11) 18:02	16:40 19:59 20:53	05:34 20:53 21:39	04:51 20:53 21:39
7	08:30 16:14 42	14:01 (WEA 12) 15:24 (WEA 11) 17:09	07:52 15:17 (WEA 11) 18:04	16:37 20:01 20:55	05:32 20:55 21:39	04:50 20:55 21:39
8	08:30 16:16 43	14:03 (WEA 12) 15:26 (WEA 11) 17:11	07:50 15:21 (WEA 11) 18:05	16:35 20:02 20:56	05:30 20:56 21:40	04:50 20:56 21:40
9	08:29 16:17 43	14:04 (WEA 12) 15:27 (WEA 11) 17:13	07:48 18:07 18:07	16:33 20:04 20:58	05:28 20:58 21:41	04:49 20:58 21:41
10	08:28 16:19 43	14:05 (WEA 12) 15:28 (WEA 11) 17:15	07:46 18:09 18:09	16:30 20:06 21:00	05:26 21:00 21:42	04:49 21:00 21:42
11	08:28 16:20 43	14:06 (WEA 12) 15:29 (WEA 11) 17:17	07:44 18:11 18:11	17:34 (WEA 6) 17:36 (WEA 6) 20:08	05:24 21:01 21:43	04:48 21:01 21:43
12	08:27 16:22 43	14:07 (WEA 12) 15:30 (WEA 11) 17:19	07:42 16:35 (WEA 10) 18:13	17:29 (WEA 6) 17:41 (WEA 6) 20:10	05:23 21:03 21:44	04:48 21:03 21:44
13	08:26 16:23 41	14:09 (WEA 12) 15:31 (WEA 11) 17:21	07:40 16:32 (WEA 10) 18:15	17:25 (WEA 6) 17:43 (WEA 6) 20:11	05:21 21:05 21:44	04:48 21:05 21:44
14	08:25 16:25 40	14:11 (WEA 12) 15:32 (WEA 11) 17:23	07:38 16:30 (WEA 10) 18:17	17:24 (WEA 6) 17:45 (WEA 6) 20:13	05:19 21:07 21:45	04:47 21:07 21:45
15	08:24 16:26 36	14:14 (WEA 12) 15:33 (WEA 11) 17:25	07:36 16:28 (WEA 10) 18:19	17:22 (WEA 6) 17:45 (WEA 6) 20:15	05:18 21:08 21:46	04:47 21:08 21:46
16	08:24 16:28 29	15:05 (WEA 11) 15:34 (WEA 11) 17:27	07:34 16:27 (WEA 10) 18:20	17:21 (WEA 6) 17:46 (WEA 6) 20:17	05:16 21:10 21:46	04:47 21:10 21:46
17	08:23 16:30 30	15:05 (WEA 11) 15:35 (WEA 11) 17:29	07:32 16:26 (WEA 10) 18:22	17:21 (WEA 6) 17:47 (WEA 6) 20:19	05:14 21:11 21:47	04:47 21:11 21:47
18	08:22 16:31 30	15:06 (WEA 11) 15:36 (WEA 11) 17:31	07:30 16:25 (WEA 10) 18:24	17:20 (WEA 6) 17:46 (WEA 6) 20:20	05:13 21:13 21:47	04:47 21:13 21:47
19	08:20 16:33 31	15:05 (WEA 11) 15:36 (WEA 11) 17:33	07:28 16:25 (WEA 10) 18:26	17:20 (WEA 6) 17:46 (WEA 6) 20:22	05:11 21:15 21:47	04:47 21:15 21:47
20	08:19 16:35 32	15:05 (WEA 11) 15:37 (WEA 11) 17:35	07:26 16:25 (WEA 10) 18:28	17:19 (WEA 6) 17:46 (WEA 6) 20:24	05:10 21:16 21:48	04:47 21:16 21:48
21	08:18 16:37 33	15:05 (WEA 11) 15:38 (WEA 11) 17:37	07:24 16:25 (WEA 10) 18:30	17:19 (WEA 6) 17:45 (WEA 6) 20:26	05:08 21:18 21:48	04:47 21:18 21:48
22	08:17 16:39 33	15:05 (WEA 11) 15:38 (WEA 11) 17:39	07:21 16:24 (WEA 10) 18:31	17:19 (WEA 6) 17:44 (WEA 6) 20:28	05:07 21:19 21:48	04:47 21:19 21:48
23	08:16 16:40 33	15:06 (WEA 11) 15:39 (WEA 11) 17:41	07:19 16:24 (WEA 10) 18:33	17:20 (WEA 6) 17:44 (WEA 6) 20:30	05:05 21:21 21:48	04:47 21:21 21:48
24	08:14 16:42 34	15:05 (WEA 11) 15:39 (WEA 11) 17:43	07:17 16:25 (WEA 10) 18:35	17:20 (WEA 6) 17:42 (WEA 6) 20:31	05:04 21:22 21:49	04:48 21:22 21:49
25	08:13 16:44 34	15:06 (WEA 11) 15:40 (WEA 11) 17:45	07:15 16:25 (WEA 10) 18:37	17:21 (WEA 6) 17:41 (WEA 6) 20:33	05:03 21:24 21:49	04:48 21:24 21:49
26	08:12 16:46 34	15:06 (WEA 11) 15:40 (WEA 11) 17:46	07:13 16:26 (WEA 10) 18:39	17:23 (WEA 6) 17:39 (WEA 6) 20:35	05:02 21:25 21:49	04:49 21:25 21:49
27	08:10 16:48 33	15:06 (WEA 11) 15:39 (WEA 11) 17:48	07:10 16:27 (WEA 10) 18:41	17:25 (WEA 6) 17:36 (WEA 6) 20:37	05:00 21:26 21:48	04:49 21:26 21:48
28	08:09 16:50 33	15:07 (WEA 11) 15:40 (WEA 11) 17:50	07:08 16:28 (WEA 10) 18:42	17:36 (WEA 6) 20:39 21:28	04:59 21:28 21:48	04:49 21:28 21:48
29	08:07 16:52 33	15:07 (WEA 11) 15:40 (WEA 11) 17:51	07:06 16:29 (WEA 10) 18:43	20:39 21:29 21:49	04:58 21:29 21:48	04:50 21:29 21:48
30	08:06 16:54 32	15:07 (WEA 11) 15:39 (WEA 11) 17:52	07:04 16:30 (WEA 10) 18:44	20:40 21:30 21:49	04:57 21:30 21:48	04:51 21:30 21:48
31	08:04 16:55 31	15:09 (WEA 11) 15:40 (WEA 11) 17:53	07:02 16:31 (WEA 10) 18:45	20:42 21:32 21:49	04:56 21:32 21:48	04:51 21:32 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1094	551	370			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** AZ - Gartenstraße 26

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:21 (WEA 6)	08:07 16:45
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:09 (WEA 6)	08:09 16:43
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:15 (WEA 6)	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:11 (WEA 6)	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:09 (WEA 6)	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:08 (WEA 6)	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:06 (WEA 6)	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:05 (WEA 6)	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:04 (WEA 6)	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:03 (WEA 6)	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:03 (WEA 6)	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:02 (WEA 6)	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:03 (WEA 6)	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:03 (WEA 6)	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:04 (WEA 6)	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:03 (WEA 6)	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:05 (WEA 6)	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47		08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			333	418	852	1044

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BA - Gartenstraße 24

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April	Mai	Juni
1	08:32	13:58 (WEA 12)	08:02	15:09 (WEA 11)	07:06	06:52	05:44	04:55
	16:07	34 15:15 (WEA 11)	16:57	28 15:37 (WEA 11)	17:52	19:50	20:44	21:33
2	08:32	13:59 (WEA 12)	08:01	15:10 (WEA 11)	07:03	06:49	05:42	04:54
	16:08	37 15:18 (WEA 11)	16:59	26 15:36 (WEA 11)	17:54	19:51	20:46	21:34
3	08:31	13:59 (WEA 12)	07:59	15:11 (WEA 11)	07:01	06:47	05:40	04:53
	16:09	39 15:19 (WEA 11)	17:01	24 15:35 (WEA 11)	17:56	19:53	20:48	21:35
4	08:31	14:00 (WEA 12)	07:57	15:13 (WEA 11)	06:59	06:45	05:38	04:53
	16:10	40 15:21 (WEA 11)	17:03	21 15:34 (WEA 11)	17:58	19:55	20:49	21:36
5	08:31	14:01 (WEA 12)	07:55	15:14 (WEA 11)	06:57	06:42	05:36	04:52
	16:12	41 15:22 (WEA 11)	17:05	18 15:32 (WEA 11)	18:00	19:57	20:51	21:37
6	08:30	14:02 (WEA 12)	07:54	15:17 (WEA 11)	06:54	06:40	05:34	04:51
	16:13	41 15:23 (WEA 11)	17:07	13 15:30 (WEA 11)	18:02	19:59	20:53	21:39
7	08:30	14:02 (WEA 12)	07:52		06:52	06:37	05:32	04:50
	16:14	43 15:24 (WEA 11)	17:09		18:04	20:01	20:55	21:39
8	08:30	14:04 (WEA 12)	07:50		06:50	06:35	05:30	04:50
	16:16	43 15:26 (WEA 11)	17:11		18:05	20:02	20:56	21:40
9	08:29	14:05 (WEA 12)	07:48		06:47	06:33	05:28	04:49
	16:17	43 15:27 (WEA 11)	17:13		18:07	20:04	20:58	21:41
10	08:28	14:06 (WEA 12)	07:46		06:45	06:30	05:26	04:49
	16:19	43 15:28 (WEA 11)	17:15		18:09	9 17:37 (WEA 6)	20:06	21:42
11	08:28	14:07 (WEA 12)	07:44	16:32 (WEA 10)	06:42	17:24 (WEA 6)	06:28	05:24
	16:20	42 15:29 (WEA 11)	17:17	8 16:40 (WEA 10)	18:11	15 17:39 (WEA 6)	20:08	21:43
12	08:27	14:09 (WEA 12)	07:42	16:29 (WEA 10)	06:40	17:23 (WEA 6)	06:26	05:23
	16:22	40 15:30 (WEA 11)	17:19	14 16:43 (WEA 10)	18:13	18 17:41 (WEA 6)	20:10	21:44
13	08:26	14:11 (WEA 12)	07:40	16:27 (WEA 10)	06:38	17:20 (WEA 6)	06:23	05:21
	16:23	37 15:30 (WEA 11)	17:21	18 16:45 (WEA 10)	18:15	22 17:42 (WEA 6)	20:11	21:44
14	08:25	14:15 (WEA 12)	07:38	16:26 (WEA 10)	06:35	17:20 (WEA 6)	06:21	05:19
	16:25	32 15:31 (WEA 11)	17:23	20 16:46 (WEA 10)	18:17	23 17:43 (WEA 6)	20:13	21:45
15	08:24	15:03 (WEA 11)	07:36	16:25 (WEA 10)	06:33	17:18 (WEA 6)	06:19	05:18
	16:26	29 15:32 (WEA 11)	17:25	22 16:47 (WEA 10)	18:19	25 17:43 (WEA 6)	20:15	21:46
16	08:24	15:03 (WEA 11)	07:34	16:24 (WEA 10)	06:30	17:18 (WEA 6)	06:16	05:16
	16:28	30 15:33 (WEA 11)	17:27	24 16:48 (WEA 10)	18:20	26 17:44 (WEA 6)	20:17	21:46
17	08:23	15:04 (WEA 11)	07:32	16:23 (WEA 10)	06:28	17:18 (WEA 6)	06:14	05:14
	16:30	30 15:34 (WEA 11)	17:29	25 16:48 (WEA 10)	18:22	26 17:44 (WEA 6)	20:19	21:47
18	08:22	15:04 (WEA 11)	07:30	16:23 (WEA 10)	06:26	17:17 (WEA 6)	06:12	05:13
	16:31	31 15:35 (WEA 11)	17:31	26 16:49 (WEA 10)	18:24	26 17:43 (WEA 6)	20:20	21:47
19	08:20	15:03 (WEA 11)	07:28	16:22 (WEA 10)	06:23	17:17 (WEA 6)	06:09	05:11
	16:33	32 15:35 (WEA 11)	17:33	27 16:49 (WEA 10)	18:26	26 17:43 (WEA 6)	20:22	21:47
20	08:19	15:04 (WEA 11)	07:26	16:23 (WEA 10)	06:21	17:17 (WEA 6)	06:07	05:10
	16:35	32 15:36 (WEA 11)	17:35	26 16:49 (WEA 10)	18:28	25 17:42 (WEA 6)	20:24	21:48
21	08:18	15:04 (WEA 11)	07:24	16:23 (WEA 10)	06:18	17:17 (WEA 6)	06:05	05:08
	16:37	33 15:37 (WEA 11)	17:37	26 16:49 (WEA 10)	18:30	25 17:42 (WEA 6)	20:26	21:48
22	08:17	15:04 (WEA 11)	07:21	16:22 (WEA 10)	06:16	17:17 (WEA 6)	06:03	05:07
	16:39	33 15:37 (WEA 11)	17:39	26 16:48 (WEA 10)	18:31	23 17:40 (WEA 6)	20:28	21:48
23	08:16	15:04 (WEA 11)	07:19	16:23 (WEA 10)	06:14	17:18 (WEA 6)	06:01	05:05
	16:40	33 15:37 (WEA 11)	17:41	25 16:48 (WEA 10)	18:33	21 17:39 (WEA 6)	20:30	21:48
24	08:14	15:04 (WEA 11)	07:17	16:24 (WEA 10)	06:11	17:19 (WEA 6)	05:58	05:04
	16:42	33 15:37 (WEA 11)	17:43	24 16:48 (WEA 10)	18:35	18 17:37 (WEA 6)	20:31	21:49
25	08:13	15:05 (WEA 11)	07:15	16:24 (WEA 10)	06:09	17:21 (WEA 6)	05:56	05:03
	16:44	33 15:38 (WEA 11)	17:45	22 16:46 (WEA 10)	18:37	14 17:35 (WEA 6)	20:33	21:49
26	08:12	15:05 (WEA 11)	07:13	16:25 (WEA 10)	06:06	17:26 (WEA 6)	05:54	05:02
	16:46	33 15:38 (WEA 11)	17:46	20 16:45 (WEA 10)	18:39	5 17:31 (WEA 6)	20:35	21:49
27	08:10	15:05 (WEA 11)	07:10	16:27 (WEA 10)	06:04		05:52	05:00
	16:48	32 15:37 (WEA 11)	17:48	17 16:44 (WEA 10)	18:41		20:37	21:48
28	08:09	15:06 (WEA 11)	07:08	16:29 (WEA 10)	06:01		05:50	04:59
	16:50	32 15:38 (WEA 11)	17:50	11 16:40 (WEA 10)	18:42		20:39	21:48
29	08:07	15:06 (WEA 11)			06:59		05:48	04:58
	16:52	32 15:38 (WEA 11)			19:44		20:40	21:48
30	08:06	15:07 (WEA 11)			06:57		05:46	04:57
	16:54	30 15:37 (WEA 11)			19:46		20:42	21:30
31	08:04	15:08 (WEA 11)			06:54			04:56
	16:55	30 15:38 (WEA 11)			19:48			21:32
Sonnenscheinstunden		252	274	367		419	492	507
astr.max.mögl.Beschattung		1093	511	347				

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)		Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BA - Gartenstraße 24

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:21 (WEA 6)	08:07 16:45
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:02 (WEA 6)	08:09 16:43
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 18:05 (WEA 6)	08:10 16:42
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 14:51 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 14:55 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 14:46 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 14:44 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 14:43 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 14:42 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 14:41 (WEA 11)
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 14:40 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 14:39 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 17:04 (WEA 10)	08:23 14:38 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 17:01 (WEA 10)	08:24 14:37 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 17:00 (WEA 10)	08:24 14:36 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:58 (WEA 10)	08:25 14:35 (WEA 11)
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:56 (WEA 10)	08:26 14:34 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:55 (WEA 10)	08:27 14:33 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:54 (WEA 10)	08:28 14:32 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:53 (WEA 10)	08:28 14:31 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:52 (WEA 10)	08:29 14:30 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:51 (WEA 10)	08:30 14:29 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:50 (WEA 10)	08:30 14:28 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:49 (WEA 10)	08:30 14:27 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:00 (WEA 6)	07:57 16:48 (WEA 10)	08:31 14:26 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 17:59 (WEA 6)	07:59 16:47 (WEA 10)	08:31 14:25 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 17:57 (WEA 6)	08:01 16:46 (WEA 10)	08:31 14:24 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 17:55 (WEA 6)	08:02 16:45 (WEA 10)	08:32 14:23 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 17:53 (WEA 6)	08:04 16:44 (WEA 10)	08:32 14:22 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 17:51 (WEA 6)	08:06 16:43 (WEA 10)	08:32 14:21 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:07 16:42 (WEA 10)	08:32 14:20 (WEA 11)
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			297	441	780	1035

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BB - Gartenstraße 30

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	13:56 (WEA 12) 16:57	15:11 (WEA 11) 17:52	16:30 (WEA 10) 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	13:57 (WEA 12) 16:59	15:11 (WEA 11) 17:54	16:32 (WEA 10) 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	13:57 (WEA 12) 17:01	15:12 (WEA 11) 17:56	16:33 (WEA 10) 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	13:58 (WEA 12) 17:03	15:12 (WEA 11) 17:58	16:35 (WEA 10) 19:55	05:38 20:49	04:53 21:36
5	08:31 16:12	13:59 (WEA 12) 17:05	15:13 (WEA 11) 18:00	16:42 19:57	05:36 20:51	04:52 21:37
6	08:30 16:13	14:00 (WEA 12) 17:07	15:14 (WEA 11) 18:02	16:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:00 (WEA 12) 17:09	15:15 (WEA 11) 18:04	16:37 20:01	05:32 20:55	04:50 21:39
8	08:30 16:16	14:02 (WEA 12) 17:11	15:17 (WEA 11) 18:05	16:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:02 (WEA 12) 17:13	15:19 (WEA 11) 18:07	16:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:03 (WEA 12) 17:15	15:22 (WEA 11) 18:09	16:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:04 (WEA 12) 17:17	15:35 (WEA 11) 18:11	16:28 20:08	05:24 21:01	04:48 21:43
12	08:27 16:22	14:05 (WEA 12) 17:19	15:40 (WEA 11) 18:13	16:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:06 (WEA 12) 17:21	15:45 (WEA 11) 18:15	16:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:07 (WEA 12) 17:23	15:50 (WEA 11) 18:17	17:37 (WEA 6) 20:13	05:19 21:07	04:47 21:45
15	08:24 16:26	14:09 (WEA 12) 17:25	16:37 (WEA 10) 18:19	17:32 (WEA 6) 20:15	06:19 21:08	04:47 21:46
16	08:24 16:28	14:11 (WEA 12) 17:27	16:35 (WEA 10) 18:20	17:30 (WEA 6) 20:17	06:16 21:10	04:47 21:46
17	08:23 16:30	14:14 (WEA 12) 17:29	16:32 (WEA 10) 18:22	17:29 (WEA 6) 20:19	06:14 21:11	04:47 21:47
18	08:22 16:31	14:18 (WEA 12) 17:31	16:31 (WEA 10) 18:24	17:27 (WEA 6) 20:20	06:12 21:13	04:47 21:47
19	08:20 16:33	15:09 (WEA 11) 17:33	16:31 (WEA 10) 18:26	17:26 (WEA 6) 20:22	06:09 21:15	04:47 21:47
20	08:19 16:35	15:09 (WEA 11) 17:35	16:30 (WEA 10) 18:28	17:25 (WEA 6) 20:24	06:07 21:16	04:47 21:48
21	08:18 16:37	15:09 (WEA 11) 17:37	16:30 (WEA 10) 18:30	17:25 (WEA 6) 20:26	06:05 21:18	04:47 21:48
22	08:17 16:39	15:41 (WEA 11) 17:39	16:56 (WEA 10) 18:31	17:52 (WEA 6) 20:28	06:03 21:19	04:47 21:48
23	08:16 16:40	15:09 (WEA 11) 17:41	16:28 (WEA 10) 18:33	17:51 (WEA 6) 20:30	06:01 21:21	04:47 21:48
24	08:14 16:42	15:08 (WEA 11) 17:43	16:29 (WEA 10) 18:35	17:23 (WEA 6) 20:31	05:58 21:22	04:48 21:49
25	08:13 16:44	15:42 (WEA 11) 17:45	16:56 (WEA 10) 18:37	17:50 (WEA 6) 20:33	05:56 21:24	04:48 21:49
26	08:12 16:46	15:09 (WEA 11) 17:46	16:28 (WEA 10) 18:39	17:24 (WEA 6) 20:35	05:54 21:25	04:49 21:49
27	08:10 16:48	15:43 (WEA 11) 17:48	16:55 (WEA 10) 18:41	17:49 (WEA 6) 20:37	05:52 21:26	04:49 21:48
28	08:09 16:50	15:09 (WEA 11) 17:50	16:29 (WEA 10) 18:42	17:26 (WEA 6) 20:39	05:50 21:28	04:49 21:48
29	08:07 16:52	15:44 (WEA 11) 17:52	16:54 (WEA 10) 18:44	17:46 (WEA 6) 20:41	05:48 21:29	04:50 21:48
30	08:06 16:54	15:09 (WEA 11) 17:54	16:57 (WEA 10) 18:46	18:44 (WEA 6) 20:43	05:46 21:30	04:51 21:48
31	08:04 16:55	15:10 (WEA 11) 17:55	16:54 (WEA 10) 18:48	18:41 (WEA 6) 20:45	05:45 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1110	596	434			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BB - Gartenstraße 30

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember			
1	04:51 21:48	05:30 21:13	06:24 20:08		07:16 18:55		07:13 16:45	14	14:51 (WEA 11) 15:05 (WEA 11)	08:07 16:02	44	13:46 (WEA 12) 15:12 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05		07:18 18:53		07:15 16:43	19	14:48 (WEA 11) 15:07 (WEA 11)	08:09 16:01	42	13:46 (WEA 12) 15:11 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03		07:19 18:50		07:17 16:42	23	14:46 (WEA 11) 15:09 (WEA 11)	08:10 16:01	39	13:45 (WEA 12) 15:09 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01		07:21 18:48		07:19 16:40	25	14:45 (WEA 11) 15:10 (WEA 11)	08:11 16:00	36	13:46 (WEA 12) 15:08 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58		07:23 18:45		07:21 16:38	27	14:44 (WEA 11) 15:11 (WEA 11)	08:13 15:59	30	13:45 (WEA 12) 14:15 (WEA 12)
6	04:55 21:45	05:39 21:04	06:32 19:56		07:25 18:43		07:23 16:36	29	14:44 (WEA 11) 15:13 (WEA 11)	08:14 15:59	30	13:46 (WEA 12) 14:16 (WEA 12)
7	04:56 21:45	05:40 21:02	06:34 19:53		07:27 18:41		07:24 16:34	31	14:43 (WEA 11) 15:14 (WEA 11)	08:16 15:58	31	13:46 (WEA 12) 14:17 (WEA 12)
8	04:57 21:44	05:42 21:00	06:36 19:51		07:28 18:38		07:26 16:32	32	14:42 (WEA 11) 15:14 (WEA 11)	08:17 15:58	32	13:46 (WEA 12) 14:18 (WEA 12)
9	04:58 21:43	05:44 20:58	06:37 19:49		07:30 18:36	7	07:28 17:20 (WEA 10)	33	14:42 (WEA 11) 15:15 (WEA 11)	08:18 15:58	32	13:46 (WEA 12) 14:18 (WEA 12)
10	04:59 21:42	05:45 20:56	06:39 19:46		07:32 18:33	14	07:30 17:22 (WEA 10)	34	14:41 (WEA 11) 15:15 (WEA 11)	08:19 15:57	33	13:46 (WEA 12) 14:19 (WEA 12)
11	05:00 21:41	05:47 20:54	06:41 19:44		07:34 18:31	18	07:32 17:24 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:20 15:57	33	13:46 (WEA 12) 14:19 (WEA 12)
12	05:02 21:41	05:49 20:52	06:43 19:41		07:36 18:29	21	07:34 17:25 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:21 15:57	33	13:47 (WEA 12) 14:20 (WEA 12)
13	05:03 21:40	05:51 20:50	06:44 19:39	11	07:37 18:32 (WEA 6)	23	07:36 17:26 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:23 15:57	33	13:48 (WEA 12) 14:21 (WEA 12)
14	05:04 21:39	05:52 20:48	06:46 19:36	17	07:39 18:34 (WEA 6)	25	07:38 17:27 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:24 15:57	33	13:48 (WEA 12) 14:21 (WEA 12)
15	05:05 21:38	05:54 20:46	06:48 19:34	19	07:41 18:35 (WEA 6)	26	07:40 17:27 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:24 15:57	34	13:48 (WEA 12) 14:22 (WEA 12)
16	05:07 21:36	05:56 20:44	06:50 19:32	22	07:43 18:36 (WEA 6)	28	07:41 17:00 (WEA 10)	35	14:41 (WEA 11) 15:16 (WEA 11)	08:25 15:57	34	13:48 (WEA 12) 14:22 (WEA 12)
17	05:08 21:35	05:58 20:42	06:51 19:29	24	07:45 18:37 (WEA 6)	28	07:43 17:28 (WEA 10)	34	14:42 (WEA 11) 15:16 (WEA 11)	08:26 15:57	33	13:49 (WEA 12) 14:22 (WEA 12)
18	05:09 21:34	05:59 20:40	06:53 19:27	26	07:47 18:37 (WEA 6)	28	07:45 17:28 (WEA 10)	34	14:42 (WEA 11) 15:16 (WEA 11)	08:27 15:57	34	13:49 (WEA 12) 14:23 (WEA 12)
19	05:11 21:33	06:01 20:37	06:55 19:24	26	07:48 18:37 (WEA 6)	27	07:47 17:00 (WEA 10)	33	14:43 (WEA 11) 15:16 (WEA 11)	08:28 15:58	34	13:50 (WEA 12) 14:24 (WEA 12)
20	05:12 21:32	06:03 20:35	06:57 19:22	27	07:50 18:10 (WEA 6)	27	07:49 17:27 (WEA 10)	33	14:43 (WEA 11) 15:16 (WEA 11)	08:28 15:58	34	13:50 (WEA 12) 14:24 (WEA 12)
21	05:13 21:30	06:04 20:33	06:58 19:19	27	07:52 18:09 (WEA 6)	26	07:50 17:00 (WEA 10)	32	14:44 (WEA 11) 15:16 (WEA 11)	08:29 15:58	34	13:51 (WEA 12) 14:25 (WEA 12)
22	05:15 21:29	06:06 20:31	07:00 19:17	27	07:54 18:36 (WEA 6)	25	07:52 17:26 (WEA 10)	31	14:45 (WEA 11) 15:16 (WEA 11)	08:30 15:59	34	13:51 (WEA 12) 14:25 (WEA 12)
23	05:16 21:28	06:08 20:28	07:02 19:14	27	07:56 18:36 (WEA 6)	24	07:54 17:25 (WEA 10)	30	14:46 (WEA 11) 15:16 (WEA 11)	08:30 15:59	34	13:52 (WEA 12) 14:26 (WEA 12)
24	05:18 21:26	06:10 20:26	07:04 19:12	25	07:58 18:35 (WEA 6)	22	07:56 17:24 (WEA 10)	33	13:55 (WEA 12) 15:16 (WEA 11)	08:30 16:00	34	13:52 (WEA 12) 14:26 (WEA 12)
25	05:19 21:25	06:11 20:24	07:05 19:10	24	07:00 18:09 (WEA 6)	19	07:57 16:22 (WEA 10)	38	13:52 (WEA 12) 15:15 (WEA 11)	08:31 16:01	34	13:52 (WEA 12) 14:26 (WEA 12)
26	05:21 21:23	06:13 20:22	07:07 19:07	22	07:02 18:10 (WEA 6)	15	07:59 16:05 (WEA 10)	42	13:50 (WEA 12) 15:15 (WEA 11)	08:31 16:01	34	13:53 (WEA 12) 14:27 (WEA 12)
27	05:22 21:22	06:15 20:19	07:09 19:05	20	07:04 18:11 (WEA 6)	9	08:01 16:08 (WEA 10)	44	13:48 (WEA 12) 15:14 (WEA 11)	08:31 16:02	34	13:54 (WEA 12) 14:28 (WEA 12)
28	05:24 21:20	06:17 20:17	07:11 19:02	16	07:05 18:13 (WEA 6)		08:02 16:05	45	13:48 (WEA 12) 15:14 (WEA 11)	08:32 16:03	34	13:54 (WEA 12) 14:28 (WEA 12)
29	05:26 21:18	06:18 20:15	07:12 19:00	10	07:07 18:15 (WEA 6)		08:04 16:04	44	13:47 (WEA 12) 15:13 (WEA 11)	08:32 16:04	33	13:55 (WEA 12) 14:28 (WEA 12)
30	05:27 21:17	06:20 20:12	07:14 18:57		07:09 16:49		08:06 16:03	44	13:47 (WEA 12) 15:13 (WEA 11)	08:32 16:05	34	13:55 (WEA 12) 14:29 (WEA 12)
31	05:29 21:15	06:22 20:10			07:11 16:47	4	14:56 (WEA 11) 15:00 (WEA 11)			08:32 16:06	33	13:55 (WEA 12) 14:28 (WEA 12)
Sonnenscheinstunden	510	458	382		329		261		236			
astr.max.mögl.Beschattung			370		416		994		1056			

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BC - Forstweg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07 30	14:03 (WEA 12) 14:33 (WEA 12) 16:57	08:02 16:57 30	15:14 (WEA 11) 15:44 (WEA 11) 17:52	16:32 (WEA 10) 16:46 (WEA 10) 19:50	06:52 20:44 21:33
2	08:32 16:08 30	14:04 (WEA 12) 14:34 (WEA 12) 16:59	08:01 16:59 29	15:15 (WEA 11) 15:44 (WEA 11) 17:54	16:36 (WEA 10) 16:43 (WEA 10) 19:51	06:49 20:46 21:34
3	08:31 16:09 30	14:04 (WEA 12) 14:34 (WEA 12) 17:01	07:59 17:01 28	15:15 (WEA 11) 15:43 (WEA 11) 17:56	16:47 19:53 20:48	06:47 20:51 21:37
4	08:31 16:10 29	14:05 (WEA 12) 14:34 (WEA 12) 17:03	07:57 17:03 26	15:16 (WEA 11) 15:42 (WEA 11) 17:58	16:45 19:55 20:49	06:45 20:53 21:36
5	08:31 16:12 29	14:06 (WEA 12) 14:35 (WEA 12) 17:05	07:55 17:05 23	15:18 (WEA 11) 15:41 (WEA 11) 18:00	16:42 19:57 20:51	06:42 20:51 21:37
6	08:30 16:13 28	14:07 (WEA 12) 14:35 (WEA 12) 17:07	07:54 17:07 21	15:19 (WEA 11) 15:40 (WEA 11) 18:02	16:40 19:59 20:53	06:40 20:53 21:38
7	08:30 16:14 33	14:07 (WEA 12) 15:24 (WEA 11) 17:09	07:52 17:09 17	15:21 (WEA 11) 15:38 (WEA 11) 18:04	16:37 20:01 20:55	06:37 20:52 21:39
8	08:30 16:16 36	14:09 (WEA 12) 15:27 (WEA 11) 17:11	07:50 17:11 12	15:24 (WEA 11) 15:36 (WEA 11) 18:05	16:35 20:02 20:56	06:35 20:56 21:40
9	08:29 16:17 40	14:09 (WEA 12) 15:29 (WEA 11) 17:13	07:48 17:13 10	15:29 (WEA 11) 18:07 06:45	16:33 20:04 20:58	06:33 20:58 21:41
10	08:28 16:19 40	14:10 (WEA 12) 15:30 (WEA 11) 17:15	07:46 17:15 11	15:30 (WEA 11) 18:09 06:42	16:30 20:06 20:52	06:30 21:00 21:42
11	08:28 16:20 41	14:11 (WEA 12) 15:32 (WEA 11) 17:17	07:44 17:17 12	15:32 (WEA 11) 18:11 06:40	17:33 (WEA 6) 17:38 (WEA 6) 20:08	06:28 21:01 21:43
12	08:27 16:22 41	14:12 (WEA 12) 15:33 (WEA 11) 17:19	07:42 17:19 13	15:33 (WEA 11) 18:13 06:38	17:29 (WEA 6) 17:42 (WEA 6) 20:10	06:26 21:03 21:44
13	08:26 16:23 41	14:14 (WEA 12) 15:34 (WEA 11) 17:21	07:40 17:21 9	15:34 (WEA 11) 16:36 (WEA 10) 18:15	17:26 (WEA 6) 17:44 (WEA 6) 20:11	06:23 21:05 21:44
14	08:25 16:25 40	14:15 (WEA 12) 15:35 (WEA 11) 17:23	07:38 17:23 15	15:35 (WEA 11) 16:33 (WEA 10) 18:17	17:25 (WEA 6) 17:45 (WEA 6) 20:13	06:21 21:07 21:45
15	08:24 16:26 39	14:17 (WEA 12) 15:37 (WEA 11) 17:25	07:36 17:25 19	15:37 (WEA 11) 16:31 (WEA 10) 18:19	17:23 (WEA 6) 17:47 (WEA 6) 20:15	06:19 21:08 21:46
16	08:24 16:28 35	14:20 (WEA 12) 15:38 (WEA 11) 17:27	07:34 17:27 21	15:38 (WEA 11) 16:30 (WEA 10) 18:20	17:22 (WEA 6) 17:46 (WEA 6) 20:17	06:16 21:10 21:46
17	08:23 16:30 27	15:12 (WEA 11) 15:39 (WEA 11) 17:29	07:32 17:29 23	15:39 (WEA 11) 16:28 (WEA 10) 18:22	17:22 (WEA 6) 17:47 (WEA 6) 20:19	06:14 21:11 21:47
18	08:22 16:31 28	15:12 (WEA 11) 15:40 (WEA 11) 17:31	07:30 17:31 24	15:40 (WEA 11) 16:28 (WEA 10) 18:24	17:21 (WEA 6) 17:46 (WEA 6) 20:20	06:12 21:13 21:47
19	08:20 16:33 29	15:11 (WEA 11) 15:40 (WEA 11) 17:33	07:28 17:33 25	15:41 (WEA 11) 16:28 (WEA 10) 18:26	17:21 (WEA 6) 17:47 (WEA 6) 20:22	06:09 21:15 21:47
20	08:19 16:35 30	15:11 (WEA 11) 15:41 (WEA 11) 17:35	07:26 17:35 26	15:42 (WEA 11) 16:27 (WEA 10) 18:28	17:20 (WEA 6) 17:46 (WEA 6) 20:24	06:07 21:16 21:48
21	08:18 16:37 31	15:11 (WEA 11) 15:42 (WEA 11) 17:37	07:24 17:37 27	15:43 (WEA 11) 16:27 (WEA 10) 18:30	17:20 (WEA 6) 17:46 (WEA 6) 20:26	06:05 21:18 21:48
22	08:17 16:39 31	15:11 (WEA 11) 15:42 (WEA 11) 17:39	07:21 17:39 26	15:44 (WEA 11) 16:27 (WEA 10) 18:31	17:20 (WEA 6) 17:44 (WEA 6) 20:28	06:03 21:19 21:48
23	08:16 16:40 32	15:11 (WEA 11) 15:43 (WEA 11) 17:41	07:19 17:41 26	15:45 (WEA 11) 16:27 (WEA 10) 18:33	17:21 (WEA 6) 17:44 (WEA 6) 20:30	06:01 21:21 21:48
24	08:14 16:42 32	15:11 (WEA 11) 15:43 (WEA 11) 17:43	07:17 17:43 26	15:46 (WEA 11) 16:27 (WEA 10) 18:35	17:21 (WEA 6) 17:42 (WEA 6) 20:31	05:58 21:22 21:49
25	08:13 16:44 33	15:11 (WEA 11) 15:44 (WEA 11) 17:45	07:15 17:45 25	15:47 (WEA 11) 16:27 (WEA 10) 18:37	17:23 (WEA 6) 17:40 (WEA 6) 20:33	05:56 21:24 21:49
26	08:12 16:46 33	15:11 (WEA 11) 15:44 (WEA 11) 17:46	07:13 17:46 23	15:48 (WEA 11) 16:28 (WEA 10) 18:39	17:25 (WEA 6) 17:38 (WEA 6) 20:35	05:54 21:25 21:49
27	08:10 16:48 33	15:11 (WEA 11) 15:44 (WEA 11) 17:48	07:10 17:48 21	15:49 (WEA 11) 16:29 (WEA 10) 18:41	17:28 (WEA 6) 17:34 (WEA 6) 20:37	05:52 21:26 21:48
28	08:09 16:50 33	15:12 (WEA 11) 15:45 (WEA 11) 17:50	07:08 17:50 18	15:50 (WEA 11) 16:30 (WEA 10) 18:42	05:50 20:39 21:28	04:59 21:28 21:48
29	08:07 16:52 33	15:12 (WEA 11) 15:45 (WEA 11) 17:52	07:06 17:52 17	15:51 (WEA 11) 16:31 (WEA 10) 18:44	05:48 20:40 21:29	04:58 21:29 21:48
30	08:06 16:54 32	15:12 (WEA 11) 15:44 (WEA 11) 17:54	07:04 17:54 16	15:52 (WEA 11) 16:32 (WEA 10) 18:46	05:46 20:42 21:30	04:57 21:30 21:48
31	08:04 16:55 31	15:14 (WEA 11) 15:45 (WEA 11) 17:56	07:02 17:56 15	15:53 (WEA 11) 16:33 (WEA 10) 18:48	05:44 20:44 21:32	04:56 21:32 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1030	540	355			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BC - Forstweg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 18:22 (WEA 6)	08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 18:09 (WEA 6)	08:09 15:58 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:43	08:10 15:01 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 15:08 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:10 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:12 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:13 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:14 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:15 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:16 (WEA 11)
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:17 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:18 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:19 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:20 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:24 15:21 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20 (WEA 6)	07:41 16:19	08:25 15:22 (WEA 11)
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:13 (WEA 6)	07:43 16:18	08:26 15:23 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:11 (WEA 6)	07:45 16:16	08:27 15:24 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:09 (WEA 6)	07:47 16:15	08:28 15:25 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:08 (WEA 6)	07:49 16:14	08:28 15:26 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:06 (WEA 6)	07:50 16:12	08:29 15:27 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:05 (WEA 6)	07:52 16:11	08:30 15:28 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04 (WEA 6)	07:54 16:10	08:30 15:29 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:03 (WEA 6)	07:56 16:09	08:30 15:30 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:02 (WEA 6)	07:57 16:08	08:31 15:31 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:03 (WEA 6)	07:59 16:07	08:31 15:32 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:04 (WEA 6)	08:01 16:06	08:31 15:33 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:04 (WEA 6)	08:02 16:05	08:32 15:34 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:05 (WEA 6)	08:04 16:04	08:32 15:35 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:24 (WEA 6)	08:06 16:03	08:32 15:36 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47		08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			310	402	854	989

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BD - Gartenstraße 32

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai		Juni	
1	08:32	13:56 (WEA 12)	08:02	15:12 (WEA 11)	07:06	16:31 (WEA 10)	06:52	18:33 (WEA 6)	05:44	04:55	
	16:07	34	14:30 (WEA 12)	16:57	35	15:47 (WEA 11)	17:52	16:56 (WEA 10)	19:50	20:44	21:33
2	08:32	13:57 (WEA 12)	08:01	15:12 (WEA 11)	07:04	16:32 (WEA 10)	06:49	8	18:41 (WEA 6)	05:42	04:54
	16:08	34	14:31 (WEA 12)	16:59	34	15:46 (WEA 11)	17:54	23	16:55 (WEA 10)	19:51	20:46
3	08:31	13:57 (WEA 12)	07:59	15:12 (WEA 11)	07:01	16:33 (WEA 10)	06:47		16:33 (WEA 10)	19:51	20:46
	16:09	33	14:30 (WEA 12)	17:01	34	15:46 (WEA 11)	17:56	20	16:53 (WEA 10)	19:53	20:48
4	08:31	13:58 (WEA 12)	07:57	15:13 (WEA 11)	06:59	16:34 (WEA 10)	06:45		16:34 (WEA 10)	19:53	20:48
	16:10	33	14:31 (WEA 12)	17:03	33	15:46 (WEA 11)	17:58	18	16:52 (WEA 10)	19:55	20:49
5	08:31	13:59 (WEA 12)	07:55	15:14 (WEA 11)	06:57	16:37 (WEA 10)	06:42		16:37 (WEA 10)	19:57	20:51
	16:12	33	14:32 (WEA 12)	17:05	31	15:45 (WEA 11)	18:00	13	16:50 (WEA 10)	19:57	20:51
6	08:30	13:59 (WEA 12)	07:54	15:14 (WEA 11)	06:54		06:40			06:40	04:51
	16:13	33	14:32 (WEA 12)	17:07	30	15:44 (WEA 11)	18:02			19:59	20:53
7	08:30	14:00 (WEA 12)	07:52	15:15 (WEA 11)	06:52		06:37			20:01	20:55
	16:14	31	14:31 (WEA 12)	17:09	29	15:44 (WEA 11)	18:04			20:01	20:55
8	08:30	14:01 (WEA 12)	07:50	15:17 (WEA 11)	06:50		06:35			20:01	20:55
	16:16	31	14:32 (WEA 12)	17:11	26	15:43 (WEA 11)	18:05			20:02	20:56
9	08:29	14:02 (WEA 12)	07:48	15:18 (WEA 11)	06:47		06:33			20:02	20:56
	16:17	30	14:32 (WEA 12)	17:13	23	15:41 (WEA 11)	18:07			20:04	20:58
10	08:28	14:02 (WEA 12)	07:46	15:20 (WEA 11)	06:45		06:30			20:04	20:58
	16:19	38	15:26 (WEA 11)	17:15	20	15:40 (WEA 11)	18:09			20:06	20:59
11	08:28	14:03 (WEA 12)	07:44	15:23 (WEA 11)	06:42		06:28			20:06	20:59
	16:20	41	15:29 (WEA 11)	17:17	14	15:37 (WEA 11)	18:11			20:08	21:01
12	08:27	14:04 (WEA 12)	07:42	15:28 (WEA 11)	06:40		06:26			20:08	21:01
	16:22	43	15:31 (WEA 11)	17:19	5	15:33 (WEA 11)	18:13			20:10	21:03
13	08:26	14:05 (WEA 12)	07:40		06:38		06:23			20:10	21:03
	16:23	44	15:32 (WEA 11)	17:21		18:15				20:11	21:05
14	08:25	14:06 (WEA 12)	07:38		06:35		06:21			20:11	21:05
	16:25	45	15:34 (WEA 11)	17:23		18:17				20:13	21:07
15	08:24	14:08 (WEA 12)	07:36		06:33	17:41 (WEA 6)	06:19			20:13	21:07
	16:26	44	15:35 (WEA 11)	17:25		18:19				20:15	21:08
16	08:24	14:09 (WEA 12)	07:34	16:40 (WEA 10)	06:30	1	17:42 (WEA 6)			20:15	21:08
	16:28	45	15:37 (WEA 11)	17:27	11	16:51 (WEA 10)	18:20			20:16	21:09
17	08:23	14:11 (WEA 12)	07:32	16:36 (WEA 10)	06:28	12	17:48 (WEA 6)			20:17	21:10
	16:30	44	15:38 (WEA 11)	17:29	16	16:52 (WEA 10)	18:22			20:17	21:10
18	08:22	14:14 (WEA 12)	07:30	16:35 (WEA 10)	06:26	18	17:51 (WEA 6)			20:19	21:12
	16:31	40	15:39 (WEA 11)	17:31	19	16:54 (WEA 10)	18:24			20:19	21:12
19	08:20	14:17 (WEA 12)	07:28	16:34 (WEA 10)	06:23	21	17:52 (WEA 6)			20:20	21:13
	16:33	36	15:40 (WEA 11)	17:33	22	16:56 (WEA 10)	18:26			20:20	21:13
20	08:19	15:11 (WEA 11)	07:26	16:33 (WEA 10)	06:21	23	17:53 (WEA 6)			20:22	21:15
	16:35	30	15:41 (WEA 11)	17:35	24	16:57 (WEA 10)	18:28			20:22	21:15
21	08:18	15:11 (WEA 11)	07:24	16:32 (WEA 10)	06:18	25	17:53 (WEA 6)			20:24	21:16
	16:37	31	15:42 (WEA 11)	17:37	26	16:58 (WEA 10)	18:30			20:24	21:16
22	08:17	15:10 (WEA 11)	07:21	16:31 (WEA 10)	06:16	26	17:54 (WEA 6)			20:26	21:18
	16:39	32	15:42 (WEA 11)	17:39	27	16:58 (WEA 10)	18:31			20:26	21:18
23	08:16	15:11 (WEA 11)	07:19	16:31 (WEA 10)	06:14	27	17:53 (WEA 6)			20:28	21:19
	16:40	33	15:44 (WEA 11)	17:41	27	16:58 (WEA 10)	18:33			20:28	21:19
24	08:14	15:10 (WEA 11)	07:17	16:31 (WEA 10)	06:11	28	17:54 (WEA 6)			20:30	21:21
	16:42	34	15:44 (WEA 11)	17:43	28	16:59 (WEA 10)	18:35			20:30	21:21
25	08:13	15:10 (WEA 11)	07:15	16:30 (WEA 10)	06:09	27	17:53 (WEA 6)			20:31	21:22
	16:44	35	15:45 (WEA 11)	17:45	28	16:58 (WEA 10)	18:37			20:31	21:22
26	08:12	15:10 (WEA 11)	07:13	16:30 (WEA 10)	06:06	27	17:53 (WEA 6)			20:33	21:24
	16:46	35	15:45 (WEA 11)	17:46	28	16:58 (WEA 10)	18:39			20:33	21:24
27	08:10	15:10 (WEA 11)	07:10	16:31 (WEA 10)	06:04	27	17:53 (WEA 6)			20:35	21:25
	16:48	35	15:45 (WEA 11)	17:48	27	16:58 (WEA 10)	18:41			20:35	21:25
28	08:09	15:11 (WEA 11)	07:08	16:30 (WEA 10)	06:01	25	17:51 (WEA 6)			20:37	21:26
	16:50	35	15:46 (WEA 11)	17:50	27	16:57 (WEA 10)	18:42			20:37	21:26
29	08:07	15:10 (WEA 11)			06:59	23	17:50 (WEA 6)			20:39	21:28
	16:52	36	15:46 (WEA 11)		19:44		18:27 (WEA 6)			20:42	21:30
30	08:06	15:10 (WEA 11)			06:57	22	18:29 (WEA 6)			20:42	21:30
	16:54	36	15:46 (WEA 11)		19:46	18	18:47 (WEA 6)			20:42	21:30
31	08:04	15:11 (WEA 11)			06:54		18:30 (WEA 6)			20:42	21:30
	16:55	36	15:47 (WEA 11)		19:48	14	18:44 (WEA 6)			20:42	21:30
Sonnenscheinstunden		252	274	367	419	492	507				
astr.max.mögl.Beschattung		1120	624	463	8						

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BD - Gartenstraße 32

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 15:10 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 15:11 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 15:12 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 15:13 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:14 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:16 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:16 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:17 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:17 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:17 (WEA 11)
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:32 (WEA 6)	07:32 16:27	08:20 15:18 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:30 (WEA 6)	07:34 16:25	08:21 15:18 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:28 (WEA 6)	07:36 16:24	08:23 15:18 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:26 (WEA 6)	07:38 16:22	08:24 15:18 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:24 (WEA 6)	07:40 16:21	08:24 15:18 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20 (WEA 6)	07:41 16:19	08:25 15:18 (WEA 11)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:15 (WEA 6)	07:43 16:18	08:26 15:18 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:13 (WEA 6)	07:45 16:16	08:27 15:18 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:10 (WEA 6)	07:47 16:15	08:28 15:18 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:13 (WEA 6)	07:49 16:14	08:28 15:17 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:12 (WEA 6)	07:50 16:12	08:29 15:17 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:12 (WEA 6)	07:52 16:11	08:30 15:17 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:13 (WEA 6)	07:54 16:10	08:30 15:17 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:13 (WEA 6)	07:56 16:09	08:30 15:17 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:13 (WEA 6)	07:57 16:07	08:31 15:16 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:15 (WEA 6)	07:59 16:19 (WEA 10)	08:31 15:16 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:16 (WEA 6)	08:01 16:06	08:31 15:14 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:20 (WEA 6)	08:02 16:05	08:32 15:14 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 16:04	08:32 15:13 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 15:04 (WEA 11)	08:32 15:13 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:08 15:07 (WEA 11)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			379	443	1044	1068

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BE - Gartenstraße 27

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	13:50 (WEA 12) 16:57	08:02 15:06 (WEA 11)	07:06 16:28 (WEA 10)	06:52 16:52 (WEA 10)	05:44 20:44
2	08:32 16:08	13:51 (WEA 12) 16:59	08:01 15:06 (WEA 11)	07:04 16:30 (WEA 10)	06:49 19:50	20:44 21:33
3	08:31 16:09	13:51 (WEA 12) 17:01	07:59 15:07 (WEA 11)	07:01 16:30 (WEA 10)	06:47 19:51	20:46 21:34
4	08:31 16:10	13:52 (WEA 12) 17:03	07:57 15:08 (WEA 11)	06:59 16:48 (WEA 10)	06:45 19:53	20:48 21:35
5	08:31 16:12	13:53 (WEA 12) 17:05	07:55 15:09 (WEA 11)	06:57 16:46 (WEA 10)	06:42 19:55	20:49 21:36
6	08:30 16:13	13:54 (WEA 12) 17:07	07:54 15:10 (WEA 11)	06:54 16:46 (WEA 10)	06:40 19:59	20:53 21:39
7	08:30 16:14	13:54 (WEA 12) 17:09	07:52 15:11 (WEA 11)	06:52 16:46 (WEA 10)	06:37 20:01	20:53 21:39
8	08:30 16:16	13:56 (WEA 12) 17:11	07:50 15:13 (WEA 11)	06:50 16:46 (WEA 10)	06:35 20:02	20:53 21:40
9	08:29 16:17	13:56 (WEA 12) 17:13	07:48 15:15 (WEA 11)	06:47 16:46 (WEA 10)	06:33 20:04	20:58 21:41
10	08:28 16:19	13:57 (WEA 12) 17:15	07:46 15:19 (WEA 11)	06:45 16:46 (WEA 10)	06:30 20:06	20:56 21:42
11	08:28 16:20	13:58 (WEA 12) 17:17	07:44 15:27 (WEA 11)	06:42 16:46 (WEA 10)	06:28 20:08	20:54 21:43
12	08:27 16:22	13:59 (WEA 12) 17:19	07:42 15:29 (WEA 11)	06:40 16:46 (WEA 10)	06:26 20:10	20:52 21:44
13	08:26 16:23	14:01 (WEA 12) 17:21	07:40 15:30 (WEA 11)	06:38 16:46 (WEA 10)	06:23 20:11	20:51 21:44
14	08:25 16:25	14:02 (WEA 12) 17:23	07:38 15:31 (WEA 11)	06:35 16:44 (WEA 10)	06:21 20:13	20:51 21:45
15	08:24 16:26	14:04 (WEA 12) 17:25	07:36 15:32 (WEA 11)	06:33 16:48 (WEA 10)	06:19 17:33 (WEA 6)	20:18 21:08
16	08:24 16:28	14:06 (WEA 12) 17:27	07:34 15:33 (WEA 11)	06:30 16:50 (WEA 10)	06:16 17:31 (WEA 6)	20:16 21:10
17	08:23 16:30	14:10 (WEA 12) 17:29	07:32 15:34 (WEA 11)	06:28 16:51 (WEA 10)	06:14 17:29 (WEA 6)	20:14 21:11
18	08:22 16:31	15:04 (WEA 11) 17:31	07:30 15:35 (WEA 11)	06:26 16:52 (WEA 10)	06:12 17:27 (WEA 6)	20:12 21:13
19	08:20 16:33	15:03 (WEA 11) 17:33	07:28 15:36 (WEA 11)	06:23 16:53 (WEA 10)	06:09 17:26 (WEA 6)	20:10 21:15
20	08:19 16:35	15:03 (WEA 11) 17:35	07:26 15:36 (WEA 11)	06:21 16:54 (WEA 10)	06:07 17:25 (WEA 6)	20:10 21:16
21	08:18 16:37	15:04 (WEA 11) 17:37	07:24 15:38 (WEA 11)	06:18 16:55 (WEA 10)	06:05 17:25 (WEA 6)	20:08 21:18
22	08:17 16:39	15:03 (WEA 11) 17:39	07:21 15:38 (WEA 11)	06:16 16:55 (WEA 10)	06:03 17:24 (WEA 6)	20:07 21:19
23	08:16 16:40	15:04 (WEA 11) 17:41	07:19 15:39 (WEA 11)	06:14 16:55 (WEA 10)	06:01 17:24 (WEA 6)	20:05 21:21
24	08:14 16:42	15:03 (WEA 11) 17:43	07:17 15:40 (WEA 11)	06:11 16:55 (WEA 10)	05:58 17:23 (WEA 6)	20:04 21:22
25	08:13 16:44	15:04 (WEA 11) 17:45	07:15 15:40 (WEA 11)	06:09 16:54 (WEA 10)	05:56 17:23 (WEA 6)	20:03 21:24
26	08:12 16:46	15:04 (WEA 11) 17:46	07:13 15:40 (WEA 11)	06:06 16:54 (WEA 10)	05:54 17:24 (WEA 6)	20:02 21:25
27	08:10 16:48	15:03 (WEA 11) 17:48	07:10 15:39 (WEA 11)	06:04 16:54 (WEA 10)	05:52 17:24 (WEA 6)	20:00 21:26
28	08:09 16:50	15:04 (WEA 11) 17:50	07:08 15:40 (WEA 11)	06:01 16:52 (WEA 10)	05:50 17:25 (WEA 6)	20:00 21:28
29	08:07 16:52	15:04 (WEA 11) 17:52	07:06 15:40 (WEA 11)	05:59 16:59 (WEA 10)	05:48 18:25 (WEA 6)	20:00 21:29
30	08:06 16:54	15:04 (WEA 11) 17:54	07:05 15:40 (WEA 11)	05:57 16:59 (WEA 10)	05:46 18:27 (WEA 6)	20:00 21:30
31	08:04 16:55	15:06 (WEA 11) 17:56	07:03 15:41 (WEA 11)	05:54 16:59 (WEA 10)	05:44 18:29 (WEA 6)	20:00 21:32
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1183	611	456			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BE - Gartenstraße 27

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 15:00 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	12 16:43	16:02 14:44 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	18 16:42	08:09 15:02 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	22 16:40	16:01 14:42 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	25 16:38	16:00 14:39 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	28 16:36	15:59 14:37 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	30 16:34	15:59 14:39 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	30 16:32	15:58 14:38 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	32 16:31	15:58 14:37 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	34 16:29	15:57 14:37 (WEA 11)
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	34 16:27	15:57 14:37 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	36 16:25	15:57 14:36 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	36 16:24	15:57 14:36 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	36 16:22	15:57 14:36 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	36 16:21	15:57 14:36 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	36 16:19	15:57 14:36 (WEA 11)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	36 16:18	15:57 14:37 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	36 16:16	15:57 14:37 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	35 16:15	15:58 14:38 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	35 16:14	15:58 14:39 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	35 16:12	15:58 14:39 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	34 16:11	15:59 14:40 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	32 16:10	15:59 14:40 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	31 16:09	16:00 14:41 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:00	31 16:07	16:00 14:41 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:00	37 16:05	16:01 14:42 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:00	42 16:03	16:01 14:42 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:00	45 16:02	16:02 14:43 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:00	47 16:01	16:03 14:43 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	46 16:00	16:04 14:44 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	48 16:03	16:05 14:44 (WEA 11)
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			392	430	1017	1108

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BF - Gartenstraße 34

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai		Juni	
1	08:32	13:56 (WEA 12)	08:02	15:13 (WEA 11)	07:06	16:32 (WEA 10)	06:52	18:32 (WEA 6)	05:44	04:55	
	16:07	35	14:31 (WEA 12)	16:57	36	15:49 (WEA 11)	17:52	16:59 (WEA 10)	19:50	18:48 (WEA 6)	20:44
2	08:32	13:57 (WEA 12)	08:01	15:13 (WEA 11)	07:04	16:33 (WEA 10)	06:49	18:34 (WEA 6)	05:42	04:54	
	16:08	35	14:32 (WEA 12)	16:59	36	15:49 (WEA 11)	17:54	16:59 (WEA 10)	19:51	18:46 (WEA 6)	20:46
3	08:31	13:57 (WEA 12)	07:59	15:13 (WEA 11)	07:01	16:33 (WEA 10)	06:47		05:40	04:53	
	16:09	35	14:32 (WEA 12)	17:01	35	15:48 (WEA 11)	17:56	24	16:57 (WEA 10)	19:53	20:48
4	08:31	13:58 (WEA 12)	07:57	15:14 (WEA 11)	06:59	16:35 (WEA 10)	06:45		05:38	04:53	
	16:10	34	14:32 (WEA 12)	17:03	34	15:48 (WEA 11)	17:58	21	16:56 (WEA 10)	19:55	20:49
5	08:31	13:59 (WEA 12)	07:55	15:14 (WEA 11)	06:57	16:36 (WEA 10)	06:42		05:36	04:52	
	16:12	34	14:33 (WEA 12)	17:05	34	15:48 (WEA 11)	18:00	19	16:55 (WEA 10)	19:57	20:51
6	08:30	13:59 (WEA 12)	07:54	15:15 (WEA 11)	06:54	16:38 (WEA 10)	06:40		05:34	04:51	
	16:13	34	14:33 (WEA 12)	17:07	32	15:47 (WEA 11)	18:02	14	16:52 (WEA 10)	19:59	20:53
7	08:30	13:59 (WEA 12)	07:52	15:16 (WEA 11)	06:52	16:42 (WEA 10)	06:37		05:32	04:50	
	16:14	34	14:33 (WEA 12)	17:09	31	15:47 (WEA 11)	18:04	7	16:49 (WEA 10)	20:01	20:55
8	08:30	14:01 (WEA 12)	07:50	15:17 (WEA 11)	06:50		06:35		05:30	04:50	
	16:16	32	14:33 (WEA 12)	17:11	29	15:46 (WEA 11)	18:05		20:02	20:56	21:40
9	08:29	14:01 (WEA 12)	07:48	15:18 (WEA 11)	06:47		06:33		05:28	04:49	
	16:17	32	14:33 (WEA 12)	17:13	27	15:45 (WEA 11)	18:07		20:04	20:58	21:41
10	08:28	14:02 (WEA 12)	07:46	15:19 (WEA 11)	06:45		06:30		05:26	04:49	
	16:19	31	14:33 (WEA 12)	17:15	25	15:44 (WEA 11)	18:09		20:06	21:00	21:42
11	08:28	14:03 (WEA 12)	07:44	15:21 (WEA 11)	06:42		06:28		05:24	04:48	
	16:20	30	14:33 (WEA 12)	17:17	21	15:42 (WEA 11)	18:11		20:08	21:01	21:43
12	08:27	14:03 (WEA 12)	07:42	15:24 (WEA 11)	06:40		06:26		05:23	04:48	
	16:22	39	15:29 (WEA 11)	17:19	16	15:40 (WEA 11)	18:13		20:10	21:03	21:44
13	08:26	14:04 (WEA 12)	07:40	15:27 (WEA 11)	06:38		06:23		05:21	04:48	
	16:23	43	15:32 (WEA 11)	17:21	10	15:37 (WEA 11)	18:15		20:11	21:05	21:44
14	08:25	14:05 (WEA 12)	07:38		06:35		06:21		05:19	04:47	
	16:25	44	15:34 (WEA 11)	17:23		18:17	20:13		21:07	21:45	
15	08:24	14:07 (WEA 12)	07:36		06:33		06:19		05:18	04:47	
	16:26	44	15:35 (WEA 11)	17:25		18:19	20:15		21:08	21:46	
16	08:24	14:08 (WEA 12)	07:34		06:30		06:16		05:16	04:47	
	16:28	46	15:37 (WEA 11)	17:27		18:20	20:17		21:10	21:46	
17	08:23	14:10 (WEA 12)	07:32	16:42 (WEA 10)	06:28		17:40 (WEA 6)	06:14	05:14	04:47	
	16:30	45	15:39 (WEA 11)	17:29	9	16:51 (WEA 10)	18:22	10	17:50 (WEA 6)	20:19	21:11
18	08:22	14:12 (WEA 12)	07:30	16:39 (WEA 10)	06:26		17:36 (WEA 6)	06:12	05:13	04:47	
	16:31	43	15:40 (WEA 11)	17:31	15	16:54 (WEA 10)	18:24	16	17:52 (WEA 6)	20:20	21:13
19	08:20	14:13 (WEA 12)	07:28	16:37 (WEA 10)	06:23		17:34 (WEA 6)	06:09	05:11	04:47	
	16:33	43	15:41 (WEA 11)	17:33	20	16:57 (WEA 10)	18:26	20	17:54 (WEA 6)	20:22	21:15
20	08:19	14:17 (WEA 12)	07:26	16:36 (WEA 10)	06:21		17:32 (WEA 6)	06:07	05:10	04:47	
	16:35	38	15:42 (WEA 11)	17:35	22	16:58 (WEA 10)	18:28	23	17:55 (WEA 6)	20:24	21:16
21	08:18	15:13 (WEA 11)	07:24	16:35 (WEA 10)	06:18		17:31 (WEA 6)	06:05	05:08	04:47	
	16:37	30	15:43 (WEA 11)	17:37	24	16:59 (WEA 10)	18:30	25	17:56 (WEA 6)	20:26	21:18
22	08:17	15:12 (WEA 11)	07:21	16:34 (WEA 10)	06:16		17:30 (WEA 6)	06:03	05:07	04:47	
	16:39	32	15:44 (WEA 11)	17:39	25	16:59 (WEA 10)	18:31	26	17:56 (WEA 6)	20:28	21:19
23	08:16	15:13 (WEA 11)	07:19	16:33 (WEA 10)	06:14		17:29 (WEA 6)	06:01	05:05	04:47	
	16:40	32	15:45 (WEA 11)	17:41	27	17:00 (WEA 10)	18:33	27	17:56 (WEA 6)	20:30	21:21
24	08:14	15:12 (WEA 11)	07:17	16:33 (WEA 10)	06:11		17:28 (WEA 6)	05:58	05:04	04:48	
	16:42	33	15:45 (WEA 11)	17:43	28	17:01 (WEA 10)	18:35	28	17:56 (WEA 6)	20:31	21:22
25	08:13	15:12 (WEA 11)	07:15	16:32 (WEA 10)	06:09		17:28 (WEA 6)	05:56	05:03	04:48	
	16:44	34	15:46 (WEA 11)	17:45	28	17:00 (WEA 10)	18:37	28	17:56 (WEA 6)	20:33	21:24
26	08:12	15:12 (WEA 11)	07:13	16:32 (WEA 10)	06:06		17:29 (WEA 6)	05:54	05:02	04:49	
	16:46	35	15:47 (WEA 11)	17:46	28	17:00 (WEA 10)	18:39	27	17:56 (WEA 6)	20:35	21:25
27	08:10	15:11 (WEA 11)	07:10	16:32 (WEA 10)	06:04		17:28 (WEA 6)	05:52	05:00	04:49	
	16:48	36	15:47 (WEA 11)	17:48	29	17:01 (WEA 10)	18:41	27	17:55 (WEA 6)	20:37	21:26
28	08:09	15:12 (WEA 11)	07:08	16:32 (WEA 10)	06:01		17:29 (WEA 6)	05:50	04:59	04:49	
	16:50	36	15:48 (WEA 11)	17:50	28	17:00 (WEA 10)	18:42	25	17:54 (WEA 6)	20:39	21:28
29	08:07	15:12 (WEA 11)			06:59		18:28 (WEA 6)	05:48	04:58	04:50	
	16:52	36	15:48 (WEA 11)		19:44	25	18:53 (WEA 6)	20:40	21:29	21:48	
30	08:06	15:12 (WEA 11)			06:57		18:29 (WEA 6)	05:46	04:57	04:51	
	16:54	36	15:48 (WEA 11)		19:46	23	18:52 (WEA 6)	20:42	21:30	21:48	
31	08:04	15:13 (WEA 11)			06:54		18:30 (WEA 6)		04:56		
	16:55	36	15:49 (WEA 11)		19:48	20	18:50 (WEA 6)		21:32		
Sonnenscheinstunden		252		274		367		419		492	507
astr.max.mögl.Beschattung		1127		649		488		28			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BF - Gartenstraße 34

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	14:49 (WEA 11) 08:07 15:14 (WEA 11) 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	25 14:47 (WEA 11) 08:09 15:15 (WEA 11) 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	28 14:46 (WEA 11) 08:10 15:16 (WEA 11) 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	30 14:45 (WEA 11) 08:11 15:16 (WEA 11) 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	31 14:44 (WEA 11) 08:13 15:17 (WEA 11) 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	34 14:45 (WEA 11) 08:14 15:19 (WEA 11) 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	35 14:44 (WEA 11) 08:16 15:19 (WEA 11) 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	35 14:44 (WEA 11) 08:17 15:19 (WEA 11) 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	36 14:44 (WEA 11) 08:18 15:20 (WEA 11) 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	36 14:44 (WEA 11) 08:19 15:20 (WEA 11) 15:57
11	05:01 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	36 14:44 (WEA 11) 08:20 15:20 (WEA 11) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	36 14:44 (WEA 11) 08:21 15:20 (WEA 11) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	36 14:44 (WEA 11) 08:23 15:20 (WEA 11) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	36 14:44 (WEA 11) 08:24 15:20 (WEA 11) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	36 14:44 (WEA 11) 08:24 15:20 (WEA 11) 15:57
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	35 14:45 (WEA 11) 08:25 15:20 (WEA 11) 15:57
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:18	34 14:45 (WEA 11) 08:26 15:19 (WEA 11) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	33 14:46 (WEA 11) 08:27 15:19 (WEA 11) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	32 14:47 (WEA 11) 08:28 15:19 (WEA 11) 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	32 14:47 (WEA 11) 08:28 15:19 (WEA 11) 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	30 14:48 (WEA 11) 08:29 15:18 (WEA 11) 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	38 13:53 (WEA 11) 08:30 15:18 (WEA 11) 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	43 13:50 (WEA 12) 08:30 15:18 (WEA 11) 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	43 13:49 (WEA 12) 08:30 15:17 (WEA 11) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:36	07:57 17:00	45 13:48 (WEA 12) 08:31 15:17 (WEA 11) 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:33	07:59 16:07	46 13:47 (WEA 12) 08:31 15:16 (WEA 11) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	08:01 16:06	45 13:46 (WEA 12) 08:31 15:15 (WEA 11) 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53	08:02 16:05	43 13:46 (WEA 12) 08:32 15:14 (WEA 11) 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 16:04	42 13:46 (WEA 12) 08:32 15:13 (WEA 11) 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 16:03	38 13:46 (WEA 12) 08:32 15:11 (WEA 11) 16:05
31	05:29 21:15	06:22 20:10		07:11 16:47	14:50 (WEA 11) 15:12 (WEA 11)	35 14:50 (WEA 12) 08:32 15:12 (WEA 11) 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			379	477	1082	1084

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenden (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BG - Gartenstraße 23

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	13:53 (WEA 12) 14:24 (WEA 12)	08:02 16:57	15:07 (WEA 11) 17:52	06:52 19:50	05:44 20:44
2	08:32 16:08	13:54 (WEA 12) 14:25 (WEA 12)	08:01 16:59	15:08 (WEA 11) 17:54	06:49 19:51	05:42 20:46
3	08:31 16:09	13:54 (WEA 12) 14:24 (WEA 12)	07:59 17:01	15:08 (WEA 11) 17:56	06:47 19:53	05:40 20:48
4	08:31 16:10	13:55 (WEA 12) 15:16 (WEA 11)	07:57 17:03	15:09 (WEA 11) 17:58	06:45 19:55	05:38 20:49
5	08:31 16:12	13:56 (WEA 12) 15:19 (WEA 11)	07:55 17:05	15:10 (WEA 11) 18:00	06:42 19:57	05:36 20:51
6	08:30 16:13	13:57 (WEA 12) 15:21 (WEA 11)	07:54 17:07	15:12 (WEA 11) 18:02	06:40 19:59	05:34 20:53
7	08:30 16:14	13:57 (WEA 12) 15:22 (WEA 11)	07:52 17:09	15:13 (WEA 11) 18:04	06:37 20:01	05:32 20:55
8	08:30 16:16	13:59 (WEA 12) 15:25 (WEA 11)	07:50 17:11	15:16 (WEA 11) 18:05	06:35 20:02	05:30 20:56
9	08:29 16:17	13:59 (WEA 12) 15:26 (WEA 11)	07:48 17:13	15:19 (WEA 11) 18:07	06:33 20:04	05:28 20:58
10	08:28 16:19	14:00 (WEA 12) 15:27 (WEA 11)	07:46 17:15	15:29 (WEA 11) 18:09	06:30 20:06	05:26 21:00
11	08:28 16:20	14:01 (WEA 12) 15:28 (WEA 11)	07:44 17:17	16:45 18:11	06:28 20:08	05:24 21:01
12	08:27 16:22	14:02 (WEA 12) 15:29 (WEA 11)	07:42 17:19	16:40 18:13	06:26 20:10	05:23 21:03
13	08:26 16:23	14:04 (WEA 12) 15:30 (WEA 11)	07:40 17:21	16:38 (WEA 10) 18:15	06:23 20:11	05:21 21:05
14	08:25 16:25	14:06 (WEA 12) 15:31 (WEA 11)	07:38 17:23	16:33 (WEA 10) 18:17	06:21 20:13	05:19 21:07
15	08:24 16:26	14:08 (WEA 12) 15:32 (WEA 11)	07:36 17:25	16:31 (WEA 10) 18:19	06:19 20:15	05:18 21:08
16	08:24 16:28	14:11 (WEA 12) 15:33 (WEA 11)	07:34 17:27	16:30 (WEA 10) 18:20	06:16 20:17	05:16 21:10
17	08:23 16:30	15:04 (WEA 11) 15:34 (WEA 11)	07:32 17:29	16:28 (WEA 10) 18:22	06:14 20:19	05:14 21:11
18	08:22 16:31	15:04 (WEA 11) 15:36 (WEA 11)	07:30 17:31	16:27 (WEA 10) 18:24	06:12 20:20	05:13 21:13
19	08:20 16:33	15:04 (WEA 11) 15:36 (WEA 11)	07:28 17:33	16:27 (WEA 10) 18:26	06:09 20:22	05:11 21:15
20	08:19 16:35	15:04 (WEA 11) 15:37 (WEA 11)	07:26 17:35	16:26 (WEA 10) 18:28	06:07 20:24	05:10 21:16
21	08:18 16:37	15:04 (WEA 11) 15:38 (WEA 11)	07:24 17:37	16:26 (WEA 10) 18:30	06:05 20:26	05:08 21:18
22	08:17 16:39	15:04 (WEA 11) 15:38 (WEA 11)	07:21 17:39	16:25 (WEA 10) 18:31	06:03 20:28	05:07 21:19
23	08:16 16:40	15:04 (WEA 11) 15:39 (WEA 11)	07:19 17:41	16:25 (WEA 10) 18:33	06:01 20:30	05:05 21:21
24	08:14 16:42	15:04 (WEA 11) 15:39 (WEA 11)	07:17 17:43	16:26 (WEA 10) 18:35	05:58 20:31	05:04 21:22
25	08:13 16:44	15:05 (WEA 11) 15:39 (WEA 11)	07:15 17:45	16:25 (WEA 10) 18:37	05:56 20:33	05:03 21:24
26	08:12 16:46	15:04 (WEA 11) 15:39 (WEA 11)	07:13 17:46	16:26 (WEA 10) 18:39	05:54 20:35	05:02 21:25
27	08:10 16:48	15:04 (WEA 11) 15:39 (WEA 11)	07:10 17:48	16:27 (WEA 10) 18:41	05:52 20:37	05:00 21:26
28	08:09 16:50	15:05 (WEA 11) 15:40 (WEA 11)	07:08 17:50	16:27 (WEA 10) 18:42	05:50 20:39	04:59 21:28
29	08:07 16:52	15:05 (WEA 11) 15:40 (WEA 11)	07:06 17:52	16:26 (WEA 10) 18:44	05:48 20:40	04:58 21:29
30	08:06 16:54	15:05 (WEA 11) 15:39 (WEA 11)	07:04 17:54	16:25 (WEA 10) 18:46	05:46 20:42	04:57 21:30
31	08:04 16:55	15:07 (WEA 11) 15:40 (WEA 11)	07:02 17:56	16:24 (WEA 10) 18:48	05:44 20:44	04:55 21:32
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	1141	585	421			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schatteneinde (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BG - Gartenstraße 23

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember	
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02	13:43 (WEA 12) 15:10 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 16:01	45 13:43 (WEA 12) 15:10 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01	13:43 (WEA 12) 15:09 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00	13:43 (WEA 12) 15:09 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:59	13:42 (WEA 12) 15:08 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59	13:43 (WEA 12) 15:07 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:24 16:34	08:16 15:58	13:42 (WEA 12) 15:06 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58	13:43 (WEA 12) 15:04 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58	13:43 (WEA 12) 14:13 (WEA 12)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 17:15 (WEA 10)	08:19 15:57	13:43 (WEA 12) 14:14 (WEA 12)
11	05:00 21:41	05:47 20:54	06:41 19:44	07:34 18:31	07:32 17:09 (WEA 10)	08:20 15:57	13:43 (WEA 12) 14:14 (WEA 12)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 17:03 (WEA 10)	08:22 15:57	13:44 (WEA 12) 14:16 (WEA 12)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 17:01 (WEA 10)	08:23 15:57	13:44 (WEA 12) 14:16 (WEA 12)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 17:00 (WEA 10)	08:24 15:57	13:45 (WEA 12) 14:17 (WEA 12)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:59 (WEA 10)	08:24 15:57	13:45 (WEA 12) 14:17 (WEA 12)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:58 (WEA 10)	08:25 15:57	13:44 (WEA 12) 14:17 (WEA 12)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:57 (WEA 10)	08:26 15:57	13:45 (WEA 12) 14:18 (WEA 12)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:57 (WEA 10)	08:27 15:57	13:46 (WEA 12) 14:19 (WEA 12)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:56 (WEA 10)	08:28 15:58	13:46 (WEA 12) 14:19 (WEA 12)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:56 (WEA 10)	08:28 15:58	13:46 (WEA 12) 14:19 (WEA 12)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:56 (WEA 10)	08:29 15:58	13:47 (WEA 12) 14:20 (WEA 12)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:57 (WEA 10)	08:30 15:59	13:47 (WEA 12) 14:20 (WEA 12)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:57 (WEA 10)	08:30 15:59	13:48 (WEA 12) 14:21 (WEA 12)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:58 (WEA 10)	08:30 16:00	13:48 (WEA 12) 14:21 (WEA 12)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:06	07:57 15:59 (WEA 10)	08:31 16:01	13:49 (WEA 12) 14:22 (WEA 12)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 18:07	07:59 16:00 (WEA 10)	08:31 16:01	13:50 (WEA 12) 14:23 (WEA 12)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 18:07	08:01 16:01 (WEA 10)	08:31 16:02	13:50 (WEA 12) 14:23 (WEA 12)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 18:09	08:02 16:04 (WEA 10)	08:32 16:03	13:51 (WEA 12) 14:23 (WEA 12)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 18:09	08:04 16:04 (WEA 10)	08:32 16:04	13:51 (WEA 12) 14:24 (WEA 12)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 18:22	08:06 16:03	08:32 16:05	13:52 (WEA 12) 14:24 (WEA 12)
31	05:29 21:15	06:22 20:10		07:11 16:47		08:32 16:06	13:52 (WEA 12) 14:24 (WEA 12)
Sonnenscheinstunden	510	458	382	329	261	236	
astr.max.mögl.Beschattung			376	415	943	1080	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BH - Gartenstraße 31

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März		April		Mai		Juni	
1	08:32	13:49 (WEA 12)	08:02	15:07 (WEA 11)	07:06	16:30 (WEA 10)	06:52	18:30 (WEA 6)	05:44	04:55	
	16:07	35	14:24 (WEA 12)	16:57	37	15:44 (WEA 11)	17:52	16:57 (WEA 10)	19:50	18:49 (WEA 6)	20:44
2	08:32	13:50 (WEA 12)	08:01	15:07 (WEA 11)	07:04	16:31 (WEA 10)	06:49	18:32 (WEA 6)	05:42	04:54	
	16:08	34	14:24 (WEA 12)	16:59	36	15:43 (WEA 11)	17:54	16:56 (WEA 10)	19:51	18:47 (WEA 6)	20:46
3	08:31	13:50 (WEA 12)	07:59	15:08 (WEA 11)	07:01	16:31 (WEA 10)	06:47	18:35 (WEA 6)	05:40	04:53	
	16:09	34	14:24 (WEA 12)	17:01	35	15:43 (WEA 11)	17:56	16:55 (WEA 10)	19:53	18:42 (WEA 6)	20:48
4	08:31	13:51 (WEA 12)	07:57	15:08 (WEA 11)	06:59	16:32 (WEA 10)	06:45	18:36 (WEA 6)	05:38	04:53	
	16:10	34	14:25 (WEA 12)	17:03	35	15:43 (WEA 11)	17:58	16:54 (WEA 10)	19:55	18:49 (WEA 6)	20:49
5	08:31	13:52 (WEA 12)	07:55	15:09 (WEA 11)	06:57	16:34 (WEA 10)	06:42	18:37 (WEA 6)	05:36	04:52	
	16:12	34	14:26 (WEA 12)	17:05	33	15:42 (WEA 11)	18:00	16:52 (WEA 10)	19:57	18:51 (WEA 6)	20:51
6	08:30	13:52 (WEA 12)	07:54	15:10 (WEA 11)	06:54	16:36 (WEA 10)	06:40	18:38 (WEA 6)	05:34	04:51	
	16:13	33	14:25 (WEA 12)	17:07	31	15:41 (WEA 11)	18:02	16:49 (WEA 10)	19:59	18:53 (WEA 6)	20:53
7	08:30	13:53 (WEA 12)	07:52	15:11 (WEA 11)	06:52	16:41 (WEA 10)	06:37	18:39 (WEA 6)	05:32	04:50	
	16:14	32	14:25 (WEA 12)	17:09	30	15:41 (WEA 11)	18:04	16:44 (WEA 10)	20:01	18:55 (WEA 6)	20:55
8	08:30	13:54 (WEA 12)	07:50	15:12 (WEA 11)	06:50		06:35		05:30	04:50	
	16:16	36	15:20 (WEA 11)	17:11	28	15:40 (WEA 11)	18:05		20:02	18:56 (WEA 6)	21:00
9	08:29	13:55 (WEA 12)	07:48	15:13 (WEA 11)	06:47		06:33		05:28	04:49	
	16:17	41	15:23 (WEA 11)	17:13	25	15:38 (WEA 11)	18:07		20:04	18:58 (WEA 6)	21:02
10	08:28	13:55 (WEA 12)	07:46	15:15 (WEA 11)	06:45		06:30		05:26	04:49	
	16:19	44	15:25 (WEA 11)	17:15	22	15:37 (WEA 11)	18:09		20:06	18:59 (WEA 6)	21:04
11	08:28	13:56 (WEA 12)	07:44	15:17 (WEA 11)	06:42		06:28		05:24	04:48	
	16:20	46	15:27 (WEA 11)	17:17	18	15:35 (WEA 11)	18:11		20:08	19:01 (WEA 6)	21:06
12	08:27	13:57 (WEA 12)	07:42	15:21 (WEA 11)	06:40		06:26		05:23	04:48	
	16:22	48	15:29 (WEA 11)	17:19	11	15:32 (WEA 11)	18:13		20:10	19:03 (WEA 6)	21:08
13	08:26	13:58 (WEA 12)	07:40		06:38		06:23		05:21	04:48	
	16:23	47	15:30 (WEA 11)	17:21		18:15		20:11	19:05 (WEA 6)	21:09	
14	08:25	14:00 (WEA 12)	07:38		06:35		06:21		05:19	04:47	
	16:25	48	15:32 (WEA 11)	17:23		18:17		20:13	19:07 (WEA 6)	21:11	
15	08:24	14:01 (WEA 12)	07:36		06:33		06:19		05:18	04:47	
	16:26	48	15:33 (WEA 11)	17:25		18:19		20:15	19:08 (WEA 6)	21:12	
16	08:24	14:03 (WEA 12)	07:34	16:41 (WEA 10)	06:30		06:16		05:16	04:47	
	16:28	47	15:34 (WEA 11)	17:27	8	16:49 (WEA 10)	18:20		20:17	19:10 (WEA 6)	21:14
17	08:23	14:05 (WEA 12)	07:32	16:37 (WEA 10)	06:28		06:14		05:14	04:47	
	16:30	45	15:35 (WEA 11)	17:29	14	16:51 (WEA 10)	18:22	10	17:49 (WEA 6)	19:11	21:17
18	08:22	14:07 (WEA 12)	07:30	16:35 (WEA 10)	06:26		06:12		05:13	04:47	
	16:31	44	15:37 (WEA 11)	17:31	19	16:54 (WEA 10)	18:24	17	17:52 (WEA 6)	19:13	21:17
19	08:20	14:10 (WEA 12)	07:28	16:34 (WEA 10)	06:23		06:09		05:11	04:47	
	16:33	38	15:37 (WEA 11)	17:33	21	16:55 (WEA 10)	18:26	21	17:54 (WEA 6)	19:15	21:17
20	08:19	15:06 (WEA 11)	07:26	16:33 (WEA 10)	06:21		06:07		05:10	04:47	
	16:35	32	15:38 (WEA 11)	17:35	24	16:57 (WEA 10)	18:28	23	17:54 (WEA 6)	19:16	21:18
21	08:18	15:06 (WEA 11)	07:24	16:32 (WEA 10)	06:18		06:05		05:08	04:47	
	16:37	33	15:39 (WEA 11)	17:37	26	16:58 (WEA 10)	18:30	25	17:55 (WEA 6)	19:18	21:18
22	08:17	15:05 (WEA 11)	07:21	16:30 (WEA 10)	06:16		06:03		05:07	04:47	
	16:39	35	15:40 (WEA 11)	17:39	28	16:58 (WEA 10)	18:31	26	17:55 (WEA 6)	19:19	21:18
23	08:16	15:06 (WEA 11)	07:19	16:30 (WEA 10)	06:14		06:01		05:05	04:47	
	16:40	35	15:41 (WEA 11)	17:41	28	16:58 (WEA 10)	18:33	28	17:56 (WEA 6)	19:21	21:18
24	08:14	15:05 (WEA 11)	07:17	16:30 (WEA 10)	06:11		05:58		05:04	04:48	
	16:42	36	15:41 (WEA 11)	17:43	29	16:59 (WEA 10)	18:35	28	17:55 (WEA 6)	19:21	21:19
25	08:13	15:06 (WEA 11)	07:15	16:29 (WEA 10)	06:09		05:56		05:03	04:48	
	16:44	36	15:42 (WEA 11)	17:45	29	16:58 (WEA 10)	18:37	28	17:55 (WEA 6)	19:23	21:19
26	08:12	15:05 (WEA 11)	07:13	16:29 (WEA 10)	06:06		05:54		05:02	04:49	
	16:46	37	15:42 (WEA 11)	17:46	29	16:58 (WEA 10)	18:39	29	17:56 (WEA 6)	19:25	21:19
27	08:10	15:05 (WEA 11)	07:10	16:29 (WEA 10)	06:04		05:52		05:00	04:49	
	16:48	37	15:42 (WEA 11)	17:48	29	16:58 (WEA 10)	18:41	27	17:54 (WEA 6)	19:26	21:18
28	08:09	15:06 (WEA 11)	07:08	16:29 (WEA 10)	06:01		05:50		04:59	04:49	
	16:50	37	15:43 (WEA 11)	17:50	28	16:57 (WEA 10)	18:42	27	17:54 (WEA 6)	19:28	21:18
29	08:07	15:06 (WEA 11)			06:59		05:48		04:58	04:50	
	16:52	37	15:43 (WEA 11)		19:44		26	18:53 (WEA 6)	20:40	19:29	21:18
30	08:06	15:06 (WEA 11)			06:57		05:46		04:57	04:51	
	16:54	37	15:43 (WEA 11)		19:46		24	18:52 (WEA 6)	20:42	19:30	21:18
31	08:04	15:07 (WEA 11)			06:54		05:44		04:56		
	16:55	37	15:44 (WEA 11)		19:48		22	18:50 (WEA 6)	21:32		
Sonnenscheinstunden		252		274		367		419		492	507
astr.max.mögl.Beschattung		1197		653		493		41			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BH - Gartenstraße 31

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 15:07 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	23 07:15 16:43	46 16:02 15:09 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	25 07:17 16:43	44 16:01 15:09 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	28 07:19 16:40	42 16:00 15:05 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	30 07:21 16:38	38 15:59 14:59 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	32 07:23 16:36	32 15:59 14:59 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	34 07:24 16:34	33 15:59 14:59 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	36 07:26 16:32	34 15:58 14:58 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	38 07:28 16:31	36 15:57 14:57 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	40 07:30 16:29	38 15:56 14:56 (WEA 11)
11	05:01 21:41	05:47 20:54	06:41 19:44	07:34 18:31	42 07:32 16:27	40 15:55 14:55 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	44 07:34 16:25	42 15:54 14:54 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	46 07:36 16:24	44 15:53 14:53 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	48 07:38 16:22	46 15:52 14:52 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	50 07:40 16:21	48 15:51 14:51 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20	52 07:41 16:19	50 15:50 14:50 (WEA 11)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	54 07:43 16:18	52 15:49 14:49 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	56 07:45 16:16	54 15:48 14:48 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	58 07:47 16:15	56 15:47 14:47 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	60 07:49 16:14	58 15:46 14:46 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	62 07:50 16:12	60 15:45 14:45 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	64 07:52 16:11	62 15:44 14:44 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	66 07:54 16:10	64 15:43 14:43 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	68 07:56 16:09	66 15:42 14:42 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	08:00 18:00	70 07:57 16:08	68 15:41 14:41 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	08:02 18:02	72 07:59 16:07	70 15:40 14:40 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	08:04 18:00	74 08:01 16:06	72 15:39 14:39 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	08:06 17:58	76 08:02 16:05	74 15:38 14:38 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	08:07 17:57	78 08:04 16:04	76 15:37 14:37 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	08:09 17:55	80 08:06 16:03	78 15:36 14:36 (WEA 11)
31	05:29 21:15	06:22 20:10		08:11 17:53	82 08:08 16:02	80 15:35 14:35 (WEA 11)
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			403	479	1109	1128

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BI - Gartenstraße 36

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar			Februar			März			April			Mai			Juni		
1	08:32		13:57 (WEA 12)	08:02		15:15 (WEA 11)	07:06		16:35 (WEA 10)	06:52		18:32 (WEA 6)	05:44		04:55			
	16:07	36	14:33 (WEA 12)	16:57	37	15:52 (WEA 11)	17:52	28	17:03 (WEA 10)	19:50	22	18:54 (WEA 6)	20:44		21:33			
2	08:32		13:57 (WEA 12)	08:01		15:15 (WEA 11)	07:04		16:35 (WEA 10)	06:49		18:34 (WEA 6)	05:42		04:54			
	16:08	37	14:34 (WEA 12)	16:59	37	15:52 (WEA 11)	17:54	28	17:03 (WEA 10)	19:51	19	18:53 (WEA 6)	20:46		21:34			
3	08:31		13:57 (WEA 12)	07:59		15:15 (WEA 11)	07:01		16:35 (WEA 10)	06:47		18:35 (WEA 6)	05:40		04:53			
	16:09	37	14:34 (WEA 12)	17:01	37	15:52 (WEA 11)	17:56	26	17:01 (WEA 10)	19:53	15	18:50 (WEA 6)	20:48		21:35			
4	08:31		13:58 (WEA 12)	07:57		15:15 (WEA 11)	06:59		16:36 (WEA 10)	06:45		18:38 (WEA 6)	05:38		04:53			
	16:10	36	14:34 (WEA 12)	17:03	36	15:51 (WEA 11)	17:58	25	17:01 (WEA 10)	19:55	9	18:47 (WEA 6)	20:49		21:36			
5	08:31		13:59 (WEA 12)	07:55		15:16 (WEA 11)	06:57		16:37 (WEA 10)	06:42			05:36		04:52			
	16:12	36	14:35 (WEA 12)	17:05	35	15:51 (WEA 11)	18:00	23	17:00 (WEA 10)	19:57			20:51		21:37			
6	08:30		14:00 (WEA 12)	07:54		15:16 (WEA 11)	06:54		16:38 (WEA 10)	06:40			05:34		04:51			
	16:13	35	14:35 (WEA 12)	17:07	35	15:51 (WEA 11)	18:02	20	16:58 (WEA 10)	19:59			20:53		21:38			
7	08:30		14:00 (WEA 12)	07:52		15:17 (WEA 11)	06:52		16:40 (WEA 10)	06:37			05:32		04:50			
	16:14	35	14:35 (WEA 12)	17:09	33	15:50 (WEA 11)	18:04	16	16:56 (WEA 10)	20:01			20:55		21:39			
8	08:30		14:01 (WEA 12)	07:50		15:18 (WEA 11)	06:50		16:42 (WEA 10)	06:35			05:30		04:50			
	16:16	35	14:36 (WEA 12)	17:11	32	15:50 (WEA 11)	18:05	11	16:53 (WEA 10)	20:02			20:56		21:40			
9	08:29		14:02 (WEA 12)	07:48		15:18 (WEA 11)	06:47			06:33			05:28		04:49			
	16:17	34	14:36 (WEA 12)	17:13	31	15:49 (WEA 11)	18:07			20:04			20:58		21:41			
10	08:28		14:02 (WEA 12)	07:46		15:20 (WEA 11)	06:45			06:30			05:26		04:49			
	16:19	34	14:36 (WEA 12)	17:15	28	15:48 (WEA 11)	18:09			20:06			21:00		21:42			
11	08:28		14:03 (WEA 12)	07:44		15:21 (WEA 11)	06:42			06:28			05:24		04:48			
	16:20	32	14:35 (WEA 12)	17:17	26	15:47 (WEA 11)	18:11			20:08			21:01		21:43			
12	08:27		14:04 (WEA 12)	07:42		15:23 (WEA 11)	06:40			06:26			05:23		04:48			
	16:22	31	14:35 (WEA 12)	17:19	23	15:46 (WEA 11)	18:13			20:10			21:03		21:44			
13	08:26		14:04 (WEA 12)	07:40		15:25 (WEA 11)	06:38			06:23			05:21		04:48			
	16:23	31	14:35 (WEA 12)	17:21	19	15:44 (WEA 11)	18:15			20:11			21:05		21:44			
14	08:25		14:05 (WEA 12)	07:38		15:28 (WEA 11)	06:35			06:21			05:19		04:47			
	16:25	38	15:32 (WEA 11)	17:23	14	15:42 (WEA 11)	18:17			20:13			21:07		21:45			
15	08:24		14:07 (WEA 12)	07:36			06:33			06:19			05:18		04:47			
	16:26	41	15:35 (WEA 11)	17:25			18:19			20:15			21:08		21:46			
16	08:24		14:08 (WEA 12)	07:34			06:30			06:16			05:16		04:47			
	16:28	44	15:37 (WEA 11)	17:27			18:20			20:17			21:10		21:46			
17	08:23		14:09 (WEA 12)	07:32			06:28			06:14			05:14		04:47			
	16:30	45	15:39 (WEA 11)	17:29			18:22			20:19			21:11		21:47			
18	08:22		14:11 (WEA 12)	07:30		16:47 (WEA 10)	06:26		17:45 (WEA 6)	06:12			05:13		04:47			
	16:31	45	15:41 (WEA 11)	17:31	5	16:52 (WEA 10)	18:24	5	17:50 (WEA 6)	20:20			21:13		21:47			
19	08:20		14:12 (WEA 12)	07:28		16:43 (WEA 10)	06:23		17:41 (WEA 6)	06:09			05:11		04:47			
	16:33	45	15:42 (WEA 11)	17:33	14	16:57 (WEA 10)	18:26	13	17:54 (WEA 6)	20:22			21:15		21:47			
20	08:19		14:14 (WEA 12)	07:26		16:41 (WEA 10)	06:21		17:37 (WEA 6)	06:07			05:10		04:47			
	16:35	43	15:43 (WEA 11)	17:35	18	16:59 (WEA 10)	18:28	19	17:56 (WEA 6)	20:24			21:16		21:48			
21	08:18		14:17 (WEA 12)	07:24		16:40 (WEA 10)	06:18		17:36 (WEA 6)	06:05			05:08		04:47			
	16:37	41	15:45 (WEA 11)	17:37	21	17:01 (WEA 10)	18:30	21	17:57 (WEA 6)	20:26			21:18		21:48			
22	08:17		14:21 (WEA 12)	07:21		16:38 (WEA 10)	06:16		17:34 (WEA 6)	06:03			05:07		04:47			
	16:39	34	15:45 (WEA 11)	17:39	23	17:01 (WEA 10)	18:31	24	17:58 (WEA 6)	20:28			21:19		21:48			
23	08:16		15:16 (WEA 11)	07:19		16:37 (WEA 10)	06:14		17:33 (WEA 6)	06:01			05:05		04:47			
	16:40	31	15:47 (WEA 11)	17:41	25	17:02 (WEA 10)	18:33	26	17:59 (WEA 6)	20:30			21:21		21:48			
24	08:14		15:15 (WEA 11)	07:17		16:36 (WEA 10)	06:11		17:32 (WEA 6)	05:58			05:04		04:48			
	16:42	32	15:47 (WEA 11)	17:43	27	17:03 (WEA 10)	18:35	26	17:58 (WEA 6)	20:31			21:22		21:49			
25	08:13		15:15 (WEA 11)	07:15		16:35 (WEA 10)	06:09		17:32 (WEA 6)	05:56			05:03		04:48			
	16:44	34	15:49 (WEA 11)	17:45	28	17:03 (WEA 10)	18:37	27	17:59 (WEA 6)	20:33			21:24		21:49			
26	08:12		15:15 (WEA 11)	07:13		16:35 (WEA 10)	06:06		17:32 (WEA 6)	05:54			05:02		04:49			
	16:46	34	15:49 (WEA 11)	17:46	28	17:03 (WEA 10)	18:39	27	17:59 (WEA 6)	20:35			21:25		21:49			
27	08:10		15:14 (WEA 11)	07:10		16:35 (WEA 10)	06:04		17:31 (WEA 6)	05:52			05:00		04:49			
	16:48	35	15:49 (WEA 11)	17:48	29	17:04 (WEA 10)	18:41	27	17:58 (WEA 6)	20:37			21:26		21:48			
28	08:09		15:15 (WEA 11)	07:08		16:34 (WEA 10)	06:01		17:31 (WEA 6)	05:50			04:59		04:49			
	16:50	35	15:50 (WEA 11)	17:50	29	17:03 (WEA 10)	18:42	27	17:58 (WEA 6)	20:39			21:28		21:48			
29	08:07		15:14 (WEA 11)				06:59		18:30 (WEA 6)	05:48			04:58		04:50			
	16:52	37	15:51 (WEA 11)				19:44	27	18:57 (WEA 6)	20:40			21:29		21:48			
30	08:06		15:14 (WEA 11)				06:57		18:31 (WEA 6)	05:46			04:57		04:51			
	16:54	37	15:51 (WEA 11)				19:46	26	18:57 (WEA 6)	20:42			21:30		21:48			
31	08:04		15:15 (WEA 11)				06:54		18:31 (WEA 6)				04:56					
	16:55	37	15:52 (WEA 11)				19:48	24	18:55 (WEA 6)				21:32					
Sonnenscheinstunden		252		274			367			419			492		507			
astr.max.mögl.Beschattung		1137		670			496		65									

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BI - Gartenstraße 36

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September		Oktober		November		Dezember		
1	04:51 21:48	05:30 21:13	06:24 20:08		07:16 18:55		07:13 16:45	29	15:18 (WEA 11) 16:02	33	14:18 (WEA 12)
2	04:52 21:47	05:32 21:11	06:25 20:05		07:18 18:53		07:15 16:43	31	15:19 (WEA 11) 16:01	34	14:19 (WEA 12)
3	04:53 21:47	05:34 21:10	06:27 20:03		07:19 18:50		07:17 16:42	33	15:20 (WEA 11) 16:01	34	14:19 (WEA 12)
4	04:54 21:46	05:35 21:08	06:29 20:01		07:21 18:48		07:19 16:40	34	15:20 (WEA 11) 16:00	35	14:20 (WEA 12)
5	04:54 21:46	05:37 21:06	06:31 19:58		07:23 18:45	6	17:21 (WEA 10) 16:38	35	15:21 (WEA 11) 15:59	35	14:20 (WEA 12)
6	04:55 21:45	05:39 21:04	06:32 19:56		07:25 18:43	14	17:17 (WEA 10) 16:32	36	15:22 (WEA 11) 15:59	35	14:21 (WEA 12)
7	04:56 21:45	05:40 21:02	06:34 19:53		07:27 18:41	19	17:14 (WEA 10) 16:34	36	15:22 (WEA 11) 15:58	35	14:21 (WEA 12)
8	04:57 21:44	05:42 21:00	06:36 19:51	9	18:32 (WEA 6) 18:38	21	17:13 (WEA 10) 16:32	36	15:22 (WEA 11) 15:58	36	14:22 (WEA 12)
9	04:58 21:43	05:44 20:58	06:37 19:49	15	18:29 (WEA 6) 18:36	24	17:11 (WEA 10) 16:31	37	15:23 (WEA 11) 15:58	37	14:23 (WEA 12)
10	04:59 21:42	05:45 20:56	06:39 19:46	19	18:44 (WEA 6) 18:33	26	17:35 (WEA 10) 16:29	37	15:23 (WEA 11) 15:57	36	14:23 (WEA 12)
11	05:01 21:41	05:47 20:54	06:41 19:44	21	18:25 (WEA 6) 18:31	27	17:09 (WEA 10) 16:32	37	15:23 (WEA 11) 15:57	36	14:23 (WEA 12)
12	05:02 21:41	05:49 20:52	06:43 19:41	24	18:46 (WEA 6) 18:29	28	17:36 (WEA 10) 16:25	37	15:23 (WEA 11) 15:57	37	14:25 (WEA 12)
13	05:03 21:40	05:51 20:50	06:44 19:39	25	18:23 (WEA 6) 18:26	29	17:07 (WEA 10) 16:24	36	15:22 (WEA 11) 15:57	37	14:25 (WEA 12)
14	05:04 21:39	05:52 20:48	06:46 19:36	26	18:48 (WEA 6) 18:24	29	17:36 (WEA 10) 16:22	35	15:22 (WEA 11) 15:57	37	14:26 (WEA 12)
15	05:05 21:38	05:54 20:46	06:48 19:34	28	18:20 (WEA 6) 18:22	29	17:07 (WEA 10) 16:21	35	15:22 (WEA 11) 15:57	37	14:26 (WEA 12)
16	05:07 21:36	05:56 20:44	06:50 19:32	28	18:48 (WEA 6) 18:20	28	18:20 (WEA 6) 16:19	34	15:22 (WEA 11) 15:57	37	14:26 (WEA 12)
17	05:08 21:35	05:58 20:42	06:51 19:29	28	18:20 (WEA 6) 18:17	28	17:35 (WEA 10) 16:18	34	15:22 (WEA 11) 15:57	37	14:26 (WEA 12)
18	05:09 21:34	05:59 20:40	06:53 19:27	27	18:48 (WEA 6) 18:15	26	17:08 (WEA 10) 16:16	32	15:21 (WEA 11) 15:57	37	14:27 (WEA 12)
19	05:11 21:33	06:01 20:37	06:55 19:24	27	18:19 (WEA 6) 18:13	25	17:34 (WEA 10) 16:15	31	15:21 (WEA 11) 15:58	37	14:28 (WEA 12)
20	05:12 21:32	06:03 20:35	06:57 19:22	25	18:20 (WEA 6) 18:11	23	17:33 (WEA 10) 16:14	34	15:21 (WEA 11) 15:58	37	14:28 (WEA 12)
21	05:13 21:30	06:04 20:33	06:58 19:19	25	18:45 (WEA 6) 18:08	21	17:10 (WEA 10) 16:12	41	15:20 (WEA 11) 15:58	38	14:29 (WEA 12)
22	05:15 21:29	06:06 20:31	07:00 19:17	22	18:22 (WEA 6) 18:06	17	17:32 (WEA 10) 16:11	43	15:19 (WEA 11) 15:59	38	14:29 (WEA 12)
23	05:16 21:28	06:08 20:28	07:02 19:14	19	18:22 (WEA 6) 18:04	12	17:14 (WEA 10) 16:10	45	15:19 (WEA 11) 15:59	38	14:30 (WEA 12)
24	05:18 21:26	06:10 20:26	07:04 19:12	16	18:41 (WEA 6) 18:02		17:26 (WEA 10) 16:09	45	15:18 (WEA 11) 16:00	37	14:30 (WEA 12)
25	05:19 21:25	06:11 20:24	07:05 19:10	10	18:39 (WEA 6) 17:00		18:25 (WEA 6) 16:08	44	15:17 (WEA 11) 16:01	37	14:30 (WEA 12)
26	05:21 21:23	06:13 20:22	07:07 19:07		18:35 (WEA 6) 16:58		17:07 (WEA 10) 16:07	44	15:17 (WEA 11) 16:01	37	14:31 (WEA 12)
27	05:22 21:22	06:15 20:19	07:09 19:05		16:56	7	15:01 (WEA 11) 16:06	41	15:16 (WEA 11) 16:02	38	14:32 (WEA 12)
28	05:24 21:20	06:17 20:17	07:11 19:02		16:53	16	14:56 (WEA 11) 16:05	37	15:12 (WEA 11) 16:03	37	14:32 (WEA 12)
29	05:26 21:18	06:18 20:15	07:12 19:00		16:51	20	15:12 (WEA 11) 16:04	30	15:12 (WEA 11) 16:04	37	14:32 (WEA 12)
30	05:27 21:17	06:20 20:12	07:14 18:57		16:49	24	14:52 (WEA 11) 16:03	31	14:16 (WEA 12) 16:05	37	14:33 (WEA 12)
31	05:29 21:15	06:22 20:10			16:47	27	15:16 (WEA 11)		14:17 (WEA 12) 16:06	36	14:32 (WEA 12)
Sonnenscheinstunden	510	458	382		329		261		236		
astr.max.mögl.Beschattung				394		526		1090		1129	

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenden (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BJ - Gartenstraße 33

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar		Februar		März		April		Mai		Juni			
1	08:32		13:49 (WEA 12)	08:02	15:09 (WEA 11)	07:06	16:32 (WEA 10)	06:52	18:31 (WEA 6)	05:44	04:55			
	16:07	37	14:26 (WEA 12)	16:57	38	15:47 (WEA 11)	17:52	29	17:01 (WEA 10)	19:50	23	18:54 (WEA 6)	20:44	21:33
2	08:32		13:50 (WEA 12)	08:01		15:09 (WEA 11)	07:04		16:33 (WEA 10)	06:49		18:32 (WEA 6)	05:42	04:54
	16:08	37	14:27 (WEA 12)	16:59	38	15:47 (WEA 11)	17:54	28	17:01 (WEA 10)	19:51	21	18:53 (WEA 6)	20:46	21:34
3	08:31		13:50 (WEA 12)	07:59		15:09 (WEA 11)	07:01		16:32 (WEA 10)	06:47		18:33 (WEA 6)	05:40	04:53
	16:09	36	14:26 (WEA 12)	17:01	37	15:46 (WEA 11)	17:56	27	16:59 (WEA 10)	19:53	18	18:51 (WEA 6)	20:48	21:35
4	08:31		13:51 (WEA 12)	07:57		15:10 (WEA 11)	06:59		16:33 (WEA 10)	06:45		18:35 (WEA 6)	05:38	04:53
	16:10	36	14:27 (WEA 12)	17:03	36	15:46 (WEA 11)	17:58	26	16:59 (WEA 10)	19:55	14	18:49 (WEA 6)	20:49	21:36
5	08:31		13:52 (WEA 12)	07:55		15:10 (WEA 11)	06:57		16:35 (WEA 10)	06:42		18:40 (WEA 6)	05:36	04:52
	16:12	36	14:28 (WEA 12)	17:05	36	15:46 (WEA 11)	18:00	23	16:58 (WEA 10)	19:57	5	18:45 (WEA 6)	20:51	21:37
6	08:30		13:53 (WEA 12)	07:54		15:11 (WEA 11)	06:54		16:35 (WEA 10)	06:40		18:45 (WEA 6)	05:34	04:51
	16:13	35	14:28 (WEA 12)	17:07	34	15:45 (WEA 11)	18:02	21	16:56 (WEA 10)	19:59		20:53	21:38	
7	08:30		13:53 (WEA 12)	07:52		15:12 (WEA 11)	06:52		16:37 (WEA 10)	06:37		20:53	21:38	
	16:14	34	14:27 (WEA 12)	17:09	33	15:45 (WEA 11)	18:04	17	16:54 (WEA 10)	20:01		20:55	21:39	
8	08:30		13:54 (WEA 12)	07:50		15:12 (WEA 11)	06:50		16:40 (WEA 10)	06:35		20:53	21:38	
	16:16	34	14:28 (WEA 12)	17:11	32	15:44 (WEA 11)	18:05	10	16:50 (WEA 10)	20:02		20:56	21:40	
9	08:29		13:55 (WEA 12)	07:48		15:14 (WEA 11)	06:47			06:33		20:52	21:37	
	16:17	33	14:28 (WEA 12)	17:13	29	15:43 (WEA 11)	18:07			20:04		20:58	21:41	
10	08:28		13:55 (WEA 12)	07:46		15:15 (WEA 11)	06:45			06:30		20:56	21:40	
	16:19	33	14:28 (WEA 12)	17:15	27	15:42 (WEA 11)	18:09			20:06		21:00	21:42	
11	08:28		13:56 (WEA 12)	07:44		15:16 (WEA 11)	06:42			06:28		20:52	21:36	
	16:20	39	15:25 (WEA 11)	17:17	25	15:41 (WEA 11)	18:11			20:08		21:01	21:43	
12	08:27		13:57 (WEA 12)	07:42		15:18 (WEA 11)	06:40			06:26		20:53	21:37	
	16:22	44	15:28 (WEA 11)	17:19	21	15:39 (WEA 11)	18:13			20:10		21:03	21:44	
13	08:26		13:58 (WEA 12)	07:40		15:21 (WEA 11)	06:38			06:23		20:52	21:36	
	16:23	45	15:30 (WEA 11)	17:21	16	15:37 (WEA 11)	18:15			20:11		21:05	21:44	
14	08:25		13:59 (WEA 12)	07:38		15:26 (WEA 11)	06:35			06:21		20:51	21:35	
	16:25	47	15:32 (WEA 11)	17:23	7	15:33 (WEA 11)	18:17			20:13		21:07	21:45	
15	08:24		14:00 (WEA 12)	07:36			06:33			06:19		20:58	21:40	
	16:26	49	15:34 (WEA 11)	17:25			18:19			20:15		21:08	21:46	
16	08:24		14:02 (WEA 12)	07:34			06:30			06:16		20:56	21:38	
	16:28	47	15:35 (WEA 11)	17:27			18:20			20:17		21:10	21:46	
17	08:23		14:03 (WEA 12)	07:32			06:28			06:14		20:54	21:37	
	16:30	49	15:37 (WEA 11)	17:29			18:22			20:19		21:11	21:47	
18	08:22		14:05 (WEA 12)	07:30		16:42 (WEA 10)	06:26		17:46 (WEA 6)	06:12		20:53	21:36	
	16:31	47	15:38 (WEA 11)	17:31	11	16:53 (WEA 10)	18:24	2	17:48 (WEA 6)	20:20		21:13	21:47	
19	08:20		14:07 (WEA 12)	07:28		16:39 (WEA 10)	06:23		17:40 (WEA 6)	06:09		20:51	21:35	
	16:33	45	15:39 (WEA 11)	17:33	17	16:56 (WEA 10)	18:26	14	17:54 (WEA 6)	20:22		21:15	21:47	
20	08:19		14:10 (WEA 12)	07:26		16:38 (WEA 10)	06:21		17:37 (WEA 6)	06:07		20:50	21:34	
	16:35	42	15:40 (WEA 11)	17:35	20	16:58 (WEA 10)	18:28	18	17:55 (WEA 6)	20:24		21:16	21:48	
21	08:18		15:10 (WEA 11)	07:24		16:36 (WEA 10)	06:18		17:36 (WEA 6)	06:05		20:58	21:47	
	16:37	31	15:41 (WEA 11)	17:37	23	16:59 (WEA 10)	18:30	21	17:57 (WEA 6)	20:26		21:18	21:48	
22	08:17		15:09 (WEA 11)	07:21		16:34 (WEA 10)	06:16		17:34 (WEA 6)	06:03		20:57	21:47	
	16:39	33	15:42 (WEA 11)	17:39	26	17:00 (WEA 10)	18:31	23	17:57 (WEA 6)	20:28		21:19	21:48	
23	08:16		15:09 (WEA 11)	07:19		16:34 (WEA 10)	06:14		17:33 (WEA 6)	06:01		20:55	21:47	
	16:40	34	15:43 (WEA 11)	17:41	27	17:01 (WEA 10)	18:33	25	17:58 (WEA 6)	20:30		21:21	21:48	
24	08:14		15:08 (WEA 11)	07:17		16:33 (WEA 10)	06:11		17:31 (WEA 6)	05:58		20:54	21:48	
	16:42	35	15:43 (WEA 11)	17:43	28	17:01 (WEA 10)	18:35	27	17:58 (WEA 6)	20:31		21:22	21:49	
25	08:13		15:09 (WEA 11)	07:15		16:32 (WEA 10)	06:09		17:31 (WEA 6)	05:56		20:53	21:48	
	16:44	35	15:44 (WEA 11)	17:45	29	17:01 (WEA 10)	18:37	28	17:59 (WEA 6)	20:33		21:24	21:49	
26	08:12		15:08 (WEA 11)	07:13		16:32 (WEA 10)	06:06		17:31 (WEA 6)	05:54		20:52	21:49	
	16:46	37	15:45 (WEA 11)	17:46	29	17:01 (WEA 10)	18:39	28	17:59 (WEA 6)	20:35		21:25	21:49	
27	08:10		15:08 (WEA 11)	07:10		16:32 (WEA 10)	06:04		17:30 (WEA 6)	05:52		20:50	21:49	
	16:48	37	15:45 (WEA 11)	17:48	30	17:02 (WEA 10)	18:41	28	17:58 (WEA 6)	20:37		21:26	21:48	
28	08:09		15:08 (WEA 11)	07:08		16:31 (WEA 10)	06:01		17:30 (WEA 6)	05:50		20:59	21:49	
	16:50	38	15:46 (WEA 11)	17:50	30	17:01 (WEA 10)	18:42	28	17:58 (WEA 6)	20:39		21:28	21:48	
29	08:07		15:08 (WEA 11)				06:59		18:29 (WEA 6)	05:48		20:58	21:48	
	16:52	38	15:46 (WEA 11)				19:44	28	18:57 (WEA 6)	20:40		21:29	21:48	
30	08:06		15:08 (WEA 11)				06:57		18:30 (WEA 6)	05:46		20:57	21:47	
	16:54	38	15:46 (WEA 11)				19:46	27	18:57 (WEA 6)	20:42		21:30	21:48	
31	08:04		15:09 (WEA 11)				06:54		18:30 (WEA 6)			20:56		
	16:55	38	15:47 (WEA 11)				19:48	25	18:55 (WEA 6)			21:32		
Sonnenscheinstunden		252		274			367		419			492		507
astr.max.mögl.Beschattung		1199		679			503		81					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BJ - Gartenstraße 33

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 15:12 (WEA 11)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 15:13 (WEA 11)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 15:14 (WEA 11)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 15:15 (WEA 11)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:15 (WEA 11)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:17 (WEA 11)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:39 (WEA 6)	07:24 17:12 (WEA 10)	08:16 14:40 (WEA 11)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38 (WEA 6)	07:26 17:10 (WEA 10)	08:17 14:40 (WEA 11)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36 (WEA 6)	07:28 17:09 (WEA 10)	08:18 14:40 (WEA 11)
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33 (WEA 6)	07:30 17:07 (WEA 10)	08:19 14:40 (WEA 11)
11	05:01 21:41	05:47 20:54	06:41 19:44	07:34 18:31 (WEA 6)	07:32 17:06 (WEA 10)	08:20 14:40 (WEA 11)
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29 (WEA 6)	07:34 17:05 (WEA 10)	08:21 14:40 (WEA 11)
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26 (WEA 6)	07:36 17:05 (WEA 10)	08:23 14:40 (WEA 11)
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24 (WEA 6)	07:38 17:05 (WEA 10)	08:24 14:40 (WEA 11)
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22 (WEA 6)	07:40 17:04 (WEA 10)	08:24 14:41 (WEA 11)
16	05:07 21:36	05:56 20:44	06:50 19:32	07:43 18:20 (WEA 6)	07:41 17:04 (WEA 10)	08:25 14:41 (WEA 11)
17	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17 (WEA 6)	07:43 17:05 (WEA 10)	08:26 14:42 (WEA 11)
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15 (WEA 6)	07:45 17:05 (WEA 10)	08:27 14:42 (WEA 11)
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13 (WEA 6)	07:47 17:05 (WEA 10)	08:28 14:43 (WEA 11)
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11 (WEA 6)	07:49 17:06 (WEA 10)	08:28 14:44 (WEA 11)
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08 (WEA 6)	07:50 17:07 (WEA 10)	08:29 14:45 (WEA 11)
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06 (WEA 6)	07:52 17:08 (WEA 10)	08:30 13:46 (WEA 11)
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04 (WEA 6)	07:54 17:10 (WEA 10)	08:30 13:44 (WEA 11)
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02 (WEA 6)	07:56 17:13 (WEA 10)	08:30 13:42 (WEA 11)
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 18:33 (WEA 6)	07:57 16:08	08:31 13:41 (WEA 11)
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:59 16:07	08:31 13:39 (WEA 11)
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	08:01 16:06	08:31 13:39 (WEA 11)
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53	08:02 15:04 (WEA 11)	08:32 13:39 (WEA 11)
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 15:07 (WEA 11)	08:32 13:39 (WEA 11)
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 15:09 (WEA 11)	08:32 13:39 (WEA 11)
31	05:29 21:15	06:22 20:10		07:11 16:47	08:08 15:11 (WEA 11)	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
astr.max.mögl.Beschattung			415	532	1153	1137

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzler-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzler-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzler-Goldenitz (rev.01) **Schattenrezeptor:** BK - Hauptstraße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	19:20 (WEA 12)	04:55	05:30	19:58 (WEA 11)	06:24	07:16	08:07
	16:07	16:57	17:52	19:50	20:44	20:04 (WEA 11)	21:33	21:47	21:13	9	20:07 (WEA 11)	20:08
2	08:31	08:01	07:03	06:49	05:42	19:21 (WEA 12)	04:54	04:52	05:32	19:56 (WEA 11)	06:25	07:18
	16:08	16:59	17:54	19:51	20:46	20:04 (WEA 11)	21:34	21:47	21:11	13	20:09 (WEA 11)	20:05
3	08:31	07:59	07:01	06:47	05:40	19:22 (WEA 12)	04:53	04:53	05:34	19:55 (WEA 11)	06:27	07:19
	16:09	17:01	17:56	19:53	20:47	20:04 (WEA 11)	21:35	21:47	21:10	16	20:11 (WEA 11)	20:03
4	08:31	07:57	06:59	06:45	05:38	19:23 (WEA 12)	04:53	04:54	05:35	19:53 (WEA 11)	06:29	07:21
	16:10	17:03	17:58	19:55	20:49	20:04 (WEA 11)	21:36	21:46	21:08	18	20:11 (WEA 11)	20:00
5	08:31	07:55	06:56	06:42	05:36	19:25 (WEA 12)	04:52	04:54	05:37	19:53 (WEA 11)	06:30	07:23
	16:12	17:05	18:00	19:57	20:51	20:03 (WEA 11)	21:37	21:46	21:06	19	20:12 (WEA 11)	19:58
6	08:30	07:54	06:54	06:40	05:34	19:31 (WEA 12)	04:51	04:55	05:39	19:51 (WEA 11)	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	20:03 (WEA 11)	21:38	21:45	21:04	21	20:12 (WEA 11)	19:56
7	08:30	07:52	06:52	06:37	05:32	19:42 (WEA 11)	04:50	04:56	05:40	19:38 (WEA 12)	06:34	07:26
	16:14	17:09	18:04	20:00	20:54	20:02 (WEA 11)	21:39	21:44	21:02	29	20:13 (WEA 11)	19:53
8	08:29	07:50	06:49	06:35	05:30	19:42 (WEA 11)	04:50	04:57	05:42	19:34 (WEA 12)	06:36	07:28
	16:16	17:11	18:05	20:02	20:56	20:01 (WEA 11)	21:40	21:44	21:00	36	20:13 (WEA 11)	19:51
9	08:29	07:48	06:47	06:33	05:28	19:43 (WEA 11)	04:49	04:58	05:44	19:32 (WEA 12)	06:37	07:30
	16:17	17:13	18:07	20:04	20:58	20:00 (WEA 11)	21:41	21:43	20:58	40	20:13 (WEA 11)	19:48
10	08:28	07:46	06:45	06:30	05:26	19:45 (WEA 11)	04:49	04:59	05:45	19:31 (WEA 12)	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	20:00 (WEA 11)	21:42	21:42	20:56	42	20:13 (WEA 11)	19:46
11	08:28	07:44	06:42	06:28	05:24	19:46 (WEA 11)	04:48	05:01	05:47	19:29 (WEA 12)	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	19:58 (WEA 11)	21:43	21:41	20:54	44	20:13 (WEA 11)	19:44
12	08:27	07:42	06:40	06:26	05:23	19:48 (WEA 11)	04:48	05:02	05:49	19:29 (WEA 12)	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	7	19:55 (WEA 11)	21:44	21:40	44	20:13 (WEA 11)	19:41
13	08:26	07:40	06:38	06:23	05:21			04:48	05:03	19:27 (WEA 12)	06:44	07:37
	16:23	17:21	18:15	20:11	21:05			21:44	21:40	45	20:12 (WEA 11)	19:39
14	08:25	07:38	06:35	06:21	05:19			04:47	05:04	19:27 (WEA 12)	06:46	07:39
	16:25	17:23	18:17	20:13	21:06			21:45	21:39	44	20:11 (WEA 11)	19:36
15	08:24	07:36	06:33	06:19	05:18			04:47	05:05	19:27 (WEA 12)	06:48	07:41
	16:26	17:25	18:18	20:15	21:08			21:46	21:37	44	20:11 (WEA 11)	19:34
16	08:23	07:34	06:30	06:16	05:16	19:29 (WEA 12)	05:16	04:47	05:07	19:25 (WEA 12)	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	19:40 (WEA 12)	05:10	21:46	21:36	44	20:09 (WEA 11)	19:31
17	08:22	07:32	06:28	06:14	05:14	19:26 (WEA 12)	05:14	04:47	05:08	19:25 (WEA 12)	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	19:43 (WEA 12)	05:11	21:47	21:35	43	20:08 (WEA 11)	19:29
18	08:21	07:30	06:26	06:12	05:13	19:24 (WEA 12)	05:13	04:47	05:09	19:26 (WEA 12)	06:53	07:47
	16:31	17:31	18:24	20:20	21:13	19:44 (WEA 12)	05:11	21:47	21:34	40	20:07 (WEA 11)	19:27
19	08:20	07:28	06:23	06:09	05:11	19:23 (WEA 12)	05:11	04:47	05:11	19:25 (WEA 12)	06:55	07:48
	16:33	17:33	18:26	20:22	21:15	19:45 (WEA 12)	05:12	21:47	21:33	34	20:03 (WEA 11)	19:24
20	08:19	07:26	06:21	06:07	05:10	19:21 (WEA 12)	05:10	04:47	05:12	19:25 (WEA 12)	06:56	07:50
	16:35	17:35	18:28	20:24	21:16	19:45 (WEA 12)	05:12	21:48	21:32	27	19:52 (WEA 12)	19:22
21	08:18	07:24	06:18	06:05	05:08	19:20 (WEA 12)	05:08	04:47	05:13	19:25 (WEA 12)	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	19:46 (WEA 12)	05:11	21:48	21:30	26	19:51 (WEA 12)	19:19
22	08:17	07:21	06:16	06:03	05:07	19:20 (WEA 12)	05:07	04:47	05:15	19:25 (WEA 12)	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	19:46 (WEA 12)	05:11	21:48	21:29	26	19:51 (WEA 12)	19:17
23	08:16	07:19	06:13	06:01	05:05	19:19 (WEA 12)	05:05	04:47	05:16	19:26 (WEA 12)	07:02	07:56
	16:40	17:41	18:33	20:29	21:21	19:47 (WEA 12)	05:11	21:48	21:27	24	19:50 (WEA 12)	19:14
24	08:14	07:17	06:11	05:58	05:04	19:19 (WEA 12)	05:04	04:48	05:18	19:26 (WEA 12)	07:03	07:58
	16:42	17:43	18:35	20:31	21:22	19:58 (WEA 11)	05:11	21:48	21:26	22	19:48 (WEA 12)	19:12
25	08:13	07:15	06:09	05:56	05:03	19:19 (WEA 12)	05:03	04:48	05:19	19:27 (WEA 12)	07:05	07:00
	16:44	17:44	18:37	20:33	21:24	20:00 (WEA 11)	05:11	21:48	21:24	20	19:47 (WEA 12)	19:09
26	08:11	07:13	06:06	05:54	05:02	19:19 (WEA 12)	05:02	04:49	05:21	19:29 (WEA 12)	07:07	07:02
	16:46	17:46	18:39	20:35	21:25	20:02 (WEA 11)	05:11	21:48	21:23	16	19:45 (WEA 12)	19:07
27	08:10	07:10	06:04	05:52	05:00	19:19 (WEA 12)	05:00	04:49	05:22	19:31 (WEA 12)	07:09	07:03
	16:48	17:48	18:40	20:37	21:26	20:03 (WEA 11)	05:11	21:48	21:21	11	19:42 (WEA 12)	19:05
28	08:08	07:08	06:01	05:50	04:59	19:19 (WEA 12)	04:59	04:50	05:24	19:42 (WEA 12)	07:10	07:05
	16:50	17:50	18:42	20:38	21:28	20:03 (WEA 11)	05:11	21:48	21:20		19:02	16:53
29	08:07		06:59	05:48	04:58	19:19 (WEA 12)	04:58	04:50	05:26		19:02	16:53
	16:52		19:44	20:40	21:29	20:04 (WEA 11)	05:11	21:48	21:18		19:00	16:51
30	08:05		06:57	05:46	04:57	19:20 (WEA 12)	04:57	04:51	05:27		19:04	16:51
	16:54		19:46	20:42	21:30	20:04 (WEA 11)	05:11	21:48	21:16		18:57	16:49
31	08:04		06:54		04:56				05:29			16:47
	16:55		19:48		21:32				21:15			16:47
Sonnenscheinstunden	252	274	367	419	471	492	507	510	458	382	329	261
astr. max. mögl. Beschattung												

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BL - Hauptstraße 14

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	Oktober	[November	[Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:22 (WEA 12) 20:07 (WEA 11)	04:55 21:33	04:51 21:47	05:30 21:13	19:57 (WEA 11) 20:15 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:22 (WEA 12) 20:07 (WEA 11)	04:54 21:34	04:52 21:47	05:32 21:11	19:56 (WEA 11) 20:15 (WEA 11)	06:25 20:05	07:18 18:52	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	19:23 (WEA 12) 20:07 (WEA 11)	04:53 21:35	04:53 21:47	05:34 21:10	19:55 (WEA 11) 20:16 (WEA 11)	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	19:23 (WEA 12) 20:07 (WEA 11)	04:53 21:36	04:54 21:46	05:35 21:08	19:40 (WEA 12) 20:16 (WEA 11)	06:29 20:00	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:56 18:00	06:42 19:57	05:36 20:51	19:24 (WEA 12) 20:07 (WEA 11)	04:52 21:37	04:54 21:46	05:37 21:06	19:38 (WEA 12) 20:17 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	19:26 (WEA 12) 20:08 (WEA 11)	04:51 21:38	04:55 21:45	05:39 21:04	19:36 (WEA 12) 20:17 (WEA 11)	06:32 19:56	07:25 18:43	07:22 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	19:27 (WEA 12) 20:07 (WEA 11)	04:50 21:39	04:56 21:44	05:40 21:02	19:35 (WEA 12) 20:17 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	19:28 (WEA 12) 20:06 (WEA 11)	04:50 21:40	04:57 21:44	05:42 21:00	19:33 (WEA 12) 20:16 (WEA 11)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	19:31 (WEA 12) 20:06 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	19:32 (WEA 12) 20:17 (WEA 11)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	19:45 (WEA 11) 20:06 (WEA 11)	04:49 21:42	04:59 21:42	05:45 20:56	19:32 (WEA 12) 20:17 (WEA 11)	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	19:46 (WEA 11) 20:05 (WEA 11)	04:48 21:43	05:01 21:41	05:47 20:54	19:30 (WEA 12) 20:16 (WEA 11)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	19:46 (WEA 11) 20:03 (WEA 11)	04:48 21:44	05:02 21:40	05:49 20:52	19:30 (WEA 12) 20:15 (WEA 11)	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	19:48 (WEA 11) 20:03 (WEA 11)	04:48 21:44	05:03 21:40	05:51 20:50	19:29 (WEA 12) 20:14 (WEA 11)	06:44 19:39	07:37 18:26	07:36 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	19:49 (WEA 11) 20:01 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	19:29 (WEA 12) 20:13 (WEA 11)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:18	06:19 20:15	05:18 21:08	19:52 (WEA 11) 20:01 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	19:29 (WEA 12) 20:12 (WEA 11)	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	19:28 (WEA 12) 20:09 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	19:28 (WEA 12) 20:09 (WEA 11)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	19:22 (WEA 12) 20:07 (WEA 11)	04:47 21:47	05:08 21:35	05:57 20:42	19:29 (WEA 12) 20:07 (WEA 11)	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	19:33 (WEA 12) 19:43 (WEA 12)	04:47 21:47	05:09 21:34	05:59 20:39	19:29 (WEA 12) 19:57 (WEA 12)	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	19:30 (WEA 12) 19:46 (WEA 12)	04:47 21:47	05:11 21:33	06:01 20:37	19:29 (WEA 12) 19:55 (WEA 12)	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	19:27 (WEA 12) 19:46 (WEA 12)	04:47 21:48	05:12 21:32	06:03 20:35	19:30 (WEA 12) 19:55 (WEA 12)	06:56 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	19:26 (WEA 12) 19:48 (WEA 12)	04:47 21:48	05:13 21:30	06:04 20:33	19:29 (WEA 12) 19:53 (WEA 12)	06:58 19:19	07:52 18:06	07:50 16:12	08:29 15:58
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	19:25 (WEA 12) 19:49 (WEA 12)	04:47 21:48	05:15 21:29	06:06 20:31	19:31 (WEA 12) 19:52 (WEA 12)	07:00 19:17	07:54 18:06	07:52 16:11	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	19:24 (WEA 12) 19:49 (WEA 12)	04:48 21:48	05:16 21:27	06:08 20:28	19:32 (WEA 12) 19:51 (WEA 12)	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	19:23 (WEA 12) 19:50 (WEA 12)	04:48 21:48	05:18 21:26	06:10 20:26	19:33 (WEA 12) 19:48 (WEA 12)	07:03 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	19:23 (WEA 12) 19:50 (WEA 12)	04:48 21:48	05:19 21:24	06:11 20:24	19:36 (WEA 12) 19:46 (WEA 12)	07:05 19:09	07:00 17:00	07:57 16:08	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	19:22 (WEA 12) 20:01 (WEA 11)	04:49 21:48	05:21 21:23	06:13 20:22	19:46 (WEA 12) 20:07 (WEA 11)	07:07 19:07	07:02 16:58	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	19:22 (WEA 12) 20:03 (WEA 11)	04:49 21:48	05:22 21:21	06:15 20:19	19:46 (WEA 12) 20:03 (WEA 11)	07:09 19:05	07:03 16:56	08:01 16:02	08:31 16:02
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	19:22 (WEA 12) 20:05 (WEA 11)	04:50 21:48	05:24 21:20	06:17 20:17	19:46 (WEA 12) 20:02 (WEA 11)	07:10 19:02	07:05 16:53	08:02 16:05	08:31 16:03
29	08:07 16:52	07:07 17:51	06:00 18:41	05:48 20:39	04:58 21:29	19:22 (WEA 12) 20:06 (WEA 11)	04:50 21:48	05:26 21:18	06:18 20:15	19:46 (WEA 12) 20:02 (WEA 11)	07:12 19:00	07:07 16:51	08:04 16:04	08:32 16:04
30	08:05 16:54	07:05 17:50	06:00 18:41	05:46 20:40	04:57 21:30	19:22 (WEA 12) 20:06 (WEA 11)	04:51 21:48	05:27 21:16	06:20 20:12	19:46 (WEA 12) 20:02 (WEA 11)	07:14 18:57	07:09 16:49	08:05 16:03	08:32 16:05
31	08:04 16:55	07:04 17:51	06:00 18:41	05:46 20:41	04:56 21:32	19:22 (WEA 12) 20:06 (WEA 11)	04:51 21:48	05:29 21:15	06:22 20:12	19:58 (WEA 11) 20:14 (WEA 11)	06:22 20:10	07:11 16:47	08:07 16:04	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	808	382	329	261	236	
astr.max.mögl.Beschattung				378	456		38							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BM - Hauptstraße 16

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember		
1	[08:32 16:07	[08:02 16:57	[07:06 17:52	[06:52 19:50	[05:44 20:44	19:24 (WEA 12) 20:08 (WEA 11)	[04:55 21:33	[04:51 21:47	[05:30 21:13	19:58 (WEA 11) 20:18 (WEA 11)	[06:24 20:08	[07:16 18:55	[07:13 16:45	[08:07 16:02
2	[08:31 16:08	[08:01 16:59	[07:03 17:54	[06:49 19:51	[05:42 20:46	19:24 (WEA 12) 20:09 (WEA 11)	[04:54 21:34	[04:52 21:47	[05:32 21:11	19:45 (WEA 12) 20:18 (WEA 11)	[06:25 20:05	[07:18 18:52	[07:15 16:43	[08:08 16:01
3	[08:31 16:09	[07:59 17:56	[07:01 17:53	[06:47 19:53	[05:40 20:47	19:24 (WEA 12) 20:09 (WEA 11)	[04:53 21:35	[04:53 21:47	[05:34 21:10	19:42 (WEA 12) 20:19 (WEA 11)	[06:27 20:03	[07:19 18:50	[07:17 16:42	[08:10 16:01
4	[08:31 16:10	[07:57 17:03	[06:59 17:58	[06:45 19:55	[05:38 20:49	19:24 (WEA 12) 20:09 (WEA 11)	[04:53 21:36	[04:54 21:46	[05:35 21:08	19:39 (WEA 12) 20:19 (WEA 11)	[06:29 20:00	[07:21 18:48	[07:19 16:40	[08:11 16:00
5	[08:31 16:12	[07:55 17:05	[06:56 18:00	[06:42 19:57	[05:36 20:51	19:25 (WEA 12) 20:09 (WEA 11)	[04:52 21:37	[04:54 21:46	[05:37 21:06	19:38 (WEA 12) 20:19 (WEA 11)	[06:30 19:58	[07:23 18:45	[07:21 16:38	[08:13 15:59
6	[08:30 16:13	[07:54 17:07	[06:54 18:02	[06:40 19:59	[05:34 20:53	19:26 (WEA 12) 20:10 (WEA 11)	[04:51 21:38	[04:55 21:45	[05:39 21:04	19:36 (WEA 12) 20:19 (WEA 11)	[06:32 19:56	[07:25 18:43	[07:22 16:36	[08:14 15:59
7	[08:30 16:14	[07:52 17:09	[06:52 18:04	[06:37 20:00	[05:32 20:54	19:27 (WEA 12) 20:09 (WEA 11)	[04:50 21:39	[04:56 21:44	[05:40 21:02	19:35 (WEA 12) 20:19 (WEA 11)	[06:34 19:53	[07:26 18:41	[07:24 16:34	[08:15 15:58
8	[08:29 16:16	[07:50 17:11	[06:49 18:05	[06:35 20:02	[05:30 20:56	19:28 (WEA 12) 20:09 (WEA 11)	[04:50 21:40	[04:57 21:44	[05:42 21:00	19:34 (WEA 12) 20:18 (WEA 11)	[06:36 19:51	[07:28 18:38	[07:26 16:32	[08:17 15:58
9	[08:29 16:17	[07:47 17:13	[06:47 18:07	[06:33 20:04	[05:28 20:58	19:29 (WEA 12) 20:08 (WEA 11)	[04:49 21:41	[04:58 21:43	[05:44 20:58	19:34 (WEA 12) 20:18 (WEA 11)	[06:37 19:48	[07:30 18:36	[07:28 16:31	[08:18 15:58
10	[08:28 16:19	[07:46 17:15	[06:45 18:09	[06:30 20:06	[05:26 21:00	19:32 (WEA 12) 20:08 (WEA 11)	[04:49 21:42	[04:59 21:42	[05:45 20:56	19:33 (WEA 12) 20:18 (WEA 11)	[06:39 19:46	[07:32 18:33	[07:30 16:29	[08:19 15:57
11	[08:28 16:20	[07:44 17:17	[06:42 18:11	[06:28 20:08	[05:24 21:01	19:47 (WEA 11) 20:07 (WEA 11)	[04:48 21:43	[05:01 21:41	[05:47 20:54	19:32 (WEA 12) 20:17 (WEA 11)	[06:41 19:44	[07:34 18:31	[07:32 16:27	[08:20 15:57
12	[08:27 16:22	[07:42 17:19	[06:40 18:13	[06:26 20:10	[05:23 21:03	19:47 (WEA 11) 20:06 (WEA 11)	[04:48 21:44	[05:02 21:40	[05:49 20:52	19:32 (WEA 12) 20:16 (WEA 11)	[06:43 19:41	[07:36 18:29	[07:34 16:25	[08:21 15:57
13	[08:26 16:23	[07:40 17:21	[06:38 18:15	[06:23 20:11	[05:21 21:05	19:48 (WEA 11) 20:06 (WEA 11)	[04:48 21:44	[05:03 21:40	[05:51 20:50	19:31 (WEA 12) 20:15 (WEA 11)	[06:44 19:39	[07:37 18:26	[07:36 16:24	[08:22 15:57
14	[08:25 16:25	[07:38 17:23	[06:35 18:17	[06:21 20:13	[05:19 21:06	19:49 (WEA 11) 20:04 (WEA 11)	[04:47 21:45	[05:04 21:39	[05:52 20:48	19:31 (WEA 12) 20:14 (WEA 11)	[06:46 19:36	[07:39 18:24	[07:38 16:22	[08:23 15:57
15	[08:24 16:26	[07:36 17:25	[06:33 18:18	[06:19 20:15	[05:18 21:08	19:51 (WEA 11) 20:04 (WEA 11)	[04:47 21:46	[05:05 21:37	[05:54 20:46	19:32 (WEA 12) 20:12 (WEA 11)	[06:48 19:34	[07:41 18:22	[07:39 16:21	[08:24 15:57
16	[08:23 16:28	[07:34 17:27	[06:30 18:20	[06:16 20:17	[05:16 21:10	19:52 (WEA 11) 20:01 (WEA 11)	[04:47 21:46	[05:07 21:36	[05:56 20:44	19:31 (WEA 12) 20:08 (WEA 11)	[06:50 19:31	[07:43 18:20	[07:41 16:19	[08:25 15:57
17	[08:22 16:30	[07:32 17:29	[06:28 18:22	[06:14 20:19	[05:14 21:11	19:53 (WEA 12) 19:59 (WEA 12)	[04:47 21:47	[05:08 21:35	[05:57 20:42	19:31 (WEA 12) 19:59 (WEA 12)	[06:51 19:29	[07:45 18:17	[07:43 16:18	[08:26 15:57
18	[08:21 16:31	[07:30 17:31	[06:26 18:24	[06:12 20:20	[05:13 21:13	19:54 (WEA 12) 19:58 (WEA 12)	[04:47 21:47	[05:09 21:34	[05:59 20:39	19:32 (WEA 12) 19:58 (WEA 12)	[06:53 19:27	[07:47 18:15	[07:45 16:16	[08:27 15:57
19	[08:20 16:33	[07:28 17:33	[06:23 18:26	[06:09 20:22	[05:11 21:15	19:55 (WEA 12) 19:57 (WEA 12)	[04:47 21:47	[05:11 21:33	[06:01 20:37	19:32 (WEA 12) 19:57 (WEA 12)	[06:55 19:24	[07:48 18:13	[07:47 16:15	[08:28 15:58
20	[08:19 16:35	[07:26 17:35	[06:21 18:28	[06:07 20:24	[05:10 21:16	19:56 (WEA 12) 19:59 (WEA 12)	[04:47 21:48	[05:12 21:32	[06:03 20:35	19:33 (WEA 12) 19:56 (WEA 12)	[06:56 19:22	[07:50 18:11	[07:49 16:14	[08:29 15:58
21	[08:18 16:37	[07:24 17:37	[06:18 18:30	[06:05 20:26	[05:08 21:18	19:29 (WEA 12) 19:48 (WEA 12)	[04:47 21:48	[05:13 21:30	[06:04 20:33	19:33 (WEA 12) 19:54 (WEA 12)	[06:58 19:19	[07:52 18:06	[07:50 16:12	[08:29 15:58
22	[08:17 16:39	[07:22 17:39	[06:16 18:31	[06:03 20:28	[05:07 21:19	19:28 (WEA 12) 19:50 (WEA 12)	[04:47 21:48	[05:15 21:29	[06:06 20:31	19:34 (WEA 12) 19:53 (WEA 12)	[07:00 19:17	[07:54 18:06	[07:52 16:11	[08:29 15:59
23	[08:16 16:40	[07:19 17:41	[06:13 18:33	[06:01 20:29	[05:05 21:21	19:27 (WEA 12) 19:51 (WEA 12)	[04:48 21:48	[05:16 21:27	[06:08 20:28	19:36 (WEA 12) 19:51 (WEA 12)	[07:02 19:14	[07:56 18:04	[07:54 16:10	[08:30 15:59
24	[08:14 16:42	[07:17 17:43	[06:11 18:35	[05:58 20:31	[05:04 21:22	19:26 (WEA 12) 19:51 (WEA 12)	[04:48 21:48	[05:18 21:26	[06:10 20:26	19:39 (WEA 12) 19:47 (WEA 12)	[07:03 19:12	[07:58 18:02	[07:56 16:09	[08:30 16:00
25	[08:13 16:44	[07:15 17:44	[06:09 18:37	[05:56 20:33	[05:03 21:24	19:25 (WEA 12) 19:52 (WEA 12)	[04:48 21:48	[05:19 21:24	[06:11 20:24	19:37 (WEA 12) 19:49 (WEA 12)	[07:05 19:09	[07:00 17:00	[07:57 16:08	[08:31 16:01
26	[08:11 16:46	[07:13 17:46	[06:06 18:39	[05:54 20:35	[05:02 21:25	19:25 (WEA 12) 19:52 (WEA 12)	[04:49 21:48	[05:21 21:23	[06:13 20:22	19:37 (WEA 12) 19:47 (WEA 12)	[07:07 19:07	[07:02 16:58	[07:59 16:07	[08:31 16:01
27	[08:10 16:48	[07:10 17:48	[06:04 18:40	[05:52 20:37	[05:00 21:26	19:24 (WEA 12) 20:03 (WEA 11)	[04:49 21:48	[05:22 21:21	[06:15 20:19	19:47 (WEA 12) 20:10 (WEA 11)	[07:09 19:05	[07:03 16:56	[08:01 16:06	[08:31 16:02
28	[08:09 16:50	[07:08 17:50	[06:01 18:42	[05:50 20:38	[04:59 21:28	19:24 (WEA 12) 20:05 (WEA 11)	[04:50 21:48	[05:24 21:20	[06:17 20:11	19:47 (WEA 12) 20:14 (WEA 11)	[07:19 19:02	[07:05 16:53	[08:02 16:05	[08:31 16:03
29	[08:07 16:52		[06:59 18:44	[05:48 20:40	[04:58 21:29	19:24 (WEA 12) 20:07 (WEA 11)	[04:50 21:48	[05:26 21:18	[06:18 20:15	20:01 (WEA 11) 20:15 (WEA 11)	[06:18 19:00	[07:12 16:51	[08:04 16:04	[08:32 16:04
30	[08:05 16:54		[06:57 18:46	[05:46 20:42	[04:57 21:30	19:24 (WEA 12) 20:07 (WEA 11)	[04:51 21:48	[05:27 21:16	[06:20 20:12	19:59 (WEA 11) 20:15 (WEA 11)	[06:20 18:57	[07:14 16:49	[08:05 16:03	[08:32 16:05
31	[08:04 16:55		[06:54 18:48		[04:56 21:32			[05:29 21:15	[06:22 20:10	19:58 (WEA 11) 20:17 (WEA 11)	[06:22 18:58	[07:11 16:47	[08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236		
astr.max.mögl.Beschattung				333	513	65	794							

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BN - Hauptstraße 18

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	43 19:26 (WEA 12) 20:09 (WEA 11)	04:55 21:33	04:51 21:47	05:30 21:13	35 19:44 (WEA 12) 20:21 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	44 19:26 (WEA 12) 20:10 (WEA 11)	04:54 21:34	04:52 21:47	05:32 21:11	39 19:42 (WEA 12) 20:21 (WEA 11)	06:25 20:05	07:18 18:52	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	44 19:26 (WEA 12) 20:10 (WEA 11)	04:53 21:35	04:53 21:47	05:34 21:10	41 19:41 (WEA 12) 20:22 (WEA 11)	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	45 19:26 (WEA 12) 20:11 (WEA 11)	04:53 21:36	04:54 21:46	05:35 21:08	42 19:39 (WEA 12) 20:21 (WEA 11)	06:29 20:00	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:56 18:00	06:42 19:57	05:36 20:51	45 19:26 (WEA 12) 20:11 (WEA 11)	04:52 21:37	04:54 21:46	05:37 21:06	44 19:38 (WEA 12) 20:22 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
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7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	44 19:28 (WEA 12) 20:12 (WEA 11)	04:50 21:39	04:56 21:44	05:40 21:02	44 19:37 (WEA 12) 20:21 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	43 19:28 (WEA 12) 20:11 (WEA 11)	04:50 21:40	04:57 21:44	05:42 21:00	45 19:35 (WEA 12) 20:20 (WEA 11)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	42 19:29 (WEA 12) 20:11 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	45 19:35 (WEA 12) 20:20 (WEA 11)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
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12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	32 19:34 (WEA 12) 20:10 (WEA 11)	04:48 21:44	05:02 21:40	05:49 20:52	43 19:34 (WEA 12) 20:17 (WEA 11)	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
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14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	20 19:49 (WEA 12) 20:09 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	38 19:34 (WEA 12) 20:13 (WEA 11)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:18	06:19 20:15	05:18 21:08	17 19:51 (WEA 12) 20:08 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	28 19:34 (WEA 12) 20:02 (WEA 12)	06:50 19:34	07:43 18:22	07:41 16:21	08:25 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	16 19:51 (WEA 12) 20:07 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	27 19:34 (WEA 12) 20:01 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	13 19:53 (WEA 12) 20:06 (WEA 11)	04:47 21:47	05:08 21:35	05:57 20:42	26 19:35 (WEA 12) 20:01 (WEA 12)	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	9 19:55 (WEA 12) 20:04 (WEA 11)	04:47 21:47	05:09 21:34	05:59 20:39	24 19:36 (WEA 12) 20:00 (WEA 12)	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15		04:47 21:47	05:11 21:33	06:01 20:37	22 19:36 (WEA 12) 19:58 (WEA 12)	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	3 19:40 (WEA 12) 19:43 (WEA 12)	05:10 21:16	05:12 21:32	06:03 20:35	22 19:37 (WEA 12) 19:57 (WEA 12)	06:56 19:22	07:50 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	13 19:35 (WEA 12) 19:48 (WEA 12)	05:08 21:18	05:13 21:30	06:04 20:33	17 19:38 (WEA 12) 19:55 (WEA 12)	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	17 19:33 (WEA 12) 19:50 (WEA 12)	05:07 21:19	05:15 21:29	06:06 20:31	12 19:40 (WEA 12) 19:52 (WEA 12)	07:00 19:17	07:54 18:06	07:52 16:11	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	21 19:31 (WEA 12) 19:52 (WEA 12)	05:05 21:21	05:16 21:27	06:08 20:28		07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	23 19:30 (WEA 12) 19:53 (WEA 12)	05:04 21:22	05:18 21:26	06:10 20:26		07:03 19:12	07:58 18:02	07:56 16:09	08:30 15:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	23 19:29 (WEA 12) 19:54 (WEA 12)	05:03 21:24	05:19 21:24	06:11 20:24	6 20:07 (WEA 11) 20:03 (WEA 11)	07:05 19:07	07:59 16:08	07:57 16:01	08:31 15:59
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	25 19:28 (WEA 12) 19:54 (WEA 12)	05:02 21:25	05:21 21:25	06:13 20:22	11 20:05 (WEA 11) 20:03 (WEA 11)	07:07 19:07	07:02 16:58	07:59 16:07	08:31 15:59
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	26 19:27 (WEA 12) 19:54 (WEA 12)	05:00 21:26	05:22 21:21	06:15 20:19	14 20:03 (WEA 11) 20:17 (WEA 11)	07:09 19:05	07:03 16:56	08:01 16:06	08:31 15:59
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	27 19:27 (WEA 12) 20:03 (WEA 11)	04:59 21:28	05:24 21:20	06:17 20:17	17 20:02 (WEA 11) 20:19 (WEA 11)	07:10 19:02	07:05 16:53	08:02 16:05	08:31 15:59
29	08:07 16:52		06:59 18:44	05:48 20:40	04:58 21:29	32 19:26 (WEA 12) 20:07 (WEA 11)	04:58 21:29	05:26 21:18	06:18 20:15	17 20:01 (WEA 11) 20:19 (WEA 11)	07:12 19:00	07:07 16:51	08:04 16:04	08:32 15:00
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	41 19:26 (WEA 12) 20:08 (WEA 11)	04:57 21:30	05:27 21:16	06:20 20:12	18 20:02 (WEA 11) 20:20 (WEA 11)	07:14 18:57	07:09 16:49	08:05 16:03	08:32 15:00
31	08:04 16:55		06:54 19:48		04:56 21:32	42 20:08 (WEA 11)	04:56 21:32	05:29 21:15	06:22 20:10	28 19:46 (WEA 12) 20:20 (WEA 11)	06:22 19:10	07:11 16:47	08:03 16:06	08:32 15:00
Sonnenscheinstunden	252	274	367	419	492			507	510	458	382	329	261	236
astr.max.mögl.Beschattung				270	602				113	766				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BO - Hauptstraße 20

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:28 (WEA 12) 20:10 (WEA 11)	04:55 21:33	04:51 21:47	05:30 21:13	19:43 (WEA 12) 20:24 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
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4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	19:27 (WEA 12) 20:12 (WEA 11)	04:53 21:36	04:54 21:46	05:35 21:08	19:39 (WEA 12) 20:24 (WEA 11)	06:29 20:00	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	19:27 (WEA 12) 20:13 (WEA 11)	04:52 21:37	04:55 21:46	05:37 21:06	19:39 (WEA 12) 20:24 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
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9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	19:29 (WEA 12) 20:13 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	19:37 (WEA 12) 20:21 (WEA 11)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
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11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	19:31 (WEA 12) 20:13 (WEA 11)	04:48 21:43	05:01 21:41	05:47 20:54	19:36 (WEA 12) 20:19 (WEA 11)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
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14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	19:35 (WEA 12) 20:12 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	19:37 (WEA 12) 20:04 (WEA 12)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:18	06:19 20:15	05:18 21:08	19:38 (WEA 12) 20:12 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	19:37 (WEA 12) 20:04 (WEA 12)	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	19:52 (WEA 11) 20:11 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	19:37 (WEA 12) 20:02 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	19:53 (WEA 11) 20:11 (WEA 11)	04:47 21:47	05:08 21:35	05:57 20:42	19:38 (WEA 12) 20:02 (WEA 12)	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	19:54 (WEA 11) 20:10 (WEA 11)	04:47 21:47	05:09 21:34	05:59 20:39	19:40 (WEA 12) 20:01 (WEA 12)	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	19:55 (WEA 11) 20:08 (WEA 11)	04:47 21:47	05:11 21:33	06:01 20:37	19:40 (WEA 12) 19:59 (WEA 12)	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	19:57 (WEA 11) 20:07 (WEA 11)	04:47 21:48	05:12 21:32	06:03 20:35	19:42 (WEA 12) 19:57 (WEA 12)	06:56 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	20:00 (WEA 11) 20:05 (WEA 11)	04:47 21:48	05:13 21:30	06:04 20:33	19:45 (WEA 12) 19:53 (WEA 12)	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	19:39 (WEA 12) 19:49 (WEA 12)	05:07 21:19	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	07:52 15:59	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	19:36 (WEA 12) 19:51 (WEA 12)	05:05 21:21	05:16 21:27	06:08 20:16 (WEA 11)	07:02 19:14	07:56 18:04	07:54 16:10	07:54 15:59	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	19:34 (WEA 12) 19:53 (WEA 12)	05:04 21:22	05:18 21:26	06:10 20:18 (WEA 11)	07:03 19:12	07:58 18:02	07:56 16:09	07:56 16:00	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	19:33 (WEA 12) 19:54 (WEA 12)	05:03 21:24	05:19 21:24	06:11 20:19 (WEA 11)	07:05 19:09	07:00 17:00	07:57 16:08	07:57 16:01	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	19:31 (WEA 12) 19:55 (WEA 12)	05:02 21:25	05:21 21:23	06:13 20:21 (WEA 11)	07:07 19:07	07:02 16:58	07:59 16:07	07:59 16:01	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	19:31 (WEA 12) 19:56 (WEA 12)	05:00 21:26	05:22 21:21	06:15 20:21 (WEA 11)	07:09 19:05	07:03 16:56	08:01 16:06	08:01 16:02	08:31 16:02
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	19:30 (WEA 12) 19:57 (WEA 12)	04:59 21:28	05:24 21:20	06:17 20:23 (WEA 11)	07:10 19:02	07:05 16:53	08:02 16:05	08:02 16:03	08:31 16:03
29	08:07 16:52	07:00 17:44	05:59 19:44	05:48 20:40	04:58 21:29	19:29 (WEA 12) 19:57 (WEA 12)	04:58 21:29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 16:04	08:04 16:04	08:32 16:04
30	08:05 16:54	07:00 17:46	06:57 19:46	05:46 20:42	04:57 21:30	19:29 (WEA 12) 20:08 (WEA 11)	04:57 21:30	05:27 21:16	06:20 20:12	07:14 18:57	07:09 16:49	08:05 16:03	08:05 16:03	08:32 16:03
31	08:04 16:55	07:00 17:48	06:54 19:48	05:45 20:42	04:56 21:32	20:08 (WEA 11)	04:56 21:32	05:29 21:15	06:22 20:10	19:43 (WEA 12) 20:24 (WEA 11)	06:22 19:10	07:11 16:47	07:11 16:47	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458		382	329	261	236
astr.max.mögl.Beschattung				207	711			197	726					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BP - Hauptstraße 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:31 (WEA 12) 21:33	04:55 21:47	05:30 21:13	19:45 (WEA 12) 20:05 (WEA 12)	06:24 20:08	07:16 18:55	07:13 16:45
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:31 (WEA 12) 21:34	04:52 21:47	05:32 21:11	19:44 (WEA 12) 20:05 (WEA 12)	06:25 20:05	07:18 18:52	07:15 16:43
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	19:31 (WEA 12) 21:35	04:53 21:47	05:34 21:10	19:43 (WEA 12) 20:07 (WEA 12)	06:27 20:03	07:19 18:50	07:17 16:42
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	19:30 (WEA 12) 21:36	04:54 21:46	05:35 21:08	19:42 (WEA 12) 20:07 (WEA 12)	06:29 20:00	07:21 18:48	07:19 16:40
5	08:31 16:12	07:55 17:05	06:56 18:00	06:42 19:57	05:36 20:51	19:30 (WEA 12) 21:37	04:54 21:46	05:37 21:06	19:42 (WEA 12) 20:08 (WEA 12)	06:30 19:58	07:23 18:45	07:21 16:38
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	19:31 (WEA 12) 21:38	04:55 21:45	05:39 21:04	19:41 (WEA 12) 20:07 (WEA 12)	06:32 19:56	07:25 18:43	07:22 16:36
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	19:31 (WEA 12) 21:39	04:56 21:44	05:40 21:02	19:41 (WEA 12) 20:08 (WEA 12)	06:34 19:53	07:26 18:41	07:24 16:34
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	19:32 (WEA 12) 21:40	04:57 21:44	05:42 21:00	19:40 (WEA 12) 20:08 (WEA 12)	06:36 19:51	07:28 18:38	07:26 16:32
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	19:32 (WEA 12) 21:41	04:58 21:43	05:44 20:58	19:40 (WEA 12) 20:08 (WEA 12)	06:37 19:48	07:30 18:36	07:28 16:31
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	19:33 (WEA 12) 21:42	04:59 21:42	05:45 20:56	19:40 (WEA 12) 20:08 (WEA 12)	06:39 19:46	07:32 18:33	07:30 16:29
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	19:34 (WEA 12) 21:43	04:48 21:41	05:47 20:54	19:39 (WEA 12) 20:07 (WEA 12)	06:41 19:44	07:34 18:31	07:32 16:27
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	19:34 (WEA 12) 21:44	04:48 21:40	05:49 20:52	19:40 (WEA 12) 20:07 (WEA 12)	06:43 19:41	07:36 18:29	07:34 16:25
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15	08:24 16:26	07:36 17:25	06:33 18:18	06:19 20:15	05:18 21:08	19:41 (WEA 12) 21:45	04:47 21:37	05:54 20:46	19:41 (WEA 12) 20:06 (WEA 12)	06:48 19:34	07:41 18:22	07:39 16:21
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	19:48 (WEA 12) 21:46	04:47 21:36	05:56 20:44	19:41 (WEA 12) 20:04 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	05:08 21:35	05:57 20:42	19:42 (WEA 12) 20:03 (WEA 12)	06:51 19:29	07:45 18:17	07:43 16:18
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	05:09 21:34	05:59 20:39	19:43 (WEA 12) 20:02 (WEA 12)	06:53 19:27	07:47 18:15	07:45 16:16
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47	05:11 21:33	06:01 20:37	19:44 (WEA 12) 20:00 (WEA 12)	06:55 19:24	07:48 18:13	07:47 16:15
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	05:12 21:32	06:03 20:35	19:47 (WEA 12) 19:57 (WEA 12)	06:56 19:22	07:50 18:11	07:49 16:14
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	05:13 21:30	06:04 20:33	19:48 (WEA 12) 20:01 (WEA 12)	06:58 19:19	07:52 18:06	07:50 16:12
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	05:15 21:29	06:06 20:31	19:49 (WEA 12) 20:02 (WEA 12)	07:00 19:17	07:54 18:06	07:52 16:11
23	08:15 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	04:48 21:48	05:16 21:27	06:08 20:28	19:50 (WEA 12) 20:00 (WEA 12)	07:02 19:14	07:56 18:04	07:54 16:10
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	05:18 21:26	06:10 20:26	19:51 (WEA 12) 20:01 (WEA 12)	07:03 19:12	07:58 18:02	07:56 16:09
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	05:19 21:24	06:11 20:24	19:52 (WEA 12) 20:02 (WEA 12)	07:05 19:09	07:00 17:00	07:57 16:08
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:48	05:21 21:23	06:13 20:22	19:53 (WEA 12) 20:03 (WEA 12)	07:07 19:07	07:02 16:58	07:59 16:07
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:48	05:22 21:21	06:15 20:19	19:54 (WEA 12) 20:04 (WEA 12)	07:09 19:05	07:03 16:56	08:01 16:06
28	08:08 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	05:24 21:20	06:17 20:17	19:55 (WEA 12) 20:05 (WEA 12)	07:10 19:02	07:05 16:53	08:02 16:05
29	08:07 16:52	07:07 17:59	05:59 18:44	05:48 20:40	04:58 21:29	04:50 21:48	05:26 21:18	06:18 20:10	19:56 (WEA 12) 20:06 (WEA 12)	07:12 19:00	07:07 16:51	08:04 16:04
30	08:05 16:54	07:05 17:46	05:57 18:46	05:46 20:42	04:57 21:30	04:51 21:48	05:27 21:16	06:20 20:14	19:57 (WEA 12) 20:02 (WEA 12)	07:14 18:57	07:09 16:49	08:05 16:03
31	08:04 16:55	07:04 17:54	05:54 18:48	05:45 20:48	04:56 21:32	04:50 21:15	05:29 21:10	06:22 20:10	19:58 (WEA 12) 20:03 (WEA 12)	07:15 18:58	07:11 16:47	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	475	382	329	261
astr.max.mögl.Beschattung				172	341		41					236

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BQ - Hauptstraße 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember				
1	[08:32 16:07	[08:02 16:57	[07:06 17:52	[06:52 19:50	[05:44 20:44	33	19:34 (WEA 12) 20:09 (WEA 11)	[04:55 21:33	[04:51 21:47	[05:30 21:13	42	19:46 (WEA 12) 20:28 (WEA 11)	[06:24 20:08	[07:16 18:55	[07:13 16:45	[08:07 16:02
2	[08:31 16:08	[08:01 16:59	[07:03 17:54	[06:49 19:51	[05:42 20:46	39	19:33 (WEA 12) 20:12 (WEA 11)	[04:54 21:34	[04:52 21:47	[05:32 21:11	42	19:45 (WEA 12) 20:27 (WEA 11)	[06:25 20:05	[07:18 18:52	[07:15 16:43	[08:08 16:01
3	[08:31 16:09	[07:59 17:01	[07:01 17:56	[06:47 19:53	[05:40 20:47	40	19:33 (WEA 12) 20:13 (WEA 11)	[04:53 21:35	[04:53 21:47	[05:34 21:10	43	19:44 (WEA 12) 20:27 (WEA 11)	[06:27 20:03	[07:19 18:50	[07:17 16:42	[08:10 16:01
4	[08:31 16:10	[07:57 17:03	[06:59 17:58	[06:45 19:55	[05:38 20:49	42	19:32 (WEA 12) 20:14 (WEA 11)	[04:53 21:36	[04:54 21:46	[05:35 21:08	44	19:43 (WEA 12) 20:27 (WEA 11)	[06:29 20:00	[07:21 18:48	[07:19 16:40	[08:11 16:00
5	[08:31 16:12	[07:55 17:05	[06:56 18:00	[06:42 19:57	[05:36 20:51	43	19:32 (WEA 12) 20:15 (WEA 11)	[04:52 21:37	[04:55 21:46	[05:37 21:06	44	19:43 (WEA 12) 20:27 (WEA 11)	[06:30 19:58	[07:23 18:45	[07:21 16:38	[08:13 15:59
6	[08:30 16:13	[07:54 17:07	[06:54 18:02	[06:40 19:59	[05:34 20:53	43	19:33 (WEA 12) 20:16 (WEA 11)	[04:51 21:38	[04:55 21:45	[05:39 21:04	44	19:42 (WEA 12) 20:26 (WEA 11)	[06:32 19:56	[07:25 18:43	[07:22 16:36	[08:14 15:59
7	[08:30 16:14	[07:52 17:09	[06:52 18:04	[06:37 20:00	[05:32 20:54	43	19:33 (WEA 12) 20:16 (WEA 11)	[04:50 21:39	[04:56 21:44	[05:40 21:02	43	19:42 (WEA 12) 20:25 (WEA 11)	[06:34 19:53	[07:26 18:41	[07:24 16:34	[08:15 15:58
8	[08:29 16:16	[07:50 17:11	[06:49 18:05	[06:35 20:02	[05:30 20:56	43	19:33 (WEA 12) 20:16 (WEA 11)	[04:50 21:40	[04:57 21:44	[05:42 21:00	42	19:42 (WEA 12) 20:24 (WEA 11)	[06:36 19:51	[07:28 18:38	[07:26 16:32	[08:17 15:58
9	[08:29 16:17	[07:47 17:13	[06:47 18:07	[06:33 20:04	[05:28 20:58	43	19:33 (WEA 12) 20:16 (WEA 11)	[04:49 21:41	[04:58 21:43	[05:44 20:58	41	19:42 (WEA 12) 20:23 (WEA 11)	[06:37 19:48	[07:30 18:36	[07:28 16:31	[08:18 15:58
10	[08:28 16:19	[07:46 17:15	[06:45 18:09	[06:30 20:06	[05:26 21:00	43	19:34 (WEA 12) 20:17 (WEA 11)	[04:49 21:42	[04:59 21:42	[05:45 20:56	40	19:42 (WEA 12) 20:22 (WEA 11)	[06:39 19:46	[07:32 18:33	[07:30 16:29	[08:19 15:57
11	[08:28 16:20	[07:44 17:17	[06:42 18:11	[06:28 20:08	[05:24 21:01	43	19:34 (WEA 12) 20:17 (WEA 11)	[04:48 21:43	[05:01 21:41	[05:47 20:54	38	19:42 (WEA 12) 20:20 (WEA 11)	[06:41 19:44	[07:34 18:31	[07:32 16:27	[08:20 15:57
12	[08:27 16:22	[07:42 17:19	[06:40 18:13	[06:26 20:10	[05:23 21:03	41	19:35 (WEA 12) 20:16 (WEA 11)	[04:48 21:44	[05:02 21:40	[05:49 20:52	30	19:42 (WEA 12) 20:16 (WEA 11)	[06:43 19:41	[07:36 18:29	[07:34 16:25	[08:21 15:57
13	[08:26 16:23	[07:40 17:21	[06:38 18:15	[06:23 20:11	[05:21 21:05	41	19:36 (WEA 12) 20:17 (WEA 11)	[04:48 21:44	[05:03 21:40	[05:51 20:50	26	19:42 (WEA 12) 20:08 (WEA 12)	[06:44 19:39	[07:37 18:26	[07:36 16:24	[08:22 15:57
14	[08:25 16:25	[07:38 17:23	[06:35 18:17	[06:21 20:13	[05:19 21:06	39	19:37 (WEA 12) 20:16 (WEA 11)	[04:47 21:45	[05:04 21:39	[05:52 20:48	24	19:43 (WEA 12) 20:07 (WEA 12)	[06:46 19:36	[07:39 18:24	[07:38 16:22	[08:23 15:57
15	[08:24 16:26	[07:36 17:25	[06:33 18:18	[06:19 20:15	[05:18 21:08	37	19:39 (WEA 12) 20:16 (WEA 11)	[04:47 21:45	[05:05 21:37	[05:54 20:46	23	19:44 (WEA 12) 20:07 (WEA 12)	[06:48 19:34	[07:41 18:22	[07:39 16:21	[08:24 15:57
16	[08:23 16:28	[07:34 17:27	[06:30 18:20	[06:16 20:17	[05:16 21:10	33	19:40 (WEA 12) 20:15 (WEA 11)	[04:47 21:46	[05:07 21:36	[05:56 20:44	21	19:44 (WEA 12) 20:05 (WEA 12)	[06:50 19:31	[07:43 18:20	[07:41 16:19	[08:25 15:57
17	[08:22 16:30	[07:32 17:29	[06:28 18:22	[06:14 20:19	[05:14 21:11	27	19:43 (WEA 12) 20:15 (WEA 11)	[04:47 21:47	[05:08 21:35	[05:57 20:42	18	19:46 (WEA 12) 20:04 (WEA 12)	[06:51 19:29	[07:45 18:17	[07:43 16:18	[08:26 15:57
18	[08:21 16:31	[07:30 17:31	[06:26 18:24	[06:12 20:20	[05:13 21:13	19	19:56 (WEA 11) 20:15 (WEA 11)	[04:47 21:47	[05:09 21:34	[05:59 20:39	14	19:48 (WEA 12) 20:02 (WEA 12)	[06:53 19:27	[07:47 18:15	[07:45 16:16	[08:27 15:57
19	[08:20 16:33	[07:28 17:33	[06:23 18:26	[06:09 20:22	[05:11 21:15	16	19:57 (WEA 11) 20:13 (WEA 11)	[04:47 21:47	[05:11 21:33	[06:01 20:37	8	19:50 (WEA 12) 19:58 (WEA 12)	[06:55 19:24	[07:48 18:13	[07:47 16:15	[08:28 15:58
20	[08:19 16:35	[07:26 17:35	[06:21 18:28	[06:07 20:24	[05:10 21:16	14	19:58 (WEA 11) 20:12 (WEA 11)	[04:47 21:48	[05:12 21:32	[06:03 20:35			[06:56 19:22	[07:49 18:11	[07:48 16:14	[08:28 15:58
21	[08:18 16:37	[07:24 17:37	[06:18 18:30	[06:05 20:26	[05:08 21:18	11	20:00 (WEA 11) 20:11 (WEA 11)	[04:47 21:48	[05:13 21:30	[06:04 20:33	5	20:13 (WEA 11) 20:18 (WEA 11)	[06:04 20:33	[06:58 19:19	[07:52 18:08	[08:29 16:12
22	[08:17 16:39	[07:22 17:39	[06:16 18:31	[06:03 20:28	[05:07 21:19	8	20:01 (WEA 11) 20:09 (WEA 11)	[04:47 21:48	[05:15 21:29	[06:06 20:31	10	20:10 (WEA 11) 20:20 (WEA 11)	[06:06 20:31	[07:00 19:17	[07:54 18:06	[08:29 16:11
23	[08:16 16:40	[07:19 17:41	[06:13 18:33	[06:01 20:29	[05:05 21:21			[04:48 21:48	[05:16 21:27	[06:08 20:28	13	20:09 (WEA 11) 20:22 (WEA 11)	[06:08 20:28	[07:02 19:14	[07:56 18:04	[08:30 16:10
24	[08:14 16:42	[07:17 17:43	[06:11 18:35	[05:58 20:31	[05:04 21:22			[04:48 21:48	[05:16 21:26	[06:10 20:26	15	20:08 (WEA 11) 20:23 (WEA 11)	[06:08 20:26	[07:03 19:12	[07:56 18:02	[08:30 16:09
25	[08:13 16:44	[07:15 17:44	[06:09 18:37	[05:56 20:33	[05:03 21:24			[04:48 21:48	[05:19 21:24	[06:11 20:24	17	20:07 (WEA 11) 20:24 (WEA 11)	[06:11 20:24	[07:05 19:09	[07:00 17:00	[08:31 16:01
26	[08:11 16:46	[07:13 17:46	[06:06 18:39	[05:54 20:35	[05:02 21:25			[04:49 21:48	[05:21 21:23	[06:13 20:22	19	20:06 (WEA 11) 20:25 (WEA 11)	[06:13 20:22	[07:07 19:07	[07:02 16:58	[08:31 16:01
27	[08:10 16:48	[07:10 17:48	[06:04 18:40	[05:52 20:37	[05:00 21:26			[04:49 21:48	[05:22 21:21	[06:15 20:19	30	19:52 (WEA 12) 20:25 (WEA 11)	[06:22 20:19	[07:09 19:05	[07:03 16:56	[08:31 16:06
28	[08:08 16:50	[07:08 17:50	[06:01 18:42	[05:50 20:38	[04:59 21:28			[04:50 21:48	[05:24 21:20	[06:17 20:17	35	19:51 (WEA 12) 20:27 (WEA 11)	[06:17 20:15	[07:10 19:02	[07:05 16:53	[08:31 16:03
29	[08:07 16:52	[07:07 17:51	[05:59 18:44	[05:48 20:40	[04:58 21:29			[04:50 21:48	[05:26 21:18	[06:18 20:15	37	19:49 (WEA 12) 20:26 (WEA 11)	[06:18 20:15	[07:12 19:00	[07:07 16:51	[08:32 16:04
30	[08:05 16:54	[07:05 17:53	[05:57 18:46	[05:46 20:42	[04:57 21:30			[04:51 21:48	[05:27 21:16	[06:20 20:12	39	19:48 (WEA 12) 20:27 (WEA 11)	[06:20 20:12	[07:14 18:57	[07:09 16:49	[08:32 16:05
31	[08:04 16:55	[07:04 17:54	[05:54 18:48	[05:45 20:43	[04:56 21:32			[04:59 21:48	[05:29 21:15	[06:22 20:10	41	19:46 (WEA 12) 20:27 (WEA 11)	[06:22 20:10	[07:11 18:47	[07:08 16:47	[08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	741	507	510	458	627	382	329	261	236		
astr.max.mögl.Beschattung				143												

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BR - Dorfanger 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:29 (WEA 12) 21:33	04:55 21:47	05:30 21:13	19:40 (WEA 12) 20:08	06:24 18:55	07:16 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:29 (WEA 12) 21:34	04:54 21:47	05:32 21:11	19:39 (WEA 12) 20:05	06:25 18:52	07:18 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	19:28 (WEA 12) 21:35	04:53 21:47	05:34 21:10	19:39 (WEA 12) 20:03	06:27 18:50	07:19 16:42	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:59	06:45 19:55	05:38 20:49	19:28 (WEA 12) 21:36	04:54 21:46	05:35 21:08	19:38 (WEA 12) 20:01	06:29 18:48	07:21 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	19:27 (WEA 12) 21:37	04:55 21:46	05:37 21:06	19:38 (WEA 12) 20:01	06:30 18:45	07:23 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	19:28 (WEA 12) 21:38	04:55 21:45	05:39 21:04	19:37 (WEA 12) 20:02	06:32 18:43	07:25 16:33	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	19:28 (WEA 12) 21:39	04:56 21:44	05:40 21:02	19:38 (WEA 12) 20:04	06:34 18:41	07:26 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	19:28 (WEA 12) 21:40	04:57 21:44	05:42 21:00	19:37 (WEA 12) 20:06	06:36 18:38	07:28 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	19:28 (WEA 12) 21:41	04:58 21:43	05:44 20:58	19:37 (WEA 12) 20:07	06:37 18:36	07:30 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	19:29 (WEA 12) 21:42	04:59 21:42	05:45 20:56	19:38 (WEA 12) 20:08	06:39 18:33	07:32 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	19:29 (WEA 12) 21:43	04:48 21:41	05:47 20:54	19:37 (WEA 12) 20:11	06:41 18:31	07:34 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	19:29 (WEA 12) 21:44	04:48 21:40	05:49 20:52	19:38 (WEA 12) 20:12	06:43 18:29	07:36 16:25	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	19:30 (WEA 12) 21:44	04:48 21:40	05:51 20:50	19:38 (WEA 12) 20:13	06:44 18:26	07:37 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	19:30 (WEA 12) 21:45	04:47 21:39	05:52 20:48	19:39 (WEA 12) 20:14	06:46 18:24	07:39 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	19:32 (WEA 12) 21:46	04:47 21:37	05:54 20:46	19:40 (WEA 12) 20:15	06:48 18:22	07:41 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	19:32 (WEA 12) 21:46	04:47 21:36	05:56 20:44	19:40 (WEA 12) 20:16	06:50 18:20	07:43 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	19:34 (WEA 12) 21:47	04:47 21:35	05:57 20:42	19:42 (WEA 12) 20:17	06:51 18:17	07:45 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	19:36 (WEA 12) 21:47	04:47 21:34	05:59 20:39	20:10 (WEA 11) 19:59 (WEA 12)	05:59 20:39	07:47 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	19:37 (WEA 12) 21:47	04:47 21:33	06:01 20:37	20:08 (WEA 11) 19:46 (WEA 12)	06:01 20:37	07:48 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	19:40 (WEA 12) 21:48	04:47 21:32	06:03 20:35	20:20 (WEA 11) 20:07 (WEA 12)	20:37 20:35	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	19:55 (WEA 11) 21:48	04:47 21:30	06:04 20:33	20:21 (WEA 11) 20:06 (WEA 12)	20:35 20:33	07:50 16:12	08:30 15:58
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	20:14 (WEA 11) 21:48	04:47 21:29	06:06 20:31	20:23 (WEA 11) 20:31	20:33 20:31	07:54 16:11	08:31 15:59
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	19:56 (WEA 11) 21:48	04:48 21:27	06:08 20:28	19:52 (WEA 12) 20:24 (WEA 12)	20:31 20:28	07:56 16:10	08:32 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	19:58 (WEA 11) 21:48	04:48 21:26	06:10 20:26	19:49 (WEA 12) 20:25 (WEA 12)	20:28 20:26	07:58 16:09	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	19:57 (WEA 12) 21:48	04:48 21:24	06:11 20:24	19:46 (WEA 12) 20:25 (WEA 12)	20:29 20:24	07:59 16:08	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	19:55 (WEA 12) 21:48	04:49 21:23	06:13 20:22	19:45 (WEA 12) 20:26 (WEA 12)	20:25 20:22	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	19:53 (WEA 12) 21:48	04:50 21:21	06:15 20:19	19:44 (WEA 12) 20:26 (WEA 12)	20:22 20:19	07:59 16:06	08:31 16:02
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	19:52 (WEA 12) 21:48	04:50 21:20	06:17 20:17	19:43 (WEA 12) 20:27 (WEA 12)	20:17 20:17	07:59 16:05	08:31 16:03
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	19:51 (WEA 12) 21:48	04:50 21:18	06:18 20:15	19:42 (WEA 12) 20:27 (WEA 12)	20:18 20:15	07:59 16:04	08:32 16:04
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	19:50 (WEA 12) 21:48	04:51 21:17	06:20 20:12	19:41 (WEA 12) 20:28 (WEA 12)	20:16 20:12	07:59 16:03	08:32 16:05
31	08:04 16:55		06:54 19:48		04:56 21:32	19:58 (WEA 12) 21:48	04:50 21:15	06:22 20:10	19:40 (WEA 12) 20:27 (WEA 12)	20:12 20:10	07:59 16:02	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung				149	946	426	676					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BS - Dorfanger 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	27 19:34 (WEA 12) 20:01 (WEA 12)	04:55 21:33	04:51 21:47	05:30 21:13	46 19:43 (WEA 12) 20:29 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	28 19:33 (WEA 12) 20:01 (WEA 12)	04:54 21:34	04:52 21:47	05:32 21:11	47 19:42 (WEA 12) 20:29 (WEA 11)	06:25 20:05	07:18 18:52	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:56	07:01 17:53	06:47 19:53	05:40 20:47	40 19:32 (WEA 12) 20:12 (WEA 11)	04:53 21:35	04:53 21:47	05:34 21:10	47 19:42 (WEA 12) 20:29 (WEA 11)	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
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5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	44 19:31 (WEA 12) 20:15 (WEA 11)	04:52 21:37	04:55 21:46	05:37 21:06	46 19:42 (WEA 12) 20:28 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	44 19:32 (WEA 12) 20:16 (WEA 11)	04:51 21:38	04:55 21:45	05:39 21:04	45 19:41 (WEA 12) 20:26 (WEA 11)	06:32 19:56	07:25 18:43	07:22 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	45 19:32 (WEA 12) 20:17 (WEA 11)	04:50 21:39	04:56 21:44	05:40 21:02	45 19:41 (WEA 12) 20:26 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	46 19:31 (WEA 12) 20:17 (WEA 11)	04:50 21:40	04:57 21:44	05:42 21:00	43 19:41 (WEA 12) 20:24 (WEA 11)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	46 19:31 (WEA 12) 20:17 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	42 19:41 (WEA 12) 20:23 (WEA 11)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	46 19:32 (WEA 12) 20:18 (WEA 11)	04:49 21:42	04:59 21:42	05:45 20:56	37 19:42 (WEA 12) 20:20 (WEA 11)	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	46 19:32 (WEA 12) 20:18 (WEA 11)	04:48 21:43	05:01 21:41	05:47 20:54	28 19:42 (WEA 12) 20:10 (WEA 12)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	46 19:32 (WEA 12) 20:18 (WEA 11)	04:48 21:44	05:02 21:40	05:49 20:52	27 19:42 (WEA 12) 20:09 (WEA 12)	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	46 19:33 (WEA 12) 20:19 (WEA 11)	04:48 21:44	05:03 21:40	05:51 20:50	26 19:42 (WEA 12) 20:08 (WEA 12)	06:44 19:39	07:37 18:26	07:36 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	44 19:34 (WEA 12) 20:18 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	24 19:43 (WEA 12) 20:07 (WEA 12)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	43 19:35 (WEA 12) 20:18 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	21 19:45 (WEA 12) 20:06 (WEA 12)	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	43 19:35 (WEA 12) 20:18 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	19 19:45 (WEA 12) 20:04 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	41 19:37 (WEA 12) 20:18 (WEA 11)	04:47 21:47	05:08 21:35	05:57 20:42	14 19:48 (WEA 12) 20:02 (WEA 12)	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	41 19:38 (WEA 12) 20:18 (WEA 11)	04:47 21:47	05:09 21:34	05:59 20:39	9 19:51 (WEA 12) 20:21 (WEA 11)	06:53 20:39	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	37 19:39 (WEA 12) 20:17 (WEA 11)	04:47 21:47	05:11 21:33	06:01 20:37	8 19:59 (WEA 12) 20:10 (WEA 11)	06:55 20:37	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	32 19:41 (WEA 12) 20:17 (WEA 11)	04:47 21:48	05:12 21:32	06:03 20:35	12 20:09 (WEA 11) 20:23 (WEA 11)	06:03 20:35	06:56 19:22	07:49 18:11	08:29 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	23 19:45 (WEA 12) 20:16 (WEA 11)	04:47 21:48	05:13 21:30	06:04 20:33	17 20:08 (WEA 11) 20:25 (WEA 11)	06:04 20:33	06:58 19:19	07:52 18:08	08:30 15:58
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	18 19:57 (WEA 11) 20:15 (WEA 11)	04:47 21:48	05:15 21:29	06:06 20:31	19 20:07 (WEA 11) 20:26 (WEA 11)	06:06 20:31	07:00 18:06	07:52 16:11	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	16 19:58 (WEA 11) 20:14 (WEA 11)	04:48 21:48	05:16 21:27	06:08 20:28	28 19:53 (WEA 12) 20:26 (WEA 11)	06:08 20:28	07:02 19:14	07:56 18:04	08:34 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	13 20:00 (WEA 11) 20:13 (WEA 11)	04:48 21:48	05:18 21:26	06:10 20:26	34 19:51 (WEA 12) 20:27 (WEA 11)	06:10 20:26	07:03 18:02	07:56 18:02	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	11 19:49 (WEA 12) 20:12 (WEA 11)	04:48 21:48	05:19 21:24	06:11 20:24	34 19:49 (WEA 12) 20:27 (WEA 11)	06:11 20:24	07:05 19:09	07:57 18:00	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	8 19:41 (WEA 12) 19:56 (WEA 12)	04:49 21:28	05:21 21:23	06:13 20:22	38 19:48 (WEA 12) 20:28 (WEA 11)	06:13 20:22	07:07 19:07	07:02 18:00	07:59 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	8 19:38 (WEA 12) 19:58 (WEA 12)	04:49 21:28	05:22 21:21	06:15 20:19	40 19:47 (WEA 12) 20:28 (WEA 11)	06:15 20:19	07:09 19:05	07:03 18:00	08:01 16:02
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	20 19:37 (WEA 12) 19:59 (WEA 12)	04:59 21:28	05:24 21:20	06:17 20:17	41 19:46 (WEA 12) 20:29 (WEA 11)	06:17 20:17	07:10 19:02	07:05 18:00	08:02 16:03
29	08:07 16:52	07:06 17:51	05:59 18:44	05:48 20:40	04:58 21:29	22 19:36 (WEA 12) 20:00 (WEA 12)	04:58 21:28	05:26 21:18	06:18 20:15	43 19:45 (WEA 12) 20:29 (WEA 11)	06:18 20:15	07:12 19:00	07:07 18:00	08:04 16:04
30	08:05 16:54	07:04 17:46	05:46 18:46	05:40 20:42	04:57 21:30	24 19:35 (WEA 12) 20:00 (WEA 12)	04:57 21:30	05:27 21:17	06:20 20:12	44 19:45 (WEA 12) 20:29 (WEA 11)	06:20 20:12	07:14 18:57	07:09 18:00	08:05 16:03
31	08:04 16:55	07:03 17:48	05:44 18:48	05:39 20:42	04:56 21:32	25 19:34 (WEA 12) 20:00 (WEA 12)	04:56 21:32	05:29 21:15	06:22 20:10	46 19:43 (WEA 12) 20:29 (WEA 11)	06:22 20:10	07:11 18:57	07:08 18:00	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	611	382	329	261	236	
astr.max.mögl.Beschattung				115	915									

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BT - Hauptstraße 24

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:37 (WEA 12) 21:33	04:55 21:47	04:51 21:47	05:30 21:13	19:46 (WEA 12) 20:08	07:16 18:55	07:13 16:45
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:37 (WEA 12) 21:34	04:54 21:47	04:52 21:47	05:32 21:11	19:45 (WEA 12) 20:05	07:18 18:52	07:15 16:43
3	08:31 16:09	08:01 17:01	07:03 17:56	06:49 19:53	05:42 20:47	19:36 (WEA 12) 21:35	04:53 21:47	04:53 21:47	05:34 21:10	19:45 (WEA 12) 20:03	07:19 18:50	07:17 16:42
4	08:31 16:10	08:01 17:03	07:03 17:59	06:49 19:55	05:38 20:49	19:35 (WEA 12) 21:36	04:53 21:46	04:54 21:46	05:35 21:08	19:45 (WEA 12) 20:06	07:21 18:48	07:19 16:40
5	08:31 16:12	08:01 17:05	07:03 18:00	06:42 19:57	05:36 20:51	19:35 (WEA 12) 21:37	04:52 21:46	04:55 21:46	05:37 21:06	19:45 (WEA 12) 20:06	07:23 18:45	07:21 16:38
6	08:30 16:13	08:00 17:07	07:04 18:02	06:40 19:59	05:34 20:53	19:35 (WEA 12) 21:38	04:51 21:45	04:55 21:45	05:39 21:04	19:44 (WEA 12) 20:07	07:25 18:43	07:22 16:36
7	08:30 16:14	08:00 17:09	07:04 18:04	06:37 20:00	05:32 20:54	19:35 (WEA 12) 21:39	04:50 21:44	04:56 21:44	05:40 21:02	19:45 (WEA 12) 20:08	07:26 18:41	07:24 16:34
8	08:29 16:16	08:00 17:11	07:04 18:05	06:35 20:02	05:30 20:56	19:34 (WEA 12) 21:40	04:50 21:44	04:57 21:44	05:42 21:00	19:44 (WEA 12) 20:09	07:28 18:38	07:26 16:32
9	08:29 16:17	08:00 17:13	07:04 18:07	06:33 20:04	05:28 20:58	19:34 (WEA 12) 21:41	04:49 21:43	04:58 21:43	05:44 20:58	19:45 (WEA 12) 20:10	07:30 18:36	07:28 16:31
10	08:28 16:19	08:00 17:15	07:04 18:09	06:30 20:06	05:26 21:00	19:35 (WEA 12) 21:42	04:49 21:42	04:59 21:42	05:45 20:56	19:45 (WEA 12) 20:11	07:32 18:33	07:30 16:29
11	08:28 16:20	08:00 17:17	07:04 18:11	06:28 20:08	05:24 21:01	19:35 (WEA 12) 21:43	04:48 21:41	05:01 21:41	05:47 20:54	19:45 (WEA 12) 20:12	07:34 18:31	07:32 16:27
12	08:27 16:22	08:00 17:19	07:04 18:13	06:26 20:10	05:23 21:03	19:35 (WEA 12) 21:44	04:48 21:40	05:02 21:40	05:49 20:52	19:46 (WEA 12) 20:13	07:36 18:29	07:34 16:25
13	08:26 16:23	08:00 17:21	07:04 18:15	06:23 20:11	05:21 21:05	19:36 (WEA 12) 21:44	04:48 21:40	05:03 21:40	05:51 20:50	19:46 (WEA 12) 20:14	07:37 18:26	07:36 16:24
14	08:25 16:25	08:00 17:23	07:04 18:17	06:21 20:13	05:19 21:06	19:36 (WEA 12) 21:45	04:47 21:39	05:04 21:39	05:52 20:48	19:48 (WEA 12) 20:15	07:39 18:24	07:38 16:22
15	08:24 16:26	08:00 17:25	07:04 18:19	06:19 20:15	05:18 21:08	19:37 (WEA 12) 21:46	04:47 21:37	05:05 21:37	05:54 20:46	19:49 (WEA 12) 20:16	07:41 18:22	07:39 16:21
16	08:23 16:28	08:00 17:27	07:04 18:20	06:16 20:17	05:16 21:10	19:37 (WEA 12) 21:46	04:47 21:36	05:07 21:36	05:56 20:44	19:51 (WEA 12) 20:17	07:43 18:20	07:41 16:19
17	08:22 16:30	08:00 17:29	07:04 18:22	06:14 20:19	05:14 21:11	19:39 (WEA 12) 21:47	04:47 21:35	05:08 21:35	05:57 20:42	19:54 (WEA 12) 20:18	07:45 18:17	07:43 16:18
18	08:21 16:31	08:00 17:31	07:04 18:24	06:12 20:20	05:13 21:13	19:40 (WEA 12) 21:47	04:47 21:34	05:09 21:34	05:59 20:39	20:13 (WEA 11) 20:19	07:47 18:15	07:45 16:16
19	08:20 16:33	08:00 17:33	07:04 18:26	06:09 20:22	05:11 21:15	19:41 (WEA 12) 21:47	04:47 21:33	05:11 21:33	06:01 20:37	20:11 (WEA 11) 20:37	07:48 18:13	07:47 16:15
20	08:19 16:35	08:00 17:35	07:04 18:28	06:07 20:24	05:10 21:16	19:43 (WEA 12) 21:48	04:47 21:32	05:12 21:32	06:03 20:35	20:10 (WEA 11) 20:35	07:49 18:11	07:49 16:14
21	08:18 16:37	08:00 17:37	07:04 18:30	06:05 20:26	05:08 21:18	19:45 (WEA 12) 21:48	04:47 21:30	05:13 21:30	06:04 20:33	20:10 (WEA 11) 20:33	07:50 18:06	07:50 16:12
22	08:17 16:39	08:00 17:39	07:04 18:31	06:03 20:28	05:07 21:19	19:48 (WEA 12) 21:48	04:47 21:29	05:15 21:29	06:06 20:31	19:56 (WEA 12) 20:31	07:54 18:06	07:52 16:11
23	08:16 16:40	08:00 17:41	07:04 18:33	06:01 20:29	05:05 21:21	20:00 (WEA 11) 21:48	04:48 21:27	05:16 21:27	06:08 20:28	19:53 (WEA 12) 20:28	07:56 18:04	07:54 16:10
24	08:14 16:42	08:00 17:43	07:04 18:35	05:58 20:31	05:04 21:22	20:01 (WEA 11) 21:48	04:48 21:26	05:18 21:26	06:10 20:26	19:52 (WEA 12) 20:29	07:58 18:02	07:56 16:09
25	08:13 16:44	08:00 17:44	07:04 18:37	05:56 20:33	05:03 21:24	20:02 (WEA 11) 21:48	04:48 21:24	05:19 21:24	06:11 20:24	19:51 (WEA 12) 20:24	07:59 18:00	07:57 16:08
26	08:11 16:46	08:00 17:46	07:04 18:39	05:54 20:35	05:02 21:25	20:04 (WEA 11) 21:48	04:49 21:23	05:21 21:23	06:13 20:22	19:50 (WEA 12) 20:22	07:59 18:01	07:59 16:07
27	08:10 16:48	08:00 17:48	07:04 18:40	05:52 20:37	05:00 21:26	20:06 (WEA 11) 21:49	04:49 21:21	05:22 21:21	06:15 20:19	19:49 (WEA 12) 20:19	07:59 18:01	08:01 16:02
28	08:09 16:50	08:00 17:50	07:04 18:42	05:50 20:38	05:00 21:28	19:41 (WEA 12) 21:48	04:50 21:28	05:24 21:28	06:17 20:17	19:48 (WEA 12) 20:17	07:59 18:02	08:02 16:03
29	08:07 16:52	08:00 17:52	07:04 18:45	05:48 20:40	05:00 21:29	20:00 (WEA 12) 21:48	04:50 21:28	05:26 21:28	06:18 20:15	19:47 (WEA 12) 20:15	07:59 18:01	08:04 16:04
30	08:05 16:54	08:00 17:54	07:04 18:46	05:46 20:42	05:00 21:30	19:39 (WEA 12) 21:48	04:51 21:28	05:27 21:28	06:20 20:12	19:47 (WEA 12) 20:12	07:59 18:01	08:05 16:03
31	08:04 16:55	08:00 17:55	07:04 18:48	05:44 20:46	05:00 21:32	20:02 (WEA 12) 21:48	04:50 21:28	05:29 21:28	06:22 20:10	19:46 (WEA 12) 20:10	07:59 18:01	08:05 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	458	382	329	261
astr.max.mögl.Beschattung				86	916	507	510	460	547	382	329	261

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BU - Hauptstraße 22

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember					
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	26	19:35 (WEA 12) 20:01 (WEA 12)	04:55 21:33	04:51 21:47	05:30 21:13	44	19:45 (WEA 12) 20:29 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02	
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	32	19:34 (WEA 12) 20:09 (WEA 11)	04:54 21:34	04:52 21:47	05:32 21:11	44	19:44 (WEA 12) 20:28 (WEA 11)	06:25 20:05	07:18 18:52	07:15 16:43	08:08 16:01	
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	39	19:33 (WEA 12) 20:12 (WEA 11)	04:53 21:35	04:53 21:47	05:34 21:10	45	19:44 (WEA 12) 20:29 (WEA 11)	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01	
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	41	19:33 (WEA 12) 20:14 (WEA 11)	04:53 21:36	04:54 21:46	05:35 21:08	45	19:43 (WEA 12) 20:28 (WEA 11)	06:29 20:00	07:21 18:48	07:19 16:40	08:11 16:00	
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	43	19:32 (WEA 12) 20:15 (WEA 11)	04:52 21:37	04:55 21:46	05:37 21:06	45	19:43 (WEA 12) 20:28 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59	
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	44	19:33 (WEA 12) 20:17 (WEA 11)	04:51 21:38	04:55 21:45	05:39 21:04	44	19:42 (WEA 12) 20:26 (WEA 11)	06:32 19:56	07:25 18:43	07:22 16:36	08:14 15:59	
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	44	19:33 (WEA 12) 20:17 (WEA 11)	04:50 21:39	04:56 21:44	05:40 21:02	44	19:42 (WEA 12) 20:26 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58	
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	44	19:33 (WEA 12) 20:17 (WEA 11)	04:50 21:40	04:57 21:44	05:42 21:00	42	19:42 (WEA 12) 20:24 (WEA 11)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58	
9	08:29 16:17	07:47 17:13	06:47 18:07	06:33 20:04	05:28 20:58	44	19:33 (WEA 12) 20:17 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	41	19:42 (WEA 12) 20:23 (WEA 11)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58	
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	45	19:33 (WEA 12) 20:18 (WEA 11)	04:49 21:42	04:59 21:42	05:45 20:56	38	19:43 (WEA 12) 20:21 (WEA 11)	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57	
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	44	19:34 (WEA 12) 20:18 (WEA 11)	04:48 21:43	05:01 21:41	05:47 20:54	28	19:42 (WEA 12) 20:10 (WEA 12)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57	
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13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	43	19:35 (WEA 12) 20:18 (WEA 11)	04:48 21:44	05:03 21:40	05:51 20:50	25	19:43 (WEA 12) 20:08 (WEA 12)	06:44 19:39	07:37 18:26	07:36 16:24	08:22 15:57	
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	43	19:35 (WEA 12) 20:18 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	24	19:44 (WEA 12) 20:08 (WEA 12)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57	
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	42	19:36 (WEA 12) 20:18 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	21	19:46 (WEA 12) 20:07 (WEA 12)	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57	
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	40	19:37 (WEA 12) 20:17 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	18	19:46 (WEA 12) 20:04 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57	
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18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	36	19:40 (WEA 12) 20:17 (WEA 11)	04:47 21:47	05:09 21:34	05:59 20:39	8	19:52 (WEA 12) 20:00 (WEA 12)	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57	
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	31	19:42 (WEA 12) 20:16 (WEA 11)	04:47 21:47	05:11 21:33	06:01 20:37	9	20:12 (WEA 11) 20:21 (WEA 11)	06:55 20:37	07:48 18:13	07:47 16:15	08:28 15:58	
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21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	21	19:58 (WEA 11) 20:16 (WEA 11)	04:47 21:48	05:13 21:30	06:04 20:33	14	20:10 (WEA 11) 20:24 (WEA 11)	06:58 20:33	07:52 18:09	07:50 16:12	08:29 15:58	
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	16	19:58 (WEA 11) 20:14 (WEA 11)	04:47 21:48	05:15 21:29	06:06 20:31	17	20:08 (WEA 11) 20:25 (WEA 11)	06:06 20:31	07:54 18:06	07:52 16:11	08:29 15:59	
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	13	20:00 (WEA 11) 20:13 (WEA 11)	04:48 21:48	05:16 21:27	06:08 20:28	18	20:07 (WEA 11) 20:25 (WEA 11)	06:08 20:28	07:56 18:04	07:54 16:10	08:30 15:59	
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	11	20:01 (WEA 11) 20:12 (WEA 11)	04:48 21:48	05:18 21:26	06:10 20:26	28	20:27 (WEA 11) 20:37 (WEA 11)	06:10 20:26	07:58 18:02	07:56 16:09	08:30 16:00	
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	6	20:04 (WEA 11) 20:10 (WEA 11)	04:48 21:48	05:19 21:24	06:11 20:24	34	20:31 (WEA 11) 20:27 (WEA 11)	06:11 20:24	07:59 18:00	07:57 16:08	08:31 16:01	
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	19	19:41 (WEA 12) 19:57 (WEA 12)	05:02 21:25	05:21 21:28	06:13 20:22	38	20:27 (WEA 11) 20:28 (WEA 11)	06:13 20:22	07:59 18:00	07:57 16:07	08:31 16:01	
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	19	19:39 (WEA 12) 19:58 (WEA 12)	05:00 21:26	05:22 21:28	06:15 20:19	40	20:28 (WEA 11) 20:28 (WEA 11)	06:15 20:19	08:00 18:05	08:01 16:06	08:31 16:02	
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	21	19:38 (WEA 12) 19:59 (WEA 12)	04:59 21:28	05:24 21:20	06:17 20:17	41	20:29 (WEA 11) 20:29 (WEA 11)	06:17 20:15	08:02 18:04	08:02 16:05	08:31 16:03	
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	24	19:36 (WEA 12) 20:00 (WEA 12)	04:58 21:29	05:26 21:18	06:18 20:15	43	20:29 (WEA 11) 20:29 (WEA 11)	06:18 20:20	08:04 18:05	08:04 16:04	08:32 16:04	
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	26	19:35 (WEA 12) 20:01 (WEA 12)	04:57 21:30	05:27 21:16	06:20 20:12	43	20:29 (WEA 11) 20:29 (WEA 11)	06:20 20:12	08:05 18:05	08:05 16:05	08:32 16:05	
31	08:04 16:55		06:54 19:48		04:56 21:32	26	20:01 (WEA 12) 20:12 (WEA 11)	04:56 21:32	05:29 21:15	06:22 20:10	44	20:29 (WEA 11) 20:29 (WEA 11)	06:22 20:10	08:06 18:06	08:06 16:06	08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492				507	510		458	598	382	329	261	236
astr.max.mögl.Beschattung				116		849				384							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BV - Hauptstraße 17

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:41 (WEA 12) 21:33	04:55 21:47	04:51 21:47	05:30 21:13	19:49 (WEA 12) 20:08	07:16 18:55	07:13 16:45
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:40 (WEA 12) 21:34	04:54 21:47	04:52 21:47	05:32 21:11	19:48 (WEA 12) 20:05	07:18 18:52	07:15 16:43
3	08:31 16:09	08:01 17:01	07:01 17:56	06:47 19:53	05:40 20:47	19:39 (WEA 12) 21:35	04:53 21:47	04:53 21:47	05:34 21:10	19:48 (WEA 12) 20:03	07:19 18:50	07:17 16:42
4	08:31 16:10	08:01 17:03	07:01 17:58	06:45 19:55	05:38 20:49	19:38 (WEA 12) 21:36	04:53 21:46	04:54 21:46	05:35 21:08	19:47 (WEA 12) 20:00	07:21 18:48	07:19 16:40
5	08:31 16:12	08:01 17:05	07:01 18:00	06:42 19:57	05:36 20:51	19:37 (WEA 12) 21:37	04:52 21:46	04:55 21:46	05:37 21:06	19:48 (WEA 12) 20:30 (WEA 11)	07:23 18:45	07:21 16:38
6	08:30 16:13	08:00 17:07	07:00 18:02	06:40 19:59	05:34 20:53	19:38 (WEA 12) 21:38	04:51 21:45	04:55 21:45	05:39 21:04	19:47 (WEA 12) 20:32 (WEA 11)	07:25 18:43	07:22 16:36
7	08:30 16:14	08:00 17:09	07:00 18:04	06:37 20:00	05:32 20:54	19:37 (WEA 12) 21:39	04:50 21:44	04:56 21:44	05:40 21:02	19:47 (WEA 12) 20:34 (WEA 11)	07:26 18:41	07:24 16:34
8	08:29 16:16	08:00 17:11	07:00 18:05	06:35 20:02	05:30 20:56	19:37 (WEA 12) 21:40	04:50 21:44	04:57 21:44	05:42 21:00	19:47 (WEA 12) 20:36 (WEA 11)	07:28 18:38	07:26 16:32
9	08:29 16:17	08:00 17:13	07:00 18:07	06:33 20:04	05:28 20:58	19:37 (WEA 12) 21:41	04:49 21:43	04:58 21:43	05:44 20:58	19:48 (WEA 12) 20:37	07:30 18:36	07:28 16:31
10	08:28 16:19	08:00 17:15	07:00 18:09	06:30 20:06	05:26 21:00	19:38 (WEA 12) 21:42	04:49 21:42	04:59 21:42	05:45 20:56	19:48 (WEA 12) 20:39	07:32 18:33	07:30 16:29
11	08:28 16:20	08:00 17:17	07:00 18:11	06:28 20:08	05:24 21:01	19:37 (WEA 12) 21:43	04:48 21:41	05:01 21:41	05:47 20:54	19:48 (WEA 12) 20:44	07:34 18:31	07:32 16:27
12	08:27 16:22	08:00 17:19	07:00 18:13	06:26 20:10	05:23 21:03	19:37 (WEA 12) 21:44	04:48 21:40	05:02 21:40	05:49 20:52	19:49 (WEA 12) 20:43 (WEA 11)	07:36 18:29	07:34 16:25
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16	08:23 16:28	08:00 17:27	07:00 18:20	06:16 20:17	05:16 21:10	19:40 (WEA 12) 21:46	04:47 21:36	05:07 21:36	05:56 20:44	19:56 (WEA 12) 20:50	07:43 18:20	07:41 16:19
17	08:22 16:30	08:00 17:29	07:00 18:22	06:14 20:19	05:14 21:11	19:41 (WEA 12) 21:47	04:47 21:35	05:08 21:35	05:57 20:42	20:18 (WEA 11) 20:44 (WEA 11)	07:45 18:17	07:43 16:18
18	08:21 16:31	08:00 17:31	07:00 18:24	06:12 20:20	05:13 21:13	19:42 (WEA 12) 21:47	04:47 21:34	05:09 21:34	05:59 20:39	20:14 (WEA 11) 20:26 (WEA 11)	07:47 18:15	07:45 16:16
19	08:20 16:33	08:00 17:33	07:00 18:26	06:09 20:22	05:11 21:15	19:43 (WEA 12) 21:47	04:47 21:33	05:11 21:33	06:01 20:37	20:13 (WEA 11) 20:27 (WEA 11)	07:48 18:13	07:47 16:15
20	08:19 16:35	08:00 17:35	07:00 18:28	06:07 20:24	05:10 21:16	19:44 (WEA 12) 21:48	04:47 21:32	05:12 21:32	06:03 20:35	20:11 (WEA 11) 20:27 (WEA 11)	07:49 18:11	07:49 16:14
21	08:18 16:37	08:00 17:37	07:00 18:30	06:05 20:26	05:08 21:18	19:46 (WEA 12) 21:48	04:47 21:30	05:13 21:30	06:04 20:33	20:11 (WEA 11) 20:29 (WEA 11)	07:50 18:06	07:50 16:12
22	08:17 16:39	08:00 17:39	07:00 18:31	06:03 20:28	05:07 21:19	19:48 (WEA 12) 21:48	04:47 21:29	05:15 21:29	06:06 20:31	19:57 (WEA 12) 20:29 (WEA 11)	07:52 18:06	07:52 16:11
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27	08:10 16:48	08:00 17:48	07:00 18:40	05:52 20:37	05:00 21:26	20:06 (WEA 11) 21:49	04:49 21:21	05:22 21:21	06:15 20:19	19:51 (WEA 12) 20:33 (WEA 11)	08:01 18:06	08:01 16:02
28	08:08 16:50	08:00 17:50	07:00 18:42	05:50 20:38	04:59 21:28	19:45 (WEA 12) 21:28	04:50 21:28	05:24 21:28	06:17 20:17	20:14 (WEA 11) 20:34 (WEA 11)	08:02 18:07	08:02 16:03
29	08:07 16:52	08:00 17:51	07:00 18:43	05:48 20:39	04:58 21:29	20:01 (WEA 11) 21:29	04:50 21:28	05:26 21:28	06:18 20:15	19:50 (WEA 12) 20:35 (WEA 11)	08:04 18:07	08:04 16:04
30	08:05 16:54	08:00 17:53	07:00 18:45	05:46 20:40	04:57 21:30	19:42 (WEA 12) 21:30	04:51 21:28	05:27 21:28	06:20 20:12	19:50 (WEA 12) 20:36 (WEA 11)	08:05 18:09	08:05 16:03
31	08:04 16:55	08:00 17:54	07:00 18:46	05:44 20:41	04:56 21:32	20:03 (WEA 12) 21:32	04:50 21:29	05:29 21:25	06:22 20:10	19:49 (WEA 12) 20:38 (WEA 11)	08:06 18:11	08:06 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	502	382	329	261
astr.max.mögl.Beschattung				66	890							236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BW - Hauptstraße 19

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli		[August		[September	Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19	19:46 (WEA 12) 21:33	04:55 21:47		05:30 21:13	43	19:51 (WEA 12) 20:34 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
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5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	26	19:42 (WEA 12) 21:37	04:52 21:46		05:37 21:06	40	19:51 (WEA 12) 20:31 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
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7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	39	19:41 (WEA 12) 21:39	04:50 21:44		05:40 21:02	38	19:51 (WEA 12) 20:27 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	40	19:41 (WEA 12) 21:40	04:50 21:44		05:42 21:00	36	19:51 (WEA 12) 20:17 (WEA 12)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	41	20:21 (WEA 11) 21:41	04:49 21:43	26	05:44 20:58	26	20:17 (WEA 12) 19:53 (WEA 12)	06:37 19:48	07:29 18:36	07:27 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	42	19:41 (WEA 12) 21:42	04:49 21:42	25	05:45 20:56	23	20:17 (WEA 12) 19:54 (WEA 12)	06:39 19:46	07:30 18:33	07:30 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	43	19:40 (WEA 12) 21:43	04:48 21:41	22	05:47 20:54	20	19:54 (WEA 12) 20:14 (WEA 12)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	43	19:40 (WEA 12) 21:44	04:48 21:40	18	05:49 20:52	20	19:55 (WEA 12) 20:13 (WEA 12)	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	43	19:41 (WEA 12) 21:44	04:48 21:40	18	05:49 20:52	18	19:55 (WEA 12) 20:11 (WEA 12)	06:43 19:39	07:37 18:26	07:36 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	43	19:41 (WEA 12) 21:45	04:47 21:39	10	05:54 20:48	15	20:00 (WEA 12) 20:08 (WEA 12)	06:46 19:48	07:38 18:24	07:39 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	43	19:41 (WEA 12) 21:45	04:47 21:37	10	05:54 20:48	15	20:00 (WEA 12) 20:08 (WEA 12)	06:46 19:48	07:38 18:24	07:39 16:22	08:23 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	43	19:41 (WEA 12) 21:46	04:47 21:36	12	05:56 21:36	12	20:15 (WEA 11) 20:29 (WEA 11)	06:47 20:44	07:41 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	42	19:42 (WEA 12) 21:47	04:47 21:35	14	05:57 21:35	16	20:15 (WEA 11) 20:31 (WEA 12)	06:47 20:42	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	42	19:43 (WEA 12) 21:47	04:47 21:34	16	05:59 21:34	24	20:02 (WEA 12) 20:31 (WEA 11)	06:48 20:39	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	41	19:43 (WEA 12) 21:47	04:47 21:33	24	05:59 21:33	31	19:59 (WEA 12) 20:32 (WEA 11)	06:01 20:37	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	40	19:44 (WEA 12) 21:48	04:47 21:32	31	05:58 21:32	34	19:58 (WEA 12) 20:32 (WEA 11)	06:03 20:35	07:50 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	38	19:46 (WEA 12) 21:48	04:47 21:30	37	05:13 21:30	37	19:57 (WEA 12) 20:34 (WEA 11)	06:04 20:33	07:52 18:08	07:50 16:12	08:30 15:58
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	37	19:46 (WEA 12) 21:48	04:47 21:29	38	05:15 21:29	38	19:56 (WEA 12) 20:34 (WEA 11)	06:06 20:31	07:54 18:06	07:52 16:11	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	36	19:47 (WEA 12) 21:48	04:48 21:27	39	05:16 21:27	39	19:55 (WEA 12) 20:34 (WEA 11)	06:08 20:28	07:56 18:04	07:54 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	33	19:49 (WEA 12) 21:48	04:48 21:26	41	05:18 21:26	41	19:54 (WEA 12) 20:35 (WEA 11)	06:10 20:26	07:58 18:02	07:56 16:09	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	39	19:51 (WEA 12) 21:48	04:48 21:24	41	05:19 21:24	41	19:53 (WEA 12) 20:34 (WEA 11)	06:11 20:24	07:59 18:00	07:57 16:08	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	28	19:55 (WEA 12) 21:48	04:49 21:23	42	05:21 21:23	42	19:53 (WEA 12) 20:35 (WEA 11)	06:13 20:22	08:00 18:05	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	19	20:06 (WEA 11) 21:48	04:49 21:21	42	05:22 21:21	43	19:52 (WEA 12) 20:35 (WEA 11)	06:15 20:19	08:01 18:06	08:01 16:06	08:31 16:02
28	08:08 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	15	20:07 (WEA 11) 21:48	04:50 21:20	43	05:24 21:20	43	19:52 (WEA 12) 20:35 (WEA 11)	06:17 20:17	08:02 18:06	08:02 16:05	08:31 16:03
29	08:07 16:52	07:07 17:51	06:00 18:43	05:48 20:39	04:58 21:29	13	20:08 (WEA 11) 21:48	04:50 21:18	43	05:26 21:18	43	19:52 (WEA 12) 20:35 (WEA 11)	06:18 20:15	08:03 18:07	08:03 16:04	08:32 16:04
30	08:05 16:54	07:05 17:53	06:00 18:44	05:46 20:40	04:57 21:30	11	20:10 (WEA 11) 21:48	04:51 21:16	43	05:27 21:16	43	19:52 (WEA 12) 20:35 (WEA 11)	06:20 20:12	08:04 18:09	08:04 16:03	08:32 16:05
31	08:04 16:55	07:04 17:54	06:00 18:45	05:45 20:41	04:56 21:32	2	20:13 (WEA 11) 21:48	04:51 21:15	43	05:29 21:15	43	19:51 (WEA 12) 20:34 (WEA 11)	06:22 20:10	08:05 18:10	08:05 16:04	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510		458		382	329	261	236	
astr.max.mögl.Beschattung				26		975		600		417		326	299	211	186	

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BX - Hauptstraße 21

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember				
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44		04:55 21:33	19:57 (WEA 12) 20:26 (WEA 11)	04:51 21:47	05:30 21:13	40	19:57 (WEA 12) 20:37 (WEA 11)	06:24 18:55	07:16 16:45	08:07 16:02	
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	8	19:57 (WEA 12) 20:05 (WEA 12)	04:54 21:34	20:00 (WEA 12) 21:11	05:32 21:11	39	19:56 (WEA 12) 20:35 (WEA 11)	06:25 20:05	07:18 18:52	08:08 16:01	
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	14	19:54 (WEA 12) 19:51 (WEA 12)	04:53 21:35	20:12 (WEA 11) 20:13 (WEA 11)	05:34 05:35	37	19:57 (WEA 12) 20:34 (WEA 11)	06:27 20:03	07:19 18:50	08:10 16:01	
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	18	19:51 (WEA 12) 20:09 (WEA 12)	04:53 21:36	20:13 (WEA 11) 20:25 (WEA 11)	05:35 21:46		19:57 (WEA 12) 20:31 (WEA 11)	06:29 20:00	07:21 18:48	08:11 16:00	
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	21	19:50 (WEA 12) 20:11 (WEA 12)	04:52 21:37	20:14 (WEA 11) 20:23 (WEA 11)	05:37 21:46	25	19:58 (WEA 12) 20:23 (WEA 12)	06:30 19:58	07:23 18:45	08:13 15:59	
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	23	19:49 (WEA 12) 20:12 (WEA 12)	04:51 21:38	20:16 (WEA 11) 20:23 (WEA 11)	05:39 21:45	5	19:58 (WEA 12) 20:22 (WEA 11)	06:32 21:04	07:25 18:43	08:14 15:59	
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	25	19:48 (WEA 12) 20:13 (WEA 12)	04:50 21:39	20:18 (WEA 11) 20:20 (WEA 11)	05:40 21:44	8	19:59 (WEA 12) 20:22 (WEA 11)	06:34 21:02	07:26 18:41	08:15 15:58	
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	26	19:47 (WEA 12) 20:13 (WEA 12)	04:50 21:40	20:21 (WEA 11) 20:32 (WEA 11)	05:42 21:44	11	20:00 (WEA 12) 20:33 (WEA 11)	06:36 21:00	07:28 18:38	08:17 15:58	
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	36	19:46 (WEA 12) 20:22 (WEA 11)	04:49 21:41	20:01 (WEA 11) 20:33 (WEA 11)	05:48 21:43	13	19:59 (WEA 12) 20:18 (WEA 12)	06:37 19:48	07:30 18:36	08:18 15:58	
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	37	19:47 (WEA 12) 20:24 (WEA 11)	04:49 21:42	20:02 (WEA 11) 20:07 (WEA 12)	05:49 21:47	14	20:20 (WEA 11) 20:34 (WEA 11)	05:45 20:56	07:32 18:33	08:19 15:57	
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	39	19:46 (WEA 12) 20:25 (WEA 11)	04:48 21:43	20:04 (WEA 12) 20:34 (WEA 11)	05:01 21:41	21	20:07 (WEA 12) 20:37 (WEA 11)	05:47 20:54	07:32 18:31	08:20 15:57	
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	41	19:45 (WEA 12) 20:26 (WEA 11)	04:48 21:44	20:05 (WEA 12) 20:35 (WEA 11)	05:02 21:40	27	20:05 (WEA 12) 20:35 (WEA 11)	05:49 20:52	07:34 18:29	08:21 16:25	
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	41	19:46 (WEA 12) 20:27 (WEA 11)	04:48 21:44	20:06 (WEA 12) 20:36 (WEA 11)	05:03 21:40	32	20:03 (WEA 12) 20:36 (WEA 11)	05:51 20:50	07:36 18:26	08:22 15:57	
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	42	19:45 (WEA 12) 20:27 (WEA 11)	04:47 21:45	20:04 (WEA 12) 20:36 (WEA 11)	05:04 21:45	34	20:02 (WEA 12) 20:36 (WEA 11)	05:52 20:48	07:39 18:24	08:23 15:57	
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	42	19:46 (WEA 12) 20:28 (WEA 11)	04:47 21:45	20:01 (WEA 12) 20:37 (WEA 11)	05:05 21:37	36	20:01 (WEA 12) 20:37 (WEA 11)	05:54 20:46	07:41 18:22	08:24 15:57	
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	43	19:45 (WEA 12) 20:28 (WEA 11)	04:47 21:46	20:00 (WEA 12) 20:37 (WEA 11)	05:06 21:36	37	20:00 (WEA 12) 20:37 (WEA 11)	05:56 20:44	07:43 18:20	08:25 15:57	
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	43	19:46 (WEA 12) 20:29 (WEA 11)	04:47 21:47	20:00 (WEA 12) 20:38 (WEA 11)	05:08 21:35	38	20:00 (WEA 12) 20:38 (WEA 11)	05:57 20:42	07:43 18:17	08:26 15:57	
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	44	19:46 (WEA 12) 20:30 (WEA 11)	04:47 21:47	19:59 (WEA 12) 20:38 (WEA 11)	05:09 21:34	39	20:01 (WEA 12) 20:38 (WEA 11)	05:59 20:39	07:45 18:15	08:27 15:57	
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	43	19:46 (WEA 12) 20:29 (WEA 11)	04:47 21:47	19:59 (WEA 12) 20:39 (WEA 11)	05:11 21:33	40	20:01 (WEA 12) 20:39 (WEA 11)	06:01 20:37	07:48 18:13	08:28 15:58	
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	42	19:47 (WEA 12) 20:29 (WEA 11)	04:47 21:48	19:58 (WEA 12) 20:39 (WEA 11)	05:12 21:32	41	20:02 (WEA 12) 20:39 (WEA 11)	06:03 20:35	07:49 18:11	08:29 15:58	
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	43	19:47 (WEA 12) 20:30 (WEA 11)	04:47 21:48	19:58 (WEA 12) 20:40 (WEA 11)	05:13 21:30	42	20:03 (WEA 12) 20:40 (WEA 11)	06:04 20:33	07:50 18:08	08:30 15:58	
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	42	19:47 (WEA 12) 20:29 (WEA 11)	04:47 21:48	19:57 (WEA 12) 20:39 (WEA 11)	05:15 21:29	42	20:06 (WEA 12) 20:39 (WEA 11)	06:06 20:31	07:52 18:06	08:29 15:59	
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	41	19:48 (WEA 12) 20:29 (WEA 11)	04:48 21:48	19:57 (WEA 12) 20:39 (WEA 11)	05:16 21:27	42	20:08 (WEA 12) 20:39 (WEA 11)	06:08 20:28	07:54 18:04	08:30 15:59	
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	40	19:49 (WEA 12) 20:29 (WEA 11)	04:48 21:48	19:57 (WEA 12) 20:40 (WEA 11)	05:18 21:26	43	20:10 (WEA 12) 20:39 (WEA 11)	06:10 20:26	07:56 18:02	08:30 16:00	
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	39	19:50 (WEA 12) 20:29 (WEA 11)	04:48 21:48	19:56 (WEA 12) 20:39 (WEA 11)	05:19 21:24	43	20:11 (WEA 12) 20:39 (WEA 11)	06:11 20:24	07:57 18:00	08:31 16:01	
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	39	19:50 (WEA 12) 20:29 (WEA 11)	04:49 21:48	19:57 (WEA 12) 20:40 (WEA 11)	05:21 21:23	43	20:12 (WEA 12) 20:40 (WEA 11)	06:13 20:22	07:58 18:07	08:31 16:01	
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	38	19:51 (WEA 12) 20:29 (WEA 11)	04:49 21:48	19:56 (WEA 12) 20:39 (WEA 11)	05:22 21:21	43	20:15 (WEA 12) 20:39 (WEA 11)	06:15 20:19	07:59 18:05	08:31 16:02	
28	08:08 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	36	19:52 (WEA 12) 20:28 (WEA 11)	04:50 21:48	19:56 (WEA 12) 20:39 (WEA 11)	05:24 21:20	43	20:17 (WEA 12) 20:39 (WEA 11)	06:17 20:17	07:01 18:03	08:31 16:03	
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	35	19:53 (WEA 12) 20:28 (WEA 11)	04:50 21:48	19:56 (WEA 12) 20:39 (WEA 11)	05:26 21:18	43	20:18 (WEA 12) 20:39 (WEA 11)	06:18 20:20	07:04 18:04	08:32 16:04	
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	34	19:54 (WEA 12) 20:28 (WEA 11)	04:51 21:48	19:57 (WEA 12) 20:39 (WEA 11)	05:27 21:16	43	20:20 (WEA 12) 20:39 (WEA 11)	06:20 20:12	07:06 18:05	08:32 16:05	
31	08:04 16:55		06:54 19:48		04:56 21:32	29	19:56 (WEA 12) 20:27 (WEA 11)		19:56 (WEA 12) 20:37 (WEA 11)	05:29 21:15	41	20:22 (WEA 12) 20:37 (WEA 11)	06:22 20:10		08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492		507		510		458		382	329	261	236
astr.max.mögl.Beschattung					1044		87		864		276					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BY - Dorfanger 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 20:03 (WEA 12)
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 20:04 (WEA 12)
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 20:05 (WEA 12)
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 20:06 (WEA 12)
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 20:06 (WEA 12)
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 20:16 (WEA 11)
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 20:18 (WEA 11)
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 20:20 (WEA 11)
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 20:21 (WEA 11)
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 20:22 (WEA 11)
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 20:22 (WEA 11)
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 20:23 (WEA 11)
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 20:24 (WEA 11)
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 20:23 (WEA 11)
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 20:24 (WEA 11)
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 20:24 (WEA 11)
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 20:24 (WEA 11)
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 20:25 (WEA 11)
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 20:24 (WEA 11)
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 20:24 (WEA 11)
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 20:25 (WEA 11)
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 20:24 (WEA 11)
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	04:48 20:24 (WEA 11)
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 20:23 (WEA 11)
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	04:48 20:23 (WEA 11)
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 20:23 (WEA 11)
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 20:23 (WEA 11)
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 20:22 (WEA 11)
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 20:21 (WEA 11)
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	04:51 20:21 (WEA 11)
31	08:04 16:55		06:54 19:48		04:56 21:32	04:50 20:20 (WEA 11)
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung				26	1137	26

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: BY - Dorfanger 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Juli		[August		[September		[Oktober		[November		[Dezember	
1	04:51		05:30		19:48 (WEA 12)	06:24	07:16		07:13		08:07	
	21:47		21:13	46	20:34 (WEA 11)	20:08	18:55		16:45		16:02	
2	04:52		05:32		19:47 (WEA 12)	06:25	07:18		07:15		08:08	
	21:47		21:11	46	20:33 (WEA 11)	20:05	18:52		16:43		16:01	
3	04:53		05:34		19:48 (WEA 12)	06:27	07:19		07:17		08:10	
	21:47		21:10	44	20:32 (WEA 11)	20:03	18:50		16:42		16:01	
4	04:54		05:35		19:48 (WEA 12)	06:29	07:21		07:19		08:11	
	21:46		21:08	43	20:31 (WEA 11)	20:01	18:48		16:40		16:00	
5	04:55		05:37		19:48 (WEA 12)	06:30	07:23		07:21		08:13	
	21:46		21:06	42	20:30 (WEA 11)	19:58	18:45		16:38		15:59	
6	04:55		05:39		19:48 (WEA 12)	06:32	07:25		07:23		08:14	
	21:45		21:04	39	20:27 (WEA 11)	19:56	18:43		16:36		15:59	
7	04:56		05:40		19:49 (WEA 12)	06:34	07:26		07:24		08:15	
	21:44		21:02	31	20:23 (WEA 11)	19:53	18:41		16:34		15:58	
8	04:57		05:42		19:49 (WEA 12)	06:36	07:28		07:26		08:17	
	21:44		21:00	27	20:16 (WEA 12)	19:51	18:38		16:32		15:58	
9	04:58		05:44		19:50 (WEA 12)	06:37	07:30		07:28		08:18	
	21:43	2	20:22 (WEA 11)	25	20:15 (WEA 12)	19:48	18:36		16:31		15:58	
10	04:59		05:45		19:51 (WEA 12)	06:39	07:32		07:30		08:19	
	21:42	7	20:25 (WEA 11)	24	20:15 (WEA 12)	19:46	18:33		16:29		15:57	
11	05:01		05:47		19:51 (WEA 12)	06:41	07:34		07:32		08:20	
	21:41	11	20:27 (WEA 11)	22	20:13 (WEA 12)	19:44	18:31		16:27		15:57	
12	05:02		05:49		19:53 (WEA 12)	06:43	07:36		07:34		08:21	
	21:40	13	20:28 (WEA 11)	18	20:11 (WEA 12)	19:41	18:29		16:25		15:57	
13	05:03		05:51		19:54 (WEA 12)	06:44	07:37		07:36		08:22	
	21:40	15	20:29 (WEA 11)	15	20:09 (WEA 12)	19:39	18:26		16:24		15:57	
14	05:04		05:52		19:58 (WEA 12)	06:46	07:39		07:38		08:23	
	21:39	17	20:30 (WEA 11)	7	20:05 (WEA 12)	19:36	18:24		16:22		15:57	
15	05:05		05:54			06:48	07:41		07:39		08:24	
	21:37	24	20:30 (WEA 11)			19:34	18:22		16:21		15:57	
16	05:07		05:56			06:50	07:43		07:41		08:25	
	21:36	30	20:31 (WEA 11)			19:31	18:20		16:19		15:57	
17	05:08		05:57			06:51	07:45		07:43		08:26	
	21:35	35	20:32 (WEA 11)			19:29	18:17		16:18		15:57	
18	05:09		05:59			06:53	07:47		07:45		08:27	
	21:34	38	20:33 (WEA 11)			19:27	18:15		16:16		15:57	
19	05:11		06:01			06:55	07:48		07:47		08:28	
	21:33	40	20:33 (WEA 11)			19:24	18:13		16:15		15:58	
20	05:12		06:03			06:56	07:50		07:49		08:28	
	21:32	41	20:33 (WEA 11)			19:22	18:11		16:14		15:58	
21	05:13		06:04			06:58	07:52		07:50		08:29	
	21:30	42	20:34 (WEA 11)			19:19	18:08		16:12		15:58	
22	05:15		06:06			07:00	07:54		07:52		08:29	
	21:29	43	20:34 (WEA 11)			19:17	18:06		16:11		15:59	
23	05:16		06:08			07:02	07:56		07:54		08:30	
	21:27	44	20:34 (WEA 11)			19:14	18:04		16:10		15:59	
24	05:18		06:10			07:03	07:58		07:56		08:30	
	21:26	45	20:35 (WEA 11)			19:12	18:02		16:09		16:00	
25	05:19		06:11			07:05	07:00		07:57		08:31	
	21:24	46	20:35 (WEA 11)			19:09	17:00		16:08		16:01	
26	05:21		06:13			07:07	07:02		07:59		08:31	
	21:23	46	20:35 (WEA 11)			19:07	16:58		16:07		16:01	
27	05:22		06:15			07:09	07:03		08:01		08:31	
	21:21	46	20:35 (WEA 11)			19:05	16:56		16:06		16:02	
28	05:24		06:17			07:10	07:05		08:02		08:31	
	21:20	46	19:49 (WEA 11)			19:02	16:53		16:05		16:03	
29	05:26		06:18			07:12	07:07		08:04		08:32	
	21:18	47	20:35 (WEA 11)			19:00	16:51		16:04		16:04	
30	05:27		06:20			07:14	07:09		08:05		08:32	
	21:17	47	20:35 (WEA 11)			18:57	16:49		16:03		16:05	
31	05:29		06:22				07:11				08:32	
	21:15	46	20:34 (WEA 11)				16:47				16:06	
Sonnenscheinstunden	510		458			382	329		261		236	
astr.max.mögl.Beschattung	771		429									

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** BZ - Dorfanger 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	19:42 (WEA 12) 20:04 (WEA 12)	04:55 21:33	04:51 21:47	05:30 21:13	19:48 (WEA 12) 20:33 (WEA 11)	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	19:41 (WEA 12) 20:05 (WEA 12)	04:54 21:34	04:52 21:47	05:32 21:11	19:47 (WEA 12) 20:32 (WEA 11)	06:25 20:05	07:18 18:52	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	19:40 (WEA 12) 20:05 (WEA 12)	04:53 21:35	04:53 21:47	05:34 21:10	19:48 (WEA 12) 20:32 (WEA 11)	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:59	06:45 19:55	05:38 20:49	19:39 (WEA 12) 20:06 (WEA 12)	04:53 21:36	04:54 21:46	05:35 21:08	19:47 (WEA 12) 20:30 (WEA 11)	06:29 20:01	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	19:38 (WEA 12) 20:14 (WEA 11)	04:52 21:37	04:55 21:46	05:37 21:06	19:48 (WEA 12) 20:30 (WEA 11)	06:30 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	19:38 (WEA 12) 20:17 (WEA 11)	04:51 21:38	04:55 21:45	05:39 21:04	19:47 (WEA 12) 20:28 (WEA 11)	06:32 19:56	07:25 18:43	07:22 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	19:38 (WEA 12) 20:19 (WEA 11)	04:50 21:39	04:56 21:44	05:40 21:02	19:48 (WEA 12) 20:26 (WEA 11)	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	19:37 (WEA 12) 20:20 (WEA 11)	04:50 21:40	04:57 21:44	05:42 21:00	19:47 (WEA 12) 20:21 (WEA 11)	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	19:37 (WEA 12) 20:20 (WEA 11)	04:49 21:41	04:58 21:43	05:44 20:58	19:48 (WEA 12) 20:15 (WEA 12)	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	19:37 (WEA 12) 20:22 (WEA 11)	04:49 21:42	04:59 21:42	05:45 20:56	19:49 (WEA 12) 20:14 (WEA 12)	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	19:37 (WEA 12) 20:22 (WEA 11)	04:48 21:43	05:01 21:41	05:47 20:54	19:50 (WEA 12) 20:13 (WEA 12)	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	19:37 (WEA 12) 20:22 (WEA 11)	04:48 21:44	05:02 21:40	05:49 20:52	19:51 (WEA 12) 20:12 (WEA 12)	06:43 19:41	07:36 18:29	07:34 16:25	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	19:37 (WEA 12) 20:23 (WEA 11)	04:48 21:44	05:03 21:40	05:51 20:50	19:52 (WEA 12) 20:10 (WEA 12)	06:44 19:39	07:37 18:26	07:36 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	19:37 (WEA 12) 20:22 (WEA 11)	04:47 21:45	05:04 21:39	05:52 20:48	19:54 (WEA 12) 20:08 (WEA 12)	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	19:38 (WEA 12) 20:23 (WEA 11)	04:47 21:46	05:05 21:37	05:54 20:46	19:57 (WEA 12) 20:05 (WEA 12)	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	19:38 (WEA 12) 20:23 (WEA 11)	04:47 21:46	05:07 21:36	05:56 20:44	19:55 (WEA 12) 20:08 (WEA 12)	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	19:39 (WEA 12) 20:23 (WEA 11)	04:47 21:47	05:08 21:35	05:57 20:42	20:13 (WEA 11) 20:30 (WEA 11)	05:57 20:42	06:51 18:17	07:45 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	19:40 (WEA 12) 20:23 (WEA 11)	04:47 21:47	05:09 21:34	05:59 20:39	19:59 (WEA 12) 20:30 (WEA 11)	05:59 20:39	06:53 18:15	07:47 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	19:40 (WEA 12) 20:23 (WEA 11)	04:47 21:47	05:11 21:33	06:01 20:37	19:56 (WEA 12) 20:31 (WEA 11)	06:01 20:37	06:55 18:14	07:48 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	19:41 (WEA 12) 20:23 (WEA 11)	04:47 21:48	05:12 21:32	06:03 20:35	19:54 (WEA 12) 20:31 (WEA 11)	06:03 20:35	06:56 18:11	07:50 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	19:42 (WEA 12) 20:23 (WEA 11)	04:47 21:48	05:13 21:30	06:04 20:33	19:54 (WEA 12) 20:32 (WEA 11)	06:04 20:33	06:58 18:08	07:52 16:12	08:29 15:58
22	08:17 16:39	07:22 17:39	06:16 18:31	06:03 20:28	05:07 21:19	19:43 (WEA 12) 20:22 (WEA 11)	04:47 21:48	05:15 21:29	06:06 20:31	19:53 (WEA 12) 20:32 (WEA 11)	06:06 20:31	07:00 18:06	07:54 16:11	08:29 15:59
23	08:16 16:40	07:19 17:41	06:13 18:33	06:01 20:29	05:05 21:21	19:44 (WEA 12) 20:21 (WEA 11)	04:48 21:48	05:16 21:27	06:08 20:28	19:51 (WEA 12) 20:32 (WEA 11)	06:08 20:28	07:02 18:04	07:56 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	19:46 (WEA 12) 20:21 (WEA 11)	04:48 21:48	05:18 21:26	06:10 20:26	19:51 (WEA 12) 20:33 (WEA 11)	06:10 20:26	07:03 18:02	07:58 16:09	08:30 16:00
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	19:48 (WEA 12) 20:21 (WEA 11)	04:48 21:48	05:19 21:24	06:11 20:24	19:50 (WEA 12) 20:33 (WEA 11)	06:11 20:24	07:05 18:00	07:57 16:08	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	19:51 (WEA 12) 20:20 (WEA 11)	04:49 21:48	05:21 21:23	06:13 20:22	19:50 (WEA 12) 20:34 (WEA 11)	06:13 20:22	07:07 18:00	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	20:04 (WEA 11) 20:20 (WEA 11)	04:49 21:48	05:22 21:21	06:15 20:19	19:49 (WEA 12) 20:33 (WEA 11)	06:15 20:19	07:09 18:05	08:01 16:06	08:31 16:02
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	20:05 (WEA 11) 20:19 (WEA 11)	04:50 21:48	05:24 21:20	06:17 20:17	19:49 (WEA 12) 20:34 (WEA 11)	06:17 20:17	07:10 18:02	08:02 16:05	08:31 16:03
29	08:07 16:52	07:07 17:51	05:59 18:44	05:48 20:40	04:58 21:29	20:06 (WEA 11) 20:18 (WEA 11)	04:50 21:48	05:26 21:18	06:18 20:15	19:48 (WEA 12) 20:33 (WEA 11)	06:18 20:15	07:12 18:00	08:04 16:04	08:32 16:04
30	08:05 16:54	07:05 17:53	05:57 18:45	05:46 20:42	04:57 21:30	19:44 (WEA 12) 20:07 (WEA 11)	04:51 21:48	05:27 21:17	06:20 20:12	19:48 (WEA 12) 20:34 (WEA 11)	06:20 20:12	07:14 18:57	08:05 16:03	08:32 16:05
31	08:04 16:55	07:04 17:54	05:54 18:46	05:43 20:43	04:56 21:32	20:09 (WEA 11) 20:14 (WEA 11)	04:51 21:48	05:29 21:15	06:22 20:10	19:48 (WEA 12) 20:33 (WEA 11)	06:22 20:10	07:11 18:57	08:03 16:02	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	464	382	329	261	236	236
astr.max.mögl.Beschattung				43	1044			629						

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CA - Dorfanger 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	21 20:46	12 21:34
3	08:31 16:09	08:01 17:01	07:01 17:56	06:47 19:53	24 20:40	10 21:37
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	25 20:47	8 21:35
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	27 20:49	1 21:36
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	28 20:51	20:06 (WEA 11)
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	38 20:53	20:18 (WEA 11)
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	41 20:54	20:07 (WEA 11)
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	43 20:56	20:17 (WEA 11)
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	45 20:58	20:09 (WEA 11)
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	46 21:00	20:17 (WEA 11)
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	47 21:01	20:12 (WEA 11)
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	47 21:03	20:13 (WEA 11)
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	47 21:05	20:06 (WEA 11)
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	48 21:06	20:07 (WEA 11)
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	48 21:08	20:07 (WEA 11)
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	48 21:10	20:07 (WEA 11)
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	47 21:11	20:07 (WEA 11)
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	47 21:13	20:07 (WEA 11)
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	47 21:15	20:07 (WEA 11)
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	46 21:16	20:07 (WEA 11)
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	46 21:18	20:07 (WEA 11)
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	45 21:19	20:07 (WEA 11)
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	44 21:21	20:07 (WEA 11)
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	43 21:22	20:07 (WEA 11)
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	41 21:24	20:07 (WEA 11)
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	40 21:25	20:07 (WEA 11)
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	38 21:26	20:07 (WEA 11)
29	08:07 16:52		05:59 19:44	05:48 20:40	35 21:28	20:07 (WEA 11)
30	08:05 16:54		05:57 19:46	05:46 20:42	30 21:30	20:07 (WEA 11)
31	08:04 16:55		05:54 19:48	05:43 20:44	24 21:32	20:07 (WEA 11)
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung				30	1178	31

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CA - Dorfanger 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:47	05:30 21:13	19:46 (WEA 12) 20:33 (WEA 11)	06:24 20:08	07:16 18:55	08:07 16:02
2	04:52 21:47	05:32 21:11	19:46 (WEA 12) 20:32 (WEA 11)	06:25 20:05	07:18 18:53	08:08 16:01
3	04:53 21:47	05:34 21:10	19:46 (WEA 12) 20:32 (WEA 11)	06:27 20:03	07:19 18:50	08:10 16:01
4	04:54 21:46	05:35 21:08	19:46 (WEA 12) 20:30 (WEA 11)	06:29 20:01	07:21 18:48	08:11 16:00
5	04:55 21:46	05:37 21:06	19:46 (WEA 12) 20:29 (WEA 11)	06:30 19:58	07:23 18:45	08:13 15:59
6	04:55 21:45	05:39 21:04	19:46 (WEA 12) 20:27 (WEA 11)	06:32 19:56	07:25 18:43	08:14 15:59
7	04:56 21:44	05:40 21:02	19:47 (WEA 12) 20:24 (WEA 11)	06:34 19:53	07:27 18:41	08:15 15:58
8	04:57 21:44	05:42 21:00	19:47 (WEA 12) 20:15 (WEA 12)	06:36 19:51	07:28 18:38	08:17 15:58
9	04:58 21:43	20:18 (WEA 11) 20:23 (WEA 11)	05:44 20:58	19:48 (WEA 12) 20:14 (WEA 12)	06:37 19:48	07:30 18:36
10	04:59 21:42	20:16 (WEA 11) 20:25 (WEA 11)	05:45 20:56	19:49 (WEA 12) 20:14 (WEA 12)	06:39 19:46	07:32 18:33
11	05:01 21:41	20:15 (WEA 11) 20:26 (WEA 11)	05:47 20:54	19:49 (WEA 12) 20:12 (WEA 12)	06:41 19:44	07:34 18:31
12	05:02 21:40	20:14 (WEA 11) 20:27 (WEA 11)	05:49 20:52	19:51 (WEA 12) 20:11 (WEA 12)	06:43 19:41	07:36 18:29
13	05:03 21:40	20:13 (WEA 11) 20:28 (WEA 11)	05:51 20:50	19:52 (WEA 12) 20:08 (WEA 12)	06:44 19:39	07:37 18:26
14	05:04 21:39	20:12 (WEA 11) 20:29 (WEA 11)	05:52 20:48	19:55 (WEA 12) 20:06 (WEA 12)	06:46 19:36	07:39 18:24
15	05:05 21:37	19:57 (WEA 12) 20:30 (WEA 11)	05:54 20:46	19:52 (WEA 12) 19:34	06:48 18:22	07:41 18:21
16	05:07 21:36	19:55 (WEA 12) 20:30 (WEA 11)	05:56 20:44	19:50 (WEA 12) 19:31	06:50 18:20	07:43 18:19
17	05:08 21:35	19:54 (WEA 12) 20:32 (WEA 11)	05:58 20:42	19:51 (WEA 12) 19:29	06:51 18:17	07:45 18:18
18	05:09 21:34	19:53 (WEA 12) 20:32 (WEA 11)	05:59 20:39	19:52 (WEA 12) 19:27	06:53 18:15	07:47 18:16
19	05:11 21:33	19:52 (WEA 12) 20:32 (WEA 11)	06:01 20:37	19:53 (WEA 12) 19:24	06:55 18:13	07:48 18:15
20	05:12 21:32	19:50 (WEA 12) 20:33 (WEA 11)	06:03 20:35	19:54 (WEA 12) 19:22	06:56 18:11	07:50 18:14
21	05:13 21:30	19:50 (WEA 12) 20:34 (WEA 11)	06:04 20:33	19:55 (WEA 12) 19:19	06:58 18:08	07:52 18:12
22	05:15 21:29	19:49 (WEA 12) 20:34 (WEA 11)	06:06 20:31	19:56 (WEA 12) 19:17	07:00 18:06	07:54 18:11
23	05:16 21:27	19:48 (WEA 12) 20:33 (WEA 11)	06:08 20:28	19:57 (WEA 12) 19:14	07:02 18:04	07:56 18:10
24	05:18 21:26	19:48 (WEA 12) 20:34 (WEA 11)	06:10 20:26	19:58 (WEA 12) 19:12	07:03 18:02	07:58 18:09
25	05:19 21:24	19:48 (WEA 12) 20:34 (WEA 11)	06:11 20:24	19:59 (WEA 12) 19:09	07:05 17:00	07:57 18:08
26	05:21 21:23	19:48 (WEA 12) 20:35 (WEA 11)	06:13 20:22	19:59 (WEA 12) 19:07	07:07 16:58	07:59 18:07
27	05:22 21:21	19:47 (WEA 12) 20:34 (WEA 11)	06:15 20:19	19:59 (WEA 12) 19:05	07:09 16:56	08:01 18:06
28	05:24 21:20	19:47 (WEA 12) 20:35 (WEA 11)	06:17 20:17	19:59 (WEA 12) 19:02	07:10 16:53	08:02 18:05
29	05:26 21:18	19:46 (WEA 12) 20:34 (WEA 11)	06:18 20:15	19:59 (WEA 12) 19:00	07:12 16:51	08:04 18:04
30	05:27 21:17	19:47 (WEA 12) 20:34 (WEA 11)	06:20 20:12	19:59 (WEA 12) 18:57	07:14 16:49	08:05 18:03
31	05:29 21:15	19:46 (WEA 12) 20:33 (WEA 11)	06:22 20:10	19:59 (WEA 12) 18:57	07:16 16:47	08:07 18:06
Sonnenscheinstunden	510	458	451	382	329	261
astr.max.mögl.Beschattung	798					236

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CB - Dorfanger 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	21 20:46	15 21:34
3	08:31 16:09	08:01 17:01	07:01 17:56	06:47 19:53	24 20:40	14 21:37
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	26 20:38	12 21:36
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	28 20:36	10 21:36
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	29 20:35	7 21:37
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	39 20:32	1 21:38
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	43 20:30	20:17 (WEA 11)
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	44 20:28	20:18 (WEA 11)
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	46 20:26	20:19 (WEA 11)
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	47 20:24	20:20 (WEA 11)
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	48 20:22	20:21 (WEA 11)
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	49 20:20	20:22 (WEA 11)
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	50 20:18	20:23 (WEA 11)
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	49 20:16	20:24 (WEA 11)
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	49 20:14	20:25 (WEA 11)
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	50 20:12	20:26 (WEA 11)
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	50 20:10	20:27 (WEA 11)
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	49 20:08	20:28 (WEA 11)
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	48 20:06	20:29 (WEA 11)
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	48 20:04	20:30 (WEA 11)
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	47 20:02	20:31 (WEA 11)
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	46 20:00	20:32 (WEA 11)
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	45 20:00	20:33 (WEA 11)
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	44 20:00	20:34 (WEA 11)
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	43 20:00	20:35 (WEA 11)
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	42 20:00	20:36 (WEA 11)
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	40 20:00	20:37 (WEA 11)
29	08:07 16:52		06:59 19:44	05:48 19:44 (WEA 12)	37 20:00	20:38 (WEA 11)
30	08:05 16:54		06:57 19:46	05:46 19:42 (WEA 12)	33 20:00	20:39 (WEA 11)
31	08:04 16:55		06:54 19:48	05:44 20:00 (WEA 12)	28 20:00	20:40 (WEA 11)
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung				37	1261	59

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CB - Dorfanger 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	1. Juli	2. August	3. September	4. Oktober	5. November	6. Dezember
1	04:51 21:47	05:30 21:13	19:44 (WEA 12) 20:33 (WEA 11)	06:24 20:08	07:16 18:55	08:07 16:02
2	04:52 21:47	05:32 21:11	19:44 (WEA 12) 20:31 (WEA 11)	06:25 20:05	07:18 18:53	08:08 16:01
3	04:53 21:47	05:34 21:10	19:44 (WEA 12) 20:31 (WEA 11)	06:27 20:03	07:19 18:50	08:10 16:01
4	04:54 21:46	05:35 21:08	19:44 (WEA 12) 20:29 (WEA 11)	06:29 20:01	07:21 18:48	08:11 16:00
5	04:55 21:46	05:37 21:06	19:44 (WEA 12) 20:28 (WEA 11)	06:31 19:58	07:23 18:45	08:13 15:59
6	04:55 21:45	05:39 21:04	19:44 (WEA 12) 20:26 (WEA 11)	06:32 19:56	07:25 18:43	08:14 15:59
7	04:56 21:44	20:17 (WEA 11) 20:22 (WEA 11)	05:40 21:02	19:45 (WEA 12) 20:22 (WEA 11)	06:34 19:53	07:27 18:41
8	04:57 21:44	20:15 (WEA 11) 20:24 (WEA 11)	05:42 21:00	19:45 (WEA 12) 20:14 (WEA 12)	06:36 19:51	07:28 18:38
9	04:58 21:43	20:14 (WEA 11) 20:25 (WEA 11)	05:44 20:58	19:46 (WEA 12) 20:13 (WEA 12)	06:37 19:48	07:30 18:36
10	04:59 21:42	20:13 (WEA 11) 20:26 (WEA 11)	05:45 20:56	19:47 (WEA 12) 20:12 (WEA 12)	06:39 19:46	07:32 18:33
11	05:01 21:41	20:12 (WEA 11) 20:27 (WEA 11)	05:47 20:54	19:47 (WEA 12) 20:11 (WEA 12)	06:41 19:44	07:34 18:31
12	05:02 21:40	20:12 (WEA 11) 20:28 (WEA 11)	05:49 20:52	19:49 (WEA 12) 20:09 (WEA 12)	06:43 19:41	07:36 18:29
13	05:03 21:40	19:56 (WEA 12) 20:29 (WEA 11)	05:51 20:50	19:50 (WEA 12) 20:07 (WEA 12)	06:44 19:39	07:37 18:26
14	05:04 21:39	19:54 (WEA 12) 20:30 (WEA 11)	05:52 20:48	19:53 (WEA 12) 20:05 (WEA 12)	06:46 19:36	07:39 18:24
15	05:05 21:37	19:52 (WEA 12) 20:30 (WEA 11)	05:54 20:46	19:50 (WEA 12) 20:05 (WEA 12)	06:48 19:34	07:41 18:22
16	05:07 21:36	20:30 (WEA 11) 20:31 (WEA 11)	20:46 20:44	19:34 19:31	18:22 18:20	16:21 16:19
17	05:08 21:35	20:31 (WEA 11) 20:32 (WEA 11)	20:44 20:42	19:31 19:29	18:20 18:17	16:19 16:18
18	05:09 21:34	20:32 (WEA 11) 20:32 (WEA 11)	20:42 20:39	19:29 19:27	18:17 18:15	16:18 16:16
19	05:11 21:33	20:32 (WEA 11) 20:32 (WEA 11)	20:39 20:37	19:27 19:24	18:15 18:13	16:16 16:15
20	05:12 21:32	20:32 (WEA 11) 20:32 (WEA 11)	20:37 20:35	19:24 19:22	18:13 18:11	16:15 16:14
21	05:13 21:30	20:32 (WEA 11) 20:33 (WEA 11)	20:35 20:33	19:22 19:19	18:11 18:08	16:14 16:12
22	05:15 21:29	20:33 (WEA 11) 20:33 (WEA 11)	20:36 20:31	19:19 19:17	18:08 18:06	16:12 16:11
23	05:16 21:27	20:33 (WEA 11) 20:33 (WEA 11)	20:36 20:28	19:17 19:14	18:06 18:04	16:11 16:10
24	05:18 21:26	20:33 (WEA 11) 20:34 (WEA 11)	20:28 20:26	19:14 19:12	18:04 18:02	16:10 16:09
25	05:19 21:24	20:34 (WEA 11) 20:34 (WEA 11)	20:26 20:24	19:12 19:09	18:02 17:00	16:09 16:08
26	05:21 21:23	20:34 (WEA 11) 20:34 (WEA 11)	20:24 20:22	19:09 19:07	17:00 16:58	16:08 16:07
27	05:22 21:21	20:34 (WEA 11) 20:34 (WEA 11)	20:22 20:19	19:07 19:05	16:58 16:56	16:07 16:06
28	05:24 21:20	20:34 (WEA 11) 20:34 (WEA 11)	20:19 20:17	19:05 19:02	16:56 16:53	16:06 16:05
29	05:26 21:18	20:34 (WEA 11) 20:34 (WEA 11)	20:17 20:15	19:02 19:00	16:53 16:51	16:05 16:04
30	05:27 21:17	20:34 (WEA 11) 20:34 (WEA 11)	20:15 20:12	19:00 18:57	16:51 16:49	16:04 16:03
31	05:29 21:15	20:34 (WEA 11) 20:33 (WEA 11)	20:12 20:10	18:57 18:55	16:49 16:47	16:03 16:02
Sonnenscheinstunden	510	458	461	382	329	261
astr.max.mögl.Beschattung	901	461	461	382	329	261

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CC - Dorfanger 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember			
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	4	19:55 (WEA 12) 04:55 20:26 (WEA 11) 21:47	36	20:26 (WEA 11) 21:47 20:21 (WEA 11) 05:32	43	20:35 (WEA 11) 20:08 19:51 (WEA 12) 06:25	07:13 18:55	08:07 16:02		
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	13	19:51 (WEA 12) 04:54 20:04 (WEA 12) 21:34	32	20:25 (WEA 11) 21:47 19:53 (WEA 12) 04:53	5	20:21 (WEA 11) 21:11 20:19 (WEA 12) 05:34	43	20:34 (WEA 11) 20:05 19:52 (WEA 12) 06:27	07:15 18:53	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	18	19:48 (WEA 12) 21:35 19:46 (WEA 12) 21:35	29	20:26 (WEA 11) 21:47 19:55 (WEA 12) 04:54	7	20:26 (WEA 11) 21:10 20:18 (WEA 11) 05:35	41	20:33 (WEA 11) 20:03 19:52 (WEA 12) 06:29	07:17 18:50	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	21	19:46 (WEA 12) 21:36 19:45 (WEA 12) 21:36	23	20:25 (WEA 11) 21:46 20:09 (WEA 11) 21:45	10	20:28 (WEA 11) 21:08 20:18 (WEA 11) 05:37	38	20:30 (WEA 11) 20:01 19:53 (WEA 12) 06:30	07:19 18:48	08:13 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	23	19:45 (WEA 12) 21:37 19:44 (WEA 12) 21:37	15	20:24 (WEA 11) 21:46 20:11 (WEA 12) 21:45	11	20:29 (WEA 11) 21:06 20:17 (WEA 11) 05:39	28	20:21 (WEA 12) 21:06 19:53 (WEA 12) 06:32	07:21 18:45	08:14 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	26	19:44 (WEA 12) 21:38 19:43 (WEA 12) 21:38	13	20:24 (WEA 11) 21:45 20:11 (WEA 12) 21:44	13	20:30 (WEA 11) 21:04 20:17 (WEA 12) 05:40	26	20:19 (WEA 12) 21:04 19:54 (WEA 12) 06:34	07:23 18:43	08:15 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	27	19:43 (WEA 12) 21:39 20:10 (WEA 12) 21:39	12	20:23 (WEA 11) 21:44 20:13 (WEA 12) 21:43	14	20:31 (WEA 11) 21:02 20:03 (WEA 12) 05:42	25	20:19 (WEA 12) 21:02 19:55 (WEA 12) 06:36	07:24 18:41	08:16 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	33	19:42 (WEA 12) 21:40 20:17 (WEA 11) 21:40	10	20:23 (WEA 11) 21:44 20:14 (WEA 11) 21:43	22	20:32 (WEA 11) 21:00 20:01 (WEA 12) 05:44	22	20:17 (WEA 12) 21:00 19:56 (WEA 12) 06:37	07:26 18:38	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	39	19:41 (WEA 12) 21:41 20:20 (WEA 11) 21:41	9	20:23 (WEA 11) 21:43 20:15 (WEA 11) 21:42	27	20:33 (WEA 11) 20:58 20:00 (WEA 12) 05:45	20	20:16 (WEA 12) 21:04 19:58 (WEA 12) 06:39	07:30 18:36	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	41	19:42 (WEA 12) 21:42 19:41 (WEA 12) 21:42	6	20:21 (WEA 11) 21:42 20:18 (WEA 11) 21:41	30	20:34 (WEA 11) 20:56 19:59 (WEA 12) 05:47	17	20:15 (WEA 12) 21:04 20:00 (WEA 12) 06:41	07:32 18:33	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	43	19:41 (WEA 12) 21:43 19:41 (WEA 12) 21:43	1	20:19 (WEA 11) 21:41 20:19 (WEA 12) 21:41	34	20:34 (WEA 11) 20:54 19:58 (WEA 12) 05:49	11	20:11 (WEA 12) 21:04 19:54 (WEA 12) 06:43	07:34 18:31	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	44	19:41 (WEA 12) 21:44 20:25 (WEA 11) 21:44	37	20:19 (WEA 11) 21:42 20:15 (WEA 12) 21:41	38	20:35 (WEA 11) 20:52 19:57 (WEA 12) 05:51	19	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:36 18:26	08:21 15:57
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17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	47	19:41 (WEA 12) 21:47 20:28 (WEA 11) 21:47	41	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	42	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	14	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:45 18:24	08:26 15:57
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19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	47	19:41 (WEA 12) 21:47 20:28 (WEA 11) 21:47	44	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	45	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	12	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:49 18:24	08:28 15:57
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	46	19:42 (WEA 12) 21:47 20:28 (WEA 11) 21:48	45	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	45	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	11	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:50 18:24	08:29 15:57
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	47	19:42 (WEA 12) 21:48 20:29 (WEA 11) 21:48	45	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	46	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	10	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:52 18:24	08:30 15:57
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	47	19:42 (WEA 12) 21:47 20:29 (WEA 12) 21:48	45	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	46	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	9	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:54 18:24	08:31 15:57
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	46	19:43 (WEA 12) 21:48 20:29 (WEA 12) 21:48	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	46	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	8	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:56 18:24	08:32 15:57
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	45	19:43 (WEA 12) 21:48 20:29 (WEA 11) 21:48	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	7	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:58 18:24	08:33 15:57
25	08:13 16:44	07:15 17:44	06:09 18:37	05:56 20:33	05:03 21:24	44	19:44 (WEA 12) 21:48 20:29 (WEA 12) 21:48	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	6	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	07:59 18:24	08:34 15:57
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	43	19:45 (WEA 12) 21:49 20:29 (WEA 12) 21:49	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	5	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	08:01 18:24	08:35 15:57
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	42	19:46 (WEA 12) 21:49 20:29 (WEA 12) 21:49	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	4	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	08:02 18:24	08:36 15:57
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	42	19:46 (WEA 12) 21:49 20:29 (WEA 11) 21:48	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	46	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	3	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	08:04 18:24	08:37 15:57
29	08:07 16:52	07:07 17:55	05:59 18:44	05:48 20:40	04:58 21:29	40	19:47 (WEA 12) 21:49 20:29 (WEA 12) 21:49	46	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	46	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	2	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	08:05 18:24	08:38 15:57
30	08:05 16:54	07:05 17:57	05:57 18:45	05:46 20:42	04:57 21:30	39	19:48 (WEA 12) 21:48 20:29 (WEA 12) 21:48	45	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54	1	20:10 (WEA 12) 21:00 19:56 (WEA 12) 06:44	08:06 18:24	08:39 15:57
31	08:04 16:55	07:04 17:58	05:54 18:48	05:45 20:46	04:56 21:32	38	19:49 (WEA 12) 21:48 20:29 (WEA 11) 21:48	45	20:27 (WEA 11) 21:46 20:23 (WEA 12) 21:45	47	20:36 (WEA 11) 20:54 19:55 (WEA 12) 05:54		08:07 18:24	08:40 15:57	
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236			
astr.max.mögl.Beschattung					1174	186	1052	314							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CD - Dorfanger 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	19:52 (WEA 12) 04:51 20:32 (WEA 11) 21:47	20:05 (WEA 12) 05:30 20:35 (WEA 11) 21:13	20:00 (WEA 12) 06:24 20:36 (WEA 11) 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34	19:53 (WEA 12) 04:52 20:32 (WEA 11) 21:47	20:05 (WEA 12) 05:32 20:36 (WEA 11) 21:11	20:00 (WEA 12) 06:25 20:32 (WEA 11) 20:05	07:18 18:53	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35	19:54 (WEA 12) 04:53 20:33 (WEA 11) 21:47	20:04 (WEA 12) 05:34 20:36 (WEA 11) 21:10	20:01 (WEA 12) 06:27 20:03 (WEA 12) 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	19:54 (WEA 12) 04:54 20:32 (WEA 11) 21:46	20:03 (WEA 12) 05:35 20:37 (WEA 11) 21:08	20:01 (WEA 12) 06:29 20:25 (WEA 12) 20:01	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	19:55 (WEA 12) 04:55 20:31 (WEA 11) 21:46	20:03 (WEA 12) 05:37 20:37 (WEA 11) 21:06	20:02 (WEA 12) 06:30 20:24 (WEA 12) 20:02	07:23 18:45	07:21 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	19:55 (WEA 12) 04:51 20:32 (WEA 11) 21:45	20:03 (WEA 12) 05:39 20:38 (WEA 11) 21:04	20:03 (WEA 12) 06:32 20:22 (WEA 12) 20:05	07:25 18:43	07:23 16:36	08:14 15:59
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29	08:07 16:52	07:07 17:52	05:59 18:44	05:48 20:40	04:58 21:29	04:50 21:48	20:19 (WEA 12) 05:26 20:30 (WEA 11) 21:18	20:00 (WEA 12) 06:18 20:43 (WEA 11) 20:15	20:09 (WEA 12) 07:12 20:00 (WEA 12) 06:18	07:59 18:00	07:58 16:04	08:38 16:04
30	08:05 16:54	07:05 17:54	05:57 18:45	05:46 20:42	04:57 21:30	04:51 21:48	20:18 (WEA 12) 05:27 20:30 (WEA 11) 21:17	20:00 (WEA 12) 06:20 20:43 (WEA 11) 20:12	20:09 (WEA 12) 07:14 20:00 (WEA 12) 06:20	07:59 18:00	07:58 16:03	08:39 16:05
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Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung					1016	645	1241	180				

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzler-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzler-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzler-Goldenitz (rev.01) **Schattenrezeptor:** CE - Dorfanger 10

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	19:54 (WEA 12) 04:51 20:35 (WEA 11) 21:47	20:05 (WEA 12) 05:30 20:39 (WEA 11) 21:13	20:04 (WEA 12) 06:24 20:29 (WEA 12) 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34	19:54 (WEA 12) 04:52 20:35 (WEA 11) 21:47	20:05 (WEA 12) 05:32 20:40 (WEA 11) 21:11	20:04 (WEA 12) 06:25 20:28 (WEA 12) 20:05	07:18 18:53	07:15 16:43	08:08 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35	19:55 (WEA 12) 04:53 20:36 (WEA 11) 21:47	20:04 (WEA 12) 05:34 20:39 (WEA 11) 21:10	20:06 (WEA 12) 06:27 20:27 (WEA 12) 20:03	07:19 18:50	07:17 16:42	08:10 16:01
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28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	20:05 (WEA 12) 05:24 20:36 (WEA 11) 21:20	20:02 (WEA 12) 06:17 20:42 (WEA 11) 20:17	07:10 19:02	07:05 16:53	08:02 16:05	08:31 16:03
29	08:07 16:52	07:07 17:51	05:59 18:44	04:58 20:40	04:58 21:29	04:50 21:48	20:05 (WEA 12) 05:26 20:38 (WEA 11) 21:18	20:02 (WEA 12) 06:18 20:43 (WEA 11) 20:15	07:12 19:00	07:07 16:51	08:04 16:04	08:32 16:04
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Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung					940	987	1258	117				

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CF - Dorfanger 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni		[Juli		[August		[September	[Oktober	[November	[Dezember		
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	[16:08	[16:59	[17:54	[19:51	[20:46		[21:34	42	20:38 (WEA 11)	[21:47	38	20:44 (WEA 11)	[21:11	19	20:29 (WEA 12)	[18:53	[16:43	[16:01
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	[16:20	[17:17	[18:11	[20:08	[21:01	19	20:19 (WEA 12)	[21:43	38	20:39 (WEA 11)	[21:41	42	20:47 (WEA 11)	[20:54	19:44	[18:31	[16:27	[15:57
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31	[08:04]		[06:54]		[04:56		[19:56 (WE											

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CG - Dorfanger 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August		September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44		04:55	20:00 (WEA 12)	04:51	20:08 (WEA 12)	05:30	20:19 (WEA 12)	06:24	07:16	07:13	08:07
	16:07	16:57	17:52	19:50	20:44		21:33	42	20:42 (WEA 11)	21:47	40	20:48 (WEA 11)	21:13	12	20:31 (WEA 12)	16:02
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15	08:24	07:36	06:33	06:19	05:18	20:03 (WEA 12)	04:47	20:05 (WEA 12)	05:05	20:08 (WEA 12)	05:54	20:48	07:41	07:39	08:24	
	16:26	17:25	18:19	20:15	21:08	22	20:25 (WEA 12)	21:45	39	20:44 (WEA 11)	21:37	43	20:51 (WEA 11)	20:46	19:34	18:22
16	08:23	07:34	06:30	06:16	05:16	20:01 (WEA 12)	04:47	20:06 (WEA 12)	05:07	20:08 (WEA 12)	05:56	20:50	07:43	07:41	08:25	
	16:28	17:27	18:20	20:17	21:10	28	20:30 (WEA 11)	21:46	38	20:44 (WEA 11)	21:36	42	20:50 (WEA 11)	20:44	19:31	18:20
17	08:22	07:32	06:28	06:14	05:14	20:01 (WEA 12)	04:47	20:06 (WEA 12)	05:08	20:09 (WEA 12)	05:58	20:51	07:45	07:43	08:26	
	16:30	17:29	18:22	20:19	21:11	33	20:34 (WEA 11)	21:47	38	20:44 (WEA 11)	21:35	42	20:51 (WEA 11)	20:42	19:29	18:17
18	08:21	07:30	06:26	06:12	05:13	20:01 (WEA 12)	04:47	20:06 (WEA 12)	05:09	20:09 (WEA 12)	05:59	20:53	07:47	07:45	08:27	
	16:31	17:31	18:24	20:20	21:13	35	20:36 (WEA 11)	21:47	38	20:44 (WEA 11)	21:34	42	20:51 (WEA 11)	20:39	19:27	18:15
19	08:20	07:28	06:23	06:09	05:11	20:00 (WEA 12)	04:47	20:06 (WEA 12)	05:11	20:09 (WEA 12)	06:01	20:55	07:48	07:47	08:28	
	16:33	17:33	18:26	20:22	21:15	37	20:37 (WEA 11)	21:47	38	20:44 (WEA 11)	21:33	41	20:50 (WEA 11)	20:37	19:24	18:13
20	08:19	07:26	06:21	06:07	05:10	20:00 (WEA 12)	04:47	20:07 (WEA 12)	05:12	20:09 (WEA 12)	06:03	20:56	07:50	07:49	08:28	
	16:35	17:35	18:28	20:24	21:16	38	20:38 (WEA 11)	21:48	37	20:44 (WEA 11)	21:32	41	20:50 (WEA 11)	20:35	19:22	18:11
21	08:18	07:24	06:18	06:05	05:08	20:00 (WEA 12)	04:47	20:07 (WEA 12)	05:13	20:10 (WEA 12)	06:04	20:58	07:52	07:50	08:29	
	16:37	17:37	18:30	20:26	21:18	39	20:39 (WEA 11)	21:48	37	20:44 (WEA 11)	21:30	40	20:50 (WEA 11)	20:33	19:19	18:08
22	08:17	07:21	06:16	06:03	05:07	19:59 (WEA 12)	04:47	20:08 (WEA 12)	05:15	20:09 (WEA 12)	06:06	20:59	07:54	07:52	08:29	
	16:39	17:39	18:31	20:28	21:19	40	20:39 (WEA 11)	21:48	37	20:45 (WEA 11)	21:29	40	20:49 (WEA 11)	20:31	19:17	18:06
23	08:16	07:19	06:14	06:01	05:05	19:59 (WEA 12)	04:48	20:07 (WEA 12)	05:16	20:08 (WEA 12)	06:08	20:52	07:56	07:54	08:30	
	16:40	17:41	18:33	20:29	21:21	41	20:40 (WEA 11)	21:48	38	20:45 (WEA 11)	21:27	39	20:48 (WEA 11)	20:28	19:14	18:04
24	08:14	07:17	06:11	05:58	05:04	19:59 (WEA 12)	04:48	20:07 (WEA 12)	05:18	20:10 (WEA 12)	06:10	20:53	07:58	07:56	08:30	
	16:42	17:43	18:35	20:31	21:22	41	20:40 (WEA 11)	21:48	38	20:45 (WEA 11)	21:26	38	20:48 (WEA 11)	20:26	19:12	18:02
25	08:13	07:15	06:09	05:56	05:03	19:59 (WEA 12)	04:48	20:08 (WEA 12)	05:19	20:11 (WEA 12)	06:11	20:55	07:59	07:57	08:31	
	16:44	17:44	18:37	20:33	21:24	42	20:41 (WEA 11)	21:48	38	20:46 (WEA 11)	21:24	36	20:47 (WEA 11)	20:24	19:09	17:00
26	08:11	07:13	06:06	05:54	05:02	19:59 (WEA 12)	04:49	20:08 (WEA 12)	05:21	20:12 (WEA 12)	06:13	20:57	07:59	07:59	08:31	
	16:46	17:46	18:39	20:35	21:25	42	20:41 (WEA 11)	21:48	38	20:46 (WEA 11)	21:23	34	20:46 (WEA 11)	20:22	19:07	16:58
27	08:10	07:10	06:04	05:52	05:00	20:00 (WEA 12)	04:49	20:09 (WEA 12)	05:22	20:12 (WEA 12)	06:15	20:59	07:59	07:59	08:31	
	16:48	17:48	18:40	20:37	21:26	42	20:42 (WEA 11)	21:48	39	20:47 (WEA 11)	21:21	31	20:43 (WEA 11)	20:19	19:05	16:56
28	08:09	07:08	06:01	05:50	04:59	20:00 (WEA 12)	04:50	20:08 (WEA 12)	05:24	20:13 (WEA 12)	06:17	20:59	07:59	07:59	08:31	
	16:50	17:50	18:42	20:38	21:28	42	20:42 (WEA 11)	21:48	39	20:47 (WEA 11)	21:20	24	20:37 (WEA 12)	20:17	19:02	16:53
29	08:07		06:59	05:48	04:58	20:00 (WEA 12)	04:50	20:08 (WEA 12)	05:26	20:14 (WEA 12)	06:18	20:59	07:59	07:59	08:31	
	16:52		19:44	20:40	21:29	42	20:42 (WEA 11)	21:48	39	20:47 (WEA 11)	21:18	21	20:35 (WEA 12)	20:15	19:00	16:51
30	08:05		06:57	05:46	04:57	20:00 (WEA 12)	04:51	20:08 (WEA 12)	05:27	20:15 (WEA 12)	06:20	20:59	07:59	07:59	08:31	
	16:54		19:46	20:42	21:30	42	20:42 (WEA 11)	21:48	39	20:47 (WEA 11)	21:16	20	20:35 (WEA 12)	20:12	18:57	16:49
31	08:04		06:54		04:56	20:00 (WEA 12)			05:29	20:16 (WEA 12)	06:22				07:11	
	16:56		19:48		21:32	42	20:42 (WEA 11)		21:15	17	20:33 (WEA 12)	20:10			16:47	
Sonnenscheinstunden	252	274	367	419	492		507		510		458		382	329	261	236
astr.max.mögl.Beschattung					711		1179		1168		18					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CH - Dorfanger 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August		September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44		04:55	20:01 (WEA 12)	04:51	20:09 (WEA 12)	05:30	20:22 (WEA 12)	06:24	07:16	07:13	08:07
	16:07	16:57	17:52	19:50	20:44		21:33	42	20:43 (WEA 11)	21:47	40	20:49 (WEA 11)	21:13	20:08	18:55	16:45
2	08:31	08:01	07:03	06:49	05:42		04:54		20:01 (WEA 12)	04:52		20:09 (WEA 12)	05:32	06:25	07:18	07:15
	16:08	16:59	17:54	19:51	20:46		21:34	42	20:43 (WEA 11)	21:47	41	20:50 (WEA 11)	21:11	20:05	18:53	16:43
3	08:31	07:59	07:01	06:47	05:40		04:53		20:02 (WEA 12)	04:53		20:09 (WEA 12)	05:34	06:27	07:19	07:17
	16:09	17:01	17:56	19:53	20:47		21:35	42	20:44 (WEA 11)	21:47	40	20:49 (WEA 11)	21:10	20:03	18:50	16:42
4	08:31	07:57	06:59	06:45	05:38		04:53		20:02 (WEA 12)	04:54		20:09 (WEA 12)	05:35	06:29	07:21	07:19
	16:10	17:03	17:59	19:55	20:49		21:36	42	20:44 (WEA 11)	21:46	41	20:50 (WEA 11)	21:08	20:01	18:48	16:40
5	08:31	07:55	06:57	06:42	05:36		04:52		20:03 (WEA 12)	04:55		20:09 (WEA 12)	05:37	06:31	07:23	07:21
	16:12	17:05	18:00	19:57	20:51		21:37	42	20:45 (WEA 11)	21:46	41	20:50 (WEA 11)	21:06	19:58	18:45	16:38
6	08:30	07:54	06:54	06:40	05:34		04:51		20:03 (WEA 12)	04:55		20:09 (WEA 12)	05:39	06:32	07:25	07:22
	16:13	17:07	18:02	19:59	20:53		21:38	41	20:44 (WEA 11)	21:45	42	20:51 (WEA 11)	21:04	19:56	18:43	16:36
7	08:30	07:52	06:52	06:37	05:32		04:50		20:03 (WEA 12)	04:56		20:10 (WEA 12)	05:40	06:34	07:26	07:24
	16:14	17:09	18:04	20:00	20:54		21:39	41	20:44 (WEA 11)	21:44	41	20:51 (WEA 11)	21:02	19:53	18:41	16:34
8	08:29	07:50	06:49	06:35	05:30		04:50		20:04 (WEA 12)	04:57		20:10 (WEA 12)	05:42	06:36	07:28	07:26
	16:16	17:11	18:05	20:02	20:56		21:40	40	20:44 (WEA 11)	21:44	41	20:51 (WEA 11)	21:00	19:51	18:38	16:32
9	08:29	07:48	06:47	06:33	05:28		04:49		20:04 (WEA 12)	04:58		20:10 (WEA 12)	05:44	06:37	07:30	07:28
	16:17	17:13	18:07	20:04	20:58		21:41	41	20:45 (WEA 11)	21:43	41	20:51 (WEA 11)	20:58	19:48	18:36	16:31
10	08:28	07:46	06:45	06:30	05:26		04:49		20:04 (WEA 12)	04:59		20:10 (WEA 12)	05:45	06:39	07:32	07:30
	16:19	17:15	18:09	20:06	21:00		21:42	40	20:44 (WEA 11)	21:42	42	20:52 (WEA 11)	20:56	19:46	18:33	16:29
11	08:28	07:44	06:42	06:28	05:24		04:48		20:05 (WEA 12)	05:01		20:10 (WEA 12)	05:47	06:41	07:34	07:32
	16:20	17:17	18:11	20:08	21:01		21:43	40	20:45 (WEA 11)	21:41	42	20:52 (WEA 11)	20:54	19:44	18:31	16:27
12	08:27	07:42	06:40	06:26	05:23	20:10 (WEA 12)	04:48		20:06 (WEA 12)	05:02		20:10 (WEA 12)	05:49	06:43	07:36	07:34
	16:22	17:19	18:13	20:10	21:03	11	20:21 (WEA 12)	21:44	39	20:45 (WEA 11)	21:40	42	20:52 (WEA 11)	20:52	19:41	18:29
13	08:26	07:40	06:38	06:23	05:21	20:08 (WEA 12)	04:48		20:05 (WEA 12)	05:03		20:10 (WEA 12)	05:51	06:44	07:37	07:36
	16:23	17:21	18:15	20:11	21:05	15	20:23 (WEA 12)	21:44	39	20:44 (WEA 11)	21:40	42	20:52 (WEA 11)	20:50	19:39	18:26
14	08:25	07:38	06:35	06:21	05:19	20:06 (WEA 12)	04:47		20:06 (WEA 12)	05:04		20:10 (WEA 12)	05:52	06:46	07:39	07:38
	16:25	17:23	18:17	20:13	21:06	18	20:24 (WEA 12)	21:45	39	20:45 (WEA 11)	21:39	42	20:52 (WEA 11)	20:48	19:36	18:24
15	08:24	07:36	06:33	06:19	05:18	20:05 (WEA 12)	04:47		20:06 (WEA 12)	05:05		20:09 (WEA 12)	05:54	06:48	07:41	07:39
	16:26	17:25	18:19	20:15	21:08	21	20:26 (WEA 12)	21:45	39	20:45 (WEA 11)	21:37	43	20:52 (WEA 11)	20:46	19:34	18:22
16	08:23	07:34	06:30	06:16	05:16	20:03 (WEA 12)	04:47		20:06 (WEA 12)	05:07		20:09 (WEA 12)	05:56	06:50	07:43	07:41
	16:28	17:27	18:20	20:17	21:10	23	20:26 (WEA 12)	21:46	39	20:45 (WEA 11)	21:36	42	20:51 (WEA 11)	20:44	19:31	18:20
17	08:22	07:32	06:28	06:14	05:14	20:03 (WEA 12)	04:47		20:07 (WEA 12)	05:08		20:10 (WEA 12)	05:58	06:51	07:45	07:43
	16:30	17:29	18:22	20:19	21:11	30	20:33 (WEA 11)	21:47	38	20:45 (WEA 11)	21:35	42	20:52 (WEA 11)	20:42	19:29	18:17
18	08:21	07:30	06:26	06:12	05:13	20:03 (WEA 12)	04:47		20:07 (WEA 12)	05:09		20:10 (WEA 12)	05:59	06:53	07:47	07:45
	16:31	17:31	18:24	20:20	21:13	33	20:36 (WEA 11)	21:47	38	20:45 (WEA 11)	21:34	42	20:52 (WEA 11)	20:39	19:27	18:15
19	08:20	07:28	06:23	06:09	05:11	20:02 (WEA 12)	04:47		20:07 (WEA 12)	05:11		20:10 (WEA 12)	06:01	06:55	07:48	07:47
	16:33	17:33	18:26	20:22	21:15	35	20:37 (WEA 11)	21:47	39	20:46 (WEA 11)	21:33	41	20:51 (WEA 11)	20:37	19:24	18:13
20	08:19	07:26	06:21	06:07	05:10	20:02 (WEA 12)	04:47		20:07 (WEA 12)	05:12		20:10 (WEA 12)	06:03	06:56	07:50	07:49
	16:35	17:35	18:28	20:24	21:16	36	20:38 (WEA 11)	21:48	39	20:46 (WEA 11)	21:32	40	20:50 (WEA 11)	20:35	19:22	18:11
21	08:18	07:24	06:18	06:05	05:08	20:01 (WEA 12)	04:47		20:07 (WEA 12)	05:13		20:11 (WEA 12)	06:04	06:58	07:52	07:50
	16:37	17:37	18:30	20:26	21:18	39	20:40 (WEA 11)	21:48	39	20:46 (WEA 11)	21:30	40	20:51 (WEA 11)	20:33	19:19	18:08
22	08:17	07:21	06:16	06:03	05:07	20:00 (WEA 12)	04:47		20:08 (WEA 12)	05:15		20:11 (WEA 12)	06:06	07:00	07:54	07:52
	16:39	17:39	18:31	20:28	21:19	40	20:40 (WEA 11)	21:48	39	20:47 (WEA 11)	21:29	39	20:50 (WEA 11)	20:31	19:17	18:06
23	08:16	07:19	06:14	06:01	05:05	20:01 (WEA 12)	04:48		20:08 (WEA 12)	05:16		20:11 (WEA 12)	06:08	07:02	07:56	07:54
	16:40	17:41	18:33	20:29	21:21	39	20:40 (WEA 11)	21:48	39	20:47 (WEA 11)	21:27	38	20:49 (WEA 11)	20:28	19:14	18:04
24	08:14	07:17	06:11	05:58	05:04	20:01 (WEA 12)	04:48		20:08 (WEA 12)	05:18		20:12 (WEA 12)	06:10	07:03	07:58	07:56
	16:42	17:43	18:35	20:31	21:22	40	20:41 (WEA 11)	21:48	39	20:47 (WEA 11)	21:26	36	20:48 (WEA 11)	20:26	19:12	18:02
25	08:13	07:15	06:09	05:56	05:03	20:01 (WEA 12)	04:48		20:09 (WEA 12)	05:19		20:12 (WEA 12)	06:11	07:05	07:00	07:57
	16:44	17:44	18:37	20:33	21:24	41	20:42 (WEA 11)	21:48	38	20:47 (WEA 11)	21:24	35	20:47 (WEA 11)	20:24	19:09	17:00
26	08:11	07:13	06:06	05:54	05:02	20:01 (WEA 12)	04:49		20:09 (WEA 12)	05:21		20:13 (WEA 12)	06:13	07:07	07:02	07:59
	16:46	17:46	18:39	20:35	21:25	41	20:42 (WEA 11)	21:48	38	20:47 (WEA 11)	21:23	32	20:45 (WEA 11)	20:22	19:07	16:58
27	08:10	07:10	06:04	05:52	05:00	20:01 (WEA 12)	04:49		20:09 (WEA 12)	05:22		20:14 (WEA 12)	06:15	07:09	07:03	08:01
	16:48	17:48	18:40	20:37	21:26	42	20:43 (WEA 11)	21:48	39	20:48 (WEA 11)	21:21	25	20:41 (WEA 11)	20:19	19:05	16:56
28	08:09	07:08	06:01	05:50	04:59	20:01 (WEA 12)	04:50		20:09 (WEA 12)	05:24		20:15 (WEA 12)	06:17	07:10	07:05	08:02
	16:50	17:50	18:42	20:38	21:28	42	20:43 (WEA 11)	21:48	39	20:48 (WEA 11)	21:20	22	20:37 (WEA 12)	20:17	19:02	16:53
29	08:07		06:59	05:48	04:58	20:01 (WEA 12)	04:50		20:09 (WEA 12)	05:26		20:16 (WEA 12)	06:18	07:12	07:07	08:04
	16:52		19:44	20:40	21:29	42	20:43 (WEA 11)	21:48	40	20:49 (WEA 11)	21:18	20	20:36 (WEA 12)	20:15	19:00	16:51
30	08:05		06:57	05:46	04:57	20:01 (WEA 12)	04:51		20:09 (WEA 12)	05:27		20:18 (WEA 12)	06:20	07:14	07:09	08:05
	16:54		19:46	20:42	21:30	42	20:43 (WEA 11)	21:48	39	20:48 (WEA 11)	21:16	17	20:35 (WEA 12)	20:12	18:57	16:49
31	08:04		06:54		04:56	20:01 (WEA 12)				05:29			20:19 (WEA 12)	06:22		07:11
	16:56		19:48		21:32	42	20:43 (WEA 11)			21:15	13	20:32 (WEA 12)	20:10			16:47
Sonnenscheinstunden	252	274	367	419	492	672		507		510		458		382	329	261
astr.max.mögl.Beschattung							1191		1145		8					236

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CI - Hauptstraße 23

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August		September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44		04:55	20:04 (WEA 12)	04:51	20:12 (WEA 12)	05:30	20:26 (WEA 12)	06:24	07:16	07:13	08:07
	16:07	16:57	17:52	19:50	20:44		21:33	29 20:33 (WEA 12)	21:47	26 20:38 (WEA 12)	21:13	4 20:30 (WEA 12)	20:08	18:55	16:45	16:02
2	08:31	08:01	07:03	06:49	05:42		04:54	20:04 (WEA 12)	04:52	26 20:12 (WEA 12)	05:32		06:25	07:18	07:15	08:08
	16:08	16:59	17:54	19:51	20:46		21:34	29 20:33 (WEA 12)	21:47	26 20:38 (WEA 12)	21:11		20:05	18:52	16:43	16:01
3	08:31	07:59	07:01	06:47	05:40		04:53	20:05 (WEA 12)	04:53	26 20:12 (WEA 12)	05:34		06:27	07:19	07:17	08:10
	16:09	17:01	17:56	19:53	20:47		21:35	29 20:34 (WEA 12)	21:47	26 20:38 (WEA 12)	21:09		20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38		04:53	20:05 (WEA 12)	04:54	26 20:12 (WEA 12)	05:35		06:29	07:21	07:19	08:11
	16:10	17:03	17:59	19:55	20:49		21:36	28 20:33 (WEA 12)	21:46	27 20:39 (WEA 12)	21:08		20:00	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36		04:52	28 20:06 (WEA 12)	04:55	27 20:12 (WEA 12)	05:37		06:30	07:23	07:21	08:13
	16:12	17:05	18:00	19:57	20:51		21:37	28 20:34 (WEA 12)	21:46	27 20:39 (WEA 12)	21:06		19:58	18:45	16:38	15:59
6	08:30	07:54	06:54	06:40	05:34		04:51	28 20:06 (WEA 12)	04:55	27 20:12 (WEA 12)	05:39		06:32	07:25	07:22	08:14
	16:13	17:07	18:02	19:59	20:53		21:38	27 20:33 (WEA 12)	21:45	28 20:40 (WEA 12)	21:04		19:56	18:43	16:36	15:59
7	08:30	07:52	06:52	06:37	05:32		04:50	28 20:06 (WEA 12)	04:56	27 20:12 (WEA 12)	05:40		06:34	07:26	07:24	08:15
	16:14	17:09	18:04	20:00	20:54		21:39	27 20:33 (WEA 12)	21:44	28 20:40 (WEA 12)	21:02		19:53	18:41	16:34	15:58
8	08:29	07:50	06:49	06:35	05:30		04:50	28 20:07 (WEA 12)	04:57	27 20:12 (WEA 12)	05:42		06:36	07:28	07:26	08:17
	16:16	17:11	18:05	20:02	20:56		21:40	26 20:33 (WEA 12)	21:44	28 20:40 (WEA 12)	21:00		19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28		04:49	27 20:07 (WEA 12)	04:58	26 20:12 (WEA 12)	05:44		06:37	07:30	07:28	08:18
	16:17	17:13	18:07	20:04	20:58		21:41	27 20:34 (WEA 12)	21:43	29 20:41 (WEA 12)	20:58		19:48	18:36	16:31	15:58
10	08:28	07:46	06:45	06:30	05:26		04:49	27 20:07 (WEA 12)	04:59	29 20:12 (WEA 12)	05:45		06:39	07:32	07:30	08:19
	16:19	17:15	18:09	20:06	21:00		21:42	26 20:33 (WEA 12)	21:42	29 20:41 (WEA 12)	20:56		19:46	18:33	16:29	15:57
11	08:28	07:44	06:42	06:28	05:24		04:48	26 20:08 (WEA 12)	05:01	29 20:12 (WEA 12)	05:47		06:41	07:34	07:32	08:20
	16:20	17:17	18:11	20:08	21:01		21:43	26 20:34 (WEA 12)	21:41	29 20:41 (WEA 12)	20:54		19:44	18:31	16:27	15:57
12	08:27	07:42	06:40	06:26	05:23	8	20:14 (WEA 12)	20:08 (WEA 12)	05:02	29 20:12 (WEA 12)	05:49		06:43	07:36	07:34	08:21
	16:22	17:19	18:13	20:10	21:03		20:22 (WEA 12)	20:34 (WEA 12)	21:40	30 20:42 (WEA 12)	20:52		19:41	18:29	16:25	15:57
13	08:26	07:40	06:38	06:23	05:21		20:11 (WEA 12)	20:08 (WEA 12)	05:03	30 20:12 (WEA 12)	05:51		06:44	07:37	07:36	08:22
	16:23	17:21	18:15	20:11	21:05	13	20:24 (WEA 12)	20:33 (WEA 12)	21:40	30 20:42 (WEA 12)	20:50		19:39	18:26	16:24	15:57
14	08:25	07:38	06:35	06:21	05:19		20:08 (WEA 12)	20:09 (WEA 12)	05:04	30 20:12 (WEA 12)	05:52		06:46	07:39	07:38	08:23
	16:25	17:23	18:17	20:13	21:06	17	20:25 (WEA 12)	20:33 (WEA 12)	21:39	30 20:42 (WEA 12)	20:48		19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18		20:08 (WEA 12)	20:09 (WEA 12)	05:05	30 20:12 (WEA 12)	05:54		06:48	07:41	07:39	08:24
	16:26	17:25	18:19	20:15	21:08		20:27 (WEA 12)	20:34 (WEA 12)	21:37	30 20:42 (WEA 12)	20:46		19:34	18:22	16:21	15:57
16	08:23	07:34	06:30	06:16	05:16		20:06 (WEA 12)	20:09 (WEA 12)	05:07	30 20:12 (WEA 12)	05:56		06:50	07:43	07:41	08:25
	16:28	17:27	18:20	20:17	21:10	22	20:28 (WEA 12)	20:34 (WEA 12)	21:36	30 20:42 (WEA 12)	20:44		19:31	18:20	16:19	15:57
17	08:22	07:32	06:28	06:14	05:14		20:06 (WEA 12)	20:10 (WEA 12)	05:08	29 20:13 (WEA 12)	05:58		06:51	07:45	07:43	08:26
	16:30	17:29	18:22	20:19	21:11	23	20:29 (WEA 12)	20:34 (WEA 12)	21:35	29 20:42 (WEA 12)	20:42		19:29	18:17	16:18	15:57
18	08:21	07:30	06:26	06:12	05:13		20:05 (WEA 12)	20:10 (WEA 12)	05:09	29 20:13 (WEA 12)	05:59		06:53	07:47	07:45	08:27
	16:31	17:31	18:24	20:20	21:13	25	20:30 (WEA 12)	20:34 (WEA 12)	21:34	29 20:42 (WEA 12)	20:39		19:27	18:15	16:16	15:57
19	08:20	07:28	06:23	06:09	05:11		20:04 (WEA 12)	20:10 (WEA 12)	05:11	29 20:13 (WEA 12)	06:01		06:55	07:48	07:47	08:28
	16:33	17:33	18:26	20:22	21:15	26	20:30 (WEA 12)	20:34 (WEA 12)	21:33	29 20:42 (WEA 12)	20:37		19:24	18:13	16:15	15:58
20	08:19	07:26	06:21	06:07	05:10		20:04 (WEA 12)	20:10 (WEA 12)	05:12	29 20:13 (WEA 12)	06:03		06:56	07:50	07:49	08:28
	16:35	17:35	18:28	20:24	21:16	27	20:31 (WEA 12)	20:34 (WEA 12)	21:32	28 20:41 (WEA 12)	20:35		19:22	18:11	16:14	15:58
21	08:18	07:24	06:18	06:05	05:08		20:04 (WEA 12)	20:10 (WEA 12)	05:13	28 20:14 (WEA 12)	06:04		06:58	07:52	07:50	08:29
	16:37	17:37	18:30	20:26	21:18	28	20:32 (WEA 12)	20:34 (WEA 12)	21:30	28 20:42 (WEA 12)	20:33		19:19	18:08	16:12	15:58
22	08:17	07:21	06:16	06:03	05:07		20:03 (WEA 12)	20:11 (WEA 12)	05:15	28 20:14 (WEA 12)	06:06		07:00	07:54	07:52	08:29
	16:39	17:39	18:31	20:28	21:19	28	20:31 (WEA 12)	20:35 (WEA 12)	21:29	27 20:41 (WEA 12)	20:31		19:17	18:06	16:11	15:59
23	08:15	07:19	06:14	06:01	05:05		20:03 (WEA 12)	20:11 (WEA 12)	05:16	27 20:14 (WEA 12)	06:08		07:02	07:56	07:54	08:30
	16:40	17:41	18:33	20:29	21:21	29	20:32 (WEA 12)	20:35 (WEA 12)	21:27	27 20:41 (WEA 12)	20:28		19:14	18:04	16:10	15:59
24	08:14	07:17	06:11	05:58	05:04		20:03 (WEA 12)	20:11 (WEA 12)	05:18	27 20:15 (WEA 12)	06:10		07:03	07:58	07:56	08:30
	16:42	17:43	18:35	20:31	21:22	29	20:32 (WEA 12)	20:35 (WEA 12)	21:26	26 20:41 (WEA 12)	20:26		19:12	18:02	16:09	16:00
25	08:13	07:15	06:09	05:56	05:03		20:03 (WEA 12)	20:12 (WEA 12)	05:19	26 20:15 (WEA 12)	06:11		07:05	07:00	07:57	08:31
	16:44	17:44	18:37	20:33	21:24	30	20:33 (WEA 12)	20:36 (WEA 12)	21:24	25 20:40 (WEA 12)	20:24		19:09	17:00	16:08	16:01
26	08:11	07:13	06:06	05:54	05:02		20:03 (WEA 12)	20:12 (WEA 12)	05:21	25 20:16 (WEA 12)	06:13		07:07	07:02	07:59	08:31
	16:46	17:46	18:39	20:35	21:25	30	20:33 (WEA 12)	20:36 (WEA 12)	21:23	24 20:40 (WEA 12)	20:22		19:07	16:58	16:07	16:01
27	08:10	07:10	06:04	05:52	05:00		20:04 (WEA 12)	20:12 (WEA 12)	05:22	24 20:16 (WEA 12)	06:15		07:09	07:03	08:01	08:31
	16:48	17:48	18:40	20:37	21:26	29	20:33 (WEA 12)	20:37 (WEA 12)	21:21	23 20:39 (WEA 12)	20:19		19:05	16:56	16:06	16:02
28	08:08	07:08	06:01	05:50	04:59		20:04 (WEA 12)	20:12 (WEA 12)	05:24	23 20:18 (WEA 12)	06:17		07:10	07:05	08:02	08:31
	16:50	17:50	18:42	20:38	21:28	29	20:33 (WEA 12)	20:37 (WEA 12)	21:20	21 20:39 (WEA 12)	20:17		19:02	16:53	16:05	16:03
29	08:07		06:59	05:48	04:58		20:04 (WEA 12)	20:12 (WEA 12)	05:26	20 20:19 (WEA 12)	06:18		07:12	07:07	08:04	08:32
	16:52		19:44	20:40	21:29	29	20:33 (WEA 12)	20:37 (WEA 12)	21:18	18 20:37 (WEA 12)	20:15		19:00	16:51	16:04	16:04
30	08:05		06:57	05:46	04:57		20:04 (WEA 12)	20:12 (WEA 12)	05:27	18 20:20 (WEA 12)	06:20		07:14	07:09	08:05	08:32
	16:54		19:46	20:42	21:30	29	20:33 (WEA 12)	20:37 (WEA 12)	21:16	16 20:36 (WEA 12)	20:12		18:57	16:49	16:03	16:05
31	08:04		06:54		04:56		20:04 (WEA 12)		05:29		06:22			07:11		08:32
	16:55		19:48		21:32	29	20:33 (WEA 12)		21:15	12 20:24 (WEA 12)	20:10			16:47		16:06
Sonnenscheinstunden	252	274	367	419	492			507	510		458		382	329	261	236
astr.max.mögl.Beschattung					499		767		815		4					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CJ - Kirche Warlitz

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August		September	Oktober	November	Dezember			
1	08:32	08:02	07:06	06:52	05:44		04:55	19:59 (WEA 12)	04:51	20:10 (WEA 12)	05:30	20:10 (WEA 12)	06:24	07:16	07:13	08:07			
	16:07	16:57	17:52	19:50	20:44		21:33	39	20:38 (WEA 11)	21:47	31	20:41 (WEA 11)	21:13	22	20:32 (WEA 12)	20:08	18:55	16:45	16:02
2	08:31	08:01	07:03	06:49	05:42		04:54	19:59 (WEA 12)	04:52	20:10 (WEA 12)	05:32	20:10 (WEA 12)	06:25	07:18	07:15	08:08			
	16:08	16:59	17:54	19:51	20:46		21:34	38	20:37 (WEA 11)	21:47	32	20:42 (WEA 11)	21:11	21	20:31 (WEA 12)	20:05	18:52	16:43	16:01
3	08:31	07:59	07:01	06:47	05:40		04:53	20:00 (WEA 12)	04:53	20:09 (WEA 12)	05:34	20:12 (WEA 12)	06:27	07:19	07:17	08:10			
	16:09	17:01	17:56	19:53	20:47		21:35	38	20:38 (WEA 11)	21:47	33	20:42 (WEA 11)	21:10	18	20:30 (WEA 12)	20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38		04:53	20:01 (WEA 12)	04:54	20:09 (WEA 12)	05:35	20:13 (WEA 12)	06:29	07:21	07:19	08:11			
	16:10	17:03	17:58	19:55	20:49		21:36	37	20:38 (WEA 11)	21:46	33	20:42 (WEA 11)	21:08	14	20:27 (WEA 12)	20:00	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36		04:52	20:01 (WEA 12)	04:55	20:09 (WEA 12)	05:37	20:16 (WEA 12)	06:30	07:23	07:21	08:13			
	16:12	17:05	18:00	19:57	20:51		21:37	36	20:37 (WEA 11)	21:46	34	20:43 (WEA 11)	21:06	9	20:25 (WEA 12)	19:58	18:45	16:38	15:59
6	08:30	07:54	06:54	06:40	05:34		04:51	20:02 (WEA 12)	04:55	20:09 (WEA 12)	05:39	20:14 (WEA 12)	06:32	07:25	07:22	08:14			
	16:13	17:07	18:02	19:59	20:53		21:38	36	20:38 (WEA 11)	21:45	35	20:44 (WEA 11)	21:04	19:56	18:43	16:36	15:59		
7	08:30	07:52	06:52	06:37	05:32		04:50	20:02 (WEA 12)	04:56	20:08 (WEA 12)	05:40	20:14 (WEA 12)	06:34	07:26	07:24	08:15			
	16:14	17:09	18:04	20:00	20:54		21:39	35	20:37 (WEA 11)	21:44	36	20:44 (WEA 11)	21:02	19:53	18:41	16:34	15:58		
8	08:29	07:50	06:49	06:35	05:30	20:05 (WEA 12)	04:50	20:03 (WEA 12)	04:57	20:08 (WEA 12)	05:42	20:14 (WEA 12)	06:36	07:28	07:26	08:17			
	16:16	17:11	18:05	20:02	20:56	11	20:16 (WEA 12)	21:40	21:44	34	20:37 (WEA 11)	21:44	37	20:45 (WEA 11)	21:00	19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28	20:02 (WEA 12)	04:49	20:04 (WEA 12)	04:58	20:08 (WEA 12)	05:44	20:14 (WEA 12)	06:37	07:30	07:28	08:18			
	16:17	17:13	18:07	20:04	20:58	16	20:18 (WEA 12)	21:41	21:43	37	20:45 (WEA 11)	20:58	19:48	18:36	16:31	15:58			
10	08:28	07:46	06:45	06:30	05:26	20:01 (WEA 12)	04:49	20:04 (WEA 12)	04:59	20:08 (WEA 12)	05:45	20:14 (WEA 12)	06:39	07:32	07:30	08:19			
	16:19	17:15	18:09	20:06	21:00	19	20:20 (WEA 12)	21:42	21:33	38	20:46 (WEA 11)	20:56	19:46	18:33	16:29	15:57			
11	08:28	07:44	06:42	06:28	05:24	20:00 (WEA 12)	04:48	20:05 (WEA 12)	05:01	20:07 (WEA 12)	05:47	20:14 (WEA 12)	06:41	07:34	07:32	08:20			
	16:20	17:17	18:11	20:08	21:01	21	20:21 (WEA 12)	21:43	21:41	39	20:46 (WEA 11)	20:54	19:44	18:31	16:27	15:57			
12	08:27	07:42	06:40	06:26	05:23	19:59 (WEA 12)	04:48	20:06 (WEA 12)	05:02	20:07 (WEA 12)	05:49	20:14 (WEA 12)	06:43	07:36	07:34	08:21			
	16:22	17:19	18:13	20:10	21:03	23	20:22 (WEA 12)	21:44	21:40	39	20:46 (WEA 11)	20:52	19:41	18:29	16:25	15:57			
13	08:26	07:40	06:38	06:23	05:21	19:58 (WEA 12)	04:48	20:06 (WEA 12)	05:03	20:07 (WEA 12)	05:51	20:14 (WEA 12)	06:44	07:37	07:36	08:22			
	16:23	17:21	18:15	20:11	21:05	30	20:28 (WEA 11)	21:44	21:40	39	20:46 (WEA 11)	20:50	19:39	18:26	16:24	15:57			
14	08:25	07:38	06:35	06:21	05:19	19:57 (WEA 12)	04:47	20:07 (WEA 12)	05:04	20:07 (WEA 12)	05:52	20:14 (WEA 12)	06:46	07:39	07:38	08:23			
	16:25	17:23	18:17	20:13	21:06	33	20:30 (WEA 11)	21:45	21:39	40	20:47 (WEA 11)	20:48	19:36	18:24	16:22	15:57			
15	08:24	07:36	06:33	06:19	05:18	19:57 (WEA 12)	04:47	20:08 (WEA 12)	05:05	20:06 (WEA 12)	05:54	20:14 (WEA 12)	06:48	07:41	07:39	08:24			
	16:26	17:25	18:19	20:15	21:08	35	20:32 (WEA 11)	21:45	21:37	41	20:47 (WEA 11)	20:46	19:34	18:22	16:21	15:57			
16	08:23	07:34	06:30	06:16	05:16	19:56 (WEA 12)	04:47	20:08 (WEA 12)	05:07	20:06 (WEA 12)	05:56	20:14 (WEA 12)	06:50	07:43	07:41	08:25			
	16:28	17:27	18:20	20:17	21:10	37	20:33 (WEA 11)	21:46	21:36	41	20:47 (WEA 11)	20:44	19:31	18:20	16:19	15:57			
17	08:22	07:32	06:28	06:14	05:14	19:56 (WEA 12)	04:47	20:09 (WEA 12)	05:08	20:06 (WEA 12)	05:58	20:14 (WEA 12)	06:51	07:45	07:43	08:26			
	16:30	17:29	18:22	20:19	21:11	38	20:34 (WEA 11)	21:47	21:35	42	20:48 (WEA 11)	20:42	19:29	18:17	16:18	15:57			
18	08:21	07:30	06:26	06:12	05:13	19:56 (WEA 12)	04:47	20:09 (WEA 12)	05:09	20:06 (WEA 12)	05:59	20:14 (WEA 12)	06:53	07:47	07:45	08:27			
	16:31	17:31	18:24	20:20	21:13	40	20:36 (WEA 11)	21:47	21:34	41	20:47 (WEA 11)	20:39	19:27	18:15	16:16	15:57			
19	08:20	07:28	06:23	06:09	05:11	19:56 (WEA 12)	04:47	20:09 (WEA 12)	05:11	20:06 (WEA 12)	06:01	20:14 (WEA 12)	06:55	07:48	07:47	08:28			
	16:33	17:33	18:26	20:22	21:15	39	20:35 (WEA 11)	21:47	21:33	41	20:47 (WEA 11)	20:37	19:24	18:13	16:15	15:58			
20	08:19	07:26	06:21	06:07	05:10	19:56 (WEA 12)	04:47	20:10 (WEA 12)	05:12	20:05 (WEA 12)	06:03	20:14 (WEA 12)	06:56	07:50	07:49	08:28			
	16:35	17:35	18:28	20:24	21:16	40	20:36 (WEA 11)	21:48	21:32	42	20:47 (WEA 11)	20:35	19:22	18:11	16:14	15:58			
21	08:18	07:24	06:18	06:05	05:08	19:56 (WEA 12)	04:47	20:11 (WEA 12)	05:13	20:06 (WEA 12)	06:04	20:14 (WEA 12)	06:58	07:52	07:50	08:29			
	16:37	17:37	18:30	20:26	21:18	41	20:37 (WEA 11)	21:48	21:30	41	20:47 (WEA 11)	20:33	19:19	18:08	16:12	15:58			
22	08:17	07:21	06:16	06:03	05:07	19:55 (WEA 12)	04:47	20:11 (WEA 12)	05:15	20:06 (WEA 12)	06:06	20:14 (WEA 12)	07:00	07:54	07:52	08:29			
	16:39	17:39	18:31	20:28	21:19	42	20:37 (WEA 11)	21:48	21:29	41	20:47 (WEA 11)	20:31	19:17	18:06	16:11	15:59			
23	08:15	07:19	06:13	06:01	05:05	19:56 (WEA 12)	04:48	20:11 (WEA 12)	05:16	20:06 (WEA 12)	06:08	20:14 (WEA 12)	07:02	07:56	07:54	08:30			
	16:40	17:41	18:33	20:29	21:21	41	20:37 (WEA 11)	21:48	21:27	40	20:46 (WEA 11)	20:28	19:14	18:04	16:10	15:59			
24	08:14	07:17	06:11	05:58	05:04	19:56 (WEA 12)	04:48	20:10 (WEA 12)	05:18	20:06 (WEA 12)	06:10	20:14 (WEA 12)	07:03	07:58	07:56	08:30			
	16:42	17:43	18:35	20:31	21:22	41	20:37 (WEA 11)	21:48	21:26	41	20:47 (WEA 11)	20:26	19:12	18:02	16:09	16:00			
25	08:13	07:15	06:09	05:56	05:03	19:56 (WEA 12)	04:48	20:11 (WEA 12)	05:19	20:06 (WEA 12)	06:11	20:14 (WEA 12)	07:05	07:00	07:57	08:31			
	16:44	17:44	18:37	20:33	21:24	42	20:38 (WEA 11)	21:48	21:24	40	20:46 (WEA 11)	20:24	19:09	17:00	16:08	16:01			
26	08:11	07:13	06:06	05:54	05:02	19:57 (WEA 12)	04:49	20:10 (WEA 12)	05:21	20:07 (WEA 12)	06:13	20:14 (WEA 12)	07:07	07:02	07:59	08:31			
	16:46	17:46	18:39	20:35	21:25	41	20:38 (WEA 11)	21:48	21:23	39	20:46 (WEA 11)	20:22	19:07	16:58	16:07	16:01			
27	08:10	07:10	06:04	05:52	05:00	19:57 (WEA 12)	04:49	20:11 (WEA 12)	05:22	20:07 (WEA 12)	06:15	20:14 (WEA 12)	07:09	07:03	08:01	08:31			
	16:48	17:48	18:40	20:37	21:26	41	20:38 (WEA 11)	21:48	21:21	37	20:44 (WEA 11)	20:19	19:05	16:56	16:06	16:02			
28	08:08	07:08	06:01	05:50	04:59	19:58 (WEA 12)	04:50	20:10 (WEA 12)	05:24	20:08 (WEA 12)	06:17	20:14 (WEA 12)	07:10	07:05	08:02	08:31			
	16:50	17:50	18:42	20:38	21:28	40	20:38 (WEA 11)	21:48	21:20	36	20:44 (WEA 11)	20:17	19:02	16:53	16:05	16:03			
29	08:07		06:59	05:48	04:58	19:58 (WEA 12)	04:50	20:10 (WEA 12)	05:26	20:07 (WEA 12)	06:18	20:14 (WEA 12)	07:12	07:07	08:04	08:32			
	16:52		19:44	20:40	21:29	40	20:38 (WEA 11)	21:48	21:18	35	20:42 (WEA 11)	20:15	19:00	16:51	16:04	16:04			
30	08:05		06:57	05:46	04:57	19:58 (WEA 12)	04:51	20:10 (WEA 12)	05:27	20:09 (WEA 12)	06:20	20:14 (WEA 12)	07:14	07:09	08:05	08:32			
	16:54		19:46	20:42	21:30	40	20:38 (WEA 11)	21:48	21:16	32	20:41 (WEA 11)	20:12	18:57	16:49	16:03	16:05			
31	08:04		06:54		04:56	19:59 (WEA 12)		20:10 (WEA 12)	05:29	20:09 (WEA 12)	06:22	20:14 (WEA 12)		07:11		08:32			
	16:55		19:48		21:32	39	20:38 (WEA 11)		21:15	24									

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CK - Hauptstraße 25

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni		[Juli		[August	[September	[Oktober	[November	[Dezember			
1	08:32	08:02	07:06	06:52	05:44		04:55		20:08 (WEA 12)	04:51	20:16 (WEA 12)	05:30	06:24	07:16	07:13	08:07		
	16:07	16:57	17:52	19:50	20:44		21:33	29	20:37 (WEA 12)	21:47	27	20:43 (WEA 12)	21:13	20:08	18:55	16:45	16:02	
2	08:31	08:01	07:03	06:49	05:42		04:54		20:08 (WEA 12)	04:52	20:16 (WEA 12)	05:32	06:25	07:18	07:15	08:08		
	16:08	16:59	17:54	19:51	20:46		21:34	29	20:37 (WEA 12)	21:47	27	20:43 (WEA 12)	21:11	20:05	18:52	16:43	16:01	
3	08:31	07:59	07:01	06:47	05:40		04:53		20:09 (WEA 12)	04:53	20:15 (WEA 12)	05:34	06:27	07:19	07:17	08:10		
	16:09	17:01	17:56	19:53	20:47		21:35	29	20:38 (WEA 12)	21:47	28	20:43 (WEA 12)	21:09	20:03	18:50	16:42	16:01	
4	08:31	07:57	06:59	06:45	05:38		04:53		20:09 (WEA 12)	04:54	20:16 (WEA 12)	05:35	06:29	07:21	07:19	08:11		
	16:10	17:03	17:58	19:55	20:49		21:36	29	20:38 (WEA 12)	21:46	27	20:43 (WEA 12)	21:08	20:00	18:48	16:40	16:00	
5	08:31	07:55	06:57	06:42	05:36		04:52		20:10 (WEA 12)	04:55	20:16 (WEA 12)	05:37	06:30	07:23	07:21	08:13		
	16:12	17:05	18:00	19:57	20:51		21:37	28	20:38 (WEA 12)	21:46	28	20:44 (WEA 12)	21:06	19:58	18:45	16:38	15:59	
6	08:30	07:54	06:54	06:40	05:34		04:51		20:10 (WEA 12)	04:55	20:16 (WEA 12)	05:39	06:32	07:25	07:22	08:14		
	16:13	17:07	18:02	19:59	20:53		21:38	28	20:38 (WEA 12)	21:45	28	20:44 (WEA 12)	21:04	19:56	18:43	16:36	15:59	
7	08:30	07:52	06:52	06:37	05:32		04:50		20:10 (WEA 12)	04:56	20:16 (WEA 12)	05:40	06:34	07:26	07:24	08:15		
	16:14	17:09	18:04	20:00	20:54		21:39	28	20:38 (WEA 12)	21:44	29	20:45 (WEA 12)	21:02	19:53	18:41	16:34	15:58	
8	08:29	07:50	06:49	06:35	05:30		04:50		20:10 (WEA 12)	04:57	20:17 (WEA 12)	05:42	06:36	07:28	07:26	08:17		
	16:16	17:11	18:05	20:02	20:56		21:40	28	20:38 (WEA 12)	21:44	28	20:45 (WEA 12)	21:00	19:51	18:38	16:32	15:58	
9	08:29	07:48	06:47	06:33	05:28		04:49		20:11 (WEA 12)	04:58	20:17 (WEA 12)	05:44	06:37	07:30	07:28	08:18		
	16:17	17:13	18:07	20:04	20:58		21:41	28	20:39 (WEA 12)	21:43	28	20:45 (WEA 12)	20:58	19:48	18:36	16:31	15:58	
10	08:28	07:46	06:45	06:30	05:26		04:49		20:11 (WEA 12)	04:59	20:17 (WEA 12)	05:45	06:39	07:32	07:30	08:19		
	16:19	17:15	18:09	20:06	21:00		21:42	27	20:38 (WEA 12)	21:42	28	20:45 (WEA 12)	20:56	19:46	18:33	16:29	15:57	
11	08:28	07:44	06:42	06:28	05:24		04:48		20:11 (WEA 12)	05:01	20:17 (WEA 12)	05:47	06:41	07:34	07:32	08:20		
	16:20	17:17	18:11	20:08	21:01		21:43	28	20:39 (WEA 12)	21:41	29	20:46 (WEA 12)	20:54	19:44	18:31	16:27	15:57	
12	08:27	07:42	06:40	06:26	05:23		04:48		20:12 (WEA 12)	05:02	20:17 (WEA 12)	05:49	06:43	07:36	07:34	08:21		
	16:22	17:19	18:13	20:10	21:03		21:44	27	20:39 (WEA 12)	21:40	29	20:46 (WEA 12)	20:52	19:41	18:29	16:25	15:57	
13	08:26	07:40	06:38	06:23	05:21		04:48		20:12 (WEA 12)	05:03	20:17 (WEA 12)	05:51	06:44	07:37	07:36	08:22		
	16:23	17:21	18:15	20:11	21:05		21:44	26	20:38 (WEA 12)	21:40	29	20:46 (WEA 12)	20:50	19:39	18:26	16:24	15:57	
14	08:25	07:38	06:35	06:21	05:19		04:47		20:12 (WEA 12)	05:04	20:17 (WEA 12)	05:52	06:46	07:39	07:38	08:23		
	16:25	17:23	18:17	20:13	21:06	4	20:23 (WEA 12)	21:45	26	20:38 (WEA 12)	21:39	29	20:46 (WEA 12)	20:48	19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18		04:47		20:12 (WEA 12)	05:05	20:17 (WEA 12)	05:54	06:48	07:41	07:39	08:24		
	16:26	17:25	18:19	20:15	21:08	11	20:27 (WEA 12)	21:45	27	20:39 (WEA 12)	21:37	29	20:46 (WEA 12)	20:46	19:34	18:22	16:21	15:57
16	08:23	07:34	06:30	06:16	05:16		04:47		20:13 (WEA 12)	05:07	20:17 (WEA 12)	05:56	06:50	07:43	07:41	08:25		
	16:28	17:27	18:20	20:17	21:10	15	20:29 (WEA 12)	21:46	26	20:39 (WEA 12)	21:36	28	20:45 (WEA 12)	20:44	19:31	18:20	16:19	15:57
17	08:22	07:32	06:28	06:14	05:14		04:47		20:13 (WEA 12)	05:08	20:18 (WEA 12)	05:58	06:51	07:45	07:43	08:26		
	16:30	17:29	18:22	20:19	21:11	18	20:31 (WEA 12)	21:47	26	20:39 (WEA 12)	21:35	28	20:46 (WEA 12)	20:42	19:29	18:17	16:18	15:57
18	08:21	07:30	06:26	06:12	05:13		04:47		20:13 (WEA 12)	05:09	20:18 (WEA 12)	05:59	06:53	07:47	07:45	08:27		
	16:31	17:31	18:24	20:20	21:13	20	20:32 (WEA 12)	21:47	26	20:39 (WEA 12)	21:34	28	20:46 (WEA 12)	20:39	19:27	18:15	16:16	15:57
19	08:20	07:28	06:23	06:09	05:11		04:47		20:14 (WEA 12)	05:11	20:18 (WEA 12)	06:01	06:55	07:48	07:47	08:28		
	16:33	17:33	18:26	20:22	21:15	21	20:32 (WEA 12)	21:47	25	20:39 (WEA 12)	21:33	27	20:45 (WEA 12)	20:37	19:24	18:13	16:15	15:58
20	08:19	07:26	06:21	06:07	05:10		04:47		20:14 (WEA 12)	05:12	20:18 (WEA 12)	06:03	06:56	07:50	07:49	08:28		
	16:35	17:35	18:28	20:24	21:16	24	20:34 (WEA 12)	21:48	25	20:39 (WEA 12)	21:31	27	20:45 (WEA 12)	20:35	19:22	18:11	16:14	15:58
21	08:18	07:24	06:18	06:05	05:08		04:47		20:14 (WEA 12)	05:13	20:19 (WEA 12)	06:04	06:58	07:52	07:50	08:29		
	16:37	17:37	18:30	20:26	21:18	24	20:34 (WEA 12)	21:48	25	20:39 (WEA 12)	21:30	26	20:45 (WEA 12)	20:33	19:19	18:08	16:12	15:58
22	08:17	07:21	06:16	06:03	05:07		04:47		20:15 (WEA 12)	05:15	20:19 (WEA 12)	06:06	07:00	07:54	07:52	08:29		
	16:39	17:39	18:31	20:28	21:19	25	20:34 (WEA 12)	21:48	25	20:40 (WEA 12)	21:29	25	20:44 (WEA 12)	20:31	19:17	18:06	16:11	15:59
23	08:15	07:19	06:13	06:01	05:05		04:48		20:15 (WEA 12)	05:16	20:20 (WEA 12)	06:08	07:02	07:56	07:54	08:30		
	16:40	17:41	18:33	20:29	21:21	26	20:35 (WEA 12)	21:48	25	20:40 (WEA 12)	21:27	24	20:44 (WEA 12)	20:28	19:14	18:04	16:10	15:59
24	08:14	07:17	06:11	05:58	05:04		04:48		20:14 (WEA 12)	05:18	20:21 (WEA 12)	06:10	07:03	07:58	07:56	08:30		
	16:42	17:43	18:35	20:31	21:22	27	20:36 (WEA 12)	21:48	26	20:40 (WEA 12)	21:26	23	20:44 (WEA 12)	20:26	19:12	18:02	16:09	16:00
25	08:13	07:15	06:09	05:56	05:03		04:48		20:15 (WEA 12)	05:19	20:21 (WEA 12)	06:11	07:05	07:59	07:57	08:31		
	16:44	17:44	18:37	20:33	21:24	27	20:36 (WEA 12)	21:48	26	20:41 (WEA 12)	21:24	21	20:42 (WEA 12)	20:24	19:09	17:59	16:08	16:01
26	08:11	07:13	06:06	05:54	05:02		04:48		20:15 (WEA 12)	05:21	20:23 (WEA 12)	06:13	07:07	07:59	07:57	08:31		
	16:46	17:46	18:39	20:35	21:25	28	20:36 (WEA 12)	21:48	26	20:41 (WEA 12)	21:23	19	20:42 (WEA 12)	20:22	19:07	17:58	16:07	16:01
27	08:10	07:10	06:04	05:52	05:00		04:49		20:16 (WEA 12)	05:22	20:24 (WEA 12)	06:15	07:09	07:59	07:57	08:31		
	16:48	17:48	18:40	20:37	21:26	29	20:37 (WEA 12)	21:48	26	20:42 (WEA 12)	21:21	17	20:41 (WEA 12)	20:19	19:05	17:56	16:06	16:02
28	08:08	07:08	06:01	05:50	04:59		04:50		20:15 (WEA 12)	05:24	20:26 (WEA 12)	06:17	07:10	07:05	08:02	08:31		
	16:50	17:50	18:42	20:38	21:28	29	20:37 (WEA 12)	21:48	27	20:42 (WEA 12)	21:20	14	20:40 (WEA 12)	20:17	19:02	17:53	16:05	16:03
29	08:07		06:59	05:48	04:58		04:50		20:16 (WEA 12)	05:26	20:27 (WEA 12)	06:18	07:12	07:07	08:04	08:32		
	16:52		19:44	20:40	21:29	29	20:37 (WEA 12)	21:48	26	20:42 (WEA 12)	21:18	10	20:37 (WEA 12)	20:15	19:00	17:51	16:04	16:04
30	08:05		06:57	05:46	04:57		04:51		20:15 (WEA 12)	05:27			06:20	07:14	07:09	08:05	08:32	
	16:54		19:46	20:42	21:30	29	20:37 (WEA 12)	21:48	27	20:42 (WEA 12)	21:16		20:12	18:57	17:49	16:03	16:05	
31	08:04		06:54		04:56		20:08 (WEA 12)			05:29			06:22		07:11		08:32	
	16:55		19:48		21:32	29	20:37 (WEA 12)			21:15			20:10		16:47		16:06	
Sonnenscheinstunden	252	274	367	419	492		507		507	510		458	382	329	261		236	
astr.max.mögl.Beschattung					415		804		804		740							

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

Tag im Monat	Sonnenaufgang (SS:MM)	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenanfang (WEA mit erstem Schatten)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CL - Hauptstraße 27

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55		04:55	20:10 (WEA 12)	04:51	20:16 (WEA 12)	05:30	06:24	07:16	07:13	08:07
	16:07	16:57	17:52	19:50	20:44	21:33	29	20:39 (WEA 12)	21:47	30	20:46 (WEA 12)	21:13	20:08	18:55	16:45	16:02
2	08:31	08:01	07:03	06:49	05:42	04:54		04:54	20:10 (WEA 12)	04:52	20:17 (WEA 12)	05:32	06:25	07:18	07:15	08:08
	16:08	16:59	17:54	19:51	20:46	21:34	29	20:39 (WEA 12)	21:47	29	20:46 (WEA 12)	21:11	20:05	18:52	16:43	16:01
3	08:31	07:59	07:01	06:47	05:40	04:53		04:53	20:11 (WEA 12)	04:53	20:16 (WEA 12)	05:34	06:27	07:19	07:17	08:10
	16:09	17:01	17:56	19:53	20:47	21:35	29	20:40 (WEA 12)	21:47	30	20:46 (WEA 12)	21:09	20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38	04:53		04:53	20:10 (WEA 12)	04:54	20:17 (WEA 12)	05:35	06:29	07:21	07:19	08:11
	16:10	17:03	17:58	19:55	20:49	21:36	30	20:40 (WEA 12)	21:46	29	20:46 (WEA 12)	21:08	20:00	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36	04:52		04:52	20:11 (WEA 12)	04:55	20:17 (WEA 12)	05:37	06:30	07:23	07:21	08:13
	16:12	17:05	18:00	19:57	20:51	21:37	30	20:41 (WEA 12)	21:46	30	20:47 (WEA 12)	21:06	19:58	18:45	16:38	15:59
6	08:30	07:54	06:54	06:40	05:34	04:51		04:51	20:11 (WEA 12)	04:55	20:17 (WEA 12)	05:39	06:32	07:25	07:22	08:14
	16:13	17:07	18:02	19:59	20:53	21:38	30	20:41 (WEA 12)	21:45	30	20:47 (WEA 12)	21:04	19:56	18:43	16:36	15:59
7	08:30	07:52	06:52	06:37	05:32	04:50		04:50	20:11 (WEA 12)	04:56	20:18 (WEA 12)	05:40	06:34	07:26	07:24	08:15
	16:14	17:09	18:04	20:00	20:54	21:39	29	20:40 (WEA 12)	21:44	29	20:47 (WEA 12)	21:02	19:53	18:41	16:34	15:58
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	16:16	17:11	18:05	20:02	20:56	21:40	30	20:41 (WEA 12)	21:44	29	20:47 (WEA 12)	21:00	19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28	04:49		04:49	20:12 (WEA 12)	04:58	20:18 (WEA 12)	05:44	06:37	07:30	07:28	08:18
	16:17	17:13	18:07	20:04	20:58	21:41	29	20:41 (WEA 12)	21:43	30	20:48 (WEA 12)	20:58	19:48	18:36	16:31	15:58
10	08:28	07:46	06:45	06:30	05:26	04:49		04:49	20:12 (WEA 12)	04:59	20:18 (WEA 12)	05:45	06:39	07:32	07:30	08:19
	16:19	17:15	18:09	20:06	21:00	21:42	29	20:41 (WEA 12)	21:42	30	20:48 (WEA 12)	20:56	19:46	18:33	16:29	15:57
11	08:28	07:44	06:42	06:28	05:24	04:48		04:48	20:12 (WEA 12)	05:01	20:18 (WEA 12)	05:47	06:41	07:34	07:32	08:20
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12	08:27	07:42	06:40	06:26	05:23	04:48		04:48	20:13 (WEA 12)	05:02	20:18 (WEA 12)	05:49	06:43	07:36	07:34	08:21
	16:22	17:19	18:13	20:10	21:03	21:44	29	20:42 (WEA 12)	21:40	30	20:48 (WEA 12)	20:52	19:41	18:29	16:25	15:57
13	08:26	07:40	06:38	06:23	05:21	04:48		04:48	20:12 (WEA 12)	05:03	20:19 (WEA 12)	05:51	06:44	07:37	07:36	08:22
	16:23	17:21	18:15	20:11	21:05	21:44	29	20:41 (WEA 12)	21:40	29	20:48 (WEA 12)	20:50	19:39	18:26	16:24	15:57
14	08:25	07:38	06:35	06:21	05:19	04:47		04:47	20:13 (WEA 12)	05:04	20:19 (WEA 12)	05:52	06:46	07:39	07:38	08:23
	16:25	17:23	18:17	20:13	21:06	21:45	29	20:42 (WEA 12)	21:39	29	20:48 (WEA 12)	20:48	19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18	04:47		04:47	20:13 (WEA 12)	05:05	20:19 (WEA 12)	05:54	06:48	07:41	07:39	08:24
	16:26	17:25	18:19	20:15	21:08	21:45	29	20:42 (WEA 12)	21:37	28	20:47 (WEA 12)	20:46	19:34	18:22	16:21	15:57
16	08:23	07:34	06:30	06:16	05:16	04:47		04:47	20:13 (WEA 12)	05:07	20:19 (WEA 12)	05:56	06:50	07:43	07:41	08:25
	16:28	17:27	18:20	20:17	21:10	6 20:26 (WEA 12)	21:46	21:36	29	20:42 (WEA 12)	21:36	28	20:47 (WEA 12)	20:44	19:31	18:20
17	08:22	07:32	06:28	06:14	05:14	20:18 (WEA 12)	04:47	20:14 (WEA 12)	20:14 (WEA 12)	05:08	20:20 (WEA 12)	05:58	06:51	07:45	07:43	08:26
	16:30	17:29	18:22	20:19	21:11	11 20:29 (WEA 12)	21:47	21:35	28	20:42 (WEA 12)	21:35	28	20:48 (WEA 12)	20:42	19:29	18:17
18	08:21	07:30	06:26	06:12	05:13	20:16 (WEA 12)	04:47	20:14 (WEA 12)	20:14 (WEA 12)	05:09	20:20 (WEA 12)	05:59	06:53	07:47	07:45	08:27
	16:31	17:31	18:24	20:20	21:13	16 20:32 (WEA 12)	21:47	21:34	28	20:42 (WEA 12)	21:34	27	20:47 (WEA 12)	20:39	19:27	18:15
19	08:20	07:28	06:23	06:09	05:11	20:14 (WEA 12)	04:47	20:14 (WEA 12)	20:14 (WEA 12)	05:11	20:20 (WEA 12)	06:01	06:55	07:48	07:47	08:28
	16:33	17:33	18:26	20:22	21:15	18 20:32 (WEA 12)	21:47	21:33	27	20:43 (WEA 12)	21:33	27	20:47 (WEA 12)	20:37	19:24	18:13
20	08:19	07:26	06:21	06:07	05:10	20:14 (WEA 12)	04:47	20:14 (WEA 12)	20:14 (WEA 12)	05:12	20:21 (WEA 12)	06:03	06:56	07:50	07:49	08:28
	16:35	17:35	18:28	20:24	21:16	20 20:34 (WEA 12)	21:48	21:31	29	20:43 (WEA 12)	21:31	25	20:46 (WEA 12)	20:35	19:22	18:11
21	08:18	07:24	06:18	06:05	05:08	20:13 (WEA 12)	04:47	20:14 (WEA 12)	20:14 (WEA 12)	05:13	20:22 (WEA 12)	06:04	06:58	07:52	07:50	08:29
	16:37	17:37	18:30	20:26	21:18	22 20:35 (WEA 12)	21:48	21:30	29	20:43 (WEA 12)	21:30	24	20:46 (WEA 12)	20:33	19:19	18:08
22	08:17	07:21	06:16	06:03	05:07	20:12 (WEA 12)	04:47	20:15 (WEA 12)	20:15 (WEA 12)	05:15	20:22 (WEA 12)	06:06	07:00	07:54	07:52	08:29
	16:39	17:39	18:31	20:28	21:19	23 20:35 (WEA 12)	21:48	21:29	29	20:44 (WEA 12)	21:29	23	20:45 (WEA 12)	20:31	19:17	18:06
23	08:15	07:19	06:14	06:01	05:05	20:11 (WEA 12)	04:48	20:15 (WEA 12)	20:15 (WEA 12)	05:16	20:23 (WEA 12)	06:08	07:02	07:56	07:54	08:30
	16:40	17:41	18:33	20:29	21:21	25 20:36 (WEA 12)	21:48	21:27	29	20:44 (WEA 12)	21:27	21	20:44 (WEA 12)	20:28	19:14	18:04
24	08:14	07:17	06:11	05:58	05:04	20:11 (WEA 12)	04:48	20:15 (WEA 12)	20:15 (WEA 12)	05:18	20:24 (WEA 12)	06:10	07:03	07:58	07:56	08:30
	16:42	17:43	18:35	20:31	21:22	26 20:37 (WEA 12)	21:48	21:26	28	20:43 (WEA 12)	21:26	20	20:44 (WEA 12)	20:26	19:12	18:02
25	08:13	07:15	06:09	05:56	05:03	20:11 (WEA 12)	04:48	20:16 (WEA 12)	20:16 (WEA 12)	05:19	20:25 (WEA 12)	06:11	07:05	07:59	07:57	08:31
	16:44	17:44	18:37	20:33	21:24	26 20:37 (WEA 12)	21:48	21:28	28	20:44 (WEA 12)	21:24	17	20:42 (WEA 12)	20:24	19:09	17:50
26	08:11	07:13	06:06	05:54	05:02	20:11 (WEA 12)	04:49	20:15 (WEA 12)	20:15 (WEA 12)	05:21	20:27 (WEA 12)	06:13	07:07	07:52	07:59	08:31
	16:46	17:46	18:39	20:35	21:25	27 20:38 (WEA 12)	21:48	21:24	29	20:44 (WEA 12)	21:23	14	20:41 (WEA 12)	20:22	19:07	17:58
27	08:10	07:10	06:04	05:52	05:00	20:11 (WEA 12)	04:49	20:16 (WEA 12)	20:16 (WEA 12)	05:22	20:29 (WEA 12)	06:15	07:09	07:03	08:01	08:01
	16:48	17:48	18:40	20:37	21:26	27 20:38 (WEA 12)	21:48	21:28	29	20:45 (WEA 12)	21:21	10	20:39 (WEA 12)	20:19	19:05	16:56
28	08:08	07:08	06:01	05:50	04:59	20:10 (WEA 12)	04:50	20:16 (WEA 12)	20:16 (WEA 12)	05:24	20:29 (WEA 12)	06:17	07:10	07:05	08:02	08:31
	16:50	17:50	18:42	20:38	21:28	29 20:39 (WEA 12)	21:48	21:20	29	20:45 (WEA 12)	21:20	20:17	19:02	16:53	16:05	16:03
29	08:07		06:59	05:48	04:58	20:10 (WEA 12)	04:50	20:16 (WEA 12)	20:16 (WEA 12)	05:26	20:29 (WEA 12)	06:18	07:12	07:07	08:04	08:32
	16:52		19:44	20:40	21:29	29 20:39 (WEA 12)	21:48	21:18	29	20:45 (WEA 12)	21:18	20:15	19:00	16:51	16:04	16:04
30	08:05		06:57	05:46	04:57	20:10 (WEA 12)	04:51	20:16 (WEA 12)	20:16 (WEA 12)	05:27	20:29 (WEA 12)	06:20	07:14	07:09	08:05	08:32
	16:54		19:46	20:42	21:30	29 20:39 (WEA 12)	21:48	21:16	29	20:45 (WEA 12)	21:16	20:12	18:57	16:49	16:03	16:05
31	08:04		06:54		04:56	20:10 (WEA 12)				05:29		06:22		07:11		08:32
	16:56		19:48		21:32	29 20:39 (WEA 12)				21:15		20:10		16:47		16:06
Sonnenscheinstunden	252	274	367	419	492			507		510		458	382	329	261	236
astr.max.mögl.Beschattung					363			870			706					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CM - Hauptstraße 28

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember		
1	08:32	08:02	07:06	06:52	05:44	04:55		04:55	20:12 (WEA 12)	04:51	20:18 (WEA 12)	05:30	06:24	07:16	07:13	08:07		
	16:07	16:57	17:52	19:50	20:44	21:33	38	20:50 (WEA 11)	21:47	40	20:58 (WEA 11)	21:13	20:08	18:55	16:45	16:02		
2	08:31	08:01	07:03	06:49	05:42	04:54		04:54	20:13 (WEA 12)	04:52	20:18 (WEA 12)	05:32	06:25	07:18	07:15	08:08		
	16:08	16:59	17:54	19:51	20:46	21:34	39	20:52 (WEA 11)	21:47	41	20:59 (WEA 11)	21:11	20:05	18:53	16:43	16:01		
3	08:31	07:59	07:01	06:47	05:40	04:53		04:53	20:13 (WEA 12)	04:53	20:18 (WEA 12)	05:34	06:27	07:19	07:17	08:10		
	16:09	17:01	17:56	19:53	20:47	21:35	39	20:52 (WEA 11)	21:47	40	20:58 (WEA 11)	21:10	20:03	18:50	16:42	16:01		
4	08:31	07:57	06:59	06:45	05:38	04:53		04:53	20:12 (WEA 12)	04:54	20:18 (WEA 12)	05:35	06:29	07:21	07:19	08:11		
	16:10	17:03	17:58	19:55	20:49	21:36	40	20:52 (WEA 11)	21:46	40	20:58 (WEA 11)	21:08	20:01	18:48	16:40	16:00		
5	08:31	07:55	06:57	06:42	05:36	04:52		04:52	20:13 (WEA 12)	04:55	20:19 (WEA 12)	05:37	06:31	07:23	07:21	08:13		
	16:12	17:05	18:00	19:57	20:51	21:37	40	20:53 (WEA 11)	21:46	40	20:59 (WEA 11)	21:06	19:58	18:45	16:38	15:59		
6	08:30	07:54	06:54	06:40	05:34	04:51		04:51	20:13 (WEA 12)	04:55	20:19 (WEA 12)	05:39	06:32	07:25	07:22	08:14		
	16:13	17:07	18:02	19:59	20:53	21:38	40	20:53 (WEA 11)	21:45	40	20:59 (WEA 11)	21:04	19:56	18:43	16:36	15:59		
7	08:30	07:52	06:52	06:37	05:32	04:50		04:50	20:12 (WEA 12)	04:56	20:19 (WEA 12)	05:40	06:34	07:26	07:24	08:15		
	16:14	17:09	18:04	20:00	20:54	21:39	40	20:52 (WEA 11)	21:44	40	20:59 (WEA 11)	21:02	19:53	18:41	16:34	15:58		
8	08:29	07:50	06:49	06:35	05:30	04:50		04:50	20:13 (WEA 12)	04:57	20:20 (WEA 12)	05:42	06:36	07:28	07:26	08:17		
	16:16	17:11	18:05	20:02	20:56	21:40	40	20:53 (WEA 11)	21:44	39	20:59 (WEA 11)	21:00	19:51	18:38	16:32	15:58		
9	08:29	07:48	06:47	06:33	05:28	04:49		04:49	20:14 (WEA 12)	04:58	20:20 (WEA 12)	05:44	06:37	07:30	07:28	08:18		
	16:17	17:13	18:07	20:04	20:58	21:41	40	20:54 (WEA 11)	21:43	39	20:59 (WEA 11)	20:58	19:48	18:36	16:31	15:58		
10	08:28	07:46	06:45	06:30	05:26	04:49		04:49	20:13 (WEA 12)	04:59	20:20 (WEA 12)	05:45	06:39	07:32	07:30	08:19		
	16:19	17:15	18:09	20:06	21:00	21:42	40	20:53 (WEA 11)	21:42	39	20:59 (WEA 11)	20:56	19:46	18:33	16:29	15:57		
11	08:28	07:44	06:42	06:28	05:24	04:48		04:48	20:14 (WEA 12)	05:01	20:21 (WEA 12)	05:47	06:41	07:34	07:32	08:20		
	16:20	17:17	18:11	20:08	21:01	21:43	40	20:54 (WEA 11)	21:41	38	20:59 (WEA 11)	20:54	19:44	18:31	16:27	15:57		
12	08:27	07:42	06:40	06:26	05:23	04:48		04:48	20:14 (WEA 12)	05:02	20:21 (WEA 12)	05:49	06:43	07:36	07:34	08:21		
	16:22	17:19	18:13	20:10	21:03	21:44	41	20:55 (WEA 11)	21:40	38	20:59 (WEA 11)	20:52	19:41	18:29	16:25	15:57		
13	08:26	07:40	06:38	06:23	05:21	04:48		04:48	20:14 (WEA 12)	05:03	20:21 (WEA 12)	05:51	06:44	07:37	07:36	08:22		
	16:23	17:21	18:15	20:11	21:05	21:44	40	20:54 (WEA 11)	21:40	37	20:58 (WEA 11)	20:50	19:39	18:26	16:24	15:57		
14	08:25	07:38	06:35	06:21	05:19	04:47		04:47	20:14 (WEA 12)	05:04	20:21 (WEA 12)	05:52	06:46	07:39	07:38	08:23		
	16:25	17:23	18:17	20:13	21:06	21:45	40	20:54 (WEA 11)	21:39	37	20:58 (WEA 11)	20:48	19:36	18:24	16:22	15:57		
15	08:24	07:36	06:33	06:19	05:18	04:47		04:47	20:14 (WEA 12)	05:05	20:22 (WEA 12)	05:54	06:48	07:41	07:39	08:24		
	16:26	17:25	18:19	20:15	21:08	21:45	41	20:55 (WEA 11)	21:37	35	20:57 (WEA 11)	20:46	19:34	18:22	16:21	15:57		
16	08:23	07:34	06:30	06:16	05:16	04:47		04:47	20:15 (WEA 12)	05:07	20:22 (WEA 12)	05:56	06:50	07:43	07:41	08:25		
	16:28	17:27	18:20	20:17	21:10	21:46	40	20:55 (WEA 11)	21:36	35	20:57 (WEA 11)	20:44	19:31	18:20	16:19	15:57		
17	08:22	07:32	06:28	06:14	05:14	04:47		04:47	20:15 (WEA 12)	05:08	20:23 (WEA 12)	05:58	06:51	07:45	07:43	08:26		
	16:30	17:29	18:22	20:19	21:11	21:47	40	20:55 (WEA 11)	21:35	34	20:57 (WEA 11)	20:42	19:29	18:17	16:18	15:57		
18	08:21	07:30	06:26	06:12	05:13	04:47		04:47	20:15 (WEA 12)	05:09	20:24 (WEA 12)	05:59	06:53	07:47	07:45	08:27		
	16:31	17:31	18:24	20:20	21:13	21:47	40	20:55 (WEA 11)	21:34	32	20:56 (WEA 11)	20:39	19:27	18:15	16:16	15:57		
19	08:20	07:28	06:23	06:09	05:11	04:47		04:47	20:15 (WEA 12)	05:11	20:24 (WEA 12)	06:01	06:55	07:48	07:47	08:28		
	16:33	17:33	18:26	20:22	21:15	9	20:30 (WEA 12)	21:47	41	20:56 (WEA 11)	21:33	30	20:54 (WEA 11)	20:37	19:24	18:13	16:15	15:58
20	08:19	07:26	06:21	06:07	05:10	04:47		04:47	20:15 (WEA 12)	05:12	20:25 (WEA 12)	06:03	06:56	07:50	07:49	08:28		
	16:35	17:35	18:28	20:24	21:16	14	20:33 (WEA 12)	21:48	41	20:56 (WEA 11)	21:32	27	20:52 (WEA 11)	20:35	19:22	18:11	16:14	15:58
21	08:18	07:24	06:18	06:05	05:08	04:47		04:47	20:15 (WEA 12)	05:13	20:26 (WEA 12)	06:04	06:58	07:52	07:50	08:29		
	16:37	17:37	18:30	20:26	21:18	17	20:35 (WEA 12)	21:48	41	20:56 (WEA 11)	21:30	21	20:47 (WEA 12)	20:33	19:19	18:08	16:12	15:58
22	08:17	07:21	06:16	06:03	05:07	04:47		04:47	20:16 (WEA 12)	05:15	20:27 (WEA 12)	06:06	07:00	07:54	07:52	08:29		
	16:39	17:39	18:31	20:28	21:19	19	20:35 (WEA 12)	21:48	41	20:57 (WEA 11)	21:29	18	20:45 (WEA 12)	20:31	19:17	18:06	16:11	15:59
23	08:16	07:19	06:14	06:01	05:05	04:48		04:48	20:16 (WEA 12)	05:16	20:28 (WEA 12)	06:08	07:02	07:56	07:54	08:30		
	16:40	17:41	18:33	20:29	21:21	26	20:41 (WEA 11)	21:48	41	20:57 (WEA 11)	21:27	16	20:44 (WEA 12)	20:28	19:14	18:04	16:10	15:59
24	08:14	07:17	06:11	05:58	05:04	04:48		04:48	20:16 (WEA 12)	05:18	20:31 (WEA 12)	06:10	07:03	07:58	07:56	08:30		
	16:42	17:43	18:35	20:31	21:22	29	20:44 (WEA 11)	21:48	40	20:56 (WEA 11)	21:26	11	20:42 (WEA 12)	20:26	19:12	18:02	16:09	16:00
25	08:13	07:15	06:09	05:56	05:03	04:48		04:48	20:17 (WEA 12)	05:19	20:33 (WEA 12)	06:11	07:05	07:00	07:57	08:31		
	16:44	17:45	18:37	20:33	21:24	31	20:45 (WEA 11)	21:48	40	20:57 (WEA 11)	21:24	6	20:39 (WEA 12)	20:24	19:09	17:00	16:08	16:01
26	08:11	07:13	06:06	05:54	05:02	04:49		04:49	20:17 (WEA 12)	05:21	20:37 (WEA 12)	06:13	07:07	07:02	07:59	08:31		
	16:46	17:46	18:39	20:35	21:25	33	20:47 (WEA 11)	21:48	40	20:57 (WEA 11)	21:23		20:22	19:07	16:58	16:07	16:01	
27	08:10	07:10	06:04	05:52	05:00	04:49		04:49	20:17 (WEA 12)	05:22	20:37 (WEA 12)	06:15	07:09	07:03	07:58	08:31		
	16:48	17:48	18:40	20:37	21:26	34	20:48 (WEA 11)	21:48	41	20:58 (WEA 11)	21:21		20:19	19:05	16:56	16:06	16:02	
28	08:08	07:08	06:01	05:50	04:59	04:50		04:50	20:17 (WEA 12)	05:24	20:37 (WEA 12)	06:17	07:10	07:05	08:02	08:31		
	16:50	17:50	18:42	20:38	21:28	36	20:49 (WEA 11)	21:48	41	20:58 (WEA 11)	21:20		20:17	19:02	16:53	16:05	16:03	
29	08:07		06:59	05:48	04:58	04:50		04:50	20:18 (WEA 12)	05:26	20:38 (WEA 12)	06:18	07:12	07:07	08:04	08:32		
	16:52		19:44	20:40	21:29	36	20:49 (WEA 11)	21:48	40	20:58 (WEA 11)	21:18		20:15	19:00	16:51	16:04	16:04	
30	08:05		06:57	05:46	04:57	04:51		04:51	20:17 (WEA 12)	05:27	20:37 (WEA 12)	06:20	07:14	07:09	08:05	08:32		
	16:54		19:46	20:42	21:30	37	20:50 (WEA 11)	21:48	41	20:58 (WEA 11)	21:16		20:12	18:57	16:49	16:03	16:05	
31	08:04		06:54		04:56	04:50		04:50	20:13 (WEA 12)			05:29	06:22		07:11		08:32	
	16:56		19:48		21:32	37	20:50 (WEA 11)				21:15		20:10		16:47		16:06	
Sonnenscheinstunden	252	274	367	419	492	507		507		510		458	382	329	261	236		
astr. max.mögl.Beschattung					358	1206		1206		813								

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CN - Hauptstraße 30

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember					
1	08:32	08:02	07:06	06:52	05:44	04:55	20:15 (WEA 12)	04:51	20:20 (WEA 12)	05:30	06:24	07:16	07:13	08:07			
	16:07	16:57	17:52	19:50	20:44	21:33	37	20:52 (WEA 11)	21:47	40	21:00 (WEA 11)	21:13	20:08	18:55	16:45	16:02	
2	08:31	08:01	07:03	06:49	05:42	04:54	20:16 (WEA 12)	04:52	20:21 (WEA 12)	05:32	06:25	07:18	07:15	08:08			
	16:08	16:59	17:54	19:51	20:46	21:34	37	20:53 (WEA 11)	21:47	39	21:00 (WEA 11)	21:11	20:05	18:53	16:43	16:01	
3	08:31	07:59	07:01	06:47	05:40	04:53	20:16 (WEA 12)	04:53	20:20 (WEA 12)	05:34	06:27	07:19	07:17	08:10			
	16:09	17:01	17:56	19:53	20:47	21:35	37	20:53 (WEA 11)	21:47	40	21:00 (WEA 11)	21:10	20:03	18:50	16:42	16:01	
4	08:31	07:57	06:59	06:45	05:38	04:53	20:15 (WEA 12)	04:54	20:21 (WEA 12)	05:35	06:29	07:21	07:19	08:11			
	16:10	17:03	17:58	19:55	20:49	21:36	38	20:53 (WEA 11)	21:46	39	21:00 (WEA 11)	21:08	20:01	18:48	16:40	16:00	
5	08:31	07:55	06:57	06:42	05:36	04:52	20:16 (WEA 12)	04:55	20:21 (WEA 12)	05:37	06:31	07:23	07:21	08:13			
	16:12	17:05	18:00	19:57	20:51	21:37	38	20:54 (WEA 11)	21:46	39	21:00 (WEA 11)	21:06	19:58	18:45	16:38	15:59	
6	08:30	07:54	06:54	06:40	05:34	04:51	20:15 (WEA 12)	04:55	20:22 (WEA 12)	05:39	06:32	07:25	07:22	08:14			
	16:13	17:07	18:02	19:59	20:53	21:38	39	20:54 (WEA 11)	21:45	39	21:01 (WEA 11)	21:04	19:56	18:43	16:36	15:59	
7	08:30	07:52	06:52	06:37	05:32	04:50	20:15 (WEA 12)	04:56	20:22 (WEA 12)	05:40	06:34	07:26	07:24	08:15			
	16:14	17:09	18:04	20:00	20:54	21:39	39	20:54 (WEA 11)	21:44	39	21:01 (WEA 11)	21:02	19:53	18:41	16:34	15:58	
8	08:29	07:50	06:49	06:35	05:30	04:50	20:16 (WEA 12)	04:57	20:23 (WEA 12)	05:42	06:36	07:28	07:26	08:17			
	16:16	17:11	18:05	20:02	20:56	21:40	39	20:55 (WEA 11)	21:44	38	21:01 (WEA 11)	21:00	19:51	18:38	16:32	15:58	
9	08:29	07:48	06:47	06:33	05:28	04:49	20:16 (WEA 12)	04:58	20:23 (WEA 12)	05:44	06:37	07:30	07:28	08:18			
	16:17	17:13	18:07	20:04	20:58	21:41	40	20:56 (WEA 11)	21:43	38	21:01 (WEA 11)	20:58	19:48	18:36	16:31	15:58	
10	08:28	07:46	06:45	06:30	05:26	04:49	20:16 (WEA 12)	04:59	20:23 (WEA 12)	05:45	06:39	07:32	07:30	08:19			
	16:19	17:15	18:09	20:06	21:00	21:42	39	20:55 (WEA 11)	21:42	37	21:00 (WEA 11)	20:56	19:46	18:33	16:29	15:57	
11	08:28	07:44	06:42	06:28	05:24	04:48	20:16 (WEA 12)	05:01	20:24 (WEA 12)	05:47	06:41	07:34	07:32	08:20			
	16:20	17:17	18:11	20:08	21:01	21:43	40	20:56 (WEA 11)	21:41	36	21:00 (WEA 11)	20:54	19:44	18:31	16:27	15:57	
12	08:27	07:42	06:40	06:26	05:23	04:48	20:17 (WEA 12)	05:02	20:24 (WEA 12)	05:49	06:43	07:36	07:34	08:21			
	16:22	17:19	18:13	20:10	21:03	21:44	39	20:56 (WEA 11)	21:40	36	21:00 (WEA 11)	20:52	19:41	18:29	16:25	15:57	
13	08:26	07:40	06:38	06:23	05:21	04:48	20:16 (WEA 12)	05:03	20:24 (WEA 12)	05:51	06:44	07:37	07:36	08:22			
	16:23	17:21	18:15	20:11	21:05	21:44	40	20:56 (WEA 11)	21:40	35	20:59 (WEA 11)	20:50	19:39	18:26	16:24	15:57	
14	08:25	07:38	06:35	06:21	05:19	04:47	20:16 (WEA 12)	05:04	20:25 (WEA 12)	05:52	06:46	07:39	07:38	08:23			
	16:25	17:23	18:17	20:13	21:06	21:45	40	20:56 (WEA 11)	21:39	34	20:59 (WEA 11)	20:48	19:36	18:24	16:22	15:57	
15	08:24	07:36	06:33	06:19	05:18	04:47	20:17 (WEA 12)	05:05	20:25 (WEA 12)	05:54	06:48	07:41	07:39	08:24			
	16:26	17:25	18:19	20:15	21:08	21:45	40	20:57 (WEA 11)	21:37	33	20:58 (WEA 11)	20:46	19:34	18:22	16:21	15:57	
16	08:23	07:34	06:30	06:16	05:16	04:47	20:17 (WEA 12)	05:07	20:25 (WEA 12)	05:56	06:50	07:43	07:41	08:25			
	16:28	17:27	18:20	20:17	21:10	21:46	40	20:57 (WEA 11)	21:36	32	20:57 (WEA 11)	20:44	19:31	18:20	16:19	15:57	
17	08:22	07:32	06:28	06:14	05:14	04:47	20:17 (WEA 12)	05:08	20:27 (WEA 12)	05:58	06:51	07:45	07:43	08:26			
	16:30	17:29	18:22	20:19	21:11	21:47	40	20:57 (WEA 11)	21:35	30	20:57 (WEA 11)	20:42	19:29	18:17	16:18	15:57	
18	08:21	07:30	06:26	06:12	05:13	04:47	20:17 (WEA 12)	05:09	20:28 (WEA 12)	05:59	06:53	07:47	07:45	08:27			
	16:31	17:31	18:24	20:20	21:13	21:47	40	20:57 (WEA 11)	21:34	27	20:55 (WEA 11)	20:39	19:27	18:15	16:16	15:57	
19	08:20	07:28	06:23	06:09	05:11	04:47	20:17 (WEA 12)	05:11	20:28 (WEA 12)	06:01	06:55	07:48	07:47	08:28			
	16:33	17:33	18:26	20:22	21:15	21:47	40	20:57 (WEA 11)	21:33	23	20:52 (WEA 11)	20:37	19:24	18:13	16:15	15:58	
20	08:19	07:26	06:21	06:07	05:10	04:47	20:18 (WEA 12)	05:12	20:29 (WEA 12)	06:03	06:56	07:50	07:49	08:28			
	16:35	17:35	18:28	20:24	21:16	21:48	40	20:58 (WEA 11)	21:32	18	20:47 (WEA 12)	20:35	19:22	18:11	16:14	15:58	
21	08:18	07:24	06:18	06:05	05:08	04:47	20:18 (WEA 12)	05:13	20:31 (WEA 12)	06:04	06:58	07:52	07:50	08:29			
	16:37	17:37	18:30	20:26	21:18	10	20:34 (WEA 12)	21:48	40	20:58 (WEA 11)	21:30	20:47 (WEA 12)	20:33	19:19	18:08	16:12	15:58
22	08:17	07:21	06:16	06:03	05:07	04:47	20:21 (WEA 12)	05:15	20:32 (WEA 12)	06:06	07:00	07:54	07:52	08:29			
	16:39	17:39	18:31	20:28	21:19	14	20:35 (WEA 12)	21:48	40	20:59 (WEA 11)	21:29	20:45 (WEA 12)	20:31	19:17	18:06	16:11	15:59
23	08:16	07:19	06:14	06:01	05:05	04:48	20:20 (WEA 12)	05:16	20:35 (WEA 12)	06:08	07:02	07:56	07:54	08:30			
	16:40	17:41	18:33	20:29	21:21	17	20:37 (WEA 12)	21:48	41	20:59 (WEA 11)	21:27	20:42 (WEA 12)	20:28	19:14	18:04	16:10	15:59
24	08:14	07:17	06:11	05:58	05:04	04:48	20:19 (WEA 12)	05:18	20:36 (WEA 12)	06:10	07:03	07:58	07:56	08:30			
	16:42	17:43	18:35	20:31	21:22	19	20:38 (WEA 12)	21:48	40	20:58 (WEA 11)	21:26	20:26	19:12	18:02	16:09	16:00	
25	08:13	07:15	06:09	05:56	05:03	04:48	20:18 (WEA 12)	05:19	20:39 (WEA 12)	06:11	07:05	07:00	07:57	08:31			
	16:44	17:45	18:37	20:33	21:24	26	20:44 (WEA 11)	21:48	40	20:59 (WEA 11)	21:24	20:24	19:09	17:00	16:08	16:01	
26	08:11	07:13	06:06	05:54	05:02	04:49	20:18 (WEA 12)	05:21	20:40 (WEA 12)	06:13	07:07	07:02	07:59	08:31			
	16:46	17:46	18:39	20:35	21:25	28	20:46 (WEA 11)	21:48	40	20:59 (WEA 11)	21:23	20:22	19:07	16:58	16:07	16:01	
27	08:10	07:10	06:04	05:52	05:00	04:49	20:17 (WEA 12)	05:22	20:40 (WEA 12)	06:15	07:09	07:03	07:58	08:31			
	16:48	17:48	18:40	20:37	21:26	31	20:48 (WEA 11)	21:48	40	21:00 (WEA 11)	21:21	20:19	19:05	16:56	16:06	16:02	
28	08:08	07:08	06:01	05:50	04:59	04:50	20:17 (WEA 12)	05:24	20:41 (WEA 12)	06:17	07:10	07:05	08:02	08:31			
	16:50	17:50	18:42	20:38	21:28	32	20:49 (WEA 11)	21:48	40	20:59 (WEA 11)	21:20	20:17	19:02	16:53	16:05	16:03	
29	08:07		06:59	05:48	04:58	04:50	20:16 (WEA 12)	05:26	20:40 (WEA 12)	06:26	07:19	07:12	08:04	08:32			
	16:52		19:44	20:40	21:29	34	20:50 (WEA 11)	21:48	40	21:00 (WEA 11)	21:18	20:15	19:00	16:51	16:04	16:04	
30	08:05		06:57	05:46	04:57	04:51	20:16 (WEA 12)	05:27	20:40 (WEA 12)	06:27	07:14	07:09	08:05	08:32			
	16:54		19:46	20:42	21:30	35	20:51 (WEA 11)	21:48	40	21:00 (WEA 11)	21:16	20:12	18:57	16:49	16:03	16:05	
31	08:04		06:54		04:56	04:50	20:16 (WEA 12)				05:29	06:22		07:11		08:32	
	16:56		19:48		21:32	35	20:51 (WEA 11)				21:15	20:10		16:47		16:06	
Sonnenscheinstunden	252	274	367	419	492	507		510		458	382	329	261	236			
astr. max. mögl. Beschattung					281	1183		728									

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CO - Zum Schloß 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember		
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	20:35 (WEA 12) 20:47 (WEA 12)	04:51 21:47	31 21:06 (WEA 11)	05:30 21:13	06:24 20:08	07:16 18:55	08:07 16:45	16:02
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34	20:35 (WEA 12) 20:49 (WEA 12)	04:52 21:47	31 21:07 (WEA 11)	05:32 21:11	06:25 20:05	07:18 18:53	08:08 16:43	16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35	20:34 (WEA 12) 20:55 (WEA 11)	04:53 21:47	30 21:06 (WEA 11)	05:34 21:10	06:27 20:03	07:19 18:50	08:10 16:42	16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	20:33 (WEA 12) 20:56 (WEA 11)	04:54 21:46	29 21:07 (WEA 11)	05:35 21:08	06:29 20:01	07:21 18:48	08:11 16:40	16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	20:33 (WEA 12) 20:58 (WEA 11)	04:55 21:46	29 21:06 (WEA 11)	05:37 21:06	06:31 19:58	07:23 18:45	08:13 16:38	15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	20:32 (WEA 12) 20:59 (WEA 11)	04:55 21:45	27 21:05 (WEA 11)	05:39 21:04	06:32 19:56	07:25 18:43	08:14 16:36	15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 21:39	20:31 (WEA 12) 20:59 (WEA 11)	04:56 21:44	26 21:05 (WEA 11)	05:40 21:02	06:34 19:53	07:27 18:41	08:15 16:34	15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 21:40	20:32 (WEA 12) 21:00 (WEA 11)	04:57 21:44	24 21:04 (WEA 11)	05:42 21:00	06:36 19:51	07:28 18:38	08:17 16:32	15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	20:32 (WEA 12) 21:01 (WEA 11)	04:58 21:43	22 21:03 (WEA 11)	05:44 20:58	06:37 19:48	07:30 18:36	08:18 16:31	15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	20:31 (WEA 12) 21:01 (WEA 11)	04:59 21:42	18 21:01 (WEA 11)	05:45 20:56	06:39 19:46	07:32 18:33	08:19 16:29	15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43	20:31 (WEA 12) 21:02 (WEA 11)	05:01 21:41	13 20:56 (WEA 12)	05:47 20:54	06:41 19:44	07:34 18:31	08:20 16:27	15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	20:32 (WEA 12) 21:03 (WEA 11)	05:02 21:40	11 20:55 (WEA 12)	05:49 20:52	06:43 19:41	07:36 18:29	08:21 16:26	15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44	20:31 (WEA 12) 21:03 (WEA 11)	05:03 21:40	6 20:53 (WEA 12)	05:51 20:50	06:44 19:39	07:37 18:26	08:22 16:24	15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 21:45	20:31 (WEA 12) 21:03 (WEA 11)	05:04 21:39		05:52 20:48	06:46 19:36	07:39 18:24	08:23 16:22	15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:45	20:31 (WEA 12) 21:04 (WEA 11)	05:05 21:37		05:54 20:46	06:48 19:34	07:41 18:22	08:24 16:21	15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46	20:31 (WEA 12) 21:04 (WEA 11)	05:07 21:36		05:56 20:44	06:50 19:31	07:43 18:20	08:25 16:19	15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	20:32 (WEA 12) 21:04 (WEA 11)	05:08 21:35		05:58 20:42	06:51 19:29	07:45 18:17	08:26 16:18	15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	20:32 (WEA 12) 21:05 (WEA 11)	05:09 21:34		05:59 20:39	06:53 19:27	07:47 18:15	08:27 16:16	15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47	20:32 (WEA 12) 21:05 (WEA 11)	05:11 21:33		06:01 20:37	06:55 19:24	07:48 18:13	08:28 16:15	15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	20:32 (WEA 12) 21:05 (WEA 11)	05:12 21:32		06:03 20:35	06:56 19:22	07:50 18:11	08:28 16:14	15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	20:32 (WEA 12) 21:05 (WEA 11)	05:13 21:30		06:04 20:33	06:58 19:19	07:52 18:08	08:29 16:12	15:58
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	20:33 (WEA 12) 21:06 (WEA 11)	05:15 21:29		06:06 20:31	07:00 19:17	07:54 18:06	08:29 16:11	15:59
23	08:15 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	04:48 21:48	20:33 (WEA 12) 21:06 (WEA 11)	05:16 21:27		06:08 20:28	07:02 19:14	07:56 18:04	08:30 16:10	15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	20:33 (WEA 12) 21:06 (WEA 11)	05:18 21:26		06:10 20:26	07:03 19:12	07:58 18:02	08:30 16:09	16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	20:34 (WEA 12) 21:06 (WEA 11)	05:19 21:24		06:11 20:24	07:05 19:09	07:00 17:00	08:31 16:08	16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:48	20:33 (WEA 12) 21:06 (WEA 11)	05:21 21:23		06:13 20:22	07:07 19:07	07:02 16:58	08:31 16:07	16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:48	20:34 (WEA 12) 21:07 (WEA 11)	05:22 21:21		06:15 20:19	07:09 19:05	07:03 16:56	08:31 16:06	16:02
28	08:08 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	20:34 (WEA 12) 21:06 (WEA 11)	05:24 21:20		06:17 20:17	07:10 19:02	07:05 16:53	08:32 16:05	16:03
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	20:35 (WEA 12) 21:07 (WEA 11)	05:26 21:18		06:18 20:15	07:12 19:00	07:07 16:51	08:32 16:04	16:04
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30		20:41 (WEA 12) 20:42 (WEA 12)	04:51 21:48		06:20 20:12	07:14 18:57	07:09 16:49	08:32 16:03	16:05
31	08:04 16:56		06:54 19:48		04:56 21:32		20:37 (WEA 12) 20:46 (WEA 12)			06:22 20:10		07:11 16:47	08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492	507	570	610	630	648	658	667	674	678
astr.max.mögl.Beschattung						10	885	927	957	978	989	994	997	998

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CP - Goldenitzer Weg 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33						
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34						
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35						
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	20:43 (WEA 12)	04:54 21:46	20:41 (WEA 11)	05:30 21:13	06:24 20:08	07:16 18:55
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	20:41 (WEA 12)	04:55 21:46	20:44 (WEA 12)	05:37 21:06	06:31 20:08	07:23 18:55
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	20:40 (WEA 12)	04:55 21:45	20:46 (WEA 12)	05:39 21:04	06:32 20:08	07:25 18:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 21:39	20:38 (WEA 12)	04:56 21:44	20:47 (WEA 12)	05:40 21:02	06:34 20:08	07:27 18:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 21:40	20:38 (WEA 12)	04:57 21:44	20:49 (WEA 12)	05:42 21:00	06:36 20:09	07:28 18:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	20:37 (WEA 12)	04:58 21:43	20:56 (WEA 12)	05:44 21:05	06:37 20:10	07:28 18:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	20:37 (WEA 12)	04:59 21:42	20:57 (WEA 12)	05:45 21:06	06:39 20:11	07:30 18:59
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43	20:37 (WEA 12)	05:01 21:41	20:58 (WEA 12)	05:47 21:07	06:41 20:12	07:34 18:59
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	20:37 (WEA 12)	05:02 21:40	20:59 (WEA 12)	05:49 21:08	06:43 20:13	07:34 18:59
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44	20:37 (WEA 12)	05:03 21:40	21:03 (WEA 11)	05:51 21:09	06:44 20:14	07:37 18:59
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 21:45	20:37 (WEA 12)	05:04 21:39	21:04 (WEA 11)	05:52 21:10	06:46 20:15	07:38 18:59
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:45	20:37 (WEA 12)	05:05 21:37	21:04 (WEA 11)	05:54 21:11	06:48 20:16	07:39 18:59
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46	20:37 (WEA 12)	05:07 21:36	21:05 (WEA 11)	05:56 21:12	06:50 20:17	07:41 18:59
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	20:37 (WEA 12)	05:08 21:35	21:05 (WEA 11)	05:58 21:13	06:51 20:18	07:45 18:59
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	20:37 (WEA 12)	05:09 21:34	21:06 (WEA 11)	05:59 21:14	06:53 20:19	07:47 18:59
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47	20:37 (WEA 12)	05:11 21:33	21:06 (WEA 11)	06:01 21:15	06:55 20:20	07:48 18:59
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	20:37 (WEA 12)	05:12 21:32	21:06 (WEA 11)	06:03 21:16	06:56 20:21	07:50 18:59
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	20:37 (WEA 12)	05:13 21:30	21:06 (WEA 11)	06:04 21:19	06:58 20:22	07:50 18:59
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	20:37 (WEA 12)	05:15 21:29	21:07 (WEA 11)	06:06 21:20	07:00 20:23	07:52 18:59
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	04:48 21:48	20:37 (WEA 12)	05:16 21:27	21:08 (WEA 11)	06:08 21:28	07:02 20:24	07:54 18:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	20:37 (WEA 12)	05:18 21:26	21:08 (WEA 11)	06:10 21:26	07:03 20:26	07:56 18:59
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	20:37 (WEA 12)	05:19 21:24	21:09 (WEA 11)	06:11 21:24	07:05 20:27	07:57 18:59
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:48	20:37 (WEA 12)	05:21 21:23	21:10 (WEA 11)	06:13 21:22	07:07 20:28	07:59 18:59
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:48	20:40 (WEA 12)	05:22 21:21	21:11 (WEA 11)	06:15 21:19	07:09 20:29	08:01 18:59
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	20:40 (WEA 12)	05:24 21:20	21:12 (WEA 11)	06:17 21:17	07:10 20:30	08:02 18:59
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	20:41 (WEA 12)	05:26 21:18	21:13 (WEA 11)	06:18 21:15	07:12 20:31	08:04 18:59
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48	20:40 (WEA 12)	05:27 21:16	21:14 (WEA 11)	06:20 21:12	07:14 20:32	08:05 18:59
31	08:04 16:56		06:54 19:48		04:56 21:32			05:29 21:15		06:22 20:10	07:11 20:33	08:32 18:59
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung						664	145					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CQ - Hauptstraße 31

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember		
1	08:32	08:02	07:06	06:52	05:44			04:55		20:25 (WEA 12)	04:51	20:28 (WEA 12)	05:30	06:24	07:16	07:13	08:07	
	16:07	16:57	17:52	19:50	20:44			21:33	28	20:53 (WEA 11)	21:47	36	21:04 (WEA 11)	21:13	20:08	18:55	16:45	16:02
2	08:31	08:01	07:03	06:49	05:42			04:54		20:25 (WEA 12)	04:52	20:29 (WEA 12)	05:32	06:25	07:18	07:15	08:08	
	16:08	16:59	17:54	19:51	20:46			21:34	30	20:55 (WEA 11)	21:47	35	21:04 (WEA 11)	21:11	20:05	18:53	16:43	16:01
3	08:31	07:59	07:01	06:47	05:40			04:53		20:25 (WEA 12)	04:53	20:28 (WEA 12)	05:34	06:27	07:19	07:17	08:10	
	16:09	17:01	17:56	19:53	20:47			21:35	31	20:56 (WEA 11)	21:47	36	21:04 (WEA 11)	21:10	20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38			04:53		20:24 (WEA 12)	04:54	20:29 (WEA 12)	05:35	06:29	07:21	07:19	08:11	
	16:10	17:03	17:58	19:55	20:49			21:36	32	20:56 (WEA 11)	21:46	35	21:04 (WEA 11)	21:08	20:01	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36			04:52		20:24 (WEA 12)	04:55	20:29 (WEA 12)	05:37	06:31	07:23	07:21	08:13	
	16:12	17:05	18:00	19:57	20:51			21:37	33	20:57 (WEA 11)	21:46	35	21:04 (WEA 11)	21:06	19:58	18:45	16:38	15:59
6	08:30	07:54	06:54	06:40	05:34			04:51		20:24 (WEA 12)	04:55	20:30 (WEA 12)	05:39	06:32	07:25	07:22	08:14	
	16:13	17:07	18:02	19:59	20:53			21:38	33	20:57 (WEA 11)	21:45	34	21:04 (WEA 11)	21:04	19:56	18:43	16:36	15:59
7	08:30	07:52	06:52	06:37	05:32			04:50		20:23 (WEA 12)	04:56	20:31 (WEA 12)	05:40	06:34	07:26	07:24	08:15	
	16:14	17:09	18:04	20:00	20:54			21:39	34	20:57 (WEA 11)	21:44	33	21:04 (WEA 11)	21:02	19:53	18:41	16:34	15:58
8	08:29	07:50	06:49	06:35	05:30			04:50		20:24 (WEA 12)	04:57	20:31 (WEA 12)	05:42	06:36	07:28	07:26	08:17	
	16:16	17:11	18:05	20:02	20:56			21:40	34	20:58 (WEA 11)	21:44	33	21:04 (WEA 11)	21:00	19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28			04:49		20:24 (WEA 12)	04:58	20:32 (WEA 12)	05:44	06:37	07:30	07:28	08:18	
	16:17	17:13	18:07	20:04	20:58			21:41	35	20:59 (WEA 11)	21:43	31	21:03 (WEA 11)	20:58	19:48	18:36	16:31	15:58
10	08:28	07:46	06:45	06:30	05:26			04:49		20:24 (WEA 12)	04:59	20:32 (WEA 12)	05:45	06:39	07:32	07:30	08:19	
	16:19	17:15	18:09	20:06	21:00			21:42	35	20:59 (WEA 11)	21:42	31	21:03 (WEA 11)	20:56	19:46	18:33	16:29	15:57
11	08:28	07:44	06:42	06:28	05:24			04:48		20:24 (WEA 12)	05:01	20:33 (WEA 12)	05:47	06:41	07:34	07:32	08:20	
	16:20	17:17	18:11	20:08	21:01			21:43	36	21:00 (WEA 11)	21:41	29	21:02 (WEA 11)	20:54	19:44	18:31	16:27	15:57
12	08:27	07:42	06:40	06:26	05:23			04:48		20:24 (WEA 12)	05:02	20:34 (WEA 12)	05:49	06:43	07:36	07:34	08:21	
	16:22	17:19	18:13	20:10	21:03			21:44	36	21:00 (WEA 11)	21:40	27	21:01 (WEA 11)	20:52	19:41	18:29	16:25	15:57
13	08:26	07:40	06:38	06:23	05:21			04:48		20:24 (WEA 12)	05:03	20:34 (WEA 12)	05:51	06:44	07:37	07:36	08:22	
	16:23	17:21	18:15	20:11	21:05			21:44	36	21:00 (WEA 11)	21:40	26	21:00 (WEA 11)	20:50	19:39	18:26	16:24	15:57
14	08:25	07:38	06:35	06:21	05:19			04:47		20:24 (WEA 12)	05:04	20:35 (WEA 12)	05:52	06:46	07:39	07:38	08:23	
	16:25	17:23	18:17	20:13	21:06			21:45	36	21:00 (WEA 11)	21:39	23	20:58 (WEA 11)	20:48	19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18			04:47		20:24 (WEA 12)	05:05	20:36 (WEA 12)	05:54	06:48	07:41	07:39	08:24	
	16:26	17:25	18:19	20:15	21:08			21:45	37	21:01 (WEA 11)	21:37	17	20:53 (WEA 12)	20:46	19:34	18:22	16:21	15:57
16	08:23	07:34	06:30	06:16	05:16			04:47		20:24 (WEA 12)	05:07	20:37 (WEA 12)	05:56	06:50	07:43	07:41	08:25	
	16:28	17:27	18:20	20:17	21:10			21:46	37	21:01 (WEA 11)	21:36	14	20:51 (WEA 12)	20:44	19:31	18:20	16:19	15:57
17	08:22	07:32	06:28	06:14	05:14			04:47		20:25 (WEA 12)	05:08	20:39 (WEA 12)	05:58	06:51	07:45	07:43	08:26	
	16:30	17:29	18:22	20:19	21:11			21:47	36	21:01 (WEA 11)	21:35	12	20:51 (WEA 12)	20:42	19:29	18:17	16:18	15:57
18	08:21	07:30	06:26	06:12	05:13			04:47		20:25 (WEA 12)	05:09	20:42 (WEA 12)	05:59	06:53	07:47	07:45	08:27	
	16:31	17:31	18:24	20:20	21:13			21:47	37	21:02 (WEA 11)	21:34	6	20:48 (WEA 12)	20:39	19:27	18:15	16:16	15:57
19	08:20	07:28	06:23	06:09	05:11			04:47		20:25 (WEA 12)	05:11		06:01	06:55	07:48	07:47	08:28	
	16:33	17:33	18:26	20:22	21:15			21:47	37	21:02 (WEA 11)	21:33		20:37	19:24	18:13	16:15	15:58	
20	08:19	07:26	06:21	06:07	05:10			04:47		20:25 (WEA 12)	05:12		06:03	06:56	07:50	07:49	08:28	
	16:35	17:35	18:28	20:24	21:16			21:48	37	21:02 (WEA 11)	21:32		20:35	19:22	18:11	16:14	15:58	
21	08:18	07:24	06:18	06:05	05:08			04:47		20:25 (WEA 12)	05:13		06:04	06:58	07:52	07:50	08:29	
	16:37	17:37	18:30	20:26	21:18			21:48	37	21:02 (WEA 11)	21:30		20:33	19:19	18:08	16:12	15:58	
22	08:17	07:21	06:16	06:03	05:07			04:47		20:26 (WEA 12)	05:15		06:06	07:00	07:54	07:52	08:29	
	16:39	17:39	18:31	20:28	21:19			21:48	37	21:03 (WEA 11)	21:29		20:31	19:17	18:06	16:11	15:59	
23	08:15	07:19	06:14	06:01	05:05			04:48		20:26 (WEA 12)	05:16		06:08	07:02	07:56	07:54	08:30	
	16:40	17:41	18:33	20:29	21:21			21:48	37	21:03 (WEA 11)	21:27		20:28	19:14	18:04	16:10	15:59	
24	08:14	07:17	06:11	05:58	05:04			04:48		20:26 (WEA 12)	05:18		06:10	07:03	07:58	07:56	08:30	
	16:42	17:43	18:35	20:31	21:22			21:48	37	21:03 (WEA 11)	21:26		20:26	19:12	18:02	16:09	16:00	
25	08:13	07:15	06:09	05:56	05:03			04:48		20:27 (WEA 12)	05:19		06:11	07:05	07:00	07:57	08:31	
	16:44	17:45	18:37	20:33	21:24			21:48	37	21:04 (WEA 11)	21:24		20:24	19:09	17:00	16:08	16:01	
26	08:11	07:13	06:06	05:54	05:02		20:31 (WEA 12)	04:49		20:26 (WEA 12)	05:21		06:13	07:07	07:02	07:59	08:31	
	16:46	17:46	18:39	20:35	21:25	9	20:40 (WEA 12)	21:48	37	21:03 (WEA 11)	21:23		20:27	19:07	16:58	16:07	16:01	
27	08:10	07:10	06:04	05:52	05:00			04:49		20:27 (WEA 12)	05:22		06:10	07:09	07:03	07:01	08:31	
	16:48	17:48	18:40	20:37	21:26			21:48	37	21:04 (WEA 11)	21:21		20:19	19:05	16:56	16:06	16:02	
28	08:08	07:08	06:01	05:50	04:59		20:28 (WEA 12)	04:50		20:27 (WEA 12)	05:24		06:17	07:10	07:05	08:02	08:31	
	16:50	17:50	18:42	20:38	21:28	16	20:44 (WEA 12)	21:48	37	21:04 (WEA 11)	21:20		20:17	19:02	16:53	16:05	16:03	
29	08:07		06:59	05:48	04:58		20:27 (WEA 12)	04:50		20:28 (WEA 12)	05:26		06:18	07:12	07:07	08:04	08:32	
	16:52		19:44	20:40	21:29	21	20:48 (WEA 11)	21:48	36	21:04 (WEA 11)	21:18		20:15	19:00	16:51	16:04	16:04	
30	08:05		06:57	05:46	04:57		20:26 (WEA 12)	04:51		20:27 (WEA 12)	05:27		06:20	07:14	07:09	08:05	08:32	
	16:54		19:46	20:42	21:30	25	20:51 (WEA 11)	21:48	37	21:04 (WEA 11)	21:16		20:12	18:57	16:49	16:03	16:05	
31	08:04		06:54		04:56		20:25 (WEA 12)				05:29		06:22		07:11		08:32	
	16:56		19:48		21:32	27	20:52 (WEA 11)				21:15		20:10		16:47		16:06	
Sonnenscheinstunden	252	274	367	419	492			507		510		458	382	329	261	236		
astr.max.mögl.Beschattung					111			1059			493							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CR - Zum Schloß 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:
Die Sonne scheint täglich von Sonnenauf- bis -untergang
Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33						
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34	20:43 (WEA 12)	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35	20:41 (WEA 12)	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:08 16:01
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	20:39 (WEA 12)	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 16:00
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	20:39 (WEA 12)	05:37 21:06	06:31 20:06	07:23 18:45	07:21 16:38	08:13 15:59
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	20:38 (WEA 12)	05:39 21:04	06:32 19:56	07:25 18:43	07:22 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 21:39	20:37 (WEA 12)	05:40 21:02	06:34 19:53	07:26 18:41	07:24 16:34	08:15 15:58
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 21:40	20:37 (WEA 12)	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	20:37 (WEA 12)	05:44 20:58	06:37 19:48	07:30 18:36	07:28 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	20:36 (WEA 12)	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43	20:36 (WEA 12)	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	20:36 (WEA 12)	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:26	08:21 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44	20:35 (WEA 12)	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:22 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 21:45	20:36 (WEA 12)	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:23 15:57
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:45	20:36 (WEA 12)	05:54 20:46	06:48 19:34	07:41 18:22	07:39 16:21	08:24 15:57
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46	20:36 (WEA 12)	05:56 20:44	06:50 19:31	07:43 18:20	07:41 16:19	08:25 15:57
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	20:36 (WEA 12)	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	20:36 (WEA 12)	05:59 20:39	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47	20:36 (WEA 12)	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	20:36 (WEA 12)	06:03 20:35	06:56 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	20:36 (WEA 12)	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	20:37 (WEA 12)	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:29 15:59
23	08:15 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	04:48 21:48	20:37 (WEA 12)	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	20:37 (WEA 12)	06:10 20:26	07:03 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	20:38 (WEA 12)	06:11 20:24	07:05 19:09	07:57 18:00	07:57 16:08	08:31 16:01
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:48	20:38 (WEA 12)	06:13 20:22	07:07 19:07	07:59 18:00	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:48	20:39 (WEA 12)	06:15 20:19	07:09 19:05	07:03 18:00	08:01 16:06	08:31 16:02
28	08:08 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	20:39 (WEA 12)	06:17 20:17	07:10 19:02	07:05 18:00	08:02 16:05	08:31 16:03
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	20:39 (WEA 12)	06:18 20:15	07:12 19:00	07:07 18:00	08:04 16:04	08:32 16:04
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48	20:39 (WEA 12)	06:20 20:12	07:14 18:57	07:09 18:00	08:05 16:03	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32		21:07 (WEA 11)	06:22 20:10		07:11 16:47		08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung						737	196					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CS - Goldenitzer Weg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	20:23 (WEA 12) 20:52 (WEA 11)	04:51 21:47	20:26 (WEA 12) 21:13	06:24 20:08	07:16 18:55	08:07 16:45
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34	20:23 (WEA 12) 20:54 (WEA 11)	04:52 21:47	20:26 (WEA 12) 21:11	06:25 20:05	07:18 18:53	08:08 16:43
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35	20:24 (WEA 12) 20:55 (WEA 11)	04:53 21:47	20:26 (WEA 12) 21:10	06:27 20:03	07:19 18:50	08:10 16:42
4	08:31 16:10	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	20:22 (WEA 12) 20:55 (WEA 11)	04:54 21:46	20:27 (WEA 12) 21:08	06:29 20:01	07:21 18:48	08:11 16:40
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	20:22 (WEA 12) 20:56 (WEA 11)	04:55 21:46	20:27 (WEA 12) 21:06	06:31 19:58	07:23 18:45	08:13 16:38
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	20:22 (WEA 12) 20:57 (WEA 11)	04:55 21:45	20:28 (WEA 12) 21:04	06:32 19:56	07:25 18:43	08:14 16:36
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 21:39	20:21 (WEA 12) 20:57 (WEA 11)	04:56 21:44	20:29 (WEA 12) 21:02	06:34 19:53	07:27 18:41	08:15 16:34
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 21:40	20:22 (WEA 12) 20:58 (WEA 11)	04:57 21:44	20:29 (WEA 12) 21:00	06:36 19:51	07:28 18:38	08:17 16:32
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	20:22 (WEA 12) 20:59 (WEA 11)	04:58 21:43	20:30 (WEA 12) 21:02	06:37 19:49	07:30 18:36	08:18 16:31
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	20:21 (WEA 12) 20:59 (WEA 11)	04:59 21:42	20:30 (WEA 12) 21:02	06:39 19:46	07:32 18:33	08:19 16:29
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43	20:22 (WEA 12) 20:59 (WEA 11)	05:01 21:41	20:31 (WEA 12) 21:04	06:41 19:44	07:34 18:31	08:20 16:27
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	20:22 (WEA 12) 21:00 (WEA 11)	05:02 21:40	20:32 (WEA 12) 21:05	06:43 19:41	07:36 18:29	08:21 16:26
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44	20:21 (WEA 12) 20:59 (WEA 11)	05:03 21:40	20:33 (WEA 12) 21:05	06:44 19:39	07:37 18:26	08:22 16:24
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 21:45	20:22 (WEA 12) 21:00 (WEA 11)	05:04 21:39	20:34 (WEA 12) 21:06	06:46 19:36	07:39 18:24	08:23 16:22
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:45	21:00 (WEA 11) 20:22 (WEA 12)	05:05 21:37	20:35 (WEA 12) 21:04	06:48 19:34	07:41 18:22	08:24 16:21
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46	20:22 (WEA 12) 21:01 (WEA 11)	05:07 21:36	20:36 (WEA 12) 21:04	06:50 19:31	07:43 18:20	08:25 16:19
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	20:22 (WEA 12) 21:01 (WEA 11)	05:08 21:35	20:39 (WEA 12) 21:02	06:51 19:29	07:45 18:17	08:26 16:18
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	20:22 (WEA 12) 21:01 (WEA 11)	05:09 21:34	20:40 (WEA 12) 21:03	06:53 19:27	07:47 18:15	08:27 16:16
19	08:20 16:33	07:28 17:33	06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:47	21:01 (WEA 11) 20:22 (WEA 12)	05:11 21:33	20:41 (WEA 12) 21:03	06:55 19:24	07:48 18:13	08:28 16:15
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	20:22 (WEA 12) 21:02 (WEA 11)	05:12 21:32	20:42 (WEA 12) 21:04	06:56 19:22	07:50 18:11	08:29 16:14
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	20:23 (WEA 12) 21:02 (WEA 11)	05:13 21:30	20:43 (WEA 12) 21:05	06:58 19:23	07:52 18:08	08:30 16:12
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	20:23 (WEA 12) 21:03 (WEA 11)	05:15 21:29	20:44 (WEA 12) 21:06	06:59 19:21	07:54 18:06	08:31 16:11
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:05 21:21	04:48 21:48	21:03 (WEA 11) 20:23 (WEA 12)	05:16 21:27	20:45 (WEA 12) 21:07	07:02 19:14	07:56 18:04	08:32 16:10
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	20:23 (WEA 12) 21:02 (WEA 11)	05:18 21:26	20:46 (WEA 12) 21:08	07:03 19:12	07:58 18:02	08:33 16:09
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	21:02 (WEA 11) 20:24 (WEA 12)	05:19 21:24	20:47 (WEA 12) 21:09	07:05 19:09	07:59 18:07	08:34 16:08
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49	20:24 (WEA 12) 21:03 (WEA 11)	05:21 21:23	20:48 (WEA 12) 21:10	07:07 19:07	07:59 18:07	08:35 16:07
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:49	20:25 (WEA 12) 21:04 (WEA 11)	05:22 21:21	20:49 (WEA 12) 21:12	07:08 19:05	07:03 18:06	08:36 16:06
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:49	20:27 (WEA 12) 21:03 (WEA 11)	05:24 21:20	20:50 (WEA 12) 21:12	07:10 19:02	07:05 18:53	08:37 16:05
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	20:26 (WEA 12) 20:43 (WEA 11)	05:26 21:18	20:51 (WEA 12) 21:10	07:12 19:00	07:07 18:51	08:38 16:04
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48	20:25 (WEA 12) 21:03 (WEA 11)	05:27 21:17	20:52 (WEA 12) 21:12	07:14 18:57	07:09 18:49	08:39 16:03
31	08:04 16:56		06:54 19:48		04:56 21:32	04:56 21:32	20:24 (WEA 12) 20:51 (WEA 11)	05:29 21:15	06:22 20:10	07:11 18:47	07:08 18:41	08:40 16:02
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung					101	1117	491					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CT - Goldenitzer Weg 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:57	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33						
2	08:31 16:08	08:01 16:59	07:03 17:54	06:49 19:51	05:42 20:46	04:54 21:34						
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:47	04:53 21:35						
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36						
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37						
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38						
7	08:30 16:14	07:52 17:09	06:52 18:04	06:37 20:00	05:32 20:54	04:50 21:39	20:42 (WEA 12) 20:47 (WEA 12)	04:56 21:44				
8	08:29 16:16	07:50 17:11	06:49 18:05	06:35 20:02	05:30 20:56	04:50 21:40	20:40 (WEA 12) 20:50 (WEA 12)	04:57 21:44				
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	20:40 (WEA 12) 20:51 (WEA 12)	04:58 21:43				
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	20:38 (WEA 12) 20:56 (WEA 11)	04:59 21:42				
11	08:28 16:20	07:44 17:17	06:42 18:11	06:28 20:08	05:24 21:01	04:48 21:43	20:38 (WEA 12) 20:59 (WEA 11)	05:01 21:41				
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	20:38 (WEA 12) 21:01 (WEA 11)	05:02 21:40				
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44	20:37 (WEA 12) 21:01 (WEA 11)	05:03 21:40				
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:06	04:47 21:45	20:37 (WEA 12) 21:02 (WEA 11)	05:04 21:39				
15	08:24 16:26	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:46	20:37 (WEA 12) 21:03 (WEA 11)	05:05 21:37				
16	08:23 16:28	07:34 17:27	06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46	20:37 (WEA 12) 21:03 (WEA 11)	05:07 21:36				
17	08:22 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47	20:37 (WEA 12) 21:04 (WEA 11)	05:08 21:35				
18	08:21 16:31	07:30 17:31	06:26 18:24	06:12 20:20	05:13 21:13	04:47 21:47	20:37 (WEA 12) 21:04 (WEA 11)	05:09 21:34				
19	08:20 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	04:47 21:47	20:37 (WEA 12) 21:04 (WEA 11)	05:11 21:33				
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	20:37 (WEA 12) 21:05 (WEA 11)	05:12 21:32				
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	20:37 (WEA 12) 21:05 (WEA 11)	05:13 21:30				
22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48	20:38 (WEA 12) 21:06 (WEA 11)	05:15 21:29				
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:29	05:06 21:21	04:48 21:48	20:38 (WEA 12) 21:05 (WEA 11)	05:16 21:27				
24	08:14 16:42	07:17 17:43	06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:48	20:38 (WEA 12) 21:05 (WEA 11)	05:18 21:26				
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:48	20:39 (WEA 12) 21:06 (WEA 11)	05:19 21:24				
26	08:11 16:46	07:13 17:46	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:48	20:39 (WEA 12) 21:05 (WEA 11)	05:21 21:23				
27	08:10 16:48	07:10 17:48	06:04 18:40	05:52 20:37	05:00 21:26	04:49 21:48	20:40 (WEA 12) 21:06 (WEA 11)	05:22 21:21				
28	08:09 16:50	07:08 17:50	06:01 18:42	05:50 20:38	04:59 21:28	04:50 21:48	20:40 (WEA 12) 21:05 (WEA 11)	05:24 21:20				
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	20:41 (WEA 12) 21:05 (WEA 11)	05:26 21:18				
30	08:05 16:54		06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48	20:41 (WEA 12) 21:04 (WEA 11)	05:27 21:17				
31	08:04 16:56		06:54 19:48		04:56 21:32			05:29 21:15				
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung						556	69					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CU - Goldenitzer Weg 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44		04:55		20:21 (WEA 12)	04:51	20:23 (WEA 12)	05:30	06:24	07:16	08:07
	16:07	16:57	17:52	19:50	20:44		21:33	29	20:50 (WEA 11)	21:47	40	21:03 (WEA 11)	21:13	20:08	18:55
2	08:31	08:01	07:03	06:49	05:42		04:54		20:21 (WEA 12)	04:52		20:24 (WEA 12)	05:32	06:25	07:18
	16:08	16:59	17:54	19:51	20:46		21:34	31	20:52 (WEA 11)	21:47	39	21:03 (WEA 11)	21:11	20:05	18:53
3	08:31	07:59	07:01	06:47	05:40		04:53		20:20 (WEA 12)	04:53		20:24 (WEA 12)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:47		21:35	33	20:53 (WEA 11)	21:47	38	21:02 (WEA 11)	21:10	20:03	18:50
4	08:31	07:57	06:59	06:45	05:38		04:53		20:20 (WEA 12)	04:54		20:24 (WEA 12)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49		21:36	34	20:54 (WEA 11)	21:46	38	21:02 (WEA 11)	21:08	20:01	18:48
5	08:31	07:55	06:57	06:42	05:36		04:52		20:20 (WEA 12)	04:55		20:25 (WEA 12)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51		21:37	35	20:55 (WEA 11)	21:46	37	21:02 (WEA 11)	21:06	19:58	18:45
6	08:30	07:54	06:54	06:40	05:34		04:51		20:19 (WEA 12)	04:55		20:26 (WEA 12)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53		21:38	37	20:56 (WEA 11)	21:45	36	21:02 (WEA 11)	21:04	19:56	18:43
7	08:30	07:52	06:52	06:37	05:32		04:50		20:19 (WEA 12)	04:56		20:26 (WEA 12)	05:40	06:34	07:27
	16:14	17:09	18:04	20:00	20:54		21:39	37	20:56 (WEA 11)	21:44	36	21:02 (WEA 11)	21:02	19:53	18:41
8	08:29	07:50	06:49	06:35	05:30		04:50		20:19 (WEA 12)	04:57		20:27 (WEA 12)	05:42	06:36	07:28
	16:16	17:11	18:05	20:02	20:56		21:40	38	20:57 (WEA 11)	21:44	35	21:02 (WEA 11)	21:00	19:51	18:38
9	08:29	07:48	06:47	06:33	05:28		04:49		20:20 (WEA 12)	04:58		20:28 (WEA 12)	05:44	06:37	07:30
	16:17	17:13	18:07	20:04	20:58		21:41	38	20:58 (WEA 11)	21:43	33	21:01 (WEA 11)	20:58	19:49	18:36
10	08:28	07:46	06:45	06:30	05:26		04:49		20:19 (WEA 12)	04:59		20:28 (WEA 12)	05:45	06:39	07:32
	16:19	17:15	18:09	20:06	21:00		21:42	39	20:58 (WEA 11)	21:42	32	21:00 (WEA 11)	20:56	19:46	18:33
11	08:28	07:44	06:42	06:28	05:24		04:48		20:19 (WEA 12)	05:01		20:29 (WEA 12)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01		21:43	39	20:58 (WEA 11)	21:41	30	20:59 (WEA 11)	20:54	19:44	18:31
12	08:27	07:42	06:40	06:26	05:23		04:48		20:19 (WEA 12)	05:02		20:30 (WEA 12)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03		21:44	40	20:59 (WEA 11)	21:40	28	20:58 (WEA 11)	20:52	19:41	18:29
13	08:26	07:40	06:38	06:23	05:21		04:48		20:19 (WEA 12)	05:03		20:31 (WEA 12)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05		21:44	40	20:59 (WEA 11)	21:40	23	20:55 (WEA 11)	20:50	19:39	18:26
14	08:25	07:38	06:35	06:21	05:19		04:47		20:19 (WEA 12)	05:04		20:32 (WEA 12)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:06		21:45	40	20:59 (WEA 11)	21:39	18	20:50 (WEA 12)	20:48	19:36	18:24
15	08:24	07:36	06:33	06:19	05:18		04:47		20:19 (WEA 12)	05:05		20:33 (WEA 12)	05:54	06:48	07:41
	16:26	17:25	18:19	20:15	21:08		21:46	41	21:00 (WEA 11)	21:37	15	20:48 (WEA 12)	20:46	19:34	18:22
16	08:23	07:34	06:30	06:16	05:16		04:47		20:19 (WEA 12)	05:07		20:35 (WEA 12)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10		21:46	41	21:00 (WEA 11)	21:36	11	20:46 (WEA 12)	20:44	19:31	18:20
17	08:22	07:32	06:28	06:14	05:14		04:47		20:20 (WEA 12)	05:08		20:38 (WEA 12)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11		21:47	40	21:00 (WEA 11)	21:35	7	20:45 (WEA 12)	20:42	19:29	18:17
18	08:21	07:30	06:26	06:12	05:13		04:47		20:20 (WEA 12)	05:09		05:59	06:53	07:47	07:45
	16:31	17:31	18:24	20:20	21:13		21:47	41	21:01 (WEA 11)	21:34		20:39	19:27	18:15	16:16
19	08:20	07:28	06:23	06:09	05:11		04:47		20:20 (WEA 12)	05:11		06:01	06:55	07:48	07:47
	16:33	17:33	18:26	20:22	21:15		21:47	41	21:01 (WEA 11)	21:33		20:37	19:24	18:13	16:15
20	08:19	07:26	06:21	06:07	05:10		04:47		20:20 (WEA 12)	05:12		06:03	06:56	07:50	07:49
	16:35	17:35	18:28	20:24	21:16		21:48	41	21:01 (WEA 11)	21:32		20:35	19:22	18:11	16:14
21	08:18	07:24	06:18	06:05	05:08		04:47		20:20 (WEA 12)	05:13		06:04	06:58	07:52	07:50
	16:37	17:37	18:30	20:26	21:18		21:48	41	21:01 (WEA 11)	21:30		20:33	19:19	18:08	16:12
22	08:17	07:21	06:16	06:03	05:07		04:47		20:21 (WEA 12)	05:15		06:06	07:00	07:54	07:52
	16:39	17:39	18:31	20:28	21:19		21:48	41	21:02 (WEA 11)	21:29		20:31	19:17	18:06	16:11
23	08:16	07:19	06:14	06:01	05:05		04:48		20:21 (WEA 12)	05:16		06:08	07:02	07:56	07:54
	16:40	17:41	18:33	20:29	21:21		21:48	41	21:02 (WEA 11)	21:27		20:28	19:14	18:04	16:10
24	08:14	07:17	06:11	05:58	05:04		04:48		20:21 (WEA 12)	05:18		06:10	07:03	07:58	07:56
	16:42	17:43	18:35	20:31	21:22		21:48	41	21:02 (WEA 11)	21:26		20:26	19:12	18:02	16:09
25	08:13	07:15	06:09	05:56	05:03		04:48		20:22 (WEA 12)	05:19		06:11	07:05	07:00	07:57
	16:44	17:45	18:37	20:33	21:24		21:48	40	21:02 (WEA 11)	21:24		20:24	19:09	17:00	16:08
26	08:11	07:13	06:06	05:54	05:02		04:49		20:21 (WEA 12)	05:21		06:13	07:07	07:02	07:59
	16:46	17:46	18:39	20:35	21:25		21:48	41	21:02 (WEA 11)	21:23		20:22	19:07	16:58	16:07
27	08:10	07:10	06:04	05:52	05:00		04:49		20:22 (WEA 12)	05:22		06:15	07:09	07:03	08:01
	16:48	17:48	18:40	20:37	21:26	10	20:27 (WEA 12)	21:48	41	21:03 (WEA 11)	21:21	20:19	19:05	16:56	16:06
28	08:09	07:08	06:01	05:50	04:59		20:25 (WEA 12)	04:50		20:22 (WEA 12)	05:24	06:17	07:10	07:05	08:02
	16:50	17:50	18:42	20:38	21:28	14	20:39 (WEA 12)	21:48	40	21:02 (WEA 11)	21:20	20:17	19:02	16:53	16:05
29	08:07		06:59	05:48	04:58		20:24 (WEA 12)	04:50		20:23 (WEA 12)	05:26	06:18	07:12	07:07	08:04
	16:52		19:44	20:40	21:29	16	20:40 (WEA 12)	21:48	40	21:03 (WEA 11)	21:18	20:15	19:08	16:51	16:04
30	08:05		06:57	05:46	04:57		20:23 (WEA 12)	04:51		20:23 (WEA 12)	05:27	06:20	07:14	07:09	08:05
	16:54		19:46	20:42	21:30	19	20:42 (WEA 12)	21:48	39	21:02 (WEA 11)	21:17	20:12	18:57	16:49	16:03
31	08:04		06:54		04:56		20:22 (WEA 12)					06:22		07:11	08:32
	16:56		19:48		21:32	26	20:48 (WEA 11)			05:29		20:10		16:47	16:06
Sonnenscheinstunden	252	274	367	419	492		507			510		458	382	329	261
astr. max.mögl. Beschattung					85		1160			496					236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CV - Dorfstraße 2a

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		[Januar	[Februar	[März	[April	[Mai		[Juni		[Juli		[August		[September	[Oktober	[November	[Dezember				
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	[16:07	[16:58	[17:52	[19:50	[20:44			[21:33	30	20:26 (WEA 7)	[21:48	25	20:30 (WEA 7)	[21:13	22	20:32 (WEA 7)	[21:08	[18:55	[16:46	[16:02	
2	[08:32	[08:01	[07:04	[06:49	[05:42			[04:54	19:57 (WEA 7)	[04:52	20:06 (WEA 7)	[05:32	20:10 (WEA 7)	[06:25	[07:18	[07:15	[08:09				
	[16:08	[17:00	[17:54	[19:52	[20:46			[21:34	30	20:27 (WEA 7)	[21:47	25	20:31 (WEA 7)	[21:11	20	20:30 (WEA 7)	[21:05	[18:53	[16:44	[16:01	
3	[08:31	[07:59	[07:01	[06:47	[05:40			[04:53	19:58 (WEA 7)	[04:53	20:05 (WEA 7)	[05:34	20:12 (WEA 7)	[06:27	[07:19	[07:17	[08:10				
	[16:09	[17:01	[17:56	[19:53	[20:48			[21:35	29	20:27 (WEA 7)	[21:47	26	20:31 (WEA 7)	[21:10	17	20:29 (WEA 7)	[21:03	[18:50	[16:42	[16:01	
4	[08:31	[07:57	[06:59	[06:45	[05:38			[04:53	19:58 (WEA 7)	[04:54	20:05 (WEA 7)	[05:35	20:14 (WEA 7)	[06:29	[07:21	[07:19	[08:11				
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6	[08:30	[07:54	[06:54	[06:40	[05:34			[04:51	19:59 (WEA 7)	[04:56	20:05 (WEA 7)	[05:39	20:15 (WEA 7)	[06:32	[07:25	[07:23	[08:14				
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7	[08:30	[07:52	[06:52	[06:37	[05:32			[04:51	20:00 (WEA 7)	[04:56	20:05 (WEA 7)	[05:40	20:16 (WEA 7)	[06:34	[07:27	[07:25	[08:16				
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8	[08:30	[07:50	[06:50	[06:35	[05:30		20:06 (WEA 7)	[04:50	20:00 (WEA 7)	[04:57	20:05 (WEA 7)	[05:42	20:16 (WEA 7)	[06:36	[07:28	[07:26	[08:17				
	[16:16	[17:11	[18:06	[20:02	[20:56	8	20:14 (WEA 7)	[21:40	26	20:26 (WEA 7)	[21:44	28	20:33 (WEA 7)	[21:00		20:18 (WEA 7)	[19:51	[18:38	[16:32	[15:58	
9	[08:29	[07:48	[06:47	[06:33	[05:28		20:04 (WEA 7)	[04:49	20:01 (WEA 7)	[04:59	20:05 (WEA 7)	[05:44	20:16 (WEA 7)	[06:44		20:16 (WEA 7)	[19:52	[18:36	[07:30	[07:28	[08:18
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12	[08:27	[07:42	[06:40	[06:26	[05:23		19:59 (WEA 7)	[04:48	20:02 (WEA 7)	[05:02	20:05 (WEA 7)	[05:49	20:16 (WEA 7)	[06:43	[07:36	[07:34	[08:21				
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28	[08:09	[07:08	[06:02	[05:50	[04:59		19:55 (WEA 7)	[04:50	20:05 (WEA 7)	[05:24	20:07 (WEA 7)	[06:17	20:16 (WEA 7)	[07:11	[07:05	[08:02	[08:32				
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CW - Dorfstraße 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember		
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7	[08:30 16:14	[07:52 17:09	[06:52 18:04	[06:37 20:01	[05:32 20:55	[04:51 21:39	20:04 (WEA 7) 20:34 (WEA 7)	[04:56 21:45	30 20:10 (WEA 7) 20:40 (WEA 7)	[05:40 21:02	20:34 19:53	[07:27 18:41	[07:25 16:34	[07:22 15:59
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9	[08:29 16:17	[07:48 17:13	[06:47 18:07	[06:33 20:04	[05:28 20:58	[04:49 21:41	20:05 (WEA 7) 20:33 (WEA 7)	[04:59 21:43	30 20:10 (WEA 7) 20:40 (WEA 7)	[05:44 20:58	20:37 19:49	[07:30 18:36	[07:28 16:31	[07:25 15:58
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11	[08:28 16:20	[07:44 17:17	[06:43 18:11	[06:28 20:08	[05:25 21:01	[04:48 21:43	20:12 (WEA 7) 20:20 (WEA 7)	[05:01 21:43	31 20:10 (WEA 7) 20:41 (WEA 7)	[05:47 20:54	20:39 19:44	[07:34 18:31	[07:32 16:27	[07:29 15:57
12	[08:27 16:22	[07:42 17:19	[06:40 18:13	[06:26 20:10	[05:23 21:03	[04:48 21:44	20:06 (WEA 7) 20:23 (WEA 7)	[05:02 21:41	31 20:10 (WEA 7) 20:41 (WEA 7)	[05:49 20:52	20:40 19:41	[07:36 18:29	[07:34 16:26	[07:31 15:57
13	[08:26 16:23	[07:40 17:21	[06:38 18:15	[06:23 20:11	[05:21 21:05	[04:48 21:44	20:07 (WEA 7) 20:25 (WEA 7)	[05:03 21:40	31 20:10 (WEA 7) 20:41 (WEA 7)	[05:51 20:50	20:42 19:44	[07:37 18:27	[07:36 16:24	[07:33 15:57
14	[08:25 16:25	[07:38 17:23	[06:35 18:17	[06:21 20:13	[05:19 21:07	[04:48 21:45	20:06 (WEA 7) 20:26 (WEA 7)	[05:04 21:39	31 20:10 (WEA 7) 20:41 (WEA 7)	[05:52 20:48	20:43 19:41	[07:39 18:24	[07:38 16:22	[07:35 15:57
15	[08:24 16:27	[07:36 17:25	[06:33 18:19	[06:19 20:15	[05:18 21:08	[04:47 21:46	20:06 (WEA 7) 20:27 (WEA 7)	[05:05 21:38	31 20:10 (WEA 7) 20:41 (WEA 7)	[05:54 20:46	20:44 19:34	[07:41 18:22	[07:40 16:21	[07:37 15:57
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18	[08:22 16:32	[07:30 17:31	[06:26 18:24	[06:12 20:21	[05:13 21:13	[04:47 21:47	20:03 (WEA 7) 20:30 (WEA 7)	[05:09 21:34	32 20:10 (WEA 7) 20:42 (WEA 7)	[05:59 20:40	20:47 19:27	[07:47 18:15	[07:45 16:16	[07:39 15:58
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22	[08:17 16:39	[07:22 17:39	[06:16 18:31	[06:03 20:28	[05:07 21:19	[04:47 21:48	20:01 (WEA 7) 20:31 (WEA 7)	[05:15 21:29	30 20:10 (WEA 7) 20:41 (WEA 7)	[06:06 20:31	20:51 19:17	[07:54 18:06	[07:52 16:11	[07:41 15:59
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24	[08:14 16:42	[07:17 17:43	[06:11 18:35	[05:59 20:31	[05:04 21:22	[04:48 21:48	20:01 (WEA 7) 20:32 (WEA 7)	[05:18 21:26	29 20:10 (WEA 7) 20:41 (WEA 7)	[06:10 20:26	20:53 19:04	[07:58 18:02	[07:56 16:09	[07:44 16:00
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26	[08:12 16:46	[07:13 17:47	[06:06 18:39	[05:54 20:35	[05:02 21:25	[04:49 21:49	20:01 (WEA 7) 20:32 (WEA 7)	[05:21 21:23	28 20:10 (WEA 7) 20:40 (WEA 7)	[06:13 20:22	20:55 19:07	[07:59 18:04	[07:58 16:07	[07:46 16:01
27	[08:10 16:48	[07:10 17:48	[06:04 18:41	[05:52 20:37	[05:01 21:26	[04:49 21:48	20:01 (WEA 7) 20:32 (WEA 7)	[05:23 21:22	27 20:10 (WEA 7) 20:39 (WEA 7)	[06:15 20:19	20:56 19:05	[08:01 18:05	[08:01 16:06	[07:48 16:02
28	[08:09 16:50	[07:08 17:50	[06:02 18:42	[05:50 20:39	[04:59 21:28	[04:50 21:48	20:01 (WEA 7) 20:33 (WEA 7)	[05:24 21:20	25 20:10 (WEA 7) 20:38 (WEA 7)	[06:17 20:17	20:57 19:02	[08:02 18:02	[08:02 16:05	[07:49 16:03
29	[08:07 16:52	[07:07 17:51	[06:01 18:43	[05:48 20:40	[04:58 21:29	[04:50 21:48	20:01 (WEA 7) 20:33 (WEA 7)	[05:26 21:18	22 20:10 (WEA 7) 20:37 (WEA 7)	[06:18 20:15	20:58 19:07	[08:04 18:03	[08:04 16:04	[07:51 16:04
30	[08:06 16:54	[07:06 17:52	[06:00 18:44	[05:47 20:41	[04:57 21:30	[04:51 21:48	20:01 (WEA 7) 20:33 (WEA 7)	[05:27 21:17	20 20:10 (WEA 7) 20:36 (WEA 7)	[06:20 20:12	20:59 18:57	[08:06 18:03	[08:06 16:05	[07:52 16:05
31	[08:04 16:56	[07:04 17:54	[06:00 18:46	[05:46 20:42	[04:56 21:32	[04:50 21:48	20:01 (WEA 7) 20:33 (WEA 7)	[05:29 21:15	16 20:10 (WEA 7) 20:34 (WEA 7)	[06:22 20:10	20:59 18:57	[08:07 18:04	[08:07 16:06	[07:53 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	16	382	329	261	236	
astr.max.mögl.Beschattung						556	840	885	16					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CX - Clausenheimer Weg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember	
1	08:32		09:36 (WEA 2)	08:03	07:06	06:52	05:44	04:55	04:51	05:31	06:24	07:16	07:13							07:13		08:07		09:28 (WEA 2)
	16:07	22	09:58 (WEA 2)	16:58	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:46									16:02	11	09:39 (WEA 2)
2	08:32		09:37 (WEA 2)	08:01	07:04	06:50	05:42	04:54	04:52	05:32	06:26	07:18	07:15									08:09		09:27 (WEA 2)
	16:08	21	09:58 (WEA 2)	17:00	17:54	19:52	20:46	21:34	21:48	21:12	20:06	18:53	16:44									16:01	13	09:40 (WEA 2)
3	08:32		09:38 (WEA 2)	07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:20	07:17									08:10		09:27 (WEA 2)
	16:09	21	09:59 (WEA 2)	17:02	17:56	19:54	20:48	21:36	21:47	21:10	20:03	18:50	16:42									16:01	15	09:42 (WEA 2)
4	08:31		09:38 (WEA 2)	07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19									08:12		09:26 (WEA 2)
	16:11	20	09:58 (WEA 2)	17:03	17:58	19:55	20:50	21:37	21:47	21:08	20:01	18:48	16:40									16:00	17	09:43 (WEA 2)
5	08:31		09:39 (WEA 2)	07:56	06:57	06:42	05:36	04:52	04:55	05:37	06:31	07:23	07:21									08:13		09:26 (WEA 2)
	16:12	20	09:59 (WEA 2)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:46	16:38									16:00	18	09:44 (WEA 2)
6	08:31		09:39 (WEA 2)	07:54	06:54	06:40	05:34	04:51	04:56	05:39	06:32	07:25	07:23									08:15		09:26 (WEA 2)
	16:13	20	09:59 (WEA 2)	17:07	18:02	19:59	20:53	21:39	21:46	21:04	19:56	18:43	16:36									15:59	19	09:45 (WEA 2)
7	08:30		09:41 (WEA 2)	07:52	06:52	06:38	05:32	04:51	04:56	05:41	06:34	07:27	07:25									08:16		09:26 (WEA 2)
	16:14	18	09:59 (WEA 2)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:54	18:41	16:34									15:59	20	09:46 (WEA 2)
8	08:30		09:42 (WEA 2)	07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:29	07:27									08:17		09:26 (WEA 2)
	16:16	17	09:59 (WEA 2)	17:11	18:06	20:03	20:57	21:41	21:44	21:00	19:51	18:38	16:32									15:58	20	09:46 (WEA 2)
9	08:29		09:43 (WEA 2)	07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:29									08:18		09:26 (WEA 2)
	16:17	15	09:58 (WEA 2)	17:13	18:08	20:04	20:58	21:42	21:43	20:58	19:49	18:36	16:31									15:58	21	09:47 (WEA 2)
10	08:29		09:44 (WEA 2)	07:46	06:45	06:30	05:26	04:49	05:00	05:46	06:39	07:32	07:30									08:20		09:27 (WEA 2)
	16:19	13	09:57 (WEA 2)	17:15	18:09	20:06	21:00	21:42	21:43	20:57	19:46	18:34	16:29									15:58	21	09:48 (WEA 2)
11	08:28		09:46 (WEA 2)	07:44	06:43	06:28	05:25	04:48	05:01	05:47	06:41	07:34	07:32									08:21		09:27 (WEA 2)
	16:20	11	09:57 (WEA 2)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27									15:57	22	09:49 (WEA 2)
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13	08:26			07:41	06:38	06:23	05:21	04:48	05:03	05:51	06:45	07:38	07:36									08:23		09:27 (WEA 2)
	16:23			17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24									15:57	23	09:50 (WEA 2)
14	08:26			07:39	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38									08:24		09:27 (WEA 2)
	16:25			17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22									15:57	23	09:50 (WEA 2)
15	08:25			07:37	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40									08:25		09:28 (WEA 2)
	16:27			17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21									15:57	23	09:51 (WEA 2)
16	08:24			07:34	06:31	06:17	05:16	04:47	05:07	05:56	06:50	07:43	07:42									08:26		09:28 (WEA 2)
	16:28			17:27	18:21	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19									15:57	24	09:52 (WEA 2)
17	08:23			07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:52	07:45	07:44									08:26		09:29 (WEA 2)
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19	08:21			07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47									08:28		09:29 (WEA 2)
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20	08:20			07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:51	07:49									08:29		09:30 (WEA 2)
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	16:48			17:49	18:41	20:37	21:27	21:49	21:22	20:20	19:05	16:56	16:06									16:02	23	09:56 (WEA 2)
28	08:09			07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03									08:32		09:34 (WEA 2)
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29	08:07				06:59	05:48	04:58	04:50	05:26	06:19	07:13	07:08	08:04									08:32		09:34 (WEA 2)
	16:52				19:44	20:41	21:29	21:48	21:19	20:15	19:00	16:52	16:04									16:04	23	09:57 (WEA 2)
30	08:06				06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06								</			

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** CY - Dorfstraße 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember			
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	20:01 (WEA 7) 04:52 20:34 (WEA 7) 21:48	31 20:08 (WEA 7) 05:31 20:39 (WEA 7) 21:13	4 20:25 (WEA 7) 06:24 20:29 (WEA 7) 21:08	07:16 18:55	07:13 16:46	08:07 16:02			
2	08:32 16:08	08:01 17:00	07:04 17:54	06:49 19:52	05:42 20:46	04:54 21:34	32 20:02 (WEA 7) 04:52 20:34 (WEA 7) 21:47	31 20:09 (WEA 7) 05:32 20:40 (WEA 7) 21:11	06:25 20:05	07:18 18:53	07:15 16:44	08:09 16:01			
3	08:31 16:09	07:59 17:56	07:01 18:53	06:47 19:53	05:40 20:48	04:53 21:35	32 20:02 (WEA 7) 04:53 20:34 (WEA 7) 21:47	31 20:08 (WEA 7) 05:34 20:39 (WEA 7) 21:07	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01			
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	32 20:02 (WEA 7) 04:54 20:34 (WEA 7) 21:46	31 20:08 (WEA 7) 05:35 20:40 (WEA 7) 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:11 16:00			
5	08:31 16:12	07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:37	32 20:03 (WEA 7) 04:55 20:35 (WEA 7) 21:46	31 20:09 (WEA 7) 05:37 20:40 (WEA 7) 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 16:00			
6	08:30 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:38	31 20:03 (WEA 7) 04:56 20:34 (WEA 7) 21:45	32 20:09 (WEA 7) 05:39 20:41 (WEA 7) 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59			
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11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:01	04:49 21:43	31 20:04 (WEA 7) 05:01 20:35 (WEA 7) 21:41	33 20:09 (WEA 7) 05:47 20:42 (WEA 7) 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57			
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	9 20:12 (WEA 7) 04:48 20:21 (WEA 7) 21:44	30 20:05 (WEA 7) 05:02 20:35 (WEA 7) 21:41	33 20:09 (WEA 7) 05:49 20:42 (WEA 7) 20:52	06:43 19:41	07:36 18:29	07:34 16:26	08:21 15:57			
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:11	05:21 21:05	14 20:09 (WEA 7) 04:48 20:23 (WEA 7) 21:44	31 20:04 (WEA 7) 05:03 20:35 (WEA 7) 21:40	33 20:09 (WEA 7) 05:51 20:42 (WEA 7) 20:50	06:44 19:39	07:37 18:27	07:36 16:24	08:23 15:57			
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	18 20:08 (WEA 7) 04:48 20:26 (WEA 7) 21:45	30 20:05 (WEA 7) 05:04 20:35 (WEA 7) 21:39	33 20:09 (WEA 7) 05:52 20:42 (WEA 7) 20:48	06:46 19:38	07:39 18:24	07:38 16:22	08:24 15:57			
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18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	26 20:04 (WEA 7) 04:47 20:30 (WEA 7) 21:47	30 20:06 (WEA 7) 05:09 20:36 (WEA 7) 21:34	32 20:10 (WEA 7) 05:59 20:42 (WEA 7) 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:58			
19	08:20 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	20 20:02 (WEA 7) 04:47 20:30 (WEA 7) 21:47	30 20:06 (WEA 7) 05:11 20:36 (WEA 7) 21:33	32 20:10 (WEA 7) 06:01 20:42 (WEA 7) 20:37	06:55 19:27	07:49 18:13	07:47 16:15	08:28 15:58			
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22	08:17 16:39	07:21 17:39	06:16 18:31	06:03 20:28	05:07 21:19	30 20:01 (WEA 7) 04:47 20:31 (WEA 7) 21:48	30 20:07 (WEA 7) 05:15 20:37 (WEA 7) 21:29	30 20:11 (WEA 7) 06:06 20:41 (WEA 7) 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59			
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	31 20:01 (WEA 7) 04:48 20:32 (WEA 7) 21:48	30 20:07 (WEA 7) 05:16 20:37 (WEA 7) 21:28	29 20:13 (WEA 7) 06:08 20:42 (WEA 7) 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 16:00			
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:31	05:04 21:22	30 20:01 (WEA 7) 04:48 20:32 (WEA 7) 21:48	28 20:07 (WEA 7) 05:18 20:37 (WEA 7) 21:26	28 20:13 (WEA 7) 06:10 20:41 (WEA 7) 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:30 16:00			
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	32 20:01 (WEA 7) 04:48 20:33 (WEA 7) 21:49	30 20:08 (WEA 7) 05:19 20:38 (WEA 7) 21:25	27 20:13 (WEA 7) 06:12 20:40 (WEA 7) 20:24	07:05 19:10	07:57 18:00	07:57 16:08	08:31 16:01			
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	32 20:01 (WEA 7) 04:49 20:33 (WEA 7) 21:49	29 20:08 (WEA 7) 05:21 20:37 (WEA 7) 21:23	26 20:14 (WEA 7) 06:13 20:40 (WEA 7) 20:22	07:07 19:07	07:59 18:00	07:59 16:07	08:31 16:01			
27	08:10 16:48	07:10 17:48	06:04 18:41	05:52 20:37	05:01 21:26	32 20:01 (WEA 7) 04:49 20:33 (WEA 7) 21:48	30 20:08 (WEA 7) 05:23 20:38 (WEA 7) 21:22	24 20:15 (WEA 7) 06:15 20:39 (WEA 7) 20:19	07:09 19:05	07:59 18:00	08:01 16:06	08:31 16:02			
28	08:09 16:50	07:08 17:50	06:02 18:42	05:50 20:39	04:59 21:28	33 20:01 (WEA 7) 04:50 20:34 (WEA 7) 21:48	30 20:08 (WEA 7) 05:24 20:38 (WEA 7) 21:20	22 20:16 (WEA 7) 06:17 20:38 (WEA 7) 20:17	07:11 19:02	07:05 18:00	08:02 16:05	08:32 16:03			
29	08:07 16:52	07:07 17:44	06:00 18:33	05:48 20:40	04:58 21:29	33 20:01 (WEA 7) 04:50 20:34 (WEA 7) 21:48	30 20:08 (WEA 7) 05:26 20:38 (WEA 7) 21:18	19 20:17 (WEA 7) 06:18 20:36 (WEA 7) 20:15	07:12 19:00	07:07 18:00	08:04 16:04	08:32 16:04			
30	08:06 16:54	07:06 17:46	06:00 18:35	05:46 20:42	04:57 21:30	31 20:01 (WEA 7) 04:48 20:34 (WEA 7) 21:48	30 20:08 (WEA 7) 05:27 20:38 (WEA 7) 21:17	16 20:19 (WEA 7) 06:20 20:35 (WEA 7) 20:12	07:14 18:57	07:09 18:00	08:06 16:03	08:32 16:05			
31	08:04 16:56	07:04 17:48	06:00 18:35	05:46 20:42	04:56 21:32	33 20:01 (WEA 7) 04:48 20:34 (WEA 7) 21:48	21 20:09 (WEA 7) 06:22 20:33 (WEA 7) 20:10	13 20:20 (WEA 7) 06:12 20:33 (WEA 7) 20:10	07:11 16:48	07:00 18:00	08:06 16:03	08:32 16:06			
Sonnenscheinstunden	252	274	367	419	492	542	507	510	458	4	382	329	261	236	
astr.max.mögl.Beschattung															

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: CZ - Clausenheimer Weg 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

Januar		Februar		März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	09:40 (WEA 2)	08:03	07:06	06:52	05:44	04:55	04:51	05:31	06:24	07:16	07:13	08:07
	16:07	20 10:00 (WEA 2)	16:58	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:46	16:02
2	08:32	09:41 (WEA 2)	08:01	07:04	06:50	05:42	04:54	04:52	05:32	06:26	07:18	07:15	08:09
	16:08	19 10:00 (WEA 2)	17:00	17:54	19:52	20:46	21:34	21:48	21:12	20:06	18:53	16:44	16:01
3	08:32	09:42 (WEA 2)	07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:20	07:17	08:10
	16:09	19 10:01 (WEA 2)	17:02	17:56	19:54	20:48	21:36	21:47	21:10	20:03	18:50	16:42	16:01
4	08:31	09:43 (WEA 2)	07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12
	16:11	17 10:00 (WEA 2)	17:03	17:58	19:55	20:50	21:37	21:47	21:08	20:01	18:48	16:40	16:00
5	08:31	09:44 (WEA 2)	07:56	06:57	06:42	05:36	04:52	04:55	05:37	06:31	07:23	07:21	08:13
	16:12	16 10:00 (WEA 2)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:46	16:38	16:00
6	08:31	09:45 (WEA 2)	07:54	06:54	06:40	05:34	04:51	04:56	05:39	06:32	07:25	07:23	08:15
	16:13	15 10:00 (WEA 2)	17:07	18:02	19:59	20:53	21:39	21:46	21:04	19:56	18:43	16:36	15:59
7	08:30	09:46 (WEA 2)	07:52	06:52	06:38	05:32	04:51	04:56	05:41	06:34	07:27	07:25	08:16
	16:14	14 10:00 (WEA 2)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:54	18:41	16:34	15:59
8	08:30	09:48 (WEA 2)	07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:29	07:27	08:17
	16:16	11 09:59 (WEA 2)	17:11	18:06	20:03	20:57	21:41	21:44	21:00	19:51	18:38	16:32	15:58
9	08:29	09:49 (WEA 2)	07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:29	08:18
	16:17	9 09:58 (WEA 2)	17:13	18:08	20:04	20:58	21:42	21:43	20:58	19:49	18:36	16:31	15:58
10	08:29	09:51 (WEA 2)	07:46	06:45	06:30	05:26	04:49	05:00	05:46	06:39	07:32	07:30	08:20
	16:19	5 09:56 (WEA 2)	17:15	18:09	20:06	21:00	21:42	21:43	20:57	19:46	18:34	16:29	15:58
11	08:28		07:44	06:43	06:28	05:25	04:48	05:01	05:47	06:41	07:34	07:32	08:21
	16:20		17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	15:57
12	08:27		07:43	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	08:22
	16:22		17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:42	18:29	16:26	15:57
13	08:26		07:41	06:38	06:23	05:21	04:48	05:03	05:51	06:45	07:38	07:36	08:23
	16:23		17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	15:57
14	08:26		07:39	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	08:24
	16:25		17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	15:57
15	08:25		07:37	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	08:25
	16:27		17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	15:57
16	08:24		07:34	06:31	06:17	05:16	04:47	05:07	05:56	06:50	07:43	07:42	08:26
	16:28		17:27	18:21	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	15:57
17	08:23		07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:52	07:45	07:44	08:26
	16:30		17:29	18:22	20:19	21:12	21:47	21:36	20:42	19:29	18:18	16:18	15:57
18	08:22		07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	08:27
	16:32		17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:17	15:57
19	08:21		07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	08:28
	16:33		17:33	18:26	20:23	21:15	21:48	21:33	20:38	19:24	18:13	16:15	15:58
20	08:20		07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:51	07:49	08:29
	16:35		17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	15:58
21	08:18		07:24	06:19	06:05	05:08	04:47	05:14	06:05	06:58	07:52	07:51	08:29
	16:37		17:37	18:30	20:26	21:18	21:48	21:31	20:33	19:20	18:09	16:12	15:59
22	08:17		07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:53	08:30
	16:39		17:39	18:32	20:28	21:20	21:49	21:29	20:31	19:17	18:06	16:11	15:59
23	08:16		07:19	06:14	06:01	05:06	04:48	05:16	06:08	07:02	07:56	07:54	08:30
	16:41		17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:15	18:04	16:10	15:59
24	08:15		07:17	06:11	05:59	05:04	04:48	05:18	06:10	07:04	07:58	07:56	08:31
	16:42		17:43	18:35	20:32	21:23	21:49	21:26	20:26	19:12	18:02	16:09	16:00
25	08:13		07:15	06:09	05:56	05:03	04:48	05:19	06:12	07:05	07:00	07:58	08:31
	16:44		17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	16:01
26	08:12		07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59	08:31
	16:46		17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	16:01
27	08:10		07:11	06:04	05:52	05:01	04:49	05:23	06:15	07:09	07:04	08:01	08:32
	16:48		17:49	18:41	20:37	21:27	21:49	21:22	20:20	19:05	16:56	16:06	16:02
28	08:09		07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	08:32
	16:50		17:50	18:43	20:39	21:28	21:49	21:20	20:17	19:02	16:54	16:05	16:03
29	08:07			06:59	05:48	04:58	04:50	05:26	06:19	07:13	07:08	08:04	08:32
	16:52			19:44	20:41	21:29	21:48	21:19	20:15	19:00	16:52	16:04	16:04
30	08:06			06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06	08:32
	16:54			19:46	20:42	21:31	21:48	21:17	20:13	18:58	16:50	16:03	16:05
31	08:04			06:54		04:56		05:29	06:22		07:11		08:32
	16:56			19:48		21:32		21:15	20:10		16:48		16:06
Sonnenscheinstunden		252		274	367	419	492	507	510	458	382	329	261
astr.max.mögl.Beschattung		145											571

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Minuten mit Schatten
		Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DA - Dorfstraße 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55	20:06 (WEA 7)	05:31	06:24	07:16	07:13	08:07
	16:07	16:58	17:52	19:50	20:44	21:33	33 20:39 (WEA 7)	21:48	33 20:45 (WEA 7)	21:13	20:08	18:55
2	08:32	08:01	07:04	06:49	05:42	04:54	20:06 (WEA 7)	04:52	20:12 (WEA 7)	05:32	06:25	07:18
	16:08	17:00	17:54	19:52	20:46	21:34	34 20:40 (WEA 7)	21:47	34 20:46 (WEA 7)	21:11	20:05	18:53
3	08:31	07:59	07:01	06:47	05:40	04:53	20:06 (WEA 7)	04:53	20:12 (WEA 7)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:48	21:35	34 20:40 (WEA 7)	21:47	33 20:45 (WEA 7)	21:10	20:03	18:50
4	08:31	07:57	06:59	06:45	05:38	04:53	20:06 (WEA 7)	04:54	20:12 (WEA 7)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49	21:36	33 20:39 (WEA 7)	21:46	34 20:46 (WEA 7)	21:08	20:01	18:48
5	08:31	07:55	06:57	06:42	05:36	04:52	20:07 (WEA 7)	04:55	20:12 (WEA 7)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51	21:37	33 20:40 (WEA 7)	21:46	34 20:46 (WEA 7)	21:06	19:58	18:45
6	08:30	07:54	06:54	06:40	05:34	04:51	20:06 (WEA 7)	04:56	20:13 (WEA 7)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	21:38	34 20:40 (WEA 7)	21:45	33 20:46 (WEA 7)	21:04	19:56	18:43
7	08:30	07:52	06:52	06:37	05:32	04:51	20:07 (WEA 7)	04:56	20:13 (WEA 7)	05:40	06:34	07:27
	16:14	17:09	18:04	20:01	20:55	21:39	34 20:41 (WEA 7)	21:45	34 20:47 (WEA 7)	21:02	19:53	18:41
8	08:30	07:50	06:50	06:35	05:30	04:50	20:07 (WEA 7)	04:57	20:13 (WEA 7)	05:42	06:36	07:28
	16:16	17:11	18:06	20:02	20:56	21:40	33 20:40 (WEA 7)	21:44	34 20:47 (WEA 7)	21:00	19:51	18:38
9	08:29	07:48	06:47	06:33	05:28	04:49	20:07 (WEA 7)	04:59	20:14 (WEA 7)	05:44	06:38	07:30
	16:17	17:13	18:07	20:04	20:58	21:41	34 20:41 (WEA 7)	21:43	33 20:47 (WEA 7)	20:58	19:49	18:36
10	08:28	07:46	06:45	06:30	05:26	04:49	20:07 (WEA 7)	05:00	20:14 (WEA 7)	05:46	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	21:42	34 20:41 (WEA 7)	21:42	33 20:47 (WEA 7)	20:56	19:46	18:34
11	08:28	07:44	06:43	06:28	05:25	04:49	20:08 (WEA 7)	05:01	20:14 (WEA 7)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	21:43	33 20:41 (WEA 7)	21:41	33 20:47 (WEA 7)	20:54	19:44	18:31
12	08:27	07:42	06:40	06:26	05:23	04:48	20:08 (WEA 7)	05:02	20:14 (WEA 7)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	21:44	34 20:42 (WEA 7)	21:41	33 20:47 (WEA 7)	20:52	19:41	18:29
13	08:26	07:40	06:38	06:23	05:21	04:48	20:08 (WEA 7)	05:03	20:14 (WEA 7)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05	21:44	33 20:41 (WEA 7)	21:40	33 20:47 (WEA 7)	20:50	19:39	18:27
14	08:25	07:38	06:35	06:21	05:19	04:48	20:08 (WEA 7)	05:04	20:14 (WEA 7)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:07	21:45	33 20:41 (WEA 7)	21:39	33 20:47 (WEA 7)	20:48	19:36	18:24
15	08:24	07:36	06:33	06:19	05:18	04:47	20:08 (WEA 7)	05:05	20:15 (WEA 7)	05:54	06:48	07:41
	16:27	17:25	18:19	20:15	21:08	2	20:22 (WEA 7)	21:46	34 20:42 (WEA 7)	21:38	20:26	19:34
16	08:24	07:34	06:31	06:16	05:16	04:47	20:09 (WEA 7)	05:07	20:15 (WEA 7)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	11	20:27 (WEA 7)	21:46	33 20:42 (WEA 7)	21:36	20:24	19:32
17	08:23	07:32	06:28	06:14	05:14	04:47	20:09 (WEA 7)	05:08	20:16 (WEA 7)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	16	20:29 (WEA 7)	21:47	33 20:42 (WEA 7)	21:35	20:12	19:29
18	08:22	07:30	06:26	06:12	05:13	04:47	20:09 (WEA 7)	05:09	20:16 (WEA 7)	05:59	06:53	07:47
	16:32	17:31	18:24	20:21	21:13	19	20:31 (WEA 7)	21:47	33 20:42 (WEA 7)	21:34	20:18	19:27
19	08:20	07:28	06:23	06:10	05:11	04:47	20:09 (WEA 7)	05:11	20:16 (WEA 7)	06:01	06:55	07:49
	16:33	17:33	18:26	20:22	21:15	22	20:32 (WEA 7)	21:47	33 20:42 (WEA 7)	21:33	20:16	19:24
20	08:19	07:26	06:21	06:07	05:10	04:47	20:09 (WEA 7)	05:12	20:18 (WEA 7)	06:03	06:57	07:50
	16:35	17:35	18:28	20:24	21:16	24	20:33 (WEA 7)	21:48	33 20:42 (WEA 7)	21:32	20:16	19:22
21	08:18	07:24	06:18	06:05	05:08	04:47	20:09 (WEA 7)	05:14	20:18 (WEA 7)	06:05	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	25	20:34 (WEA 7)	21:48	33 20:43 (WEA 7)	21:30	20:17	19:23
22	08:17	07:21	06:16	06:03	05:07	04:47	20:10 (WEA 7)	05:15	20:18 (WEA 7)	06:06	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	26	20:34 (WEA 7)	21:48	33 20:43 (WEA 7)	21:29	20:16	19:21
23	08:16	07:19	06:14	06:01	05:06	04:48	20:10 (WEA 7)	05:16	20:19 (WEA 7)	06:08	07:02	07:56
	16:41	17:41	18:33	20:30	21:21	28	20:35 (WEA 7)	21:48	33 20:43 (WEA 7)	21:28	20:14	19:19
24	08:14	07:17	06:11	05:59	05:04	04:48	20:10 (WEA 7)	05:18	20:20 (WEA 7)	06:10	07:04	07:58
	16:42	17:43	18:35	20:31	21:22	29	20:36 (WEA 7)	21:48	33 20:43 (WEA 7)	21:26	20:12	19:17
25	08:13	07:15	06:09	05:56	05:03	04:48	20:11 (WEA 7)	05:19	20:21 (WEA 7)	06:12	07:05	07:59
	16:44	17:45	18:37	20:33	21:24	29	20:36 (WEA 7)	21:49	33 20:44 (WEA 7)	21:25	20:10	19:15
26	08:12	07:13	06:06	05:54	05:02	04:49	20:11 (WEA 7)	05:21	20:23 (WEA 7)	06:13	07:07	07:59
	16:46	17:47	18:39	20:35	21:25	30	20:37 (WEA 7)	21:49	33 20:44 (WEA 7)	21:23	20:11	19:16
27	08:10	07:10	06:04	05:52	05:01	04:49	20:11 (WEA 7)	05:23	20:24 (WEA 7)	06:15	07:09	07:59
	16:48	17:48	18:41	20:37	21:26	32	20:38 (WEA 7)	21:48	34 20:45 (WEA 7)	21:22	20:10	19:15
28	08:09	07:08	06:02	05:50	04:59	04:50	20:11 (WEA 7)	05:24	20:25 (WEA 7)	06:17	07:11	07:59
	16:50	17:50	18:42	20:39	21:28	32	20:38 (WEA 7)	21:48	33 20:45 (WEA 7)	21:20	20:09	19:14
29	08:07		06:59	05:48	04:58	04:50	20:12 (WEA 7)	05:26	20:26 (WEA 7)	06:18	07:12	07:59
	16:52		19:44	20:40	21:29	32	20:38 (WEA 7)	21:48	33 20:45 (WEA 7)	21:18	20:15	19:10
30	08:06		06:57	05:46	04:57	04:51	20:11 (WEA 7)	05:27	20:27 (WEA 7)	06:20	07:14	07:59
	16:54		19:46	20:42	21:30	32	20:38 (WEA 7)	21:48	34 20:45 (WEA 7)	21:17	20:12	18:57
31	08:04		06:54		04:56		20:06 (WEA 7)			05:29		06:22
	16:56		19:48		21:32	33	20:39 (WEA 7)			21:15		20:10
Sonnenscheinstunden	252	274	367	419	492	422	507	510	812	458	382	329
astr.max.mögl.Beschattung												

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DB - Ausbau 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember	
1	08:32	08:03	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07	
	16:07	16:58	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:46	16:02	
2	08:32	08:01	07:04	06:50	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09	
	16:08	17:00	17:54	19:52	20:46	21:34	21:47	21:12	20:06	18:53	16:44	16:01	
3	08:32	07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:20	07:17	08:10	
	16:09	17:01	17:56	19:53	20:48	21:36	21:47	21:10	20:03	18:50	16:42	16:01	
4	08:31	07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12	
	16:11	17:03	17:58	19:55	20:50	21:37	21:47	21:08	20:01	18:48	16:40	16:00	
5	08:31	07:56	06:57	06:42	05:36	04:52	04:55	05:37	06:31	07:23	07:21	08:13	
	16:12	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	
6	08:31	07:54	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	08:14	
	16:13	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	
7	08:30	07:52	06:52	06:38	05:32	04:50	04:56	05:40	06:34	07:27	07:25	08:16	
	16:14	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:54	18:41	16:34	15:58	
8	08:30	07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:29	07:27	08:17	
	16:16	17:11	18:06	20:03	20:57	21:41	21:44	21:00	19:51	18:38	16:32	15:58	
9	08:29	07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:29	08:18	
	16:17	17:13	18:08	20:04	20:58	21:42	21:43	20:58	19:49	18:36	16:31	15:58	
10	08:29	07:46	06:45	06:30	05:26	04:49	04:59	05:46	06:39	07:32	07:30	08:20	
	16:19	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	15:57	
11	08:28	07:44	06:43	06:28	05:25	04:48	05:01	05:47	06:41	07:34	07:32	08:21	
	16:20	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	15:57	
12	08:27	07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	08:22	10:36 (WEA 1)
	16:22	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	15:57	6 10:42 (WEA 1)
13	08:26	07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:45	07:38	07:36	08:23	10:35 (WEA 1)
	16:23	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	15:57	9 10:44 (WEA 1)
14	08:26	07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	08:24	10:35 (WEA 1)
	16:25	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	15:57	10 10:45 (WEA 1)
15	08:25	07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	08:25	10:34 (WEA 1)
	16:26	17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	15:57	12 10:46 (WEA 1)
16	08:24	07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	08:26	10:34 (WEA 1)
	16:28	17:27	18:21	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	15:57	13 10:47 (WEA 1)
17	08:23	07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	08:26	10:34 (WEA 1)
	16:30	17:29	18:22	20:19	21:12	21:47	21:36	20:42	19:29	18:17	16:18	15:57	13 10:47 (WEA 1)
18	08:22	07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	08:27	10:34 (WEA 1)
	16:32	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	15:57	14 10:48 (WEA 1)
19	08:21	07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	08:28	10:35 (WEA 1)
	16:33	17:33	18:26	20:23	21:15	21:48	21:33	20:38	19:24	18:13	16:15	15:58	14 10:49 (WEA 1)
20	08:20	07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:51	07:49	08:29	10:35 (WEA 1)
	16:35	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	15:58	15 10:50 (WEA 1)
21	08:18	07:24	06:19	06:05	05:08	04:47	05:13	06:05	06:58	07:52	07:51	08:29	10:35 (WEA 1)
	16:37	17:37	18:30	20:26	21:18	21:48	21:31	20:33	19:19	18:09	16:12	15:58	15 10:50 (WEA 1)
22	08:17	07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	08:30	10:36 (WEA 1)
	16:39	17:39	18:32	20:28	21:20	21:49	21:29	20:31	19:17	18:06	16:11	15:59	15 10:51 (WEA 1)
23	08:16	07:19	06:14	06:01	05:06	04:48	05:16	06:08	07:02	07:56	07:54	08:30	10:36 (WEA 1)
	16:40	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:15	18:04	16:10	15:59	15 10:51 (WEA 1)
24	08:15	07:17	06:11	05:59	05:04	04:48	05:18	06:10	07:04	07:58	07:56	08:31	10:36 (WEA 1)
	16:42	17:43	18:35	20:32	21:22	21:49	21:26	20:26	19:12	18:02	16:09	16:00	15 10:51 (WEA 1)
25	08:13	07:15	06:09	05:56	05:03	04:48	05:19	06:12	07:05	07:00	07:58	08:31	10:38 (WEA 1)
	16:44	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	17:00	16:08	16:01	14 10:52 (WEA 1)
26	08:12	07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59	08:31	10:38 (WEA 1)
	16:46	17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	16:01	14 10:52 (WEA 1)
27	08:10	07:11	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01	08:32	10:39 (WEA 1)
	16:48	17:49	18:41	20:37	21:27	21:49	21:22	20:20	19:05	16:56	16:06	16:02	13 10:52 (WEA 1)
28	08:09	07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	08:32	10:40 (WEA 1)
	16:50	17:50	18:43	20:39	21:28	21:49	21:20	20:17	19:02	16:54	16:05	16:03	12 10:52 (WEA 1)
29	08:07		06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:08	08:04	08:32	10:41 (WEA 1)
	16:52		19:44	20:41	21:29	21:48	21:19	20:15	19:00	16:52	16:04	16:04	11 10:52 (WEA 1)
30	08:06		06:57	05:46	04:57	04:51	05:27	06:20	07:14	07:09	08:06	08:32	10:42 (WEA 1)
	16:54		19:46	20:42	21:31	21:48	21:17	20:13	18:58	16:50	16:03	16:05	10 10:52 (WEA 1)
31	08:04		06:54		04:56		05:29	06:22		07:11		08:32	10:44 (WEA 1)
	16:56		19:48		21:32		21:15	20:10		16:48		16:06	7 10:51 (WEA 1)
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236	
astr.max.mögl.Beschattung													247

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DC - Dorfstraße 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55	20:12 (WEA 7)	04:52	20:17 (WEA 7)	05:31	06:24	07:16
	16:07	16:58	17:52	19:50	20:44	21:33	31	20:43 (WEA 7)	21:48	33	20:50 (WEA 7)	21:13
2	08:32	08:01	07:04	06:49	05:42	04:54	20:12 (WEA 7)	04:52	20:18 (WEA 7)	05:32	06:25	07:18
	16:08	17:00	17:54	19:52	20:46	21:34	32	20:44 (WEA 7)	21:47	33	20:51 (WEA 7)	21:11
3	08:31	07:59	07:01	06:47	05:40	04:54	20:12 (WEA 7)	04:53	20:17 (WEA 7)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:48	21:35	32	20:44 (WEA 7)	21:47	33	20:50 (WEA 7)	21:10
4	08:31	07:57	06:59	06:45	05:38	04:53	20:12 (WEA 7)	04:54	20:18 (WEA 7)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49	21:36	32	20:44 (WEA 7)	21:46	32	20:50 (WEA 7)	21:08
5	08:31	07:55	06:57	06:42	05:36	04:52	20:12 (WEA 7)	04:55	20:18 (WEA 7)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51	21:37	33	20:45 (WEA 7)	21:46	33	20:51 (WEA 7)	21:06
6	08:30	07:54	06:54	06:40	05:34	04:51	20:12 (WEA 7)	04:56	20:18 (WEA 7)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	21:38	33	20:45 (WEA 7)	21:45	33	20:51 (WEA 7)	21:04
7	08:30	07:52	06:52	06:37	05:32	04:51	20:13 (WEA 7)	04:56	20:19 (WEA 7)	05:40	06:34	07:27
	16:14	17:09	18:04	20:01	20:55	21:39	32	20:45 (WEA 7)	21:45	32	20:51 (WEA 7)	21:02
8	08:30	07:50	06:50	06:35	05:30	04:50	20:12 (WEA 7)	04:57	20:19 (WEA 7)	05:42	06:36	07:28
	16:16	17:11	18:06	20:02	20:56	21:40	33	20:45 (WEA 7)	21:44	32	20:51 (WEA 7)	21:00
9	08:29	07:48	06:47	06:33	05:28	04:49	20:13 (WEA 7)	04:59	20:19 (WEA 7)	05:44	06:38	07:30
	16:17	17:13	18:07	20:04	20:58	21:41	33	20:46 (WEA 7)	21:43	32	20:51 (WEA 7)	20:58
10	08:28	07:46	06:45	06:30	05:26	04:49	20:12 (WEA 7)	05:00	20:20 (WEA 7)	05:46	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	21:42	33	20:45 (WEA 7)	21:42	31	20:51 (WEA 7)	20:56
11	08:28	07:44	06:43	06:28	05:25	04:49	20:13 (WEA 7)	05:01	20:20 (WEA 7)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	21:43	33	20:46 (WEA 7)	21:41	31	20:51 (WEA 7)	20:54
12	08:27	07:42	06:40	06:26	05:23	04:48	20:13 (WEA 7)	05:02	20:20 (WEA 7)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	21:44	33	20:46 (WEA 7)	21:41	31	20:51 (WEA 7)	20:52
13	08:26	07:40	06:38	06:23	05:21	04:48	20:13 (WEA 7)	05:03	20:20 (WEA 7)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05	21:44	33	20:46 (WEA 7)	21:40	31	20:51 (WEA 7)	20:50
14	08:25	07:38	06:35	06:21	05:19	04:48	20:13 (WEA 7)	05:04	20:21 (WEA 7)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:07	21:45	33	20:46 (WEA 7)	21:39	30	20:51 (WEA 7)	20:48
15	08:24	07:36	06:33	06:19	05:18	04:47	20:13 (WEA 7)	05:05	20:21 (WEA 7)	05:54	06:48	07:41
	16:27	17:25	18:19	20:15	21:08	21:46	34	20:47 (WEA 7)	21:38	29	20:50 (WEA 7)	20:46
16	08:24	07:34	06:31	06:16	05:16	04:47	20:14 (WEA 7)	05:07	20:21 (WEA 7)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	21:46	33	20:47 (WEA 7)	21:36	29	20:50 (WEA 7)	20:44
17	08:23	07:32	06:28	06:14	05:14	04:47	20:14 (WEA 7)	05:08	20:23 (WEA 7)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	21:47	33	20:47 (WEA 7)	21:35	27	20:50 (WEA 7)	20:42
18	08:22	07:30	06:26	06:12	05:13	04:47	20:14 (WEA 7)	05:09	20:23 (WEA 7)	05:59	06:53	07:47
	16:32	17:31	18:24	20:21	21:13	5	20:29 (WEA 7)	21:47	33	20:47 (WEA 7)	21:34	26
19	08:20	07:28	06:23	06:10	05:11	04:47	20:14 (WEA 7)	05:11	20:24 (WEA 7)	06:01	06:55	07:49
	16:33	17:33	18:26	20:22	21:15	12	20:32 (WEA 7)	21:47	33	20:47 (WEA 7)	21:33	25
20	08:19	07:26	06:21	06:07	05:10	04:47	20:14 (WEA 7)	05:12	20:25 (WEA 7)	06:03	06:57	07:50
	16:35	17:35	18:28	20:24	21:16	16	20:34 (WEA 7)	21:48	33	20:47 (WEA 7)	21:32	24
21	08:18	07:24	06:18	06:05	05:08	04:47	20:15 (WEA 7)	05:14	20:26 (WEA 7)	06:05	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	19	20:36 (WEA 7)	21:48	33	20:48 (WEA 7)	21:30	22
22	08:17	07:21	06:16	06:03	05:07	04:47	20:15 (WEA 7)	05:15	20:26 (WEA 7)	06:06	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	21	20:36 (WEA 7)	21:48	33	20:48 (WEA 7)	21:29	20
23	08:16	07:19	06:14	06:01	05:06	04:48	20:15 (WEA 7)	05:16	20:28 (WEA 7)	06:08	07:02	07:56
	16:41	17:41	18:33	20:30	21:21	23	20:38 (WEA 7)	21:48	33	20:48 (WEA 7)	21:28	18
24	08:14	07:17	06:11	05:59	05:04	04:48	20:15 (WEA 7)	05:18	20:30 (WEA 7)	06:10	07:04	07:58
	16:42	17:43	18:35	20:31	21:22	25	20:39 (WEA 7)	21:48	33	20:48 (WEA 7)	21:26	14
25	08:13	07:15	06:09	05:56	05:03	04:48	20:16 (WEA 7)	05:19	20:32 (WEA 7)	06:12	07:05	07:57
	16:44	17:45	18:37	20:33	21:24	26	20:40 (WEA 7)	21:49	33	20:49 (WEA 7)	21:25	9
26	08:12	07:13	06:06	05:54	05:02	04:49	20:16 (WEA 7)	05:21	20:33 (WEA 7)	06:13	07:07	07:59
	16:46	17:47	18:39	20:35	21:25	27	20:40 (WEA 7)	21:49	33	20:49 (WEA 7)	21:23	20
27	08:10	07:10	06:04	05:52	05:01	04:49	20:17 (WEA 7)	05:23	20:35 (WEA 7)	06:15	07:09	07:54
	16:48	17:48	18:41	20:37	21:26	28	20:41 (WEA 7)	21:48	33	20:50 (WEA 7)	21:22	20
28	08:09	07:08	06:02	05:50	04:59	04:50	20:16 (WEA 7)	05:24	20:36 (WEA 7)	06:17	07:11	07:05
	16:50	17:50	18:42	20:39	21:28	29	20:42 (WEA 7)	21:48	33	20:49 (WEA 7)	21:20	20
29	08:07		06:59	05:48	04:58	04:50	20:12 (WEA 7)	05:26	20:17 (WEA 7)	06:18	07:12	07:07
	16:52		19:44	20:40	21:29	30	20:42 (WEA 7)	21:48	33	20:50 (WEA 7)	21:18	20
30	08:06		06:57	05:46	04:57	04:51	20:12 (WEA 7)	05:27	20:17 (WEA 7)	06:20	07:14	07:09
	16:54		19:46	20:42	21:30	30	20:42 (WEA 7)	21:48	33	20:50 (WEA 7)	21:17	20
31	08:04		06:54		04:56		20:12 (WEA 7)			06:22		07:11
	16:56		19:48		21:32	31	20:43 (WEA 7)			21:15		16:48
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung					322	985	690					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DD - Dorfstraße 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55	20:19 (WEA 7)	04:52	20:23 (WEA 7)	05:31	06:24	07:16
	16:07	16:58	17:52	19:50	20:44	21:33	27	20:46 (WEA 7)	21:48	32	20:55 (WEA 7)	21:13
2	08:32	08:01	07:04	06:49	05:42	04:54	20:19 (WEA 7)	04:52	20:23 (WEA 7)	05:32	06:25	07:18
	16:08	17:00	17:54	19:52	20:46	21:34	29	20:48 (WEA 7)	21:47	32	20:55 (WEA 7)	21:11
3	08:31	07:59	07:01	06:47	05:40	04:54	20:19 (WEA 7)	04:53	20:23 (WEA 7)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:48	21:35	29	20:48 (WEA 7)	21:47	32	20:55 (WEA 7)	21:10
4	08:31	07:57	06:59	06:45	05:38	04:53	20:18 (WEA 7)	04:54	20:23 (WEA 7)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49	21:36	30	20:48 (WEA 7)	21:46	32	20:55 (WEA 7)	21:08
5	08:31	07:55	06:57	06:42	05:36	04:52	20:19 (WEA 7)	04:55	20:24 (WEA 7)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51	21:37	30	20:49 (WEA 7)	21:46	31	20:55 (WEA 7)	21:06
6	08:30	07:54	06:54	06:40	05:34	04:51	20:18 (WEA 7)	04:56	20:24 (WEA 7)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	21:38	31	20:49 (WEA 7)	21:45	31	20:55 (WEA 7)	21:04
7	08:30	07:52	06:52	06:37	05:32	04:51	20:19 (WEA 7)	04:57	20:25 (WEA 7)	05:41	06:34	07:27
	16:14	17:09	18:04	20:01	20:55	21:39	31	20:50 (WEA 7)	21:45	30	20:55 (WEA 7)	21:02
8	08:30	07:50	06:50	06:35	05:30	04:50	20:18 (WEA 7)	04:57	20:25 (WEA 7)	05:42	06:36	07:28
	16:16	17:11	18:06	20:02	20:56	21:40	32	20:50 (WEA 7)	21:44	30	20:55 (WEA 7)	21:00
9	08:29	07:48	06:47	06:33	05:28	04:49	20:19 (WEA 7)	04:59	20:26 (WEA 7)	05:44	06:38	07:30
	16:17	17:13	18:07	20:04	20:58	21:41	31	20:50 (WEA 7)	21:43	29	20:55 (WEA 7)	20:58
10	08:28	07:46	06:45	06:30	05:26	04:49	20:18 (WEA 7)	05:00	20:26 (WEA 7)	05:46	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	21:42	32	20:50 (WEA 7)	21:42	29	20:55 (WEA 7)	20:56
11	08:28	07:44	06:43	06:28	05:25	04:49	20:19 (WEA 7)	05:01	20:27 (WEA 7)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	21:43	32	20:51 (WEA 7)	21:41	28	20:55 (WEA 7)	20:54
12	08:27	07:42	06:40	06:26	05:23	04:48	20:19 (WEA 7)	05:02	20:27 (WEA 7)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	21:44	32	20:51 (WEA 7)	21:41	28	20:55 (WEA 7)	20:52
13	08:26	07:40	06:38	06:23	05:21	04:48	20:18 (WEA 7)	05:03	20:28 (WEA 7)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05	21:44	33	20:51 (WEA 7)	21:40	26	20:54 (WEA 7)	20:50
14	08:25	07:38	06:35	06:21	05:19	04:48	20:19 (WEA 7)	05:04	20:28 (WEA 7)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:07	21:45	32	20:51 (WEA 7)	21:39	26	20:54 (WEA 7)	20:48
15	08:24	07:36	06:33	06:19	05:18	04:47	20:19 (WEA 7)	05:05	20:29 (WEA 7)	05:54	06:48	07:41
	16:27	17:25	18:19	20:15	21:08	21:46	33	20:52 (WEA 7)	21:38	24	20:53 (WEA 7)	20:46
16	08:24	07:34	06:31	06:16	05:16	04:47	20:19 (WEA 7)	05:07	20:30 (WEA 7)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	21:46	33	20:52 (WEA 7)	21:36	22	20:52 (WEA 7)	20:44
17	08:23	07:32	06:28	06:14	05:14	04:47	20:19 (WEA 7)	05:08	20:31 (WEA 7)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	21:47	33	20:52 (WEA 7)	21:35	21	20:52 (WEA 7)	20:42
18	08:22	07:30	06:26	06:12	05:13	04:47	20:19 (WEA 7)	05:09	20:32 (WEA 7)	05:59	06:53	07:47
	16:32	17:31	18:24	20:21	21:13	21:47	33	20:52 (WEA 7)	21:34	19	20:51 (WEA 7)	20:40
19	08:20	07:28	06:23	06:10	05:11	04:47	20:20 (WEA 7)	05:11	20:33 (WEA 7)	06:01	06:55	07:49
	16:33	17:33	18:26	20:22	21:15	21:47	33	20:53 (WEA 7)	21:33	16	20:49 (WEA 7)	20:37
20	08:19	07:26	06:21	06:07	05:10	04:47	20:20 (WEA 7)	05:12	20:36 (WEA 7)	06:03	06:57	07:50
	16:35	17:35	18:28	20:24	21:16	21:48	33	20:53 (WEA 7)	21:32	13	20:49 (WEA 7)	20:35
21	08:18	07:24	06:18	06:05	05:08	04:47	20:21 (WEA 7)	05:14	20:38 (WEA 7)	06:05	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	21:48	33	20:54 (WEA 7)	21:30	8	20:46 (WEA 7)	20:33
22	08:17	07:21	06:16	06:03	05:07	04:47	20:21 (WEA 7)	05:15	20:39 (WEA 7)	06:06	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	21:48	33	20:54 (WEA 7)	21:29	20:31	19:17	18:06
23	08:16	07:19	06:14	06:01	05:06	04:48	20:21 (WEA 7)	05:16	20:40 (WEA 7)	06:08	07:02	07:56
	16:41	17:41	18:33	20:30	21:21	21:48	33	20:54 (WEA 7)	21:28	20:28	19:14	18:04
24	08:14	07:17	06:11	05:59	05:04	04:48	20:20 (WEA 7)	05:18	20:41 (WEA 7)	06:10	07:04	07:58
	16:42	17:43	18:35	20:31	21:22	21:48	33	20:53 (WEA 7)	21:26	20:26	19:12	18:02
25	08:13	07:15	06:09	05:56	05:03	04:48	20:21 (WEA 7)	05:19	20:42 (WEA 7)	06:12	07:05	07:50
	16:44	17:45	18:37	20:33	21:24	21:49	33	20:54 (WEA 7)	21:25	20:24	19:10	18:00
26	08:12	07:13	06:06	05:54	05:02	04:49	20:21 (WEA 7)	05:21	20:43 (WEA 7)	06:13	07:07	07:52
	16:46	17:47	18:39	20:35	21:25	21:49	33	20:54 (WEA 7)	21:23	20:22	19:07	18:00
27	08:10	07:10	06:04	05:52	05:01	04:49	20:22 (WEA 7)	05:23	20:44 (WEA 7)	06:15	07:09	07:54
	16:48	17:48	18:41	20:37	21:26	21:48	33	20:55 (WEA 7)	21:22	20:19	19:05	18:00
28	08:09	07:08	06:02	05:50	04:59	04:50	20:22 (WEA 7)	05:24	20:45 (WEA 7)	06:17	07:11	07:05
	16:50	17:50	18:42	20:39	21:28	21:48	32	20:54 (WEA 7)	21:20	20:17	19:02	18:00
29	08:07		06:59	05:48	04:58	04:50	20:22 (WEA 7)	05:26	20:46 (WEA 7)	06:18	07:12	07:07
	16:52		19:44	20:40	21:29	21:48	33	20:55 (WEA 7)	21:18	20:15	19:00	18:00
30	08:06		06:57	05:46	04:57	04:51	20:22 (WEA 7)	05:27	20:47 (WEA 7)	06:20	07:14	07:09
	16:54		19:46	20:42	21:30	21:48	33	20:55 (WEA 7)	21:17	20:12	18:57	18:00
31	08:04		06:54		04:56	20:19 (WEA 7)		05:29		06:22		07:11
	16:56		19:48		21:32	20:46 (WEA 7)		21:15		20:10		16:48
Sonnenscheinstunden	252	274	367	419	492	507	539	510	458	382	329	261
astr.max.mögl.Beschattung					187	958						236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DE - Dorfstraße 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55	20:13 (WEA 7)	04:52	20:18 (WEA 7)	05:31	06:24	07:16
	16:07	16:58	17:52	19:50	20:44	21:33	31	20:44 (WEA 7)	21:48	34	20:52 (WEA 7)	21:13
2	08:32	08:01	07:04	06:49	05:42	04:54	20:14 (WEA 7)	04:52	20:19 (WEA 7)	05:32	06:25	07:18
	16:08	17:00	17:54	19:52	20:46	21:34	31	20:45 (WEA 7)	21:47	33	20:52 (WEA 7)	21:11
3	08:31	07:59	07:01	06:47	05:40	04:54	20:14 (WEA 7)	04:53	20:18 (WEA 7)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:48	21:35	31	20:45 (WEA 7)	21:47	34	20:52 (WEA 7)	21:10
4	08:31	07:57	06:59	06:45	05:38	04:53	20:13 (WEA 7)	04:54	20:19 (WEA 7)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49	21:36	32	20:45 (WEA 7)	21:46	33	20:52 (WEA 7)	21:08
5	08:31	07:55	06:57	06:42	05:36	04:52	20:14 (WEA 7)	04:55	20:19 (WEA 7)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51	21:37	32	20:46 (WEA 7)	21:46	33	20:52 (WEA 7)	21:06
6	08:30	07:54	06:54	06:40	05:34	04:51	20:13 (WEA 7)	04:56	20:20 (WEA 7)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	21:38	33	20:46 (WEA 7)	21:45	32	20:52 (WEA 7)	21:04
7	08:30	07:52	06:52	06:37	05:32	04:51	20:14 (WEA 7)	04:57	20:20 (WEA 7)	05:41	06:34	07:27
	16:14	17:09	18:04	20:01	20:55	21:39	33	20:47 (WEA 7)	21:45	32	20:52 (WEA 7)	21:02
8	08:30	07:50	06:50	06:35	05:30	04:50	20:14 (WEA 7)	04:57	20:20 (WEA 7)	05:42	06:36	07:28
	16:16	17:11	18:06	20:02	20:56	21:40	33	20:47 (WEA 7)	21:44	33	20:53 (WEA 7)	21:00
9	08:29	07:48	06:47	06:33	05:28	04:49	20:14 (WEA 7)	04:59	20:21 (WEA 7)	05:44	06:38	07:30
	16:17	17:13	18:07	20:04	20:58	21:41	33	20:47 (WEA 7)	21:43	32	20:53 (WEA 7)	20:58
10	08:28	07:46	06:45	06:30	05:26	04:49	20:14 (WEA 7)	05:00	20:21 (WEA 7)	05:46	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	21:42	33	20:47 (WEA 7)	21:42	31	20:52 (WEA 7)	20:56
11	08:28	07:44	06:43	06:28	05:25	04:49	20:14 (WEA 7)	05:01	20:22 (WEA 7)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	21:43	34	20:48 (WEA 7)	21:41	30	20:52 (WEA 7)	20:54
12	08:27	07:42	06:40	06:26	05:23	04:48	20:14 (WEA 7)	05:02	20:22 (WEA 7)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	21:44	34	20:48 (WEA 7)	21:41	30	20:52 (WEA 7)	20:52
13	08:26	07:40	06:38	06:23	05:21	04:48	20:14 (WEA 7)	05:03	20:22 (WEA 7)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05	21:44	34	20:48 (WEA 7)	21:40	30	20:52 (WEA 7)	20:50
14	08:25	07:38	06:35	06:21	05:19	04:48	20:14 (WEA 7)	05:04	20:23 (WEA 7)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:07	21:45	34	20:48 (WEA 7)	21:39	28	20:51 (WEA 7)	20:48
15	08:24	07:36	06:33	06:19	05:18	04:47	20:14 (WEA 7)	05:05	20:23 (WEA 7)	05:54	06:48	07:41
	16:27	17:25	18:19	20:15	21:08	21:46	34	20:48 (WEA 7)	21:38	28	20:51 (WEA 7)	20:46
16	08:24	07:34	06:31	06:16	05:16	04:47	20:15 (WEA 7)	05:07	20:24 (WEA 7)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	21:46	34	20:49 (WEA 7)	21:36	26	20:50 (WEA 7)	20:44
17	08:23	07:32	06:28	06:14	05:14	04:47	20:15 (WEA 7)	05:08	20:25 (WEA 7)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	21:47	34	20:49 (WEA 7)	21:35	26	20:51 (WEA 7)	20:42
18	08:22	07:30	06:26	06:12	05:13	04:47	20:15 (WEA 7)	05:09	20:26 (WEA 7)	05:59	06:53	07:47
	16:32	17:31	18:24	20:21	21:13	21:47	34	20:49 (WEA 7)	21:34	24	20:50 (WEA 7)	20:40
19	08:20	07:28	06:23	06:10	05:11	04:47	20:15 (WEA 7)	05:11	20:26 (WEA 7)	06:01	06:55	07:49
	16:33	17:33	18:26	20:22	21:15	21:47	34	20:49 (WEA 7)	21:33	23	20:49 (WEA 7)	20:37
20	08:19	07:26	06:21	06:07	05:10	04:47	20:15 (WEA 7)	05:12	20:28 (WEA 7)	06:03	06:57	07:50
	16:35	17:35	18:28	20:24	21:16	21:48	34	20:49 (WEA 7)	21:32	21	20:49 (WEA 7)	20:35
21	08:18	07:24	06:18	06:05	05:08	04:47	20:16 (WEA 7)	05:14	20:29 (WEA 7)	06:05	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	21:48	34	20:50 (WEA 7)	21:30	18	20:47 (WEA 7)	20:33
22	08:17	07:21	06:16	06:03	05:07	04:47	20:16 (WEA 7)	05:15	20:30 (WEA 7)	06:06	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	21:48	34	20:50 (WEA 7)	21:29	15	20:45 (WEA 7)	20:31
23	08:16	07:19	06:14	06:01	05:06	04:48	20:16 (WEA 7)	05:16	20:33 (WEA 7)	06:08	07:02	07:56
	16:41	17:41	18:33	20:30	21:21	21:48	34	20:50 (WEA 7)	21:28	11	20:44 (WEA 7)	20:28
24	08:14	07:17	06:11	05:59	05:04	04:48	20:16 (WEA 7)	05:18	20:37 (WEA 7)	06:10	07:04	07:58
	16:42	17:43	18:35	20:31	21:22	21:48	34	20:50 (WEA 7)	21:26	2	20:39 (WEA 7)	20:26
25	08:13	07:15	06:09	05:56	05:03	04:48	20:17 (WEA 7)	05:19		06:12	07:05	07:57
	16:44	17:45	18:37	20:33	21:24	21:49	34	20:51 (WEA 7)	21:25		20:24	19:10
26	08:12	07:13	06:06	05:54	05:02	04:49	20:17 (WEA 7)	05:21		06:13	07:07	07:59
	16:46	17:47	18:39	20:35	21:25	21:49	34	20:51 (WEA 7)	21:23		20:22	19:07
27	08:10	07:10	06:04	05:52	05:01	04:49	20:18 (WEA 7)	05:23		06:15	07:09	07:54
	16:48	17:48	18:41	20:37	21:26	21:48	33	20:51 (WEA 7)	21:22		20:19	19:05
28	08:09	07:08	06:02	05:50	04:59	04:50	20:17 (WEA 7)	05:24		06:17	07:11	07:05
	16:50	17:50	18:42	20:39	21:28	21:48	34	20:51 (WEA 7)	21:20		20:17	19:02
29	08:07		06:59	05:48	04:58	04:50	20:18 (WEA 7)	05:26		06:18	07:12	07:07
	16:52		19:44	20:40	21:29	21:48	34	20:52 (WEA 7)	21:18		20:15	19:00
30	08:06		06:57	05:46	04:57	04:51	20:18 (WEA 7)	05:27		06:20	07:14	07:09
	16:54		19:46	20:42	21:30	21:48	33	20:51 (WEA 7)	21:17		20:12	18:57
31	08:04		06:54		04:56	04:50		05:29			06:22	
	16:56		19:48		21:32	21:48		21:15			20:10	
Sonnenscheinstunden	252	274	367	419	492	507		510		458	382	329
astr.max.mögl.Beschattung					268	1000		639				261
												236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DF - Dorfstraße 8

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44	04:55	20:17 (WEA 7)	04:52	20:21 (WEA 7)	05:31	06:24	07:16
	16:07	16:58	17:52	19:50	20:44	21:33	28 20:45 (WEA 7)	21:48	33 20:54 (WEA 7)	21:13	20:08	18:55
2	08:32	08:01	07:04	06:49	05:42	04:54	20:17 (WEA 7)	04:52	20:21 (WEA 7)	05:32	06:25	07:18
	16:08	17:00	17:54	19:52	20:46	21:34	30 20:47 (WEA 7)	21:47	33 20:54 (WEA 7)	21:11	20:05	18:53
3	08:31	07:59	07:01	06:47	05:40	04:54	20:17 (WEA 7)	04:53	20:21 (WEA 7)	05:34	06:27	07:19
	16:09	17:01	17:56	19:53	20:48	21:35	30 20:47 (WEA 7)	21:47	33 20:54 (WEA 7)	21:10	20:03	18:50
4	08:31	07:57	06:59	06:45	05:38	04:53	20:16 (WEA 7)	04:54	20:21 (WEA 7)	05:35	06:29	07:21
	16:11	17:03	17:58	19:55	20:49	21:36	31 20:47 (WEA 7)	21:46	33 20:54 (WEA 7)	21:08	20:01	18:48
5	08:31	07:55	06:57	06:42	05:36	04:52	20:17 (WEA 7)	04:55	20:22 (WEA 7)	05:37	06:31	07:23
	16:12	17:05	18:00	19:57	20:51	21:37	31 20:48 (WEA 7)	21:46	32 20:54 (WEA 7)	21:06	19:58	18:45
6	08:30	07:54	06:54	06:40	05:34	04:51	20:16 (WEA 7)	04:56	20:22 (WEA 7)	05:39	06:32	07:25
	16:13	17:07	18:02	19:59	20:53	21:38	32 20:48 (WEA 7)	21:45	32 20:54 (WEA 7)	21:04	19:56	18:43
7	08:30	07:52	06:52	06:37	05:32	04:51	20:17 (WEA 7)	04:57	20:23 (WEA 7)	05:41	06:34	07:27
	16:14	17:09	18:04	20:01	20:55	21:39	32 20:49 (WEA 7)	21:45	31 20:54 (WEA 7)	21:02	19:53	18:41
8	08:30	07:50	06:50	06:35	05:30	04:50	20:16 (WEA 7)	04:57	20:23 (WEA 7)	05:42	06:36	07:28
	16:16	17:11	18:06	20:02	20:56	21:40	33 20:49 (WEA 7)	21:44	31 20:54 (WEA 7)	21:00	19:51	18:38
9	08:29	07:48	06:47	06:33	05:28	04:49	20:17 (WEA 7)	04:59	20:24 (WEA 7)	05:44	06:38	07:30
	16:17	17:13	18:07	20:04	20:58	21:41	32 20:49 (WEA 7)	21:43	30 20:54 (WEA 7)	20:58	19:49	18:36
10	08:28	07:46	06:45	06:30	05:26	04:49	20:16 (WEA 7)	05:00	20:24 (WEA 7)	05:46	06:39	07:32
	16:19	17:15	18:09	20:06	21:00	21:42	33 20:49 (WEA 7)	21:42	30 20:54 (WEA 7)	20:56	19:46	18:34
11	08:28	07:44	06:43	06:28	05:25	04:49	20:17 (WEA 7)	05:01	20:25 (WEA 7)	05:47	06:41	07:34
	16:20	17:17	18:11	20:08	21:01	21:43	33 20:50 (WEA 7)	21:41	29 20:54 (WEA 7)	20:54	19:44	18:31
12	08:27	07:42	06:40	06:26	05:23	04:48	20:17 (WEA 7)	05:02	20:25 (WEA 7)	05:49	06:43	07:36
	16:22	17:19	18:13	20:10	21:03	21:44	33 20:50 (WEA 7)	21:41	29 20:54 (WEA 7)	20:52	19:41	18:29
13	08:26	07:40	06:38	06:23	05:21	04:48	20:16 (WEA 7)	05:03	20:26 (WEA 7)	05:51	06:44	07:37
	16:23	17:21	18:15	20:11	21:05	21:44	34 20:50 (WEA 7)	21:40	27 20:53 (WEA 7)	20:50	19:39	18:27
14	08:25	07:38	06:35	06:21	05:19	04:48	20:17 (WEA 7)	05:04	20:26 (WEA 7)	05:52	06:46	07:39
	16:25	17:23	18:17	20:13	21:07	21:45	33 20:50 (WEA 7)	21:39	27 20:53 (WEA 7)	20:48	19:36	18:24
15	08:24	07:36	06:33	06:19	05:18	04:47	20:17 (WEA 7)	05:05	20:27 (WEA 7)	05:54	06:48	07:41
	16:27	17:25	18:19	20:15	21:08	21:46	34 20:51 (WEA 7)	21:38	25 20:52 (WEA 7)	20:46	19:34	18:22
16	08:24	07:34	06:31	06:16	05:16	04:47	20:17 (WEA 7)	05:07	20:28 (WEA 7)	05:56	06:50	07:43
	16:28	17:27	18:20	20:17	21:10	21:46	34 20:51 (WEA 7)	21:36	23 20:51 (WEA 7)	20:44	19:32	18:20
17	08:23	07:32	06:28	06:14	05:14	04:47	20:17 (WEA 7)	05:08	20:29 (WEA 7)	05:58	06:51	07:45
	16:30	17:29	18:22	20:19	21:11	21:47	34 20:51 (WEA 7)	21:35	22 20:51 (WEA 7)	20:42	19:29	18:17
18	08:22	07:30	06:26	06:12	05:13	04:47	20:17 (WEA 7)	05:09	20:30 (WEA 7)	05:59	06:53	07:47
	16:32	17:31	18:24	20:21	21:13	21:47	34 20:51 (WEA 7)	21:34	20 20:50 (WEA 7)	20:40	19:27	18:15
19	08:20	07:28	06:23	06:10	05:11	04:47	20:18 (WEA 7)	05:11	20:31 (WEA 7)	06:01	06:55	07:49
	16:33	17:33	18:26	20:22	21:15	21:47	34 20:52 (WEA 7)	21:33	17 20:48 (WEA 7)	20:37	19:24	18:13
20	08:19	07:26	06:21	06:07	05:10	04:47	20:18 (WEA 7)	05:12	20:34 (WEA 7)	06:03	06:57	07:50
	16:35	17:35	18:28	20:24	21:16	21:48	34 20:52 (WEA 7)	21:32	14 20:48 (WEA 7)	20:35	19:22	18:11
21	08:18	07:24	06:18	06:05	05:08	04:47	20:19 (WEA 7)	05:14	20:36 (WEA 7)	06:05	06:58	07:52
	16:37	17:37	18:30	20:26	21:18	21:48	34 20:53 (WEA 7)	21:30	9 20:45 (WEA 7)	20:33	19:19	18:09
22	08:17	07:21	06:16	06:03	05:07	04:47	20:19 (WEA 7)	05:15	20:37 (WEA 7)	06:06	07:00	07:54
	16:39	17:39	18:31	20:28	21:19	21:48	34 20:53 (WEA 7)	21:29	20:31	19:17	18:06	16:11
23	08:16	07:19	06:14	06:01	05:06	04:48	20:19 (WEA 7)	05:16	20:38 (WEA 7)	06:08	07:02	07:56
	16:41	17:41	18:33	20:30	21:21	21:48	34 20:53 (WEA 7)	21:28	20:28	19:14	18:04	16:10
24	08:14	07:17	06:11	05:59	05:04	04:48	20:18 (WEA 7)	05:18	20:39 (WEA 7)	06:10	07:04	07:58
	16:42	17:43	18:35	20:31	21:22	21:48	35 20:53 (WEA 7)	21:26	20:26	19:12	18:02	16:09
25	08:13	07:15	06:09	05:56	05:03	04:48	20:19 (WEA 7)	05:19	20:40 (WEA 7)	06:12	07:05	07:57
	16:44	17:45	18:37	20:33	21:24	21:49	34 20:53 (WEA 7)	21:25	20:24	19:10	18:00	16:08
26	08:12	07:13	06:06	05:54	05:02	04:49	20:19 (WEA 7)	05:21	20:41 (WEA 7)	06:13	07:07	07:59
	16:46	17:47	18:39	20:35	21:25	21:49	34 20:53 (WEA 7)	21:23	20:22	19:07	17:58	16:07
27	08:10	07:10	06:04	05:52	05:01	04:49	20:20 (WEA 7)	05:23	20:42 (WEA 7)	06:15	07:09	07:54
	16:48	17:48	18:41	20:37	21:26	21:48	34 20:54 (WEA 7)	21:22	20:19	19:05	17:56	16:06
28	08:09	07:08	06:02	05:50	04:59	04:50	20:20 (WEA 7)	05:24	20:43 (WEA 7)	06:17	07:11	07:05
	16:50	17:50	18:42	20:39	21:28	21:48	33 20:53 (WEA 7)	21:20	20:17	19:02	17:54	16:05
29	08:07		06:59	05:48	04:58	04:50	20:20 (WEA 7)	05:26	20:44 (WEA 7)	06:18	07:12	07:07
	16:52		19:44	20:40	21:29	21:48	34 20:54 (WEA 7)	21:18	20:15	19:00	17:52	16:04
30	08:06		06:57	05:46	04:57	04:51	20:20 (WEA 7)	05:27	20:45 (WEA 7)	06:20	07:14	07:09
	16:54		19:46	20:42	21:30	21:48	34 20:54 (WEA 7)	21:17	20:12	18:57	17:50	16:03
31	08:04		06:54		04:56			05:29			07:11	
	16:56		19:48		21:32	28	20:45 (WEA 7)	21:15			16:48	
Sonnenscheinstunden	252	274	367	419	492	507	560	510	458	382	329	261
astr.max.mögl.Beschattung					197	989						236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DG - Dorfstraße 10

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember		
1	08:32	08:02	07:06	06:52	05:44			04:55		20:22 (WEA 7)	04:52	20:25 (WEA 7)	05:31	06:24	07:16	07:13	08:07	
	16:07	16:58	17:52	19:50	20:44			21:33	25	20:47 (WEA 7)	21:48	32	20:57 (WEA 7)	21:13	20:08	18:55	16:46	16:02
2	08:32	08:01	07:04	06:49	05:42			04:54		20:23 (WEA 7)	04:52	20:26 (WEA 7)	05:32	06:25	07:18	07:15	08:09	
	16:08	17:00	17:54	19:52	20:46			21:34	25	20:48 (WEA 7)	21:47	31	20:57 (WEA 7)	21:11	20:05	18:53	16:44	16:01
3	08:31	07:59	07:01	06:47	05:40			04:54		20:22 (WEA 7)	04:53	20:26 (WEA 7)	05:34	06:27	07:19	07:17	08:10	
	16:09	17:01	17:56	19:53	20:48			21:35	27	20:49 (WEA 7)	21:47	30	20:56 (WEA 7)	21:10	20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38			04:53		20:22 (WEA 7)	04:54	20:26 (WEA 7)	05:35	06:29	07:21	07:19	08:11	
	16:11	17:03	17:58	19:55	20:49			21:36	27	20:49 (WEA 7)	21:46	31	20:57 (WEA 7)	21:08	20:01	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36			04:52		20:22 (WEA 7)	04:55	20:27 (WEA 7)	05:37	06:31	07:23	07:21	08:13	
	16:12	17:05	18:00	19:57	20:51			21:37	28	20:50 (WEA 7)	21:46	30	20:57 (WEA 7)	21:06	19:58	18:45	16:38	16:00
6	08:30	07:54	06:54	06:40	05:34			04:51		20:21 (WEA 7)	04:56	20:28 (WEA 7)	05:39	06:32	07:25	07:23	08:14	
	16:13	17:07	18:02	19:59	20:53			21:38	29	20:50 (WEA 7)	21:45	29	20:57 (WEA 7)	21:04	19:56	18:43	16:36	15:59
7	08:30	07:52	06:52	06:37	05:32			04:51		20:22 (WEA 7)	04:57	20:28 (WEA 7)	05:41	06:34	07:27	07:25	08:16	
	16:14	17:09	18:04	20:01	20:55			21:39	29	20:51 (WEA 7)	21:45	29	20:57 (WEA 7)	21:02	19:53	18:41	16:34	15:59
8	08:30	07:50	06:50	06:35	05:30			04:50		20:21 (WEA 7)	04:57	20:29 (WEA 7)	05:42	06:36	07:28	07:26	08:17	
	16:16	17:11	18:06	20:02	20:56			21:40	30	20:51 (WEA 7)	21:44	28	20:57 (WEA 7)	21:00	19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28			04:49		20:22 (WEA 7)	04:59	20:29 (WEA 7)	05:44	06:38	07:30	07:28	08:18	
	16:17	17:13	18:07	20:04	20:58			21:41	30	20:52 (WEA 7)	21:43	27	20:56 (WEA 7)	20:58	19:49	18:36	16:31	15:58
10	08:28	07:46	06:45	06:30	05:26			04:49		20:21 (WEA 7)	05:00	20:30 (WEA 7)	05:46	06:39	07:32	07:30	08:19	
	16:19	17:15	18:09	20:06	21:00			21:42	31	20:52 (WEA 7)	21:42	26	20:56 (WEA 7)	20:56	19:46	18:34	16:29	15:58
11	08:28	07:44	06:43	06:28	05:25			04:49		20:21 (WEA 7)	05:01	20:31 (WEA 7)	05:47	06:41	07:34	07:32	08:20	
	16:20	17:17	18:11	20:08	21:01			21:43	31	20:52 (WEA 7)	21:41	25	20:56 (WEA 7)	20:54	19:44	18:31	16:27	15:57
12	08:27	07:42	06:40	06:26	05:23			04:48		20:22 (WEA 7)	05:02	20:31 (WEA 7)	05:49	06:43	07:36	07:34	08:21	
	16:22	17:19	18:13	20:10	21:03			21:44	31	20:53 (WEA 7)	21:41	24	20:55 (WEA 7)	20:52	19:41	18:29	16:26	15:57
13	08:26	07:40	06:38	06:23	05:21			04:48		20:21 (WEA 7)	05:03	20:32 (WEA 7)	05:51	06:44	07:37	07:36	08:23	
	16:23	17:21	18:15	20:11	21:05			21:44	32	20:53 (WEA 7)	21:40	22	20:54 (WEA 7)	20:50	19:39	18:27	16:24	15:57
14	08:25	07:38	06:35	06:21	05:19			04:48		20:21 (WEA 7)	05:04	20:33 (WEA 7)	05:52	06:46	07:39	07:38	08:24	
	16:25	17:23	18:17	20:13	21:07			21:45	32	20:53 (WEA 7)	21:39	20	20:53 (WEA 7)	20:48	19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18			04:47		20:21 (WEA 7)	05:05	20:34 (WEA 7)	05:54	06:48	07:41	07:40	08:24	
	16:27	17:25	18:19	20:15	21:08			21:46	33	20:54 (WEA 7)	21:38	18	20:52 (WEA 7)	20:46	19:34	18:22	16:21	15:57
16	08:24	07:34	06:31	06:16	05:16			04:47		20:22 (WEA 7)	05:07	20:35 (WEA 7)	05:56	06:50	07:43	07:41	08:25	
	16:28	17:27	18:20	20:17	21:10			21:46	32	20:54 (WEA 7)	21:36	16	20:51 (WEA 7)	20:44	19:32	18:20	16:19	15:57
17	08:23	07:32	06:28	06:14	05:14			04:47		20:22 (WEA 7)	05:08	20:38 (WEA 7)	05:58	06:51	07:45	07:43	08:26	
	16:30	17:29	18:22	20:19	21:11			21:47	32	20:54 (WEA 7)	21:35	12	20:50 (WEA 7)	20:42	19:29	18:17	16:18	15:57
18	08:22	07:30	06:26	06:12	05:13			04:47		20:22 (WEA 7)	05:09	20:40 (WEA 7)	05:59	06:53	07:47	07:45	08:27	
	16:32	17:31	18:24	20:21	21:13			21:47	32	20:54 (WEA 7)	21:34	8	20:48 (WEA 7)	20:40	19:27	18:15	16:16	15:58
19	08:20	07:28	06:23	06:10	05:11			04:47		20:22 (WEA 7)	05:11		06:01	06:55	07:49	07:47	08:28	
	16:33	17:33	18:26	20:22	21:15			21:47	33	20:55 (WEA 7)	21:33		20:37	19:24	18:13	16:15	15:58	
20	08:19	07:26	06:21	06:07	05:10			04:47		20:22 (WEA 7)	05:12		06:03	06:57	07:50	07:49	08:28	
	16:35	17:35	18:28	20:24	21:16			21:48	33	20:55 (WEA 7)	21:32		20:35	19:22	18:11	16:14	15:58	
21	08:18	07:24	06:18	06:05	05:08			04:47		20:23 (WEA 7)	05:14		06:05	06:58	07:52	07:50	08:29	
	16:37	17:37	18:30	20:26	21:18			21:48	33	20:56 (WEA 7)	21:30		20:33	19:19	18:09	16:12	15:59	
22	08:17	07:21	06:16	06:03	05:07			04:47		20:23 (WEA 7)	05:15		06:06	07:00	07:54	07:52	08:30	
	16:39	17:39	18:31	20:28	21:19			21:48	33	20:56 (WEA 7)	21:29		20:31	19:17	18:06	16:11	15:59	
23	08:16	07:19	06:14	06:01	05:06			04:48		20:23 (WEA 7)	05:16		06:08	07:02	07:56	07:54	08:30	
	16:41	17:41	18:33	20:30	21:21			21:48	33	20:56 (WEA 7)	21:28		20:29	19:14	18:04	16:10	16:00	
24	08:14	07:17	06:11	05:59	05:04			04:48		20:23 (WEA 7)	05:18		06:10	07:04	07:58	07:56	08:30	
	16:42	17:43	18:35	20:31	21:22			21:48	33	20:56 (WEA 7)	21:26		20:26	19:12	18:02	16:09	16:00	
25	08:13	07:15	06:09	05:56	05:03		20:33 (WEA 7)	04:48		20:24 (WEA 7)	05:19		06:12	07:05	07:00	07:57	08:31	
	16:44	17:45	18:37	20:33	21:24	3	20:36 (WEA 7)	21:49	32	20:56 (WEA 7)	21:25		20:24	19:10	17:00	16:08	16:01	
26	08:12	07:13	06:06	05:54	05:02		20:29 (WEA 7)	04:49		20:24 (WEA 7)	05:21		06:13	07:07	07:02	07:59	08:31	
	16:46	17:47	18:39	20:35	21:25	11	20:40 (WEA 7)	21:49	32	20:56 (WEA 7)	21:23		20:22	19:07	16:58	16:07	16:01	
27	08:10	07:10	06:04	05:52	05:01		20:27 (WEA 7)	04:49		20:24 (WEA 7)	05:23		06:15	07:09	07:04	08:01	08:31	
	16:48	17:48	18:41	20:37	21:26	15	20:42 (WEA 7)	21:48	33	20:57 (WEA 7)	21:22		20:19	19:05	16:56	16:06	16:02	
28	08:09	07:08	06:02	05:50	04:59		20:26 (WEA 7)	04:50		20:24 (WEA 7)	05:24		06:17	07:11	07:05	08:02	08:32	
	16:50	17:50	18:42	20:39	21:28	17	20:43 (WEA 7)	21:48	32	20:56 (WEA 7)	21:20		20:17	19:02	16:54	16:05	16:03	
29	08:07		06:59	05:48	04:58		20:25 (WEA 7)	04:50		20:25 (WEA 7)	05:26		06:18	07:12	07:07	08:04	08:32	
	16:52		19:44	20:40	21:29	20	20:45 (WEA 7)	21:48	32	20:57 (WEA 7)	21:18		20:15	19:00	16:52	16:04	16:04	
30	08:06		06:57	05:46	04:57		20:24 (WEA 7)	04:51		20:25 (WEA 7)	05:27		06:20	07:14	07:09	08:06	08:32	
	16:54		19:46	20:42	21:30	21	20:45 (WEA 7)	21:48	31	20:56 (WEA 7)	21:17		20:12	18:57	16:50	16:03	16:05	
31	08:04		06:54		04:56		20:23 (WEA 7)				05:29		06:22		07:11		08:32	
	16:56		19:48		21:32	23	20:46 (WEA 7)				21:15		20:10		16:48		16:06	
Sonnenscheinstunden	252	274	367	419	492			507		510		458	382	329	261	236		
astr.max.mögl.Beschattung					110			926			438							

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DH - Dorfstraße 9

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember		
1	08:32	08:02	07:06	06:52	05:44		04:55		20:27 (WEA 7)	04:52	20:29 (WEA 7)	05:31	06:24	07:16	07:13	08:07	
	16:07	16:58	17:52	19:50	20:44		21:33	21	20:48 (WEA 7)	21:48	30	20:59 (WEA 7)	21:13	20:08	18:55	16:46	16:02
2	08:32	08:01	07:04	06:49	05:42		04:54		20:27 (WEA 7)	04:52	20:30 (WEA 7)	05:32	06:25	07:18	07:15	08:09	
	16:08	17:00	17:54	19:52	20:46		21:34	23	20:50 (WEA 7)	21:47	29	20:59 (WEA 7)	21:11	20:05	18:53	16:44	16:01
3	08:31	07:59	07:01	06:47	05:40		04:54		20:26 (WEA 7)	04:53	20:30 (WEA 7)	05:34	06:27	07:19	07:17	08:10	
	16:09	17:01	17:56	19:53	20:48		21:35	24	20:50 (WEA 7)	21:47	28	20:58 (WEA 7)	21:10	20:03	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38		04:53		20:26 (WEA 7)	04:54	20:30 (WEA 7)	05:35	06:29	07:21	07:19	08:11	
	16:11	17:03	17:58	19:55	20:49		21:36	25	20:51 (WEA 7)	21:46	28	20:58 (WEA 7)	21:08	20:01	18:48	16:40	16:00
5	08:31	07:55	06:57	06:42	05:36		04:52		20:26 (WEA 7)	04:55	20:31 (WEA 7)	05:37	06:31	07:23	07:21	08:13	
	16:12	17:05	18:00	19:57	20:51		21:37	26	20:52 (WEA 7)	21:46	27	20:58 (WEA 7)	21:06	19:58	18:45	16:38	16:00
6	08:30	07:54	06:54	06:40	05:34		04:51		20:25 (WEA 7)	04:56	20:31 (WEA 7)	05:39	06:32	07:25	07:23	08:14	
	16:13	17:07	18:02	19:59	20:53		21:38	27	20:52 (WEA 7)	21:45	27	20:58 (WEA 7)	21:04	19:56	18:43	16:36	15:59
7	08:30	07:52	06:52	06:37	05:32		04:51		20:26 (WEA 7)	04:57	20:32 (WEA 7)	05:41	06:34	07:27	07:25	08:16	
	16:14	17:09	18:04	20:01	20:55		21:39	27	20:53 (WEA 7)	21:45	26	20:58 (WEA 7)	21:02	19:53	18:41	16:34	15:59
8	08:30	07:50	06:50	06:35	05:30		04:50		20:25 (WEA 7)	04:57	20:33 (WEA 7)	05:42	06:36	07:28	07:26	08:17	
	16:16	17:11	18:06	20:02	20:56		21:40	28	20:53 (WEA 7)	21:44	25	20:58 (WEA 7)	21:00	19:51	18:38	16:32	15:58
9	08:29	07:48	06:47	06:33	05:28		04:49		20:25 (WEA 7)	04:59	20:33 (WEA 7)	05:44	06:38	07:30	07:28	08:18	
	16:17	17:13	18:07	20:04	20:58		21:41	29	20:54 (WEA 7)	21:43	25	20:58 (WEA 7)	20:58	19:49	18:36	16:31	15:58
10	08:28	07:46	06:45	06:30	05:26		04:49		20:25 (WEA 7)	05:00	20:34 (WEA 7)	05:46	06:39	07:32	07:30	08:19	
	16:19	17:15	18:09	20:06	21:00		21:42	29	20:54 (WEA 7)	21:42	23	20:57 (WEA 7)	20:56	19:46	18:34	16:29	15:58
11	08:28	07:44	06:43	06:28	05:25		04:49		20:25 (WEA 7)	05:01	20:35 (WEA 7)	05:47	06:41	07:34	07:32	08:20	
	16:20	17:17	18:11	20:08	21:01		21:43	29	20:54 (WEA 7)	21:41	22	20:57 (WEA 7)	20:54	19:44	18:31	16:27	15:57
12	08:27	07:42	06:40	06:26	05:23		04:48		20:25 (WEA 7)	05:02	20:36 (WEA 7)	05:49	06:43	07:36	07:34	08:21	
	16:22	17:19	18:13	20:10	21:03		21:44	30	20:55 (WEA 7)	21:41	20	20:56 (WEA 7)	20:52	19:41	18:29	16:26	15:57
13	08:26	07:40	06:38	06:23	05:21		04:48		20:25 (WEA 7)	05:03	20:37 (WEA 7)	05:51	06:44	07:37	07:36	08:23	
	16:23	17:21	18:15	20:11	21:05		21:44	30	20:55 (WEA 7)	21:40	18	20:55 (WEA 7)	20:50	19:39	18:27	16:24	15:57
14	08:25	07:38	06:35	06:21	05:19		04:48		20:25 (WEA 7)	05:04	20:38 (WEA 7)	05:52	06:46	07:39	07:38	08:24	
	16:25	17:23	18:17	20:13	21:07		21:45	30	20:55 (WEA 7)	21:39	16	20:54 (WEA 7)	20:48	19:36	18:24	16:22	15:57
15	08:24	07:36	06:33	06:19	05:18		04:47		20:25 (WEA 7)	05:05	20:39 (WEA 7)	05:54	06:48	07:41	07:40	08:24	
	16:27	17:25	18:19	20:15	21:08		21:46	31	20:56 (WEA 7)	21:38	14	20:53 (WEA 7)	20:46	19:34	18:22	16:21	15:57
16	08:24	07:34	06:31	06:16	05:16		04:47		20:25 (WEA 7)	05:07	20:41 (WEA 7)	05:56	06:50	07:43	07:41	08:25	
	16:28	17:27	18:20	20:17	21:10		21:46	31	20:56 (WEA 7)	21:36	10	20:51 (WEA 7)	20:44	19:32	18:20	16:19	15:57
17	08:23	07:32	06:28	06:14	05:14		04:47		20:25 (WEA 7)	05:08	20:46 (WEA 7)	05:58	06:51	07:45	07:43	08:26	
	16:30	17:29	18:22	20:19	21:11		21:47	31	20:56 (WEA 7)	21:35	1	20:47 (WEA 7)	20:42	19:29	18:17	16:18	15:57
18	08:22	07:30	06:26	06:12	05:13		04:47		20:26 (WEA 7)	05:09		05:59	06:53	07:47	07:45	08:27	
	16:32	17:31	18:24	20:21	21:13		21:47	30	20:56 (WEA 7)	21:34		20:40	19:27	18:15	16:16	15:58	
19	08:20	07:28	06:23	06:10	05:11		04:47		20:26 (WEA 7)	05:11		06:01	06:55	07:49	07:47	08:28	
	16:33	17:33	18:26	20:22	21:15		21:47	31	20:57 (WEA 7)	21:33		20:37	19:24	18:13	16:15	15:58	
20	08:19	07:26	06:21	06:07	05:10		04:47		20:26 (WEA 7)	05:12		06:03	06:57	07:50	07:49	08:28	
	16:35	17:35	18:28	20:24	21:16		21:48	31	20:57 (WEA 7)	21:32		20:35	19:22	18:11	16:14	15:58	
21	08:18	07:24	06:18	06:05	05:08		04:47		20:27 (WEA 7)	05:14		06:05	06:58	07:52	07:50	08:29	
	16:37	17:37	18:30	20:26	21:18		21:48	31	20:58 (WEA 7)	21:30		20:33	19:19	18:09	16:12	15:59	
22	08:17	07:21	06:16	06:03	05:07		04:47		20:27 (WEA 7)	05:15		06:06	07:00	07:54	07:52	08:30	
	16:39	17:39	18:31	20:28	21:19		21:48	31	20:58 (WEA 7)	21:29		20:31	19:17	18:06	16:11	15:59	
23	08:16	07:19	06:14	06:01	05:06		04:48		20:27 (WEA 7)	05:16		06:08	07:02	07:56	07:54	08:30	
	16:41	17:41	18:33	20:30	21:21		21:48	31	20:58 (WEA 7)	21:28		20:28	19:14	18:04	16:10	16:00	
24	08:14	07:17	06:11	05:59	05:04		04:48		20:27 (WEA 7)	05:18		06:10	07:04	07:58	07:56	08:30	
	16:42	17:43	18:35	20:31	21:22		21:48	31	20:58 (WEA 7)	21:26		20:26	19:12	18:02	16:09	16:00	
25	08:13	07:15	06:09	05:56	05:03		04:48		20:27 (WEA 7)	05:19		06:12	07:05	07:00	07:57	08:31	
	16:44	17:45	18:37	20:33	21:24		21:49	31	20:58 (WEA 7)	21:25		20:24	19:10	18:00	16:08	16:01	
26	08:12	07:13	06:06	05:54	05:02		04:49		20:27 (WEA 7)	05:21		06:13	07:07	07:02	07:59	08:31	
	16:46	17:47	18:39	20:35	21:25		21:49	31	20:58 (WEA 7)	21:23		20:22	19:07	16:58	16:07	16:01	
27	08:10	07:10	06:04	05:52	05:01	20:34 (WEA 7)	04:49		20:28 (WEA 7)	05:23		06:15	07:09	07:04	08:01	08:31	
	16:48	17:48	18:41	20:37	21:26	7	20:41 (WEA 7)	21:48	31	20:59 (WEA 7)	21:22	20:19	19:05	16:56	16:06	16:02	
28	08:09	07:08	06:02	05:50	04:59	20:31 (WEA 7)	04:50		20:28 (WEA 7)	05:24		06:17	07:11	07:05	08:02	08:32	
	16:50	17:50	18:42	20:39	21:28	12	20:43 (WEA 7)	21:48	30	20:58 (WEA 7)	21:20	20:17	19:02	16:54	16:05	16:03	
29	08:07		06:59	05:48	04:58	20:30 (WEA 7)	04:50		20:29 (WEA 7)	05:26		06:18	07:12	07:07	08:04	08:32	
	16:52		19:44	20:40	21:29	15	20:45 (WEA 7)	21:48	30	20:59 (WEA 7)	21:18	20:15	19:00	16:52	16:04	16:04	
30	08:06		06:57	05:46	04:57	20:29 (WEA 7)	04:51		20:28 (WEA 7)	05:27		06:20	07:14	07:09	08:06	08:32	
	16:54		19:46	20:42	21:30	17	20:46 (WEA 7)	21:48	30	20:58 (WEA 7)	21:17	20:12	18:57	16:50	16:03	16:05	
31	08:04		06:54		04:56	20:28 (WEA 7)				05:29		06:22		07:11		08:32	
	16:56		19:48		21:32	19	20:47 (WEA 7)			21:15		20:10		16:48		16:06	
Sonnenscheinstunden	252	274	367	419	492			507		510		458		382	329	261	236
astr.max.mögl.Beschattung					70			870		369							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DI - Dorfstraße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni		Juli		August	September	Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44		04:55	20:30 (WEA 7)	04:52	20:31 (WEA 7)	05:31	06:24	07:16	07:13	08:07
	16:07	16:58	17:52	19:50	20:44		21:33	17	20:47 (WEA 7)	21:48	28	20:59 (WEA 7)	21:13	20:08	18:55
2	08:32	08:01	07:04	06:49	05:42		04:54	20:30 (WEA 7)	04:52	20:31 (WEA 7)	05:32	06:25	07:18	07:15	08:09
	16:08	17:00	17:54	19:52	20:46		21:34	19	20:49 (WEA 7)	21:47	28	20:59 (WEA 7)	21:11	20:05	18:53
3	08:31	07:59	07:01	06:47	05:40		04:54	20:29 (WEA 7)	04:53	20:31 (WEA 7)	05:34	06:27	07:19	07:17	08:10
	16:09	17:01	17:56	19:53	20:48		21:35	21	20:50 (WEA 7)	21:47	27	20:58 (WEA 7)	21:10	20:03	18:50
4	08:31	07:57	06:59	06:45	05:38		04:53	20:28 (WEA 7)	04:54	20:32 (WEA 7)	05:35	06:29	07:21	07:19	08:11
	16:11	17:03	17:58	19:55	20:49		21:36	22	20:50 (WEA 7)	21:46	26	20:58 (WEA 7)	21:08	20:01	18:48
5	08:31	07:55	06:57	06:42	05:36		04:52	20:28 (WEA 7)	04:55	20:32 (WEA 7)	05:37	06:31	07:23	07:21	08:13
	16:12	17:05	18:00	19:57	20:51		21:37	23	20:51 (WEA 7)	21:46	26	20:58 (WEA 7)	21:06	19:58	18:45
6	08:30	07:54	06:54	06:40	05:34		04:51	20:27 (WEA 7)	04:56	20:33 (WEA 7)	05:39	06:32	07:25	07:23	08:14
	16:13	17:07	18:02	19:59	20:53		21:38	25	20:52 (WEA 7)	21:45	25	20:58 (WEA 7)	21:04	19:56	18:43
7	08:30	07:52	06:52	06:37	05:32		04:51	20:27 (WEA 7)	04:57	20:34 (WEA 7)	05:41	06:34	07:27	07:25	08:16
	16:15	17:09	18:04	20:01	20:55		21:39	26	20:53 (WEA 7)	21:45	24	20:58 (WEA 7)	21:02	19:53	18:41
8	08:30	07:50	06:50	06:35	05:30		04:50	20:27 (WEA 7)	04:57	20:35 (WEA 7)	05:42	06:36	07:28	07:26	08:17
	16:16	17:11	18:06	20:02	20:56		21:40	26	20:53 (WEA 7)	21:44	23	20:58 (WEA 7)	21:00	19:51	18:38
9	08:29	07:48	06:47	06:33	05:28		04:49	20:27 (WEA 7)	04:59	20:36 (WEA 7)	05:44	06:38	07:30	07:28	08:18
	16:17	17:13	18:07	20:04	20:58		21:41	27	20:54 (WEA 7)	21:43	21	20:57 (WEA 7)	21:08	19:49	18:36
10	08:28	07:46	06:45	06:30	05:26		04:49	20:26 (WEA 7)	05:00	20:37 (WEA 7)	05:46	06:39	07:32	07:30	08:19
	16:19	17:15	18:09	20:06	21:00		21:42	28	20:54 (WEA 7)	21:42	20	20:57 (WEA 7)	21:06	19:46	18:34
11	08:28	07:44	06:43	06:28	05:25		04:49	20:26 (WEA 7)	05:01	20:38 (WEA 7)	05:47	06:41	07:34	07:32	08:20
	16:20	17:17	18:11	20:08	21:01		21:43	29	20:55 (WEA 7)	21:41	18	20:56 (WEA 7)	21:04	19:44	18:31
12	08:27	07:42	06:40	06:26	05:23		04:48	20:27 (WEA 7)	05:02	20:39 (WEA 7)	05:49	06:43	07:36	07:34	08:21
	16:22	17:19	18:13	20:10	21:03		21:44	28	20:55 (WEA 7)	21:41	16	20:55 (WEA 7)	21:02	19:41	18:29
13	08:26	07:40	06:38	06:23	05:21		04:48	20:26 (WEA 7)	05:03	20:40 (WEA 7)	05:51	06:44	07:37	07:36	08:23
	16:23	17:21	18:15	20:11	21:05		21:44	29	20:55 (WEA 7)	21:40	14	20:54 (WEA 7)	21:00	19:39	18:27
14	08:25	07:38	06:35	06:21	05:19		04:48	20:26 (WEA 7)	05:04	20:42 (WEA 7)	05:52	06:46	07:39	07:38	08:24
	16:25	17:23	18:17	20:13	21:07		21:45	29	20:55 (WEA 7)	21:39	10	20:52 (WEA 7)	21:04	19:36	18:24
15	08:24	07:36	06:33	06:19	05:18		04:47	20:26 (WEA 7)	05:05	20:46 (WEA 7)	05:54	06:48	07:41	07:40	08:24
	16:27	17:25	18:19	20:15	21:08		21:46	30	20:56 (WEA 7)	21:38	1	20:47 (WEA 7)	21:06	19:34	18:22
16	08:24	07:34	06:31	06:16	05:16		04:47	20:26 (WEA 7)	05:07		05:56	06:50	07:43	07:41	08:25
	16:28	17:27	18:20	20:17	21:10		21:46	30	20:56 (WEA 7)	21:36		20:44	19:32	18:20	16:19
17	08:23	07:32	06:28	06:14	05:14		04:47	20:27 (WEA 7)	05:08		05:58	06:51	07:45	07:43	08:26
	16:30	17:29	18:22	20:19	21:11		21:47	30	20:57 (WEA 7)	21:35		20:42	19:29	18:17	16:18
18	08:22	07:30	06:26	06:12	05:13		04:47	20:27 (WEA 7)	05:09		05:59	06:53	07:47	07:45	08:27
	16:32	17:31	18:24	20:21	21:13		21:47	30	20:57 (WEA 7)	21:34		20:40	19:27	18:15	16:16
19	08:20	07:28	06:23	06:10	05:11		04:47	20:27 (WEA 7)	05:11		06:01	06:55	07:49	07:47	08:28
	16:33	17:33	18:26	20:22	21:15		21:47	30	20:57 (WEA 7)	21:33		20:37	19:24	18:13	16:15
20	08:19	07:26	06:21	06:07	05:10		04:47	20:27 (WEA 7)	05:12		06:03	06:57	07:50	07:49	08:28
	16:35	17:35	18:28	20:24	21:16		21:48	30	20:57 (WEA 7)	21:32		20:35	19:22	18:11	16:14
21	08:18	07:24	06:18	06:05	05:08		04:47	20:28 (WEA 7)	05:14		06:05	06:58	07:52	07:50	08:29
	16:37	17:37	18:30	20:26	21:18		21:48	30	20:58 (WEA 7)	21:30		20:33	19:19	18:09	16:12
22	08:17	07:21	06:16	06:03	05:07		04:47	20:28 (WEA 7)	05:15		06:06	07:00	07:54	07:52	08:30
	16:39	17:39	18:31	20:28	21:19		21:48	30	20:58 (WEA 7)	21:29		20:31	19:17	18:06	16:11
23	08:16	07:19	06:14	06:01	05:06		04:48	20:28 (WEA 7)	05:16		06:08	07:02	07:56	07:54	08:30
	16:41	17:41	18:33	20:30	21:21		21:48	30	20:58 (WEA 7)	21:28		20:29	19:14	18:04	16:10
24	08:14	07:17	06:11	05:59	05:04		04:48	20:28 (WEA 7)	05:18		06:10	07:04	07:58	07:56	08:30
	16:42	17:43	18:35	20:31	21:22		21:48	30	20:58 (WEA 7)	21:26		20:26	19:12	18:02	16:09
25	08:13	07:15	06:09	05:56	05:03		04:48	20:29 (WEA 7)	05:19		06:12	07:05	07:00	07:57	08:31
	16:44	17:45	18:37	20:33	21:24		21:49	30	20:59 (WEA 7)	21:25		20:24	19:10	18:00	16:08
26	08:12	07:13	06:06	05:54	05:02		04:49	20:29 (WEA 7)	05:21		06:13	07:07	07:02	07:59	08:31
	16:46	17:47	18:39	20:35	21:25		21:49	29	20:58 (WEA 7)	21:23		20:22	19:07	18:02	16:07
27	08:10	07:10	06:04	05:52	05:01		04:49	20:29 (WEA 7)	05:23		06:15	07:09	07:04	08:01	08:31
	16:48	17:48	18:41	20:37	21:26		21:48	30	20:59 (WEA 7)	21:22		20:19	19:05	18:00	16:06
28	08:09	07:08	06:02	05:50	04:59		04:50	20:29 (WEA 7)	05:24		06:17	07:11	07:05	08:02	08:32
	16:50	17:50	18:42	20:39	21:28		21:48	30	20:59 (WEA 7)	21:20		20:17	19:02	18:00	16:05
29	08:07		06:59	05:48	04:58		04:50	20:30 (WEA 7)	05:26		06:18	07:12	07:07	08:04	08:32
	16:52		19:44	20:40	21:29	7	20:42 (WEA 7)	21:48	29	20:59 (WEA 7)	21:18	20:15	19:00	16:52	16:04
30	08:06		06:57	05:46	04:57		04:51	20:30 (WEA 7)	05:27		06:20	07:14	07:09	08:06	08:32
	16:54		19:46	20:42	21:30	12	20:44 (WEA 7)	21:48	28	20:58 (WEA 7)	21:17	20:12	18:57	16:50	16:03
31	08:04		06:54		04:56		04:50		05:29		06:22		07:11		08:32
	16:56		19:48		21:32	15	20:46 (WEA 7)		21:15		20:10		16:48		16:06
Sonnenscheinstunden	252	274	367	419	492		507		510		458	382	329	261	236
astr.max.mögl.Beschattung					34		825		307						

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DJ - Parkweg 6

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:23 (WEA 7) 04:55 06:34 (WEA 7) 21:33	05:44 (WEA 8) 04:52 06:42 (WEA 7) 21:48	05:51 (WEA 8) 05:31 06:40 (WEA 7) 21:13	06:21 (WEA 7) 06:24 06:56 (WEA 7) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	06:20 (WEA 7) 04:54 06:37 (WEA 7) 21:34	05:44 (WEA 8) 04:52 06:41 (WEA 7) 21:47	05:51 (WEA 8) 05:32 06:41 (WEA 7) 21:12	06:21 (WEA 7) 06:26 06:55 (WEA 7) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:17 (WEA 7) 04:54 06:38 (WEA 7) 21:35	05:44 (WEA 8) 04:53 06:41 (WEA 7) 21:47	05:51 (WEA 8) 05:34 06:43 (WEA 7) 21:10	06:21 (WEA 7) 06:27 06:55 (WEA 7) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	06:17 (WEA 7) 04:53 06:41 (WEA 7) 21:37	05:44 (WEA 8) 04:54 06:40 (WEA 7) 21:46	05:51 (WEA 8) 05:36 06:43 (WEA 7) 21:08	06:21 (WEA 7) 06:29 06:54 (WEA 7) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:15 (WEA 7) 04:52 06:42 (WEA 7) 21:38	05:45 (WEA 8) 04:55 06:40 (WEA 7) 21:46	05:51 (WEA 8) 05:37 06:44 (WEA 7) 21:06	06:22 (WEA 7) 06:31 06:53 (WEA 7) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	06:14 (WEA 7) 04:51 06:39 (WEA 7) 21:39	05:45 (WEA 8) 04:56 06:43 (WEA 7) 21:45	05:51 (WEA 8) 05:39 06:45 (WEA 7) 21:04	06:23 (WEA 7) 06:32 06:53 (WEA 7) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:13 (WEA 7) 04:51 06:43 (WEA 7) 21:40	05:45 (WEA 8) 04:57 06:39 (WEA 7) 21:45	05:51 (WEA 8) 05:41 06:46 (WEA 7) 21:02	06:24 (WEA 7) 06:34 06:51 (WEA 7) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:12 (WEA 7) 04:50 06:43 (WEA 7) 21:41	05:45 (WEA 8) 04:58 06:38 (WEA 7) 21:44	05:51 (WEA 8) 05:42 06:47 (WEA 7) 21:00	06:25 (WEA 7) 06:36 06:51 (WEA 7) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
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13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:10 (WEA 7) 04:48 06:45 (WEA 7) 21:45	05:48 (WEA 8) 05:03 06:35 (WEA 7) 21:40	05:51 (WEA 8) 05:51 06:50 (WEA 7) 20:50	06:45 06:46 06:47	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:09 (WEA 7) 04:48 06:46 (WEA 7) 21:45	05:47 (WEA 8) 05:04 06:34 (WEA 7) 21:39	05:51 (WEA 8) 05:53 06:51 (WEA 7) 20:48	06:46 06:47 06:48	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:08 (WEA 7) 04:47 06:45 (WEA 7) 21:46	05:47 (WEA 8) 05:06 06:32 (WEA 7) 21:38	05:51 (WEA 8) 05:54 06:51 (WEA 7) 20:46	06:48 06:49 06:50	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:07 (WEA 7) 04:47 06:46 (WEA 7) 21:46	05:48 (WEA 8) 05:07 06:31 (WEA 7) 21:37	05:52 (WEA 8) 05:56 06:53 (WEA 7) 20:44	06:50 06:51 06:52	07:43 18:20	07:42 16:20	08:25 15:57
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18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:05 (WEA 7) 04:47 06:46 (WEA 7) 21:47	05:48 (WEA 8) 05:09 06:31 (WEA 7) 21:34	05:52 (WEA 8) 05:59 06:53 (WEA 7) 20:40	06:53 06:54 06:55	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	06:04 (WEA 7) 04:47 06:45 (WEA 7) 21:48	05:49 (WEA 8) 05:11 06:31 (WEA 7) 21:33	05:52 (WEA 8) 06:01 06:54 (WEA 7) 20:38	06:55 06:56 06:57	07:49 18:13	07:47 16:15	08:28 15:58
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22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:03 (WEA 7) 04:48 06:45 (WEA 7) 21:48	05:50 (WEA 8) 05:15 06:34 (WEA 7) 21:29	05:53 (WEA 8) 06:06 06:55 (WEA 7) 20:31	07:00 07:01 07:02	07:54 18:06	07:52 16:11	08:30 15:59
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24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:01 (WEA 7) 04:48 06:44 (WEA 7) 21:49	05:51 (WEA 8) 05:18 06:34 (WEA 7) 21:26	05:54 (WEA 8) 06:10 06:56 (WEA 7) 20:26	07:04 07:05 07:06	07:58 18:02	07:56 16:09	08:31 16:00
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26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	06:00 (WEA 7) 04:49 06:44 (WEA 7) 21:49	05:53 (WEA 8) 05:21 06:36 (WEA 7) 21:23	05:56 (WEA 8) 06:13 06:56 (WEA 7) 20:22	07:07 07:08 07:09	07:59 18:01	07:59 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:00 (WEA 7) 04:49 06:44 (WEA 7) 21:49	05:54 (WEA 8) 05:23 06:37 (WEA 7) 21:22	05:57 (WEA 8) 06:15 06:56 (WEA 7) 20:20	07:09 07:10 07:11	08:01 18:03	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:00 (WEA 7) 04:50 06:43 (WEA 7) 21:48	05:50 (WEA 8) 05:24 06:38 (WEA 7) 21:20	05:58 (WEA 8) 06:17 06:56 (WEA 7) 20:17	07:11 07:12 07:13	08:03 18:05	08:03 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:03 18:44	05:51 20:41	05:01 21:29	06:00 (WEA 7) 04:50 06:43 (WEA 7) 21:48	05:51 (WEA 8) 05:26 06:39 (WEA 7) 21:18	06:00 (WEA 8) 06:19 06:56 (WEA 7) 20:15	07:13 07:14 07:15	08:04 18:06	08:04 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:04 18:46	05:52 20:42	05:02 21:31	06:00 (WEA 7) 04:51 06:42 (WEA 7) 21:48	05:51 (WEA 8) 05:27 06:40 (WEA 7) 21:17	06:03 (WEA 8) 06:20 06:56 (WEA 7) 20:13	07:14 07:15 07:16	08:06 18:08	08:06 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	06:04 18:48	05:52 20:43	05:02 21:32	06:00 (WEA 7) 04:51 06:42 (WEA 7) 21:48	05:51 (WEA 8) 05:27 06:40 (WEA 7) 21:17	06:03 (WEA 8) 06:22 06:56 (WEA 7) 20:10	07:14 07:15 07:16	08:06 18:08	08:06 16:03	08:32 16:05
Sonnenscheinstunden	252	274	367	419	492	507	510	458	316	382	329	236
astr.max.mögl.Beschattung					1369	984	1588					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DK - Hamburger Straße 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember						
1	08:32	08:02	07:06	06:52	05:44	06:20 (WEA 7)	04:55	06:00 (WEA 8)	04:52	05:31	06:04 (WEA 8)	06:24	07:16	07:13	08:07			
2	16:07	16:58	17:52	19:50	20:44	27	06:47 (WEA 7)	21:33	11	06:11 (WEA 8)	21:48	21:13	50	06:58 (WEA 7)	20:08	18:55	16:46	16:02
3	08:32	08:01	07:04	06:50	05:42	06:20 (WEA 7)	04:54	06:01 (WEA 8)	04:52	05:32	06:04 (WEA 8)	06:26	07:18	07:15	08:09			
4	16:08	17:00	17:54	19:52	20:46	28	06:48 (WEA 7)	21:34	9	06:10 (WEA 8)	21:47	21:12	49	06:58 (WEA 7)	20:06	18:53	16:44	16:02
5	08:32	07:59	07:01	06:47	05:40	06:19 (WEA 7)	04:54	06:02 (WEA 8)	04:53	05:34	06:06 (WEA 8)	06:27	07:20	07:17	08:10			
6	16:10	17:02	17:56	19:53	20:48	29	06:48 (WEA 7)	21:35	6	06:08 (WEA 8)	21:47	21:10	46	06:58 (WEA 7)	20:03	18:50	16:42	16:01
7	08:31	07:57	06:59	06:45	05:38	06:19 (WEA 7)	04:53	06:04	04:54	05:36	06:06 (WEA 8)	06:29	07:21	07:19	08:12			
8	16:11	17:04	17:58	19:55	20:49	30	06:49 (WEA 7)	21:37	21:46	21:08	45	06:58 (WEA 7)	20:01	18:48	16:40	16:00		
9	08:31	07:56	06:57	06:42	05:36	06:19 (WEA 7)	04:52	06:05	04:55	05:37	06:09 (WEA 8)	06:31	07:23	07:21	08:13			
10	16:12	17:06	18:00	19:57	20:51	30	06:49 (WEA 7)	21:38	21:46	21:06	41	06:59 (WEA 7)	21:58	18:46	16:38	16:00		
11	08:31	07:54	06:54	06:40	05:34	06:18 (WEA 7)	04:51	06:04	04:56	05:39	06:14 (WEA 8)	06:33	07:25	07:23	08:14			
12	16:13	17:08	18:02	19:59	20:53	31	06:49 (WEA 7)	21:39	21:45	21:05	32	06:59 (WEA 7)	21:56	18:43	16:36	15:59		
13	08:30	07:52	06:52	06:38	05:32	06:01 (WEA 7)	04:51	06:04	04:57	05:41	06:28 (WEA 7)	06:34	07:27	07:25	08:16			
14	16:15	17:09	18:04	20:01	20:55	36	06:48 (WEA 7)	21:40	21:45	21:02	30	06:58 (WEA 7)	21:54	18:41	16:34	15:59		
15	08:30	07:50	06:50	06:35	05:30	06:58 (WEA 7)	04:50	06:04	04:58	05:42	06:28 (WEA 7)	06:36	07:29	07:27	08:17			
16	16:16	17:11	18:06	20:03	20:56	41	06:48 (WEA 7)	21:41	21:44	21:00	30	06:58 (WEA 7)	21:51	18:38	16:33	15:58		
17	08:29	07:48	06:47	06:33	05:28	06:57 (WEA 7)	04:50	06:04	04:59	05:44	06:28 (WEA 7)	06:38	07:30	07:28	08:18			
18	16:17	17:13	18:08	20:04	20:58	46	06:49 (WEA 7)	21:41	21:43	3	06:14 (WEA 8)	20:58	29	06:57 (WEA 7)	21:49	18:36	16:31	15:58
19	08:29	07:46	06:45	06:31	05:26	06:55 (WEA 7)	04:49	06:00	05:00	05:46	06:28 (WEA 7)	06:39	07:32	07:30	08:19			
20	16:19	17:15	18:10	20:06	21:00	48	06:48 (WEA 7)	21:42	21:42	8	06:17 (WEA 8)	20:56	29	06:57 (WEA 7)	21:46	18:39	16:29	15:58
21	08:28	07:44	06:43	06:28	05:25	06:54 (WEA 7)	04:49	06:01	05:01	05:47	06:29 (WEA 7)	06:41	07:34	07:32	08:21			
22	16:20	17:17	18:11	20:08	21:02	48	06:47 (WEA 7)	21:43	21:42	11	06:18 (WEA 8)	20:54	28	06:57 (WEA 7)	21:44	18:31	16:27	15:57
23	08:27	07:42	06:40	06:26	05:23	06:54 (WEA 7)	04:48	06:06 (WEA 8)	05:49	05:49	06:29 (WEA 7)	06:43	07:36	07:34	08:22			
24	16:22	17:19	18:13	20:10	21:03	48	06:47 (WEA 7)	21:44	21:41	13	06:19 (WEA 8)	20:52	27	06:56 (WEA 7)	21:41	18:29	16:26	15:57
25	08:26	07:40	06:38	06:24	05:21	06:53 (WEA 7)	04:48	06:06 (WEA 8)	05:51	05:51	06:30 (WEA 7)	06:45	07:38	07:36	08:23			
26	16:23	17:21	18:15	20:12	21:05	48	06:46 (WEA 7)	21:45	21:40	14	06:20 (WEA 8)	20:50	25	06:55 (WEA 7)	21:39	18:27	16:24	15:57
27	08:26	07:38	06:35	06:21	05:19	06:53 (WEA 7)	04:48	06:04	05:04	05:46	06:30 (WEA 7)	06:46	07:39	07:38	08:24			
28	16:25	17:23	18:17	20:13	21:07	48	06:46 (WEA 7)	21:45	21:39	16	06:21 (WEA 8)	20:48	23	06:53 (WEA 7)	21:37	18:24	16:23	15:57
29	08:25	07:36	06:33	06:19	05:18	06:52 (WEA 7)	04:47	06:06	05:06	05:44	06:32 (WEA 7)	06:48	07:41	07:40	08:25			
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31	08:24	07:34	06:31	06:17	05:16	06:52 (WEA 7)	04:47	06:07	05:07	05:56	06:34 (WEA 7)	06:50	07:43	07:42	08:25			
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33	08:23	07:32	06:28	06:14	05:15	06:51 (WEA 7)	04:47	06:08	05:08	05:58	06:35 (WEA 7)	06:52	07:45	07:43	08:26			
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35	08:22	07:30	06:26	06:12	05:13	06:52 (WEA 7)	04:47	06:10	05:10	06:03	06:30 (WEA 8)	06:40	07:37	07:35	08:24			
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37	08:21	07:28	06:23	06:10	05:11	06:51 (WEA 7)	04:47	06:11	05:11	06:03	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
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39	08:19	07:26	06:21	06:08	05:10	06:52 (WEA 7)	04:47	06:12	05:12	06:03	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
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41	08:18	07:24	06:19	06:05	05:09	06:52 (WEA 7)	04:47	06:14	05:14	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
42	16:37	17:37	18:30	20:26	21:18	34	06:38 (WEA 7)	21:48	21:30	23	06:25 (WEA 8)	20:33	19	06:52 (WEA 7)	21:31	18:09	16:13	15:59
43	08:17	07:22	06:16	06:03	05:07	06:53 (WEA 7)	04:48	06:15	05:15	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
44	16:39	17:39	18:32	20:28	21:19	26	06:35 (WEA 7)	21:48	21:29	31	06:47 (WEA 7)	20:31	19	06:52 (WEA 7)	21:31	18:06	16:11	15:59
45	08:16	07:19	06:14	06:01	05:06	06:52 (WEA 7)	04:48	06:17	05:17	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
46	16:41	17:41	18:33	20:30	21:21	23	06:15 (WEA 7)	21:49	21:28	37	06:50 (WEA 7)	20:29	19	06:52 (WEA 7)	21:31	18:04	16:10	16:00
47	08:14	07:17	06:11	05:59	05:04	06:53 (WEA 7)	04:48	06:18	05:18	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
48	16:42	17:43	18:35	20:32	21:22	22	06:15 (WEA 7)	21:49	21:26	40	06:51 (WEA 7)	20:26	19	06:52 (WEA 7)	21:31	18:02	16:09	16:00
49	08:13	07:15	06:09	05:56	05:03	06:53 (WEA 7)	04:48	06:20	05:20	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
50	16:44	17:45	18:37	20:33	21:24	22	06:15 (WEA 7)	21:49	21:25	42	06:52 (WEA 7)	20:24	19	06:52 (WEA 7)	21:31	18:00	16:08	16:01
51	08:12	07:13	06:07	05:54	05:02	06:54 (WEA 7)	04:49	06:21	05:21	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
52	16:46	17:47	18:39	20:35	21:25	20	06:14 (WEA 7)	21:49	21:23	45	06:54 (WEA 7)	20:22	19	06:52 (WEA 7)	21:31	18:00	16:08	16:01
53	08:10	07:11	06:04	05:52	05:01	06:55 (WEA 7)	04:49	06:22	05:22	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
54	16:48	17:49	18:41	20:37	21:27	18	06:44 (WEA 7)	21:27	21:22	46	06:54 (WEA 7)	20:20	19	06:52 (WEA 7)	21:31	18:00	16:08	16:02
55	08:09	07:08	06:02	05:50	05:00	06:56 (WEA 7)	04:50	06:23	05:23	06:03	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
56	16:50	17:51	18:43	20:39	21:28	18	06:13 (WEA 7)	21:48	21:20	47	06:56 (WEA 7)	20:17	19	06:52 (WEA 7)	21:31	18:00	16:08	16:01
57	08:07	07:06	06:00	05:48	04:58	06:56 (WEA 7)	04:50	06:26	05:26	06:02	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
58	16:52	17:53	18:45	20:41	21:29	17	06:13 (WEA 7)	21:48	21:18	50	06:56 (WEA 7)	20:15	19	06:52 (WEA 7)	21:31	18:00	16:08	16:04
59	08:06	07:05	06:00	05:48	04:57	06:57 (WEA 7)	04:51	06:27	05:27	06:03	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
60	16:54	17:55	18:47	20:42	21:31	15	06:12 (WEA 7)	21:48	21:17	50	06:57 (WEA 7)	20:13	19	06:52 (WEA 7)	21:31	18:00	16:08	16:01
31	08:04	07:03	06:00	05:48	04:56	06:58 (WEA 7)	04:50	06:29	05:29	06:03	06:30 (WEA 8)	06:41	07:38	07:36	08:23			
61	16:56	17:57	18:49	20:44	21:32	13	06:11 (WEA 8)	21:48	21:15	50	06:57 (WEA 7)	20:10	19	06:52 (WEA 7)	21:31	18:00	16:08	16:06
Sonnenscheinstunden	252	274	367	419	492	507	507	510	510	510	537	537	537	537	537	537		

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DL - Hagenower Straße 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:11 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:17 (WEA 8) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:04	07:04 17:54	06:50 19:52	05:42 20:46	06:10 (WEA 8) 21:34	04:52 21:47	05:32 21:12	06:16 (WEA 8) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:08 (WEA 8) 21:35	04:54 21:47	05:34 21:10	06:16 (WEA 8) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:59	06:45 19:55	05:38 20:49	06:08 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:16 (WEA 8) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:07 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:16 (WEA 8) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:07 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:17 (WEA 8) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:06 (WEA 8) 21:40	04:57 21:45	05:41 21:02	06:16 (WEA 8) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:06 (WEA 8) 21:41	04:58 21:44	05:42 21:00	06:17 (WEA 8) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:06 (WEA 8) 21:41	04:59 21:43	05:44 20:58	06:17 (WEA 8) 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:06 (WEA 8) 21:42	04:49 21:42	05:46 20:56	06:18 (WEA 8) 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:06 (WEA 8) 21:43	04:49 21:42	05:47 20:54	06:20 (WEA 8) 19:44	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:06 (WEA 8) 21:44	04:48 21:41	05:49 20:52	06:20 (WEA 8) 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:06 (WEA 8) 21:45	04:48 21:40	05:51 20:50	06:23 (WEA 8) 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:07 (WEA 8) 21:45	04:48 21:39	05:53 20:48	06:44 (WEA 7) 19:37	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:07 (WEA 8) 21:46	04:47 21:38	05:54 20:46	06:44 (WEA 7) 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:08 (WEA 8) 21:46	04:47 21:37	05:56 20:44	06:44 (WEA 7) 19:32	07:42 18:20	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:09 (WEA 8) 21:47	04:47 21:35	05:58 20:42	06:43 (WEA 7) 19:29	07:45 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:10 (WEA 8) 21:47	04:47 21:34	06:00 20:40	06:44 (WEA 7) 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	06:11 (WEA 8) 21:48	04:47 21:33	06:01 20:38	06:43 (WEA 7) 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	06:13 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:44 (WEA 7) 19:22	07:51 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:17 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:45 (WEA 7) 19:20	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:19 (WEA 8) 21:48	04:48 21:29	06:06 20:31	06:44 (WEA 7) 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:38 (WEA 7) 21:48	05:17 21:28	06:25 (WEA 8) 20:29	06:46 (WEA 7) 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:37 (WEA 7) 21:49	05:18 21:26	06:31 (WEA 8) 20:26	06:47 (WEA 7) 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:37 (WEA 7) 21:49	05:18 21:25	06:33 (WEA 8) 20:24	06:48 (WEA 7) 19:10	07:58 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	06:37 (WEA 7) 21:49	05:18 21:23	06:34 (WEA 8) 20:22	06:51 (WEA 7) 19:07	07:59 18:02	07:59 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:36 (WEA 7) 21:49	05:18 21:22	06:36 (WEA 8) 20:20	07:00 (WEA 7) 19:05	16:58 18:05	16:06 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:36 (WEA 7) 21:48	05:18 21:20	06:37 (WEA 8) 20:17	07:01 (WEA 7) 19:02	16:58 18:04	16:03 16:05	08:32 16:03
29	08:07 16:52		06:59 19:44	05:48 20:41	04:58 21:29	06:36 (WEA 7) 21:48	05:18 21:18	06:38 (WEA 8) 20:15	07:03 (WEA 7) 19:00	16:58 18:04	16:04 16:04	08:32 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	06:14 (WEA 8) 21:48	05:17 21:17	06:39 (WEA 8) 20:13	07:04 (WEA 7) 18:58	16:59 18:06	16:03 16:05	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32	07:05 (WEA 7) 21:48	05:17 21:15	06:16 (WEA 8) 20:10		16:50 18:02	16:03 16:06	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	571	507	458	382	329	261	236
astr.max.mögl.Beschattung				359			149	797				

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DM - Hagenower Straße 5

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:12 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:17 (WEA 8) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:04	07:04 17:54	06:50 19:52	05:42 20:46	06:10 (WEA 8) 21:34	04:52 21:47	05:32 21:12	06:16 (WEA 8) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:09 (WEA 8) 21:35	04:54 21:47	05:34 21:10	06:16 (WEA 8) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:59	06:45 19:55	05:38 20:49	06:09 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:16 (WEA 8) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:08 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:16 (WEA 8) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:07 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:17 (WEA 8) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:06 (WEA 8) 21:40	04:51 21:45	05:41 21:02	06:16 (WEA 8) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:06 (WEA 8) 21:41	04:50 21:44	05:42 21:00	06:17 (WEA 8) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:06 (WEA 8) 21:41	04:50 21:43	05:44 20:58	06:17 (WEA 8) 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:06 (WEA 8) 21:42	04:49 21:42	05:46 20:56	06:18 (WEA 8) 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:06 (WEA 8) 21:43	04:49 21:42	05:47 20:54	06:20 (WEA 8) 19:44	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:07 (WEA 8) 21:44	04:48 21:41	05:49 20:52	06:21 (WEA 8) 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:06 (WEA 8) 21:45	04:48 21:40	05:51 20:50	06:23 (WEA 8) 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:07 (WEA 8) 21:45	04:48 21:39	05:53 20:48	06:44 (WEA 7) 19:37	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:07 (WEA 8) 21:46	04:47 21:38	05:54 20:46	06:44 (WEA 7) 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:09 (WEA 8) 21:46	04:47 21:37	05:56 20:44	06:44 (WEA 7) 19:32	07:43 18:20	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:09 (WEA 8) 21:47	04:47 21:35	05:58 20:42	06:44 (WEA 7) 19:29	07:45 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:10 (WEA 8) 21:47	04:47 21:34	06:00 20:40	06:44 (WEA 7) 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	06:11 (WEA 8) 21:48	04:47 21:33	06:01 20:38	06:44 (WEA 7) 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	06:13 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:44 (WEA 7) 19:22	07:51 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:17 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:45 (WEA 7) 19:20	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:20 (WEA 8) 21:49	04:48 21:29	06:06 20:31	06:45 (WEA 7) 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:25 (WEA 8) 21:49	04:48 21:28	06:08 20:29	06:46 (WEA 7) 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:23 (WEA 8) 21:49	04:48 21:26	06:10 20:26	06:47 (WEA 7) 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:21 (WEA 8) 21:49	04:48 21:25	06:12 20:24	06:48 (WEA 7) 19:10	07:59 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	06:20 (WEA 8) 21:49	04:48 21:23	06:13 20:22	06:51 (WEA 7) 19:07	07:02 18:07	07:02 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:19 (WEA 8) 21:49	04:48 21:22	06:15 20:20	07:09 19:05	07:04 18:06	07:04 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:37 (WEA 8) 21:48	04:48 21:20	06:17 20:19	07:11 19:02	07:06 18:04	07:06 16:05	08:32 16:03
29	08:07 16:52		06:59 19:44	05:48 20:41	04:58 21:29	06:38 (WEA 8) 21:48	04:48 21:18	06:18 20:15	07:13 19:00	07:08 18:04	07:08 16:04	08:32 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	06:39 (WEA 8) 21:48	04:51 21:17	06:20 20:13	07:14 18:58	07:09 18:06	07:09 16:03	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32		04:52 21:15	06:22 20:10		07:11 18:06		08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	578	507	458	382	329	261	236
astr.max.mögl.Beschattung				367				808				

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzler-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzler-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzler-Goldenitz (rev.01) **Schattenrezeptor:** DN - Hagenower Straße 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:12 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:17 (WEA 8) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:04	07:04 17:54	06:50 19:52	05:42 20:46	06:10 (WEA 8) 21:34	04:52 21:47	05:32 21:12	06:16 (WEA 8) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:09 (WEA 8) 21:35	04:54 21:47	05:34 21:10	06:17 (WEA 8) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:59	06:45 19:55	05:38 20:49	06:09 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:16 (WEA 8) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:08 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:17 (WEA 8) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:07 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:17 (WEA 8) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:07 (WEA 8) 21:40	04:51 21:45	05:41 21:02	06:17 (WEA 8) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:06 (WEA 8) 21:41	04:50 21:44	05:42 21:00	06:18 (WEA 8) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:07 (WEA 8) 21:41	04:50 21:43	05:44 20:58	06:18 (WEA 8) 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:06 (WEA 8) 21:42	04:49 21:42	05:46 20:56	06:19 (WEA 8) 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:06 (WEA 8) 21:43	04:49 21:42	05:47 20:54	06:20 (WEA 8) 19:44	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:07 (WEA 8) 21:44	04:48 21:41	05:49 20:52	06:21 (WEA 8) 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:07 (WEA 8) 21:45	04:48 21:40	05:51 20:50	06:23 (WEA 8) 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:08 (WEA 8) 21:45	04:48 21:39	05:53 20:48	06:45 (WEA 7) 19:37	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:09 (WEA 8) 21:46	04:47 21:38	05:54 20:46	06:45 (WEA 7) 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:09 (WEA 8) 21:46	04:47 21:37	05:56 20:44	06:45 (WEA 7) 19:32	07:43 18:20	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:09 (WEA 8) 21:47	04:47 21:35	05:58 20:42	06:44 (WEA 7) 19:29	07:45 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:11 (WEA 8) 21:47	04:47 21:34	06:00 20:40	06:45 (WEA 7) 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	06:11 (WEA 8) 21:48	04:47 21:33	06:01 20:38	06:44 (WEA 7) 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	06:13 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:45 (WEA 7) 19:22	07:51 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:16 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:46 (WEA 7) 19:20	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:21 (WEA 8) 21:49	04:48 21:29	06:06 20:31	06:45 (WEA 7) 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:25 (WEA 8) 21:49	04:48 21:28	06:08 20:29	06:47 (WEA 7) 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:23 (WEA 8) 21:49	04:48 21:26	06:10 20:26	06:48 (WEA 7) 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:21 (WEA 8) 21:49	04:48 21:25	06:12 20:24	06:49 (WEA 7) 19:10	07:59 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	06:21 (WEA 8) 21:49	04:48 21:23	06:13 20:22	06:51 (WEA 7) 19:07	07:02 18:58	07:59 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:19 (WEA 8) 21:49	04:48 21:22	06:15 20:20	07:09 19:05	07:04 18:56	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:19 (WEA 8) 21:48	04:47 21:20	06:17 20:19	07:11 19:02	07:06 18:54	08:03 16:05	08:32 16:03
29	08:07 16:52		06:59 19:44	05:48 20:41	04:58 21:29	06:18 (WEA 8) 21:48	04:47 21:18	06:19 20:15	07:13 19:00	07:08 18:52	08:04 16:04	08:32 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	06:18 (WEA 8) 21:48	04:47 21:17	06:20 20:13	07:14 18:58	07:09 18:50	08:06 16:03	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32	06:17 (WEA 8) 21:48	04:47 21:15	06:22 20:10		07:11 18:48		08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung				376	579	154	819					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DO - Parkweg 3

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:16 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:16 (WEA 8) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	06:13 (WEA 8) 21:34	04:54 21:47	05:32 21:12	06:15 (WEA 8) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:10 (WEA 8) 21:35	04:54 21:47	05:34 21:10	06:16 (WEA 8) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:59	06:45 19:55	05:38 20:49	06:10 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:15 (WEA 8) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:09 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:16 (WEA 8) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	07:14 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:17 (WEA 8) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:07 (WEA 8) 21:40	04:51 21:45	05:41 21:02	06:17 (WEA 8) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:06 (WEA 8) 21:41	04:50 21:44	05:42 21:00	06:18 (WEA 8) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:06 (WEA 8) 21:41	04:50 21:49	05:44 20:58	06:19 (WEA 8) 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:05 (WEA 8) 21:42	04:49 21:42	05:46 20:56	06:20 (WEA 8) 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:05 (WEA 8) 21:43	04:49 21:42	05:47 20:54	06:22 (WEA 8) 19:44	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:06 (WEA 8) 21:44	04:48 21:41	05:49 20:52	06:26 (WEA 8) 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:05 (WEA 8) 21:45	04:48 21:40	05:51 20:50	06:50 (WEA 8) 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:01 (WEA 8) 21:45	04:48 21:39	05:53 20:48	06:49 (WEA 8) 19:37	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:03 (WEA 8) 21:46	04:47 21:38	05:54 20:46	06:49 (WEA 8) 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:06 (WEA 8) 21:46	04:47 21:37	05:56 20:44	06:49 (WEA 8) 19:32	07:43 18:20	07:42 16:20	08:25 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:06 (WEA 8) 21:47	04:47 21:35	05:58 20:42	06:23 (WEA 8) 19:29	07:45 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:06 (WEA 8) 21:47	04:47 21:34	05:59 20:40	06:22 (WEA 8) 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	06:06 (WEA 8) 21:48	04:47 21:33	06:01 20:37	06:49 (WEA 8) 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	06:07 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:49 (WEA 8) 19:22	07:51 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:08 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:50 (WEA 8) 19:20	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:09 (WEA 8) 21:48	04:48 21:29	06:06 20:31	07:22 (WEA 8) 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:10 (WEA 8) 21:49	04:48 21:28	06:08 20:29	06:51 (WEA 8) 19:15	07:02 18:04	07:00 16:10	08:31 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:11 (WEA 8) 21:49	04:48 21:26	06:10 20:26	06:53 (WEA 8) 19:12	07:04 18:02	07:02 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:11 (WEA 8) 21:49	04:48 21:25	06:12 20:24	06:53 (WEA 8) 19:10	07:05 18:00	07:03 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	06:13 (WEA 8) 21:49	04:49 21:23	06:13 20:22	06:55 (WEA 8) 19:07	07:07 18:02	07:05 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:15 (WEA 8) 21:49	04:49 21:22	06:15 20:20	06:59 (WEA 8) 19:05	07:09 18:06	07:07 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:18 (WEA 8) 21:48	04:50 21:20	06:17 20:17	07:10 (WEA 8) 19:02	07:06 18:04	07:04 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29	06:21 (WEA 8) 21:48	04:50 21:18	06:19 20:15	07:13 (WEA 8) 19:00	07:08 18:02	07:06 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:01 18:46	05:46 20:42	04:57 21:31	06:21 (WEA 8) 21:48	04:51 21:17	06:20 20:13	07:14 (WEA 8) 18:58	07:09 18:00	07:07 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	06:01 18:48	05:46 20:42	04:56 21:32	06:21 (WEA 8) 21:48	04:51 21:18	06:22 20:10	07:15 (WEA 8) 18:58	07:11 18:00	07:09 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	450	492	507	458	403	382	261	236
astr.max.mögl.Beschattung												

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DP - Parkweg 2

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:15 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:18 (WEA 8) 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	06:13 (WEA 8) 21:34	04:52 21:47	05:32 21:12	06:17 (WEA 8) 20:06	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:11 (WEA 8) 21:35	04:53 21:47	05:34 21:10	06:18 (WEA 8) 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	06:11 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:17 (WEA 8) 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:10 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:18 (WEA 8) 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	06:09 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:19 (WEA 8) 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:08 (WEA 8) 21:40	04:57 21:45	05:41 21:02	06:18 (WEA 8) 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:07 (WEA 8) 21:41	04:58 21:44	05:42 21:00	06:19 (WEA 8) 19:51	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:08 (WEA 8) 21:41	04:59 21:43	05:44 20:58	06:20 (WEA 8) 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:07 (WEA 8) 21:42	04:59 21:42	05:46 20:56	06:21 (WEA 8) 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:07 (WEA 8) 21:43	04:59 21:42	05:47 20:54	06:22 (WEA 8) 19:44	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:07 (WEA 8) 21:44	04:58 21:41	05:49 20:52	06:24 (WEA 8) 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:07 (WEA 8) 21:45	04:58 21:40	05:51 20:50	06:27 (WEA 8) 19:39	07:38 18:27	07:36 16:24	08:23 15:57
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18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:09 (WEA 8) 21:47	04:47 21:34	05:59 20:40	06:51 (WEA 7) 19:27	07:47 18:15	07:45 16:17	08:27 15:58
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20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	06:10 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:51 (WEA 7) 19:22	07:51 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:11 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:52 (WEA 7) 19:20	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:12 (WEA 8) 21:48	04:48 21:29	06:06 20:31	06:52 (WEA 7) 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:13 (WEA 8) 21:49	04:48 21:28	06:08 20:29	06:52 (WEA 7) 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:14 (WEA 8) 21:49	04:48 21:26	06:10 20:26	06:53 (WEA 7) 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:16 (WEA 8) 21:49	04:48 21:25	06:12 20:24	06:54 (WEA 7) 19:10	07:59 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	06:20 (WEA 8) 21:49	04:49 21:23	06:13 20:22	06:55 (WEA 7) 19:07	07:59 18:02	07:57 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:23 (WEA 8) 21:49	04:49 21:22	06:15 20:20	06:57 (WEA 7) 19:05	07:59 18:06	07:57 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:44 (WEA 7) 21:48	04:50 21:20	06:17 20:17	06:59 (WEA 7) 19:02	07:11 18:02	07:06 16:54	08:32 16:03
29	08:07 16:52	07:07 17:59	06:00 18:48	05:48 20:41	04:58 21:29	06:44 (WEA 7) 21:48	04:50 21:18	06:19 20:15	07:13 (WEA 7) 19:01	07:08 18:04	07:07 16:04	08:32 16:04
30	08:06 16:54	07:06 17:57	06:00 18:46	05:46 20:42	04:57 21:31	06:44 (WEA 7) 21:48	04:51 21:17	06:20 20:13	07:14 18:58	07:09 18:00	07:08 16:03	08:32 16:05
31	08:04 16:56	07:04 17:58	06:00 18:48	05:46 20:42	04:56 21:32	06:44 (WEA 7) 21:48	04:51 21:15	06:22 20:10	07:14 18:58	07:09 18:00	07:08 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	496	507	510	458	382	329	261	236
astr.max.mögl.Beschattung												

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DQ - Parkweg 1

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember						
1	08:32	08:02	07:06	06:52	05:44	06:16 (WEA 8)	04:55	04:52	05:31	06:24 (WEA 8)	06:24	07:07 (WEA 7)	07:16	07:13	08:07			
	16:07	16:58	17:52	19:50	20:44	48	07:19 (WEA 7)	21:33	21:48	21:13	25	06:49 (WEA 8)	20:08	6	07:13 (WEA 7)	18:55	16:46	16:02
2	08:32	08:01	07:04	06:50	05:42	06:15 (WEA 8)	04:54	04:52	05:32	06:23 (WEA 8)	06:26	07:18	07:15		08:09	07:18	16:46	16:02
	16:08	17:00	17:54	19:52	20:46	47	07:18 (WEA 7)	21:34	21:47	21:12	26	06:49 (WEA 8)	20:06		18:53	18:46	16:44	16:02
3	08:32	07:59	07:01	06:47	05:40	06:14 (WEA 8)	04:54	04:53	05:34	06:23 (WEA 8)	06:27	07:20	07:17		08:10	07:20	16:44	16:02
	16:10	17:02	17:56	19:53	20:48	46	07:16 (WEA 7)	21:35	21:47	21:10	27	06:50 (WEA 8)	20:03		18:50	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45	05:38	06:14 (WEA 8)	04:53	04:54	05:36	06:23 (WEA 8)	06:29	07:21	07:19		08:12	07:21	16:42	16:01
	16:11	17:04	17:58	19:55	20:49	43	07:15 (WEA 7)	21:37	21:46	21:08	26	06:49 (WEA 8)	20:01		18:48	18:48	16:40	16:00
5	08:31	07:56	06:57	06:42	05:36	06:14 (WEA 8)	04:52	04:55	05:37	06:23 (WEA 8)	06:31	07:23	07:21		08:13	07:23	16:40	16:00
	16:12	17:06	18:00	19:57	20:51	38	07:12 (WEA 7)	21:38	21:46	21:06	27	06:50 (WEA 8)	19:58		18:46	18:46	16:38	16:00
6	08:31	07:54	06:54	06:40	05:34	06:13 (WEA 8)	04:51	04:56	05:39	06:23 (WEA 8)	06:32	07:25	07:23		08:14	07:25	16:38	16:00
	16:13	17:07	18:02	19:58	20:53	29	07:07 (WEA 7)	21:39	21:45	21:04	27	06:50 (WEA 8)	19:56		18:43	18:43	16:36	15:59
7	08:30	07:52	06:52	06:38	05:32	06:13 (WEA 8)	04:51	04:57	05:41	06:23 (WEA 8)	06:34	07:27	07:25		08:16	07:27	16:34	15:59
	16:15	17:09	18:04	20:01	20:55	27	06:40 (WEA 8)	21:40	21:45	21:02	34	07:19 (WEA 7)	19:54		18:41	18:41	16:34	15:59
8	08:30	07:50	06:50	06:35	05:30	06:12 (WEA 8)	04:50	04:58	05:42	06:23 (WEA 8)	06:36	07:29	07:27		08:17	07:29	16:32	15:58
	16:16	17:11	18:06	20:03	20:56	27	06:39 (WEA 8)	21:41	21:44	21:00	41	07:23 (WEA 7)	19:51		18:38	18:38	16:33	15:58
9	08:29	07:48	06:47	06:33	05:28	06:13 (WEA 8)	04:50	04:59	05:44	06:23 (WEA 8)	06:38	07:30	07:28		08:18	07:30	16:31	15:58
	16:17	17:13	18:08	20:04	20:58	27	06:40 (WEA 8)	21:41	21:43	20:58	44	07:24 (WEA 7)	19:49		18:36	18:36	16:31	15:58
10	08:29	07:46	06:45	06:31	05:26	06:13 (WEA 8)	04:49	05:00	05:46	06:23 (WEA 8)	06:39	07:32	07:30		08:19	07:32	16:30	15:59
	16:19	17:15	18:10	20:06	21:00	26	06:39 (WEA 8)	21:42	21:42	20:56	47	07:26 (WEA 7)	19:46		18:34	18:34	16:29	15:58
11	08:28	07:44	06:43	06:28	05:25	06:13 (WEA 8)	04:49	05:01	05:47	06:23 (WEA 8)	06:41	07:34	07:32		08:21	07:34	16:27	15:57
	16:20	17:17	18:11	20:08	21:02	25	06:38 (WEA 8)	21:43	21:42	20:54	49	07:27 (WEA 7)	19:44		18:31	18:31	16:27	15:57
12	08:27	07:42	06:40	06:26	05:23	06:14 (WEA 8)	04:48	05:02	05:49	06:24 (WEA 8)	06:43	07:36	07:34		08:22	07:36	16:24	15:57
	16:22	17:19	18:13	20:10	21:03	24	06:38 (WEA 8)	21:44	21:41	20:52	49	07:28 (WEA 7)	19:41		18:29	18:29	16:26	15:57
13	08:26	07:40	06:38	06:24	05:21	06:14 (WEA 8)	04:48	05:03	05:51	06:26 (WEA 8)	06:45	07:38	07:36		08:23	07:38	16:23	15:57
	16:23	17:21	18:15	20:12	21:05	23	06:37 (WEA 8)	21:45	21:40	20:50	47	07:29 (WEA 7)	19:39		18:27	18:27	16:24	15:57
14	08:26	07:38	06:35	06:21	05:18	06:15 (WEA 8)	04:48	05:04	05:53	06:25 (WEA 8)	06:46	07:39	07:37		08:24	07:39	16:23	15:57
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15	08:25	07:36	06:33	06:19	05:16	06:15 (WEA 8)	04:47	05:06	05:54	06:28 (WEA 8)	06:48	07:41	07:40		08:25	07:41	16:22	15:57
	16:27	17:25	18:19	20:15	21:08	21	06:36 (WEA 8)	21:46	21:38	20:46	45	07:30 (WEA 7)	19:34		18:22	18:22	16:21	15:57
16	08:24	07:34	06:31	06:17	05:14	06:17 (WEA 8)	04:47	05:07	05:56	06:31 (WEA 8)	06:50	07:43	07:42		08:26	07:43	16:20	15:57
	16:28	17:27	18:21	20:17	21:10	19	06:36 (WEA 8)	21:46	21:37	20:44	41	07:31 (WEA 7)	19:32		18:20	18:20	16:20	15:57
17	08:23	07:32	06:28	06:14	05:11	06:17 (WEA 8)	04:47	05:08	05:58	06:57 (WEA 8)	06:52	07:45	07:43		08:26	07:45	16:19	15:57
	16:30	17:29	18:22	20:19	21:12	17	06:34 (WEA 8)	21:47	21:35	20:42	33	07:30 (WEA 7)	19:29		18:18	18:18	16:18	15:57
18	08:22	07:30	06:26	06:12	05:09	06:19 (WEA 8)	04:47	05:09	05:59	06:57 (WEA 8)	06:53	07:47	07:45		08:27	07:47	16:17	15:57
	16:32	17:31	18:24	20:21	21:13	14	06:33 (WEA 8)	21:47	21:34	20:40	34	07:31 (WEA 7)	19:27		18:15	18:15	16:17	15:58
19	08:21	07:28	06:23	06:10	05:07	06:20 (WEA 8)	04:47	05:11	06:01	06:56 (WEA 7)	06:55	07:49	07:47		08:28	07:49	16:16	15:59
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20	08:19	07:26	06:21	06:07	05:04	06:23 (WEA 8)	04:47	05:12	06:03	06:56 (WEA 7)	06:57	07:51	07:49		08:29	07:51	16:14	15:58
	16:35	17:35	18:28	20:24	21:16	5	06:28 (WEA 8)	21:48	21:32	20:35	34	07:30 (WEA 7)	19:22		18:11	18:11	16:14	15:58
21	08:18	07:24	06:19	06:05	05:01	06:24 (WEA 8)	04:47	05:14	06:05	06:56 (WEA 7)	06:58	07:52	07:51		08:29	07:52	16:13	15:59
	16:37	17:37	18:30	20:26	21:18	34	07:26 (WEA 7)	21:48	21:30	20:33	34	07:30 (WEA 7)	19:20		18:09	18:09	16:13	15:59
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	16:39	17:39	18:32	20:28	21:19	34	07:25 (WEA 7)	21:49	21:29	20:31	33	07:29 (WEA 7)	19:17		18:06	18:06	16:11	15:59
23	08:16	07:19	06:14	06:01	05:00	06:26 (WEA 8)	04:48	05:17	06:08	06:56 (WEA 7)	07:02	07:56	07:54		08:30	07:56	16:10	16:00
	16:41	17:41	18:33	20:30	21:21	34	07:25 (WEA 7)	21:21	21:49	20:29	33	07:29 (WEA 7)	19:15		18:04	18:04	16:10	16:00
24	08:14	07:17	06:11	05:59	05:04	06:27 (WEA 8)	04:48	05:18	06:10	06:57 (WEA 8)	07:04	07:58	07:56		08:31	07:58	16:09	16:00
	16:42	17:43	18:35	20:32	21:22	33	07:24 (WEA 7)	21:22	21:49	20:26	32	07:29 (WEA 7)	19:12		18:02	18:02	16:09	16:00
25	08:13	07:15	06:09	05:56	05:03	06:28 (WEA 8)	04:48	05:20	06:12	06:58 (WEA 8)	07:05	07:59	07:57		08:32	07:59	16:08	16:01
	16:44	17:45	18:37	20:33	21:24	33	07:24 (WEA 7)	21:24	21:49	20:25	32	07:28 (WEA 7)	19:10		17:00	17:00	16:08	16:01
26	08:12	07:13	06:06	05:54	05:02	06:31 (WEA 8)	04:49	05:21	06:13	06:57 (WEA 8)	07:07	07:59	07:57		08:31	07:59	16:07	16:02
	16:46	17:47	18:39	20:35	21:25	33	07:24 (WEA 7)	21:25	21:49	20:23	30	07:27 (WEA 7)	19:07		16:58	16:58	16:07	16:02
27	08:10	07:11	06:04	05:52	05:01	06:23 (WEA 8)	04:50	05:23	06:15	06:58 (WEA 7)	07:09	07:59	07:57		08:32	07:59	16:06	16:02
	16:48	17:49	18:41	20:37	21:27	41	07:23 (WEA 7)	21:27	21:49	20:22	28	07:26 (WEA 7)	19:05		16:56	16:56	16:06	16:02
28	08:09	07:08	06:02	05:50	05:00	06:30 (WEA 8)	04:50	05:24	06:17	06:58 (WEA 8)	07:11	07:59	07:57		08:32	07:59	16:05	16:02
	16:50	17:51	18:43	20:39	21:28	46	07:22 (WEA 7)	21:28	21:48	20:20	26	07:24 (WEA 7)	19:02		16:54	16:54	16:05	16:03
29	08:07	07:06	06:00	05:48	04:58	06:32 (WEA 8)	04:50	05:26	06:19	06:59 (WEA 8)	07:13	07:59	07:57		08:32	07:59	16:04	16:03
	16:52	17:53	18:45	20:41	21:29	47	07:21 (WEA 7)	21:29	21:48	20:18	24	07:23 (WEA 7)	19:00		16:52	16:52	16:04	16:04
30	08:06	07:05	06:00	05:46	04:57	06:33 (WEA 8)	04:51	05:27	06:20	06:56 (WEA 8)	07:14	07:59	07:57		08:32	07:59	16:03	16:04
	16:54	17:55	18:47	20:42	21:31	48	07:20 (WEA 7)	21:31	21:48	20:17	23	06:48 (WEA 8)	19:03		16:50	16:50	16:03	16:05
31	08:04	07:03																

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DR - Hagenower Straße 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:22 (WEA 8) 24 06:46 (WEA 8)	04:55 21:33	04:52 21:13	05:31 20:08	07:02 (WEA 7) 23 07:25 (WEA 7)	07:16 18:55	07:13 16:46
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	06:21 (WEA 8) 24 06:45 (WEA 8)	04:54 21:34	04:52 21:12	05:32 20:06	07:03 (WEA 7) 21 07:24 (WEA 7)	07:18 18:53	07:15 16:44
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:22 (WEA 8) 23 06:45 (WEA 8)	04:54 21:35	04:53 21:10	05:34 20:03	07:04 (WEA 7) 17 07:21 (WEA 7)	07:20 18:50	07:17 16:42
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	06:23 (WEA 8) 22 06:45 (WEA 8)	04:53 21:37	04:54 21:08	05:36 20:01	06:36 (WEA 8) 13 07:19 (WEA 7)	06:29 18:48	07:21 16:40
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:23 (WEA 8) 21 06:44 (WEA 8)	04:52 21:38	04:55 21:06	05:37 19:58	06:35 (WEA 8) 16 06:51 (WEA 8)	06:31 18:38	07:23 16:38
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:23 (WEA 8) 20 06:43 (WEA 8)	04:51 21:39	04:56 21:04	05:39 19:56	06:34 (WEA 8) 19 06:53 (WEA 8)	06:33 18:36	07:25 16:36
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:24 (WEA 8) 18 06:42 (WEA 8)	04:51 21:40	04:57 21:02	05:41 19:54	06:32 (WEA 8) 21 06:53 (WEA 8)	06:34 18:41	07:27 16:34
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:25 (WEA 8) 15 06:40 (WEA 8)	04:50 21:41	04:58 21:00	05:42 19:51	06:32 (WEA 8) 22 06:54 (WEA 8)	06:36 18:38	07:29 16:33
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:27 (WEA 8) 13 06:40 (WEA 8)	04:50 21:41	04:59 21:43	05:44 20:58	06:31 (WEA 8) 23 06:54 (WEA 8)	06:38 18:36	07:30 16:31
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:29 (WEA 8) 8 06:37 (WEA 8)	04:49 21:42	05:00 21:43	05:46 20:56	06:31 (WEA 8) 23 06:54 (WEA 8)	06:39 18:34	07:30 16:29
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:30 (WEA 8) 23 07:26 (WEA 7)	04:49 21:42	05:01 21:42	05:47 20:54	06:31 (WEA 8) 24 06:55 (WEA 8)	06:41 18:31	07:32 16:27
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:30 (WEA 8) 25 07:26 (WEA 7)	04:48 21:41	05:02 21:41	05:49 20:52	06:30 (WEA 8) 24 06:54 (WEA 8)	06:43 18:29	07:34 16:26
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:30 (WEA 8) 27 07:27 (WEA 7)	04:48 21:45	05:03 21:40	05:51 20:50	06:30 (WEA 8) 24 06:54 (WEA 8)	06:45 18:39	07:36 16:24
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:30 (WEA 8) 28 07:27 (WEA 7)	04:48 21:45	05:04 21:39	05:53 20:48	06:30 (WEA 8) 23 06:53 (WEA 8)	06:46 18:37	07:39 16:23
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:30 (WEA 8) 29 07:28 (WEA 7)	04:47 21:46	05:06 21:38	05:54 20:46	06:30 (WEA 8) 28 07:20 (WEA 7)	06:48 18:22	07:41 16:21
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:30 (WEA 8) 17 07:27 (WEA 7)	04:47 21:46	05:07 21:37	05:56 20:44	06:31 (WEA 8) 35 07:24 (WEA 7)	06:50 18:32	07:42 16:20
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:30 (WEA 8) 30 07:27 (WEA 7)	04:47 21:47	05:08 21:35	05:58 20:42	06:31 (WEA 8) 37 07:25 (WEA 7)	06:52 18:29	07:43 16:18
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:30 (WEA 8) 30 07:27 (WEA 7)	04:47 21:47	05:10 21:34	06:00 20:40	06:32 (WEA 8) 39 07:27 (WEA 7)	06:53 18:27	07:44 16:17
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	06:30 (WEA 8) 29 07:27 (WEA 7)	04:47 21:48	05:11 21:33	06:01 20:38	06:32 (WEA 8) 40 07:28 (WEA 7)	06:55 18:24	07:49 16:15
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	06:30 (WEA 8) 28 07:26 (WEA 7)	04:47 21:48	05:12 21:32	06:03 20:35	06:34 (WEA 8) 38 07:29 (WEA 7)	06:57 18:22	07:51 16:14
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:30 (WEA 8) 28 07:26 (WEA 7)	04:47 21:48	05:14 21:30	06:05 20:33	06:37 (WEA 8) 34 07:30 (WEA 7)	06:59 18:20	07:52 16:13
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:30 (WEA 8) 34 07:24 (WEA 7)	04:48 21:48	05:15 21:29	06:06 20:31	07:02 (WEA 7) 27 07:29 (WEA 7)	07:00 18:17	07:54 16:11
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:30 (WEA 8) 39 07:23 (WEA 7)	04:48 21:49	05:17 21:28	06:08 20:29	07:02 (WEA 7) 28 07:30 (WEA 7)	07:02 18:15	07:56 16:10
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:26 (WEA 8) 40 07:22 (WEA 7)	04:48 21:49	05:18 21:26	06:10 20:26	07:01 (WEA 7) 29 07:30 (WEA 7)	07:04 18:12	07:58 16:09
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:25 (WEA 8) 38 07:20 (WEA 7)	04:48 21:49	05:20 21:25	06:12 20:24	07:00 (WEA 7) 30 07:30 (WEA 7)	07:05 18:10	07:59 16:08
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	06:24 (WEA 8) 37 07:18 (WEA 7)	04:49 21:49	05:21 21:23	06:13 20:22	07:00 (WEA 7) 30 07:30 (WEA 7)	07:07 18:07	07:59 16:07
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:23 (WEA 8) 34 07:16 (WEA 7)	04:49 21:49	05:23 21:22	06:15 20:20	07:00 (WEA 7) 30 07:30 (WEA 7)	07:09 18:05	07:59 16:06
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:23 (WEA 8) 23 06:46 (WEA 8)	04:50 21:48	05:24 21:20	06:17 20:17	07:00 (WEA 7) 29 07:29 (WEA 7)	07:11 18:02	07:06 16:05
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29	06:22 (WEA 8) 24 06:46 (WEA 8)	04:50 21:48	05:26 21:18	06:19 20:15	07:00 (WEA 7) 28 07:28 (WEA 7)	07:13 18:00	07:08 16:04
30	08:06 16:54	07:06 17:54	06:00 18:46	05:46 20:42	04:57 21:31	06:22 (WEA 8) 24 06:46 (WEA 8)	04:51 21:48	05:27 21:17	06:20 20:13	07:01 (WEA 7) 27 07:28 (WEA 7)	07:14 18:58	07:09 16:03
31	08:04 16:56	07:04 17:56	06:00 18:48	05:46 20:44	04:56 21:32	06:22 (WEA 8) 24 06:46 (WEA 8)	04:51 21:48	05:27 21:15	06:20 20:10	07:01 (WEA 7) 25 07:26 (WEA 7)	07:14 18:58	07:09 16:03
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung				649	188			780	74			

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DS - Hagenower Straße 11

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:16 (WEA 8) 21:33	04:55 21:48	05:31 21:13	06:27 (WEA 8) 20:08	06:24 20:08	07:04 (WEA 7) 18:55	07:16 16:46
2	08:32 16:08	08:01 17:04	07:04 17:54	06:50 19:52	05:42 20:46	06:15 (WEA 8) 21:34	04:54 21:47	05:32 21:12	06:26 (WEA 8) 20:06	06:26 20:06	07:18 18:53	07:18 16:44
3	08:32 16:10	07:59 17:02	06:47 17:56	06:47 19:53	05:40 20:48	06:15 (WEA 8) 21:35	04:54 21:47	05:34 21:10	06:26 (WEA 8) 20:03	06:27 20:03	07:17 18:50	08:10 16:42
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	06:15 (WEA 8) 21:37	04:53 21:46	05:36 21:08	06:25 (WEA 8) 20:01	06:29 20:01	07:19 18:48	08:12 16:40
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	06:15 (WEA 8) 21:38	04:52 21:46	05:37 21:06	06:25 (WEA 8) 20:01	06:31 20:01	07:21 18:46	08:13 16:38
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:15 (WEA 8) 21:39	04:51 21:45	05:39 21:04	06:25 (WEA 8) 20:03	06:33 20:03	07:25 18:43	08:14 16:36
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:15 (WEA 8) 21:40	04:51 21:45	05:41 21:02	06:24 (WEA 8) 20:03	06:34 20:03	07:27 18:41	08:16 16:34
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:15 (WEA 8) 21:41	04:50 21:44	05:42 21:00	06:24 (WEA 8) 20:03	06:36 20:03	07:29 18:38	08:17 16:33
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:16 (WEA 8) 21:41	04:50 21:43	05:44 20:58	06:24 (WEA 8) 20:03	06:38 20:03	07:30 18:36	08:18 16:31
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	06:16 (WEA 8) 21:42	04:49 21:42	05:46 20:56	06:24 (WEA 8) 20:03	06:39 20:03	07:32 18:34	08:19 16:29
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	06:16 (WEA 8) 21:43	04:49 21:42	05:47 20:54	06:25 (WEA 8) 20:03	06:41 20:03	07:34 18:31	08:21 16:27
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	06:17 (WEA 8) 21:44	04:48 21:41	05:49 20:52	06:25 (WEA 8) 20:03	06:43 20:03	07:36 18:29	08:22 16:26
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	06:18 (WEA 8) 21:45	04:48 21:40	05:51 20:50	06:25 (WEA 8) 20:03	06:45 20:03	07:38 18:27	08:23 16:24
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	06:18 (WEA 8) 21:45	04:48 21:39	05:53 20:48	06:24 (WEA 8) 20:03	06:45 20:03	07:39 18:24	08:24 16:23
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	06:21 (WEA 8) 21:46	04:47 21:38	05:54 20:46	06:27 (WEA 8) 20:03	06:48 20:03	07:41 18:22	08:25 16:21
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	06:22 (WEA 8) 21:46	04:47 21:37	05:56 20:44	06:29 (WEA 8) 20:03	06:50 20:03	07:43 18:20	08:26 16:20
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	06:30 (WEA 8) 21:47	04:47 21:35	05:58 20:42	06:30 (WEA 8) 20:03	06:52 20:03	07:45 18:18	08:26 16:18
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	06:31 (WEA 8) 21:47	04:47 21:34	06:00 20:40	06:31 (WEA 8) 20:03	06:53 20:03	07:47 18:15	08:27 16:17
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	06:32 (WEA 8) 21:48	04:47 21:33	06:01 20:38	06:32 (WEA 8) 20:03	06:55 20:03	07:49 18:13	08:28 16:15
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	06:33 (WEA 8) 21:48	04:47 21:32	06:03 20:35	06:33 (WEA 8) 20:03	06:57 20:03	07:51 18:11	08:29 16:14
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	06:34 (WEA 8) 21:48	04:47 21:30	06:05 20:33	06:34 (WEA 8) 20:03	06:58 20:03	07:52 18:09	08:29 16:13
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	06:35 (WEA 8) 21:49	04:48 21:29	06:06 20:31	06:35 (WEA 8) 20:03	07:00 20:03	07:54 18:06	08:30 16:11
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	06:36 (WEA 8) 21:49	04:48 21:28	06:08 20:29	06:36 (WEA 8) 20:03	07:02 20:03	07:56 18:04	08:30 16:10
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	06:37 (WEA 8) 21:49	04:48 21:26	06:10 20:26	06:37 (WEA 8) 20:03	07:04 20:03	07:58 18:02	08:31 16:09
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	06:38 (WEA 8) 21:50	04:48 21:25	06:12 20:24	06:38 (WEA 8) 20:03	07:05 20:03	07:59 18:00	08:32 16:08
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	06:39 (WEA 8) 21:51	04:49 21:23	06:13 20:22	06:39 (WEA 8) 20:03	07:07 20:03	08:02 18:02	08:31 16:07
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:40 (WEA 8) 21:52	04:49 21:22	06:15 20:20	06:40 (WEA 8) 20:03	07:09 20:03	08:04 18:04	08:32 16:06
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	06:41 (WEA 8) 21:53	04:50 21:20	06:17 20:17	06:41 (WEA 8) 20:03	07:11 20:03	08:06 18:06	08:33 16:05
29	08:07 16:52	07:06 17:54	05:59 18:44	05:48 20:41	04:58 21:29	06:42 (WEA 8) 21:54	04:50 21:18	06:19 20:15	06:42 (WEA 8) 20:03	07:13 20:03	08:08 18:08	08:34 16:04
30	08:06 16:54	07:05 17:56	05:57 18:45	05:46 20:42	04:57 21:31	06:43 (WEA 8) 21:55	04:51 21:17	06:20 20:13	06:43 (WEA 8) 20:03	07:14 20:03	08:09 18:09	08:35 16:03
31	08:04 16:56	07:04 17:58	05:54 18:48	05:41 20:46	04:56 21:32	06:44 (WEA 8) 21:56	04:50 21:15	06:22 20:10	06:44 (WEA 8) 20:03	07:15 20:03	08:10 18:10	08:36 16:02
Sonnenscheinstunden	252	274	367	419	598	492	507	510	458	382	329	261
astr.max.mögl.Beschattung							55		908	6		236

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DT - Hagenower Straße 10

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember			
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:17 (WEA 8) 07:07 (WEA 7)	04:55 21:33	04:52 21:48	05:31 21:13	06:32 (WEA 8) 06:46 (WEA 8)	06:24 20:08	07:01 (WEA 7) 07:14 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	06:17 (WEA 8) 06:41 (WEA 8)	04:54 21:34	04:52 21:47	05:32 21:12	06:30 (WEA 8) 06:47 (WEA 8)	06:26 20:06	07:06 (WEA 7) 07:09 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	06:17 (WEA 8) 06:41 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:29 (WEA 8) 06:48 (WEA 8)	06:27 20:03	07:20 18:50	07:17 16:42	07:20 16:01	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	06:17 (WEA 8) 06:41 (WEA 8)	04:53 21:37	04:54 21:46	05:36 21:08	06:28 (WEA 8) 06:48 (WEA 8)	06:29 20:01	07:21 18:48	07:19 16:40	07:21 16:00	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:42 20:51	06:17 (WEA 8) 06:41 (WEA 8)	04:52 21:38	04:55 21:46	05:37 21:06	06:28 (WEA 8) 06:49 (WEA 8)	06:31 19:58	07:23 18:46	07:21 16:38	07:21 16:00	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	06:17 (WEA 8) 06:40 (WEA 8)	04:51 21:39	04:56 21:45	05:39 21:04	06:28 (WEA 8) 06:50 (WEA 8)	06:33 19:56	07:25 18:43	07:23 16:36	07:23 15:59	08:14 15:59
7	08:30 16:13	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:17 (WEA 8) 06:40 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:27 (WEA 8) 06:50 (WEA 8)	06:34 19:54	07:27 18:41	07:25 16:34	07:25 15:59	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	06:17 (WEA 8) 06:39 (WEA 8)	04:50 21:41	04:58 21:44	05:45 21:00	06:27 (WEA 8) 06:50 (WEA 8)	06:36 19:51	07:29 18:38	07:27 16:33	07:27 15:58	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	06:19 (WEA 8) 06:39 (WEA 8)	04:50 21:41	04:59 21:43	05:44 20:58	06:26 (WEA 8) 06:50 (WEA 8)	06:38 19:49	07:30 18:36	07:28 16:31	07:28 15:58	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 20:56	06:19 (WEA 8) 07:10 (WEA 7)	04:49 21:00	05:00 21:42	05:46 20:56	06:26 (WEA 8) 06:50 (WEA 8)	06:39 19:46	07:32 18:34	07:30 16:29	07:30 15:58	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 20:58	07:02 (WEA 7) 07:16 (WEA 7)	05:25 21:02	05:47 21:42	05:47 20:54	06:26 (WEA 8) 06:50 (WEA 8)	06:41 19:44	07:34 18:31	07:32 16:27	07:32 15:57	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 20:18	06:59 (WEA 7) 07:17 (WEA 7)	05:23 21:03	05:49 21:41	05:49 20:52	06:26 (WEA 8) 07:17 (WEA 7)	06:43 19:41	07:36 18:29	07:34 16:26	07:34 15:57	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 20:22	06:57 (WEA 7) 07:19 (WEA 7)	04:48 21:05	05:03 21:40	05:51 20:50	06:27 (WEA 8) 07:20 (WEA 7)	06:45 19:39	07:38 18:27	07:36 16:24	07:36 15:57	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 20:24	06:56 (WEA 7) 07:20 (WEA 7)	05:19 21:07	05:04 21:45	05:53 20:48	06:26 (WEA 8) 07:21 (WEA 7)	06:46 19:37	07:39 18:24	07:38 16:23	07:38 15:57	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 20:26	06:55 (WEA 7) 07:21 (WEA 7)	05:18 21:08	05:06 21:38	05:54 20:46	06:27 (WEA 8) 07:23 (WEA 7)	06:48 19:34	07:41 18:22	07:40 16:21	07:40 15:57	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 20:27	06:53 (WEA 7) 07:20 (WEA 7)	05:16 21:10	05:07 21:46	05:56 20:44	06:29 (WEA 8) 07:24 (WEA 7)	06:50 19:32	07:43 18:20	07:42 16:20	07:42 15:57	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 20:28	06:53 (WEA 7) 07:21 (WEA 7)	05:15 21:12	05:08 21:35	05:58 20:42	06:29 (WEA 8) 07:24 (WEA 7)	06:52 19:29	07:45 18:18	07:43 16:18	07:43 15:57	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 20:29	06:52 (WEA 7) 07:21 (WEA 7)	05:13 21:13	05:10 21:47	06:00 20:40	06:31 (WEA 8) 07:25 (WEA 7)	06:53 19:27	07:47 18:15	07:45 16:17	07:45 15:58	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 20:29	06:52 (WEA 7) 07:21 (WEA 7)	05:11 21:15	05:09 21:48	06:01 20:38	06:57 (WEA 7) 07:25 (WEA 7)	06:55 19:24	07:49 18:13	07:47 16:15	07:47 15:58	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 20:29	06:52 (WEA 7) 07:21 (WEA 7)	05:10 21:16	05:07 21:48	06:03 20:35	06:57 (WEA 7) 07:25 (WEA 7)	06:57 19:22	07:51 18:11	07:49 16:14	07:49 15:58	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 20:29	06:52 (WEA 7) 07:21 (WEA 7)	05:09 21:18	05:06 21:48	06:05 20:33	06:56 (WEA 7) 07:26 (WEA 7)	06:58 19:20	07:52 18:09	07:51 16:13	07:51 15:59	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:31	05:07 20:32	06:51 (WEA 7) 07:20 (WEA 7)	05:07 21:19	05:15 21:48	06:06 20:31	06:55 (WEA 7) 07:25 (WEA 7)	07:00 19:17	07:54 18:06	07:52 16:11	07:52 15:59	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 20:30	06:51 (WEA 7) 07:20 (WEA 7)	05:06 21:21	05:08 21:28	06:08 20:29	06:55 (WEA 7) 07:25 (WEA 7)	07:02 19:15	07:56 18:04	07:54 16:10	07:54 16:00	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 20:32	06:28 (WEA 8) 07:19 (WEA 7)	05:04 21:22	05:18 21:26	06:10 20:26	06:56 (WEA 7) 07:25 (WEA 7)	07:04 19:12	07:58 18:02	07:56 16:09	07:56 16:00	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 20:33	06:24 (WEA 8) 07:18 (WEA 7)	05:03 21:24	05:20 21:25	06:12 20:24	06:55 (WEA 7) 07:24 (WEA 7)	07:05 19:10	07:50 17:00	07:58 16:08	07:58 16:01	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 20:35	06:22 (WEA 8) 07:17 (WEA 7)	05:02 21:25	05:21 21:49	06:13 20:22	06:55 (WEA 7) 07:24 (WEA 7)	07:07 19:07	07:52 16:58	07:59 16:07	07:59 16:02	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 20:37	06:21 (WEA 8) 07:16 (WEA 7)	05:01 21:27	05:09 21:22	06:15 20:20	06:56 (WEA 7) 07:23 (WEA 7)	07:09 19:05	07:54 16:56	07:59 16:06	07:59 16:02	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 20:41	06:20 (WEA 8) 07:15 (WEA 7)	05:00 21:28	05:24 21:20	06:17 20:17	06:56 (WEA 7) 07:22 (WEA 7)	07:11 19:02	07:06 16:54	08:03 16:05	08:03 16:03	08:32 16:03
29	08:07 16:52		06:59 19:44	05:48 20:41	04:58 20:39	06:19 (WEA 8) 07:13 (WEA 7)	04:58 21:29	05:26 21:29	06:19 20:15	06:57 (WEA 7) 07:21 (WEA 7)	07:13 19:00	07:08 16:52	08:04 16:04	08:04 16:04	08:32 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 20:37	06:18 (WEA 8) 07:11 (WEA 7)	04:57 21:31	05:27 21:32	06:20 20:13	06:58 (WEA 7) 07:24 (WEA 7)	07:14 18:58	07:09 16:50	08:06 16:03	08:06 16:05	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32					06:59 (WEA 7)		07:11 16:48		08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492	507	510	458	853	382	16	329	261	236	
astr.max.mögl.Beschattung				605	272		17								

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DU - Lindenweg 24

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai		Juni	Juli	August		September		Oktober	November	Dezember
1	08:32	08:02	07:06	06:52	05:44										
	16:07	16:58	17:52	19:50	20:44	23	06:24 (WEA 8)	04:55	04:52	05:31	06:24	07:02 (WEA 7)	07:16	07:13	08:07
2	08:32	08:01	07:04	06:50	05:42		06:47 (WEA 8)	21:33	21:48	21:13	20:08	26	07:28 (WEA 7)	18:55	16:46
	16:08	17:00	17:54	19:52	20:46	22	06:47 (WEA 8)	21:34	21:47	21:12	20:06	24	07:27 (WEA 7)	18:53	16:44
3	08:32	07:59	07:01	06:47	05:40		06:25 (WEA 8)	04:54	04:53	05:34	06:27		07:03 (WEA 7)	07:20	07:17
	16:10	17:02	17:56	19:53	20:48	21	06:46 (WEA 8)	21:35	21:47	21:10	20:03	22	07:25 (WEA 7)	18:50	16:42
4	08:31	07:57	06:59	06:45	05:38		06:26 (WEA 8)	04:53	04:54	05:36	06:29		07:05 (WEA 7)	07:21	07:19
	16:11	17:04	17:58	19:55	20:49	20	06:46 (WEA 8)	21:37	21:46	21:08	20:01	18	07:23 (WEA 7)	18:48	16:40
5	08:31	07:56	06:57	06:42	05:36		06:27 (WEA 8)	04:52	04:55	05:37	06:31		07:07 (WEA 7)	07:23	07:21
	16:12	17:06	18:00	19:57	20:51	18	06:45 (WEA 8)	21:38	21:46	21:06	9	06:41 (WEA 8)	07:21 (WEA 7)	18:46	16:38
6	08:31	07:54	06:54	06:40	05:34		06:28 (WEA 8)	04:51	04:56	05:39	06:33		07:10 (WEA 7)	07:25	07:23
	16:13	17:08	18:02	19:59	6	07:20 (WEA 7)	20:53	15	06:43 (WEA 8)	21:39	21:45	13	06:52 (WEA 8)	18:43	16:36
7	08:30	07:52	06:52	06:38	05:32		07:10 (WEA 7)	05:32	06:29 (WEA 8)	04:51	04:57	05:41		07:27	07:25
	16:15	17:09	18:04	20:01	14	07:24 (WEA 7)	20:55	12	06:41 (WEA 8)	21:40	21:45	16	06:53 (WEA 8)	18:41	16:34
8	08:30	07:50	06:50	06:35	05:30		07:08 (WEA 7)	05:30	06:31 (WEA 8)	04:50	04:58	05:42		07:29	07:27
	16:16	17:11	18:06	20:03	18	07:26 (WEA 7)	20:56	7	06:38 (WEA 8)	21:41	21:44	21:00	18	06:54 (WEA 8)	18:38
9	08:29	07:48	06:47	06:33	05:28		07:05 (WEA 7)	05:28	04:50	04:59	05:44		06:34 (WEA 8)	06:38	18:18
	16:17	17:13	18:08	20:04	22	07:27 (WEA 7)	20:58		21:41	21:43	20:58	20	06:54 (WEA 8)	18:49	18:36
10	08:29	07:46	06:45	06:31	05:26		07:04 (WEA 7)	05:26	04:49	05:00	05:46		06:34 (WEA 8)	06:39	18:30
	16:19	17:15	18:09	20:06	24	07:28 (WEA 7)	21:00		21:42	21:43	20:56	21	06:55 (WEA 8)	19:46	18:34
11	08:28	07:44	06:43	06:28	05:25		07:03 (WEA 7)	05:25	04:49	05:01	05:47		06:34 (WEA 8)	06:41	18:29
	16:20	17:17	18:11	20:08	26	07:29 (WEA 7)	21:02		21:43	21:42	20:54	22	06:56 (WEA 8)	19:44	18:31
12	08:27	07:42	06:40	06:26	05:23		07:03 (WEA 7)	05:23	04:48	05:02	05:49		06:33 (WEA 8)	06:43	18:26
	16:22	17:19	18:13	20:10	27	07:30 (WEA 7)	21:03		21:44	21:41	20:52	23	06:56 (WEA 8)	19:41	18:29
13	08:26	07:40	06:38	06:24	05:21		07:01 (WEA 7)	05:21	04:48	05:03	05:51		06:33 (WEA 8)	06:45	18:24
	16:23	17:21	18:15	20:12	28	07:29 (WEA 7)	21:05		21:45	21:40	20:50	23	06:56 (WEA 8)	19:39	18:27
14	08:26	07:38	06:35	06:21	05:19		07:01 (WEA 7)	05:19	04:48	05:04	05:53		06:32 (WEA 8)	06:46	18:24
	16:25	17:23	18:17	20:13	28	07:29 (WEA 7)	21:07		21:45	21:39	20:48	23	06:55 (WEA 8)	19:37	18:24
15	08:25	07:36	06:33	06:19	05:18		07:01 (WEA 7)	05:18	04:47	05:06	05:54		06:32 (WEA 8)	06:48	18:21
	16:27	17:25	18:19	20:15	28	07:29 (WEA 7)	21:08		21:46	21:38	20:46	24	06:56 (WEA 8)	19:34	18:22
16	08:24	07:34	06:31	06:17	05:16		07:00 (WEA 7)	05:16	04:47	05:07	05:56		06:33 (WEA 8)	06:50	18:20
	16:28	17:27	18:21	20:17	28	07:28 (WEA 7)	21:10		21:46	21:37	20:44	23	06:56 (WEA 8)	19:32	18:20
17	08:23	07:32	06:28	06:14	05:15		07:00 (WEA 7)	05:15	04:47	05:08	05:58		06:32 (WEA 8)	06:52	18:18
	16:30	17:29	18:22	20:19	28	07:28 (WEA 7)	21:12		21:47	21:35	20:42	22	06:54 (WEA 8)	19:29	18:18
18	08:22	07:30	06:26	06:12	05:13		07:00 (WEA 7)	05:13	04:47	05:10	06:00		06:33 (WEA 8)	06:53	18:15
	16:32	17:31	18:24	20:21	28	07:28 (WEA 7)	21:13		21:47	21:34	20:40	33	07:25 (WEA 7)	19:27	18:15
19	08:21	07:28	06:23	06:10	05:11		07:00 (WEA 7)	05:11	04:47	05:11	06:01		06:33 (WEA 8)	06:55	18:13
	16:33	17:33	18:26	20:23	27	07:27 (WEA 7)	21:15		21:48	21:33	20:38	35	07:26 (WEA 7)	19:24	18:13
20	08:19	07:26	06:21	06:08	05:10		07:01 (WEA 7)	05:10	04:47	05:12	06:03		06:34 (WEA 8)	06:57	18:11
	16:35	17:35	18:28	20:24	26	07:27 (WEA 7)	21:16		21:48	21:32	20:35	37	07:28 (WEA 7)	19:22	18:11
21	08:18	07:24	06:19	06:05	05:09		06:33 (WEA 8)	05:09	04:47	05:14	06:05		06:36 (WEA 8)	06:59	18:09
	16:37	17:37	18:30	20:26	35	07:26 (WEA 7)	21:18		21:48	21:30	20:33	36	07:29 (WEA 7)	19:20	18:09
22	08:17	07:22	06:16	06:03	05:07		06:30 (WEA 8)	05:07	04:48	05:15	06:06		06:37 (WEA 8)	07:00	18:07
	16:39	17:39	18:32	20:28	36	07:23 (WEA 7)	21:19		21:48	21:29	20:31	34	07:29 (WEA 7)	19:17	18:06
23	08:16	07:19	06:14	06:01	05:06		06:28 (WEA 8)	05:06	04:48	05:17	06:08		07:05 (WEA 7)	07:02	18:04
	16:41	17:41	18:33	20:30	37	07:22 (WEA 7)	21:21		21:49	21:28	20:29	25	07:30 (WEA 7)	19:15	18:04
24	08:14	07:17	06:11	05:59	05:04		06:27 (WEA 8)	05:04	04:48	05:18	06:10		07:04 (WEA 7)	07:04	18:02
	16:42	17:43	18:35	20:32	36	07:20 (WEA 7)	21:22		21:49	21:26	20:26	27	07:31 (WEA 7)	19:12	18:02
25	08:13	07:15	06:09	05:56	05:03		06:26 (WEA 8)	05:03	04:48	05:20	06:12		07:03 (WEA 7)	07:05	18:00
	16:44	17:45	18:37	20:33	31	07:17 (WEA 7)	21:24		21:49	21:25	20:24	28	07:31 (WEA 7)	19:10	18:00
26	08:12	07:13	06:07	05:54	05:02		06:26 (WEA 8)	05:02	04:49	05:21	06:13		07:03 (WEA 7)	07:07	18:00
	16:46	17:47	18:39	20:35	22	06:48 (WEA 8)	21:25		21:49	21:23	20:22	28	07:31 (WEA 7)	19:07	18:00
27	08:10	07:11	06:04	05:52	05:01		06:25 (WEA 8)	05:01	04:49	05:23	06:15		07:02 (WEA 7)	07:09	18:00
	16:48	17:49	18:41	20:37	23	06:48 (WEA 8)	21:27		21:49	21:22	20:20	29	07:31 (WEA 7)	19:05	18:00
28	08:09	07:08	06:02	05:50	05:00		06:25 (WEA 8)	05:00	04:50	05:24	06:17		07:02 (WEA 7)	07:11	18:00
	16:50	17:51	18:43	20:39	23	06:48 (WEA 8)	21:28		21:48	21:20	20:17	28	07:30 (WEA 7)	19:02	18:00
29	08:07		06:59	05:48	04:58		06:24 (WEA 8)	04:58	04:50	05:26	06:19		07:02 (WEA 7)	07:13	18:00
	16:52		19:44	20:41	24	06:48 (WEA 8)	21:29		21:48	21:18	20:15	28	07:30 (WEA 7)	19:00	18:00
30	08:06		06:57	05:46	04:57		06:24 (WEA 8)	04:57	04:51	05:27	06:20		07:02 (WEA 7)	07:14	18:00
	16:54		19:46	20:42	24	06:48 (WEA 8)	21:31		21:48	21:17	20:13	28	07:30 (WEA 7)	18:58	18:00
31	08:04		06:54		04:56					05:29	06:22		07:02 (WEA 7)		18:00
	16:56		19:48		21:32					21:15	20:10	26	07:28 (WEA 7)		18:00
Sonnenscheinstunden	252	274	367	419	492	138			507	510	458	679	382	110	
astr.max.mögl.Beschattung				649										329	261

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DV - Lindenweg 26

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April		[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember		
1	08:32	08:02	07:06	06:52		05:44		06:25 (WEA 8)	04:55	04:52	05:31		06:24	07:03 (WEA 7)	07:16	07:13	08:07	
	16:07	16:58	17:52	19:50		20:44	23	06:48 (WEA 8)	21:33	21:48	21:13		20:08	26	07:29 (WEA 7)	18:55	16:46	16:02
2	08:32	08:01	07:04	06:50		05:42		06:25 (WEA 8)	04:54	04:52	05:32		06:26		07:04 (WEA 7)	07:18	07:15	08:09
	16:08	17:00	17:54	19:52		20:46	22	06:47 (WEA 8)	21:34	21:47	21:12		20:06	24	07:28 (WEA 7)	18:53	16:44	16:02
3	08:32	07:59	07:01	06:47		05:40		06:25 (WEA 8)	04:54	04:53	05:34		06:27		07:04 (WEA 7)	07:20	07:17	08:10
	16:10	17:02	17:56	19:53		20:48	21	06:46 (WEA 8)	21:35	21:47	21:10		20:03	22	07:26 (WEA 7)	18:50	16:42	16:01
4	08:31	07:57	06:59	06:45		05:38		06:27 (WEA 8)	04:53	04:54	05:36		06:29		07:05 (WEA 7)	07:21	07:19	08:12
	16:11	17:04	17:58	19:55		20:49	19	06:46 (WEA 8)	21:37	21:46	21:08		20:01	20	07:25 (WEA 7)	18:48	16:40	16:00
5	08:31	07:56	06:57	06:42		05:36		06:28 (WEA 8)	04:52	04:55	05:37		06:42 (WEA 8)		07:07 (WEA 7)	07:23	07:21	08:13
	16:12	17:06	18:00	19:57		20:51	17	06:45 (WEA 8)	21:38	21:46	21:06	8	06:50 (WEA 8)		07:23 (WEA 7)	18:46	16:38	16:00
6	08:31	07:54	06:54	06:40		05:34		06:28 (WEA 8)	04:51	04:56	05:39		06:40 (WEA 8)		07:09 (WEA 7)	07:25	07:23	08:14
	16:13	17:08	18:02	19:59		20:53	9	07:22 (WEA 7)	21:39	21:45	21:04	12	06:52 (WEA 8)	10	07:19 (WEA 7)	18:43	16:36	15:59
7	08:30	07:52	06:52	06:38		05:32		06:30 (WEA 8)	04:51	04:57	05:41		06:37 (WEA 8)		07:27	07:25	08:16	
	16:15	17:09	18:04	20:01	16	07:26 (WEA 7)	20:55	11	06:41 (WEA 8)	21:40	21:45	21:02	16	06:53 (WEA 8)		18:41	16:34	15:59
8	08:30	07:50	06:50	06:35		05:30		06:32 (WEA 8)	04:50	04:58	05:42		06:37 (WEA 8)		07:29	07:27	08:17	
	16:16	17:11	18:06	20:03	20	07:28 (WEA 7)	20:56	6	06:38 (WEA 8)	21:41	21:44	21:00	18	06:55 (WEA 8)		18:38	16:33	15:58
9	08:29	07:47	06:47	06:33		05:28		06:40 (WEA 8)	04:50	04:59	05:44		06:35 (WEA 8)		07:30	07:28	08:18	
	16:17	17:13	18:08	20:04	22	07:28 (WEA 7)	20:58		21:41	21:43	20:58	20	06:55 (WEA 8)		18:36	16:31	15:58	
10	08:29	07:46	06:45	06:31		05:26		06:49	05:00	05:46		06:35 (WEA 8)		07:32	07:30	08:19		
	16:19	17:15	18:09	20:06	24	07:29 (WEA 7)	21:00		21:42	21:43	20:56	21	06:56 (WEA 8)		18:34	16:29	15:58	
11	08:28	07:44	06:43	06:28		05:25		06:49	05:01	05:47		06:34 (WEA 8)		07:34	07:32	08:21		
	16:20	17:17	18:11	20:08	26	07:30 (WEA 7)	21:02		21:43	21:42	20:54	23	06:57 (WEA 8)		18:31	16:27	15:57	
12	08:27	07:42	06:40	06:26		05:23		06:48	05:02	05:49		06:33 (WEA 8)		07:36	07:34	08:22		
	16:22	17:19	18:13	20:10	28	07:31 (WEA 7)	21:03		21:44	21:41	20:52	23	06:56 (WEA 8)		18:29	16:26	15:57	
13	08:26	07:40	06:38	06:24		05:21		06:48	05:03	05:51		06:33 (WEA 8)		07:38	07:36	08:23		
	16:23	17:21	18:15	20:12	28	07:30 (WEA 7)	21:05		21:45	21:40	20:50	24	06:57 (WEA 8)		18:27	16:24	15:57	
14	08:26	07:38	06:35	06:21		05:19		06:48	05:04	05:53		06:32 (WEA 8)		07:39	07:38	08:24		
	16:25	17:23	18:17	20:13	29	07:30 (WEA 7)	21:07		21:45	21:39	20:48	24	06:56 (WEA 8)		18:24	16:23	15:57	
15	08:25	07:36	06:33	06:19		05:18		06:47	05:06	05:54		06:33 (WEA 8)		07:41	07:40	08:25		
	16:27	17:25	18:19	20:15	29	07:30 (WEA 7)	21:08		21:46	21:38	20:46	23	06:56 (WEA 8)		18:22	16:21	15:57	
16	08:24	07:34	06:31	06:17		05:16		06:47	05:07	05:56		06:33 (WEA 8)		07:43	07:42	08:26		
	16:28	17:27	18:21	20:17	29	07:29 (WEA 7)	21:10		21:46	21:37	20:44	23	06:56 (WEA 8)		18:20	16:20	15:57	
17	08:23	07:32	06:28	06:14		05:15		06:47	05:08	05:58		06:33 (WEA 8)		07:45	07:43	08:26		
	16:30	17:29	18:22	20:19	28	07:29 (WEA 7)	21:12		21:47	21:35	20:42	22	06:55 (WEA 8)		18:18	16:18	15:57	
18	08:22	07:30	06:26	06:12		05:13		06:47	05:10	06:00		06:33 (WEA 8)		07:47	07:45	08:27		
	16:32	17:31	18:24	20:21	28	07:29 (WEA 7)	21:13		21:47	21:34	20:40	33	07:25 (WEA 7)		18:15	16:17	15:58	
19	08:21	07:28	06:23	06:10		05:11		06:47	05:11	06:01		06:33 (WEA 8)		07:49	07:47	08:28		
	16:33	17:33	18:26	20:23	27	07:28 (WEA 7)	21:15		21:48	21:33	20:38	35	07:26 (WEA 7)		18:13	16:15	15:58	
20	08:19	07:26	06:21	06:08		05:10		06:47	05:12	06:03		06:34 (WEA 8)		07:51	07:49	08:29		
	16:35	17:35	18:28	20:24	29	07:27 (WEA 7)	21:16		21:48	21:32	20:35	37	07:28 (WEA 7)		18:11	16:14	15:58	
21	08:18	07:24	06:19	06:05		05:09		06:47	05:14	06:05		06:36 (WEA 8)		07:52	07:51	08:29		
	16:37	17:37	18:30	20:26	35	07:26 (WEA 7)	21:18		21:48	21:30	20:33	37	07:30 (WEA 7)		18:09	16:13	15:59	
22	08:17	07:22	06:16	06:03		05:07		06:48	05:15	06:06		06:37 (WEA 8)		07:54	07:52	08:30		
	16:39	17:39	18:32	20:28	37	07:24 (WEA 7)	21:19		21:48	21:29	20:31	35	07:30 (WEA 7)		18:06	16:11	15:59	
23	08:16	07:19	06:14	06:01		05:06		06:48	05:17	06:08		06:42 (WEA 8)		07:56	07:54	08:30		
	16:41	17:41	18:33	20:30	37	07:22 (WEA 7)	21:21		21:49	21:28	20:29	27	07:31 (WEA 7)		18:04	16:10	16:00	
24	08:14	07:17	06:11	05:59		05:04		06:48	05:18	06:10		07:05 (WEA 7)		07:58	07:56	08:31		
	16:42	17:43	18:35	20:32	35	07:20 (WEA 7)	21:22		21:49	21:26	20:26	27	07:32 (WEA 7)		18:02	16:09	16:00	
25	08:13	07:15	06:09	05:56		05:03		06:48	05:20	06:12		07:04 (WEA 7)		07:00	07:58	08:31		
	16:44	17:45	18:37	20:33	30	07:17 (WEA 7)	21:24		21:49	21:25	20:24	27	07:31 (WEA 7)		17:00	16:08	16:01	
26	08:12	07:13	06:07	05:54		05:02		06:49	05:21	06:13		07:03 (WEA 7)		07:02	07:59	08:31		
	16:46	17:47	18:39	20:35	22	06:48 (WEA 8)	21:25		21:49	21:23	20:22	29	07:32 (WEA 7)		16:58	16:07	16:02	
27	08:10	07:11	06:04	05:52		05:01		06:49	05:23	06:15		07:03 (WEA 7)		07:04	08:01	08:32		
	16:48	17:49	18:41	20:37	24	06:49 (WEA 8)	21:27		21:49	21:22	20:20	29	07:32 (WEA 7)		16:56	16:06	16:02	
28	08:09	07:08	06:02	05:50		05:00		06:45	05:24	06:17		07:02 (WEA 7)		07:06	08:03	08:32		
	16:50	17:51	18:43	20:39	24	06:49 (WEA 8)	21:28		21:48	21:20	20:17	29	07:31 (WEA 7)		16:54	16:05	16:03	
29	08:07		06:59	05:48		04:58		06:45	05:26	06:19		07:02 (WEA 7)		07:08	08:04	08:32		
	16:52		19:44	20:41	23	06:48 (WEA 8)	21:29		21:48	21:18	20:15	29	07:31 (WEA 7)		16:52	16:04	16:04	
30	08:06		06:57	05:46		04:57		06:45	05:27	06:20		07:03 (WEA 7)		07:09	08:06	08:32		
	16:54		19:46	20:42	23	06:48 (WEA 8)	21:31		21:48	21:17	20:13	28	07:31 (WEA 7)		16:50	16:03	16:05	
31	08:04		06:54			04:56			05:29	06:22		07:02 (WEA 7)		07:11		08:32		
	16:56		19:48			21:32			21:15	20:10	27	07:29 (WEA 7)		16:48		16:06		
Sonnenscheinstunden	252	274	367	419		492		507	510	458		382		329	261	236		
astr.max.mögl.Beschattung				662			134				686	118						

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DW - Lindenweg 28

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	23	06:26 (WEA 8) 06:49 (WEA 8)	04:55 21:33	04:52 21:13	05:31 21:13	06:24 20:08	27	07:04 (WEA 7) 07:31 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	22	06:26 (WEA 8) 06:48 (WEA 8)	04:54 21:34	04:52 21:12	05:32 21:12	06:26 20:06	25	07:05 (WEA 7) 07:30 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	21	06:26 (WEA 8) 06:47 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	23	07:05 (WEA 7) 07:28 (WEA 7)	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	19	06:28 (WEA 8) 06:47 (WEA 8)	04:53 21:37	04:54 21:46	05:36 21:08	06:29 20:01	21	07:06 (WEA 7) 07:27 (WEA 7)	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	17	06:29 (WEA 8) 06:46 (WEA 8)	04:52 21:38	04:55 21:46	05:37 21:06	06:31 20:02	19	07:07 (WEA 7) 07:26 (WEA 7)	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	14	06:30 (WEA 8) 06:44 (WEA 8)	04:51 21:39	04:56 21:45	05:39 21:04	06:41 20:03	12	07:09 (WEA 7) 07:22 (WEA 7)	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	11	06:31 (WEA 8) 06:42 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:39 20:04	15	07:13 (WEA 7) 07:18 (WEA 7)	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	4	06:34 (WEA 8) 06:38 (WEA 8)	04:50 21:41	04:58 21:44	05:42 21:00	06:38 20:06	18	07:18 (WEA 7) 07:29	07:27 18:41	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	23	06:38 (WEA 8) 07:07 (WEA 7)	04:50 21:41	04:59 21:43	05:44 20:58	20	06:56 (WEA 8) 06:56 (WEA 8)	07:30 18:49	07:30 16:31	08:19 15:58	
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 21:00	25	07:06 (WEA 7) 07:31 (WEA 7)	05:00 21:42	05:46 21:43	05:46 20:56	21	06:56 (WEA 8) 06:57 (WEA 8)	07:32 18:54	07:32 16:29	08:19 15:58	
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	27	07:05 (WEA 7) 07:32 (WEA 7)	05:01 21:42	05:47 21:42	05:47 20:54	23	06:56 (WEA 8) 06:58 (WEA 8)	07:34 18:54	07:32 16:27	08:21 15:57	
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	29	07:04 (WEA 7) 07:33 (WEA 7)	05:02 21:41	05:49 21:41	05:49 20:52	23	06:54 (WEA 8) 06:57 (WEA 8)	07:36 18:54	07:34 16:26	08:22 15:57	
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	29	07:03 (WEA 7) 07:32 (WEA 7)	05:03 21:40	05:51 21:40	05:51 20:50	24	06:54 (WEA 8) 06:58 (WEA 8)	07:38 18:54	07:36 16:24	08:23 15:57	
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	29	07:03 (WEA 7) 07:32 (WEA 7)	05:04 21:39	05:53 21:40	05:53 20:48	24	06:54 (WEA 8) 06:57 (WEA 8)	07:39 18:54	07:38 16:23	08:24 15:57	
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	29	07:03 (WEA 7) 07:32 (WEA 7)	05:06 21:38	05:54 21:40	05:54 20:46	24	06:53 (WEA 8) 06:57 (WEA 8)	07:41 18:54	07:40 16:21	08:25 15:57	
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	29	07:02 (WEA 7) 07:31 (WEA 7)	05:07 21:37	05:56 21:40	05:56 20:44	23	06:54 (WEA 8) 06:57 (WEA 8)	07:43 18:54	07:42 16:20	08:26 15:57	
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	29	07:02 (WEA 7) 07:31 (WEA 7)	05:08 21:35	05:58 21:42	05:58 20:42	23	06:53 (WEA 8) 06:56 (WEA 8)	07:45 18:54	07:43 16:18	08:26 15:57	
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	27	07:03 (WEA 7) 07:30 (WEA 7)	05:10 21:34	06:00 21:40	06:00 20:40	29	06:54 (WEA 8) 07:25 (WEA 7)	07:47 18:54	07:45 16:17	08:27 15:58	
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	26	07:03 (WEA 7) 07:29 (WEA 7)	05:11 21:33	06:01 21:38	06:01 20:38	34	06:54 (WEA 8) 07:27 (WEA 7)	07:49 18:54	07:47 16:15	08:28 15:58	
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	33	06:36 (WEA 8) 06:36 (WEA 8)	05:12 21:32	06:03 21:35	06:03 20:35	37	06:55 (WEA 8) 07:29 (WEA 7)	07:51 18:54	07:49 16:14	08:29 15:58	
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	36	06:33 (WEA 8) 06:28 (WEA 7)	05:14 21:30	06:05 21:33	06:05 20:33	37	06:56 (WEA 8) 07:31 (WEA 7)	07:52 18:54	07:51 16:13	08:29 15:59	
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	37	06:30 (WEA 8) 06:25 (WEA 7)	05:15 21:29	06:06 21:31	06:06 20:31	36	06:57 (WEA 8) 07:31 (WEA 7)	07:54 18:54	07:52 16:11	08:30 15:59	
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	36	06:29 (WEA 8) 06:23 (WEA 7)	05:17 21:28	06:08 21:29	06:08 20:29	32	06:40 (WEA 8) 07:32 (WEA 7)	07:56 18:54	07:54 16:10	08:30 16:00	
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	34	06:28 (WEA 8) 07:21 (WEA 7)	05:18 21:26	06:10 21:26	06:10 20:26	26	07:07 (WEA 7) 07:33 (WEA 7)	07:58 18:54	07:56 16:09	08:31 16:00	
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	27	06:27 (WEA 8) 07:17 (WEA 7)	05:19 21:25	06:12 21:25	06:12 20:24	28	07:05 (WEA 7) 07:33 (WEA 7)	07:59 18:54	07:58 16:08	08:31 16:01	
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	23	06:27 (WEA 8) 07:16 (WEA 7)	05:21 21:23	06:13 21:23	06:13 20:22	28	07:05 (WEA 7) 07:33 (WEA 7)	07:59 18:54	07:59 16:07	08:31 16:02	
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	24	06:26 (WEA 8) 06:50 (WEA 8)	05:23 21:22	06:15 21:22	06:15 20:20	29	07:09 (WEA 7) 07:34 (WEA 7)	08:00 18:54	08:01 16:06	08:32 16:02	
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	24	06:26 (WEA 8) 06:50 (WEA 8)	05:24 21:20	06:17 21:17	06:17 20:17	29	07:11 (WEA 7) 07:33 (WEA 7)	08:03 18:54	08:03 16:05	08:32 16:03	
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29	24	06:26 (WEA 8) 06:50 (WEA 8)	05:26 21:18	06:19 21:15	06:19 20:15	29	07:13 (WEA 7) 07:33 (WEA 7)	08:04 18:54	08:04 16:04	08:32 16:04	
30	08:06 16:54	07:06 17:54	06:00 18:46	05:46 20:42	04:57 21:31	23	06:26 (WEA 8) 06:49 (WEA 8)	05:27 21:17	06:20 21:13	06:20 20:13	29	07:14 (WEA 7) 07:33 (WEA 7)	08:05 18:54	08:06 16:03	08:32 16:05	
31	08:04 16:56	07:04 17:56	06:00 18:48	05:46 20:42	04:56 21:32	23	06:49 (WEA 8) 07:12 (WEA 7)	05:28 21:15	06:22 21:10	06:22 20:10	29	07:15 (WEA 7) 07:32 (WEA 7)	08:06 18:54	08:07 16:03	08:32 16:06	
Sonnenscheinstunden	252	274	367	419	492	131		507	510	458	689	382	329	261	236	
astr.max.mögl.Beschattung				679							133					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DX - Lindenweg 30

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	23	06:26 (WEA 8) 04:55 06:49 (WEA 8) 21:33	04:52 21:48	05:31 21:13	06:24 20:08	28	07:04 (WEA 7) 07:16 07:32 (WEA 7) 18:55	07:13 16:46	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	21	06:27 (WEA 8) 04:54 06:48 (WEA 8) 21:34	04:52 21:47	05:32 21:12	06:26 20:06	26	07:05 (WEA 7) 07:18 07:31 (WEA 7) 18:53	07:15 16:44	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	20	06:27 (WEA 8) 04:54 06:47 (WEA 8) 21:35	04:53 21:47	05:34 21:10	06:27 20:03	25	07:05 (WEA 7) 07:20 07:30 (WEA 7) 18:50	07:17 16:42	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	19	06:28 (WEA 8) 04:53 06:47 (WEA 8) 21:37	04:54 21:46	05:36 21:08	06:29 20:01	22	07:06 (WEA 7) 07:21 07:28 (WEA 7) 18:48	07:19 16:40	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	8	06:29 (WEA 8) 04:52 07:25 (WEA 7) 21:38	04:55 21:46	05:37 21:06	06:31 20:02	19	07:08 (WEA 7) 07:23 07:27 (WEA 7) 18:46	07:23 16:38	07:23 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	14	06:30 (WEA 8) 04:51 07:28 (WEA 7) 21:39	04:56 21:45	05:39 21:04	06:33 20:04	15	07:09 (WEA 7) 07:25 07:24 (WEA 7) 18:43	07:25 16:36	07:25 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	10	06:32 (WEA 8) 04:51 06:42 (WEA 8) 21:40	04:57 21:45	05:41 21:02	06:34 20:04	8	07:12 (WEA 7) 07:27 07:20 (WEA 7) 18:41	07:27 16:34	07:27 16:34	08:16 15:59
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13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05		07:04 (WEA 7) 05:21 07:33 (WEA 7) 21:45	04:48 21:40	05:51 20:50	06:45 20:03	23	07:38 (WEA 7) 07:39 07:40 (WEA 7) 18:27	07:38 16:24	07:38 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07		07:04 (WEA 7) 05:19 07:33 (WEA 7) 21:46	04:48 21:39	05:53 20:48	06:46 20:04	24	07:40 (WEA 7) 07:41 07:42 (WEA 7) 18:24	07:40 16:23	07:40 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08		07:04 (WEA 7) 05:18 07:33 (WEA 7) 21:47	04:47 21:38	05:54 20:46	06:48 20:04	24	07:41 (WEA 7) 07:42 07:43 (WEA 7) 18:22	07:41 16:21	07:41 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10		07:03 (WEA 7) 05:16 07:32 (WEA 7) 21:46	04:47 21:37	05:56 20:44	06:50 20:04	24	07:43 (WEA 7) 07:44 07:45 (WEA 7) 18:20	07:43 16:20	07:43 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12		07:03 (WEA 7) 05:15 07:31 (WEA 7) 21:47	04:47 21:35	05:58 20:42	06:52 20:04	23	07:45 (WEA 7) 07:46 07:47 (WEA 7) 18:18	07:45 16:18	07:45 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13		07:03 (WEA 7) 05:13 07:31 (WEA 7) 21:47	04:47 21:34	06:00 20:40	06:53 20:04	26	07:47 (WEA 7) 07:48 07:49 (WEA 7) 18:15	07:47 16:17	07:47 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15		07:04 (WEA 7) 05:11 07:30 (WEA 7) 21:48	04:47 21:33	06:01 20:38	06:55 20:04	33	07:49 (WEA 7) 07:50 07:51 (WEA 7) 18:13	07:49 16:15	07:49 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16		07:04 (WEA 7) 05:10 07:29 (WEA 7) 21:49	04:47 21:32	06:03 20:35	06:57 20:04	36	07:51 (WEA 7) 07:52 07:53 (WEA 7) 18:11	07:51 16:14	07:51 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18		07:04 (WEA 7) 05:09 07:28 (WEA 7) 21:48	04:47 21:30	06:05 20:33	06:59 20:04	38	07:52 (WEA 7) 07:53 07:54 (WEA 7) 18:09	07:52 16:13	07:52 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19		07:04 (WEA 7) 05:07 07:26 (WEA 7) 21:48	04:48 21:29	06:06 20:31	07:00 20:04	37	07:54 (WEA 7) 07:55 07:56 (WEA 7) 18:06	07:54 16:11	07:54 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21		07:04 (WEA 7) 05:06 06:29 (WEA 8) 21:49	04:48 21:28	06:08 20:29	07:02 20:04	33	07:56 (WEA 7) 07:57 07:58 (WEA 7) 18:04	07:56 16:10	07:56 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22		07:04 (WEA 7) 05:04 06:28 (WEA 8) 21:48	04:48 21:26	06:10 20:26	07:04 20:05	27	07:58 (WEA 7) 07:59 08:00 (WEA 7) 18:02	07:58 16:09	07:58 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24		07:04 (WEA 7) 05:03 06:28 (WEA 8) 21:49	04:48 21:25	06:12 20:24	07:05 20:04	28	07:59 (WEA 7) 08:00 08:01 (WEA 7) 18:00	07:59 16:08	07:59 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25		07:04 (WEA 7) 05:02 06:27 (WEA 8) 21:49	04:49 21:23	06:13 20:22	07:07 20:04	28	08:00 (WEA 7) 08:01 08:02 (WEA 7) 17:58	08:00 16:07	08:00 16:07	08:32 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27		07:04 (WEA 7) 05:01 06:26 (WEA 8) 21:49	04:49 21:22	06:15 20:20	07:09 20:04	29	08:01 (WEA 7) 08:02 08:03 (WEA 7) 17:56	08:01 16:06	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28		07:04 (WEA 7) 05:00 06:26 (WEA 8) 21:48	04:50 21:20	06:17 20:17	07:11 20:04	30	08:03 (WEA 7) 08:04 08:05 (WEA 7) 17:54	08:03 16:05	08:03 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29		07:04 (WEA 7) 04:58 06:26 (WEA 8) 21:48	04:50 21:18	06:19 20:15	07:13 20:04	30	08:04 (WEA 7) 08:05 08:06 (WEA 7) 17:52	08:04 16:04	08:04 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:01 18:46	05:46 20:42	04:57 21:31		07:04 (WEA 7) 04:57 06:26 (WEA 8) 21:48	04:51 21:17	06:20 20:13	07:14 20:04	29	08:05 (WEA 7) 08:06 08:07 (WEA 7) 17:50	08:05 16:03	08:05 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	06:00 18:48	05:44 20:43	04:56 21:32		07:04 (WEA 7) 04:56 06:26 (WEA 8) 21:48	04:49 21:15	06:22 20:10	07:14 20:04	28	08:06 (WEA 7) 08:07 08:08 (WEA 7) 17:48	08:06 16:03	08:06 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458	382		329	261	236	
astr.max.mögl.Beschattung				686		124			685	143					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** DY - Lindenweg 32

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	23	06:27 (WEA 8) 06:50 (WEA 8)	04:55 21:33	04:52 21:13	05:31 21:13	06:24 20:08	28	07:05 (WEA 7) 07:33 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	22	06:27 (WEA 8) 06:49 (WEA 8)	04:54 21:34	04:52 21:47	05:32 21:12	06:26 20:06	26	07:06 (WEA 7) 07:32 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	21	06:27 (WEA 8) 06:29 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	26	07:05 (WEA 7) 07:31 (WEA 7)	07:20 18:50	07:17 16:42	08:10 16:01
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7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	9	06:35 (WEA 8) 06:42 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:40 (WEA 8) 06:54 (WEA 8)	06:34 12	07:11 (WEA 7) 07:23 (WEA 7)	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56	24	07:09 (WEA 7) 07:33 (WEA 7)	05:30 21:47	05:42 21:44	05:42 21:00	06:39 (WEA 8) 06:56 (WEA 8)	06:36 17	07:29 (WEA 7) 07:38 (WEA 7)	07:27 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	26	07:07 (WEA 7) 07:33 (WEA 7)	05:28 21:41	05:44 21:43	05:44 20:58	06:37 (WEA 8) 06:56 (WEA 8)	06:38 19	07:30 (WEA 7) 07:28 (WEA 7)	07:28 18:36	07:28 16:31	08:18 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 20:56	26	07:07 (WEA 7) 07:34 (WEA 7)	05:26 21:42	05:46 21:43	05:46 20:56	06:37 (WEA 8) 06:58 (WEA 8)	06:39 21	07:30 (WEA 7) 07:28 (WEA 7)	07:28 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	28	07:06 (WEA 7) 07:34 (WEA 7)	05:25 21:43	05:47 21:42	05:47 20:54	06:36 (WEA 8) 06:58 (WEA 8)	06:41 22	07:29 (WEA 7) 07:28 (WEA 7)	07:28 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	28	07:05 (WEA 7) 07:33 (WEA 7)	05:23 21:44	05:49 21:41	05:49 20:52	06:35 (WEA 8) 06:58 (WEA 8)	06:43 23	07:28 (WEA 7) 07:28 (WEA 7)	07:28 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	30	07:04 (WEA 7) 07:34 (WEA 7)	05:21 21:45	05:49 21:40	05:51 20:50	06:35 (WEA 8) 06:59 (WEA 8)	06:45 24	07:28 (WEA 7) 07:28 (WEA 7)	07:28 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 20:58	30	07:04 (WEA 7) 07:34 (WEA 7)	05:19 21:45	05:53 21:45	05:53 20:48	06:34 (WEA 8) 06:58 (WEA 8)	06:46 24	07:28 (WEA 7) 07:28 (WEA 7)	07:28 18:24	07:39 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	30	07:04 (WEA 7) 07:34 (WEA 7)	05:18 21:46	05:54 21:46	05:54 20:46	06:34 (WEA 8) 06:58 (WEA 8)	06:48 24	07:28 (WEA 7) 07:28 (WEA 7)	07:28 18:22	07:41 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	29	07:03 (WEA 7) 07:32 (WEA 7)	05:16 21:46	05:56 21:37	05:56 20:44	06:35 (WEA 8) 06:58 (WEA 8)	06:50 23	07:43 (WEA 7) 07:28 (WEA 7)	07:28 18:20	07:42 16:20	08:26 15:57
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18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	27	07:04 (WEA 7) 07:31 (WEA 7)	05:13 21:47	06:00 21:34	06:00 20:40	06:35 (WEA 8) 06:57 (WEA 8)	06:53 22	07:47 (WEA 7) 07:28 (WEA 7)	07:28 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	26	07:05 (WEA 7) 07:31 (WEA 7)	05:11 21:48	06:01 21:33	06:01 20:38	06:34 (WEA 8) 07:27 (WEA 7)	06:55 33	07:49 (WEA 7) 07:28 (WEA 7)	07:28 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	36	07:06 (WEA 8) 07:30 (WEA 7)	05:10 21:48	06:03 21:32	06:03 20:35	06:35 (WEA 8) 07:30 (WEA 7)	06:59 37	07:51 (WEA 7) 07:28 (WEA 7)	07:28 18:11	07:48 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	36	07:06 (WEA 8) 07:28 (WEA 7)	05:09 21:48	06:05 21:30	06:05 20:33	06:37 (WEA 8) 07:32 (WEA 7)	06:59 37	07:52 (WEA 7) 07:28 (WEA 7)	07:28 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	37	07:06 (WEA 8) 07:26 (WEA 7)	05:07 21:48	06:06 21:29	06:06 20:31	06:37 (WEA 8) 07:32 (WEA 7)	07:00 37	07:54 (WEA 7) 07:28 (WEA 7)	07:28 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	36	07:06 (WEA 8) 07:24 (WEA 7)	05:06 21:49	06:08 21:28	06:08 20:29	06:40 (WEA 8) 07:34 (WEA 7)	07:02 34	07:56 (WEA 7) 07:28 (WEA 7)	07:28 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	31	07:29 (WEA 8) 06:28 (WEA 8)	05:04 21:49	06:10 21:26	06:10 20:26	07:08 (WEA 7) 07:34 (WEA 7)	07:04 26	07:58 (WEA 7) 07:28 (WEA 7)	07:28 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	23	06:28 (WEA 8) 06:51 (WEA 8)	05:03 21:49	06:12 21:25	06:12 20:24	07:07 (WEA 7) 07:34 (WEA 7)	07:05 27	07:60 (WEA 7) 07:28 (WEA 7)	07:28 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25	27	06:27 (WEA 8) 06:51 (WEA 8)	05:02 21:49	06:13 21:23	06:13 20:22	07:06 (WEA 7) 07:35 (WEA 7)	07:07 29	07:70 (WEA 7) 07:28 (WEA 7)	07:28 18:00	07:59 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	24	06:27 (WEA 8) 06:51 (WEA 8)	05:01 21:49	06:15 21:22	06:15 20:20	07:06 (WEA 7) 07:35 (WEA 7)	07:09 29	07:74 (WEA 7) 07:28 (WEA 7)	07:28 18:00	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	24	06:27 (WEA 8) 06:51 (WEA 8)	05:00 21:48	06:17 21:20	06:17 20:17	07:05 (WEA 7) 07:34 (WEA 7)	07:11 29	07:76 (WEA 7) 07:28 (WEA 7)	07:28 18:00	08:03 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29	24	06:27 (WEA 8) 06:51 (WEA 8)	04:58 21:48	06:19 21:18	06:19 20:15	07:05 (WEA 7) 07:35 (WEA 7)	07:13 30	07:78 (WEA 7) 07:28 (WEA 7)	07:28 18:00	08:04 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:00 18:46	05:46 20:42	04:57 21:31	23	06:27 (WEA 8) 06:50 (WEA 8)	04:57 21:48	06:20 21:17	06:20 20:13	07:05 (WEA 7) 07:35 (WEA 7)	07:14 31	07:79 (WEA 7) 07:28 (WEA 7)	07:28 18:00	08:06 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	05:58 18:48	05:40 20:44	04:56 21:32	23	06:50 (WEA 8)	04:56 21:48	06:22 21:15	06:22 20:10	07:05 (WEA 7) 07:33 (WEA 7)	18:58 28	07:81 (WEA 7) 07:28 (WEA 7)	07:28 18:00	08:07 16:04	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458		382		329	261	236	
astr.max.mögl.Beschattung				698	124							152				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: DZ - Lindenweg 34

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	23	06:27 (WEA 8) 06:50 (WEA 8)	04:55 21:33	04:52 21:13	05:31 21:13	06:24 20:08	28	07:06 (WEA 7) 07:34 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	21	06:28 (WEA 8) 06:49 (WEA 8)	04:54 21:34	04:52 21:47	05:32 21:12	06:26 20:06	27	07:06 (WEA 7) 07:33 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	20	06:28 (WEA 8) 06:30 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	26	07:06 (WEA 7) 07:32 (WEA 7)	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	18	06:48 (WEA 8) 06:31 (WEA 8)	04:53 21:37	04:54 21:46	05:36 21:08	06:29 20:01	24	07:07 (WEA 7) 07:31 (WEA 7)	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	16	06:31 (WEA 8) 06:47 (WEA 8)	04:52 21:38	04:55 21:46	05:37 21:06	06:31 19:58	21	07:08 (WEA 7) 07:29 (WEA 7)	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:08	06:54 18:02	06:40 19:59	05:34 20:53	13	06:32 (WEA 8) 06:45 (WEA 8)	04:51 21:39	04:56 21:45	05:39 21:04	06:33 19:56	18	07:09 (WEA 7) 07:27 (WEA 7)	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	8	06:34 (WEA 8) 06:42 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:34 19:54	13	07:11 (WEA 7) 07:24 (WEA 7)	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56		07:10 (WEA 7) 07:34 (WEA 7)	05:30 21:41	05:42 21:44	05:42 21:00	06:36 19:51	3	07:16 (WEA 7) 07:19 (WEA 7)	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	24	07:08 (WEA 7) 07:07 (WEA 7)	05:28 21:41	05:44 21:43	05:44 20:58	06:39 19:49	16	07:30 (WEA 7) 07:33 (WEA 7)	07:50 18:36	07:50 16:31	08:08 15:58
10	08:29 16:19	07:46 17:15	06:45 18:09	06:31 20:06	05:26 20:56	26	07:07 (WEA 7) 07:34 (WEA 7)	05:26 21:42	05:46 21:43	05:46 20:56	06:37 (WEA 8) 06:58 (WEA 8)	14	07:32 (WEA 7) 07:34 (WEA 7)	07:30 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	28	07:07 (WEA 7) 07:35 (WEA 7)	05:25 21:43	05:47 21:42	05:47 20:54	06:41 19:44	22	07:34 (WEA 7) 07:36 (WEA 8)	07:32 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:42 18:13	06:26 20:10	05:23 21:03	29	07:05 (WEA 7) 07:34 (WEA 7)	05:23 21:44	05:49 21:41	05:49 20:52	06:43 19:41	23	07:36 (WEA 8) 06:59 (WEA 8)	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05	30	07:05 (WEA 7) 07:05 (WEA 7)	05:21 21:45	05:51 21:40	05:51 20:50	06:45 19:39	23	07:38 (WEA 8) 06:59 (WEA 8)	07:38 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	30	07:05 (WEA 7) 07:35 (WEA 7)	05:19 21:45	05:53 21:39	05:53 20:48	06:46 19:37	24	07:39 (WEA 8) 06:59 (WEA 8)	07:39 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08		07:05 (WEA 7) 07:34 (WEA 7)	05:18 21:46	05:54 21:38	05:54 20:46	06:48 19:34	24	07:41 (WEA 7) 06:59 (WEA 8)	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10		07:04 (WEA 7) 07:33 (WEA 7)	05:16 21:46	05:56 21:37	05:56 20:44	06:50 19:32	24	07:42 (WEA 7) 06:59 (WEA 8)	07:42 18:20	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	28	07:05 (WEA 7) 07:33 (WEA 7)	05:15 21:47	05:58 21:35	05:58 20:42	06:52 19:29	24	07:45 (WEA 7) 06:58 (WEA 8)	07:45 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	27	07:05 (WEA 7) 06:40 (WEA 8)	05:13 21:47	06:00 21:34	06:00 20:40	06:53 19:27	23	07:47 (WEA 7) 06:58 (WEA 8)	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15		07:32 (WEA 7) 07:31 (WEA 7)	05:11 21:48	06:01 21:33	06:01 20:38	06:55 19:27	30	07:49 (WEA 7) 06:59 (WEA 8)	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:08 20:24	05:10 21:16	28	06:35 (WEA 8) 07:30 (WEA 7)	05:10 21:48	06:03 21:32	06:03 20:35	06:57 19:22	35	07:51 (WEA 7) 07:30 (WEA 7)	07:51 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18		06:33 (WEA 8) 07:29 (WEA 7)	05:09 21:48	06:05 21:30	06:05 20:33	06:58 19:20	37	07:52 (WEA 7) 06:37 (WEA 8)	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19		06:31 (WEA 8) 07:26 (WEA 7)	05:07 21:48	06:06 21:29	06:06 20:31	07:00 19:17	37	07:54 (WEA 7) 06:33 (WEA 7)	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21		06:30 (WEA 8) 07:24 (WEA 7)	05:06 21:49	06:08 21:28	06:08 20:29	07:02 19:15	35	07:56 (WEA 7) 06:39 (WEA 8)	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22		06:29 (WEA 8) 07:21 (WEA 7)	05:04 21:49	06:10 21:26	06:10 20:26	07:04 19:12	26	07:58 (WEA 7) 06:35 (WEA 7)	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	23	06:28 (WEA 8) 06:51 (WEA 8)	05:03 21:49	06:12 21:25	06:12 20:24	07:05 19:10	27	07:59 (WEA 7) 07:35 (WEA 7)	07:59 18:00	07:58 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:07 18:39	05:54 20:35	05:02 21:25		06:28 (WEA 8) 06:51 (WEA 8)	05:02 21:49	06:13 21:23	06:13 20:22	07:07 19:07	29	08:01 (WEA 7) 07:36 (WEA 7)	08:01 18:02	07:59 16:07	08:32 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27		06:27 (WEA 8) 06:51 (WEA 8)	05:01 21:49	06:15 21:22	06:15 20:20	07:09 19:05	29	08:03 (WEA 7) 07:36 (WEA 7)	08:03 18:00	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28		06:27 (WEA 8) 06:51 (WEA 8)	05:00 21:48	06:17 21:20	06:17 20:17	07:11 19:02	29	08:04 (WEA 7) 07:35 (WEA 7)	08:04 18:00	08:03 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29		06:27 (WEA 8) 06:51 (WEA 8)	04:58 21:48	06:19 21:18	06:19 20:15	07:13 19:00	29	08:05 (WEA 7) 07:35 (WEA 7)	08:05 18:00	08:04 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:00 18:46	05:46 20:42	04:57 21:31		06:27 (WEA 8) 06:51 (WEA 8)	04:57 21:48	06:20 21:17	06:20 20:13	07:14 18:58	29	08:06 (WEA 7) 07:35 (WEA 7)	08:06 18:00	08:06 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	06:00 18:48	05:44 20:44	04:56 21:32		06:27 (WEA 8) 06:51 (WEA 8)	04:56 21:48	06:22 21:15	06:22 20:10	07:15 19:02	29	08:07 (WEA 7) 07:34 (WEA 7)	08:07 18:00	08:07 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458		382	160	329	261	236	
astr.max.mögl.Beschattung				702	119				668							

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EA - Lindenweg 40

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

		Januar	Februar	März	April		Mai		Juni	Juli	August		September		Oktober	November	Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50		05:44 20:44		20	06:33 (WEA 8) 06:53 (WEA 8)	04:55 21:33	04:52 21:48	05:31 21:13	06:24 20:08	30	07:11 (WEA 7) 07:41 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
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Sonnenscheinstunden	252	274	367	419		492			507	510	458		382	251	329	261	236	
astr.max.mögl.Beschattung				768		77							605					

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EB - Hagenower Straße 13

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	25	06:27 (WEA 8) 06:52 (WEA 8)	04:55 21:33	04:52 21:48	05:31 21:13	06:24 20:08	30	07:08 (WEA 7) 07:38 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
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26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	25	06:28 (WEA 8) 06:53 (WEA 8)	05:02 21:49	06:13 21:23	06:13 20:22	29	07:10 (WEA 7) 07:39 (WEA 7)	07:07 19:07	07:02 18:06	07:02 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	25	06:28 (WEA 8) 06:53 (WEA 8)	05:01 21:49	06:15 21:22	06:15 20:20	31	07:09 (WEA 7) 07:40 (WEA 7)	07:09 19:05	07:04 18:06	07:04 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	26	06:27 (WEA 8) 06:53 (WEA 8)	05:00 21:48	06:17 21:20	06:17 20:17	31	07:08 (WEA 7) 07:39 (WEA 7)	07:11 19:02	07:06 18:04	07:06 16:05	08:32 16:03
29	08:07 16:52	07:06 17:50	05:59 18:48	05:48 20:41	04:58 21:29	25	06:27 (WEA 8) 06:52 (WEA 8)	04:58 21:48	05:26 21:18	05:26 20:15	31	07:08 (WEA 7) 07:39 (WEA 7)	07:13 19:00	07:08 18:04	07:08 16:04	08:32 16:04
30	08:06 16:54	07:05 17:46	05:57 18:46	05:46 20:42	04:57 21:31	25	06:27 (WEA 8) 06:52 (WEA 8)	04:57 21:48	05:27 21:17	05:27 20:13	31	07:08 (WEA 7) 07:39 (WEA 7)	07:14 18:58	07:09 18:06	07:09 16:03	08:32 16:05
31	08:04 16:56	07:04 17:48	05:54 18:48	05:45 20:42	04:56 21:32			05:29 21:15	06:22 21:10	06:22 20:10	31	07:07 (WEA 7) 07:38 (WEA 7)	07:07 18:32	07:11 18:32	07:11 16:06	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492			507	510	458		382		329	261	236
astr.max.mögl.Beschattung				762		150				737	189					

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EC - Hagenower Straße 17

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	24	06:31 (WEA 8) 06:55 (WEA 8)	04:55 21:33	04:52 21:13	05:31 21:13	06:24 20:08	32	07:12 (WEA 7) 07:44 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	22	06:32 (WEA 8) 06:54 (WEA 8)	04:54 21:34	04:52 21:47	05:32 21:12	06:26 20:06	32	07:12 (WEA 7) 07:44 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	21	06:32 (WEA 8) 06:53 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	31	07:12 (WEA 7) 07:43 (WEA 7)	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	18	06:34 (WEA 8) 06:52 (WEA 8)	04:53 21:37	04:54 21:46	05:36 21:08	06:29 20:01	30	07:12 (WEA 7) 07:42 (WEA 7)	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	15	06:35 (WEA 8) 06:50 (WEA 8)	04:52 21:38	04:55 21:46	05:37 21:06	06:31 19:58	29	07:13 (WEA 7) 07:42 (WEA 7)	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	11	06:37 (WEA 8) 06:48 (WEA 8)	04:51 21:39	04:56 21:45	05:39 21:04	06:32 19:56	28	07:12 (WEA 7) 07:40 (WEA 7)	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	4	06:40 (WEA 8) 06:44 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:34 19:54	26	07:13 (WEA 7) 07:39 (WEA 7)	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:03	05:30 20:56		07:15 (WEA 7) 07:45 (WEA 7)	05:30 21:41	05:42 21:44	05:42 21:00	06:36 19:51	22	07:15 (WEA 7) 07:37 (WEA 7)	07:29 18:38	07:27 16:33	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58		07:14 (WEA 7) 07:45 (WEA 7)	05:28 21:41	05:44 21:43	05:44 20:58	06:46 19:49	16	07:00 (WEA 8) 07:15 (WEA 7)	07:30 18:36	07:28 16:31	08:18 15:58
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11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02		07:13 (WEA 7) 07:45 (WEA 7)	05:25 21:43	05:47 21:42	05:47 20:54	06:40 (WEA 8) 07:02 (WEA 8)	06:41 19:44	07:23 (WEA 7) 07:27 (WEA 7)	07:34 18:31	07:32 16:27	08:21 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03		07:12 (WEA 7) 07:44 (WEA 7)	05:23 21:44	05:49 21:41	05:49 20:52	06:40 (WEA 8) 07:03 (WEA 8)	06:43 19:41	07:26 (WEA 7) 07:39 (WEA 7)	07:34 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05		07:12 (WEA 7) 07:44 (WEA 7)	05:21 21:45	05:51 21:40	05:51 20:50	06:39 (WEA 8) 07:04 (WEA 8)	06:43 19:39	07:38 (WEA 7) 07:49 (WEA 7)	07:36 18:27	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	31	07:13 (WEA 7) 07:44 (WEA 7)	05:19 21:46	05:53 21:39	05:53 20:48	06:38 (WEA 8) 07:03 (WEA 8)	06:45 19:37	07:39 (WEA 7) 07:51 (WEA 7)	07:38 18:24	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08		07:13 (WEA 7) 07:43 (WEA 7)	05:18 21:46	05:54 21:38	05:54 20:46	06:38 (WEA 8) 07:04 (WEA 8)	06:48 19:34	07:41 (WEA 7) 07:52 (WEA 7)	07:40 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10		07:12 (WEA 7) 07:41 (WEA 7)	05:16 21:46	05:56 21:37	05:56 20:44	06:38 (WEA 8) 07:04 (WEA 8)	06:50 19:32	07:43 (WEA 7) 07:54 (WEA 7)	07:42 18:20	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12		07:13 (WEA 7) 07:41 (WEA 7)	05:15 21:47	05:58 21:35	05:58 20:42	06:38 (WEA 8) 07:03 (WEA 8)	06:52 19:29	07:45 (WEA 7) 07:51 (WEA 7)	07:43 18:18	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13		06:41 (WEA 8) 07:40 (WEA 8)	05:13 21:47	05:59 21:34	05:59 20:40	06:38 (WEA 8) 07:03 (WEA 8)	06:53 19:27	07:47 (WEA 7) 07:54 (WEA 7)	07:45 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15		06:38 (WEA 8) 07:38 (WEA 7)	05:11 21:48	06:01 21:33	06:01 20:38	06:38 (WEA 8) 07:02 (WEA 8)	06:55 19:24	07:49 (WEA 7) 07:56 (WEA 7)	07:47 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16		06:37 (WEA 8) 07:37 (WEA 7)	05:10 21:48	06:03 21:32	06:03 20:35	06:38 (WEA 8) 07:02 (WEA 8)	06:57 19:22	07:51 (WEA 7) 07:58 (WEA 7)	07:49 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18		06:35 (WEA 8) 07:35 (WEA 7)	05:09 21:48	06:05 21:30	06:05 20:33	06:39 (WEA 8) 07:37 (WEA 7)	06:58 19:20	07:52 (WEA 7) 07:59 (WEA 7)	07:51 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19		06:33 (WEA 8) 07:30 (WEA 7)	05:07 21:48	06:06 21:29	06:06 20:31	06:39 (WEA 8) 07:39 (WEA 7)	07:00 19:17	07:54 (WEA 7) 07:56 (WEA 7)	07:52 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21		06:32 (WEA 8) 06:56 (WEA 8)	05:06 21:49	06:08 21:28	06:08 20:29	06:40 (WEA 8) 07:41 (WEA 7)	07:02 19:15	07:57 (WEA 7) 07:59 (WEA 7)	07:54 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22		06:32 (WEA 8) 06:56 (WEA 8)	05:04 21:49	06:10 21:26	06:10 20:26	06:42 (WEA 8) 07:42 (WEA 7)	07:04 19:12	07:58 (WEA 7) 07:54 (WEA 7)	07:56 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24		06:31 (WEA 8) 06:57 (WEA 8)	05:03 21:49	06:12 21:25	06:12 20:24	06:44 (WEA 8) 07:42 (WEA 7)	07:02 19:10	07:59 (WEA 7) 07:51 (WEA 7)	07:57 18:00	07:57 16:08	08:32 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25		06:31 (WEA 8) 06:57 (WEA 8)	05:02 21:49	06:13 21:23	06:13 20:22	07:16 (WEA 7) 07:44 (WEA 7)	07:07 19:07	07:02 (WEA 7) 07:59 (WEA 7)	07:07 18:00	07:07 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27		06:31 (WEA 8) 06:57 (WEA 8)	05:01 21:49	06:15 21:22	06:15 20:20	07:15 (WEA 7) 07:44 (WEA 7)	07:09 19:05	07:04 (WEA 7) 07:51 (WEA 7)	07:04 18:00	07:04 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28		06:31 (WEA 8) 06:56 (WEA 8)	05:00 21:48	06:17 21:20	06:17 20:17	07:14 (WEA 7) 07:44 (WEA 7)	07:11 19:02	07:06 (WEA 7) 07:51 (WEA 7)	07:06 18:00	07:06 16:05	08:32 16:03
29	08:07 16:52	07:07 17:52	06:01 18:44	05:48 20:41	04:58 21:29		06:31 (WEA 8) 06:56 (WEA 8)	04:58 21:48	06:19 21:18	06:19 20:15	07:13 (WEA 7) 07:44 (WEA 7)	07:13 19:00	07:08 (WEA 7) 07:54 (WEA 7)	07:08 18:00	07:08 16:04	08:32 16:04
30	08:06 16:54	07:06 17:54	06:01 18:46	05:46 20:42	04:57 21:31		06:31 (WEA 8) 06:55 (WEA 8)	04:57 21:48	06:20 21:17	06:20 20:13	07:13 (WEA 7) 07:45 (WEA 7)	07:14 18:58	07:09 (WEA 7) 07:56 (WEA 7)	07:09 18:00	07:09 16:03	08:32 16:05
31	08:04 16:56	07:04 17:56	06:00 18:48	05:44 20:43	04:56 21:32		06:31 (WEA 8) 06:55 (WEA 8)	04:56 21:48	06:22 21:15	06:22 20:10	07:12 (WEA 7) 07:44 (WEA 7)		07:11 (WEA 7) 07:57 (WEA 7)	07:11 18:00	07:11 16:03	08:33 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458	382	268		329	261	236	236
astr.max.mögl.Beschattung				828	115				681		268			329	261	236

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** ED - Hagenower Straße 15

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai		[Juni	[Juli	[August		[September		[Oktober	[November	[Dezember	
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	24	06:30 (WEA 8) 06:54 (WEA 8)	04:55 21:33	04:52 21:13	05:31 21:13	06:24 20:08	32	07:11 (WEA 7) 07:43 (WEA 7)	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	23	06:30 (WEA 8) 06:53 (WEA 8)	04:54 21:34	04:52 21:47	05:32 21:12	06:26 20:06	31	07:11 (WEA 7) 07:42 (WEA 7)	07:18 18:53	07:15 16:44	08:09 16:02
3	08:32 16:10	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	21	06:31 (WEA 8) 06:52 (WEA 8)	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	30	07:11 (WEA 7) 07:41 (WEA 7)	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:04	06:59 17:58	06:45 19:55	05:38 20:49	19	06:33 (WEA 8) 06:52 (WEA 8)	04:53 21:37	04:54 21:46	05:36 21:08	06:29 20:01	30	07:11 (WEA 7) 07:41 (WEA 7)	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:06	06:57 18:00	06:42 19:57	05:36 20:51	17	06:33 (WEA 8) 06:50 (WEA 8)	04:52 21:38	04:55 21:46	05:37 21:06	06:31 20:01	30	07:12 (WEA 7) 07:40 (WEA 7)	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	13	06:35 (WEA 8) 06:48 (WEA 8)	04:51 21:39	04:56 21:45	05:39 21:04	06:32 20:01	28	07:12 (WEA 7) 07:38 (WEA 7)	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	9	06:37 (WEA 8) 06:46 (WEA 8)	04:51 21:40	04:57 21:45	05:41 21:02	06:34 20:01	26	07:13 (WEA 7) 07:37 (WEA 7)	07:27 18:41	07:25 16:34	08:16 15:59
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9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58		06:44 (WEA 8) 07:13 (WEA 7)	04:50 21:42	04:59 21:43	05:44 20:58	06:38 20:01	21	07:16 (WEA 7) 07:32 (WEA 7)	07:30 18:36	07:28 16:31	08:18 15:58
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12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03		06:38 (WEA 8) 07:43 (WEA 7)	04:48 21:44	05:02 21:41	05:49 20:52	06:43 20:03	25	07:36 (WEA 7) 07:03 (WEA 8)	07:36 18:41	07:36 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:24 20:12	05:21 21:05		06:38 (WEA 8) 07:43 (WEA 7)	04:48 21:45	05:03 21:40	05:51 20:50	06:45 20:03	25	07:38 (WEA 7) 07:03 (WEA 8)	07:36 18:39	07:36 16:24	08:23 15:57
14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	31	06:37 (WEA 8) 07:42 (WEA 7)	04:48 21:45	05:04 21:39	05:53 20:48	06:46 20:03	26	07:39 (WEA 7) 07:03 (WEA 8)	07:38 18:37	07:38 16:23	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08		06:37 (WEA 8) 07:42 (WEA 7)	04:47 21:46	05:06 21:38	05:54 20:46	06:48 20:03	26	07:41 (WEA 7) 07:03 (WEA 8)	07:40 18:34	07:40 16:22	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	30	06:38 (WEA 8) 07:41 (WEA 7)	04:47 21:46	05:07 21:37	05:56 20:44	06:50 20:03	25	07:42 (WEA 7) 07:03 (WEA 8)	07:42 18:32	07:42 16:20	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:15 21:12	29	06:37 (WEA 8) 07:40 (WEA 7)	04:47 21:47	05:08 21:35	05:58 20:42	06:52 20:02	25	07:45 (WEA 7) 07:02 (WEA 8)	07:45 18:29	07:45 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	29	06:43 (WEA 8) 07:39 (WEA 7)	04:47 21:47	05:09 21:34	05:59 20:40	06:53 20:02	25	07:47 (WEA 7) 07:02 (WEA 8)	07:47 18:15	07:47 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:23	05:11 21:15	37	06:39 (WEA 8) 07:38 (WEA 7)	04:47 21:48	05:11 21:33	06:01 20:38	06:55 20:01	24	07:49 (WEA 7) 07:01 (WEA 8)	07:49 18:13	07:49 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	37	06:36 (WEA 8) 07:36 (WEA 7)	04:47 21:48	05:12 21:32	06:03 20:35	06:57 20:03	24	07:51 (WEA 7) 07:34 (WEA 7)	07:49 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:09 21:18	38	06:35 (WEA 8) 07:35 (WEA 7)	04:47 21:48	05:14 21:30	06:05 20:33	06:58 20:03	36	07:52 (WEA 7) 07:37 (WEA 7)	07:51 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	35	06:33 (WEA 8) 07:31 (WEA 7)	04:48 21:48	05:15 21:29	06:06 20:31	07:00 20:03	39	07:54 (WEA 7) 07:39 (WEA 7)	07:52 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	29	06:32 (WEA 8) 07:27 (WEA 7)	04:48 21:49	05:17 21:28	06:08 20:29	07:02 20:03	38	07:56 (WEA 7) 07:40 (WEA 7)	07:54 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	24	06:31 (WEA 8) 06:55 (WEA 8)	04:48 21:49	05:18 21:26	06:10 20:26	07:04 20:02	36	07:58 (WEA 7) 07:42 (WEA 7)	07:58 18:02	07:58 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	25	06:31 (WEA 8) 06:56 (WEA 8)	04:48 21:49	05:20 21:25	06:12 20:24	07:05 20:02	27	07:59 (WEA 7) 07:42 (WEA 7)	07:59 18:00	07:59 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	26	06:30 (WEA 8) 06:56 (WEA 8)	04:49 21:49	05:21 21:23	06:13 20:22	07:07 20:03	29	08:00 (WEA 7) 07:43 (WEA 7)	08:00 18:00	08:00 16:07	08:31 16:02
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	26	06:30 (WEA 8) 06:56 (WEA 8)	04:49 21:49	05:23 21:22	06:15 20:20	07:09 20:03	29	08:01 (WEA 7) 07:43 (WEA 7)	08:01 18:00	08:01 16:06	08:32 16:02
28	08:09 16:50	07:08 17:51	06:02 18:43	05:50 20:39	05:00 21:28	25	06:30 (WEA 8) 06:55 (WEA 8)	04:50 21:48	05:24 21:20	06:17 20:17	07:11 20:03	31	08:03 (WEA 7) 07:43 (WEA 7)	08:03 18:00	08:03 16:05	08:32 16:03
29	08:07 16:52	07:06 17:59	06:01 18:59	05:48 20:41	04:58 21:29	25	06:30 (WEA 8) 06:55 (WEA 8)	04:50 21:48	05:26 21:18	06:19 20:15	07:13 20:03	31	08:04 (WEA 7) 07:43 (WEA 7)	08:04 18:00	08:04 16:04	08:32 16:04
30	08:06 16:54	07:05 18:00	06:00 19:00	05:46 20:42	04:57 21:31	25	06:30 (WEA 8) 06:55 (WEA 8)	04:51 21:48	05:27 21:17	06:20 20:13	07:14 20:03	32	08:05 (WEA 7) 07:44 (WEA 7)	08:05 18:00	08:05 16:03	08:32 16:05
31	08:04 16:56	07:04 18:02	06:00 19:00	05:46 20:42	04:56 21:32		06:30 (WEA 8) 06:55 (WEA 8)	04:51 21:48	05:29 21:15	06:22 20:10	07:11 (WEA 7)	32	08:06 (WEA 7) 07:43 (WEA 7)	08:06 18:00	08:06 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492		507	510	458		382	248	329	261	236	
astr.max.mögl.Beschattung				816	126											

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: EE - Hagenower Straße 19

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 08:02 07:06 16:07 16:58 17:52			06:52 07:28 (WEA 7) 05:44 19:50 07:43 (WEA 7) 20:44		06:33 (WEA 8) 04:55 04:52 05:31 21:33 21:48 21:13			06:24 07:15 (WEA 7) 07:16 07:13 08:07 20:08 07:48 (WEA 7) 18:55 16:46 16:02			
2	08:32 08:01 07:04 16:08 17:00 17:54			06:50 07:25 (WEA 7) 05:42 19:52 07:46 (WEA 7) 20:46	24	06:34 (WEA 8) 04:54 04:52 05:32 21:34 21:47 21:12			06:26 07:15 (WEA 7) 07:18 07:15 08:09 20:06 07:48 (WEA 7) 18:53 16:44 16:02			
3	08:32 07:59 07:01 16:10 17:02 17:56			06:47 07:24 (WEA 7) 05:40 19:53 07:48 (WEA 7) 20:48	22	06:34 (WEA 8) 04:54 04:53 05:34 21:34 21:47 21:10			06:27 07:15 (WEA 7) 07:20 07:17 08:10 20:03 07:47 (WEA 7) 18:50 16:42 16:01			
4	08:31 07:57 06:59 16:11 17:04 17:58			06:45 07:21 (WEA 7) 05:38 19:55 07:48 (WEA 7) 20:49	20	06:36 (WEA 8) 04:53 04:54 05:36 21:37 21:46 21:08			06:29 07:15 (WEA 7) 07:21 07:19 08:12 20:01 07:47 (WEA 7) 18:48 16:40 16:00			
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31	08:04 07:04 06:04 16:56 17:56 18:48			05:44 06:33 (WEA 8) 04:56 20:44 07:36 (WEA 7) 21:32	7	06:50 (WEA 8) 04:52 05:28 06:22 21:48 21:15 20:10	43	06:42 (WEA 8) 07:11 07:23 (WEA 7) 07:36 07:34 08:22 19:51 07:43 (WEA 7) 18:38 16:33 15:58				
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	316	261	236
astr.max.mögl.Beschattung			8	868	109			681				

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 (WEA mit erstem Schatten)
Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzler-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzler-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzler-Goldenitz (rev.01) **Schattenrezeptor:** EF - Hagenower Straße 21

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 08:02 07:06 16:07 16:58 17:52			06:52 07:28 (WEA 7) 05:44 19:50 24 07:52 (WEA 7) 20:44	22 06:37 (WEA 8) 04:55 04:52 05:31 06:59 (WEA 8) 21:33 21:48 21:13			06:24 07:20 (WEA 7) 07:16 07:13 08:07 20:08 32 07:52 (WEA 7) 18:55 16:46 16:02				
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3	08:32 07:59 07:01 16:10 17:02 17:56			06:47 07:26 (WEA 7) 05:40 19:53 28 07:54 (WEA 7) 20:48	17 06:39 (WEA 8) 04:54 04:53 05:34 06:58 (WEA 8) 21:35 21:47 21:10			06:27 07:18 (WEA 7) 07:20 07:17 08:10 20:07 34 07:52 (WEA 7) 18:50 16:42 16:01				
4	08:31 07:57 06:59 16:11 17:04 17:58			06:45 07:24 (WEA 7) 05:38 19:55 30 07:54 (WEA 7) 20:49	14 06:41 (WEA 8) 04:53 04:54 05:36 06:59 (WEA 8) 21:37 21:46 21:08			06:29 07:18 (WEA 7) 07:21 07:19 08:12 20:01 34 07:52 (WEA 7) 18:48 16:40 16:00				
5	08:31 07:56 06:57 16:12 17:06 18:00			06:42 07:23 (WEA 7) 05:36 19:57 32 07:55 (WEA 7) 20:51	8 06:52 (WEA 8) 04:52 04:55 05:37 06:52 (WEA 8) 21:38 21:46 21:06			06:31 07:19 (WEA 7) 07:23 07:21 08:13 20:03 33 07:52 (WEA 7) 18:46 16:38 16:00				
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7	08:30 07:52 06:52 16:15 17:09 18:04			06:38 07:22 (WEA 7) 05:32 20:01 32 07:54 (WEA 7) 20:55			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
8	08:30 07:50 06:50 16:16 17:11 18:06			06:35 07:21 (WEA 7) 05:30 20:03 34 07:55 (WEA 7) 20:56			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
9	08:29 07:48 06:47 16:17 17:13 18:08			06:33 07:20 (WEA 7) 05:28 20:04 34 07:54 (WEA 7) 20:58			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
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13	08:26 07:40 06:38 16:23 17:21 18:15			06:24 07:21 (WEA 7) 05:21 20:12 30 07:51 (WEA 7) 21:05			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
14	08:26 07:38 06:35 16:25 17:23 18:17			06:21 07:21 (WEA 7) 05:19 20:13 29 07:50 (WEA 7) 21:07			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
15	08:25 07:36 06:33 16:27 17:25 18:19			06:19 07:22 (WEA 7) 05:18 20:15 28 07:50 (WEA 7) 21:08			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
16	08:24 07:34 06:31 16:28 17:27 18:21			06:17 06:46 (WEA 8) 05:16 20:17 34 07:47 (WEA 7) 21:10			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
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18	08:22 07:30 06:26 16:32 17:31 18:24			06:12 06:41 (WEA 8) 05:13 20:21 38 07:44 (WEA 7) 21:13			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
19	08:21 07:28 06:23 16:33 17:33 18:26			06:10 06:40 (WEA 8) 05:11 20:23 34 07:41 (WEA 7) 21:15			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
20	08:19 07:26 06:21 16:35 17:35 18:28			06:07 06:39 (WEA 8) 05:10 20:24 24 07:35 (WEA 7) 21:16			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
21	08:18 07:24 06:19 16:37 17:37 18:30			06:05 06:38 (WEA 8) 05:09 20:26 25 07:03 (WEA 8) 21:18			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
22	08:17 07:22 06:16 16:39 17:39 18:32			06:03 06:37 (WEA 8) 05:07 20:28 25 07:02 (WEA 8) 21:19			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
23	08:16 07:19 06:14 16:41 17:41 18:33			06:01 06:36 (WEA 8) 05:06 20:30 26 07:02 (WEA 8) 21:21			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
24	08:14 07:17 06:11 16:42 17:43 18:35			05:59 06:36 (WEA 8) 05:04 20:32 26 07:02 (WEA 8) 21:22			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
25	08:13 07:15 06:09 16:44 17:45 18:37			05:56 06:36 (WEA 8) 05:03 20:33 26 07:02 (WEA 8) 21:24			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
26	08:12 07:13 06:06 16:46 17:47 18:39			05:54 06:36 (WEA 8) 05:02 20:35 26 07:02 (WEA 8) 21:25			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
27	08:10 07:11 06:04 16:48 17:49 18:41			05:52 06:36 (WEA 8) 05:01 20:37 26 07:02 (WEA 8) 21:27			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
28	08:09 07:08 06:02 16:50 17:51 18:43			05:50 06:36 (WEA 8) 05:00 20:39 25 07:01 (WEA 8) 21:28			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
29	08:07 07:07 05:59 16:52 17:44 18:35		07:39 (WEA 7)	05:48 06:36 (WEA 8) 04:58 20:41 25 07:01 (WEA 8) 21:29			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
30	08:06 07:06 05:57 16:54 17:45 18:36		07:44 (WEA 7)	05:46 06:36 (WEA 8) 04:57 20:42 24 07:00 (WEA 8) 21:31			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
31	08:04 07:04 05:54 16:56 17:48 18:38		07:48 (WEA 7)	05:45 06:36 (WEA 8) 04:56 20:45 24 07:00 (WEA 8) 21:31			06:32 07:18 (WEA 7) 07:25 07:23 08:14 20:04 32 07:50 (WEA 7) 18:43 16:36 15:59					
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
astr.max.mögl.Beschattung			40	877	80			632	382			

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: EG - Clausenheim 1a

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar	[Februar	[März	[April	[Mai	[Juni	[Juli	[August	[September	[Oktober	[November	[Dezember					
1	08:32	08:03	07:06	08:11 (WEA 4)	06:52	05:44	04:55	04:52	05:31	06:24	07:16	07:13	08:07				
	16:07	16:58	17:52	8 08:19 (WEA 4)	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:46	16:02				
2	08:32	08:01	07:04		06:50	05:42	04:54	04:52	05:32	06:26	07:18	07:15	08:09				
	16:08	17:00	17:54		19:52	20:46	21:34	21:48	21:12	20:06	18:53	16:44	16:02				
3	08:32	07:59	07:01		06:47	05:40	04:54	04:53	05:34	06:27	07:20	07:17	08:10				
	16:10	17:02	17:56		19:54	20:48	21:36	21:47	21:10	20:03	18:50	16:42	16:01				
4	08:31	07:57	06:59		06:45	05:38	04:53	04:54	05:36	06:29	07:21	07:19	08:12				
	16:11	17:04	17:58		19:55	20:50	21:37	21:47	21:08	20:01	18:48	16:40	16:00				
5	08:31	07:56	06:57		06:42	05:36	04:52	04:55	05:37	06:31	07:23	07:21	08:13				
	16:12	17:06	18:00		19:57	20:51	21:38	21:46	21:06	19:58	18:46	16:38	16:00				
6	08:31	07:54	06:55		06:40	05:34	04:51	04:56	05:39	06:33	07:25	07:23	08:15				
	16:13	17:07	18:02		19:59	20:53	21:39	21:46	21:04	19:56	18:43	16:36	15:59				
7	08:30	07:52	06:52		06:38	05:32	04:51	04:57	05:41	06:34	07:27	07:25	08:16				
	16:15	17:09	18:04		20:01	20:55	21:40	21:45	21:02	19:54	18:41	16:34	15:59				
8	08:30	07:50	06:50		06:35	05:30	04:50	04:58	05:42	06:36	07:29	07:27	08:17				
	16:16	17:11	18:06		20:03	20:57	21:41	21:44	21:00	19:51	18:38	16:33	15:58				
9	08:29	07:48	06:47		06:33	05:28	04:50	04:59	05:44	06:38	07:30	07:29	08:18				
	16:17	17:13	18:08		20:04	20:58	21:42	21:43	20:59	19:49	18:36	16:31	15:58				
10	08:29	07:46	06:45		06:31	05:26	04:49	05:00	05:46	06:39	07:32	07:30	08:20				
	16:19	17:15	18:10		20:06	21:00	21:42	21:43	20:57	19:46	18:34	16:29	15:58				
11	08:28	07:45	06:43		06:28	05:25	04:49	05:01	05:47	06:41	07:34	07:32	08:21				
	16:20	17:17	18:11		20:08	21:02	21:43	21:42	20:55	19:44	18:31	16:27	15:57				
12	08:27	07:43	06:40	08:12 (WEA 4)	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	08:22			
	16:22	17:19	8 08:20 (WEA 4)	18:13	20:10	21:03	21:44	21:41	20:52	19:42	18:29	16:26	15:57				
13	08:26	07:41	08:09 (WEA 4)	06:38		06:24	05:21	04:48	05:03	05:51	06:45	07:38	08:42 (WEA 4)	07:36	08:23		
	16:23	17:21	14 08:23 (WEA 4)	18:15	7 07:05 (WEA 2)	20:12	21:05	21:45	21:40	20:50	19:39	18:27	11 08:53 (WEA 4)	16:24	15:57		
14	08:26	07:39	08:08 (WEA 4)	06:36		06:21	05:19	04:48	05:04	05:53	06:46	07:40	08:40 (WEA 4)	07:38	08:24		
	16:25	17:23	17 08:25 (WEA 4)	18:17	13 07:14 (WEA 2)	20:14	21:07	21:45	21:39	20:48	19:37	18:24	16 08:56 (WEA 4)	16:23	15:57		
15	08:25	07:37	08:06 (WEA 4)	06:33		06:19	05:18	04:47	05:06	05:54	06:48	07:41	08:38 (WEA 4)	07:40	08:25		
	16:27	17:25	21 08:27 (WEA 4)	18:19	17 07:16 (WEA 2)	20:15	21:08	21:46	21:38	20:46	19:34	18:22	19 08:57 (WEA 4)	16:21	15:57		
16	08:24	07:34	08:06 (WEA 4)	06:31		06:17	05:16	04:47	05:07	05:56	06:50	07:43	08:37 (WEA 4)	07:42	08:26		
	16:28	17:27	22 08:28 (WEA 4)	18:21	19 07:16 (WEA 2)	20:17	21:10	21:46	21:37	20:44	19:32	18:20	21 08:58 (WEA 4)	16:19	15:57		
17	08:23	07:32	08:05 (WEA 4)	06:28		06:14	05:15	04:47	05:08	05:58	06:52	07:45	08:36 (WEA 4)	07:44	08:26		
	16:30	17:29	24 08:29 (WEA 4)	18:23	21 07:17 (WEA 2)	20:19	21:12	21:47	21:36	20:42	19:29	9 07:57 (WEA 2)	23 08:59 (WEA 4)	16:18	15:57		
18	08:22	07:30	08:03 (WEA 4)	06:26		06:12	05:13	04:47	05:09	05:59	06:53	07:44 (WEA 2)	07:47	08:35 (WEA 4)	07:45	08:27	
	16:32	17:31	25 08:28 (WEA 4)	18:24	22 07:17 (WEA 2)	20:21	21:13	21:47	21:34	20:40	19:27	14 07:58 (WEA 2)	24 08:59 (WEA 4)	16:17	15:58		
19	08:21	07:28	08:03 (WEA 4)	06:23		06:10	05:11	04:47	05:11	06:01	06:55	07:42 (WEA 2)	07:49	08:34 (WEA 4)	07:47	08:28	
	16:33	17:33	26 08:29 (WEA 4)	18:26	22 07:17 (WEA 2)	20:23	21:15	21:48	21:33	20:38	19:24	18 08:00 (WEA 2)	25 08:59 (WEA 4)	16:18	15:58		
20	08:20	07:26	08:03 (WEA 4)	06:21		06:08	05:10	04:47	05:12	06:03	06:57	07:41 (WEA 2)	07:51	08:34 (WEA 4)	07:49	08:29	
	16:35	17:35	26 08:29 (WEA 4)	18:28	22 07:16 (WEA 2)	20:24	21:16	21:48	21:32	20:35	19:22	20 08:01 (WEA 2)	08:11	08:34 (WEA 4)	16:14	15:58	
21	08:18	07:24	08:03 (WEA 4)	06:19		06:05	05:08	04:47	05:14	06:05	06:59	07:41 (WEA 2)	07:52	08:34 (WEA 4)	07:51	08:29	
	16:37	17:37	26 08:29 (WEA 4)	18:30	22 07:16 (WEA 2)	20:26	21:18	21:48	21:31	20:33	19:20	21 08:02 (WEA 2)	08:09	08:34 (WEA 4)	16:13	15:59	
22	08:17	07:22	08:04 (WEA 4)	06:16		06:05	05:04	05:07	04:47	05:15	06:06	07:00	07:39 (WEA 2)	07:54	08:30		
	16:39	17:39	25 08:29 (WEA 4)	18:32	21 07:16 (WEA 2)	20:28	21:20	21:49	21:29	20:31	19:17	22 08:01 (WEA 2)	08:06	08:34 (WEA 4)	16:11	15:59	
23	08:16	07:20	08:03 (WEA 4)	06:14		06:05	05:06	04:48	05:17	06:08	07:02	07:39 (WEA 2)	07:56	08:34 (WEA 4)	07:54	08:30	
	16:41	17:41	25 08:28 (WEA 4)	18:34	20 07:15 (WEA 2)	20:30	21:21	21:49	21:28	20:29	19:15	22 08:01 (WEA 2)	08:04	08:34 (WEA 4)	16:10	16:00	
24	08:15	07:17	08:04 (WEA 4)	06:11		06:06	05:04	04:48	05:18	06:10	07:04	07:39 (WEA 2)	07:58	08:34 (WEA 4)	07:56	08:31	
	16:42	17:43	24 08:28 (WEA 4)	18:35	16 07:14 (WEA 2)	20:32	21:23	21:49	21:26	20:26	19:12	22 08:01 (WEA 2)	08:12	08:34 (WEA 4)	16:09	16:00	
25	08:13	07:15	08:05 (WEA 4)	06:09		06:06	05:06	05:03	04:49	05:20	06:12	07:39 (WEA 2)	07:00	08:34 (WEA 4)	07:58	08:31	
	16:44	17:45	22 08:27 (WEA 4)	18:37	15 07:11 (WEA 2)	20:33	21:24	21:49	21:25	20:24	19:10	22 08:01 (WEA 2)	17:00	08:34 (WEA 4)	16:08	16:01	
26	08:12	07:13	08:05 (WEA 4)	06:07		06:04	05:04	05:02	04:49	05:21	06:13	07:07	07:38 (WEA 2)	07:02	07:35 (WEA 4)	07:59	08:31
	16:46	17:47	21 08:26 (WEA 4)	18:39	10 07:09 (WEA 2)	20:35	21:25	21:49	21:23	20:22	19:07	21 07:59 (WEA 2)	16:58	22 07:57 (WEA 4)	16:07	16:02	
27	08:10	07:11	08:06 (WEA 4)	06:04		06:02	05:01	04:49	05:23	06:15	07:09	07:39 (WEA 2)	07:04	07:36 (WEA 4)	08:01	08:32	
	16:48	17:49	18 08:24 (WEA 4)	18:41		20:37	21:27	21:49	21:22	20:20	19:05	19 07:58 (WEA 2)	16:56	20 07:56 (WEA 4)	16:06	16:02	
28	08:09	07:08	08:08 (WEA 4)	06:02		06:00	05:00	04:50	05:24	06:17	07:11	07:39 (WEA 2)	07:06	07:37 (WEA 4)	08:03	08:32	
	16:50	17:51	15 08:23 (WEA 4)	18:43		20:39	21:28	21:49	21:20	20:17	19:02	18 07:57 (WEA 2)	16:54	17 07:54 (WEA 4)	16:05	16:03	
29	08:07			06:59		06:58	05:48	04:50	05:26	06:19	07:13	07:41 (WEA 2)	07:08	07:39 (WEA 4)	08:04	08:32	
	16:52			19:44		20:41	21:29	21:48	21:19	20:15	19:00	15 07:56 (WEA 2)	16:52	13 07:42 (WEA 4)	16:04	16:04	
30	08:06			06:57		06:57	05:46	04:51	05:27	06:20	07:14	07:42 (WEA 2)	07:00	07:43 (WEA 4)	08:06	08:32	
	16:54			19:46		20:42	21:31	21:48	21:17	20:13	18:58	10 07:52 (WEA 2)	16:50	6 07:49 (WEA 4)	16:03	16:05	
31	08:04			06:54		06:54	05:42		05:29	06:22			07:11			08:32	
	16:56			19:48		21:36	21:24	21:15	20:10				16:48			16:06	
Sonneneinstrahlung	252	274	367		419	492	507	510	458	382	253	329	369	261	236		
astr.max.mögl.Beschuttung		359		257													

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EH - Schwarzer Weg 12

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar		Februar		März		April		Mai		Juni		Juli		August		September		Oktober		November		Dezember	
1	08:32	14:43 (WEA 1)	08:02	07:06	06:52	05:44	04:55	04:51	05:30	06:24	07:16	07:13	08:07									08:07		14:28 (WEA 1)
16:07	28	15:11 (WEA 1)	16:57	17:52	19:50	20:44	21:33	21:48	21:13	20:08	18:55	16:45	16:02	30	14:58 (WEA 1)									
2	08:32	14:43 (WEA 1)	08:01	07:04	06:49	05:42	04:54	04:52	05:32	06:25	07:18	07:15	08:09											14:29 (WEA 1)
16:08	29	15:12 (WEA 1)	16:59	17:54	19:52	20:46	21:34	21:47	21:12	20:05	18:53	16:44	16:01	30	14:59 (WEA 1)									
3	08:32	14:44 (WEA 1)	07:59	07:01	06:47	05:40	04:53	04:53	05:34	06:27	07:19	07:17	08:10											14:30 (WEA 1)
16:09	29	15:13 (WEA 1)	17:01	17:56	19:53	20:48	21:35	21:47	21:10	20:03	18:50	16:42	16:01	30	15:00 (WEA 1)									
4	08:31	14:44 (WEA 1)	07:57	06:59	06:45	05:38	04:53	04:54	05:35	06:29	07:21	07:19	08:12											14:30 (WEA 1)
16:10	29	15:13 (WEA 1)	17:03	17:58	19:55	20:49	21:37	21:47	21:08	20:01	18:48	16:40	16:00	30	15:00 (WEA 1)									
5	08:31	14:45 (WEA 1)	07:56	06:57	06:42	05:36	04:52	04:54	05:37	06:31	07:23	07:21	08:13											14:31 (WEA 1)
16:12	29	15:14 (WEA 1)	17:05	18:00	19:57	20:51	21:38	21:46	21:06	19:58	18:45	16:38	15:59	29	15:00 (WEA 1)									
6	08:31	14:45 (WEA 1)	07:54	06:54	06:40	05:34	04:51	04:55	05:39	06:32	07:25	07:23	08:14											14:31 (WEA 1)
16:13	29	15:14 (WEA 1)	17:07	18:02	19:59	20:53	21:39	21:45	21:04	19:56	18:43	16:36	15:59	29	15:00 (WEA 1)									
7	08:30	14:46 (WEA 1)	07:52	06:52	06:37	05:32	04:50	04:56	05:40	06:34	07:27	07:25	08:16											14:31 (WEA 1)
16:14	29	15:15 (WEA 1)	17:09	18:04	20:01	20:55	21:40	21:45	21:02	19:53	18:41	16:34	15:58	29	15:00 (WEA 1)									
8	08:30	14:46 (WEA 1)	07:50	06:50	06:35	05:30	04:50	04:57	05:42	06:36	07:28	07:27	08:17											14:32 (WEA 1)
16:16	29	15:15 (WEA 1)	17:11	18:06	20:02	20:56	21:41	21:44	21:00	19:51	18:38	16:32	15:58	29	15:01 (WEA 1)									
9	08:29	14:46 (WEA 1)	07:48	06:47	06:33	05:28	04:49	04:58	05:44	06:38	07:30	07:28	08:18											14:32 (WEA 1)
16:17	30	15:16 (WEA 1)	17:13	18:07	20:04	20:58	21:41	21:43	20:58	19:49	18:36	16:31	15:58	29	15:01 (WEA 1)									
10	08:29	14:46 (WEA 1)	07:46	06:45	06:30	05:26	04:49	04:59	05:45	06:39	07:32	07:30	08:19											14:33 (WEA 1)
16:19	30	15:16 (WEA 1)	17:15	18:09	20:06	21:00	21:42	21:43	20:56	19:46	18:34	16:29	15:57	28	15:01 (WEA 1)									
11	08:28	14:46 (WEA 1)	07:44	06:43	06:28	05:24	04:48	05:01	05:47	06:41	07:34	07:32	08:21											14:34 (WEA 1)
16:20	30	15:16 (WEA 1)	17:17	18:11	20:08	21:02	21:43	21:42	20:54	19:44	18:31	16:27	15:57	28	15:02 (WEA 1)									
12	08:27	14:46 (WEA 1)	07:42	06:40	06:26	05:23	04:48	05:02	05:49	06:43	07:36	07:34	08:22											14:34 (WEA 1)
16:22	31	15:17 (WEA 1)	17:19	18:13	20:10	21:03	21:44	21:41	20:52	19:41	18:29	16:26	15:57	28	15:02 (WEA 1)									
13	08:26	14:47 (WEA 1)	07:40	06:38	06:23	05:21	04:48	05:03	05:51	06:44	07:38	07:36	08:23											14:35 (WEA 1)
16:23	30	15:17 (WEA 1)	17:21	18:15	20:12	21:05	21:45	21:40	20:50	19:39	18:27	16:24	15:57	28	15:03 (WEA 1)									
14	08:26	14:47 (WEA 1)	07:38	06:35	06:21	05:19	04:47	05:04	05:52	06:46	07:39	07:38	08:24											14:35 (WEA 1)
16:25	30	15:17 (WEA 1)	17:23	18:17	20:13	21:07	21:45	21:39	20:48	19:37	18:24	16:22	15:57	28	15:03 (WEA 1)									
15	08:25	14:48 (WEA 1)	07:36	06:33	06:19	05:18	04:47	05:05	05:54	06:48	07:41	07:40	08:25											14:16 (WEA 3)
16:26	29	15:17 (WEA 1)	17:25	18:19	20:15	21:08	21:46	21:38	20:46	19:34	18:22	16:21	8	14:35 (WEA 1)	08:25	14:16 (WEA 3)								
16	08:24	14:49 (WEA 1)	07:34	06:31	06:16	05:16	04:47	05:07	05:56	06:50	07:43	07:42	14:33 (WEA 1)	08:26	14:16 (WEA 3)									
16:28	29	15:18 (WEA 1)	17:27	18:20	20:17	21:10	21:46	21:37	20:44	19:32	18:20	16:19	13	14:46 (WEA 1)	15:57	32	15:04 (WEA 1)							
17	08:23	14:50 (WEA 1)	07:32	06:28	06:14	05:14	04:47	05:08	05:58	06:51	07:45	07:43	14:31 (WEA 1)	08:26	14:14 (WEA 3)									
16:30	28	15:18 (WEA 1)	17:29	18:22	20:19	21:12	21:47	21:35	20:42	19:29	18:17	16:18	17	14:48 (WEA 1)	15:57	35	15:03 (WEA 1)							
18	08:22	14:50 (WEA 1)	07:30	06:26	06:12	05:13	04:47	05:09	05:59	06:53	07:47	07:45	14:30 (WEA 1)	08:27	14:15 (WEA 3)									
16:31	28	15:18 (WEA 1)	17:31	18:24	20:21	21:13	21:47	21:34	20:40	19:27	18:15	16:16	20	14:50 (WEA 1)	15:57	35	15:04 (WEA 1)							
19	08:21	14:50 (WEA 1)	07:28	06:23	06:10	05:11	04:47	05:11	06:01	06:55	07:49	07:47	14:29 (WEA 1)	08:28	14:15 (WEA 3)									
16:33	28	15:18 (WEA 1)	17:33	18:26	20:22	21:15	21:48	21:33	20:37	19:24	18:13	16:15	22	14:51 (WEA 1)	15:58	36	15:05 (WEA 1)							
20	08:19	14:52 (WEA 1)	07:26	06:21	06:07	05:10	04:47	05:12	06:03	06:57	07:50	07:49	14:28 (WEA 1)	08:29	14:15 (WEA 3)									
16:35	26	15:18 (WEA 1)	17:35	18:28	20:24	21:16	21:48	21:32	20:35	19:22	18:11	16:14	24	14:52 (WEA 1)	15:58	36	15:05 (WEA 1)							
21	08:18	14:53 (WEA 1)	07:24	06:18	06:05	05:08	04:47	05:13	06:04	06:58	07:52	07:51	14:28 (WEA 1)	08:29	14:16 (WEA 3)									
16:37	25	15:18 (WEA 1)	17:37	18:30	20:26	21:18	21:48	21:30	20:33	19:19	18:08	16:12	25	14:53 (WEA 1)	15:58	35	15:05 (WEA 1)							
22	08:17	14:53 (WEA 1)	07:22	06:16	06:03	05:07	04:47	05:15	06:06	07:00	07:54	07:52	14:28 (WEA 1)	08:30	14:16 (WEA 3)									
16:39	24	15:17 (WEA 1)	17:39	18:32	20:28	21:19	21:48	21:29	20:31	19:17	18:06	16:11	26	14:54 (WEA 1)	15:59	35	15:05 (WEA 1)							
23	08:16	14:55 (WEA 1)	07:19	06:14	06:01	05:05	04:47	05:16	06:08	07:02	07:56	07:54	14:27 (WEA 1)	08:30	14:17 (WEA 3)									
16:40	22	15:17 (WEA 1)	17:41	18:33	20:30	21:21	21:49	21:28	20:29	19:14	18:04	16:10	28	14:55 (WEA 1)	15:59	36	15:07 (WEA 1)							
24	08:14	14:56 (WEA 1)	07:17	06:11	05:58	05:04	04:48	05:18	06:10	07:04	07:58	07:56	14:27 (WEA 1)	08:31	14:17 (WEA 3)									
16:42	20	15:16 (WEA 1)	17:43	18:35	20:31	21:22	21:49	21:26	20:26	19:12	18:02	16:09	28	14:55 (WEA 1)	16:00	36	15:07 (WEA 1)							
25	08:13	14:58 (WEA 1)	07:15	06:09	05:56	05:03	04:48	05:19	06:11	07:05	07:00	07:58	14:28 (WEA 1)	08:31	14:18 (WEA 3)									
16:44	17	15:15 (WEA 1)	17:45	18:37	20:33	21:24	21:49	21:25	20:24	19:10	18:00	16:08	28	14:56 (WEA 1)	16:01	36	15:08 (WEA 1)							
26	08:12	15:00 (WEA 1)	07:13	06:06	05:54	05:02	04:49	05:21	06:13	07:07	07:02	07:59	14:28 (WEA 1)	08:31	14:19 (WEA 3)									
16:46	13	15:13 (WEA 1)	17:47	18:39	20:35	21:25	21:49	21:23	20:22	19:07	16:58	16:07	29	14:57 (WEA 1)	16:01	35	15:08 (WEA 1)							
27	08:10	15:03 (WEA 1)	07:10	06:04	05:52	05:00	04:49	05:22	06:15	07:09	07:04	08:01	14:27 (WEA 1)	08:32	14:20 (WEA 3)									
16:48	8	15:11 (WEA 1)	17:48	18:41	20:37	21:27	21:49	21:22	20:19	19:05	16:56	16:06	30	14:57 (WEA 1)	16:02	33	15:09 (WEA 1)							
28	08:09		07:08	06:02	05:50	04:59	04:50	05:24	06:17	07:11	07:06	08:03	14:28 (WEA 1)	08:32	14:21 (WEA 3)									
16:50		17:50	18:42	20:39	21:28	21:48	21:20	20:17	19:02	16:54	16:05	29	14:57 (WEA 1)	16:03	32	15:09 (WEA 1)								
29	08:07		06:59	05:48	04:58	04:50	05:26	06:18	07:12	07:07	08:04		14:28 (WEA 1)	08:32	14:42 (WEA 1)									
16:52			19:44	20:40	21:29	21:48	21:18	20:15	19:00	16:51	16:04	30	14:58 (WEA 1)	16:04	28	15:10 (WEA 1)								
30	08:06		06:57	054																				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** El - Am Hofende 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:11 (WEA 11) 08:02 16:57	15:31 (WEA 10) 07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:13 (WEA 11) 08:01 16:59	15:33 (WEA 10) 07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:16 (WEA 11) 07:59 17:01	15:36 (WEA 10) 07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:20 (WEA 11) 07:57 17:03	15:42 (WEA 10) 07:59 17:58	06:59 19:55	06:45 20:49	05:38 21:36
5	08:31 16:12	14:21 (WEA 11) 07:55 17:05	15:47 (WEA 10) 06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	14:22 (WEA 11) 07:54 17:07	15:50 (WEA 10) 06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:23 (WEA 11) 07:52 17:09	15:52 (WEA 10) 06:52 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:24 (WEA 11) 07:50 17:11	15:54 (WEA 10) 06:50 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:25 (WEA 11) 07:48 17:13	15:56 (WEA 10) 06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:26 (WEA 11) 07:46 17:15	15:58 (WEA 10) 06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:27 (WEA 11) 07:44 17:17	16:00 (WEA 10) 06:42 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:28 (WEA 11) 07:42 17:19	16:02 (WEA 10) 06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:29 (WEA 11) 07:40 17:21	16:04 (WEA 10) 06:38 18:15	06:23 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:30 (WEA 11) 07:38 17:23	16:06 (WEA 10) 06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	14:31 (WEA 11) 07:36 17:25	16:08 (WEA 10) 06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:32 (WEA 11) 07:34 17:27	16:10 (WEA 10) 06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:33 (WEA 11) 07:32 17:29	16:12 (WEA 10) 06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:34 (WEA 11) 07:30 17:31	16:14 (WEA 10) 06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:35 (WEA 11) 07:28 17:33	16:16 (WEA 10) 06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	14:36 (WEA 11) 07:26 17:35	16:18 (WEA 10) 06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	14:37 (WEA 11) 07:24 17:37	16:20 (WEA 10) 06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	14:38 (WEA 11) 07:21 17:39	16:22 (WEA 10) 06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	14:39 (WEA 11) 07:19 17:41	16:24 (WEA 10) 06:14 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	14:40 (WEA 11) 07:17 17:43	16:26 (WEA 10) 06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	14:41 (WEA 11) 07:15 17:45	16:28 (WEA 10) 06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	14:42 (WEA 11) 07:13 17:46	16:30 (WEA 10) 06:06 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	14:43 (WEA 11) 07:10 17:48	16:32 (WEA 10) 06:04 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	14:44 (WEA 11) 07:08 17:50	16:34 (WEA 10) 06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	14:45 (WEA 11) 07:06 17:52	16:36 (WEA 10) 05:59 18:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	14:46 (WEA 11) 07:04 17:54	16:38 (WEA 10) 05:57 18:46	05:46 20:42	04:57 21:31	04:51 21:48
31	08:04 16:55	14:47 (WEA 11) 07:02 17:56	16:40 (WEA 10) 05:54 18:48	05:44 20:44	04:56 21:32	04:50 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	492	402				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** El - Am Hofende 4

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober		November		Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55		07:13 16:45		08:07 15:08 (WEA 10)
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53		07:15 16:43	2	16:06 (WEA 6) 08:09 15:10 (WEA 10)
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50		07:17 16:42		16:01 15:11 (WEA 10)
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48		07:19 16:40		16:00 15:14 (WEA 10)
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45		07:21 16:38		16:00 15:18 (WEA 10)
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43		07:23 16:36		16:00 15:19 (WEA 10)
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41		07:25 16:34		16:00 15:19 (WEA 10)
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38		07:26 16:32		16:00 15:19 (WEA 10)
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36		07:28 16:31	7	15:14 (WEA 10) 15:58 15:04 (WEA 10) 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33		07:30 16:29	12	15:16 (WEA 10) 15:58 15:02 (WEA 10) 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31		07:32 16:27	16	15:18 (WEA 10) 15:57 15:01 (WEA 10) 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29		07:34 16:25	18	15:19 (WEA 10) 15:57 15:00 (WEA 10) 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26		07:36 16:24	20	15:20 (WEA 10) 15:57 14:59 (WEA 10) 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24		07:38 16:22	22	15:21 (WEA 10) 15:57 14:59 (WEA 10) 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22		07:40 16:21	23	15:22 (WEA 10) 15:57 14:59 (WEA 10) 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	4	17:06 (WEA 6) 16:19	24	15:23 (WEA 10) 15:57 14:59 (WEA 10) 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	13	17:14 (WEA 6) 16:18	25	15:23 (WEA 10) 15:57 14:58 (WEA 10) 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	20	17:17 (WEA 6) 16:16	26	15:23 (WEA 10) 15:57 14:59 (WEA 10) 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	22	17:18 (WEA 6) 16:15	27	15:23 (WEA 10) 15:57 14:59 (WEA 10) 15:57
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	24	17:19 (WEA 6) 16:14	28	15:24 (WEA 10) 15:57 14:59 (WEA 10) 15:57
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	25	17:19 (WEA 6) 16:12	29	15:24 (WEA 10) 15:57 15:00 (WEA 10) 15:57
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	26	16:53 (WEA 6) 16:11	30	15:24 (WEA 10) 15:57 15:00 (WEA 10) 15:57
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	27	16:53 (WEA 6) 16:10	31	15:24 (WEA 10) 15:57 15:01 (WEA 10) 15:57
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	28	16:53 (WEA 6) 16:09		15:24 (WEA 10) 16:00 15:01 (WEA 10) 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	29	15:53 (WEA 6) 16:08		15:02 (WEA 10) 16:00 15:03 (WEA 10) 16:00
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	30	15:54 (WEA 6) 16:07		15:03 (WEA 10) 16:01 15:03 (WEA 10) 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	31	15:54 (WEA 6) 16:06		15:03 (WEA 10) 16:01 15:03 (WEA 10) 16:01
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53		15:55 (WEA 6) 16:05		15:05 (WEA 10) 16:02 15:05 (WEA 10) 16:02
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51		15:56 (WEA 6) 16:04		15:06 (WEA 10) 16:03 15:06 (WEA 10) 16:03
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49		15:57 (WEA 6) 16:03		15:07 (WEA 10) 16:04 15:07 (WEA 10) 16:04
31	05:29 21:15	06:22 20:10		07:11 16:47		15:59 (WEA 6) 16:02		15:23 (WEA 10) 16:05 15:23 (WEA 10) 16:05
Sonnenscheinstunden	510	458	382	329		261		236
astr.max.mögl.Beschattung				368		474		363

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) Schattenrezeptor: EJ - Am Brink 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	14:16 (WEA 11) 08:02 16:57	15:35 (WEA 10) 07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33
2	08:32 16:08	14:17 (WEA 11) 08:01 16:59	15:36 (WEA 10) 07:04 17:54	06:49 19:51	05:42 20:46	04:54 21:34
3	08:31 16:09	14:19 (WEA 11) 07:59 17:01	15:38 (WEA 10) 07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35
4	08:31 16:10	14:20 (WEA 11) 07:57 17:03	15:41 (WEA 10) 06:59 17:58	06:45 19:55	05:38 20:49	04:52 21:36
5	08:31 16:12	14:22 (WEA 11) 07:55 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38
6	08:30 16:13	14:24 (WEA 11) 07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39
7	08:30 16:14	14:29 (WEA 11) 07:52 17:09	06:52 18:04	06:37 20:01	05:32 20:55	04:50 21:40
8	08:30 16:16	14:31 (WEA 11) 07:50 17:11	06:50 18:05	06:35 20:02	05:30 20:56	04:50 21:40
9	08:29 16:17	14:33 (WEA 11) 07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41
10	08:28 16:19	14:35 (WEA 11) 07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42
11	08:28 16:20	14:37 (WEA 11) 07:44 17:17	16:38 (WEA 6) 06:42 18:11	06:28 20:08	05:24 21:02	04:48 21:43
12	08:27 16:22	14:39 (WEA 11) 07:42 17:19	16:41 (WEA 6) 06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44
13	08:26 16:23	14:42 (WEA 11) 07:40 17:21	16:33 (WEA 6) 06:38 18:15	06:26 20:11	05:21 21:05	04:48 21:44
14	08:25 16:25	14:44 (WEA 11) 07:38 17:23	16:45 (WEA 6) 06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45
15	08:25 16:26	14:46 (WEA 11) 07:36 17:25	16:49 (WEA 6) 06:33 18:19	06:19 20:15	05:17 21:08	04:47 21:46
16	08:24 16:28	14:48 (WEA 11) 07:34 17:27	16:50 (WEA 6) 06:30 18:20	06:16 20:17	05:16 21:10	04:47 21:46
17	08:23 16:30	14:50 (WEA 11) 07:32 17:29	16:51 (WEA 6) 06:28 18:22	06:14 20:19	05:14 21:11	04:47 21:47
18	08:22 16:31	14:52 (WEA 11) 07:30 17:31	16:51 (WEA 6) 06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47
19	08:20 16:33	14:54 (WEA 11) 07:28 17:33	16:52 (WEA 6) 06:23 18:26	06:09 20:22	05:11 21:15	04:47 21:48
20	08:19 16:35	14:56 (WEA 11) 07:26 17:35	16:52 (WEA 6) 06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48
21	08:18 16:37	14:58 (WEA 11) 07:24 17:37	16:52 (WEA 6) 06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48
22	08:17 16:39	14:59 (WEA 11) 07:21 17:39	16:52 (WEA 6) 06:16 18:31	06:03 20:28	05:07 21:19	04:47 21:48
23	08:16 16:40	15:01 (WEA 11) 07:19 17:41	16:51 (WEA 6) 06:14 18:33	06:01 20:30	05:05 21:21	04:47 21:48
24	08:14 16:42	15:03 (WEA 11) 07:17 17:43	16:51 (WEA 6) 06:11 18:35	05:58 20:31	05:04 21:22	04:48 21:49
25	08:13 16:44	15:05 (WEA 11) 07:15 17:45	16:50 (WEA 6) 06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49
26	08:12 16:46	15:07 (WEA 11) 07:13 17:46	16:50 (WEA 6) 06:06 18:39	05:54 20:35	05:02 21:25	04:48 21:49
27	08:10 16:48	15:09 (WEA 11) 07:10 17:48	16:47 (WEA 6) 06:04 18:41	05:52 20:37	05:00 21:27	04:49 21:48
28	08:09 16:50	15:11 (WEA 11) 07:08 17:50	16:45 (WEA 6) 06:01 18:42	05:50 20:39	04:59 21:28	04:49 21:48
29	08:07 16:52	15:13 (WEA 11) 07:06 17:52	16:41 (WEA 6) 06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48
30	08:06 16:54	15:15 (WEA 11) 07:04 17:54	16:50 (WEA 6) 06:57 19:46	05:46 20:42	04:57 21:30	04:51 21:48
31	08:04 16:55	15:17 (WEA 11) 07:02 17:56	16:50 (WEA 6) 06:54 19:48	05:46 20:44	04:56 21:32	04:51 21:48
Sonnenscheinstunden	252	274	367	419	492	507
astr.max.mögl.Beschattung	468	395				

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EJ - Am Brink 7

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli	August	September	Oktober	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 16:45	08:07 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:43	08:09 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	04:54 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:34	08:16 15:58
8	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	04:58 21:43	05:44 20:58	06:37 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	04:59 21:42	05:45 20:56	06:39 19:46	07:32 18:33	07:30 16:29	08:19 15:57
11	05:00 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:25	08:22 15:57
13	05:03 21:40	05:51 20:50	06:44 19:39	07:37 18:26	07:36 16:24	08:23 15:57
14	05:04 21:39	05:52 20:48	06:46 19:36	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	05:08 21:35	05:57 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	05:11 21:33	06:01 20:37	06:55 19:24	07:48 18:13	07:47 16:15	08:28 15:58
20	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:13 21:30	06:04 20:33	06:58 19:19	07:52 18:08	07:50 16:12	08:29 15:58
22	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	05:16 21:28	06:08 20:28	07:02 19:14	07:56 18:04	07:54 16:10	08:30 15:59
24	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:30 16:00
25	05:19 21:25	06:11 20:24	07:05 19:10	07:00 17:00	07:57 16:08	08:31 16:01
26	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:59 16:07	08:31 16:01
27	05:22 21:22	06:15 20:19	07:09 19:05	07:04 16:56	08:01 16:06	08:31 16:02
28	05:24 21:20	06:17 20:17	07:11 19:02	07:05 16:53	08:02 16:05	08:32 16:03
29	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:51	08:04 16:04	08:32 16:04
30	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:49	08:06 16:03	08:32 16:05
31	05:29 21:15	06:22 20:10	07:16 18:55	07:11 16:47	08:08 16:06	08:32 16:06
Sonnenscheinstunden		510	458	382	329	236
astr.max.mögl.Beschattung						
				345	261	442

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 (WEA mit erstem Schatten)
	Sonnenuntergang (SS:MM)	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)
	Minuten mit Schatten	

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **Schattenrezeptor:** EK - Hauptstraße 10

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember			
1	08:32	08:02	07:06	06:52	05:44	19:20 (WEA 12)	04:55	04:51	05:30	06:24	07:16	07:13	08:07		
	16:07	16:57	17:52	19:50	20:44	17 19:37 (WEA 12)	21:33	21:47	21:13	20:08	18:55	16:45	16:02		
2	08:31	08:01	07:03	06:49	05:42	19:22 (WEA 12)	04:54	04:52	05:32	06:25	07:18	07:15	08:08		
	16:08	16:59	17:54	19:51	20:46	13 19:35 (WEA 12)	21:34	21:47	21:11	20:05	18:52	16:43	16:01		
3	08:31	07:59	07:01	06:47	05:40	19:24 (WEA 12)	04:53	04:53	05:34	06:27	07:19	07:17	08:10		
	16:09	17:01	17:56	19:53	20:47	8 19:32 (WEA 12)	21:35	21:47	21:10	20:03	18:50	16:42	16:01		
4	08:31	07:57	06:59	06:45	05:38		04:53	04:54	05:35	06:29	07:21	07:19	08:11		
	16:10	17:03	17:58	19:55	20:49		21:36	21:46	21:08	20:00	18:48	16:40	16:00		
5	08:31	07:55	06:56	06:42	05:36		04:52	04:54	05:37	06:30	07:23	07:21	08:13		
	16:12	17:05	18:00	19:57	20:51		21:37	21:46	21:06	19:58	18:45	16:38	15:59		
6	08:30	07:54	06:54	06:40	05:34		04:51	04:55	05:39	06:32	07:25	07:22	08:14		
	16:13	17:07	18:02	19:59	20:53		21:38	21:45	21:04	19:56	18:43	16:36	15:59		
7	08:30	07:52	06:52	06:37	05:32		04:50	04:56	05:40	06:34	07:26	07:24	08:15		
	16:14	17:09	18:04	20:00	20:54		21:39	21:44	21:02	19:53	18:41	16:34	15:58		
8	08:29	07:50	06:49	06:35	05:30		04:50	04:57	05:42	06:36	07:28	07:26	08:17		
	16:16	17:11	18:05	20:02	20:56		21:40	21:44	21:00	19:51	18:38	16:32	15:58		
9	08:29	07:48	06:47	06:33	05:28		04:49	04:58	05:44	06:37	07:30	07:28	08:18		
	16:17	17:13	18:07	20:04	20:58		21:41	21:43	20:58	19:48	18:36	16:31	15:58		
10	08:28	07:46	06:45	06:30	05:26		04:49	04:59	05:45	19:33 (WEA 12)	06:39	07:32	07:30	08:19	
	16:19	17:15	18:09	20:06	21:00		21:42	21:42	20:56	10 19:43 (WEA 12)	19:46	18:33	16:29	15:57	
11	08:28	07:44	06:42	06:28	05:24		04:48	05:01	05:47	19:29 (WEA 12)	06:41	07:34	07:32	08:20	
	16:20	17:17	18:11	20:08	21:01		21:43	21:41	20:54	15 19:44 (WEA 12)	19:44	18:31	16:27	15:57	
12	08:27	07:42	06:40	06:26	05:23		04:48	05:02	05:49	19:28 (WEA 12)	06:43	07:36	07:34	08:21	
	16:22	17:19	18:13	20:10	21:03		21:44	21:40	20:52	18 19:46 (WEA 12)	19:41	18:29	16:25	15:57	
13	08:26	07:40	06:38	06:23	05:21		04:48	05:03	05:51	19:26 (WEA 12)	06:44	07:37	07:36	08:22	
	16:23	17:21	18:15	20:11	21:05		21:44	21:40	20:50	21 19:47 (WEA 12)	19:39	18:26	16:24	15:57	
14	08:25	07:38	06:35	06:21	05:19	19:27 (WEA 12)	04:47	05:04	05:52	19:25 (WEA 12)	06:46	07:39	07:38	08:23	
	16:25	17:23	18:17	20:13	21:06		21:45	21:39	20:48	23 19:48 (WEA 12)	19:36	18:24	16:22	15:57	
15	08:24	07:36	06:33	06:19	05:18	19:23 (WEA 12)	04:47	05:05	05:54	19:25 (WEA 12)	06:48	07:41	07:39	08:24	
	16:26	17:25	18:18	20:15	21:08	16 19:39 (WEA 12)	21:46	21:37	20:46	24 19:49 (WEA 12)	19:34	18:22	16:21	15:57	
16	08:23	07:34	06:30	06:16	05:16	19:22 (WEA 12)	04:47	05:07	05:56	19:23 (WEA 12)	06:50	07:43	07:41	08:25	
	16:28	17:27	18:20	20:17	21:10	19 19:41 (WEA 12)	21:46	21:36	20:44	26 19:49 (WEA 12)	19:31	18:20	16:19	15:57	
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	16:30	17:29	18:22	20:19	21:11	22 19:42 (WEA 12)	21:47	21:35	20:42	26 19:49 (WEA 12)	19:29	18:17	16:18	15:57	
18	08:21	07:30	06:26	06:12	05:13	19:19 (WEA 12)	04:47	05:09	05:59	19:23 (WEA 12)	06:53	07:47	07:45	08:27	
	16:31	17:31	18:24	20:20	21:13	24 19:43 (WEA 12)	21:47	21:34	20:39	27 19:50 (WEA 12)	19:27	18:15	16:16	15:57	
19	08:20	07:28	06:23	06:09	05:11	19:18 (WEA 12)	04:47	05:11	06:01	19:22 (WEA 12)	06:55	07:48	07:47	08:28	
	16:33	17:33	18:26	20:22	21:15	26 19:44 (WEA 12)	21:47	21:33	20:37	27 19:49 (WEA 12)	19:24	18:13	16:15	15:58	
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	16:44	17:44	18:37	20:33	21:24	27 19:43 (WEA 12)	21:48	21:24	20:24	24 19:46 (WEA 12)	19:09	17:00	16:08	16:01	
26	08:11	07:13	06:06	05:54	05:02	19:16 (WEA 12)	04:49	05:21	06:13	19:23 (WEA 12)	07:07	07:02	07:59	08:31	
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27	08:10	07:10	06:04	05:52	05:00	19:17 (WEA 12)	04:49	05:22	06:15	19:24 (WEA 12)	07:09	07:03	08:01	08:31	
	16:48	17:48	18:40	20:37	21:26	25 19:42 (WEA 12)	21:48	21:21	20:19	18 19:42 (WEA 12)	19:05	16:56	16:06	16:02	
28	08:08	07:08	06:01	05:50	04:59	19:17 (WEA 12)	04:50	05:24	06:17	19:25 (WEA 12)	07:10	07:05	08:02	08:31	
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29	08:07		06:59	05:48	04:58	19:18 (WEA 12)	04:50	05:26	06:18	19:28 (WEA 12)	07:12	07:07	08:04	08:32	
	16:52		19:44	20:40	21:29	22 19:40 (WEA 12)	21:48	21:18	20:15	10 19:38 (WEA 12)	19:00	16:51	16:04	16:04	
30	08:05		06:57	05:46	04:57	19:19 (WEA 12)	04:51	05:27	06:20		07:14	07:09	08:05	08:32	
	16:54		19:46	20:42	21:30	20 19:39 (WEA 12)	21:48	21:16	20:12		18:57	16:49	16:03	16:05	
31	08:04		06:54		04:56			05:29	06:22			07:11		08:32	
	16:55		19:48		21:32			21:15	20:10			16:47		16:06	
Sonnenscheinstunden	252	274	367	419	492			507	510	458		382	329	261	236
astr.max.mögl.Beschattung				395		38			439						

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 (WEA mit erstem Schatten)	
	Sonnenuntergang (SS:MM)	Minuten mit Schatten	Zeitpunkt (SS:MM) Schattendenende (WEA mit letztem Schatten)

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

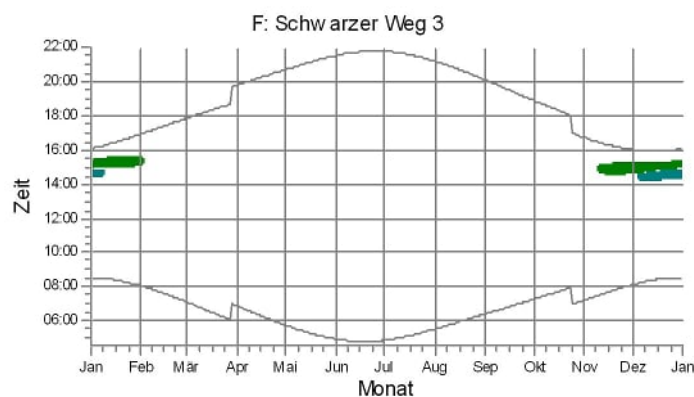
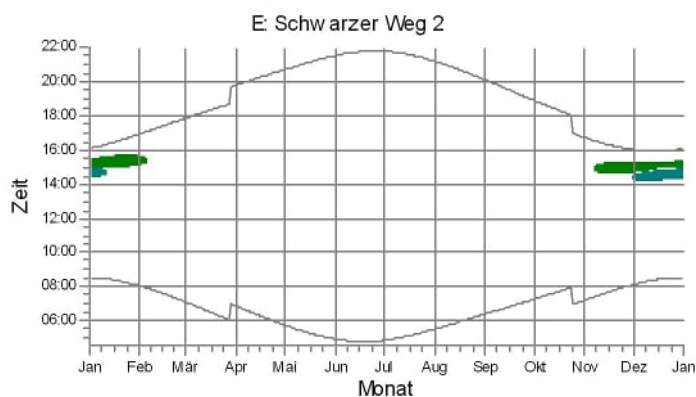
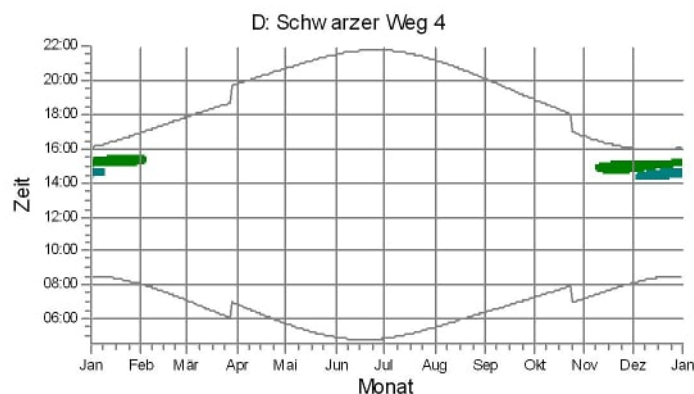
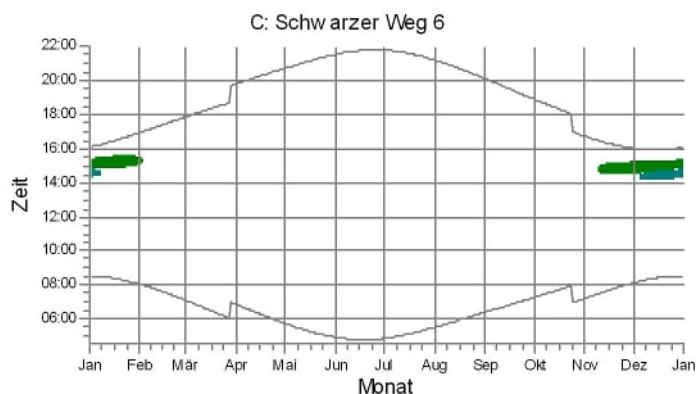
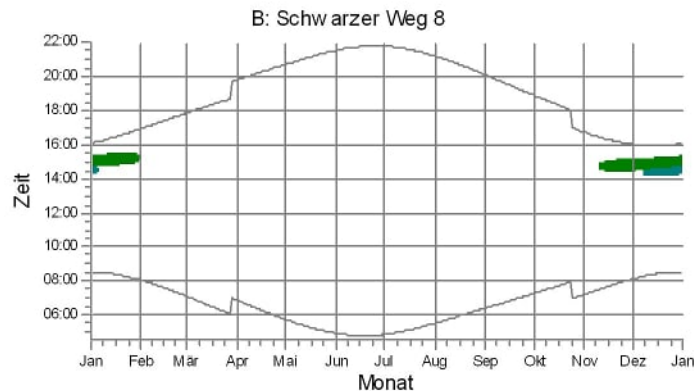
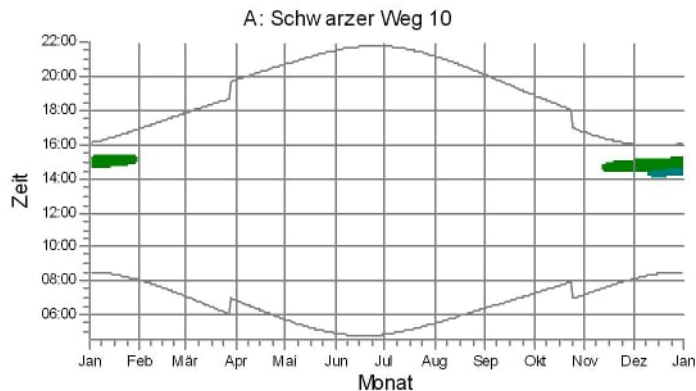
Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 1: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 3: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

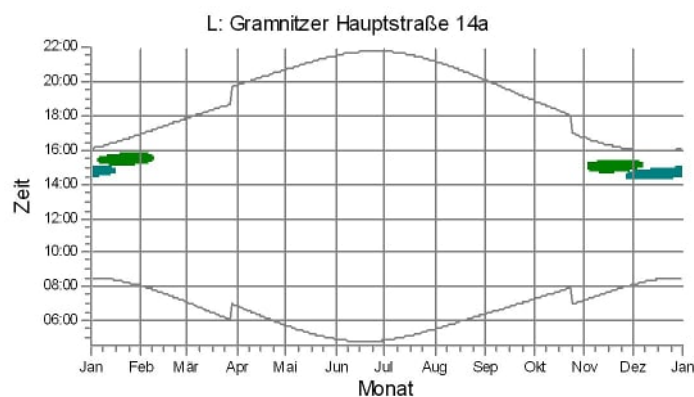
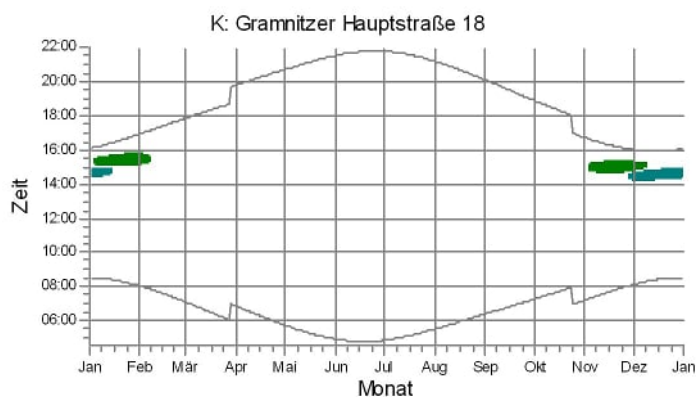
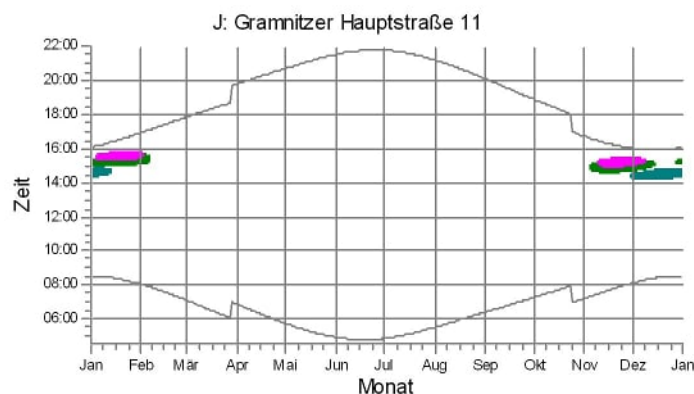
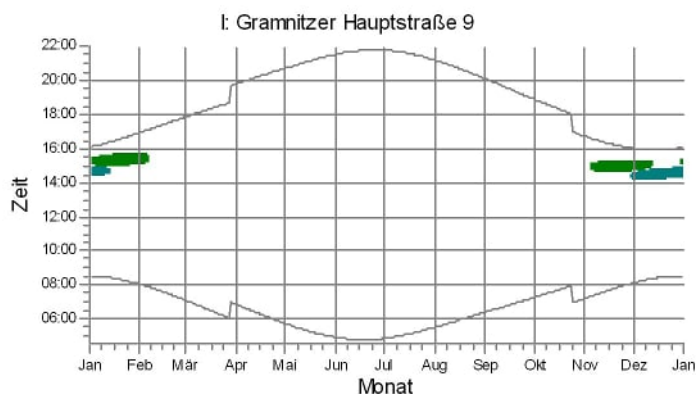
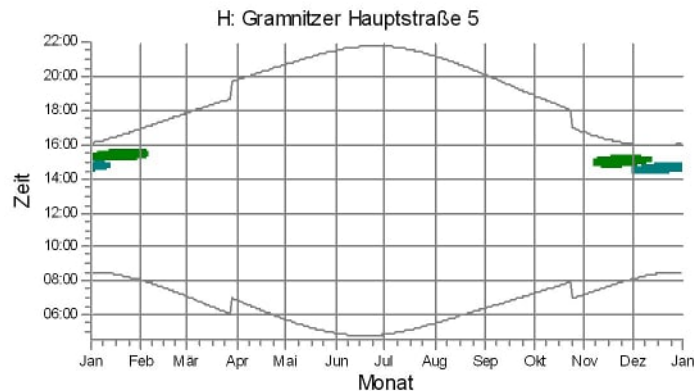
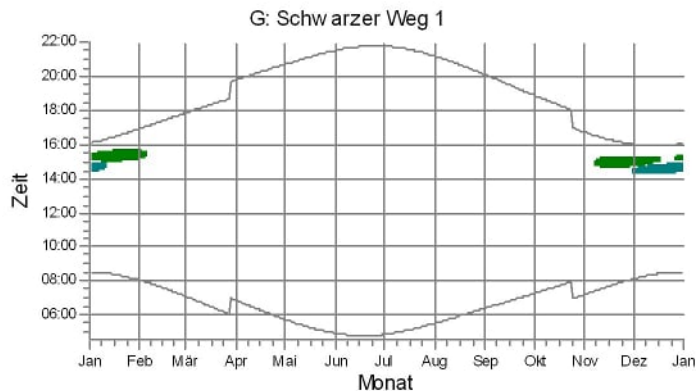
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA

WEA 1: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 2: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 3: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

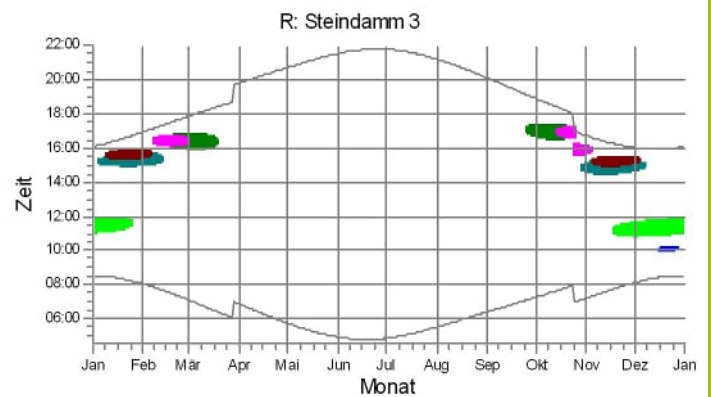
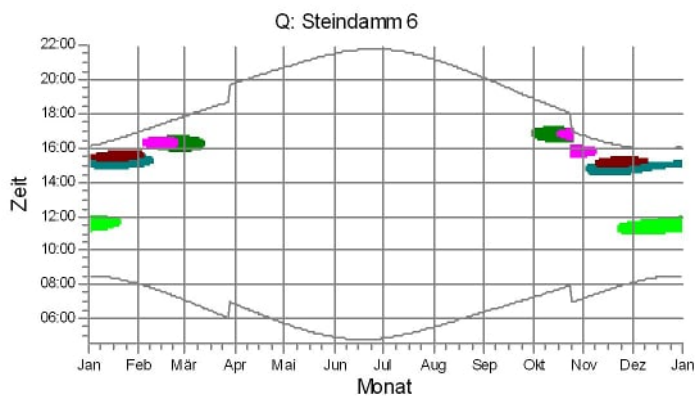
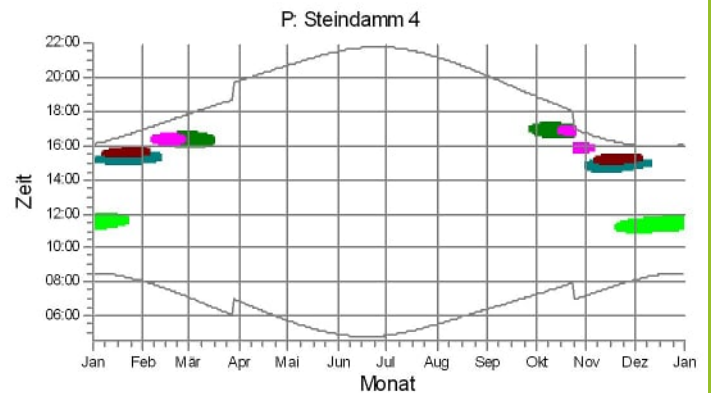
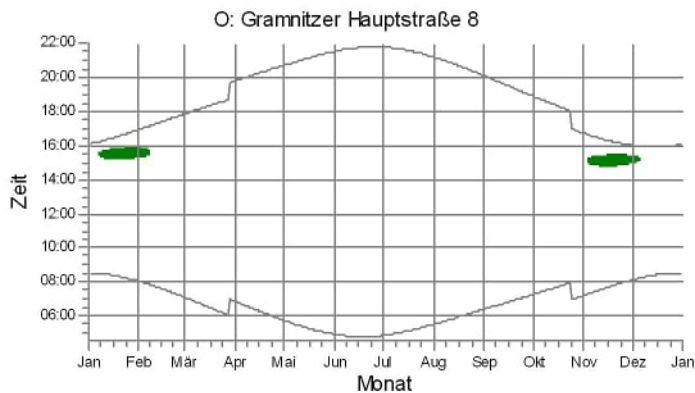
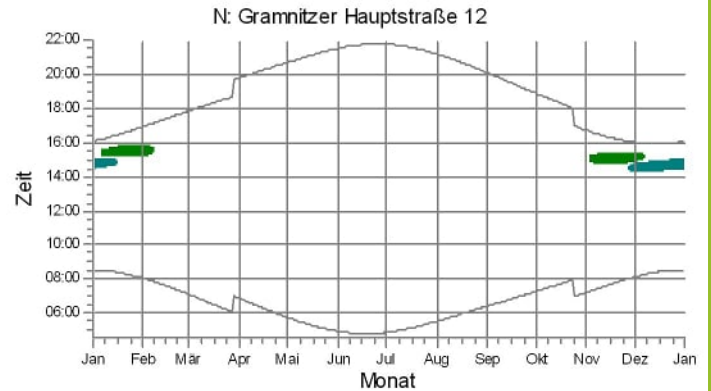
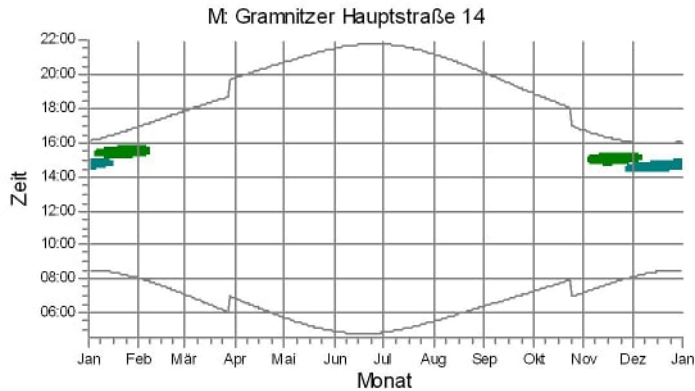
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA

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WEA 3: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 5: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
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N175/6.X mit 179 m NH

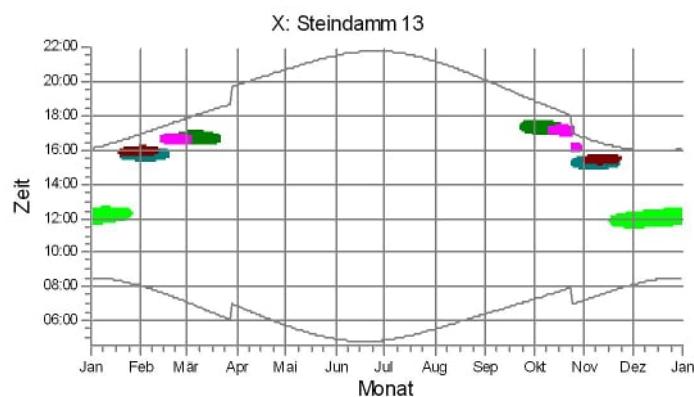
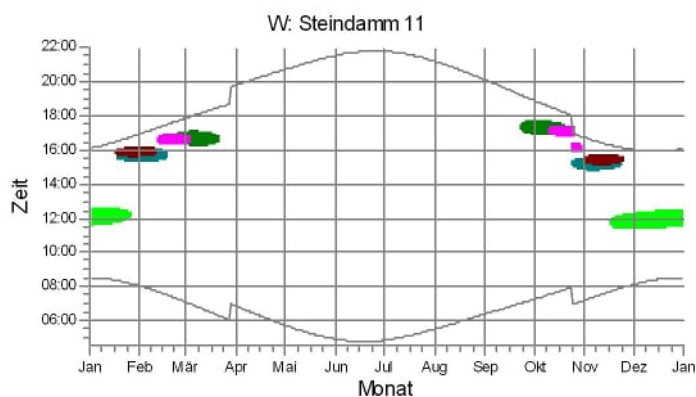
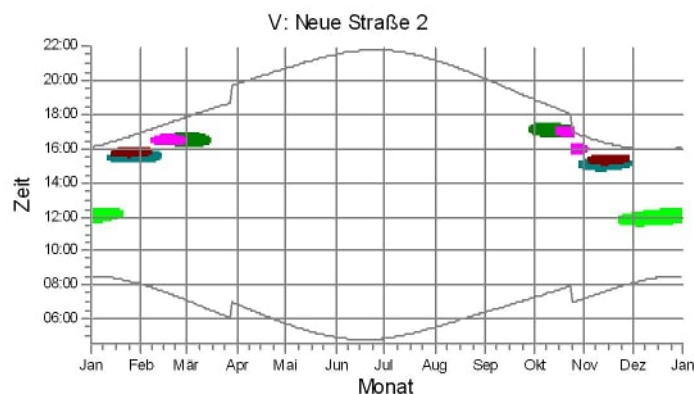
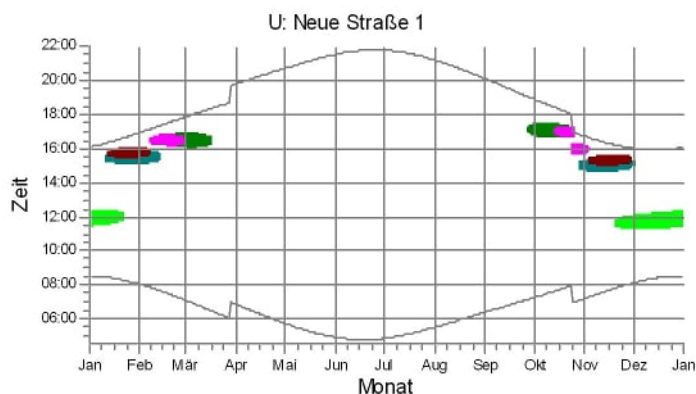
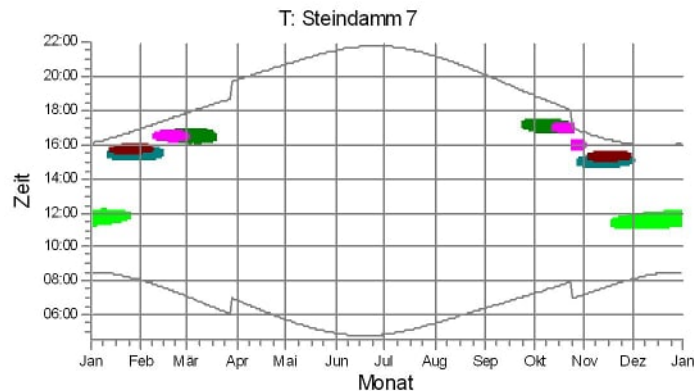
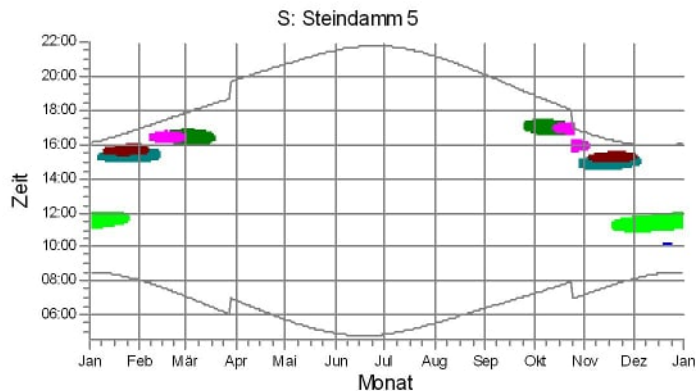
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



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WEA 5: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

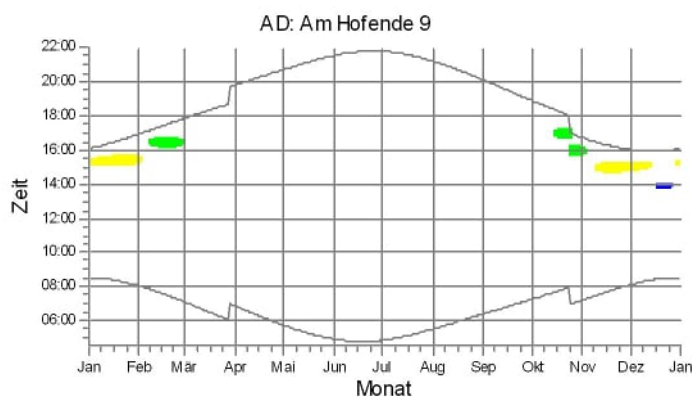
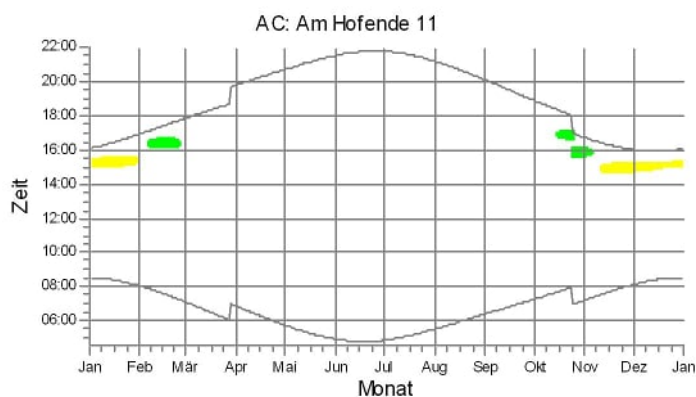
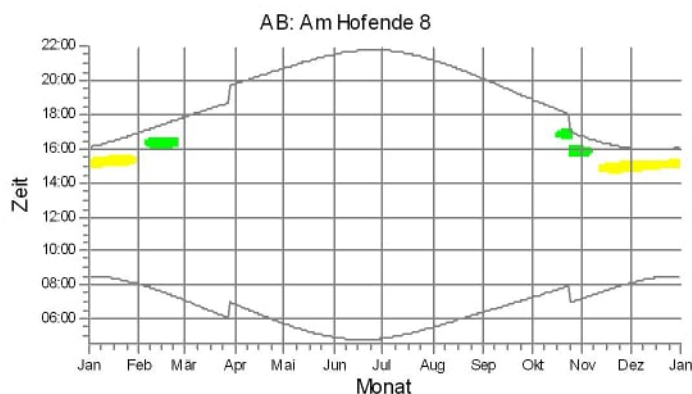
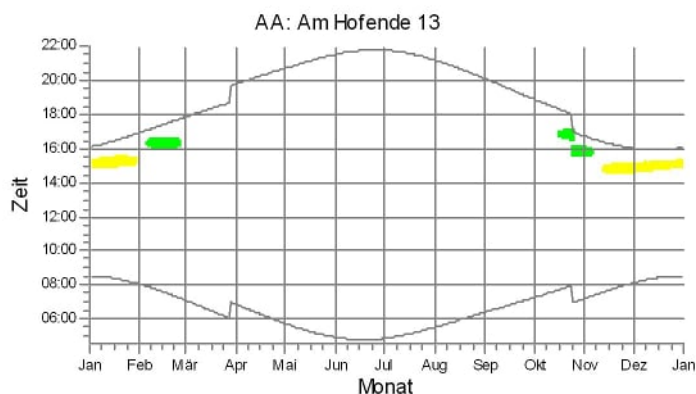
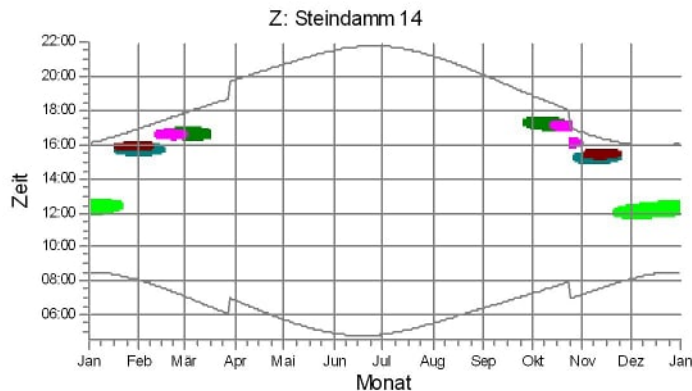
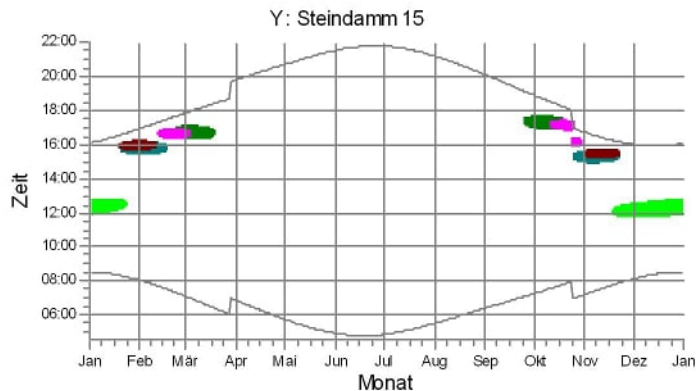
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA

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WEA 10: NORDEX N175/6.X 6800 NH: 179,0 m
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WEA 2: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 3: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 5: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

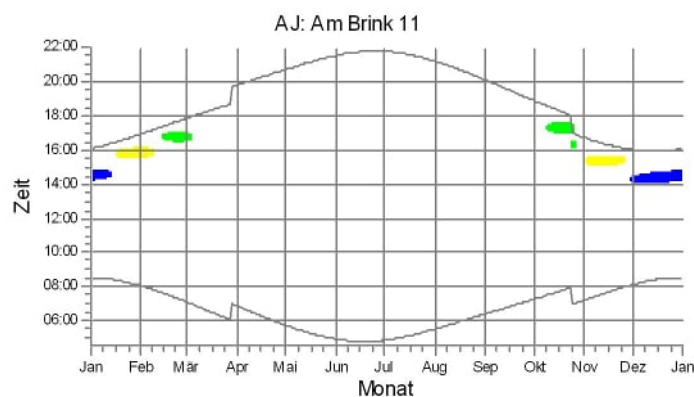
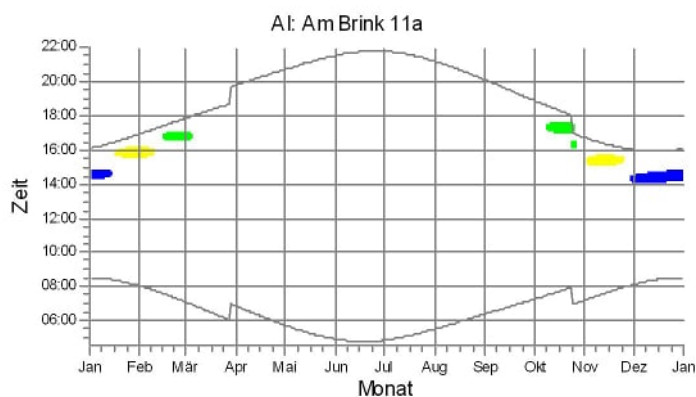
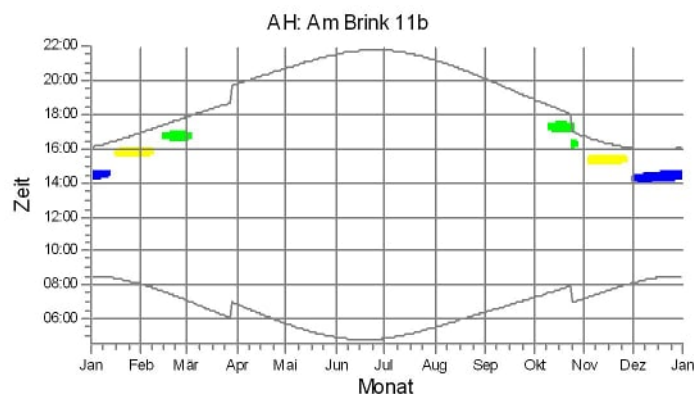
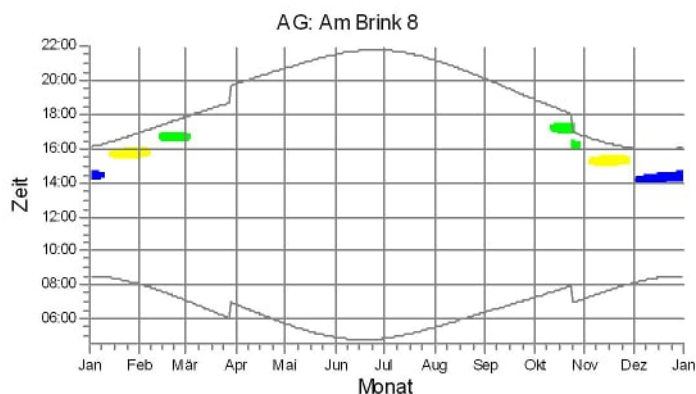
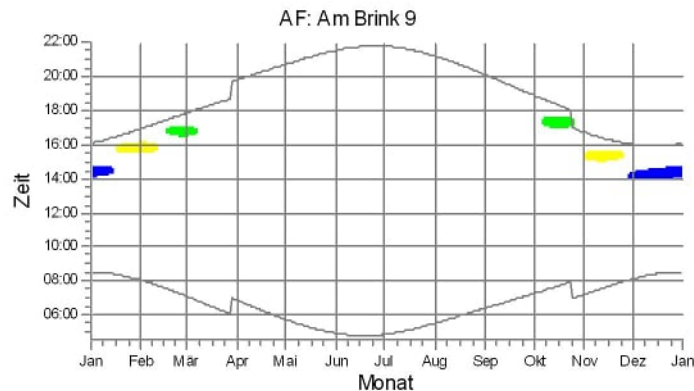
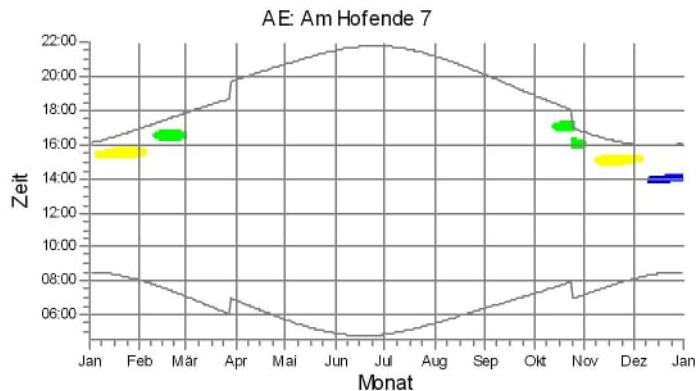
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA

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WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

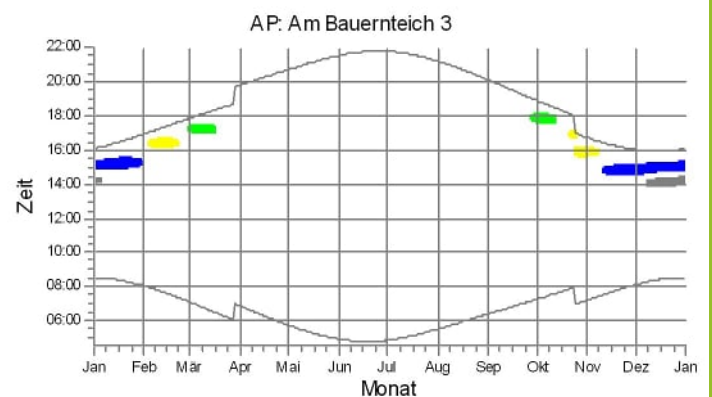
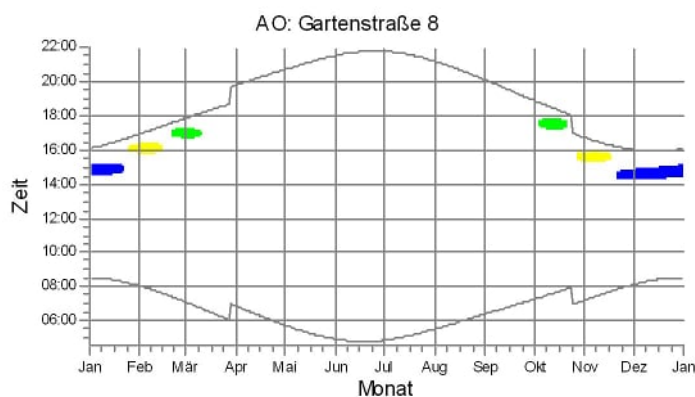
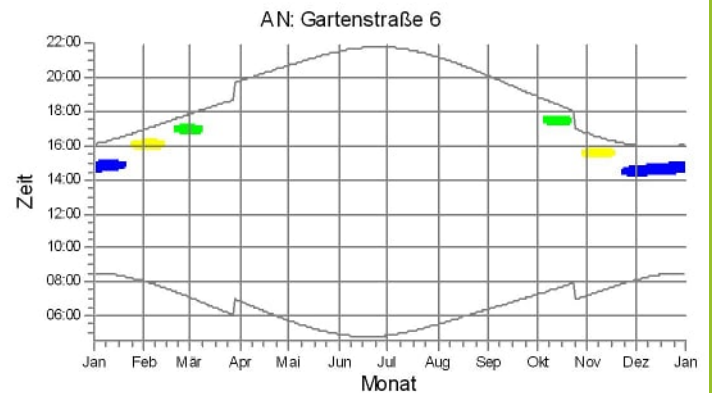
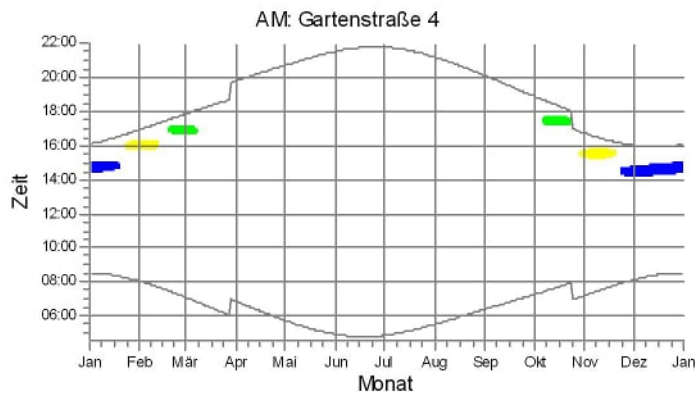
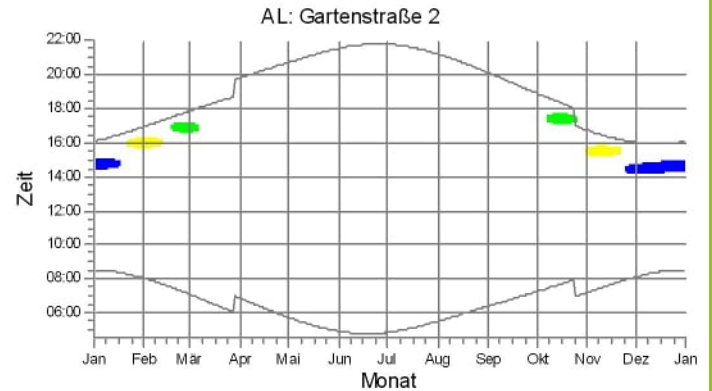
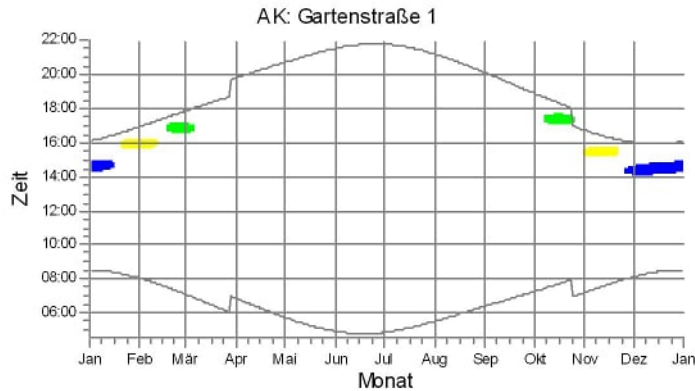
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



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WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

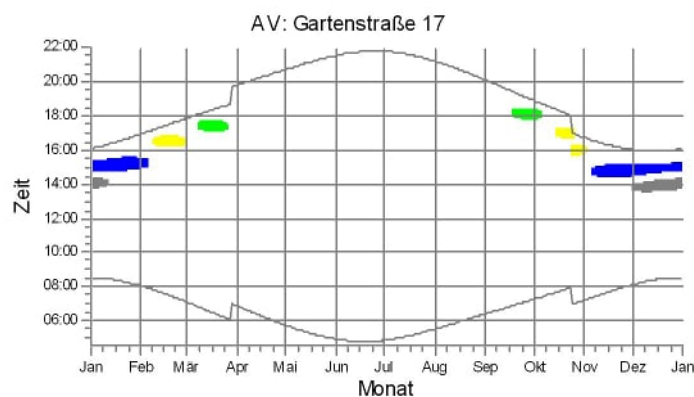
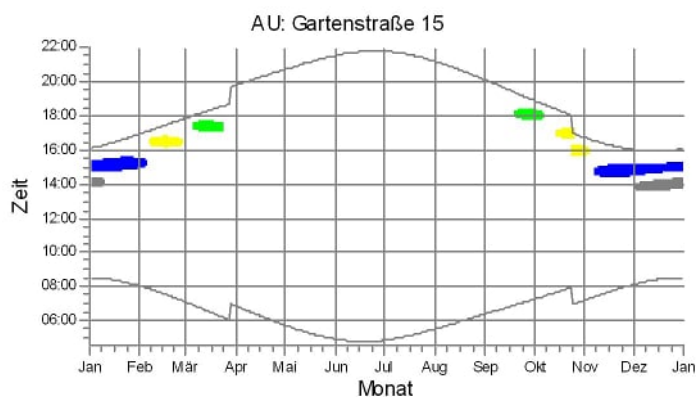
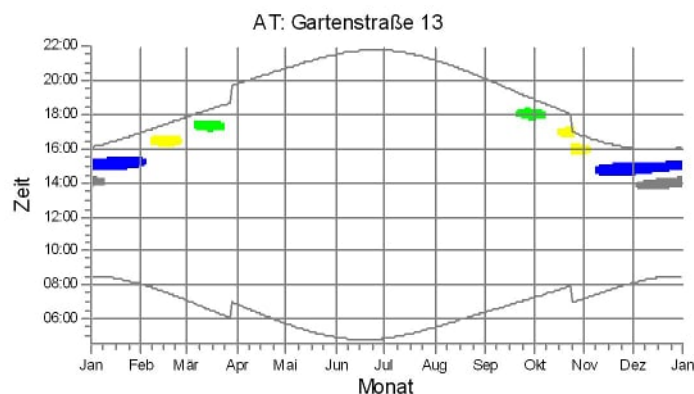
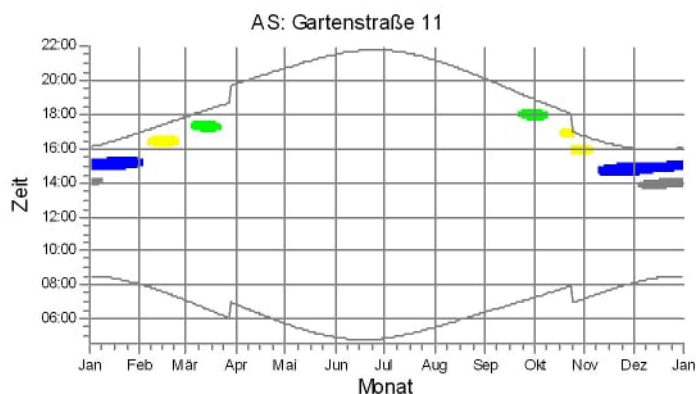
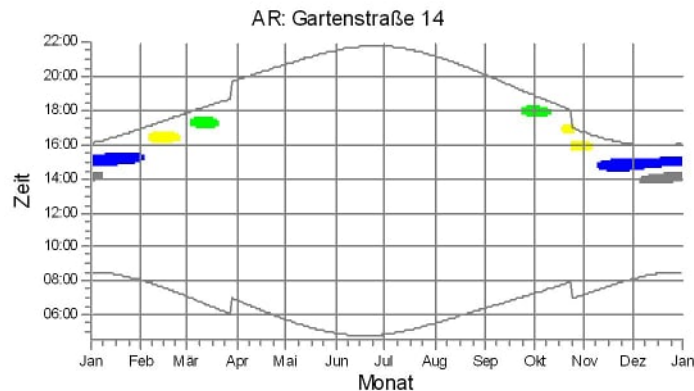
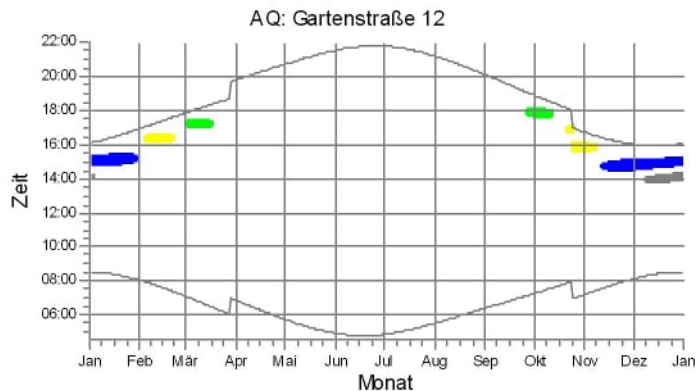
Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 10: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 11: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 12: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

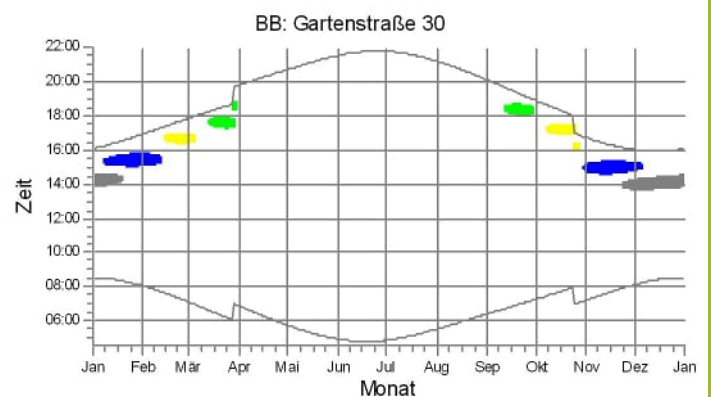
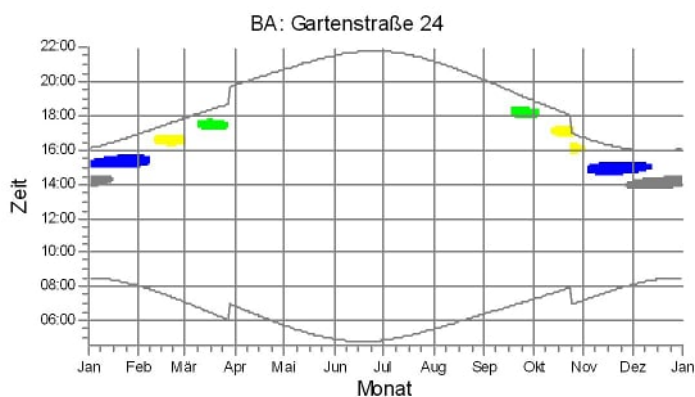
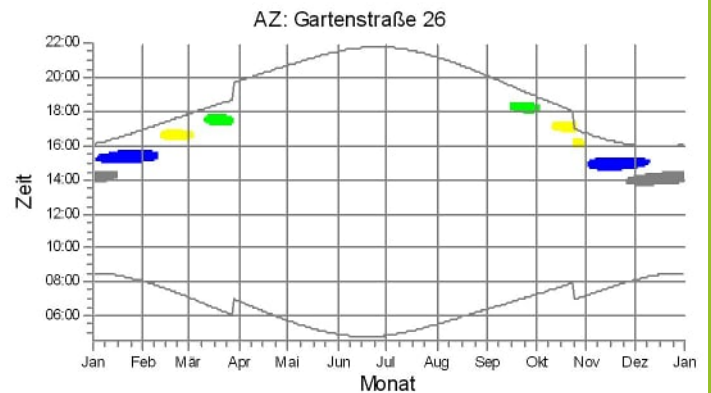
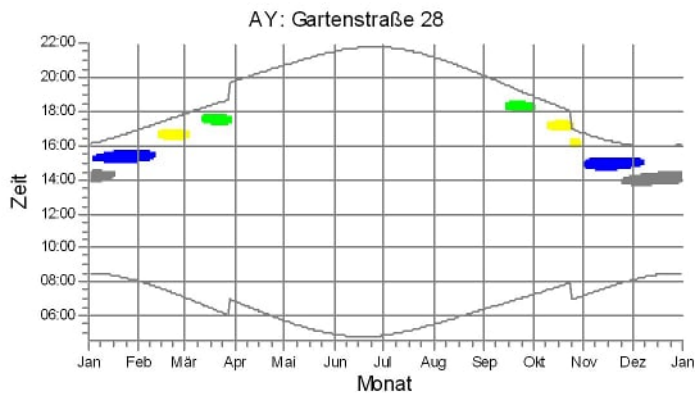
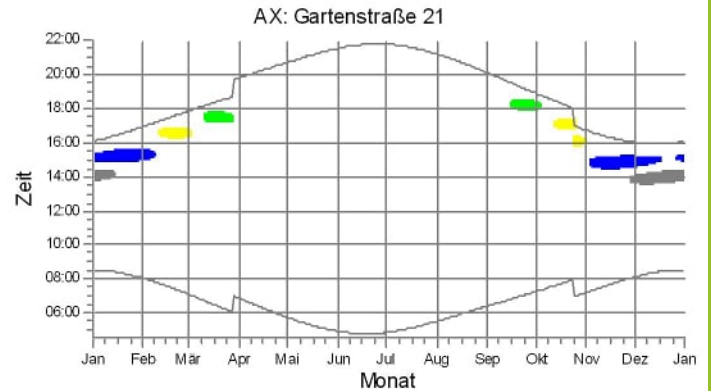
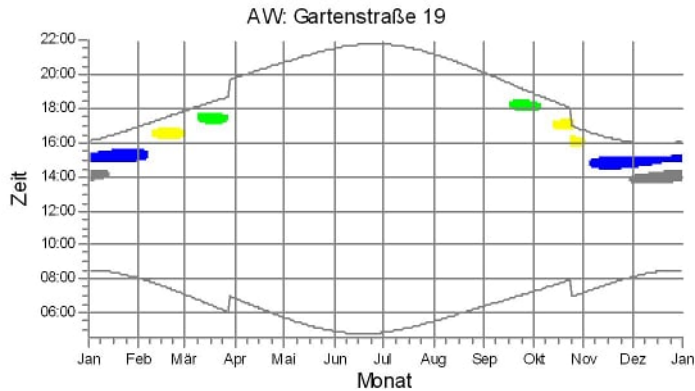
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



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WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

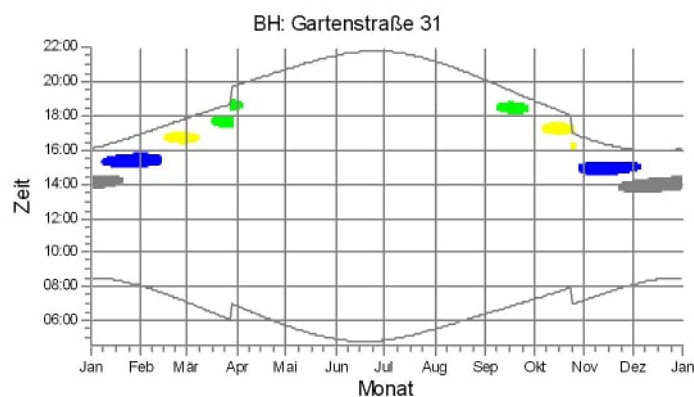
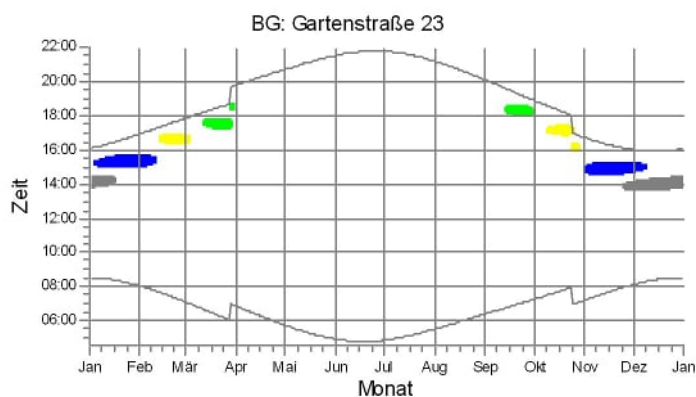
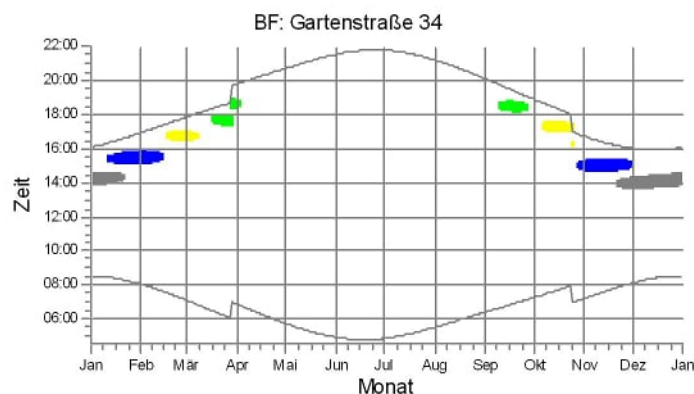
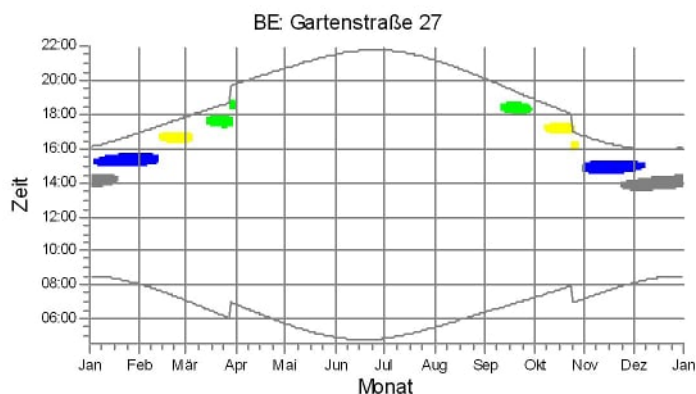
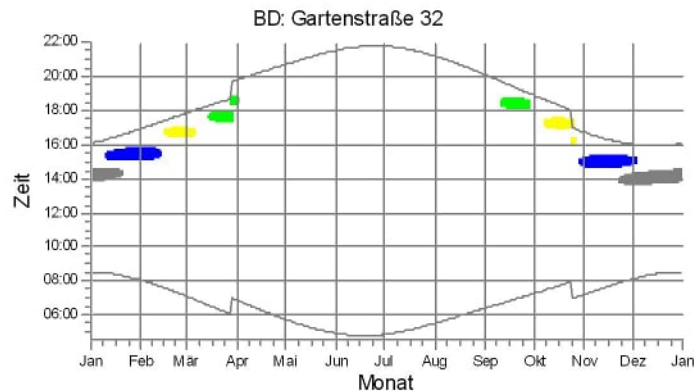
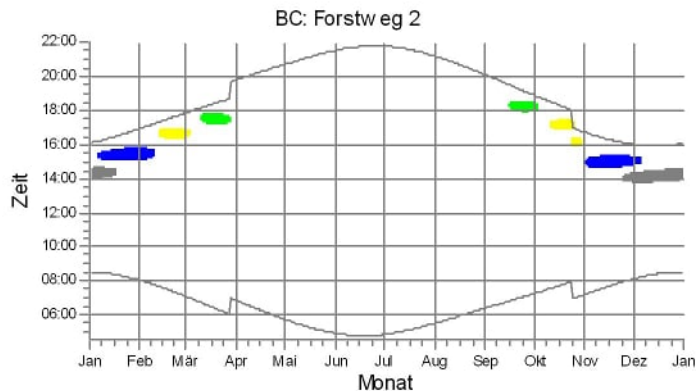
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WEA 12: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

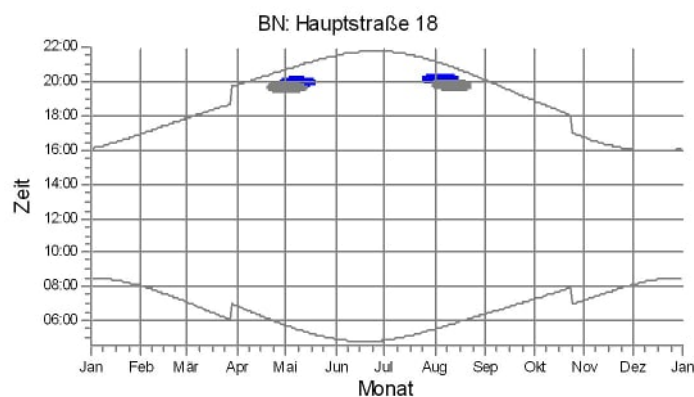
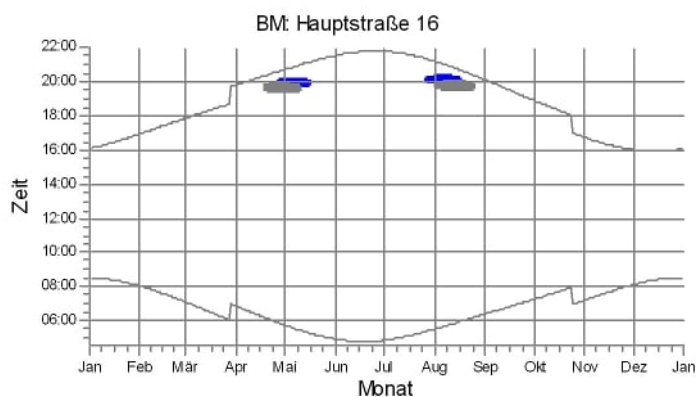
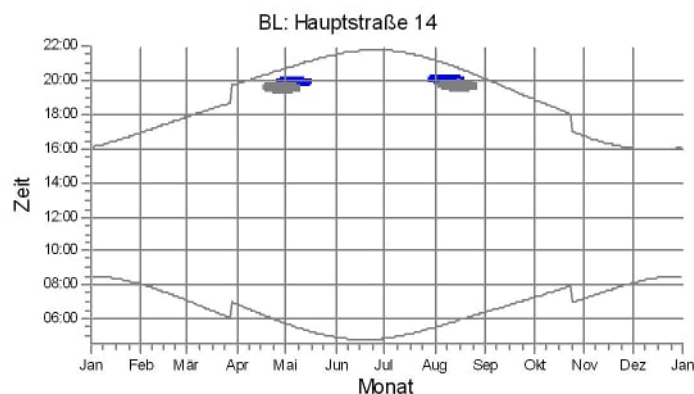
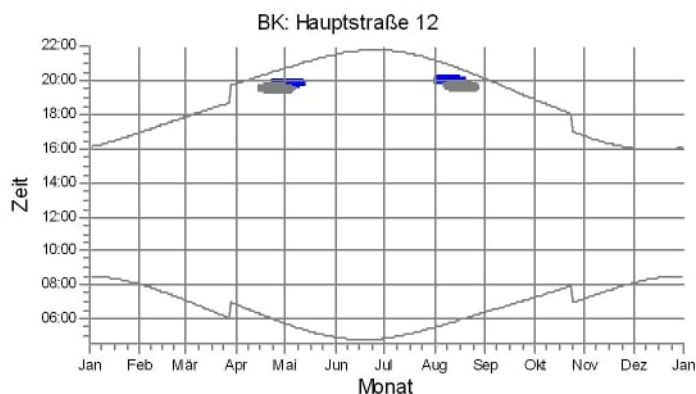
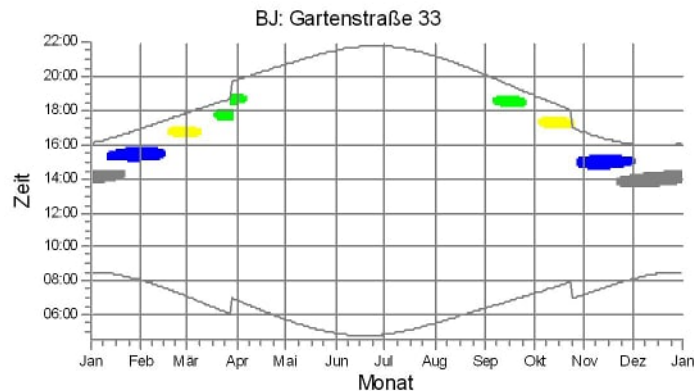
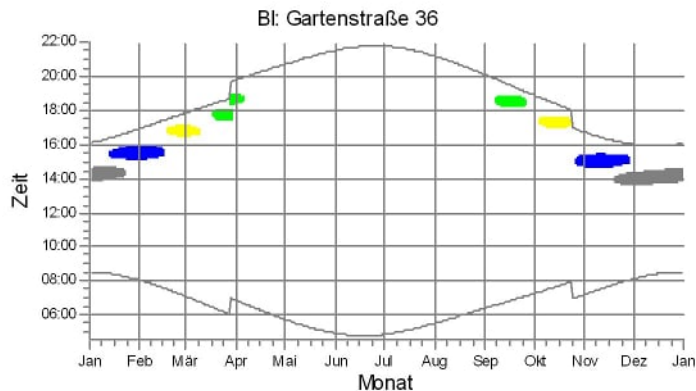
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

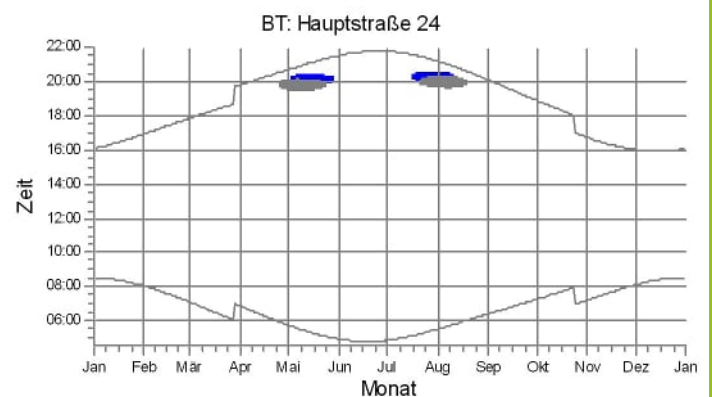
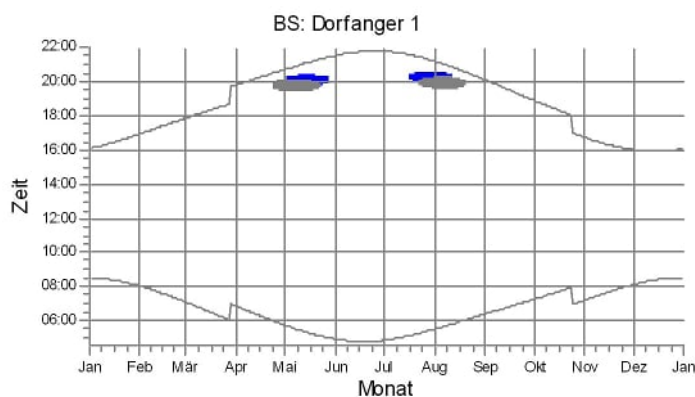
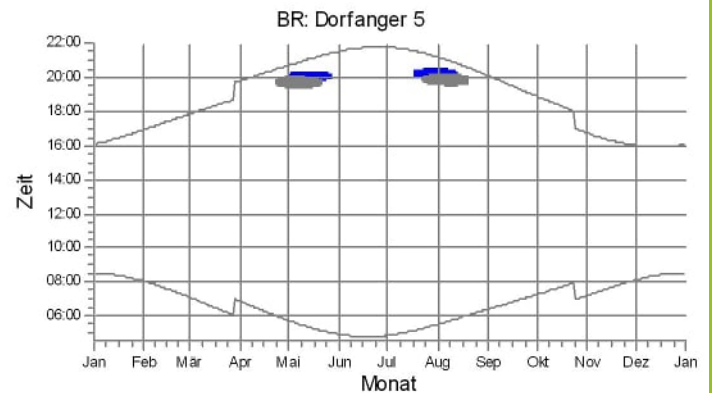
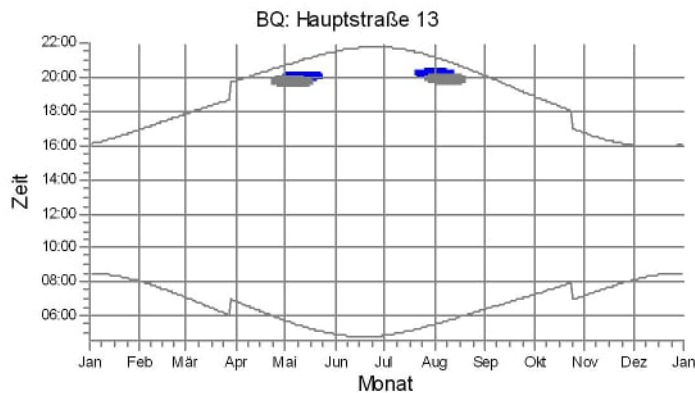
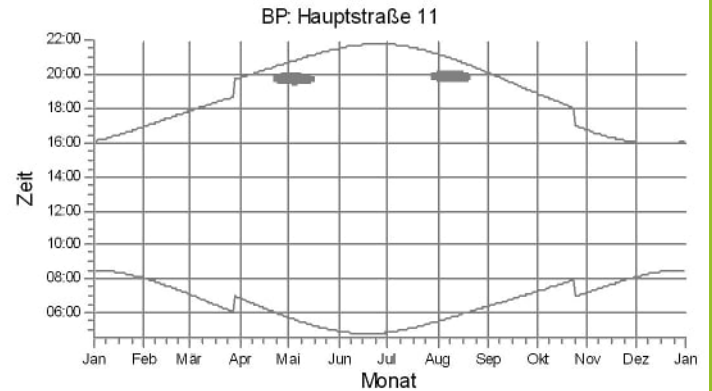
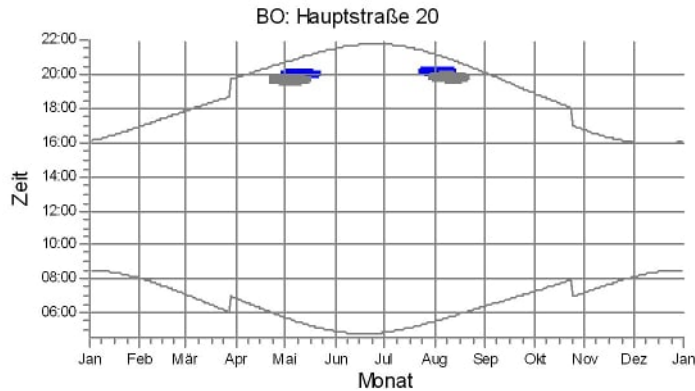
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



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WEA 12: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

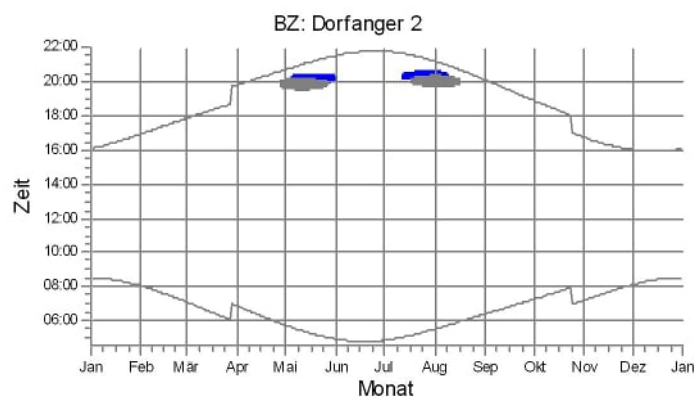
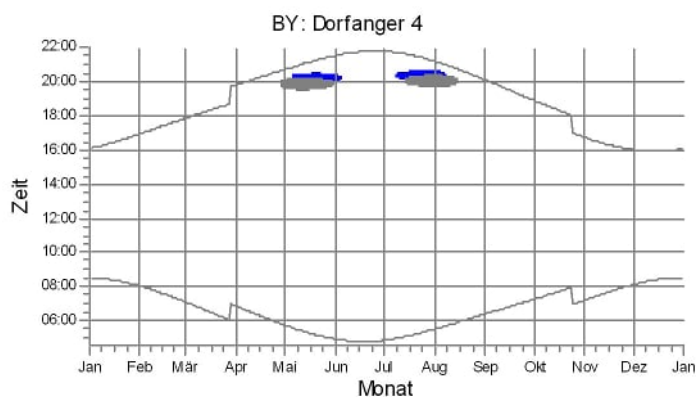
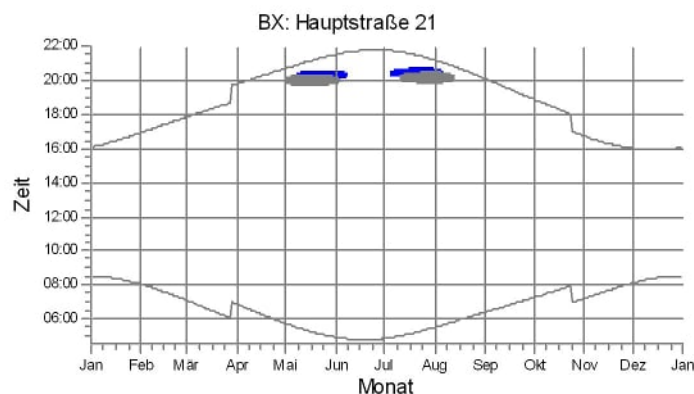
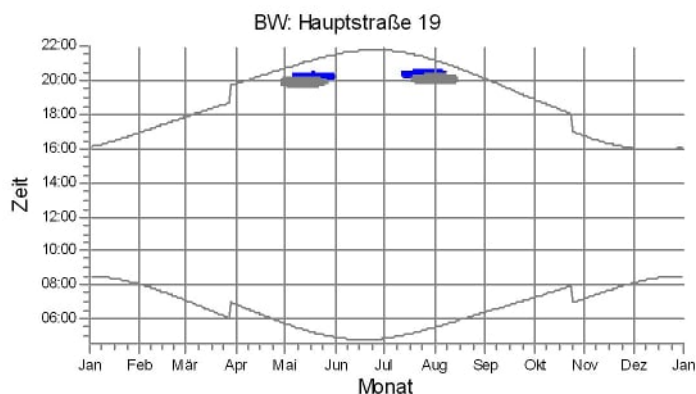
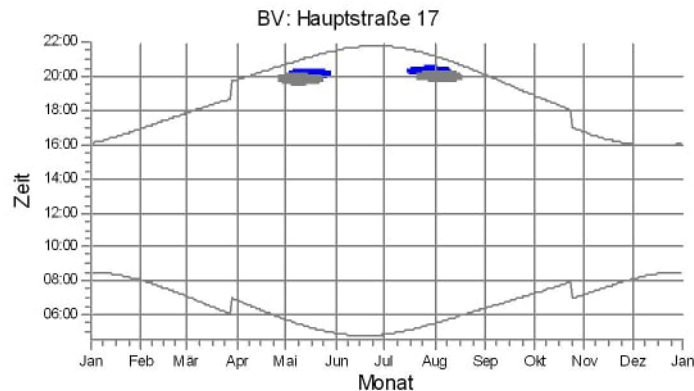
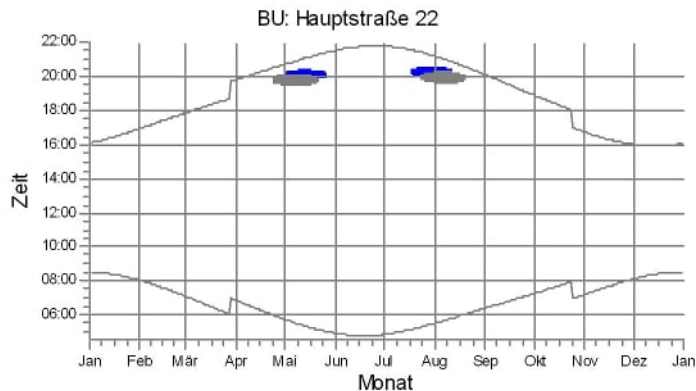
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Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

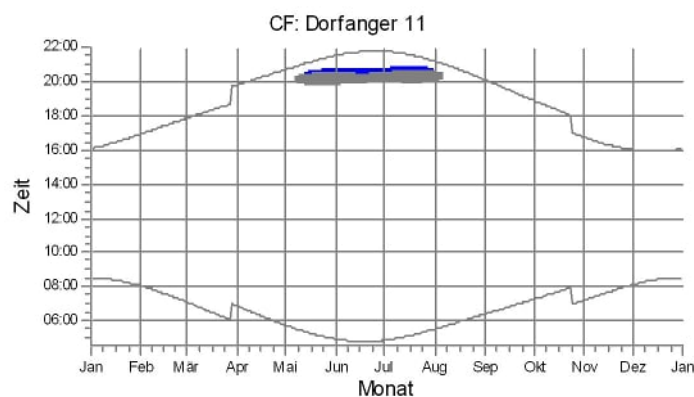
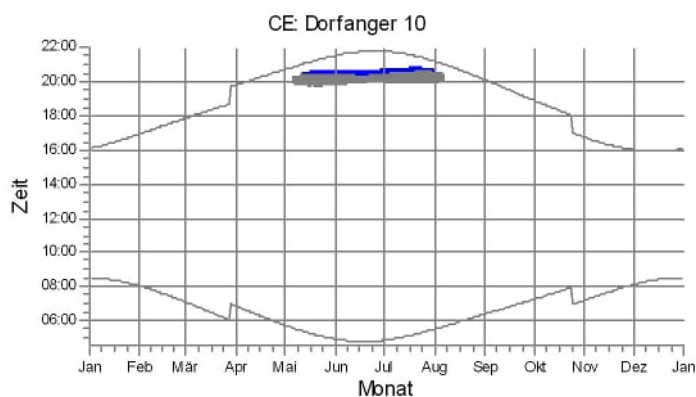
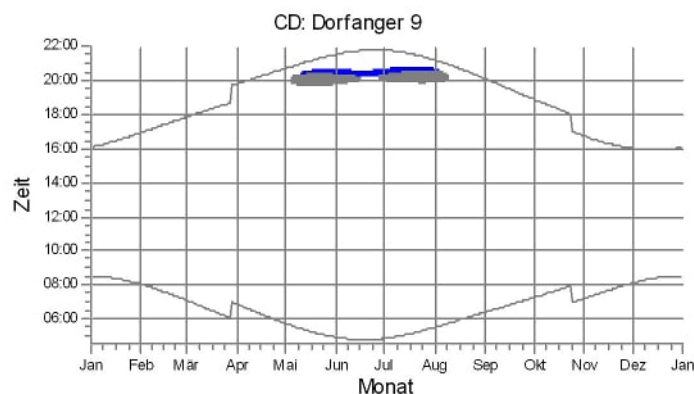
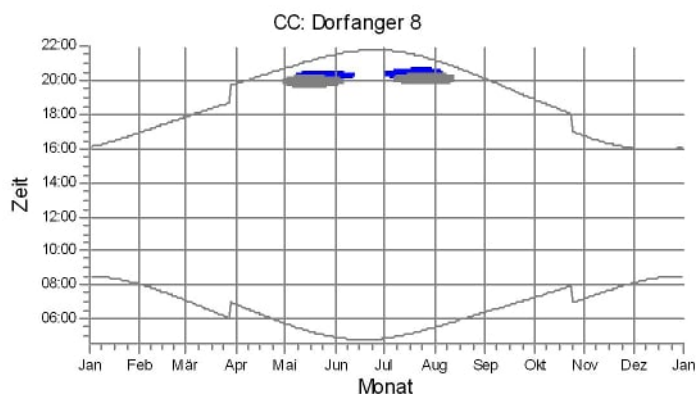
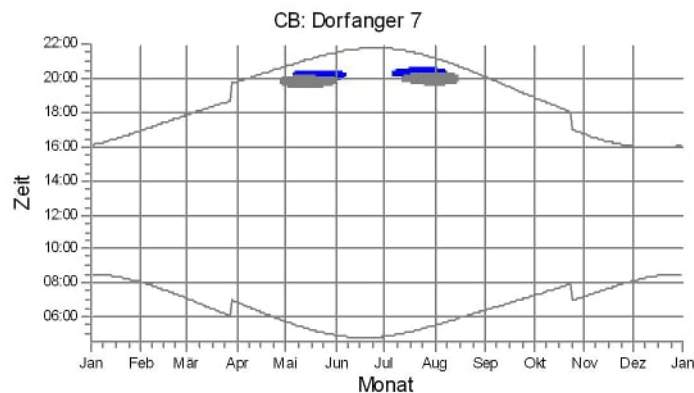
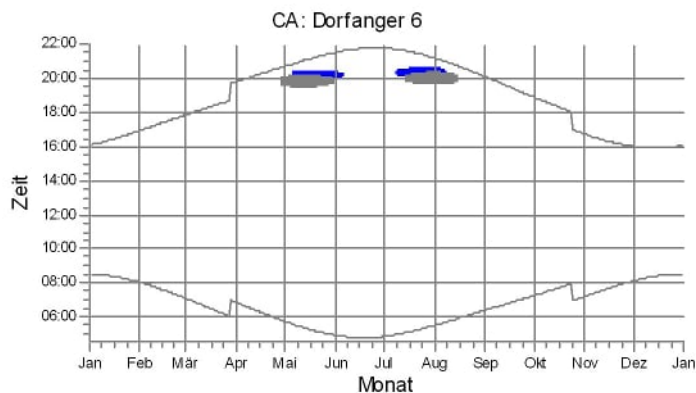
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

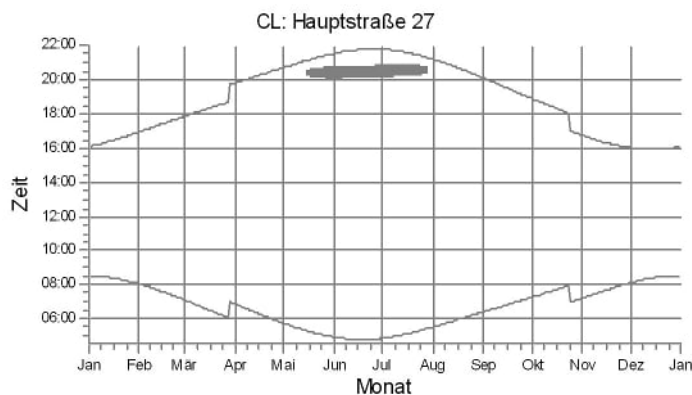
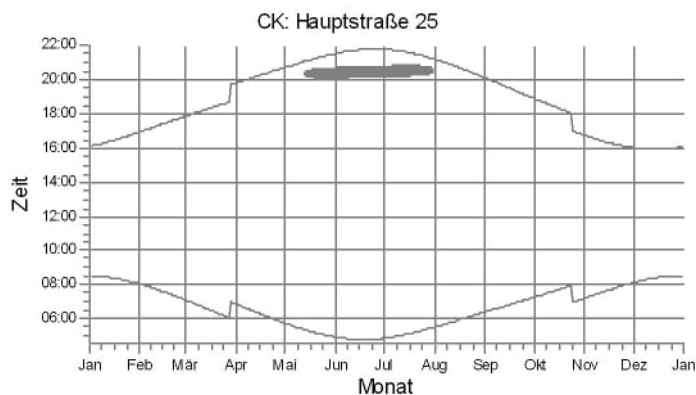
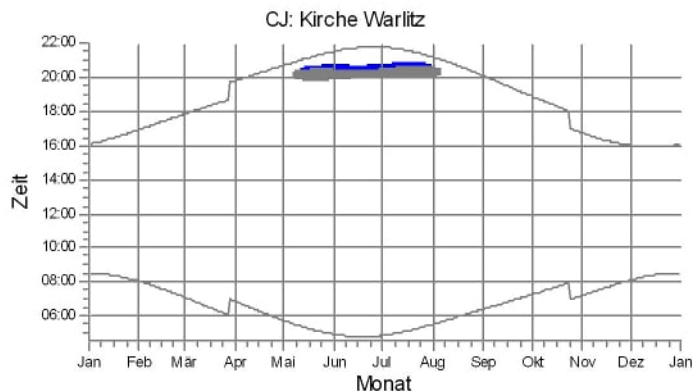
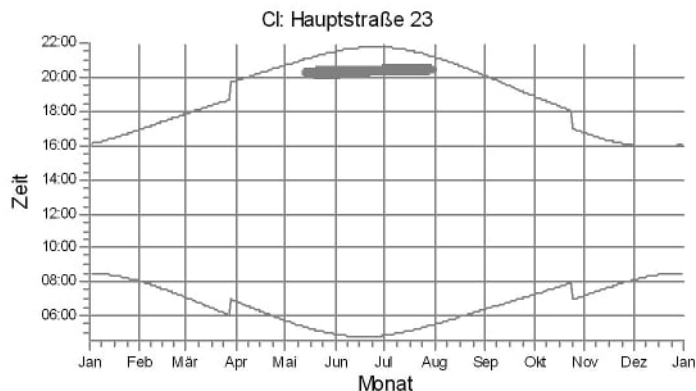
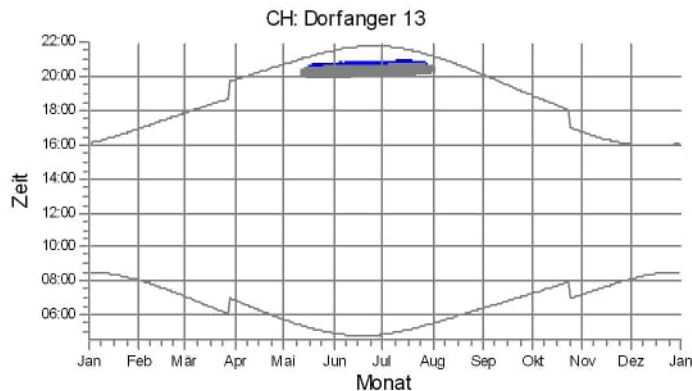
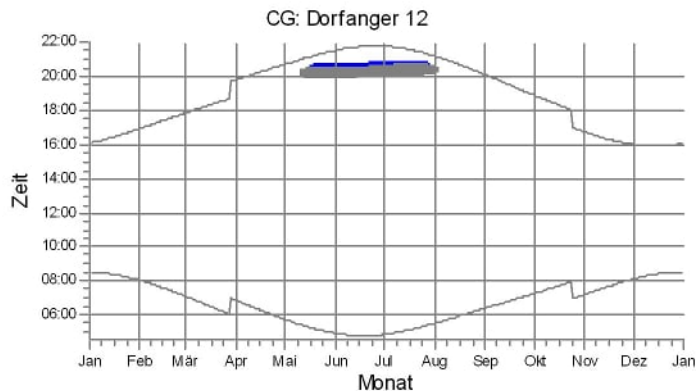
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Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

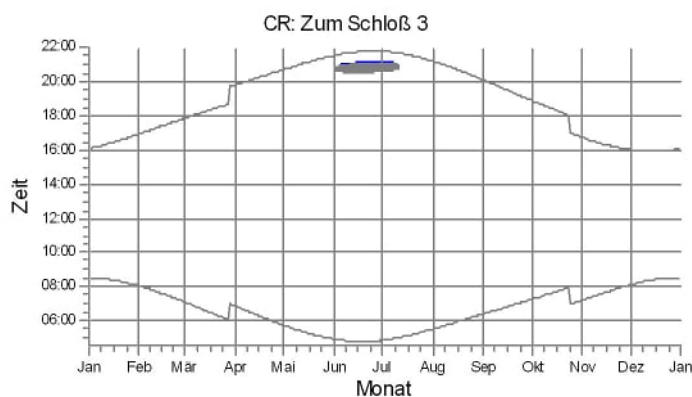
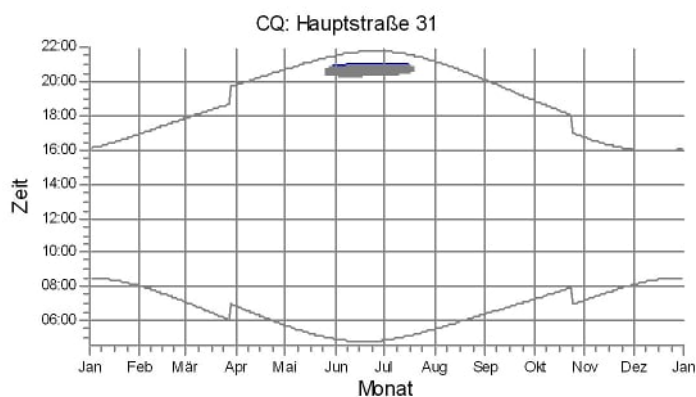
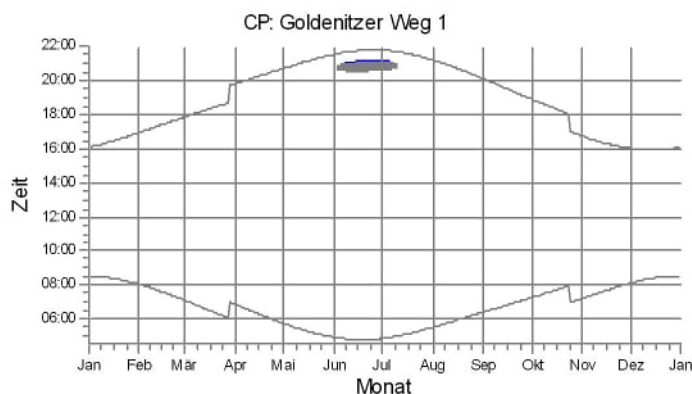
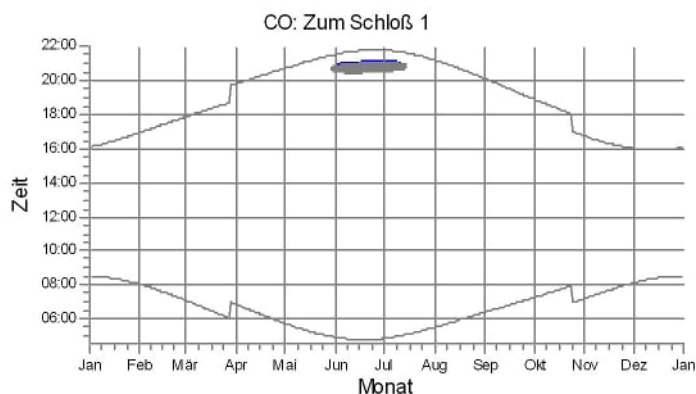
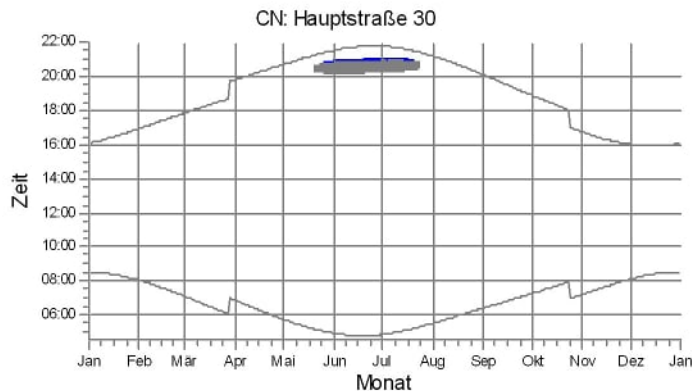
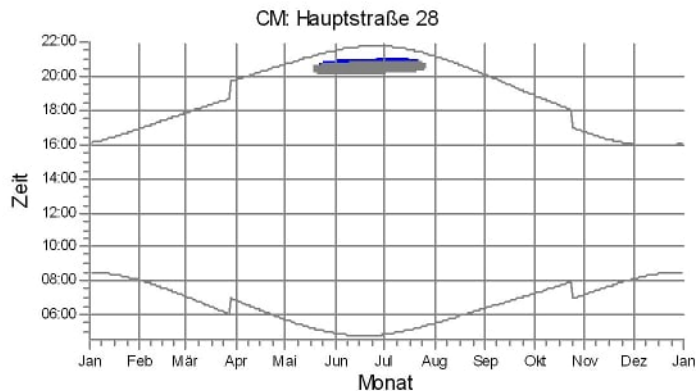
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Schattenwurfprognose WP Pritzier-Goldenitz

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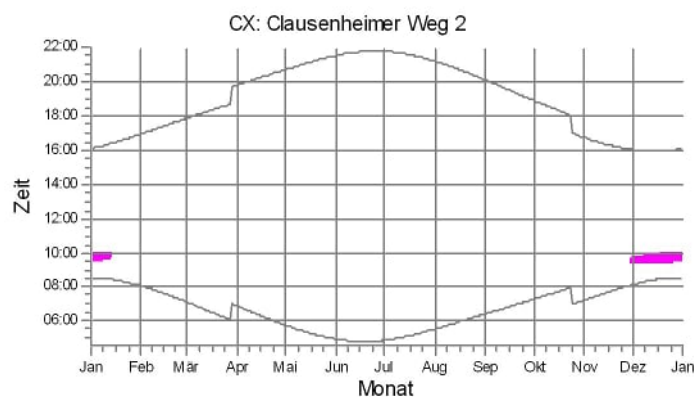
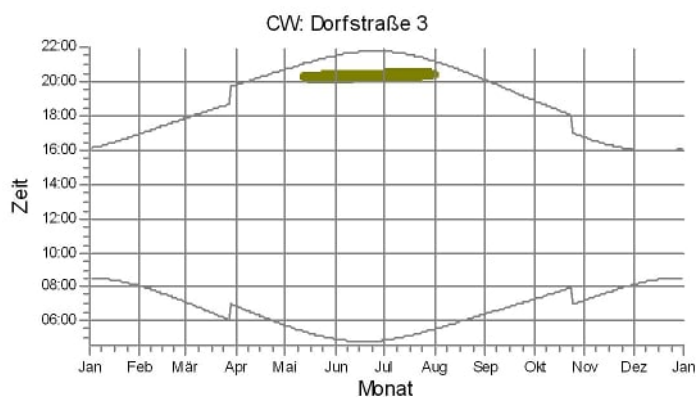
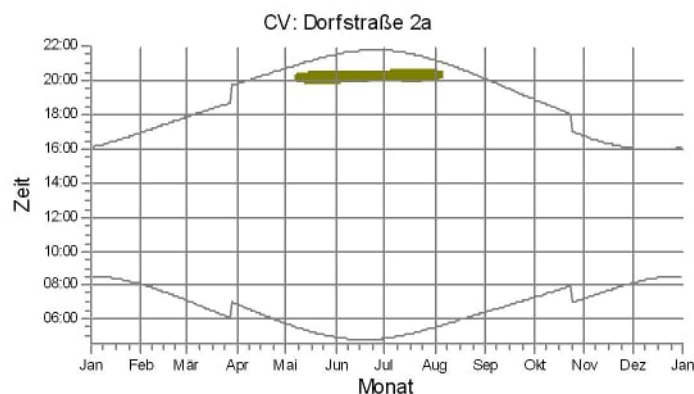
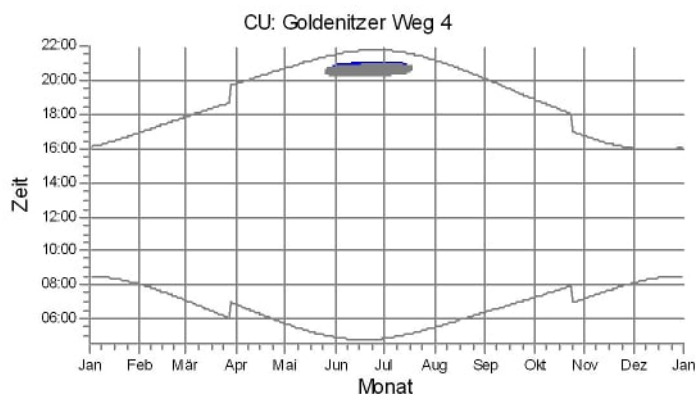
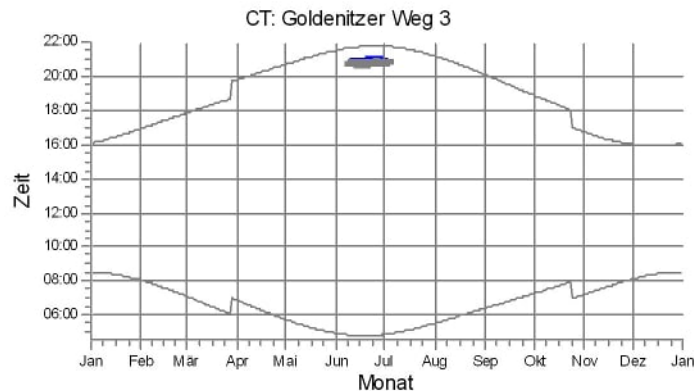
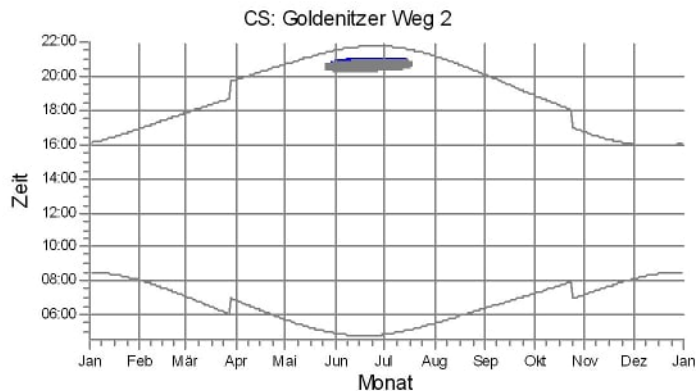
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WEA 2: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

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Schattenwurfprognose WP
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Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

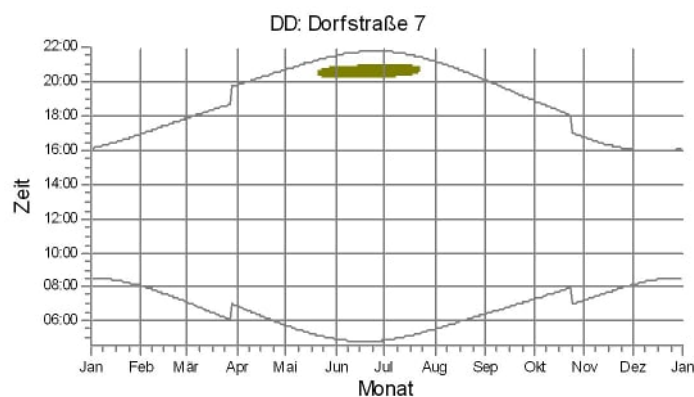
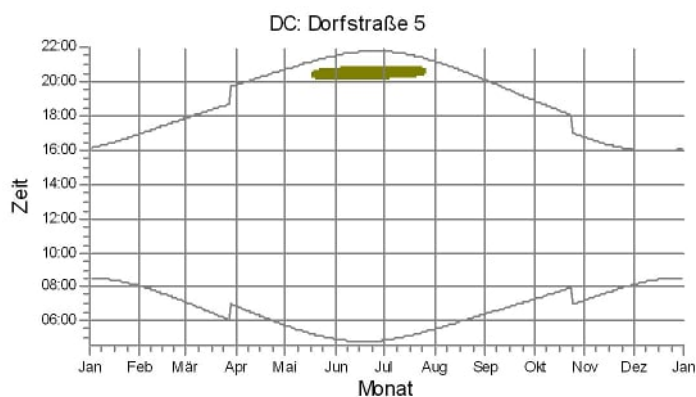
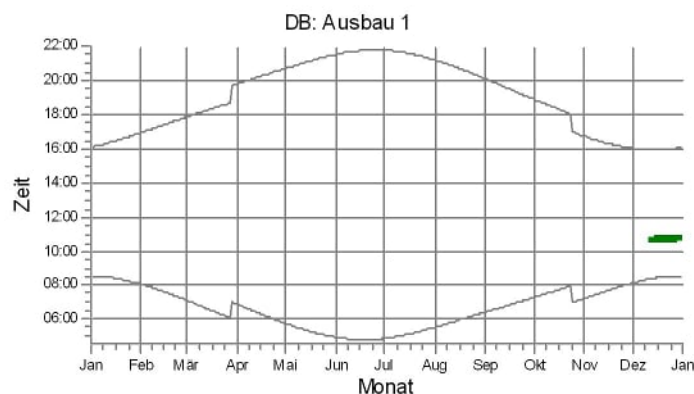
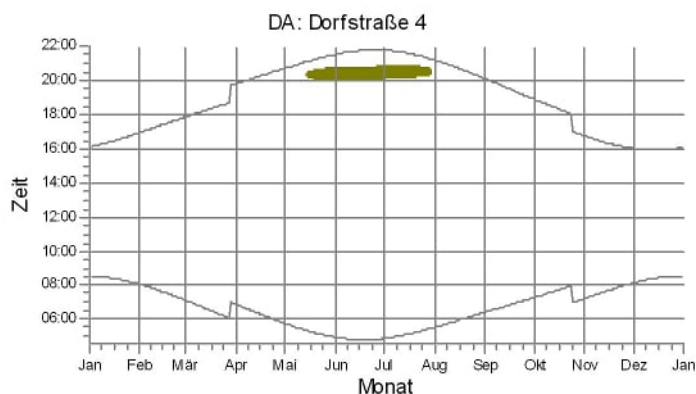
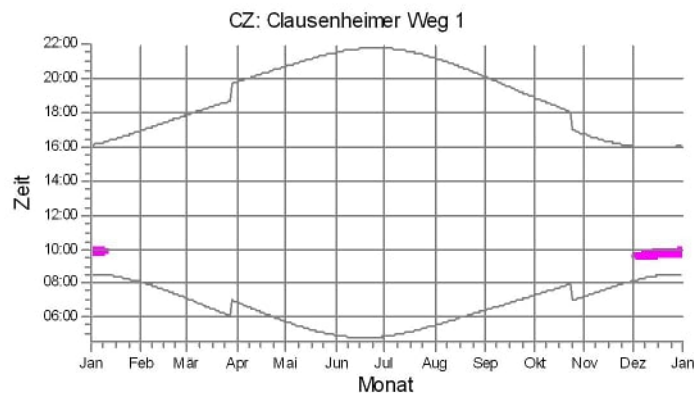
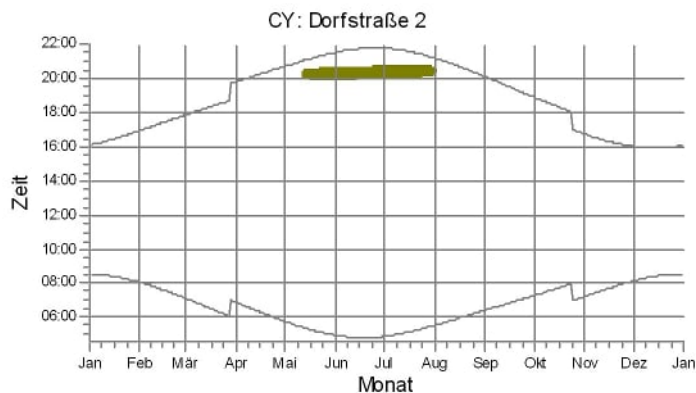
Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 1: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 2: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

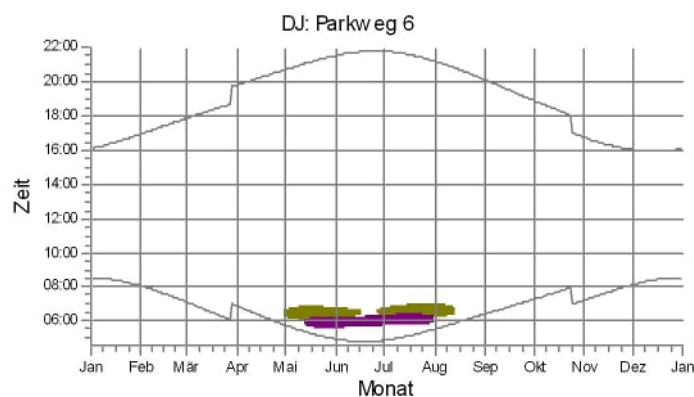
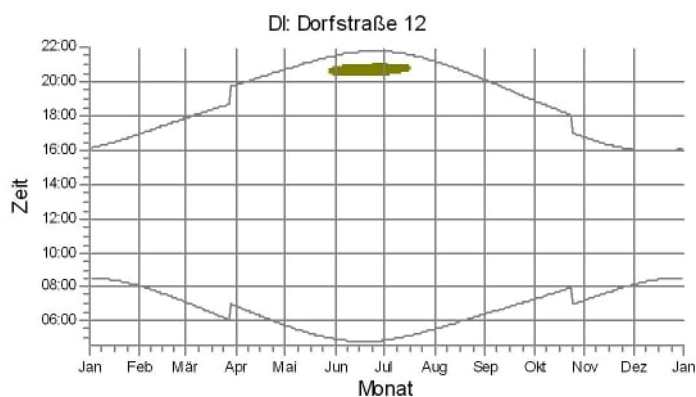
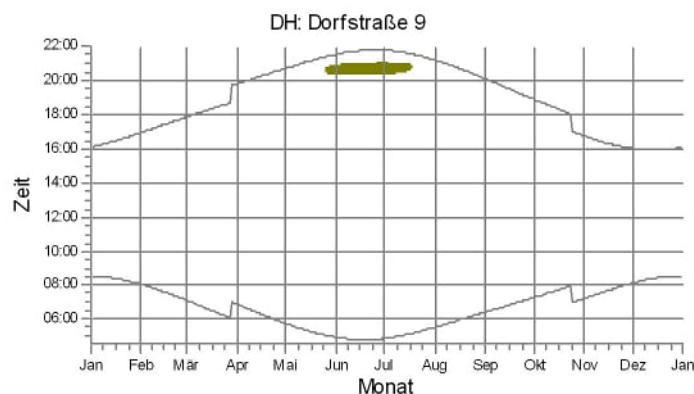
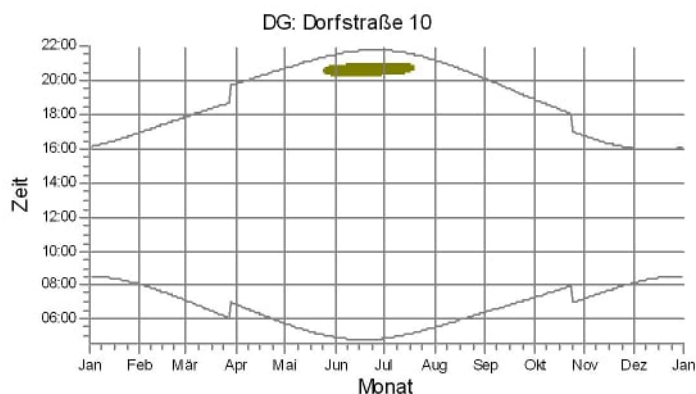
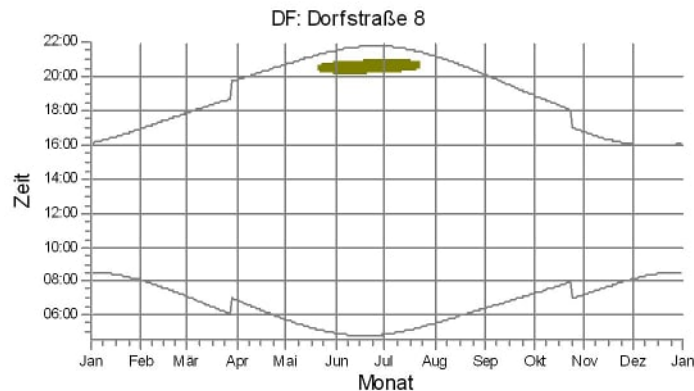
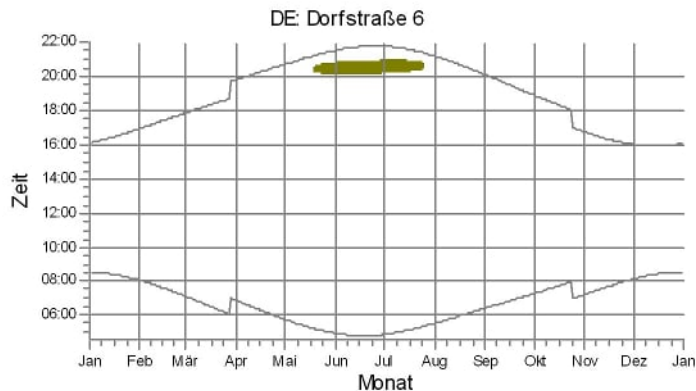
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 8: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

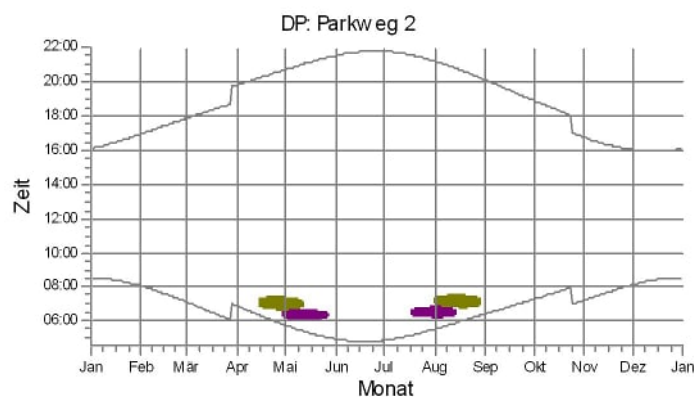
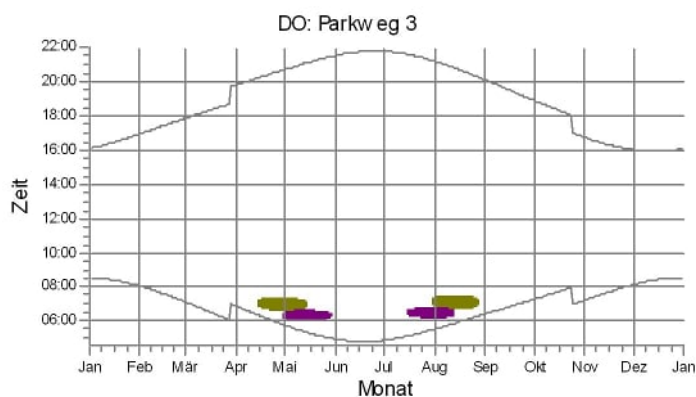
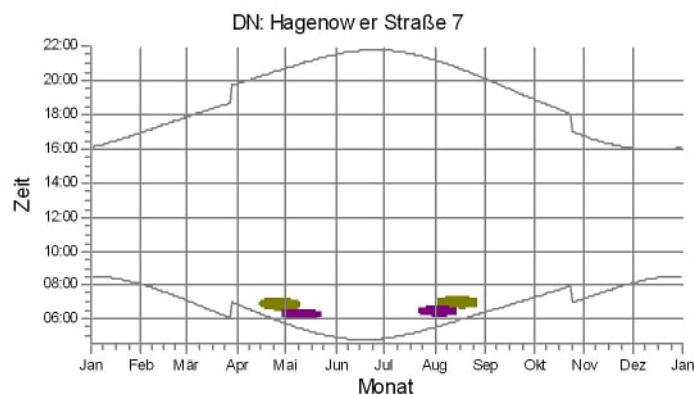
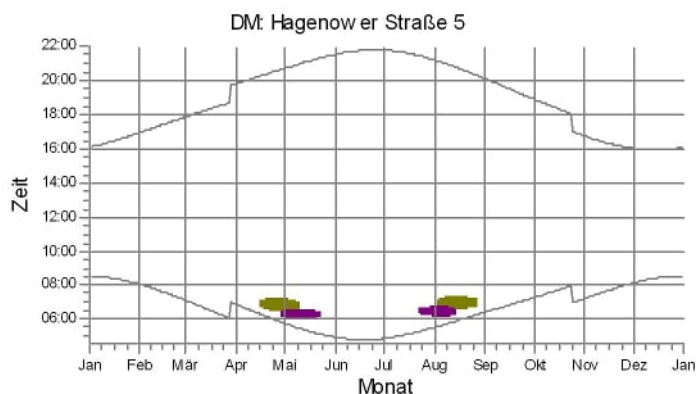
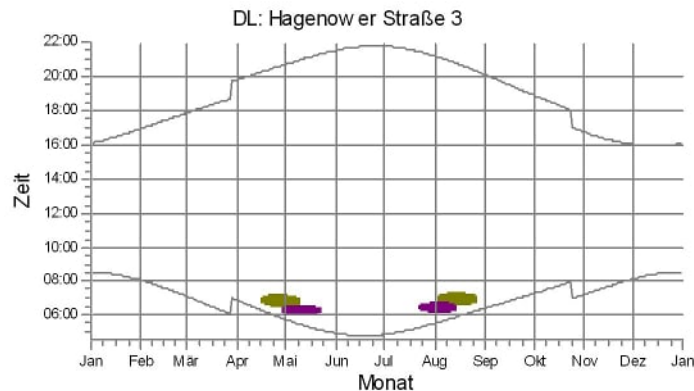
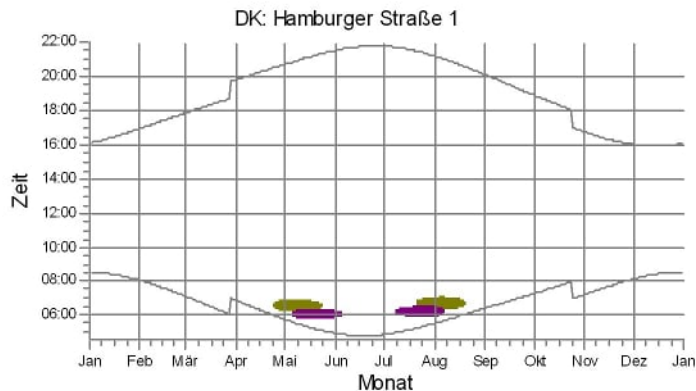
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 8: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

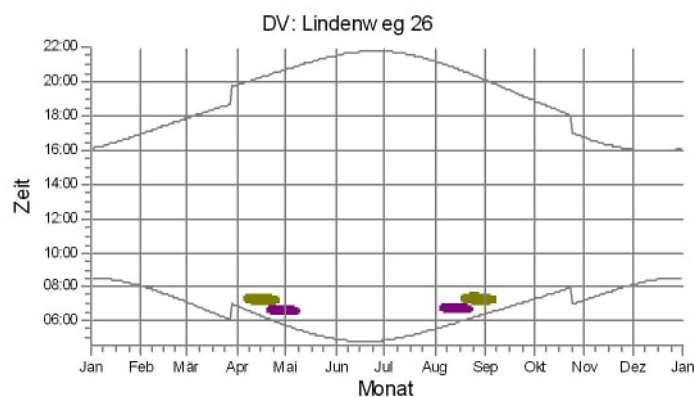
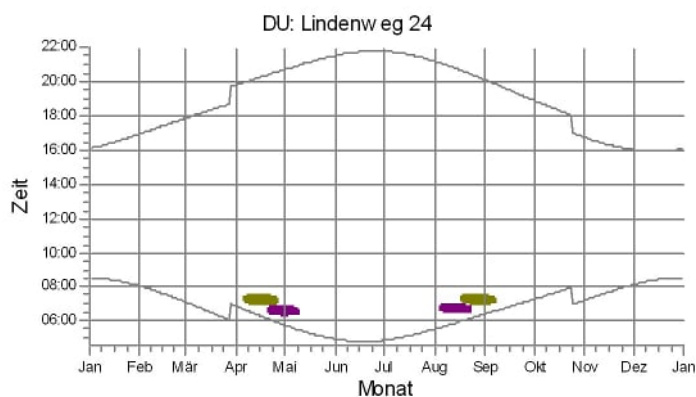
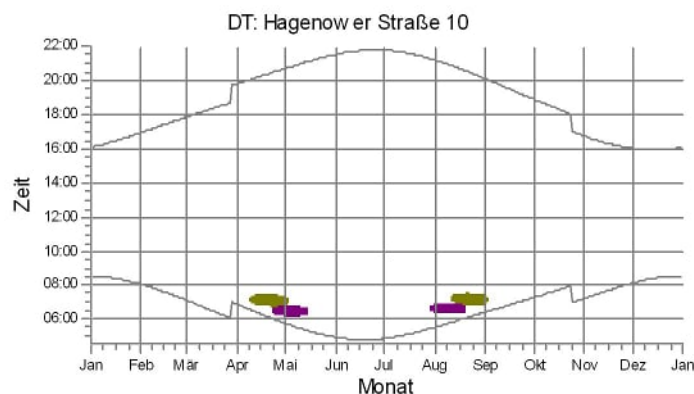
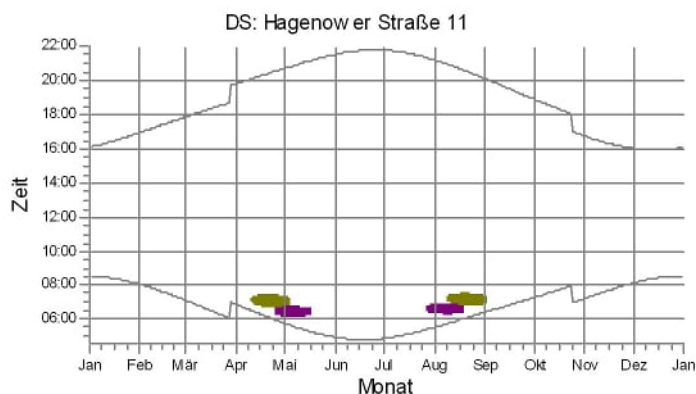
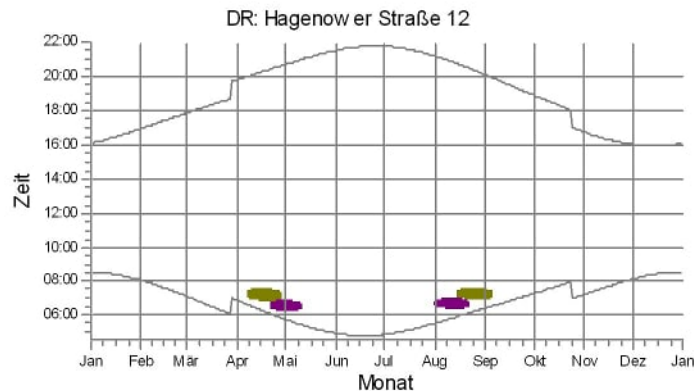
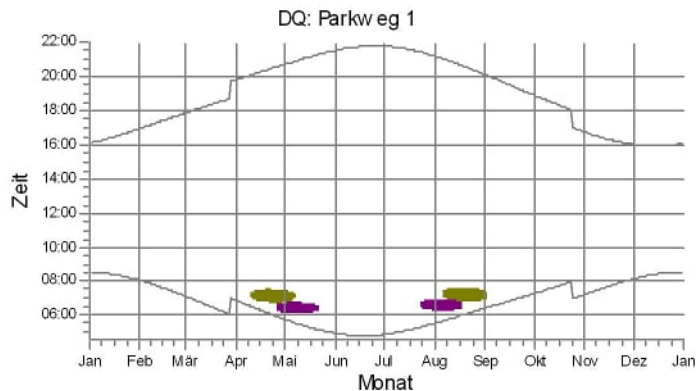
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 8: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

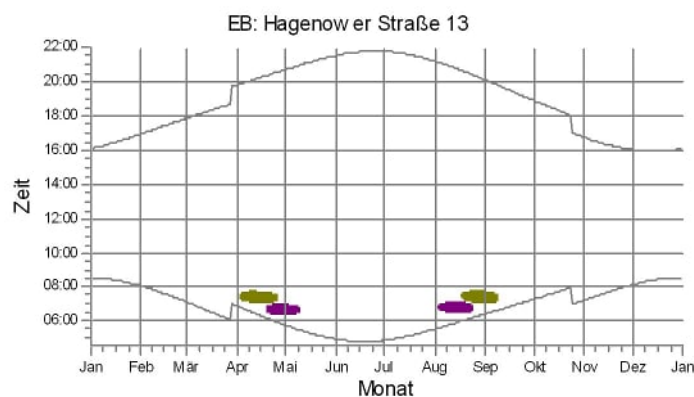
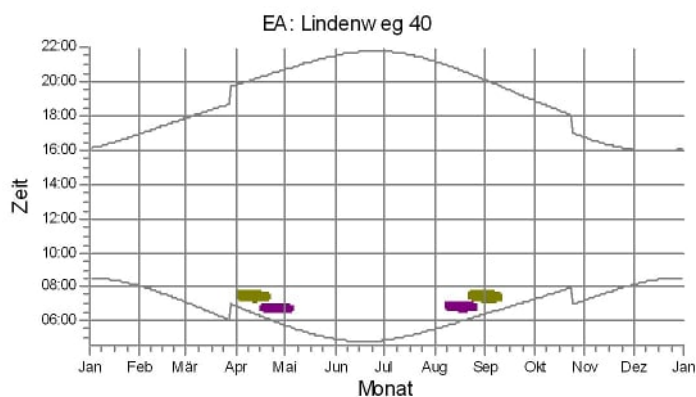
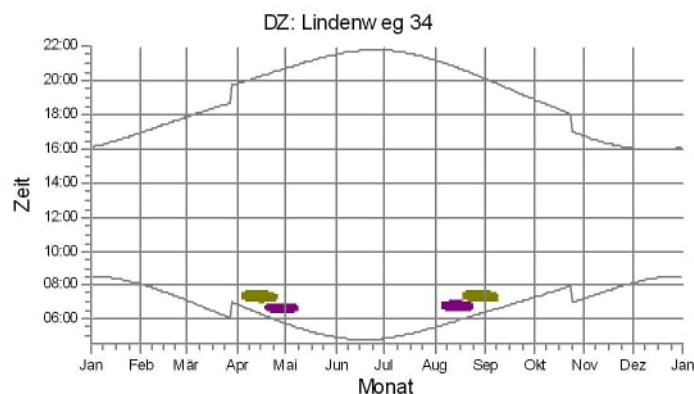
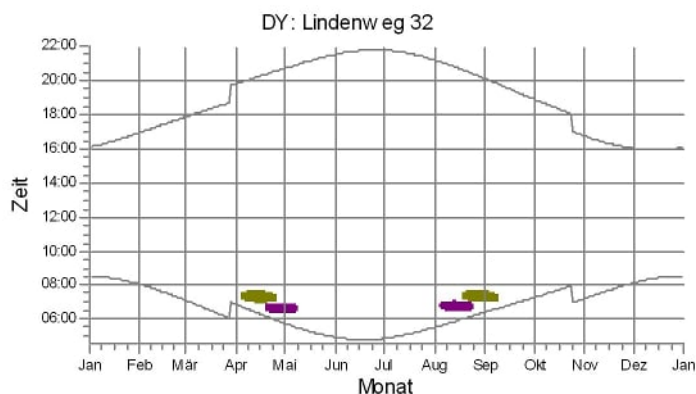
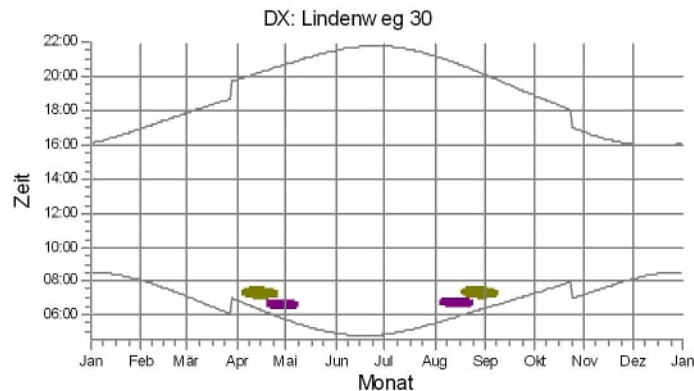
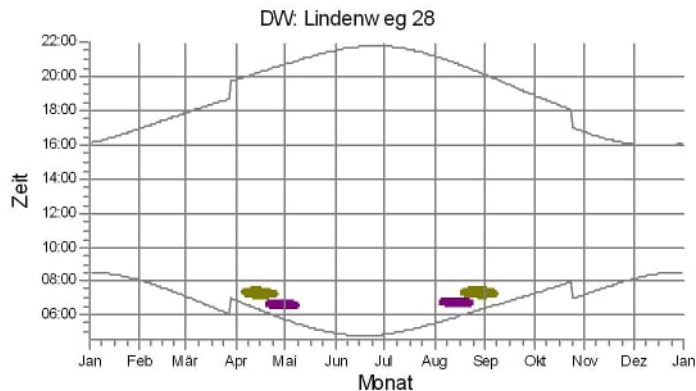
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 8: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

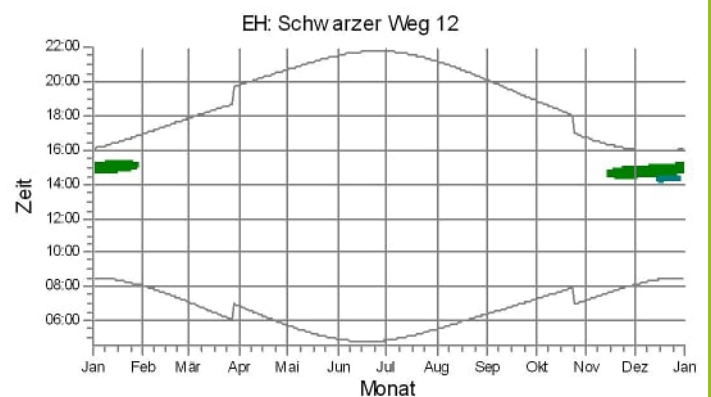
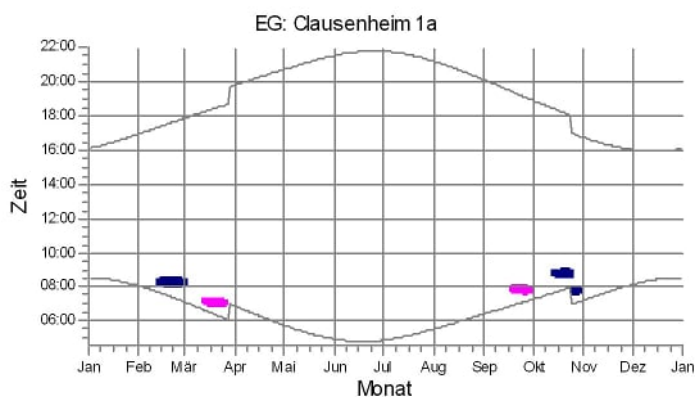
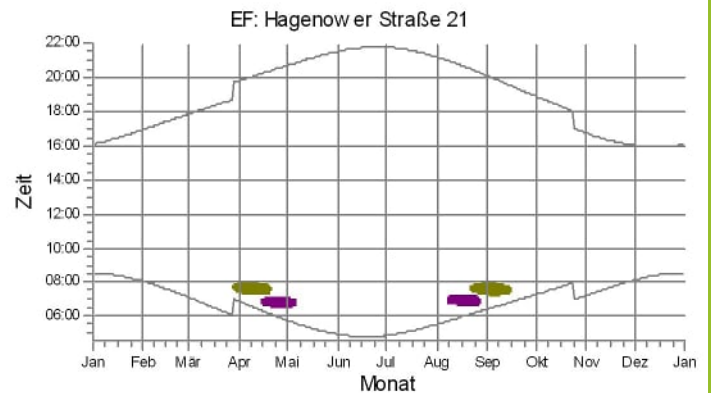
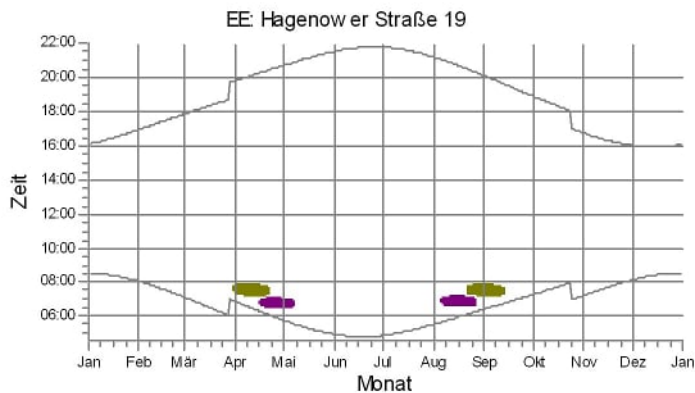
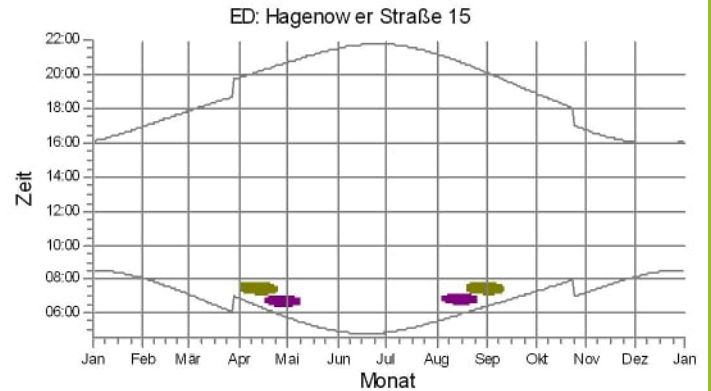
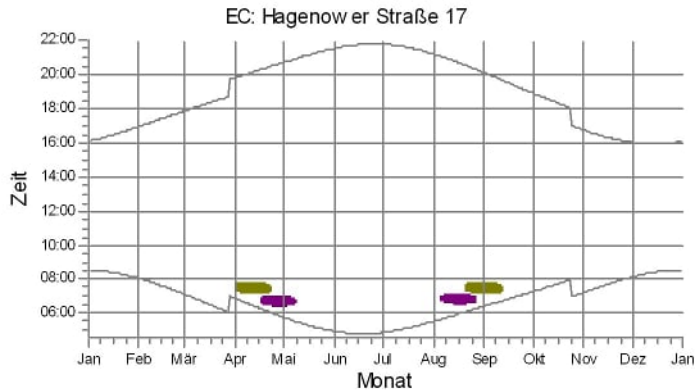
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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA

WEA 1: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 2: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 3: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 4: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 7: NORDEX N175/6.X 6800 NH: 179,0 m
WEA 8: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

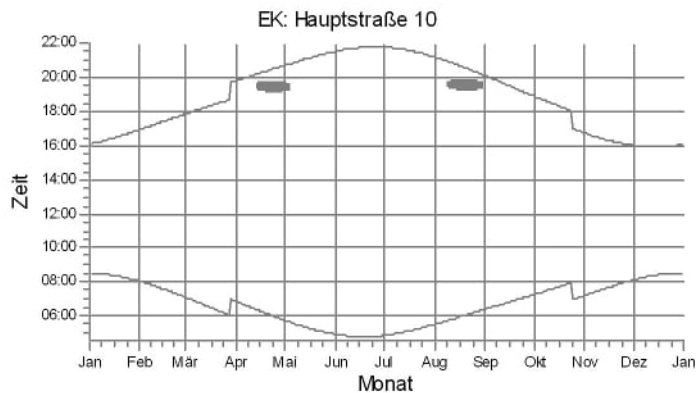
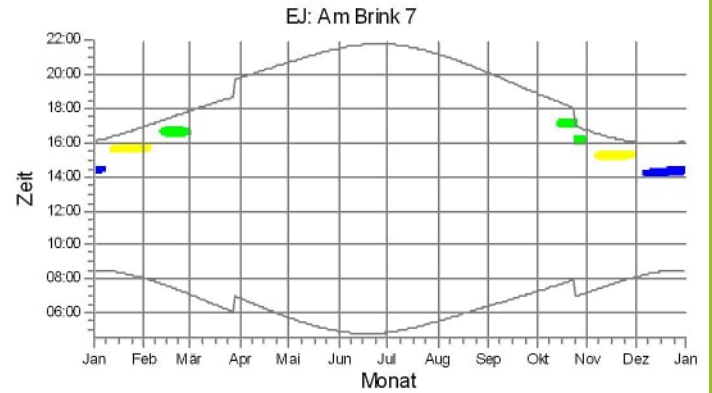
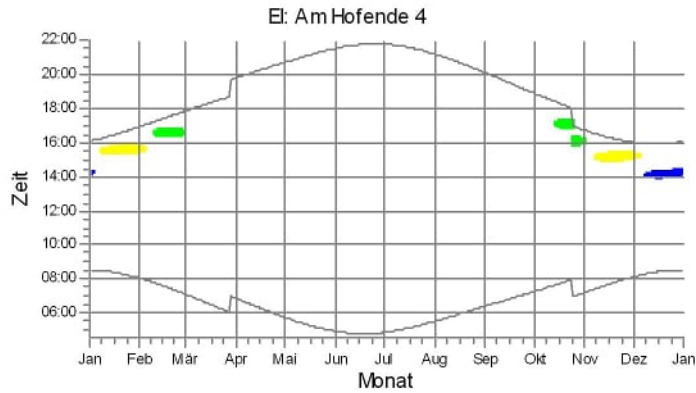
Lizenzierter Anwender:

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SHADOW - Grafischer Kalender

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



WEA



WEA 10: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 11: NORDEX N175/6.X 6800 NH: 179,0 m



WEA 12: NORDEX N175/6.X 6800 NH: 179,0 m

WEA 6: NORDEX N175/6.X 6800 NH: 179,0 m

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 1 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 14:43-15:22/39 16:07	08:02 15:12-15:49/37 16:58	07:06 15:53-17:02/69 17:52	06:52 15:53-17:02/69 19:50	05:44 20:44 21:33	04:55 21:33 21:48	04:51 21:13 21:13	05:30 20:08 21:13	06:24 20:08 20:08	07:16 16:44-17:41/57 18:55	07:13 16:46 16:46	08:07 14:28-15:20/52 16:02
2	08:32 14:43-15:24/41 16:08	08:01 15:13-15:48/35 17:00	07:04 15:54-17:03/69 17:54	06:49 15:54-17:03/69 19:52	05:42 20:46 21:34	04:54 21:34 21:47	04:52 21:12 21:12	05:32 20:05 20:05	06:25 20:05 20:05	07:18 16:42-17:41/59 18:53	07:15 16:44 16:44	08:09 14:29-15:19/50 16:01
3	08:32 14:44-15:26/42 16:09	07:59 15:14-15:47/33 17:01	07:01 15:54-17:03/69 17:56	06:47 15:54-17:03/69 19:53	05:40 20:48 21:35	04:53 21:47 21:47	04:53 21:10 21:10	05:34 20:03 20:03	06:27 20:03 20:03	07:20 16:41-17:41/60 18:50	07:17 16:42 16:42	08:10 14:30-15:18/48 16:01
4	08:31 14:44-15:26/42 16:11	07:57 15:16-15:45/29 17:03	06:59 15:55-17:04/69 17:58	06:45 15:55-17:04/69 19:55	05:38 20:49 21:37	04:53 21:46 21:46	04:54 21:08 21:08	05:35 20:29 20:29	06:29 20:29 20:29	07:21 16:38-17:40/62 18:48	07:19 14:59-15:05/6 16:40	08:12 14:30-15:16/46 16:00
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16	08:24 14:49-15:44/55 16:28	07:34 16:00-16:35/35 17:27	06:31 16:11-16:57/46 18:21	06:16 16:11-16:57/46 19:59	05:16 21:10 21:46	04:47 21:37 21:37	05:07 20:44 20:44	05:56 19:32 19:32	06:50 19:32 19:32	07:43 16:25-17:32/67 18:20	07:42 14:32-15:23/51 16:19	08:26 14:37-15:12/35 15:57
17	08:23 14:50-15:45/55 16:30	07:32 15:59-16:41/42 17:29	06:28 16:14-16:56/42 18:22	06:14 16:14-16:56/42 19:59	05:14 21:12 21:47	04:47 21:35 21:35	05:08 20:42 20:42	05:58 19:29 19:29	06:51 19:29 19:29	07:45 16:25-17:30/65 18:17	07:43 14:31-15:23/52 16:18	08:26 14:36-15:12/36 15:57
18	08:22 14:50-15:46/56 16:32	07:30 15:57-16:43/46 17:31	06:26 16:20-16:53/33 18:24	06:12 16:20-16:53/33 19:59	05:13 21:13 21:47	04:47 21:34 21:34	05:09 20:40 20:40	05:59 19:27 19:27	06:53 19:27 19:27	07:47 16:25-17:28/63 18:15	07:45 14:30-15:23/53 16:16	08:27 14:37-15:12/35 15:57
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27	08:10 15:01-15:50/49 16:48	07:10 15:53-17:01/68 17:49	06:04 16:34-16:46/12 18:41	05:52 16:34-16:46/12 19:59	05:01 21:27 21:49	04:49 21:22 21:22	05:23 20:19 20:19	06:15 19:05 19:05	07:09 19:05 19:05	07:59 16:25-17:04/34 18:05	07:59 14:28-15:23/55 16:06	08:32 14:42-15:13/36 15:58
28	08:09 15:03-15:50/47 16:50	07:08 15:54-17:03/69 17:50	06:02 16:34-16:46/12 18:42	05:50 16:34-16:46/12 19:59	04:59 21:28 21:48	04:50 21:20 21:20	05:24 20:17 20:17	06:17 19:02 19:02	07:05 19:02 19:02	07:59 16:25-17:04/34 18:05	07:59 14:28-15:23/55 16:05	08:32 14:43-15:13/37 15:59
29	08:07 15:06-15:50/44 16:52	07:06 15:54-16:53/59 17:49	06:01 16:34-16:46/12 18:44	05:48 16:34-16:46/12 19:59	04:58 21:29 21:48	04:50 21:21 21:21	05:26 20:15 20:15	06:18 19:00 19:00	07:02 19:00 19:00	07:59 16:25-17:04/34 18:05	07:59 14:28-15:23/55 16:04	08:32 14:43-15:13/38 15:58
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31	08:04 15:11-15:50/39 16:56	07:04 15:53-16:58/64 17:48	06:00 16:34-16:46/12 18:48	05:47 16:34-16:46/12 19:59	04:56 21:32 21:48	04:51 21:20 21:20	05:29 20:10 20:10	06:22 18:48 18:48	07:11 18:48 18:48	07:59 16:25-17:04/34 18:05	07:59 14:28-15:23/55 16:02	08:32 14:43-15:13/40 15:56
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	1523	1029	1100	0	0	0	0	294	1685	1214	1455	

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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DE-30177 Hannover
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 10 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 14:58-15:22/24 16:07	08:02 15:25-16:18/53 16:58	07:06 16:28-17:03/35 17:52	06:52 19:50	05:44 20:44	04:55 21:33	04:51 21:48	05:30 21:13	06:24 20:08	07:16 18:55	07:13 15:24-16:07/43 16:45	08:07 14:41-15:21/40 16:02
2	08:32 14:58-15:23/25 16:08	08:01 15:28-16:18/50 16:59	07:04 16:30-17:03/33 17:54	06:49 19:52	05:42 20:46	04:54 21:34	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 15:16-16:05/49 16:44	08:09 14:42-15:21/39 16:01
3	08:31 14:59-15:25/26 16:09	07:59 15:32-16:18/46 17:01	07:01 16:30-17:01/31 17:56	06:47 19:53	05:40 20:48	04:53 21:35	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 15:13-16:04/51 16:42	08:10 14:42-15:19/37 16:01
4	08:31 14:58-15:26/28 16:11	07:57 15:39-16:27/48 17:03	06:59 16:32-17:01/29 17:58	06:45 19:55	05:38 20:49	04:53 21:36	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 15:11-16:03/52 16:40	08:12 14:43-15:18/35 16:00
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9	08:29 14:59-15:36/37 16:17	07:48 15:47-16:36/49 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:30 17:08-17:35/27 16:31	08:18 14:47-15:13/26 15:58
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13	08:26 15:00-15:44/44 16:23	07:40 16:02-16:45/43 17:21	06:38 18:15	06:23 20:11	05:21 21:05	04:44 21:44	05:03 21:40	06:04 20:50	07:34 19:39	07:37 18:27	07:34 17:01-17:36/35 16:26	08:23 14:50-15:12/22 15:57
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31	08:04 15:22-16:17/55 16:56		06:54 19:48		04:56 21:32		05:29 21:15	06:22 20:10		07:11 16:47	07:11 15:27-16:09/42 16:47	08:32 14:59-15:21/22 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	1436	1238	209	0	0	0	0	0	0	975	1586	737

Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 11 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 14:11-15:18/67 16:07 14:04-14:09/5	08:02 15:03-15:52/49 16:58	07:06 17:52 19:50		05:44 19:41-20:10/29 20:44	04:55 20:04-20:53/49 21:33
2	08:32 14:13-15:19/66 16:08	08:01 15:05-15:52/47 16:59	07:04 17:54 19:51		05:42 19:41-20:12/31 20:46	04:54 20:04-20:55/51 21:34
3	08:31 14:14-15:20/66 16:09	07:59 15:07-15:52/45 17:01	07:01 17:56 19:53		05:40 19:41-20:13/32 20:48	04:53 20:06-20:56/50 21:35
4	08:31 14:15-15:21/66 16:11	07:57 15:08-15:51/43 17:03	06:59 17:58 19:55		05:38 19:41-20:14/33 20:49	04:53 20:07-20:56/49 21:36
5	08:31 14:16-15:22/66 16:12	07:55 15:09-15:51/42 17:05	06:57 18:00 19:57		05:36 19:41-20:16/35 20:51	04:52 20:08-20:58/50 21:37
6	08:30 14:16-15:23/67 16:13	07:54 15:10-15:51/41 17:07	06:54 18:02 19:59		05:34 19:42-20:18/36 20:53	04:51 20:11-20:59/48 21:39
7	08:30 14:17-15:24/67 16:14	07:52 15:11-15:50/39 17:09	06:52 18:04 20:01		05:32 19:42-20:20/38 20:55	04:50 20:11-20:59/48 21:39
8	08:30 14:19-15:27/68 16:16	07:50 15:12-15:50/38 17:11	06:50 18:06 20:02		05:30 19:42-20:21/39 20:56	04:50 20:13-21:00/47 21:40
9	08:29 14:20-15:29/69 16:17	07:48 15:13-15:49/36 17:13	06:47 18:07 20:04		05:28 19:43-20:22/39 20:58	04:49 20:14-21:02/48 21:41
10	08:28 14:21-15:30/69 16:19	07:46 15:15-15:48/33 17:15	06:45 18:09 20:06		05:26 19:45-20:24/39 21:00	04:49 20:15-21:02/47 21:42
11	08:28 14:22-15:32/70 16:20	07:44 15:16-15:47/31 17:17	06:42 18:11 20:08		05:24 19:46-20:25/39 21:01	04:48 20:16-21:03/47 21:43
12	08:27 14:24-15:33/69 16:22	07:42 15:18-15:46/28 17:19	06:40 18:13 20:10		05:23 19:46-20:27/41 21:03	04:48 20:17-21:04/47 21:44
13	08:26 14:35-15:34/59 16:23	07:40 15:21-15:44/23 17:21	06:38 18:15 20:11		05:21 19:48-20:28/40 21:05	04:48 20:16-21:03/47 21:44
14	08:25 14:37-15:35/58 16:25	07:38 15:26-15:42/16 17:23	06:35 18:17 20:13		05:19 19:49-20:30/41 21:07	04:47 20:17-21:04/47 21:45
15	08:24 14:39-15:37/58 16:26	07:36 17:25	06:33 18:19 20:15		05:18 19:51-20:32/41 21:08	04:47 20:18-21:05/47 21:46
16	08:24 14:43-15:38/55 16:28	07:34 17:27	06:31 18:20 20:17		05:16 19:51-20:33/42 21:10	04:47 20:18-21:05/47 21:46
17	08:23 14:45-15:39/54 16:30	07:32 17:29	06:28 18:22 20:19		05:14 19:52-20:34/42 21:11	04:47 20:19-21:05/46 21:47
18	08:22 14:47-15:41/54 16:32	07:30 17:31	06:26 18:24 20:21		05:13 19:53-20:36/43 21:13	04:47 20:19-21:06/47 21:47
19	08:20 14:48-15:42/54 16:33	07:28 17:33	06:23 18:26 20:22		05:11 19:53-20:37/44 21:15	04:47 20:20-21:06/46 21:47
20	08:19 14:51-15:43/52 16:35	07:26 17:35	06:21 18:28 20:24		05:10 19:54-20:38/44 21:16	04:47 20:20-21:06/46 21:48
21	08:18 14:55-15:45/50 16:37	07:24 17:37	06:18 18:30 20:26		05:08 19:55-20:40/45 21:18	04:47 20:20-21:06/46 21:48
22	08:17 14:55-15:45/50 16:39	07:21 17:39	06:16 18:31 20:28		05:07 19:55-20:40/45 21:19	04:47 20:21-21:07/46 21:48
23	08:16 14:56-15:47/51 16:40	07:19 17:41	06:14 18:33 20:30		05:06 19:56-20:41/45 21:21	04:48 20:21-21:07/46 21:48
24	08:14 14:56-15:47/51 16:42	07:17 17:43	06:11 18:35 20:31	19:50-19:58/8	05:04 19:58-20:44/46 21:22	04:48 20:20-21:07/47 21:49
25	08:13 14:57-15:49/52 16:44	07:15 17:45	06:09 18:37 20:33	19:47-20:00/13	05:03 19:59-20:45/46 21:24	04:48 20:21-21:08/47 21:49
26	08:12 14:57-15:49/52 16:46	07:13 17:47	06:06 18:39 20:35	19:45-20:02/17	05:02 20:00-20:47/47 21:25	04:49 20:21-21:07/46 21:49
27	08:10 14:57-15:49/52 16:48	07:10 17:48	06:04 18:41 20:37	19:44-20:03/19	05:00 20:00-20:48/48 21:26	04:49 20:21-21:08/47 21:48
28	08:09 14:59-15:50/51 16:50	07:08 17:50	06:01 18:42 20:39	19:43-20:05/22	04:59 20:01-20:49/48 21:28	04:50 20:20-21:07/47 21:48
29	08:07 14:59-15:51/52 16:52		06:59 18:44 20:40	19:42-20:07/25	04:58 20:01-20:50/49 21:29	04:50 20:21-21:08/47 21:48
30	08:06 15:00-15:51/51 16:54		06:57 18:46 20:42	19:42-20:08/26	04:57 20:02-20:51/49 21:30	04:51 20:20-21:07/47 21:48
31	08:04 15:02-15:52/50 16:56		06:54 18:48		04:56 20:03-20:52/49 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
Anzahl Minuten mit Schatten	1827	511	0	130	1285	1420

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 11 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Juli		August		September		Oktober		November		Dezember	
1	04:51 21:48	20:20-21:07/47	05:30 21:13	19:57-20:37/40	06:24 20:08	07:16 18:55			07:13 16:45	14:44-15:18/34	08:07 16:02	14:04-15:14/70
2	04:52 21:47	20:20-21:07/47	05:32 21:11	19:56-20:35/39	06:25 20:05	07:18 18:53			07:15 16:44	14:43-15:19/36	08:09 16:01	14:04-15:14/70
3	04:53 21:47	20:19-21:06/47	05:34 21:10	19:55-20:34/39	06:27 20:03	07:19 18:50			07:17 16:42	14:41-15:20/39	08:10 16:01	14:03-15:12/69
4	04:54 21:46	20:18-21:06/48	05:35 21:08	19:53-20:32/39	06:29 20:01	07:21 18:48			07:19 16:40	14:40-15:20/40	08:12 16:00	14:03-15:11/68
5	04:55 21:46	20:18-21:06/48	05:37 21:06	19:53-20:31/38	06:31 19:58	07:23 18:45			07:21 16:38	14:39-15:21/42	08:13 15:59	14:02-15:09/67
6	04:55 21:45	20:17-21:05/48	05:39 21:04	19:51-20:29/38	06:32 19:56	07:25 18:43			07:23 16:36	14:39-15:22/43	08:14 15:59	14:02-15:09/67
7	04:56 21:45	20:17-21:05/48	05:40 21:02	19:51-20:27/36	06:34 19:53	07:27 18:41			07:25 16:34	14:39-15:22/43	08:16 15:58	14:02-15:09/67
8	04:57 21:44	20:15-21:04/49	05:42 21:00	19:50-20:25/35	06:36 19:51	07:28 18:38			07:26 16:32	14:37-15:22/45	08:17 15:58	14:03-15:09/66
9	04:58 21:43	20:14-21:03/49	05:44 20:58	19:50-20:23/33	06:38 19:49	07:30 18:36			07:28 16:31	14:35-15:23/48	08:18 15:58	14:02-15:09/67
10	04:59 21:42	20:13-21:03/50	05:46 20:56	19:50-20:22/32	06:39 19:46	07:32 18:34			07:30 16:29	14:34-15:23/49	08:19 15:57	14:02-15:09/67
11	05:01 21:41	20:12-21:02/50	05:47 20:54	19:49-20:20/31	06:41 19:44	07:34 18:31			07:32 16:27	14:33-15:23/50	08:20 15:57	14:02-15:08/66
12	05:02 21:41	20:12-21:01/49	05:49 20:52	19:50-20:18/28	06:43 19:41	07:36 18:29			07:34 16:26	14:32-15:23/51	08:22 15:57	13:54-15:09/75
13	05:03 21:40	20:11-21:00/49	05:51 20:50	19:49-20:15/26	06:44 19:39	07:37 18:27			07:36 16:24	14:31-15:22/51	08:23 15:57	13:53-15:10/77
14	05:04 21:39	20:10-20:59/49	05:52 20:48	19:50-20:14/24	06:46 19:36	07:39 18:24			07:38 16:22	14:31-15:22/51	08:24 15:57	13:53-15:10/77
15	05:05 21:38	20:10-20:58/48	05:54 20:46	19:51-20:12/21	06:48 19:34	07:41 18:22			07:40 16:21	14:30-15:22/52	08:24 15:57	13:53-15:10/77
16	05:07 21:36	20:09-20:57/48	05:56 20:44	19:51-20:09/18	06:50 19:32	07:43 18:20			07:41 16:19	14:30-15:22/52	08:25 15:57	13:52-15:09/77
17	05:08 21:35	20:09-20:57/48	05:58 20:42	19:52-20:08/16	06:51 19:29	07:45 18:17			07:43 16:18	14:30-15:22/52	08:26 15:57	13:52-15:10/78
18	05:09 21:34	20:09-20:56/47	05:59 20:40	19:54-20:07/13	06:53 19:27	07:47 18:15			07:45 16:16	14:30-15:21/51	08:27 15:57	13:51-15:10/79
19	05:11 21:33	20:08-20:54/46	06:01 20:37	19:56-20:03/7	06:55 19:24	07:49 18:13			07:47 16:15	14:30-15:21/51	08:28 15:58	13:51-15:11/80
20	05:12 21:32	20:07-20:52/45	06:03 20:35		06:57 19:22	07:50 18:11			07:49 16:14	14:30-15:20/50	08:28 15:58	13:51-15:11/80
21	05:13 21:30	20:06-20:51/45	06:05 20:33		06:58 19:19	07:52 18:08			07:50 16:12	14:30-15:20/50	08:29 15:58	13:51-15:12/81
22	05:15 21:29	20:05-20:50/45	06:06 20:31		07:00 19:17	07:54 18:06			07:52 16:11	14:27-15:19/52	08:30 15:59	13:51-15:12/81
23	05:16 21:28	20:04-20:49/45	06:08 20:28		07:02 19:14	07:56 18:04			07:54 16:10	14:25-15:19/54	08:30 15:59	13:53-15:13/80
24	05:18 21:26	20:04-20:48/44	06:10 20:26		07:04 19:12	07:58 18:02			07:56 16:09	14:24-15:18/54	08:30 16:00	13:53-15:13/80
25	05:19 21:25	20:03-20:47/44	06:11 20:24		07:05 19:10	07:59 18:00			07:57 16:08	14:23-15:17/54	08:31 16:01	13:54-15:13/79
26	05:21 21:23	20:03-20:46/43	06:13 20:22		07:07 19:07	07:52 16:58			07:59 16:07	14:22-15:17/55	08:31 16:01	13:57-15:15/78
27	05:22 21:22	20:02-20:44/42	06:15 20:19		07:09 19:05	07:54 16:56	15:01-15:08/7		08:01 16:06	14:19-15:16/57	08:31 16:02	13:58-15:15/77
28	05:24 21:20	20:02-20:44/42	06:17 20:17		07:11 19:02	07:55 16:54	14:54-15:12/18		08:02 16:05	14:17-15:16/59	08:32 16:03	13:59-15:16/77
29	05:26 21:18	20:01-20:42/41	06:18 20:15		07:12 19:00	07:57 16:51	14:50-15:14/24		08:04 16:04	14:16-15:15/59	08:32 16:04	14:00-15:16/76
30	05:27 21:17	19:59-20:41/42	06:20 20:12		07:14 18:57	07:59 16:49	14:48-15:16/28		08:06 16:03	14:06-15:15/69	08:32 16:05	14:01-15:17/76
31	05:29 21:15	19:58-20:37/39	06:22 20:10			07:11 16:47	14:46-15:17/31				08:32 16:06	14:02-15:17/75
Sonnenscheinstunden		510	458		382	329			261		236	
Anzahl Minuten mit Schatten		1432	553	0	108				1499		2373	

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 12 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 13:49-14:33/44 16:07	08:02 16:57 17:52	07:06 17:52 19:50		05:44 19:20-20:05/45 20:44	04:55 19:50-20:47/57 21:33
2	08:32 13:50-14:34/44 16:08	08:01 16:59 17:54	07:04 19:51 20:46		05:42 19:21-20:06/45 20:46	04:54 19:51-20:49/58 21:34
3	08:31 13:50-14:34/44 16:09	07:59 17:55 19:53	07:01 19:53 20:48		05:40 19:22-20:08/46 20:48	04:53 19:53-20:50/57 21:35
4	08:31 13:51-14:34/43 16:11	07:57 17:58 19:55	06:59 19:55 20:49		05:38 19:23-20:09/46 20:49	04:53 19:54-20:51/57 21:36
5	08:31 13:52-14:35/43 16:12	07:55 17:05 19:57	06:57 19:57 20:51		05:36 19:24-20:11/47 20:51	04:52 19:55-20:53/58 21:37
6	08:30 13:52-14:35/43 16:13	07:54 17:07 19:59	06:54 19:59 20:53		05:34 19:26-20:12/46 20:53	04:51 19:56-20:53/57 21:38
7	08:30 13:53-14:35/42 16:14	07:52 17:09 19:59	06:52 20:01 20:55		05:32 19:27-20:13/46 20:55	04:50 19:57-20:54/57 21:39
8	08:30 13:54-14:36/42 16:16	07:50 17:11 19:59	06:50 20:02 20:56		05:30 19:28-20:16/48 20:56	04:50 19:58-20:55/57 21:40
9	08:29 13:55-14:36/41 16:17	07:48 17:13 19:59	06:47 20:04 20:58		05:28 19:28-20:18/50 20:58	04:49 19:59-20:56/57 21:41
10	08:28 13:55-14:36/41 16:19	07:46 17:15 19:59	06:45 20:06 21:00		05:26 19:29-20:20/51 21:00	04:49 19:59-20:56/57 21:42
11	08:28 13:56-14:35/39 16:20	07:44 17:17 19:59	06:42 20:08 21:01		05:24 19:29-20:21/52 21:01	04:48 20:00-20:57/57 21:43
12	08:27 13:57-14:35/38 16:22	07:42 17:19 19:59	06:40 20:10 21:03		05:23 19:29-20:22/53 21:03	04:48 20:01-20:58/57 21:44
13	08:26 13:58-14:35/37 16:23	07:40 17:21 19:59	06:38 20:11 21:05		05:21 19:30-20:24/54 21:05	04:48 20:01-20:57/56 21:44
14	08:25 13:59-14:35/36 16:25	07:38 17:23 19:59	06:35 20:13 21:07	19:27-19:37/10	05:19 19:30-20:25/55 21:07	04:47 20:02-20:58/56 21:45
15	08:24 14:00-14:35/35 16:26	07:36 17:25 19:59	06:33 20:15 21:08	19:23-19:39/16	05:18 19:32-20:27/55 21:08	04:47 20:03-20:58/55 21:46
16	08:24 14:02-14:35/33 16:28	07:34 17:27 19:59	06:30 20:17 21:10	19:22-19:41/19	05:16 19:32-20:29/57 21:10	04:47 20:03-20:59/56 21:46
17	08:23 14:03-14:34/31 16:30	07:32 17:29 19:59	06:28 20:19 21:11	19:20-19:43/23	05:14 19:34-20:31/57 21:11	04:47 20:04-20:59/55 21:47
18	08:22 14:05-14:34/29 16:32	07:30 17:31 19:59	06:26 20:21 21:13	19:19-19:44/25	05:13 19:35-20:32/57 21:13	04:47 20:04-20:59/55 21:47
19	08:20 14:07-14:32/25 16:33	07:28 17:33 19:59	06:23 20:22 21:15	19:18-19:46/28	05:11 19:35-20:32/57 21:15	04:47 20:04-21:00/56 21:47
20	08:19 14:10-14:31/21 16:35	07:26 17:35 19:59	06:21 20:24 21:16	19:17-19:47/30	05:10 19:36-20:34/58 21:16	04:47 20:05-21:00/55 21:48
21	08:18 14:17-14:30/13 16:37	07:24 17:41 19:59	06:18 20:26 21:18	19:16-19:48/32	05:08 19:37-20:35/58 21:18	04:47 20:05-21:00/55 21:48
22	08:17 14:21-14:26/5 16:39	07:21 17:39 19:59	06:16 20:28 21:19	19:16-19:50/34	05:07 19:37-20:35/58 21:19	04:47 20:06-21:01/55 21:48
23	08:16 16:40 17:41	07:19 17:41 19:59	06:14 20:30 21:21	19:16-19:52/36	05:06 19:38-20:37/59 21:21	04:48 20:05-21:01/56 21:48
24	08:14 16:42 17:43	07:17 17:43 19:59	06:11 20:31 21:22	19:16-19:54/38	05:04 19:39-20:38/59 21:22	04:48 20:05-21:01/56 21:48
25	08:13 16:44 17:45	07:15 17:45 19:59	06:09 20:33 21:24	19:16-19:56/40	05:03 19:40-20:39/59 21:24	04:48 20:06-21:01/55 21:49
26	08:12 16:46 17:46	07:13 17:46 19:59	06:06 20:35 21:25	19:16-19:58/42	05:02 19:41-20:40/59 21:25	04:49 20:05-21:01/56 21:49
27	08:10 16:48 17:48	07:10 17:48 19:59	06:04 20:37 21:26	19:17-19:59/42	05:00 19:42-20:42/60 21:26	04:49 20:06-21:02/56 21:48
28	08:09 16:50 17:50	07:08 17:50 19:59	06:01 20:39 21:28	19:17-20:01/44	04:59 19:43-20:44/61 21:28	04:50 20:05-21:01/56 21:48
29	08:07 16:52 17:52		06:59 20:40 21:29	19:18-20:02/44	04:58 19:45-20:45/60 21:29	04:50 20:05-21:02/57 21:48
30	08:06 16:54 17:54		06:57 20:42 21:30	19:19-20:04/45	04:57 19:47-20:46/59 21:30	04:51 20:05-21:01/56 21:48
31	08:04 16:56 17:56		06:54 19:48 21:32		04:56 19:49-20:46/57 21:32	
Sonnenscheinstunden	252	274	367	419	492	507
Anzahl Minuten mit Schatten	769	0	0	548	1674	1688

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 12 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Jul	August	September	Oktober	November	Dezember
1	04:51 20:05-21:01/56 21:48	05:30 19:40-20:32/52 21:13	06:24 20:08 18:55	07:16 16:45		08:07 13:38-14:18/40 16:02
2	04:52 20:05-21:01/56 21:47	05:32 19:39-20:31/52 21:11	06:25 20:05 18:53	07:18 16:44		08:09 13:39-14:19/40 16:01
3	04:53 20:04-21:00/56 21:47	05:34 19:39-20:30/51 21:10	06:27 20:03 18:50	07:19 16:42		08:10 13:38-14:19/41 16:01
4	04:54 20:03-21:00/57 21:46	05:35 19:38-20:27/49 21:08	06:29 20:01 18:48	07:21 16:40		08:11 13:38-14:20/42 16:00
5	04:55 20:03-21:00/57 21:46	05:37 19:38-20:25/47 21:06	06:31 20:01 18:45	07:23 16:38		08:13 13:38-14:20/42 15:59
6	04:55 20:03-21:00/57 21:45	05:39 19:36-20:22/46 21:04	06:32 19:56 18:43	07:25 16:36		08:14 13:38-14:21/43 15:59
7	04:56 20:02-20:59/57 21:45	05:40 19:35-20:21/46 21:02	06:34 19:53 18:41	07:27 16:34		08:16 13:38-14:21/43 15:58
8	04:57 20:02-20:59/57 21:44	05:42 19:33-20:20/47 21:00	06:36 19:51 18:38	07:28 16:32		08:17 13:39-14:22/43 15:58
9	04:58 20:01-20:58/57 21:43	05:44 19:32-20:18/46 20:58	06:37 19:49 18:36	07:30 16:31		08:18 13:39-14:23/44 15:58
10	04:59 20:00-20:57/57 21:42	05:46 19:31-20:17/46 20:56	06:39 19:46 18:34	07:32 16:29		08:19 13:39-14:23/44 15:57
11	05:01 19:59-20:56/57 21:41	05:47 19:29-20:14/45 20:54	06:41 19:44 18:31	07:34 16:27		08:20 13:39-14:23/44 15:57
12	05:02 19:58-20:55/57 21:41	05:49 19:28-20:13/45 20:52	06:43 19:41 18:29	07:36 16:26		08:21 13:40-14:25/45 15:57
13	05:03 19:56-20:55/59 21:40	05:51 19:26-20:11/45 20:50	06:44 19:39 18:27	07:37 16:24		08:23 13:40-14:25/45 15:57
14	05:04 19:54-20:54/60 21:39	05:52 19:25-20:09/44 20:48	06:46 19:36 18:24	07:39 16:22		08:24 13:41-14:26/45 15:57
15	05:05 19:52-20:53/61 21:38	05:54 19:25-20:08/43 20:46	06:48 19:34 18:22	07:41 16:21		08:24 13:41-14:27/46 15:57
16	05:07 19:51-20:51/60 21:36	05:56 19:23-20:05/42 20:44	06:50 19:32 18:20	07:43 16:19		08:25 13:41-14:26/45 15:57
17	05:08 19:51-20:51/60 21:35	05:58 19:23-20:04/41 20:42	06:51 19:29 18:17	07:45 16:18		08:26 13:41-14:27/46 15:57
18	05:09 19:50-20:49/59 21:34	05:59 19:23-20:02/39 20:40	06:53 19:27 18:15	07:47 16:16		08:27 13:42-14:28/46 15:57
19	05:11 19:49-20:48/59 21:33	06:01 19:22-20:00/38 20:37	06:55 19:24 18:13	07:48 16:15		08:28 13:43-14:28/45 15:58
20	05:12 19:48-20:47/59 21:32	06:03 19:22-19:57/35 20:35	06:57 19:22 18:11	07:50 16:14	13:56-14:01/5	08:28 13:42-14:28/46 15:58
21	05:13 19:48-20:47/59 21:30	06:04 19:21-19:55/34 20:33	06:58 19:19 18:08	07:52 16:12	13:52-14:05/13	08:29 13:43-14:29/46 15:58
22	05:15 19:47-20:45/58 21:29	06:06 19:21-19:53/32 20:31	07:00 19:17 18:06	07:54 16:11	13:46-14:07/21	08:29 13:43-14:29/46 15:59
23	05:16 19:46-20:44/58 21:28	06:08 19:22-19:51/29 20:28	07:02 19:14 18:04	07:56 16:10	13:44-14:09/25	08:30 13:44-14:30/46 15:59
24	05:18 19:46-20:44/58 21:26	06:10 19:21-19:48/27 20:26	07:04 19:12 18:02	07:58 16:09	13:42-14:11/29	08:30 13:45-14:30/45 16:00
25	05:19 19:45-20:42/57 21:25	06:11 19:22-19:47/25 20:24	07:05 19:10 17:00	07:57 16:08	13:41-14:12/31	08:31 13:45-14:31/46 16:01
26	05:21 19:45-20:42/57 21:23	06:13 19:23-19:45/22 20:22	07:07 19:07 16:58	07:59 16:07	13:41-14:14/33	08:31 13:46-14:32/46 16:01
27	05:22 19:44-20:41/57 21:21	06:15 19:24-19:42/18 20:19	07:09 19:05 16:56	08:01 16:06	13:39-14:14/35	08:31 13:46-14:32/46 16:02
28	05:24 19:43-20:40/57 21:20	06:17 19:25-19:41/16 20:17	07:11 19:02 16:54	08:02 16:05	13:39-14:15/36	08:32 13:47-14:32/45 16:03
29	05:26 19:42-20:37/55 21:18	06:18 19:28-19:38/10 20:15	07:12 19:00 16:51	08:04 16:04	13:39-14:16/37	08:32 13:47-14:33/46 16:04
30	05:27 19:41-20:36/55 21:17	06:20 20:12	07:14 18:57	08:06 16:03	13:39-14:17/38	08:32 13:48-14:33/45 16:05
31	05:29 19:40-20:34/54 21:15	06:22 20:10		07:11 16:47		08:32 13:48-14:33/45 16:06
Sonnenscheinstunden	510	458	382	329	261	236
Anzahl Minuten mit Schatten	1783	1112	0	0	303	1377

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 2 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 09:36-10:00/24 16:07	08:02 15:39-15:40/1 16:58	07:06 16:25-16:48/23 17:52	06:52 16:25-16:48/23 19:50	05:44 20:44 21:33	04:55 21:33 21:48	04:51 21:33 21:48	05:31 21:13 20:08	06:24 20:08 18:55	07:16 18:55 16:46	07:13 15:34-16:08/34 16:02	08:07 09:28-09:39/11 15:06-15:24/18
2	08:32 09:37-10:00/23 16:08	08:01 17:00 17:00	07:04 16:30-16:46/16 17:54	06:50 16:30-16:46/16 19:52	05:42 20:46 21:34	04:54 21:47 21:47	04:52 21:12 20:05	05:32 20:25 18:53	06:25 20:05 18:53	07:18 18:53 16:44	07:15 15:35-16:05/30 16:01	08:09 09:27-09:40/13 15:07-15:24/17
3	08:32 09:38-10:01/23 16:09	07:59 17:02 17:03	07:01 16:32-16:42/10 17:56	06:47 16:32-16:42/10 19:53	05:40 20:48 21:35	04:53 21:47 21:47	04:53 21:10 20:03	05:34 20:03 18:50	06:27 20:03 18:50	07:20 18:50 16:42	07:17 15:36-16:02/26 16:01	08:10 09:27-09:42/15 15:09-15:24/15
4	08:31 09:38-10:00/22 16:11	07:57 16:12-16:24/12 17:03	06:59 17:58 17:58	06:45 16:12-16:24/12 19:55	05:38 20:49 21:37	04:53 21:47 21:47	04:54 21:08 20:01	05:35 20:29 18:48	06:29 20:01 18:48	07:21 18:48 16:40	07:19 15:37-16:00/23 16:00	08:12 09:28-09:43/17 15:09-15:23/14
5	08:31 09:39-10:00/21 16:12	07:56 16:10-16:26/16 17:05	06:57 18:00 18:00	06:42 16:10-16:26/16 19:57	05:36 20:51 21:38	04:55 21:46 21:46	05:37 21:06 19:58	06:31 19:58 18:45	06:31 19:58 18:45	07:23 18:45 16:38	07:21 15:39-15:59/20 16:00	08:13 09:26-09:45/19 15:11-15:23/12
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7	08:30 09:41-10:00/19 16:14	07:52 16:07-16:30/23 17:09	06:52 18:04 18:04	06:38 16:07-16:30/23 19:52	05:32 20:55 21:40	04:51 21:45 21:45	04:56 21:02 19:54	06:34 19:54 18:41	06:34 19:54 18:41	07:27 18:41 16:34	07:25 15:43-15:54/11 15:59	08:16 09:26-09:48/22 15:13-15:21/8
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9	08:29 09:43-09:58/15 16:17	07:48 16:05-16:36/31 17:13	06:47 18:08 18:08	06:33 16:05-16:36/31 19:49	05:28 20:58 21:41	04:49 21:43 21:43	04:58 20:58 19:49	06:38 19:49 18:36	06:38 19:49 18:36	07:30 18:36 16:31	07:28 15:09-15:12/3 15:58	08:18 09:26-09:49/23 15:09-15:12/3
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11	08:28 09:46-09:57/11 16:20	07:44 16:04-16:40/36 17:17	06:43 18:11 18:11	06:28 16:04-16:40/36 19:41	05:25 21:02 21:43	04:48 21:42 21:42	05:01 20:54 19:44	06:41 19:44 18:31	06:41 19:44 18:31	07:34 18:31 16:27	07:32 15:05-15:16/11 15:57	08:21 09:27-09:51/24 15:05-15:16/11
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29	08:07 15:30-15:47/17 16:52	07:07 15:30-15:47/17 17:50	06:59 19:44 19:44	05:48 15:30-15:47/17 19:00	04:58 21:29 21:48	04:50 21:18 21:18	06:19 20:15 19:00	07:12 19:00 18:00	07:12 19:00 18:00	07:59 18:00 16:04	07:59 15:33-16:15/42 15:58	08:34 09:34-09:59/25 15:33-16:15/42
30	08:06 15:31-15:45/14 16:54	07:06 15:31-15:45/14 17:46	06:57 19:46 19:46	05:46 15:31-15:45/14 19:00	04:57 21:31 21:48	04:51 21:17 21:17	06:20 20:13 18:58	07:14 18:58 18:00	07:14 18:58 18:00	07:59 18:00 16:05	07:59 15:34-16:12/38 15:58	08:32 09:35-10:00/25 15:34-16:12/38
31	08:04 15:34-15:45/11 16:56	07:04 15:34-15:45/11 17:46	06:54 19:48 19:48	05:46 15:34-15:45/11 19:00	04:56 21:32 21:48	04:56 21:15 21:15	06:22 20:10 20:10	07:15 20:10 19:00	07:15 20:10 19:00	07:59 19:00 16:04	07:59 15:34-16:09/35 15:58	08:32 09:36-10:00/24 15:34-16:09/35
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	734	916	298	0	0	0	0	253	817	591	816	

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 3 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 14:24-15:14/50 16:07	08:02 15:00-16:03/63 16:58	07:06 17:52 17:52	06:52 19:50 19:50	05:44 20:44 20:44	04:55 21:33 21:48	04:51 21:13 21:48	05:31 21:08 21:48	06:24 20:08 20:08	07:16 18:55 18:55	07:13 14:41-15:32/51 16:46	08:07 14:18-15:10/52 16:02
2	08:32 14:26-15:16/50 16:08	08:01 15:01-16:04/63 17:00	07:04 17:54 17:54	06:49 19:52 19:52	05:42 20:46 20:46	04:54 21:34 21:47	04:52 21:12 21:47	05:32 21:05 21:47	06:25 20:05 20:05	07:18 18:53 18:53	07:15 14:40-15:33/53 16:44	08:09 14:18-15:09/51 16:01
3	08:32 14:27-15:17/50 16:09	07:59 15:02-16:04/62 17:01	07:01 17:56 17:56	06:47 19:53 19:53	05:40 20:48 20:48	04:53 21:35 21:47	04:53 21:10 21:47	05:34 21:03 21:47	06:27 20:03 20:03	07:20 18:50 18:50	07:17 14:38-15:33/55 16:42	08:10 14:17-15:09/52 16:01
4	08:31 14:28-15:18/50 16:11	07:57 15:03-16:04/61 17:03	06:59 17:58 17:58	06:45 19:55 19:55	05:38 20:49 20:49	04:53 21:37 21:46	04:54 21:08 21:46	05:35 21:01 21:46	06:29 20:01 20:01	07:21 18:48 18:48	07:19 14:37-15:34/57 16:40	08:12 14:16-15:07/51 16:00
5	08:31 14:29-15:19/50 16:12	07:56 15:04-16:04/60 17:05	06:57 17:59 18:00	06:42 19:57 19:57	05:36 20:51 20:51	04:52 21:38 21:46	04:55 21:06 21:46	05:37 21:06 21:46	06:31 20:01 20:01	07:23 18:45 18:45	07:21 14:37-15:35/58 16:39	08:13 14:16-15:07/51 16:00
6	08:31 14:30-15:20/50 16:13	07:54 15:06-16:04/58 17:07	06:54 18:02 18:02	06:40 19:59 19:59	05:34 20:53 20:53	04:51 21:39 21:45	04:56 21:04 21:45	05:39 21:04 21:45	06:32 20:05 20:05	07:25 18:43 18:43	07:23 14:35-15:35/60 16:36	08:14 14:16-15:06/50 15:59
7	08:30 14:31-15:21/50 16:14	07:52 15:07-16:04/57 17:09	06:52 18:04 18:04	06:38 19:59 20:01	05:32 20:54 20:54	04:51 21:40 21:45	04:56 21:02 21:45	05:40 21:02 21:45	06:34 20:04 20:04	07:27 18:34 18:34	07:25 14:34-15:35/61 16:34	08:16 14:15-15:05/50 15:59
8	08:30 14:32-15:23/51 16:16	07:50 15:09-16:04/55 17:11	06:50 18:06 18:06	06:35 19:59 20:02	05:30 20:56 20:56	04:50 21:41 21:44	04:57 21:00 21:44	05:42 21:00 21:44	06:36 20:04 20:04	07:28 18:38 18:38	07:27 14:32-15:35/63 16:32	08:17 14:16-15:06/50 15:58
9	08:29 14:33-15:24/51 16:17	07:48 15:10-16:03/53 17:13	06:47 18:08 18:08	06:33 19:58 20:04	05:28 20:58 20:58	04:49 21:41 21:43	04:58 21:08 21:43	05:44 21:08 21:43	06:38 20:04 20:04	07:30 18:36 18:36	07:28 14:32-15:35/63 16:31	08:18 14:16-15:05/49 15:58
10	08:28 14:34-15:26/52 16:19	07:46 15:12-16:03/51 17:15	06:45 18:09 18:09	06:30 19:58 20:06	05:26 21:00 21:02	04:49 21:42 21:42	05:00 21:06 21:42	05:46 21:06 21:42	06:39 20:04 20:04	07:32 18:34 18:34	07:30 14:31-15:34/63 16:29	08:19 14:15-15:05/50 15:58
11	08:28 14:36-15:28/52 16:20	07:44 15:15-16:02/47 17:17	06:43 18:11 18:11	06:28 19:58 20:08	05:25 21:02 21:02	04:48 21:43 21:42	05:01 21:06 21:42	05:47 21:06 21:42	06:41 20:04 20:04	07:34 18:31 18:31	07:32 14:30-15:34/64 16:27	08:21 14:15-15:05/50 15:57
12	08:27 14:39-15:31/52 16:22	07:42 15:20-16:01/41 17:19	06:40 18:13 18:13	06:26 19:59 20:10	05:23 21:03 21:03	04:48 21:44 21:41	05:02 21:06 21:41	05:49 21:06 21:41	06:43 20:04 20:04	07:36 18:29 18:29	07:34 14:30-15:34/64 16:26	08:22 14:15-15:05/50 15:57
13	08:26 14:42-15:34/52 16:23	07:40 15:24-16:00/36 17:21	06:38 18:15 18:15	06:23 19:58 20:12	05:21 21:05 21:05	04:48 21:45 21:40	05:03 21:06 21:40	05:51 21:06 21:40	06:45 20:04 20:04	07:38 18:27 18:27	07:36 14:29-15:33/64 16:24	08:23 14:14-15:05/51 15:57
14	08:26 14:46-15:36/50 16:25	07:38 15:32-15:59/27 17:23	06:35 18:17 18:17	06:21 19:58 20:13	05:19 21:07 21:07	04:47 21:45 21:39	05:04 21:06 21:39	05:52 21:06 21:39	06:46 20:04 20:04	07:39 18:24 18:24	07:38 14:29-15:33/64 16:22	08:24 14:14-15:05/51 15:57
15	08:25 14:54-15:38/44 16:27	07:36 15:34-15:57/23 17:25	06:33 18:19 18:19	06:19 19:58 20:15	05:18 21:08 21:08	04:47 21:46 21:38	05:05 21:06 21:38	05:54 21:06 21:38	06:48 20:04 20:04	07:41 18:22 18:22	07:40 14:29-15:32/63 16:21	08:25 14:14-15:05/51 15:57
16	08:24 14:54-15:40/46 16:28	07:34 15:37-15:54/17 17:27	06:31 18:21 18:21	06:16 19:58 20:17	05:16 21:10 21:10	04:47 21:46 21:37	05:07 21:06 21:37	05:56 21:06 21:37	06:50 20:04 20:04	07:43 18:20 18:20	07:42 14:29-15:31/62 16:19	08:25 14:14-15:05/51 15:57
17	08:23 14:55-15:42/47 16:30	07:32 15:43-15:50/7 17:29	06:28 18:22 18:22	06:14 19:58 20:19	05:14 21:12 21:12	04:47 21:47 21:35	05:08 21:06 21:35	05:58 21:06 21:35	06:51 20:04 20:04	07:45 18:17 18:17	07:43 14:29-15:31/62 16:18	08:26 14:13-14:52/39 15:57
18	08:22 14:55-15:43/48 16:32	07:30 17:31 17:31	06:26 18:24 18:24	06:12 19:58 20:21	05:13 21:13 21:13	04:47 21:47 21:34	05:09 21:06 21:34	05:59 21:06 21:34	06:53 20:04 20:04	07:47 18:15 18:15	07:45 14:29-15:30/61 16:16	08:27 14:13-14:53/40 15:57
19	08:21 14:54-15:46/52 16:33	07:28 17:33 17:33	06:23 18:26 18:26	06:10 19:58 20:22	05:11 21:15 21:15	04:47 21:48 21:33	05:11 21:06 21:33	06:01 21:06 21:33	06:55 20:04 20:04	07:49 18:13 18:13	07:47 14:29-15:29/60 16:15	08:28 14:14-14:54/40 15:58
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22	08:17 14:55-15:52/57 16:39	07:22 17:39 17:39	06:16 18:32 18:32	06:03 19:58 20:28	05:07 21:19 21:19	04:47 21:48 21:29	05:15 21:06 21:31	06:06 21:06 21:31	07:00 20:04 20:04	07:54 18:06 18:06	07:52 14:31-15:25/54 16:11	08:30 14:15-14:54/39 15:59
23	08:16 14:55-15:55/60 16:41	07:19 17:41 17:41	06:14 18:33 18:33	06:01 19:58 20:30	05:06 21:21 21:21	04:48 21:49 21:28	05:16 21:06 21:28	06:08 21:06 21:28	07:02 20:04 20:04	07:56 18:04 18:04	07:54 14:31-15:23/52 16:10	08:30 14:16-14:55/39 15:59
24	08:14 14:55-15:56/61 16:42	07:17 17:43 17:43	06:11 18:35 18:35	06:04 19:58 20:31	05:04 21:22 21:22	04:48 21:49 21:26	05:18 21:06 21:26	06:10 21:06 21:26	07:04 20:04 20:04	07:58 18:02 18:02	07:56 14:32-15:21/49 16:09	08:31 14:16-14:56/40 16:00
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26	08:12 14:56-15:58/62 16:46	07:13 17:47 17:47	06:06 18:39 18:39	06:04 19:58 20:35	05:02 21:25 21:25	04:49 21:49 21:23	05:21 21:06 21:23	06:13 21:06 21:23	07:07 20:04 20:04	07:59 18:00 18:00	07:59 14:33-15:19/46 16:07	08:31 14:18-14:57/39 16:01
27	08:10 14:57-16:00/63 16:48	07:10 17:49 17:49	06:04 18:41 18:41	06:02 19:58 20:37	05:01 21:27 21:27	04:49 21:49 21:22	05:23 21:06 21:22	06:15 21:06 21:22	07:09 20:04 20:04	07:59 18:00 18:00	08:01 14:33-15:17/44 16:06	08:32 14:18-15:09/51 16:02
28	08:09 14:57-16:01/64 16:50	07:08 17:50 17:50	06:02 18:42 18:42	06:00 19:58 20:39	05:00 21:28 21:28	04:50 21:48 21:20	05:24 21:06 21:20	06:17 21:06 21:20	07:11 20:04 20:04	07:59 18:00 18:00	08:03 14:33-15:17/44 16:06	08:32 14:18-15:09/51 16:02
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31	08:04 14:59-16:03/64 16:56	07:02 17:45 17:45	06:00 18:40 18:40	05:58 19:58 20:44	05:00 21:33 21:33	04:51 21:48 21:15	05:27 21:06 21:15	06:22 21:06 21:15	07:11 20:04 20:04	07:59 18:00 18:00	08:07 14:33-15:17/44 16:06	08:32 14:18-15:09/51 16:02
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	1677	781	0	0	0	0	0	0	212	1706	1553	

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 4 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	04:52 21:48	05:31 21:13	06:24 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	05:42 20:46	04:54 21:34	04:52 21:47	05:32 21:12	06:26 20:06	07:18 18:53	07:15 16:41	08:09 16:01
3	08:32 16:09	07:59 17:02	07:01 17:56	06:47 19:53	05:40 20:48	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:37	04:54 21:46	05:36 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:46	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39	04:56 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	04:51 21:40	04:57 21:45	05:41 21:02	06:34 19:54	07:27 18:41	07:25 16:34	08:16 15:59
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9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	04:49 21:41	04:59 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:31	08:18 15:58
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14	08:26 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:48 21:45	05:04 21:39	05:53 20:48	06:46 19:37	07:39 18:24	07:38 16:22	08:24 15:57
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16	08:24 16:28	07:34 17:27	06:31 18:21	06:17 20:17	05:16 21:10	04:47 21:46	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 16:19	08:26 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:12	04:47 21:47	05:08 21:36	05:58 20:42	06:52 19:29	07:45 18:18	07:44 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:46 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	04:47 21:48	05:11 21:33	06:01 20:38	06:55 19:24	07:49 18:13	07:48 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	05:12 21:32	06:03 20:35	06:57 19:22	07:51 18:11	07:49 16:14	08:29 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:08 21:18	04:47 21:48	05:14 21:30	06:05 20:33	06:58 19:19	07:52 18:09	07:51 16:13	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	04:47 21:48	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:53 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	04:48 21:49	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:55 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	04:48 21:49	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49	05:19 21:25	06:12 20:24	07:05 19:10	07:00 17:00	07:35 16:08	07:58 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:35 16:07	07:57 16:01
27	08:10 16:48	07:11 17:49	06:04 18:41	05:52 20:37	05:01 21:27	04:49 21:49	05:23 21:22	06:15 20:20	07:09 19:05	07:04 16:56	07:36 16:06	07:56 16:02
28	08:09 16:50	07:08 17:50	06:02 18:43	05:50 20:39	04:59 21:28	04:50 21:48	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:54	07:37 16:05	07:54 16:03
29	08:07 16:52		06:59 19:44	05:48 20:41	04:58 21:29	04:50 21:48	05:26 21:18	06:19 20:15	07:12 19:00	07:07 16:52	07:39 16:04	07:52 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48	05:27 21:17	06:20 20:13	07:14 18:58	07:09 16:50	07:43 16:03	07:49 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32		05:29 21:15	06:22 20:10		07:11 16:48		08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	0	359	8	0	0	0	0	0	0	369	0	0

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 - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 5 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 15:31-16:11/40 16:58	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	04:52 21:48	05:31 21:13	06:24 20:08	07:16 18:55	07:13 15:25-15:30/5 16:46	08:07 15:03-15:24/21 16:02
2	08:32 16:08	08:01 15:32-16:11/39 17:00	07:04 17:54	06:50 19:52	05:42 20:46	04:54 21:34	04:52 21:47	05:32 21:12	06:25 20:05	07:18 18:53	07:15 15:21-15:34/13 16:44	08:09 15:04-15:24/20 16:01
3	08:32 15:27-15:30/3 16:09	07:59 15:33-16:10/37 17:02	07:01 17:56	06:47 19:53	05:40 20:48	04:54 21:35	04:53 21:47	05:34 21:10	06:27 20:03	07:20 18:50	07:17 15:18-15:36/18 16:42	08:10 15:06-15:23/17 16:01
4	08:31 15:24-15:32/8 16:11	07:57 15:35-16:10/35 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:37	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 15:15-15:38/23 16:40	08:12 15:06-15:22/16 16:00
5	08:31 15:24-15:34/10 16:12	07:56 15:38-16:09/31 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 15:12-15:40/28 16:38	08:13 15:08-15:22/14 16:00
6	08:31 15:23-15:35/12 16:13	07:54 15:42-16:09/27 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39	04:56 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 15:09-15:40/31 16:36	08:14 15:09-15:21/12 15:59
7	08:30 15:22-15:36/14 16:15	07:52 15:47-16:08/21 17:09	06:52 18:04	06:38 20:01	05:32 20:55	04:51 21:40	04:57 21:45	05:41 21:02	06:34 19:54	07:27 18:41	07:25 15:06-15:41/35 16:34	08:16 15:10-15:20/10 15:59
8	08:30 15:22-15:38/16 16:16	07:50 15:49-16:06/17 17:11	06:50 18:06	06:35 20:03	05:30 20:56	04:50 21:41	04:57 21:44	05:42 21:00	06:36 19:51	07:29 18:38	07:27 15:04-15:41/37 16:32	08:17 15:12-15:20/8 15:58
9	08:29 15:22-15:39/17 16:17	07:48 15:52-16:04/12 17:13	06:47 18:08	06:33 20:04	05:28 20:58	04:49 21:41	04:59 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 15:03-15:42/39 16:31	08:18 15:14-15:18/4 15:58
10	08:29 15:21-15:41/20 16:19	07:46 15:57-15:58/1 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	05:00 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 15:01-15:42/41 16:29	08:19 15:15-15:18/4 15:58
11	08:28 15:21-15:42/21 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	04:49 21:43	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 15:00-15:42/42 16:27	08:21 15:15-15:18/4 15:57
12	08:27 15:21-15:44/23 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 14:59-15:42/43 16:26	08:22 15:15-15:18/4 15:57
13	08:26 15:20-15:45/25 16:23	07:40 17:21	06:38 18:15	06:23 20:12	05:21 21:05	04:48 21:45	05:03 21:40	05:51 20:50	06:45 19:39	07:38 18:27	07:36 14:58-15:42/44 16:24	08:23 15:15-15:18/4 15:57
14	08:26 15:20-15:48/28 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:48 21:45	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 14:57-15:42/45 16:22	08:24 15:15-15:18/4 15:57
15	08:25 15:20-15:50/30 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:46	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 14:57-15:41/44 16:21	08:25 15:15-15:18/4 15:57
16	08:24 15:21-15:52/31 16:28	07:34 17:27	06:31 18:21	06:16 20:17	05:16 21:10	04:47 21:46	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:42 14:56-15:41/45 16:19	08:26 15:15-15:18/4 15:57
17	08:23 15:21-15:54/33 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:12	04:47 21:47	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 14:56-15:41/45 16:18	08:26 15:15-15:18/4 15:57
18	08:22 15:21-15:56/35 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 14:56-15:40/44 16:17	08:27 15:15-15:18/4 15:58
19	08:21 15:21-15:58/37 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	04:47 21:48	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 14:56-15:39/43 16:15	08:28 15:15-15:18/4 15:58
20	08:19 15:21-16:00/39 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	05:12 21:32	06:03 20:35	06:57 19:22	07:51 18:11	07:49 14:56-15:38/42 16:14	08:29 15:15-15:18/4 15:58
21	08:18 15:22-16:02/40 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:08 21:18	04:47 21:48	05:14 21:30	06:05 20:33	06:58 19:19	07:52 18:09	07:51 14:57-15:37/40 16:13	08:29 15:15-15:18/4 15:59
22	08:17 15:21-16:03/42 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	04:47 21:48	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 14:57-15:36/39 16:11	08:30 15:15-15:18/4 15:59
23	08:16 15:22-16:05/43 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	04:48 21:49	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:54 14:58-15:35/37 16:10	08:30 15:15-15:18/4 16:00
24	08:14 15:22-16:06/44 16:42	07:17 17:43	06:11 18:35	05:59 20:32	05:04 21:22	04:48 21:49	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 14:58-15:33/35 16:09	08:31 15:15-15:18/4 16:00
25	08:13 15:23-16:08/45 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49	05:19 21:25	06:12 20:24	07:05 19:10	07:00 17:00	07:58 14:59-15:32/33 16:08	08:31 15:15-15:18/4 16:01
26	08:12 15:23-16:08/45 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:59 15:00-15:31/31 16:07	08:31 15:15-15:18/4 16:01
27	08:10 15:25-16:09/44 16:48	07:10 17:49	06:04 18:41	05:52 20:37	05:01 21:27	04:49 21:49	05:23 21:22	06:15 20:20	07:09 19:05	07:04 16:56	08:01 15:00-15:29/29 16:06	08:32 15:15-15:18/4 16:02
28	08:09 15:25-16:10/45 16:50	07:08 17:50	06:02 18:43	05:50 20:39	04:59 21:28	04:50 21:48	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:54	08:03 15:00-15:28/28 16:05	08:32 15:15-15:18/4 16:03
29	08:07 15:26-16:10/44 16:52		06:59 19:44	05:48 20:41	04:58 21:29	04:50 21:48	05:26 21:18	06:19 20:15	07:12 19:00	07:07 16:52	08:04 15:02-15:26/24 16:04	08:32 15:15-15:18/4 16:04
30	08:06 15:27-16:10/43 16:54		06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48	05:27 21:17	06:20 20:13	07:14 18:58	07:09 16:50	08:06 15:03-15:26/23 16:03	08:32 15:15-15:18/4 16:05
31	08:04 15:29-16:11/42 16:56		06:54 19:48		04:56 21:32		05:29 21:15	06:22 20:10		07:11 16:48		08:32 15:15-15:18/4 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	122
Anzahl Minuten mit Schatten	879	260	0	0	0	0	0	0	0	0	1026	122

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 6 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	[Januar		[Februar		[März		[April		[Mai		[Juni	
1	08:32	11:05-12:45/100	08:02		07:06	17:15-17:20/5	06:52	18:30-18:54/24	05:44		04:55	
	16:07		16:58		17:52	16:35-17:13/38	19:50		20:44		21:33	
2	08:32	11:06-12:45/99	08:01		07:04	16:37-17:24/47	06:49	18:32-18:53/21	05:42		04:54	
	16:08		16:59		17:54		19:52		20:46		21:34	
3	08:31	11:07-12:46/99	07:59		07:01	16:37-17:25/48	06:47	18:33-18:51/18	05:40		04:53	
	16:09		17:01		17:56		19:53		20:48		21:35	
4	08:31	11:07-12:46/99	07:57		06:59	16:38-17:27/49	06:45	18:35-18:49/14	05:38		04:53	
	16:11		17:03		17:58		19:55		20:49		21:36	
5	08:31	11:08-12:46/98	07:56	16:17-16:24/7	06:57	16:41-17:29/48	06:42	18:40-18:45/5	05:36		04:52	
	16:12		17:05		18:00		19:57		20:51		21:38	
6	08:31	11:08-12:46/98	07:54	16:13-16:27/14	06:54	16:43-17:30/47	06:40		05:34		04:51	
	16:13		17:07		18:02		19:59		20:53		21:39	
7	08:30	11:08-12:46/98	07:52	16:11-16:30/19	06:52	16:51-17:32/41	06:37		05:32		04:50	
	16:14		17:09		18:04		20:01		20:55		21:40	
8	08:30	11:09-12:47/98	07:50	16:10-16:32/22	06:50	16:53-17:33/40	06:35		05:30		04:50	
	16:16		17:11		18:06		20:02		20:56		21:40	
9	08:29	11:10-12:47/97	07:48	16:09-16:34/25	06:47	17:03-17:35/32	06:33		05:28		04:49	
	16:17		17:13		18:07	16:57-17:01/4	20:04		20:58		21:41	
10	08:28	11:10-12:46/96	07:46	16:08-16:38/30	06:45	17:04-17:37/33	06:30		05:26		04:49	
	16:19		17:15		18:09		20:06		21:00		21:42	
11	08:28	11:11-12:46/95	07:44	16:07-16:42/35	06:43	17:03-17:39/36	06:28		05:24		04:48	
	16:20		17:17		18:11		20:08		21:02		21:43	
12	08:27	11:12-12:46/94	07:42	16:07-16:45/38	06:40	17:04-17:42/38	06:26		05:23		04:48	
	16:22		17:19		18:13		20:10		21:03		21:44	
13	08:26	11:13-12:46/93	07:40	16:06-16:47/41	06:38	17:04-17:44/40	06:23		05:21		04:48	
	16:23		17:21		18:15		20:12		21:05		21:44	
14	08:25	11:14-12:46/92	07:38	16:06-16:49/43	06:35	17:05-17:45/40	06:21		05:19		04:47	
	16:25		17:23		18:17		20:13		21:07		21:45	
15	08:25	11:15-12:45/90	07:36	16:06-16:51/45	06:33	17:05-17:46/41	06:19		05:18		04:47	
	16:26		17:25		18:19		20:15		21:08		21:46	
16	08:24	11:16-12:45/89	07:34	16:06-16:54/48	06:31	17:08-17:49/41	06:16		05:16		04:47	
	16:28		17:27		18:20		20:17		21:10		21:46	
17	08:23	11:17-12:45/88	07:32	16:06-16:56/50	06:28	17:09-17:51/42	06:14		05:14		04:47	
	16:30		17:29		18:22		20:19		21:12		21:47	
18	08:22	11:19-12:44/85	07:30	16:06-16:59/53	06:26	17:09-17:52/43	06:12		05:13		04:47	
	16:32		17:31		18:24		20:21		21:13		21:47	
19	08:21	11:19-12:43/84	07:28	16:07-17:01/54	06:23	17:11-17:54/43	06:10		05:11		04:47	
	16:33		17:33		18:26		20:22		21:15		21:48	
20	08:19	11:21-12:42/81	07:26	16:07-17:03/56	06:21	17:12-17:56/44	06:07		05:10		04:47	
	16:35		17:35		18:28		20:24		21:16		21:48	
21	08:18	11:23-12:40/77	07:24	16:08-17:06/58	06:18	17:14-17:57/43	06:05		05:08		04:47	
	16:37		17:37		18:30		20:26		21:18		21:48	
22	08:17	11:25-12:37/72	07:22	16:09-17:07/58	06:16	17:14-17:58/44	06:03		05:07		04:47	
	16:39		17:39		18:31		20:28		21:19		21:48	
23	08:16	12:01-12:33/32	07:19	16:10-17:09/59	06:14	17:16-17:59/43	06:01		05:06		04:48	
	16:40	11:28-11:59/31	17:41		18:33		20:30		21:21		21:48	
24	08:14	12:04-12:25/21 11:31-11:44/13	07:17	16:12-17:11/59	06:11	17:17-17:58/41	05:58		05:04		04:48	
	16:42	11:47-11:54/7	17:43		18:35		20:31		21:22		21:49	
25	08:13	12:16-12:20/4	07:15	16:14-17:11/57	06:09	17:19-17:59/40	05:56		05:03		04:48	
	16:44	12:10-12:15/5	17:45		18:37		20:33		21:24		21:49	
26	08:12		07:13	16:20-17:12/52	06:06	17:21-17:59/38	05:54		05:02		04:49	
	16:46		17:47		18:39		20:35		21:25		21:49	
27	08:10		07:10	16:24-17:13/49	06:04	17:23-17:58/35	05:52		05:00		04:49	
	16:48		17:48		18:41		20:37		21:27		21:49	
28	08:09		07:08	16:27-17:12/45	06:02	17:25-17:58/33	05:50		04:59		04:50	
	16:50		17:50		18:42		20:39		21:28		21:48	
29	08:07				06:59	18:25-18:57/32	05:48		04:58		04:50	
	16:52				19:44		20:40		21:29		21:48	
30	08:06				06:57	18:27-18:57/30	05:46		04:57		04:51	
	16:54				19:46		20:42		21:31		21:48	
31	08:04				06:54	18:28-18:55/27			04:56			
	16:56				19:48				21:32			
Sonnenscheinstunden	252		274		367		419		492		507	
Anzahl Minuten mit Schatten	2135		1017		1246		82		0		0	

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 6 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	July	August	September	October	November	Dezember
1	04:51 21:48	05:30 21:13	06:24 20:08	07:16 17:43-18:22/39 18:55	07:13 15:38-16:06/28 16:45	08:07 10:53-12:28/95 16:02
2	04:52 21:47	05:32 21:11	06:25 20:05	07:18 17:42-18:19/37 18:53	07:15 15:39-16:04/25 16:44	08:09 10:54-12:30/96 16:01
3	04:53 21:47	05:34 21:10	06:27 20:03	07:19 17:42-18:17/35 18:50	07:17 15:40-16:02/22 16:42	08:10 10:54-12:31/97 16:01
4	04:54 21:46	05:35 21:08	06:29 20:01	07:21 17:40-18:13/33 18:48	07:19 15:41-15:59/18 16:40	08:12 10:54-12:31/97 16:00
5	04:55 21:46	05:37 21:06	06:31 19:58	07:23 17:31-18:11/40 18:45	07:21 15:44-15:57/13 16:38	08:13 10:54-12:32/98 15:59
6	04:55 21:45	05:39 21:04	06:32 19:56	07:25 17:28-18:09/41 18:43	07:23 15:49-15:54/5 16:36	08:14 10:54-12:32/98 15:59
7	04:56 21:45	05:40 21:02	06:34 18:35-18:39/4 19:53	07:27 17:26-18:07/41 18:41 17:23-17:24/1	07:25 16:34 07:26	08:16 10:54-12:33/99 15:58
8	04:57 21:44	05:42 21:00	06:36 18:29-18:43/14 19:51	07:28 17:17-18:05/48 18:38	07:26 16:32 07:28	08:17 10:55-12:34/99 15:58
9	04:58 21:43	05:44 20:58	06:38 18:27-18:45/18 19:49	07:30 17:15-18:03/48 18:36	07:28 16:31 07:30	08:18 10:55-12:34/99 15:58
10	04:59 21:42	05:46 20:56	06:39 18:25-18:46/21 19:46	07:32 17:12-18:00/48 18:34	07:30 16:29 07:32	08:19 10:55-12:34/99 15:57
11	05:01 21:42	05:47 20:54	06:41 18:22-18:47/25 19:44	07:34 17:10-17:58/48 18:31	07:32 16:27 07:34	08:20 10:56-12:36/100 15:57
12	05:02 21:41	05:49 20:52	06:43 18:21-18:47/26 19:41	07:36 17:09-17:56/47 18:29	07:34 16:26 07:36	08:22 10:56-12:36/100 15:57
13	05:03 21:40	05:51 20:50	06:44 18:19-18:48/29 19:39	07:38 17:03-17:46/43 18:27	07:36 16:24 07:38	08:23 10:56-12:37/101 15:57
14	05:04 21:39	05:52 20:48	06:46 18:16-18:47/31 19:36	07:39 16:59-17:45/46 18:24	07:38 16:22 07:40	08:24 10:57-12:37/100 15:57
15	05:05 21:38	05:54 20:46	06:48 18:14-18:48/34 19:34	07:41 16:55-17:45/50 18:22	07:40 16:21 07:41	08:25 10:57-12:38/101 15:57
16	05:07 21:37	05:56 20:44	06:50 18:13-18:48/35 19:32	07:43 16:52-17:44/52 18:20	07:41 16:19 07:43	08:25 10:58-12:38/100 15:57
17	05:08 21:35	05:58 20:42	06:51 18:10-18:48/38 19:29	07:45 16:45-17:43/58 18:17	07:43 11:43-11:53/10 16:18	08:26 10:57-12:38/101 15:57
18	05:09 21:34	05:59 20:40	06:53 18:07-18:46/39 19:27	07:47 16:43-17:42/59 18:15	07:45 11:38-11:59/21 11:05-11:19/14 16:16 11:21-11:28/7	08:27 10:58-12:39/101 15:57
19	05:11 21:33	06:01 20:37	06:55 18:05-18:46/41 19:24	07:49 16:41-17:40/59 18:13	07:47 11:35-12:07/32 16:15 11:02-11:33/31	08:28 10:59-12:40/101 15:58
20	05:12 21:32	06:03 20:35	06:57 18:03-18:45/42 19:22	07:50 16:40-17:38/58 18:11	07:49 11:00-12:12/72 16:14	08:28 10:59-12:40/101 15:58
21	05:13 21:30	06:05 20:33	06:58 18:00-18:44/44 19:19	07:52 16:38-17:35/57 18:08	07:51 10:58-12:15/77 16:12	08:29 10:59-12:41/102 15:58
22	05:15 21:29	06:06 20:31	07:00 17:59-18:42/43 19:17	07:54 16:38-17:33/55 18:06	07:52 10:57-12:18/81 16:11	08:30 10:59-12:41/102 15:59
23	05:16 21:28	06:08 20:29	07:02 17:57-18:41/44 19:14	07:56 16:37-17:31/54 18:04	07:54 10:56-12:20/84 16:10	08:30 11:00-12:42/102 15:59
24	05:18 21:26	06:10 20:26	07:04 17:55-18:39/44 19:12	07:58 16:36-17:28/52 18:02	07:56 10:56-12:21/85 16:09	08:31 11:01-12:42/101 16:00
25	05:19 21:25	06:11 20:24	07:05 17:52-18:36/44 19:10	07:00 15:36-16:26/50 17:00	07:57 10:55-12:23/88 16:08	08:31 11:01-12:42/101 16:01
26	05:21 21:23	06:13 20:22	07:07 17:51-18:33/42 19:07	07:02 15:36-16:23/47 16:58	07:59 10:55-12:24/89 16:07	08:31 11:02-12:43/101 16:01
27	05:22 21:22	06:15 20:19	07:09 17:50-18:31/41 19:05	07:04 15:36-16:21/45 16:56	08:01 10:54-12:24/90 16:06	08:31 11:02-12:43/101 16:02
28	05:24 21:20	06:17 20:17	07:11 17:48-18:29/41 19:02	07:06 15:36-16:18/42 16:54	08:02 10:54-12:26/92 16:05	08:32 11:03-12:44/101 16:03
29	05:26 21:18	06:18 20:15	07:12 17:45-18:26/41 19:00	07:07 15:36-16:17/41 16:52	08:04 10:54-12:27/93 16:04	08:32 11:03-12:44/101 16:04
30	05:27 21:17	06:20 20:12	07:14 17:44-18:24/40 18:57	07:09 15:36-16:14/38 16:49	08:06 10:54-12:28/94 16:03	08:32 11:04-12:45/101 16:05
31	05:29 21:15	06:22 20:10		07:11 15:37-16:11/34 16:47		08:32 11:05-12:45/100 16:06
Sonnenscheinstunden	510	458	382	329	261	236
Anzahl Minuten mit Schatten	0	0	821	1446	1171	3096

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 7 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	07:28-07:52/24 20:44	05:44 20:44
2	08:32 16:08	08:01 17:00	07:04 17:54	06:50 19:52	07:24-07:53/29 20:46	05:42 20:46
3	08:31 16:09	07:59 17:02	07:01 17:56	06:47 19:53	07:21-07:54/33 20:48	05:40 20:48
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	07:18-07:54/36 20:49	05:38 20:49
5	08:31 16:12	07:56 17:05	06:57 18:00	06:42 19:57	07:16-07:55/39 20:51	05:36 20:51
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	07:13-07:54/41 20:53	05:34 20:53
7	08:30 16:15	07:52 17:09	06:52 18:04	06:38 20:01	07:10-07:54/44 20:55	05:32 20:55
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:02	07:08-07:55/47 20:56	05:30 20:56
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	07:05-07:54/49 20:58	05:28 20:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	07:04-07:54/50 21:00	05:26 20:01-20:20/19
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	07:02-07:53/51 21:02	05:25 20:01-20:20/19
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	06:59-07:52/53 21:03	05:23 20:01-20:20/19
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:12	06:57-07:51/54 21:05	05:21 20:01-20:20/19
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	06:56-07:50/54 21:07	05:19 20:01-20:20/19
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	06:55-07:50/55 21:08	05:18 20:01-20:20/19
16	08:24 16:28	07:34 17:27	06:31 18:21	06:16 20:17	06:53-07:47/54 21:10	05:16 20:01-20:20/19
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	06:48-07:46/58 21:12	05:14 20:01-20:20/19
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	06:45-07:44/59 21:13	05:13 20:01-20:20/19
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	06:43-07:41/58 21:15	05:11 20:01-20:20/19
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	06:42-07:39/57 21:16	05:10 20:01-20:20/19
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	06:41-07:36/55 21:18	05:08 20:01-20:20/19
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	06:39-07:31/52 21:19	05:07 20:01-20:20/19
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	06:38-07:28/50 21:21	05:06 20:01-20:20/19
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:31	06:37-07:26/49 21:22	05:04 20:01-20:20/19
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	06:32-07:24/52 21:24	05:03 20:01-20:20/19
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	06:28-07:24/56 21:25	05:02 20:01-20:20/19
27	08:10 16:48	07:10 17:49	06:04 18:41	05:52 20:37	06:26-07:23/57 21:27	05:01 20:01-20:20/19
28	08:09 16:50	07:08 17:50	06:02 18:42	05:50 20:39	06:24-07:22/58 21:28	04:59 20:01-20:20/19
29	08:07 16:52		06:59 19:44	05:48 20:40	06:22-07:21/59 21:29	04:58 20:01-20:20/19
30	08:06 16:54		06:57 19:46	05:46 20:42	06:21-07:20/59 21:31	04:57 20:01-20:20/19
31	08:04 16:56		06:54 19:48		07:31-07:51/20 21:32	04:56 20:01-20:20/19
Sonnenscheinstunden	252	274	367	419	492	507
Anzahl Minuten mit Schatten	0	0	40	1492	2198	1860

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 7 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

- Die Sonne scheint täglich von Sonnenauf- bis -untergang
- Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung
- Die Windenergieanlage/n ist/sind immer in Betrieb

	July	August	September	Oktober	November	Dezember
1	04:52 06:29-06:40/11 21:48 20:05-20:59/54	05:31 07:00-07:16/16 20:10-20:33/23 21:13 06:21-06:58/37	06:24 07:01-07:52/51 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	04:52 06:28-06:41/13 21:47 20:06-20:59/53	05:32 06:21-07:17/56 21:12 20:10-20:30/20	06:25 07:03-07:53/50 20:05	07:18 18:53	07:15 16:44	08:09 16:01
3	04:53 06:28-06:43/15 21:47 20:05-20:58/53	05:34 06:21-07:19/58 21:10 20:12-20:29/17	06:27 07:03-07:52/49 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	04:54 06:27-06:43/16 21:46 20:05-20:58/53	05:36 06:21-07:20/59 21:08 20:14-20:27/13	06:29 07:05-07:52/47 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	04:55 06:26-06:44/18 21:46 20:05-20:58/53	05:37 06:22-07:22/60 21:06 20:18-20:23/5	06:31 07:07-07:52/45 19:58	07:23 18:45	07:21 16:38	08:13 16:00
6	04:56 06:26-06:45/19 21:45 20:05-20:58/53	05:39 06:23-07:23/60 21:04	06:32 07:09-07:50/41 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	04:57 06:26-06:46/20 21:45 20:05-20:58/53	05:41 06:24-07:24/60 21:02	06:34 07:11-07:50/39 19:54	07:27 18:41	07:25 16:34	08:16 15:59
8	04:58 06:25-06:47/22 21:44 20:05-20:58/53	05:42 06:25-07:25/60 21:00	06:36 07:13-07:49/36 19:51	07:28 18:38	07:27 16:32	08:17 15:58
9	04:59 06:25-06:48/23 21:43 20:05-20:58/53	05:44 06:26-07:25/59 20:58	06:38 07:14-07:47/33 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	05:00 06:24-06:49/25 21:42 20:05-20:57/52	05:46 06:27-07:26/59 20:56	06:39 07:16-07:46/30 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	05:01 06:24-06:49/25 21:42 20:05-20:57/52	05:47 06:29-07:27/58 20:54	06:41 07:20-07:45/25 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	05:02 06:23-06:50/27 21:41 20:05-20:56/51	05:49 06:29-07:28/59 20:52	06:43 07:22-07:42/20 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	05:03 06:23-06:50/27 21:40 20:04-20:55/51	05:51 06:30-07:29/59 20:50	06:45 07:24-07:40/16 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	05:04 06:22-06:51/29 21:39 20:04-20:54/50	05:53 06:30-07:29/59 20:48	06:46 07:28-07:36/8 19:37	07:39 18:24	07:38 16:22	08:24 15:57
15	05:05 06:22-06:51/29 21:38 20:04-20:53/49	05:54 06:32-07:30/58 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	05:07 06:22-06:53/31 21:37 20:04-20:52/48	05:56 06:34-07:31/57 20:44	06:50 19:32	07:43 18:20	07:42 16:19	08:25 15:57
17	05:08 06:22-06:53/31 21:35 20:05-20:52/47	05:58 06:35-07:30/55 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	05:09 06:21-06:53/32 21:34 20:04-20:51/47	05:59 06:44-07:31/47 20:40	06:53 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	05:11 06:21-06:54/33 21:33 20:04-20:49/45	06:01 06:43-07:32/49 20:37	06:55 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	05:12 06:21-06:55/34 21:32 20:05-20:49/44	06:03 06:44-07:34/50 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	05:14 06:21-06:55/34 21:30 20:05-20:48/43	06:05 06:45-07:37/52 20:33	06:58 19:19	07:52 18:09	07:51 16:13	08:29 15:59
22	05:15 06:20-06:55/35 21:29 20:04-20:46/42	06:06 06:44-07:40/56 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	05:16 06:21-06:56/35 21:28 20:05-20:46/41	06:08 06:46-07:43/57 20:29	07:02 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	05:18 06:20-06:56/36 21:26 20:05-20:44/39	06:10 06:47-07:45/58 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	05:19 06:20-06:55/35 21:25 20:05-20:41/36	06:12 06:48-07:47/59 20:24	07:05 19:10	07:00 17:00	07:57 16:08	08:31 16:01
26	05:21 06:20-06:56/36 21:23 20:06-20:41/35	06:13 06:51-07:49/58 20:22	07:07 19:07	07:02 16:58	07:59 16:07	08:31 16:01
27	05:23 06:20-06:56/36 21:22 20:06-20:39/33	06:15 06:56-07:50/54 20:19	07:09 19:05	07:04 16:56	08:01 16:06	08:31 16:02
28	05:24 06:20-06:56/36 21:20 20:07-20:38/31	06:17 06:56-07:50/54 20:17	07:11 19:02	07:06 16:54	08:02 16:05	08:32 16:03
29	05:26 06:20-06:56/36 21:18 20:07-20:37/30	06:19 06:57-07:51/54 20:15	07:12 19:00	07:07 16:52	08:04 16:04	08:32 16:04
30	05:27 06:21-06:57/36 21:17 20:08-20:36/28	06:20 06:58-07:52/54 20:13	07:14 18:58	07:09 16:50	08:06 16:03	08:32 16:05
31	05:29 07:03-07:13/10 20:08-20:34/26 21:15 06:20-06:57/37	06:22 06:59-07:52/53 20:10	 18:58	07:11 16:48	 16:03	08:32 16:06
Sonnenscheinstunden	510	458	382	329	261	236
Anzahl Minuten mit Schatten	2280	1825	490	0	0	0

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
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Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 8 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	06:11-06:59/48 21:33	04:55 21:48	05:11-06:15/24 21:13	06:04-06:49/45 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:49 19:52	05:42 20:46	06:10-06:57/47 21:34	04:54 21:47	05:11-06:15/24 21:11	06:04-06:49/45 20:05	07:18 18:53	07:15 16:44	08:09 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:48	06:08-06:56/48 21:35	04:54 21:47	05:11-06:16/25 21:10	06:06-06:50/44 20:03	07:20 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	06:08-06:55/47 21:36	04:53 21:46	05:11-06:16/25 21:08	06:06-06:50/44 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:05	06:57 18:00	06:42 19:57	05:36 20:51	06:07-06:52/45 21:38	04:52 21:46	05:11-06:16/25 21:06	06:09-06:54/45 19:58	07:23 18:45	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	06:07-06:50/43 21:39	04:51 21:45	05:11-06:17/26 21:04	06:17-06:57/40 19:56	07:25 18:43	07:25 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	06:01-06:46/45 21:40	04:51 21:45	05:11-06:17/26 21:02	06:16-07:00/44 19:53	07:27 18:41	07:27 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:02	05:30 20:56	05:58-06:43/45 21:40	04:50 21:47	05:11-06:17/26 21:00	06:17-07:02/45 19:51	07:28 18:38	07:28 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:08	06:33 20:04	05:28 20:58	05:57-06:40/43 21:41	04:49 21:43	05:11-06:18/27 20:58	06:17-07:04/47 19:49	07:30 18:36	07:30 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	05:55-06:39/44 21:42	04:49 21:44	05:11-06:18/27 20:50	06:18-07:06/48 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	05:54-06:38/44 21:43	04:49 21:42	05:11-06:18/27 20:51	06:20-07:06/46 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	05:54-06:38/44 21:44	04:48 21:41	05:11-06:19/28 20:52	06:20-07:07/47 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:12	05:21 21:05	05:53-06:37/44 21:44	04:48 21:40	05:11-06:20/29 20:53	06:23-07:08/45 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	05:51-06:37/46 21:45	04:48 21:39	05:11-06:21/30 20:54	06:26-07:08/42 19:37	07:39 18:24	07:38 16:22	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	05:48-06:36/48 21:46	04:47 21:38	05:11-06:22/31 20:55	06:27-07:09/42 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:16 20:17	05:16 21:10	05:47-06:36/49 21:47	04:46 21:37	06:25-06:32/7 20:44	06:29-07:09/40 19:32	07:43 18:20	07:42 16:19	08:25 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:12	05:46-06:34/48 21:47	04:47 21:35	05:52-06:34/42 20:42	06:29-07:09/40 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	05:45-06:33/48 21:47	04:47 21:34	05:52-06:36/44 20:40	06:31-07:09/38 19:27	07:47 18:15	07:45 16:17	08:27 15:58
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	05:44-06:32/48 21:48	04:47 21:33	05:52-06:37/45 20:37	06:32-07:08/36 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	05:44-06:31/47 21:48	04:47 21:32	05:53-06:38/45 20:35	06:34-07:08/34 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:19 18:30	06:05 20:26	05:08 21:18	05:44-06:31/47 21:48	04:47 21:30	05:53-06:39/46 20:33	06:36-07:08/32 19:19	07:52 18:09	07:51 16:12	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	05:44-06:30/46 21:48	04:47 21:29	05:53-06:40/47 20:31	06:37-07:06/29 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:41	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	05:43-06:28/45 21:48	04:48 21:28	05:54-06:42/48 20:29	06:39-07:06/27 19:15	07:56 18:04	07:54 16:10	08:30 16:00
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:31	05:04 21:22	05:43-06:27/44 21:48	04:48 21:26	05:54-06:42/48 20:26	06:42-07:05/23 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	05:43-06:27/44 21:49	04:48 21:25	05:55-06:42/47 20:24	06:43-07:02/19 19:10	07:59 17:00	07:57 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	05:43-06:25/42 21:49	04:49 21:23	05:56-06:44/48 20:22	06:46-07:01/15 19:07	07:59 16:58	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:49	06:04 18:41	05:52 20:37	05:01 21:27	06:15-06:24/9 21:49	04:49 21:22	05:57-06:45/48 20:19	06:49-06:58/9 19:05	07:04 16:56	08:01 16:06	08:31 16:02
28	08:09 16:50	07:08 17:50	06:02 18:42	05:50 20:39	04:59 21:28	06:18-06:21/3 21:48	04:50 21:20	05:58-06:46/48 20:17	06:17 19:02	07:06 16:54	08:02 16:05	08:32 16:03
29	08:07 16:52	07:06 19:44	06:01 19:40	05:48 20:40	04:58 21:29	06:18-07:01/43 21:48	04:50 21:18	06:00-06:47/47 20:15	06:19 19:00	07:07 16:52	08:04 16:04	08:32 16:04
30	08:06 16:54	07:05 19:46	06:00 19:42	05:46 20:42	04:57 21:31	05:43-06:12/29 21:48	04:51 21:17	06:03-06:48/45 20:12	06:20 18:58	07:09 16:50	08:06 16:03	08:32 16:05
31	08:04 16:56	07:04 19:48	06:04 19:48		04:56 21:32	05:43-06:11/28 21:48	04:52 21:15	06:03-06:48/45 20:10	06:22 18:58	07:11 16:48	08:07 16:03	08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	0	0	0	476	1349	716	1131	1012	0	0	0	0

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01) **WEA:** WEA 9 - NORDEX N175/6.X 6800 NH: 179,0 m

Annahmen für Schattenwurfberechnung

Die dargestellten Zeiten sind die astronomisch maximal mögliche Beschattungsdauer, berechnet unter folgenden Annahmen:

Die Sonne scheint täglich von Sonnenauf- bis -untergang

Die Rotorfläche steht immer senkrecht zur Sonneneinstrahlungsrichtung

Die Windenergieanlage/n ist/sind immer in Betrieb

	Januar	Februar	März	April	Mai	Juni	Juli	August	September	Oktober	November	Dezember
1	08:32 16:07	08:02 16:58	07:06 17:52	06:52 19:50	05:44 20:44	04:55 21:33	04:51 21:48	05:31 21:13	06:24 20:08	07:16 18:55	07:13 16:46	08:07 16:02
2	08:32 16:08	08:01 17:00	07:04 17:54	06:49 19:52	05:42 20:46	04:54 21:34	04:52 21:47	05:32 21:11	06:25 20:05	07:18 18:53	07:15 16:44	08:09 16:01
3	08:31 16:09	07:59 17:01	07:01 17:56	06:47 19:53	05:40 20:48	04:53 21:35	04:53 21:47	05:34 21:10	06:27 20:03	07:19 18:50	07:17 16:42	08:10 16:01
4	08:31 16:11	07:57 17:03	06:59 17:58	06:45 19:55	05:38 20:49	04:53 21:36	04:54 21:46	05:35 21:08	06:29 20:01	07:21 18:48	07:19 16:40	08:12 16:00
5	08:31 16:12	07:56 17:05	06:57 18:00	06:42 19:57	05:36 20:51	04:52 21:38	04:55 21:46	05:37 21:06	06:31 19:58	07:23 18:45	07:21 16:38	08:13 16:00
6	08:31 16:13	07:54 17:07	06:54 18:02	06:40 19:59	05:34 20:53	04:51 21:39	04:56 21:45	05:39 21:04	06:32 19:56	07:25 18:43	07:23 16:36	08:14 15:59
7	08:30 16:14	07:52 17:09	06:52 18:04	06:38 20:01	05:32 20:55	04:51 21:40	04:56 21:45	05:40 21:02	06:34 19:53	07:27 18:41	07:25 16:34	08:16 15:59
8	08:30 16:16	07:50 17:11	06:50 18:06	06:35 20:02	05:30 20:56	04:50 21:40	04:57 21:44	05:42 21:00	06:36 19:51	07:28 18:38	07:26 16:32	08:17 15:58
9	08:29 16:17	07:48 17:13	06:47 18:07	06:33 20:04	05:28 20:58	04:49 21:41	04:58 21:43	05:44 20:58	06:38 19:49	07:30 18:36	07:28 16:31	08:18 15:58
10	08:28 16:19	07:46 17:15	06:45 18:09	06:30 20:06	05:26 21:00	04:49 21:42	05:00 21:42	05:46 20:56	06:39 19:46	07:32 18:34	07:30 16:29	08:19 15:58
11	08:28 16:20	07:44 17:17	06:43 18:11	06:28 20:08	05:25 21:02	04:48 21:43	05:01 21:42	05:47 20:54	06:41 19:44	07:34 18:31	07:32 16:27	08:20 15:57
12	08:27 16:22	07:42 17:19	06:40 18:13	06:26 20:10	05:23 21:03	04:48 21:44	05:02 21:41	05:49 20:52	06:43 19:41	07:36 18:29	07:34 16:26	08:22 15:57
13	08:26 16:23	07:40 17:21	06:38 18:15	06:23 20:12	05:21 21:05	04:48 21:44	05:03 21:40	05:51 20:50	06:44 19:39	07:38 18:27	07:36 16:24	08:23 15:57
14	08:25 16:25	07:38 17:23	06:35 18:17	06:21 20:13	05:19 21:07	04:47 21:45	05:04 21:39	05:52 20:48	06:46 19:37	07:39 18:24	07:38 16:22	08:24 15:57
15	08:25 16:27	07:36 17:25	06:33 18:19	06:19 20:15	05:18 21:08	04:47 21:46	05:05 21:38	05:54 20:46	06:48 19:34	07:41 18:22	07:40 16:21	08:25 15:57
16	08:24 16:28	07:34 17:27	06:31 18:21	06:16 20:17	05:16 21:10	04:47 21:46	05:07 21:37	05:56 20:44	06:50 19:32	07:43 18:20	07:41 16:19	08:25 15:57
17	08:23 16:30	07:32 17:29	06:28 18:22	06:14 20:19	05:14 21:12	04:47 21:47	05:08 21:35	05:58 20:42	06:51 19:29	07:45 18:17	07:43 16:18	08:26 15:57
18	08:22 16:32	07:30 17:31	06:26 18:24	06:12 20:21	05:13 21:13	04:47 21:47	05:09 21:34	05:59 20:40	06:53 19:27	07:47 18:15	07:45 16:16	08:27 15:57
19	08:21 16:33	07:28 17:33	06:23 18:26	06:10 20:22	05:11 21:15	04:47 21:48	05:11 21:33	06:01 20:37	06:55 19:24	07:49 18:13	07:47 16:15	08:28 15:58
20	08:19 16:35	07:26 17:35	06:21 18:28	06:07 20:24	05:10 21:16	04:47 21:48	05:12 21:32	06:03 20:35	06:57 19:22	07:50 18:11	07:49 16:14	08:28 15:58
21	08:18 16:37	07:24 17:37	06:18 18:30	06:05 20:26	05:08 21:18	04:47 21:48	05:14 21:30	06:05 20:33	06:58 19:19	07:52 18:09	07:51 16:12	08:29 15:59
22	08:17 16:39	07:22 17:39	06:16 18:32	06:03 20:28	05:07 21:19	04:47 21:48	05:15 21:29	06:06 20:31	07:00 19:17	07:54 18:06	07:52 16:11	08:30 15:59
23	08:16 16:40	07:19 17:41	06:14 18:33	06:01 20:30	05:06 21:21	04:48 21:48	05:16 21:28	06:08 20:29	07:02 19:15	07:56 18:04	07:54 16:10	08:30 15:59
24	08:14 16:42	07:17 17:43	06:11 18:35	05:59 20:31	05:04 21:22	04:48 21:49	05:18 21:26	06:10 20:26	07:04 19:12	07:58 18:02	07:56 16:09	08:31 16:00
25	08:13 16:44	07:15 17:45	06:09 18:37	05:56 20:33	05:03 21:24	04:48 21:49	05:19 21:25	06:12 20:24	07:05 19:10	07:00 17:00	07:57 16:08	08:31 16:01
26	08:12 16:46	07:13 17:47	06:06 18:39	05:54 20:35	05:02 21:25	04:49 21:49	05:21 21:23	06:13 20:22	07:07 19:07	07:02 16:58	07:59 16:07	08:31 16:01
27	08:10 16:48	07:10 17:48	06:04 18:41	05:52 20:37	05:01 21:27	04:49 21:49	05:23 21:22	06:15 20:19	07:09 19:05	07:04 16:56	08:01 16:06	08:31 16:02
28	08:09 16:50	07:08 17:50	06:02 18:42	05:50 20:39	04:59 21:28	04:50 21:48	05:24 21:20	06:17 20:17	07:11 19:02	07:06 16:54	08:02 16:05	08:32 16:03
29	08:07 16:52		06:59 19:44	05:48 20:40	04:58 21:29	04:50 21:48	05:26 21:18	06:18 20:15	07:12 19:00	07:07 16:52	08:04 16:04	08:32 16:04
30	08:06 16:54		06:57 19:46	05:46 20:42	04:57 21:31	04:51 21:48	05:27 21:17	06:20 20:12	07:14 18:57	07:09 16:50	08:06 16:03	08:32 16:05
31	08:04 16:56		06:54 19:48		04:56 21:32		05:29 21:15	06:22 20:10		07:11 16:48		08:32 16:06
Sonnenscheinstunden	252	274	367	419	492	507	510	458	382	329	261	236
Anzahl Minuten mit Schatten	0	0	0	0	0	0	0	0	0	0	0	0

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:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

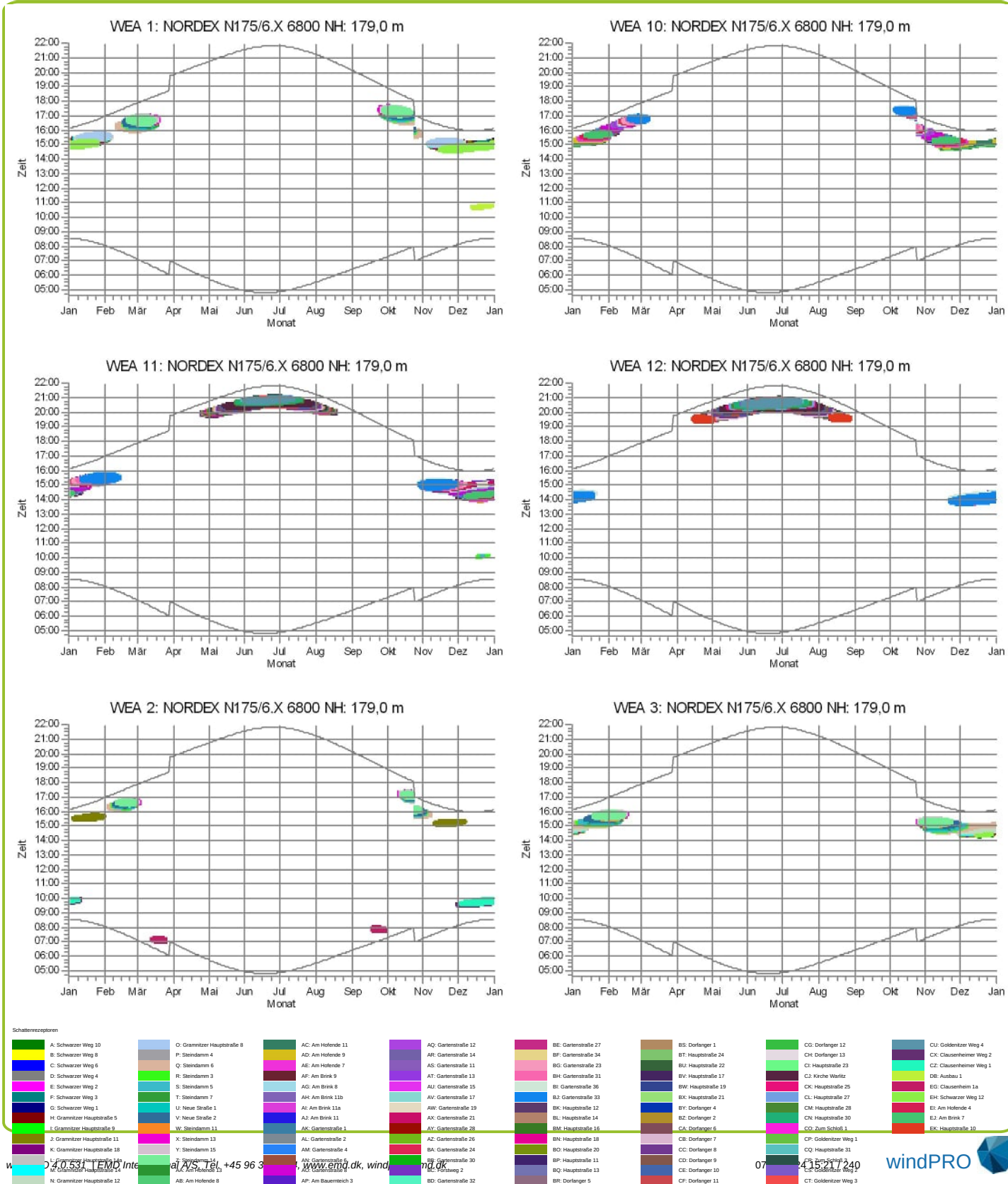
Lizenzierter Anwender:

plan-GIS GmbH Niederlassung Hannover
Podbielskistraße 70
DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

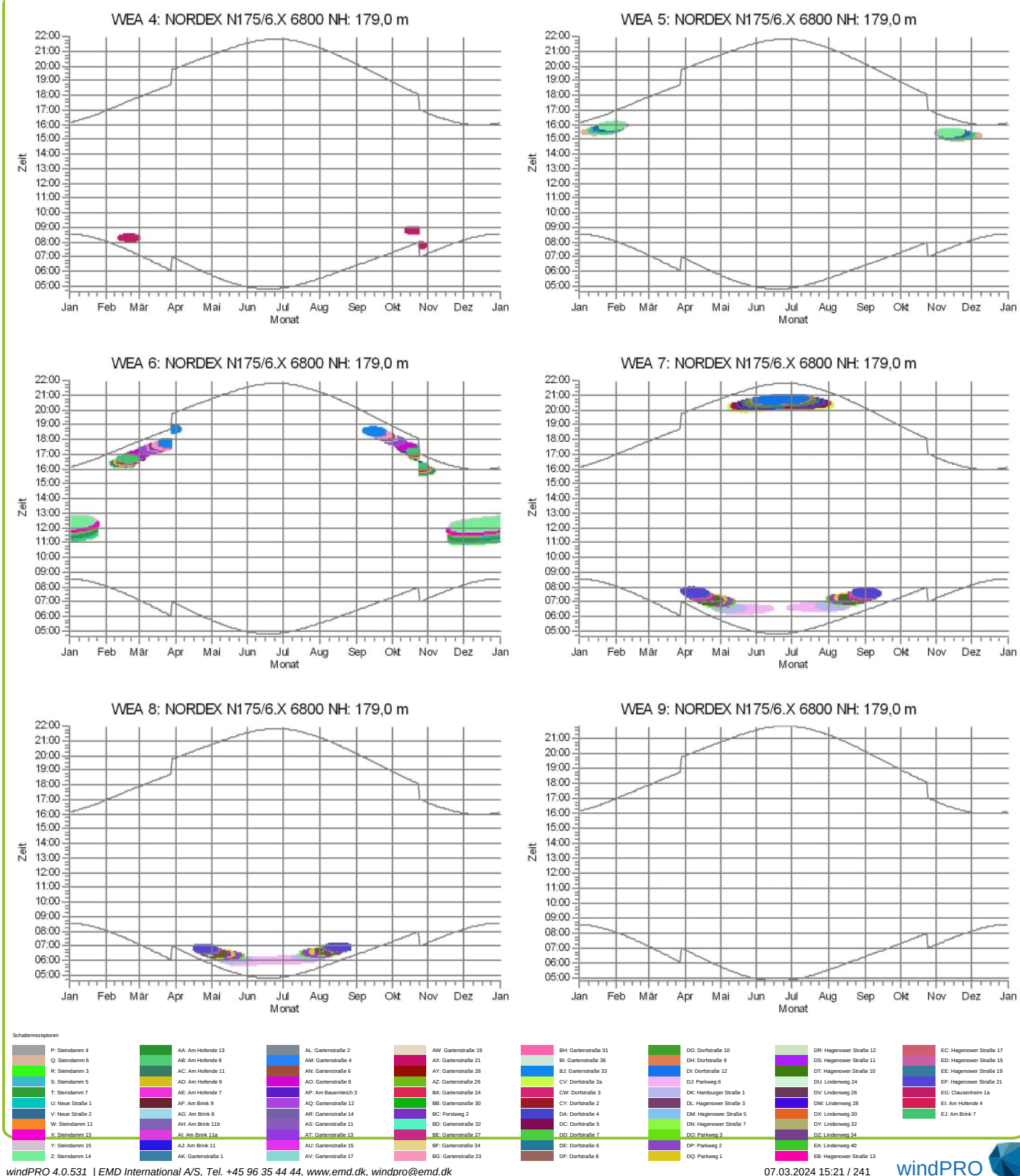
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plan-GIS GmbH Niederlassung Hannover
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DE-30177 Hannover
+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Grafischer Kalender pro WEA

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



Projekt:

Schattenwurfprognose WP Pritzier-Goldenitz

Beschreibung:

Schattenwurfprognose WP
Pritzier-Goldenitz (rev.01)
Zusatz- Gesamtbelastung durch 12
geplante WEA vom Typ Nordex
N175/6.X mit 179 m NH

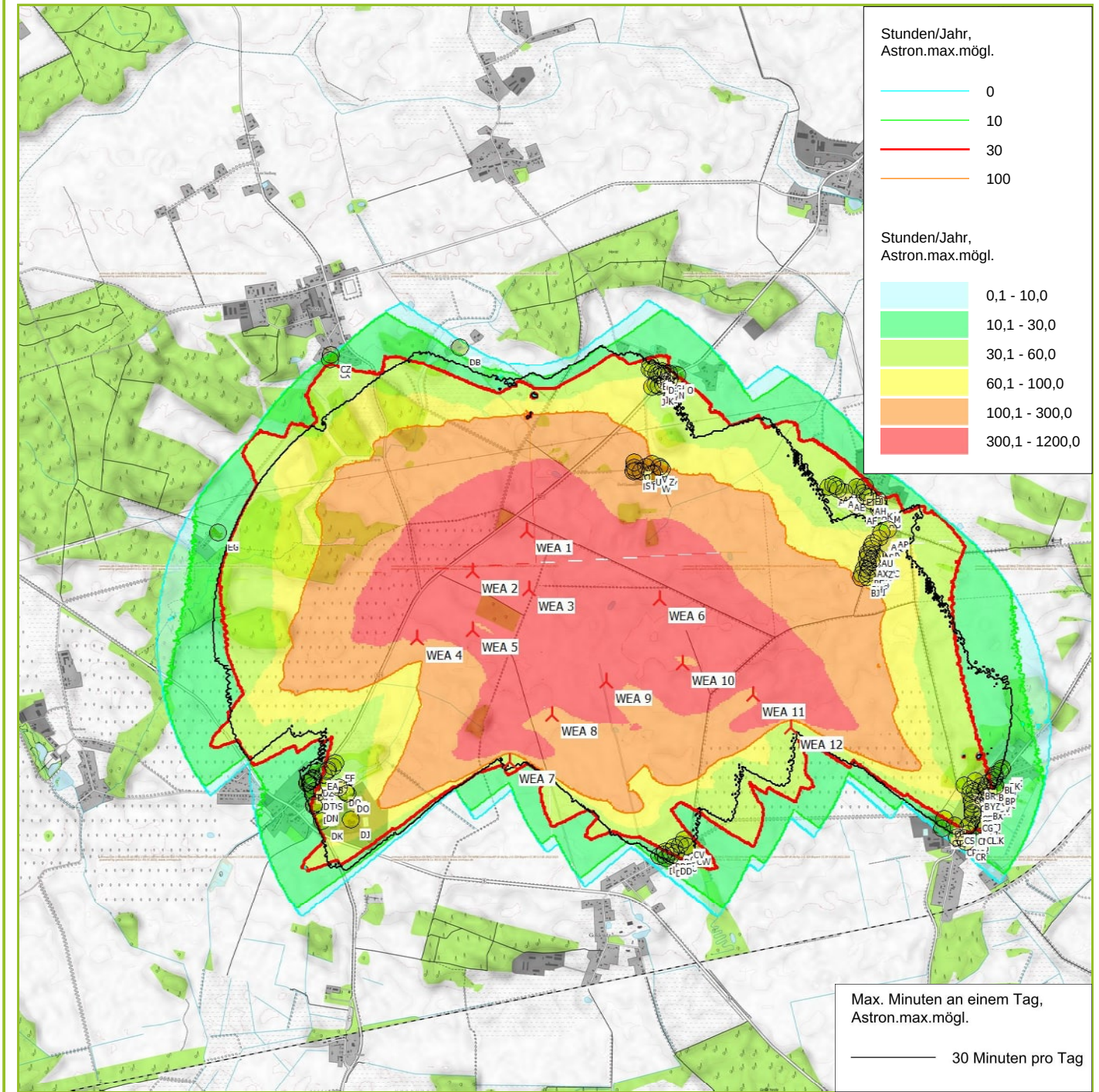
Lizenzierter Anwender:

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+49 (0)511 450 89 99-0
Niklas Eden / n.eden@plangis.de
Berechnet:
07.03.2024 13:56/4.0.531



SHADOW - Karte

Berechnung: Schattenwurf WP Pritzier-Goldenitz (rev.01)



0 500 1000 1500 2000 m

Karte: Onmaps , Maßstab 1:40.000, Mitte: UTM (north)-ETRS89 Zone: 33 Ost: 240.984 Nord: 5.923.186

Neue WEA Schattenrezeptor

Höhe der Schattenkarte: Höhenraster-Objekt: Schatten_WP_Pritzier-Goldenitz_EMDGrid_0.wpg (25)

Zeitschritt: 2 Minuten, Schrittweite: 3 Tag(e), Kartenaufösung: 10 m, Sichtbarkeit Auflösung: 5 m, Augenhöhe: 2,0 m