Regione Autonoma della Sardegna	Comune di San Gavino Monreale

Committente: **MONREALE Wind Srl**	**Monreale Wind Srl** Via Chiaravalle, 7/9 20122 Milano P.IVA/C.F. 15802641009

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Responsabile dello SIA:

Ing. Giuseppe Frongia

ORDINE INGEGNERI PROVINCIA CAGLIARI
N. 3453 Dott. Ing. Giuseppe Frongia

I.A.T. Consulenza e progetti S.r.l. Unipersonale
Sede Legale: Via Giua s.n.c. - Z.I. CACIP – 09122 Cagliari (I)
C.C.I.A.A. Cagliari n. 221254 - P.I. 02748010929
Tel. /Fax +39.070.658297
Email: info@iatprogetti.it
PEC iat@pec.it
Web: www.iatprogetti.it

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STUDIO DI IMPATTO AMBIENTALE A CURA DI:

I.A.T. Consulenza e Progetti S.r.l.

Ing. Giuseppe Frongia (Direttore Tecnico)

GRUPPO DI LAVORO:

Ing. Giuseppe Frongia (Coordinatore e responsabile)

Ing. Marianna Barbarino

Ing. Enrica Batzella

Dott. Pian. Andrea Cappai

Ing. Paolo Desogus

Pian. Terr. Veronica Fais

Ing. Gianluca Melis

Ing. Andrea Onnis

Pian. Terr. Eleonora Re

Ing. Elisa Roych

COLLABORAZIONI SPECIALISTICHE:

Aspetti geologici e geotecnici: Dott. Geol. Maria Francesca Lobina

Aspetti faunistici: Dott. Nat. Maurizio Medda

Caratterizzazione pedologica: Dott. Agronomo Federico Corona

Acustica: Ing. Antonio Dedoni

Aspetti floristico-vegetazionali: Agr. Dott. Nat. Fabio Schirru

Aspetti archeologici: Dott.ssa Alice Nozza e Dott. Matteo Tatti (Archeologi)

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1 Introduzione

Il presente elaborato, facente parte integrante della documentazione tecnico-progettuale predisposta ai fini dell'espletamento della procedura di Valutazione di Impatto Ambientale (VIA) del parco eolico "Monreale", proposto dalla PLT energia attraverso la controllata Monreale Wind S.r.l. in territorio di San Gavino Monreale (Regione Sardegna – Provincia del Sud Sardegna), esamina compiutamente il potenziale disturbo da ombreggiamento intermittente (*shadow flickering*) sui potenziali ricettori individuati nell'area interessata dal proposto impianto, entro una distanza indicativa di 1000 metri dagli aerogeneratori.

A tal fine, nel seguito, si farà riferimento alla ricognizione sugli edifici esistenti eseguita nell'ambito della definizione del layout di impianto e dell'analisi ambientale, i cui risultati sono riepilogati in opportune "schede fabbricati" all'interno di apposito report allegato al progetto del parco eolico.

Sotto il profilo metodologico, il documento è strutturato in una sezione introduttiva atta a descrivere la natura del fenomeno dell'ombreggiamento intermittente e le ipotesi alla base dei calcoli previsionali, eseguiti a mezzo di specifico software specialistico.

Poiché in corrispondenza dei ricettori individuati nell'ambito territoriale interessato dal progetto è potenzialmente avvertibile il contributo al fenomeno dello shadow – flickering originato da ulteriori impianti eolici in esercizio (Parco eolico denominato "Medio Campidano") le stime di seguito riportate, come si evince dall'esame degli allegati report di calcolo, sono riferite allo scenario cumulativo in accordo con quanto previsto dalle disposizioni vigenti in materia.

2 Descrizione del fenomeno

Un ostacolo solido opaco posto tra il sole e il terreno genera un'ombra. Generalmente se l'ostacolo è fermo, l'ombra si proietta al suolo seguendo le regole del movimento relativo del sole sull'orizzonte. Le dimensioni dell'ombra proiettata sono funzione inversa dell'angolo che i raggi del sole formano sull'orizzonte per cui si ha la massima dimensione (elongazione sul terreno) dell'ombra all'alba ed al tramonto con il minimo quando il sole raggiunge la massima altezza (mezzogiorno).

Anche gli aerogeneratori durante il giorno proiettano un'ombra che in parte è fissa (torre e navicella) e in parte è mobile (pale del rotore).

Se l'ombra del rotore in movimento si proietta sulle aperture di un fabbricato può venirsi a creare l'effetto di ombra intermittente o *shadow flickering* (sfarfallio dell'ombra); in talune circostanze, tale fenomeno di pulsazioni "luce – ombra" può potenzialmente essere all'origine di un disturbo alle normali attività che possono svolgersi all'interno dell'ambiente abitativo.

Il fenomeno si verifica durante il giorno in presenza di cielo sereno ed in assenza di ostacoli naturali, quali vegetazione, alberi, muri ecc., e con le turbine in movimento.

Per le ragioni anzidette, a distanze turbine-ricettore superiori a circa 300 metri solitamente il fenomeno di *shadow flickering* si manifesta all'alba o al tramonto, allorquando le ombre proiettate sono sufficientemente lunghe. Per le stesse ragioni il tremolio dell'ombra è un fenomeno particolarmente avvertito nelle regioni del nord Europa (Germania, Danimarca, ecc.) piuttosto che alle latitudini del Mediterraneo.

L'intensità del *shadow flickering* è definita come la differenza in luminosità, in un determinato sito, in presenza ed assenza di un'ombra.

Di seguito si riassumono alcuni aspetti caratteristici del fenomeno:

- la pala delle turbine eoliche è stretta in corrispondenza dell'estremità più esterna ed assume progressivamente maggiore larghezza verso la giunzione con il mozzo. Quando una turbina è posizionata sufficientemente vicino ad un ricettore, cosicché la porzione più larga della pala oscura una porzione maggiore del campo visivo (o meglio del disco solare), l'intensità di *shadow flickering* aumenterà. A distanze maggiori l'intensità del fenomeno sarà minore in quanto le pale copriranno una porzione inferiore del disco solare;
- l'intensità del *shadow flickering* è più bassa quando l'ombra che intercetta un ricettore si origina dall'estremità esterna del rotore (minore spessore della pala). L'intensità aumenterà allorché l'ombra si muove lungo lo sviluppo della pala fino ad arrivare ad un massimo in corrispondenza del mozzo; a tal punto l'intensità diminuisce quando l'ombra si sposta verso l'estremità della pala opposta;
- bassi impatti da *shadow flickering* sono generalmente indicativi di grandi distanze tra turbine e ricettore e ombre incidenti originate dalle estremità del rotore;
- situazioni di precaria visibilità determineranno modeste intensità di *S. flickering*;
- a distanze ancora maggiori le ombre proiettate risulteranno "fuori-fuoco". Ciò non è causa di un'intensità inferiore del *shadow flickering* ma contribuisce a rendere meno distinto il fenomeno;
- all'interno di un ambiente ben illuminato le ombre svaniscono. Conseguentemente l'accensione di luci in un ambiente riduce l'incidenza del *shadow flickering*;
- schermare una finestra (con tende o quant'altro) previene il fenomeno;
- schermare un edificio (ad esempio con alberature) può rappresentare una misura di mitigazione per prevenire il fenomeno.

La frequenza di pulsazione del tremolio dell'ombra è proporzionale alla velocità di rotazione del rotore. La tipica frequenza di passo fra le pale del rotore (tripala) è compresa tra 0.6 ed 1 Hz (velocità con cui le pale passano attraverso una posizione specifica).
Nel caso specifico, considerando un rotore del diametro indicativo di 162 metri con una velocità massima nominale di rotazione di circa 12.5 RPM si avrà una frequenza di passo pari a circa 0,6 Hz. Tali frequenze di oscillazione luminosa sono prive di rischi significativi per la salute.
Ricerche finalizzate alla definizione di relazioni cause-effetto tra fenomeni stroboscopici ed attacchi epilettici (Graham e Pamela Harding della *Aston University* e Arnold Wilkins della *University of Essex*) attestano che, al fine di escludere rischi sulla salute, le turbine eoliche dovrebbero ruotare a velocità superiori a 60 RPM (velocità di passo 5 volte superiori a quella degli aerogeneratori in progetto, superiori a 3 Hz). Peraltro, non può disconoscersi come il fenomeno del *shadow flickering* possa talvolta costituire, in particolari situazioni, un disturbo per i ricettori più esposti.
Per analizzare i risultati e quindi definire l'effettiva portata del disturbo, è dunque fondamentale conoscere l'esatta destinazione del fabbricato ricettore. Nel seguito saranno considerati potenziali ricettori i soli edifici che, sulla base delle informazioni disponibili e delle verifiche condotte in sito, potrebbero prudenzialmente ricondursi alla fattispecie di "ambienti abitativi".

3 Individuazione dei ricettori

Per le finalità del presente studio, con l'intento di meglio inquadrare i criteri di individuazione dei potenziali edifici sensibili (o ricettori) del proposto impianto eolico, si ritiene opportuno richiamare i contenuti della D.G.R. RAS 59/90 del 2020 e s.m.i. (*Individuazione delle aree non idonee all'installazione di impianti energetici alimentati da fonti energetiche rinnovabili*) e segnatamente al punto 4.3.3 "*Distanze di rispetto dagli insediamenti rurali*".
"*Al fine di limitare gli impatti visivi, acustici e di ombreggiamento, ogni singolo aerogeneratore dovrà rispettare una distanza pari a:*

- *300 metri da corpi aziendali ad utilizzazione agro-pastorale in cui sia accertata la presenza continuativa di personale in orario diurno (h. 6.00 – 22.00);*
- *500 metri da corpi aziendali ad utilizzazione agro-pastorale in cui sia accertata la presenza continuativa di personale in orario notturno (h. 22.00 – 6.00), o case rurali ad utilizzazione residenziale di carattere stagionale;*

- *700 metri da nuclei e case sparse nell'agro, destinati ad uso residenziale, così come definiti all'art. 82 delle NTA del PPR.*"

Secondo tale impostazione, pertanto, possono individuarsi le seguenti categorie di edifici:

Cat.1 – Case rurali ad utilizzazione residenziale (Categoria catastale A);

Cat. 2a – corpi aziendali ad utilizzazione agro-pastorale in cui sia accertata la presenza continuativa di personale in orario notturno;

Cat. 2b – corpi aziendali ad utilizzazione agro-pastorale in cui sia accertata la presenza continuativa di personale in orario diurno;

Cat. 3 – fabbricati ad utilizzazione agro-pastorale con presenza discontinua di personale;

Cat. 4 – fabbricati di supporto alle attività agricole (ricoveri, depositi, stalle);

Cat. 5 – ruderi/fabbricati in abbandono;

Cat. 6 – impianti minieolici esistenti.

Muovendo da tale classificazione, al fine di procedere all'individuazione di potenziali ricettori nelle aree più direttamente interessate dalle installazioni eoliche, ricomprese entro una distanza massima di 1000m[1] dalle postazioni di macchina, si è proceduto ad una individuazione complessiva dei fabbricati con l'ausilio della cartografia ufficiale di riferimento (Carta Tecnica Regionale in scala 1:10.000). Successivamente è stata verificata l'effettiva esistenza e consistenza dall'esame di foto aeree e satellitari nonché attraverso specifici sopralluoghi e riscontri sul campo. In tal modo sono state acquisite le necessarie informazioni preliminari sulle caratteristiche tipologico-costruttive e le condizioni di utilizzo degli edifici. A valle di tali riscontri, è stata inoltre accertata la categoria catastale di appartenenza degli edifici, laddove disponibile.

L'Elaborato IT-PltMo-CLP-GEN-TR-05-Rev.0 (*Report dei fabbricati censiti*) riporta l'individuazione dei fabbricati in accordo con la metodologia precedentemente indicata.

Il censimento ha condotto ad individuare complessivamente n. 317 edifici, o complessi di fabbricati agricoli. Tra questi, all'interno di una distanza di 1000m dagli aerogeneratori, sono stati individuati n. 22 edifici con *Categoria catastale A* e n. 16 edifici che, sebbene non accatastati come abitazioni, si è ritenuto potessero essere ricondotti ad ambienti abitativi in ragione della tipologia costruttiva o di informazioni dirette acquisite sul territorio.

Rispetto a tali fabbricati, in accordo con le indicazioni della D.G.R. RAS 59/90 del 2020, il posizionamento degli aerogeneratori ha assicurato una distanza minima di 500m.

La Tabella 1 riporta, per ciascun ricettore individuato, le relative coordinate secondo il sistema Gauss Boaga, la categoria Catastale e la distanza dal più prossimo aerogeneratore.

Tabella 1 – Ricettori esposti al potenziale disturbo da shadow flickering

ID	Ricettore	GB Est	GB Nord	Dist. Min. WTG	WTG Più prossimo	Categoria catastale
1	F001	1485596	4377173	668	AG15	D10
2	F004	1483720	4375821	965	AG12	A3
3	F005	1483744	4375451	786	AG11	D7
4	F010	1485426	4374613	955	AG10	A3
5	F011	1485384	4374412	885	AG10	A3 - F4
6	F012	1485018	4374219	542	AG10	A2 - D10
7	F013	1485094	4374137	641	AG10	A2 - D10
8	F014	1484954	4373983	602	AG10	A3 - F2
9	F015	1483527	4374228	985	AG10	D10

[1] La distanza di 1000m dagli aerogeneratori, ai fini dell'individuazione dei ricettori, è pari al doppio di quella indicata dalla norma UNI/TS 11143-7 per descrivere l'"area di influenza" di un parco eolico.

ID	Ricettore	GB Est	GB Nord	Dist. Min. WTG	WTG Più prossimo	Categoria catastale
10	F018	1481214	4375987	900	AG09	A2
11	F020	1481193	4374409	714	AG09	D10
12	F024	1481801	4375393	888	AG09	D10 - A4
13	F028	1481702	4374812	809	AG09	A2 - D10
14	F029	1480740	4375615	535	AG09	A4
15	F032	1480462	4375020	504	AG09	C2
16	F033	1480155	4374988	811	AG09	A4
17	F039	1478648	4376809	690	AG06	A3
18	F047	1479587	4375853	651	AG06	Pascolo cespugliato
19	F048	1479374	4375728	627	AG06	A2 - F3
20	F057	1479026	4374888	658	AG08	A2
21	F060	1479499	4374264	757	AG08	A2 - D10
22	F061	1479514	4374095	796	AG08	A3
23	F063	1479302	4373950	656	AG08	A2
24	F071	1477854	4373721	676	AG07	D10
25	F073	1478062	4374146	666	AG02	C2
26	F077	1476587	4374030	567	AG01	Seminativo - Pascolo cespugliato
27	F079	1476937	4373578	533	AG01	Ente urbano
28	F080	1477168	4373135	930	AG01	Uliveto - Pascolo cespugliato
29	F085	1478522	4372418	892	AG07	Ente urbano
30	F091	1478964	4372570	933	AG07	Ente urbano
31	F092	1479102	4372637	978	AG07	Ente urbano
32	F093	1479064	4372622	961	AG07	Ente urbano
33	F109	1485435	4374603	962	AG10	A3
34	F115	1485421	4374427	922	AG10	A3 - F4
35	F116	1485433	4374448	936	AG10	A3
36	F117	1485466	4374453	969	AG10	A3 - F4
37	F118	1485124	4374088	689	AG10	A2 - D10
38	F321	1485042	4374197	572	AG10	A2

4 Ipotesi alla base del calcolo e soglie di riferimento

L'analisi dell'effetto di shadow flickering è stata condotta con l'utilizzo del modulo SHADOW del software WindPro 3.4. Il programma esegue una simulazione completa del percorso del sole durante un intero anno.
I calcoli possono essere eseguiti secondo due scenari: lo scenario peggiore (*worst case*) e il caso reale (*real case*).

Nello scenario *worst case* nessuno, tra i fattori di influenza indicati al capitolo 2 è contemplato nei calcoli del modello di simulazione. In situazioni di cielo coperto o calma di vento, o in caso di direzione del vento tale da porre il piano del rotore in posizione parallela rispetto alla linea sole-ricettore, la WTG non produrrà ombra intermittente, ma il suo contributo teorico è comunque computato dal *software*.
Conseguentemente, nello scenario peggiore, è altamente verosimile che i ricettori considerati saranno soggetti ad un impatto da *shadow flickering* significativamente inferiore a quello ipotizzato dal modello.

Nello scenario *real case*, il software può tenere conto delle reali **condizioni di funzionamento degli aerogeneratori** (in termini di ore di funzionamento attese per ogni settore angolare di provenienza del vento) nonché delle condizioni di **Eliofania**, ossia di durata media del soleggiamento della specifica zona di studio.

Peraltro, in entrambi gli scenari di calcolo, se la simulazione contempla l'effetto dell'orografia sulla propagazione dell'ombra, la stessa ignora l'azione schermante "sito-specifica" esercitata dai manufatti e dalle alberature. In altre parole, il calcolo è sempre conservativo e rappresenta quindi il massimo rischio potenziale di disturbo.
In definitiva, affinché il fenomeno dell'ombra intermittente possa costituire un disturbo per i soggetti più sensibili dovrebbero verificarsi simultaneamente le seguenti circostanze:

- il vento deve soffiare ad una velocità superiore a 3 m/s (velocità di *cut-in* del rotore);
- presenza di luminosità solare diretta;
- l'osservatore deve risultare sufficientemente vicino alla sorgente di *shadow flickering*;
- il ricettore deve essere effettivamente esposto al campo di luce tremolante;
- l'illuminazione dell'ambiente residenziale deve essere bassa;
- il contrasto tra luci ed ombre deve essere alto;
- non devono essere presenti schermature che ostacolino la propagazione dell'ombra (come tendaggi o alberature);
- gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Per le finalità del presente studio, in assenza di una specifica disciplina normativa nazionale o regionale, si è fatto riferimento alle linee guida elaborate dal Gruppo Federale tedesco di Controllo delle Emissioni (*Bund-/Länder-Arbeitsgemeinschaft für Immissionsschutz - LAI*) – aggiornamento 2020.
Per la valutazione degli effetti del tremolio dell'ombra, peraltro, lo stesso legislatore tedesco non ha finora emanato, né risulta che sia in procinto di emanare, norme giuridicamente vincolanti.
Secondo le richiamate linee guida, affinché il fenomeno di ombreggiamento sia significativo dovrebbero essere simultaneamente verificate le seguenti circostanze:

- L'angolo del sole sopra l'orizzonte deve essere almeno 3°;
- l'ingombro della pala della turbina eolica deve coprire almeno il 20% del disco solare.
- Il massimo ombreggiamento su un edificio secondo tali linee-guida è stabilito in:
  - 30 ore di ombreggiamento annuale;
  - 30 minuti di ombreggiamento giornaliero.

<u>In tali archi temporali (30 ore/anno e 30 minuti/giorno), trattandosi di un disturbo effettivamente avvertito dagli occupanti l'edificio, dovrebbero risultare simultaneamente verificate le seguenti condizioni</u>:

- gli ambienti esposti all'ombreggiamento sono occupati;
- gli occupanti sono svegli.

Considerata l'esigua probabilità che si verifichino contemporaneamente tutte le condizioni precedentemente illustrate per l'intera durata del fenomeno, ne deriva che il risultato del calcolo rappresenta comunque una stima prudenziale dell'impatto.
La Figura 1 e la **Errore. L'origine riferimento non è stata trovata.** mostrano i parametri necessari al modello utilizzato dal modulo SHADOW per valutare l'impatto del tremolio dell'ombra.

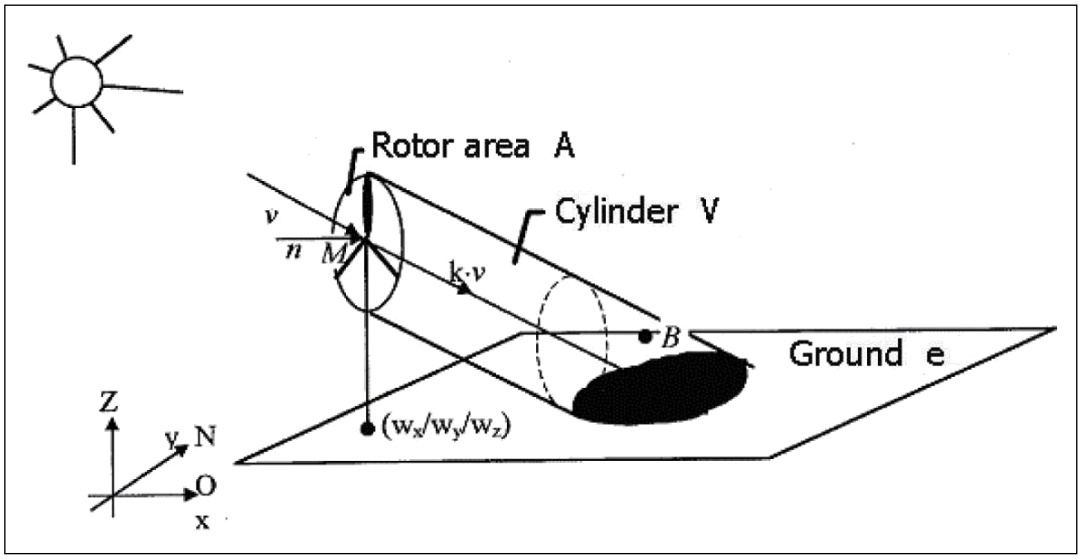

Figura 1 - Rappresentazione schematica della proiezione dell'ombra del rotore.

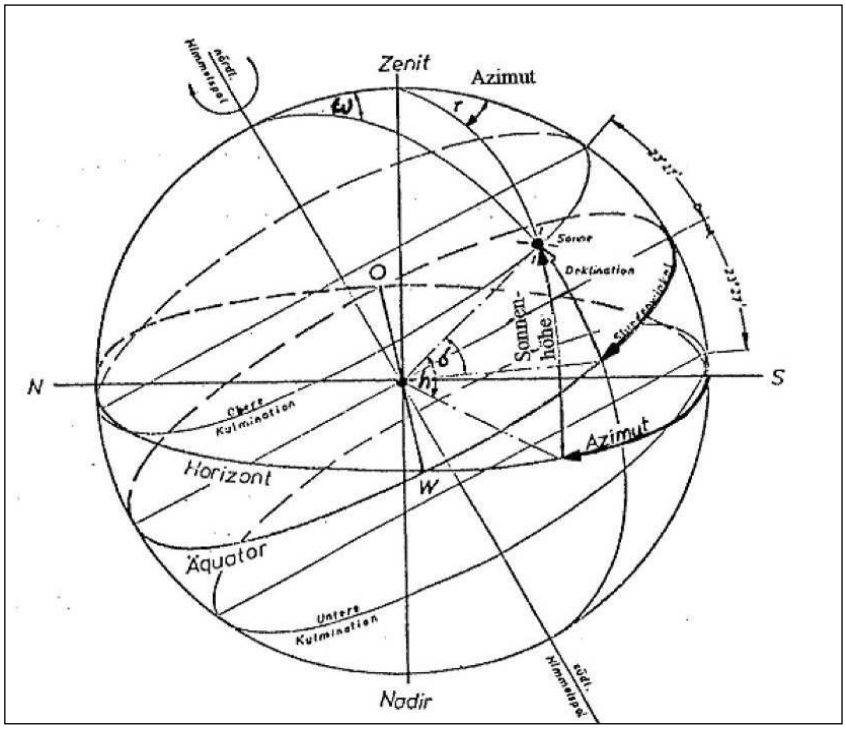

Figura 2 - Schema dei moti terrestri e parametri di calcolo.

5 Lo scenario peggiore (*worst case*)

Questi calcoli sono basati sullo scenario più conservativo (ombra massima astronomica, ossia basata sulla posizione del sole rispetto alle WTG). Se il cielo è coperto o c'è calma di vento, o la direzione del vento è tale da porre il piano del rotore in posizione parallela rispetto alla linea sole-edificio, la WTG non produrrà ombra, ma la sua influenza apparirà comunque nei calcoli. In altre parole, il calcolo descrive lo scenario peggiore possibile, e rappresenta quindi il massimo rischio potenziale di impatto. Per ciascun ricettore il software produce un calendario che indica i giorni ed i periodi di tempo in cui l'ombra sarà presente.

6 Lo scenario reale (*real case*)

Oltre al calcolo che contempla le ore di "ombra massima astronomica" (detta anche ombra peggiore), il software WINDPRO consente di configurare i parametri statistici per calcolare l'"ombra meteorologica probabile" (detta anche ombra reale). In particolare, possono essere configurati due parametri statistici:

1. Statistica delle ore di funzionamento. È il periodo in cui le turbine saranno operative per ciascuna direzione di provenienza del vento nel corso dell'anno.

2. Statistica dell'eliofania. È la percentuale di ore di sole durante il dì (dall'alba al tramonto). Questa varia notevolmente da luogo a luogo, e si rende opportuno utilizzare, pertanto, una statistica proveniente da stazioni di misura vicine al sito.

WindPRO combina ZVI ed il calcolo dell'ombra in modo da escludere il contributo delle turbine non visibili dai recettori. Questo vale anche per la mappa dell'ombra, in cui saranno incluse solo le WTG visibili da ciascun punto di griglia.

Ai fini del calcolo del tremolio dell'ombra il software di simulazione considera i seguenti parametri:

- diametro del sole, D (1.390.000 km);
- distanza Terra-Sole, d (150.000.000 km);
- angolo di attacco (3°);
- coordinate geografiche e altitudine delle turbine in progetto;
- altezza al mozzo (125 m) e diametro del rotore (162 m);
- coordinate dei recettori;
- recettori considerati in modalità "serra", assumendo che vengano interessati dal fenomeno di shadow-flickering indipendentemente dall'orientamento delle finestre (ipotesi conservativa);
- modello digitale del terreno;
- eliofania del sito;
- statistica delle ore di funzionamento degli aerogeneratori in funzione delle frequenze di provenienza del vento su 12 quadranti convenzionali;
- modello di calcolo della simulazione, che tiene conto sia dell'orbita terrestre rispetto al Sole (rivoluzione), sia della rotazione rispetto al proprio asse.

7 Risultati

Il risultato dei calcoli è reso disponibile dal programma di simulazione (*Windpro*) sotto diversi formati:

- Tabellare, (calendario per ciascun ricettore) nel quale per ogni giorno dell'anno sono indicate le ore di luce e l'intervallo di tempo di esposizione all'ombra con l'orario in cui si verifica il fenomeno;

- Grafico, (per ciascun ricettore) nel quale vengono rappresentati i periodi dell'anno in cui si verifica il fenomeno, l'orario e le turbine responsabili dell'ombra;
- grafico globale, con la rappresentazione di isolinee rappresentanti l'incidenza dell'ombra espressa in ore/anno.

Con riferimento allo Scenario di progetto, le isolinee d'ombra sono state rappresentate su specifica tavola grafica, in scala adeguata alla dimensione territoriale da rappresentare, per facilitarne la lettura. La tavola è stata realizzata, pertanto, su base cartografica in scala 1:10.000 (Elaborato IT-PltMo-CLP-OMB-DW-01).

I risultati forniti dal modello di calcolo consentono di valutare approssimativamente sia l'impatto puntuale sul singolo ricettore, sia l'impatto distribuito sul territorio (movimento e persistenza dell'ombra).

Nello specifico, all'interno degli allegati report di calcolo sono indicati, per il singolo ricettore, i valori totali di interferenza da *shadow flickering* (espressi in h/anno), il numero di giorni in cui si verifica l'interferenza ed infine la durata massima per singolo giorno.

I risultati numerici delle simulazioni modellistiche, condotti con riferimento a ciascuno scenario di calcolo (*worst e real case*), sono riportati in Appendice.

8 Analisi e post-elaborazione dei risultati

Le risultanze del calcolo modellistico atto a stimare i valori totali di potenziale interferenza da *shadow flickering* in corrispondenza dei ricettori nello scenario di progetto sono riportate in Tabella 2.

Tabella 2 - Risultati dei calcoli di ombreggiamento intermittente presso i ricettori considerati (scenario cumulativo con impianti eolici in esercizio nell'areale interessato dal progetto)

ID	Ricettore	WTG SF	WTG Più prossimo	Dist. Min. WTG	h/anno SF Worst Case	h/giorno SF Worst Case	h/anno SF Real Case
1	F001	AG15	AG15	668	93:34:00	00:58	**32:08:00**
2	F004	AG11, AG12, AG13	AG12	965	79:29:00	00:40	**29:15:00**
3	F005	AG11, AG12, AG13	AG11	786	101:36:00	00:48	**40:39:00**
4	F010	AG10, AG11	AG10	955	25:16:00	00:39	**08:27**
5	F011	AG10	AG10	885	29:03:00	00:42	**11:53**
6	F012	AG10	AG10	542	124:33:00	01:12	**62:55:00**
7	F013	AG10	AG10	641	82:02:00	01:02	**41:48:00**
8	F014	-	AG10	602	00:00	00:00	**00:00**
9	F015	AG10	AG10	985	41:41:00	00:52	**17:05**
10	F018	-	AG09	900	04:27	00:15	**01:38**
11	F020	-	AG09	714	11:27	00:20	**04:35**
12	F024	AG09	AG09	888	56:52:00	00:42	**20:04**
13	F028	AG09	AG09	809	109:44:00	00:50	**48:24:00**
14	F029	AG05, AG06	AG09	535	16:41	00:20	**08:16**
15	F032	AG08, AG09, AG05	AG09	504	162:19:00	01:15	**69:35:00**

ID	Ricettore	WTG SF	WTG Più prossimo	Dist. Min. WTG	h/anno SF Worst Case	h/giorno SF Worst Case	h/anno SF Real Case
16	F033	AG08, AG09, AG04	AG09	811	61:03:00	00:49	**24:28:00**
17	F039	AG06	AG06	690	41:31:00	00:51	**12:51**
18	F047	AG03, AG04, AG05, AG09	AG06	651	67:21:00	00:44	**27:01:00**
19	F048	AG03, AG04, AG05, AG09	AG06	627	124:21:00	00:58	**57:29:00**
20	F057	AG02, AG03, AG09	AG08	658	29:39:00	00:44	**11:57**
21	F060	AG02, AG03, AG08	AG08	757	68:10:00	00:58	**29:56:00**
22	F061	AG03, AG07, AG08	AG08	796	99:01:00	00:49	**39:35:00**
23	F063	AG02, AG07	AG08	656	49:40:00	00:36	**12:41**
24	F071	AG01, AG07	AG07	676	125:24:00	00:59	**48:48:00**
25	F073	AG01, AG02, AG08	AG02	666	127:18:00	00:55	**56:04:00**
26	F077	AG01, AG02, AG07	AG01	567	119:54:00	01:05	**50:15:00**
27	F079	AG07, AG08	AG01	533	11:36	00:21	**04:35**
28	F080	AG07	AG01	930	13:20	00:28	**05:37**
29	F085	-	AG07	892	00:00	00:00	**00:00**
30	F091	-	AG07	933	07:08	00:21	**02:56**
31	F092	-	AG07	978	09:53	00:25	**04:06**
32	F093	-	AG07	961	09:00	00:24	**03:45**
33	F109	AG10	AG10	962	24:21:00	00:39	**08:13**
34	F115	AG10	AG10	922	26:24:00	00:41	**10:42**
35	F116	AG10	AG10	936	25:19:00	00:40	**10:06**
36	F117	AG10	AG10	969	23:33	00:39	**09:22**
37	F118	AG10	AG10	689	58:01:00	00:56	**29:35:00**
38	F321	AG10	AG10	572	112:11:00	01:09	**56:53:00**

Come si può osservare dall'esame della Tabella 6.1, l'incidenza dell'ombreggiamento intermittente presso i ricettori considerati nello "scenario reale" è prevalentemente al disotto del valore guida di 30 h/anno. Fanno eccezione n. 12 fabbricati su 38, presso i quali l'ombreggiamento intermittente atteso è risultato potenzialmente superiore alla soglia guida con valori variabili nell'intervallo 32:08 h/anno (F001) – 69:35 h/anno (F032).

Nel seguito si procederà ad esaminare singolarmente le potenziali situazioni di maggiore incidenza del fenomeno di SF, riferibili ai fabbricati F001, F005, F012, F013, F028, F032, F048, F061, F071, F073, F077 e F321, pervenendo alla conclusione che, in ragione degli esistenti ostacoli alla propagazione dell'ombra e/o delle misure di mitigazione attuabili, può ragionevolmente escludersi che lo *shadow-flickering* possa rappresentare un effettivo disturbo a carico degli occupanti gli edifici considerati.

8.1 Ricettore F001

Il calendario grafico dell'ombra relativo al ricettore F001 (Figura 3) mostra come il fenomeno dello SF sia atteso nelle prime ore del mattino (nella fascia oraria 08:00-09:30) ad opera dell'aerogeneratore AG15 (indicativamente da novembre a febbraio).

Al fine di valutare la significatività dell'ombreggiamento intermittente atteso presso il ricettore si ritiene opportuno evidenziare che, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio, dovrebbero essere verificate tutte le seguenti circostanze:

- Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
- Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
- gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione (peraltro, nel caso specifico, superiore alla soglia di riferimento di appena 2 h/anno), tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

In ragione di quanto precede, avuto riguardo della conservatività delle stime[2], è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione di una alberatura schermante sul lato sudest del fabbricato.

[2] Si ricorda che la soglia di 30 h/anno fa riferimento alle ore di disturbo effettivo, il che presuppone che gli occupanti l'edificio siano effettivamente presenti nei locali interessati dal fenomeno e la circostanza che gli stessi siano svegli.

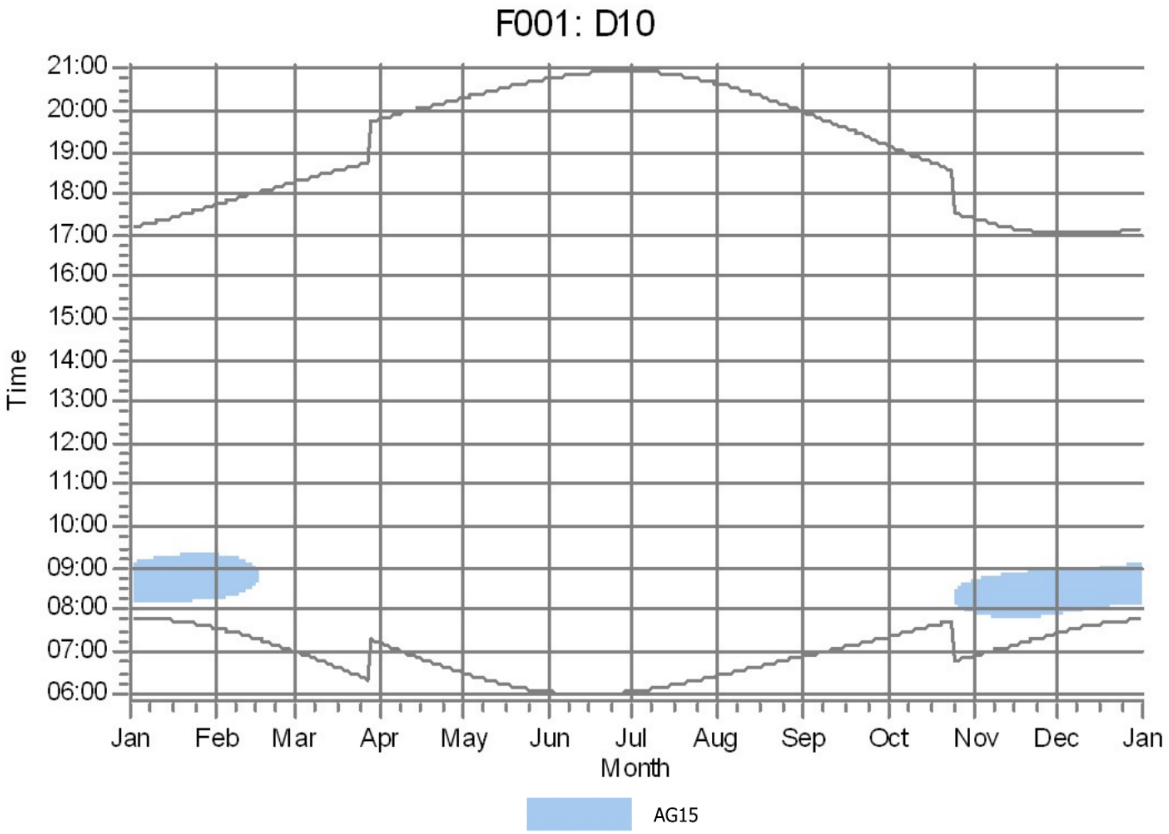

Figura 3 – Calendario dell'ombra relativo al ricettore F001

Figura 4 – Posizionamento del ricettore F001 rispetto all'aerogeneratore AG15, all'origine del potenziale effetto di shadow-flickering

Figura 5 - Ricettore F001 ed isolinee d'ombra proiettate dall'aerogeneratore AG15 (vista zenitale). Si noti come la creazione di una barriera verde sul lato sudest del fabbricato ad uso abitativo potrebbe rappresentare, ove necessario, un'efficacie misura di mitigazione

8.2 Ricettore F005

Il calendario grafico dell'ombra relativo al ricettore F005 (Figura 6) mostra come il fenomeno dello SF sia prevalentemente atteso nelle prime ore del mattino (nella fascia oraria 06:00-07:30) ad opera degli aerogeneratori AG12 e AG13 (indicativamente da maggio a settembre). Un ulteriore contributo sarà apportato dall'aerogeneratore AG11 nel periodo invernale e autunnale all'interno della fascia oraria 07:30-08:30.

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F005 si ritiene opportuno formulare le seguenti considerazioni:

- La facciata maggiormente esposta al fenomeno dello SF, riferibile all'aerogeneratore AG11, è quella sudest, contraddistinta da superfici fenestrate piuttosto limitate, risultando conseguentemente attenuata l'incidenza dell'ombreggiamento (Figura 9);
- la distanza dagli aerogeneratori AG12 e AG13 (a nordest del fabbricato) è significativa (maggiore di 900 metri in riferimento a AG12 e superiore ai 1.500 metri per AG13), il che presuppone che le relative ombre risulteranno "sfocate" e, dunque, meno avvertibili;
- Come evidenziato in precedenza, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;

- Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
- gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

In ragione di quanto precede, avuto riguardo della conservatività delle stime, è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti l'edificio.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione di una alberatura schermante sul lato sudest del fabbricato.

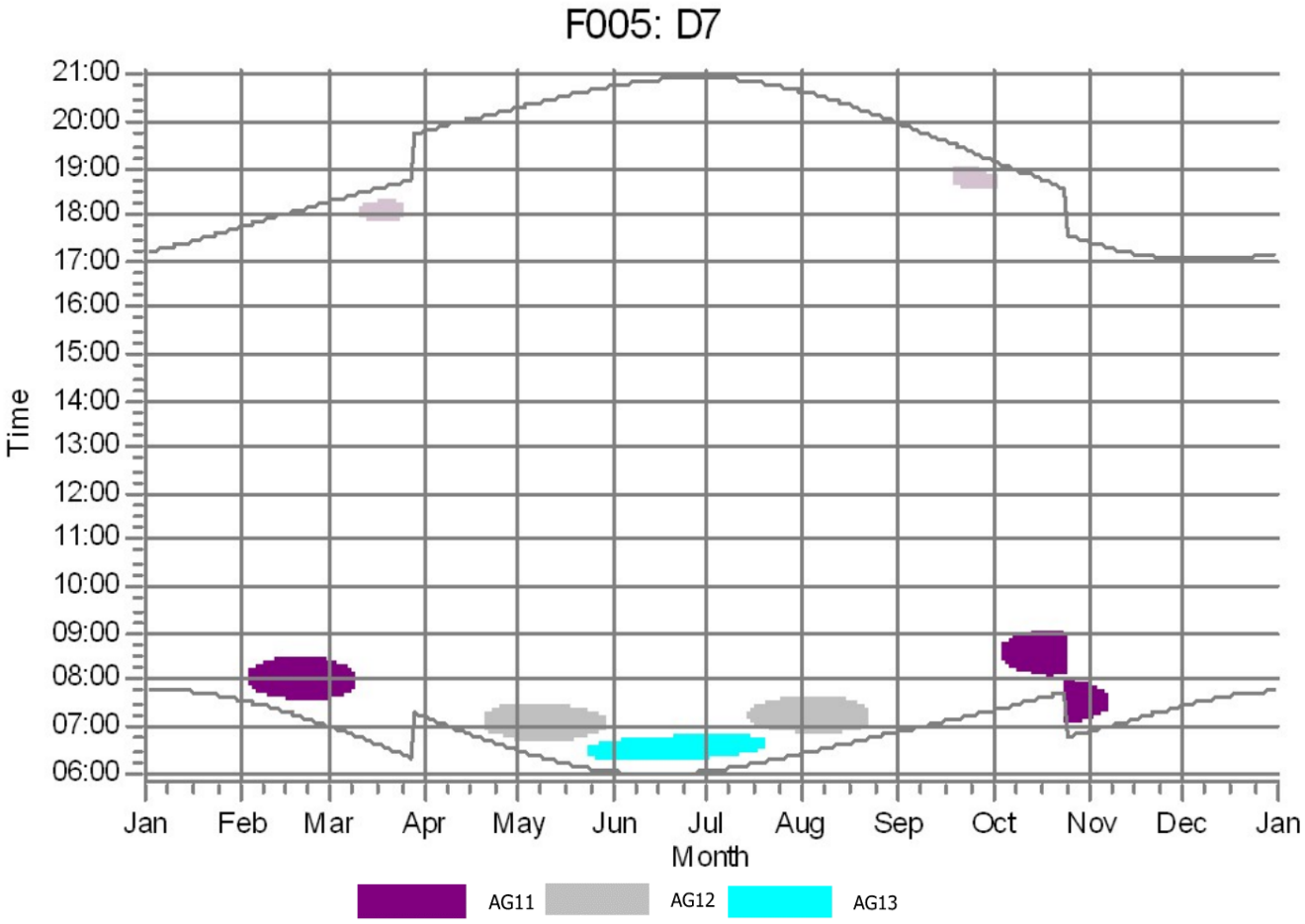

Figura 6 – Calendario dell'ombra relativo al ricettore F005

Figura 7 – Posizionamento del ricettore F005 rispetto agli aerogeneratori AG11, AG12 e AG13, all'origine del potenziale effetto di shadow-flickering

Figura 8.8 – Edificio F005 ed isolinee d'ombra (vista zenitale). Si noti come la creazione di una barriera verde sul lato sudest potrebbe rappresentare, ove necessario, un'efficacie misura di mitigazione

Figura 9 – Prospetto sudest del fabbricato F005, contraddistinto da superfici fenestrate limitate

8.3 Ricettori F012, F013 e F321

I calendari grafici dell'ombra relativi ai ricettori F012, F321 e F013 (Figura 10) mostrano come il fenomeno dello SF sia atteso nel tardo pomeriggio (nella fascia oraria 18.30 – 20.00) ad opera dell'aerogeneratore AG10 (indicativamente da maggio ad agosto).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F001 si ritiene opportuno formulare le seguenti considerazioni:

- in prossimità dei prospetti nordest dei fabbricati sono presenti delle alberature, in grado di esercitare un'efficace azione schermante nelle ore serali, allorché il sole è basso sull'orizzonte, in riferimento all'ombreggiamento esercitato dall'aerogeneratore AG10;
- come già rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

In ragione di quanto precede, avuto riguardo della conservatività delle stime, è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti gli edifici in esame.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali il rafforzamento dell'alberatura schermante sul lato nordest dei fabbricati.

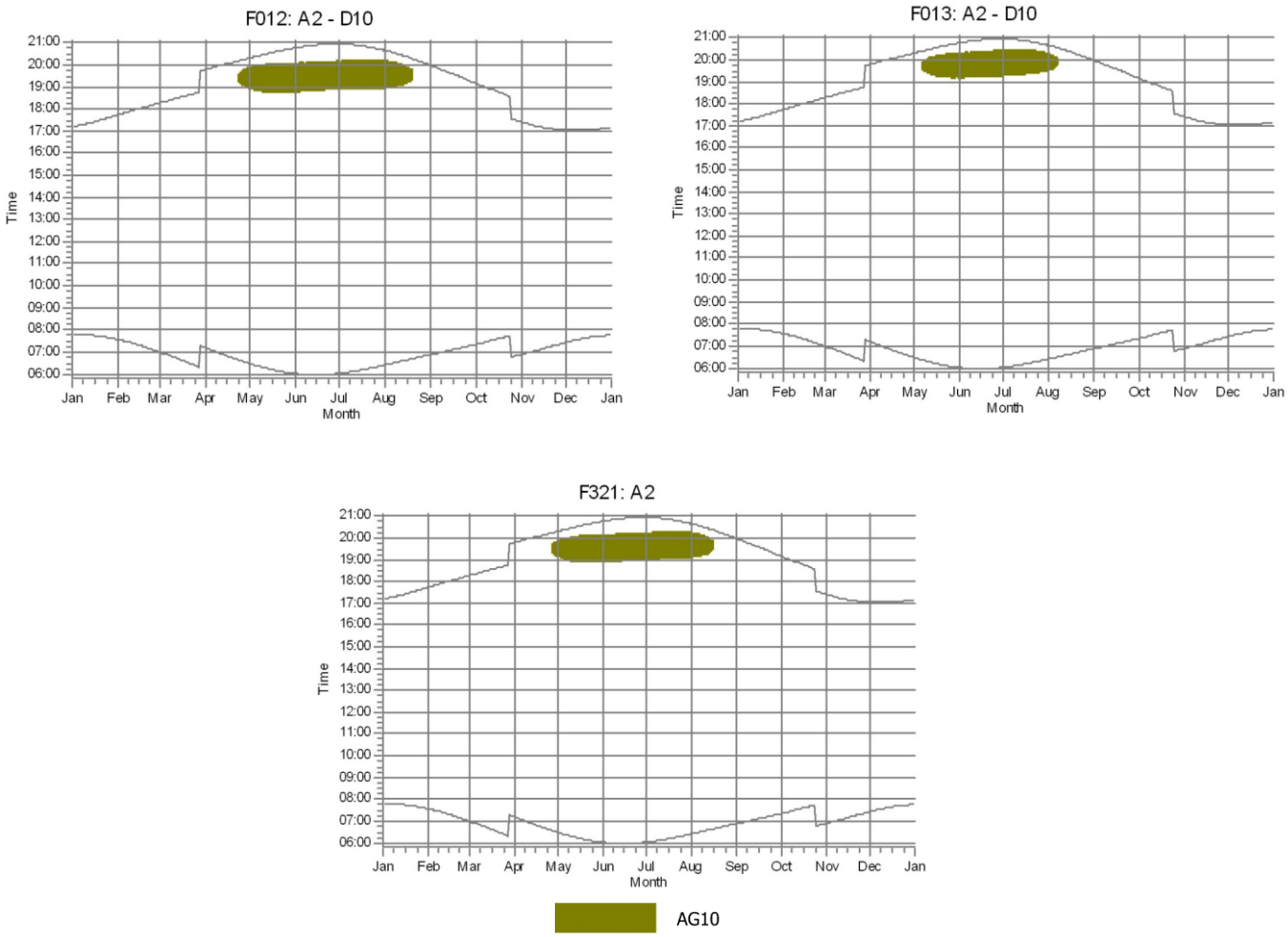

Figura 10 – Calendari dell'ombra relativi ai ricettori F012, F013 e F321

Figura 11 – Posizionamento dei ricettori F012, F013 e F321 rispetto all'aerogeneratore AG10, all'origine del potenziale effetto di shadow-flickering

Figura 8.12 – Edificio F012, F013 e F321 ed isolinee d'ombra (vista zenitale). Si noti come la presenza di alberature al perimetro degli edifici possa rappresentare una efficace barriera schermante rispetto all'ombreggiamento originato dall'aerogeneratore Ag10

8.4 Ricettore F028

Il calendario grafico dell'ombra relativo al ricettore F028 (Figura 13) mostra come il fenomeno dello SF sia prevalentemente atteso nelle ore serali (nella fascia oraria 06:00-07:30) ad opera dell'aerogeneratore AG09 (indicativamente da maggio a agosto). Un ulteriore contributo sarà apportato dagli esistenti aerogeneratori del parco eolico esistente nel periodo invernale e primaverile all'interno della fascia oraria 07:00-09:00.

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F028 si ritiene opportuno formulare le seguenti considerazioni:

- in prossimità del prospetto ovest del fabbricato F028, esposto all'ombreggiamento esercitato dall'aerogeneratore AG09, sono presenti delle alberature in grado di esercitare un'efficace azione schermante nelle ore serali, allorché il sole è basso sull'orizzonte (Figura 16);
- come già rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

In ragione di quanto precede, avuto riguardo della conservatività delle stime, è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti l'edificio.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali il rafforzamento dell'alberatura schermante sul lato ovest del fabbricato.

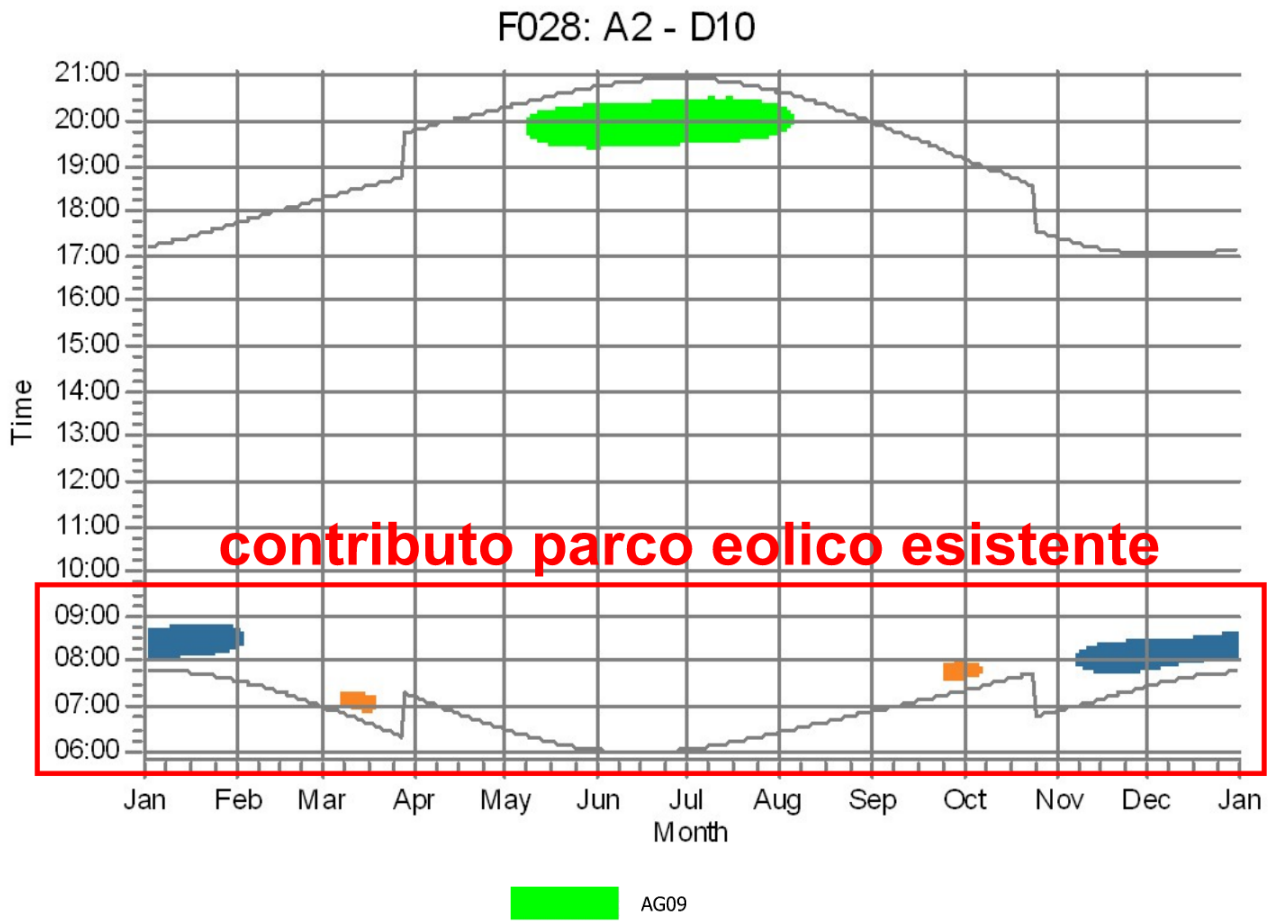

Figura 13 – Calendario dell'ombra relativo al ricettore F028

Figura 14 – Posizionamento del ricettore F028 rispetto all'aerogeneratore AG09 all'origine del potenziale effetto di shadow-flickering

Figura 8.15 – Edificio F001 ed isolinee d'ombra proiettate dall'aerogeneratore AG09 (vista zenitale). Si noti come la presenza di fasce alberate in corrispondenza del lato ovest dell'edificio possa esercitare un'efficace azione schermante rispetto al potenziale ombreggiamento esercitato dall'aerogeneratore in progetto

Figura 16 – Prospetto ovest del fabbricato F028. Si noti la presenza di alberature in grado di esercitare una efficace azione schermante rispetto all'ombreggiamento apportato dall'aerogeneratore AG09 nella tarda serata del periodo estivo.

8.5 Ricettore F032

Il calendario grafico dell'ombra relativo al ricettore F032 (Figura 13) mostra come il fenomeno dello SF sia prevalentemente atteso nelle ore mattutine (nella fascia oraria 07:00-08:00) ad opera dell'aerogeneratore AG09 (indicativamente da aprile a settembre). Ulteriori limitati contributi saranno apportati dall'aerogeneratore AG05 (alla sera nei mesi di giugno-luglio entro la fascia oraria 20:00-21:00) e dall'aerogeneratore AG08 (nel tardo pomeriggio dei mesi invernali entro la fascia oraria 17:00-18:00).

Al fine di valutare la significatività dell'ombreggiamento intermittente atteso presso il ricettore si ritiene opportuno evidenziare che, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio, dovrebbero essere verificate tutte le seguenti circostanze:

- Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
- Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
- gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione (peraltro, nel caso specifico, superiore alla soglia di riferimento di appena 2 h/anno), tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

In ragione di quanto precede, avuto riguardo della conservatività delle stime, è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione di una alberatura schermante sul lato est del fabbricato.

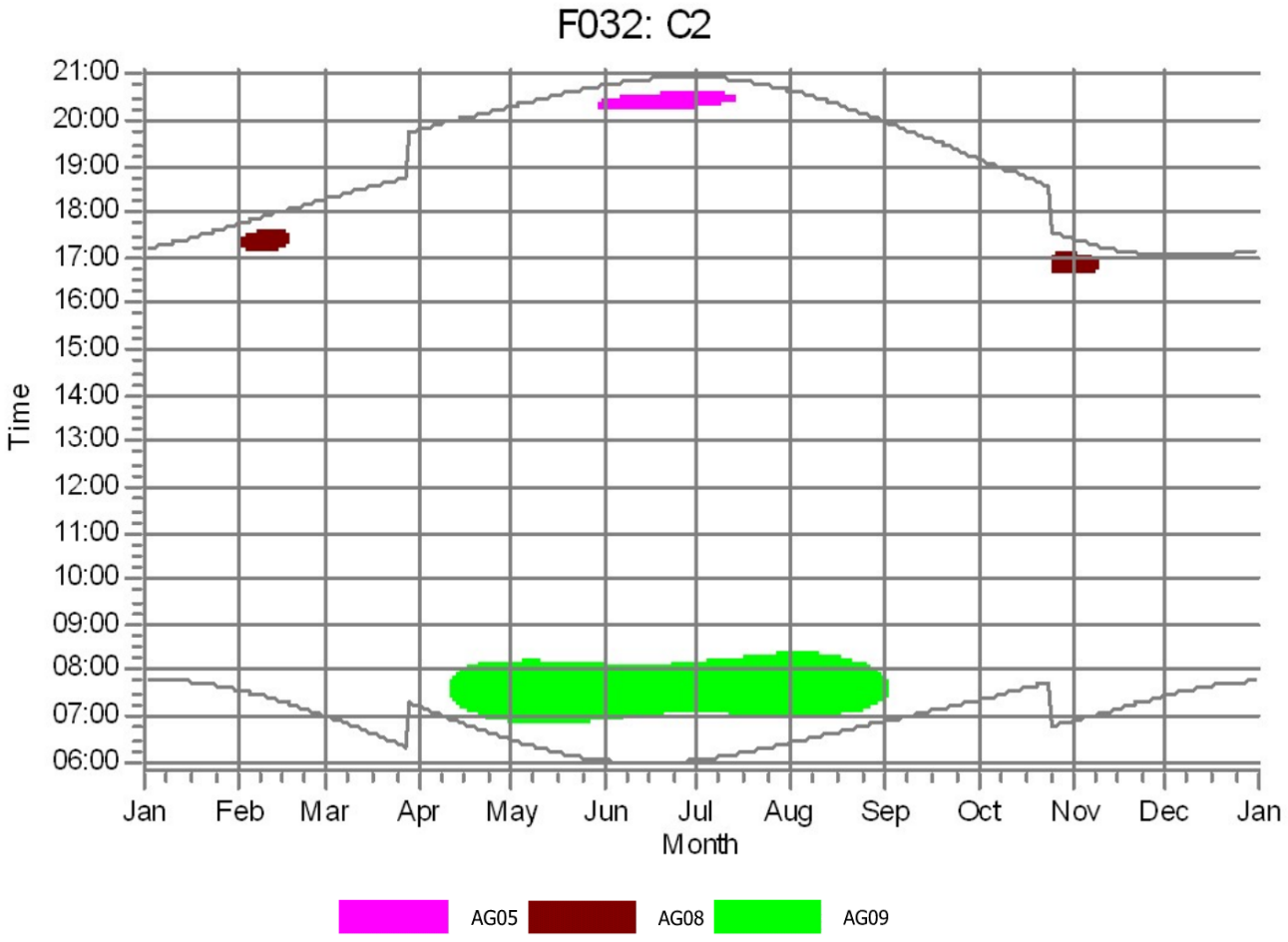

Figura 17 – Calendario dell'ombra relativo al ricettore F032

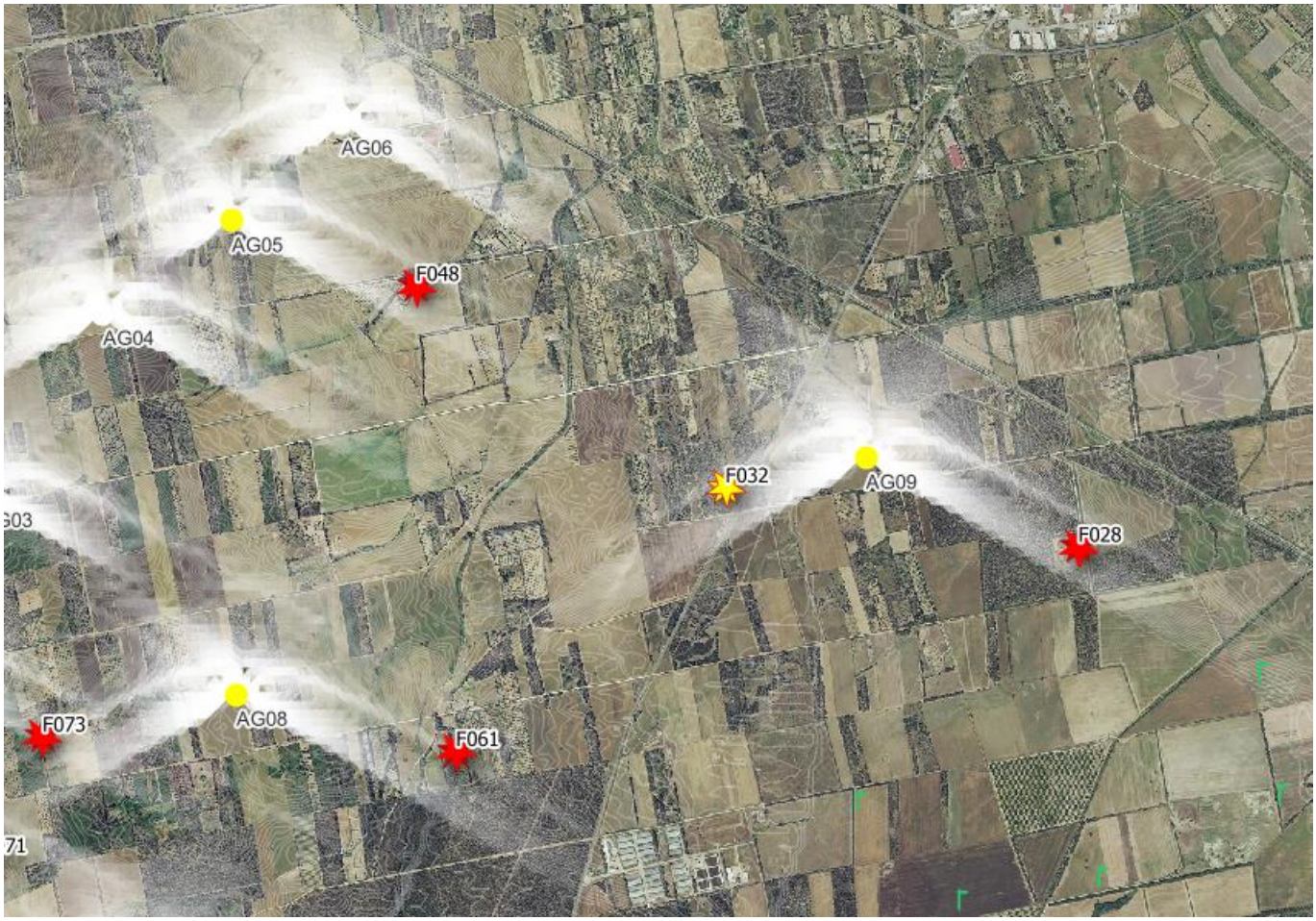

Figura 18 – Posizionamento del ricettore F032 (al centro nell'immagine) rispetto agli aerogeneratori AG05, AG08 e AG09 all'origine del potenziale effetto di shadow-flickering

Figura 8.19 – Edificio F001 ed isolinee d'ombra proiettate dagli aerogeneratori AG05, AG08, AG09 (vista zenitale). Si noti come la presenza di fasce alberate in corrispondenza perimetralmente all'edificio possa esercitare un'efficace azione schermante rispetto al potenziale ombreggiamento apportato dagli aerogeneratori in progetto

8.6 Ricettore F048

Il calendario grafico dell'ombra relativo al ricettore F048 (Figura 13) mostra come il fenomeno dello SF sia prevalentemente atteso nelle ore serali (nella fascia oraria 19:00-20:00) ad opera dell'aerogeneratore AG05 (indicativamente da maggio ad agosto). Ulteriori limitati contributi saranno apportati dall'aerogeneratore AG03 (al tardo pomeriggio nei mesi di febbraio e novembre entro la fascia oraria 17:00-18:00) e dall'aerogeneratore AG04 (in tarda serata dei mesi invernali, indicativamente entro la fascia oraria 18:00-19:00).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F048 si ritiene opportuno formulare le seguenti considerazioni:

- in prossimità del prospetto nordovest del fabbricato F048 sono presenti dei filari ad eucaliptus in grado di esercitare un'efficace azione schermante nelle ore serali del periodo estivo, in particolare rispetto all'ombreggiamento esercitato dall'aerogeneratore AG05 (Figura 23);
- come già rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

In ragione di quanto precede, avuto riguardo della conservatività delle stime, è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà estremamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" e da non arrecare apprezzabili disturbi agli occupanti l'edificio.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione di una ulteriore alberatura schermante sul lato nordovest del fabbricato.

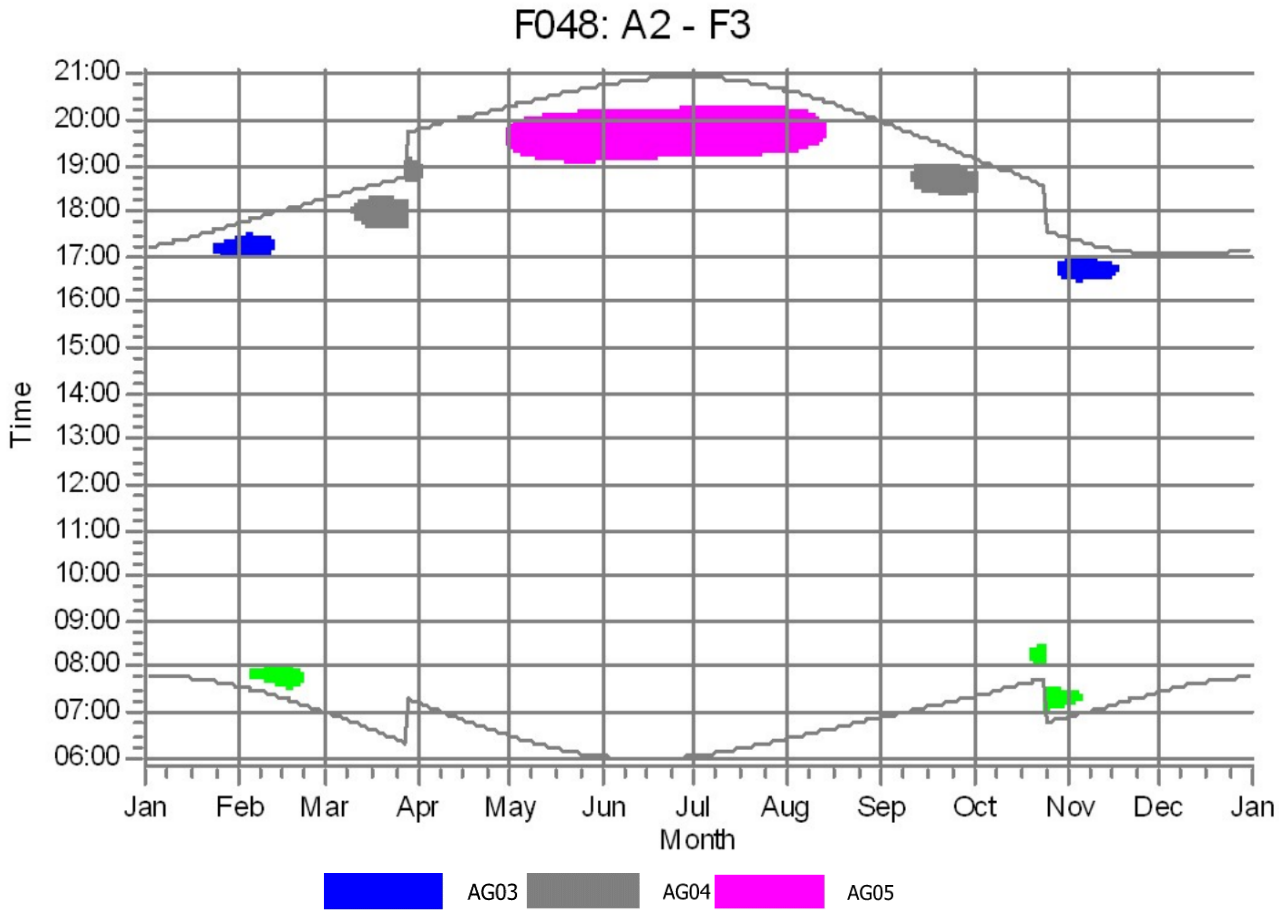

Figura 20 – Calendario dell'ombra relativo al ricettore F048

Figura 21 – Posizionamento del ricettore F048 rispetto all'aerogeneratore AG05 a cui è attribuibile il principale contributo allo shadow-flickering

Figura 8.22 – Edificio F048 ed isolinee d'ombra proiettate dagli aerogeneratori AG03, AG04, AG05 e AG09 (vista zenitale). Si noti come la presenza di fasce alberate in corrispondenza del lato nordovest dell'edificio possa esercitare un'efficace azione schermante rispetto al potenziale ombreggiamento apportato dall'aerogeneratore AG05

Figura 23 – Prospetto sudest del ricettore F048. Si noti la presenza, alle spalle del prospetto retrostante esposto a nordovest, di un filare di eucaliptus in grado di esercitare una efficace azione schermante rispetto all'ombreggiamento esercitato dall'aerogeneratore AG05

8.7 Ricettore F061

Il calendario grafico dell'ombra relativo al ricettore F061 (Figura 13) mostra come il fenomeno dello SF sia prevalentemente atteso nelle ore serali (nella fascia oraria 19:00-21:00) ad opera dell'aerogeneratore AG08 (indicativamente da aprile a settembre). Ulteriori limitati contributi saranno apportati dall'aerogeneratore AG03 (alla sera nei mesi di giugno-agosto entro la fascia oraria 20:00-21:00) e dall'aerogeneratore AG07 (nelle ore mattutine dei mesi estivi entro la fascia oraria 08:00-09:30).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F001 si ritiene opportuno formulare le seguenti considerazioni:

- La facciata maggiormente esposta al fenomeno dello SF è quella ovest, contraddistinta da superfici fenestrate piuttosto limitate, risultando conseguentemente attenuata l'incidenza dell'ombreggiamento (Figura 27);
- la distanza dagli aerogeneratori AG07 e AG09 (a est-sudovest e nordest del fabbricato rispettivamente) è significativa (superiore ai 1.300 metri), il che presuppone che le relative ombre risulteranno "sfocate" e, dunque, meno avvertibili;
- in prossimità del prospetto ovest del fabbricato F061, a distanza di circa 40 metri, sono presenti delle alberature in grado di esercitare un'efficace azione schermante nelle ore serali del periodo estivo, in particolare rispetto all'ombreggiamento esercitato dall'aerogeneratore AG05;
- Come già rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;

- Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
- gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

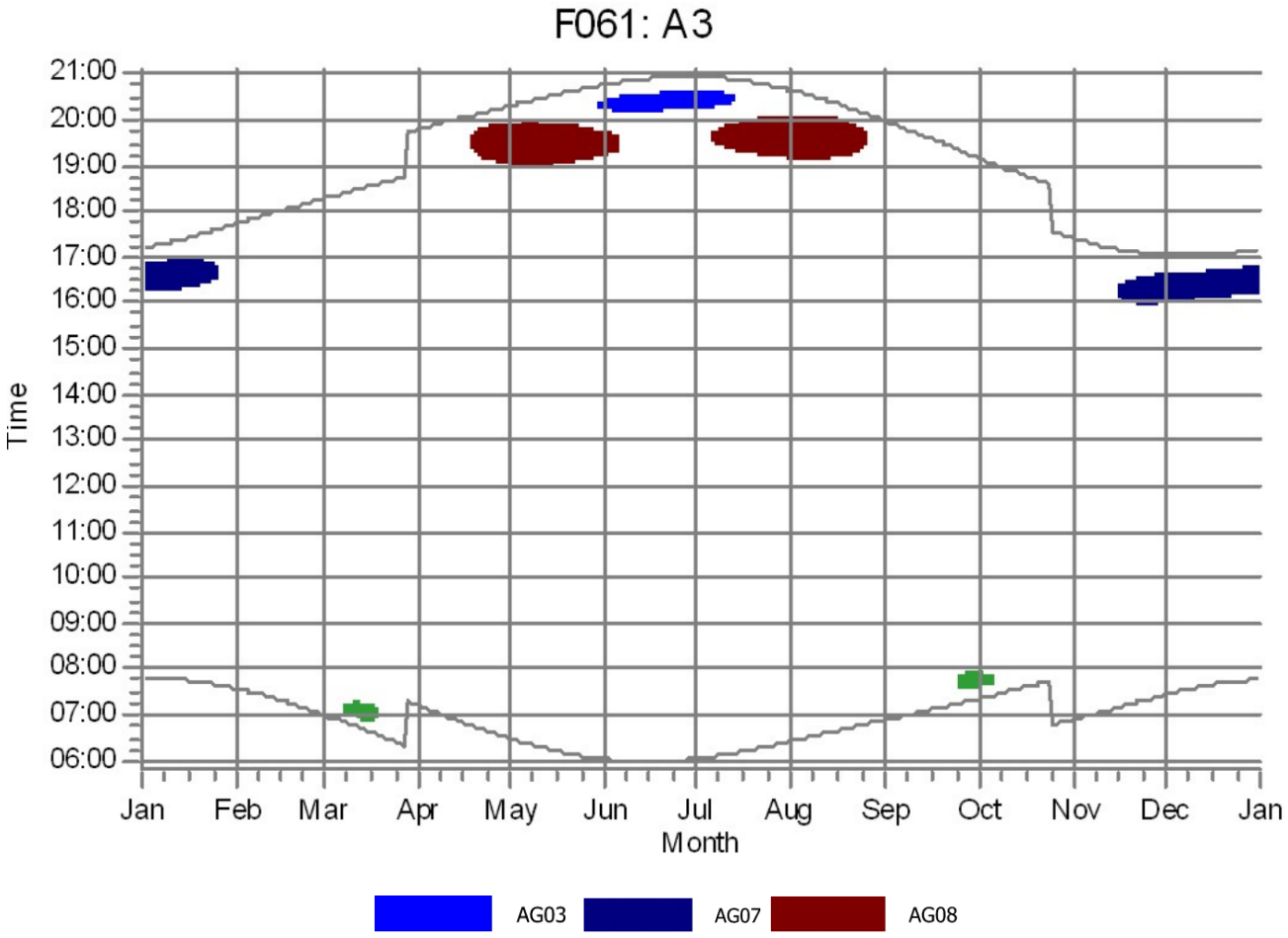

Figura 24 – Calendario dell'ombra relativo al ricettore F061

Figura 25 – Posizionamento del ricettore F061 rispetto all'aerogeneratore AG08 a cui è attribuibile il principale contributo allo shadow-flickering

Figura 8.26 – Edificio F061 ed isolinee d'ombra proiettate dagli aerogeneratori AG03, AG07 e AG08 (vista zenitale). Si noti come la creazione di una barriera verde sul lato ovest potrebbe rappresentare, ove necessario, un'efficacie misura di mitigazione

Figura 27 - Prospetto ovest del fabbricato F061, contraddistinto da superfici fenestrate piuttosto limitate

8.8 Ricettore F071

Il calendario grafico dell'ombra relativo al ricettore F071 (Figura 13) mostra come il fenomeno dello SF sia prevalentemente atteso nelle ore mattutine (nella fascia oraria 08:00-09:30) ad opera dell'aerogeneratore AG07 (indicativamente da novembre a febbraio). Un ulteriore limitato contributo sarà apportato dall'aerogeneratore AG01 (alla sera nei mesi di giugno-agosto entro la fascia oraria 19:30-20:30).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F071 si ritiene opportuno formulare le seguenti considerazioni:

- La porzione di edificio maggiormente esposta al fenomeno dello SF riferibile all'aerogeneratore AG01 è quella nordovest, contraddistinta da una porzione del complesso di edifici destinata a funzioni aziendali (deposito), e pertanto non abitata (Figura 31);
- Come già rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

Ad ogni buon conto, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione di una alberatura schermante sul lato est del fabbricato.

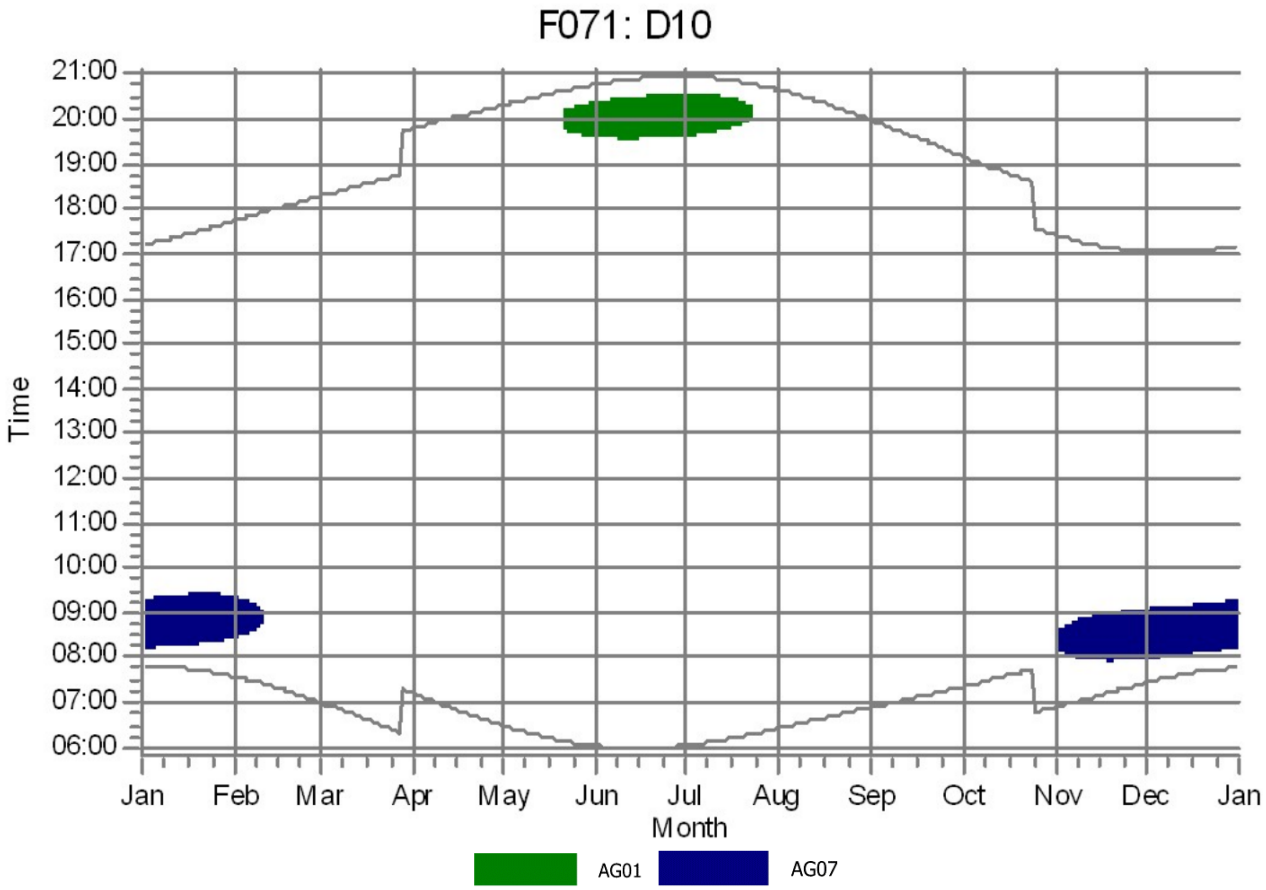

Figura 28 – Calendario dell'ombra relativo al ricettore F071

Figura 29 – Posizionamento del ricettore F071 rispetto agli aerogeneratori AG01 e AG07 a cui è attribuibile il contributo allo shadow-flickering

Figura 8.30 – Edificio F071 ed isolinee d'ombra proiettate dagli aerogeneratori AG01 e AG07 (vista zenitale). Si noti come il rafforzamento delle barriere verdi perimetrali potrebbe rappresentare, ove necessario, un'efficacie misura di mitigazione

Figura 31 – Prospetto nordovest del ricettore F061, esposto al potenziale ombreggiamento dell'aerogeneratore AG05. Come visibile si tratta di una porzione non abitata del complesso di fabbricati agricoli e dunque non esposta al disturbo da shadow-flickering

8.9 Ricettore F073

Il calendario grafico dell'ombra relativo al ricettore F073 (Figura 13) mostra come il fenomeno dello SF sia atteso, nelle ore mattutine del periodo primaverile-estivo (fascia oraria 07:00-08:30 da aprile a settembre) ad opera dell'aerogeneratore AG08. Ulteriori limitati contributi saranno apportati dagli aerogeneratori AG01 (nel tardo pomeriggio in autunno e primavera - fascia oraria 17:00-19:00) e Ag02 (tra le 19.30 e le 20.30 nel periodo giugno-agosto).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F073 si ritiene opportuno formulare le seguenti considerazioni:

- La facciate maggiormente esposte al potenziale fenomeno dello SF sono di fatto schermate dalla presenza di alberature nonché, sul lato est, di un'azienda serricola (Figura 35);
- Come a più riprese rilevato, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi agli occupanti l'edificio in esame.

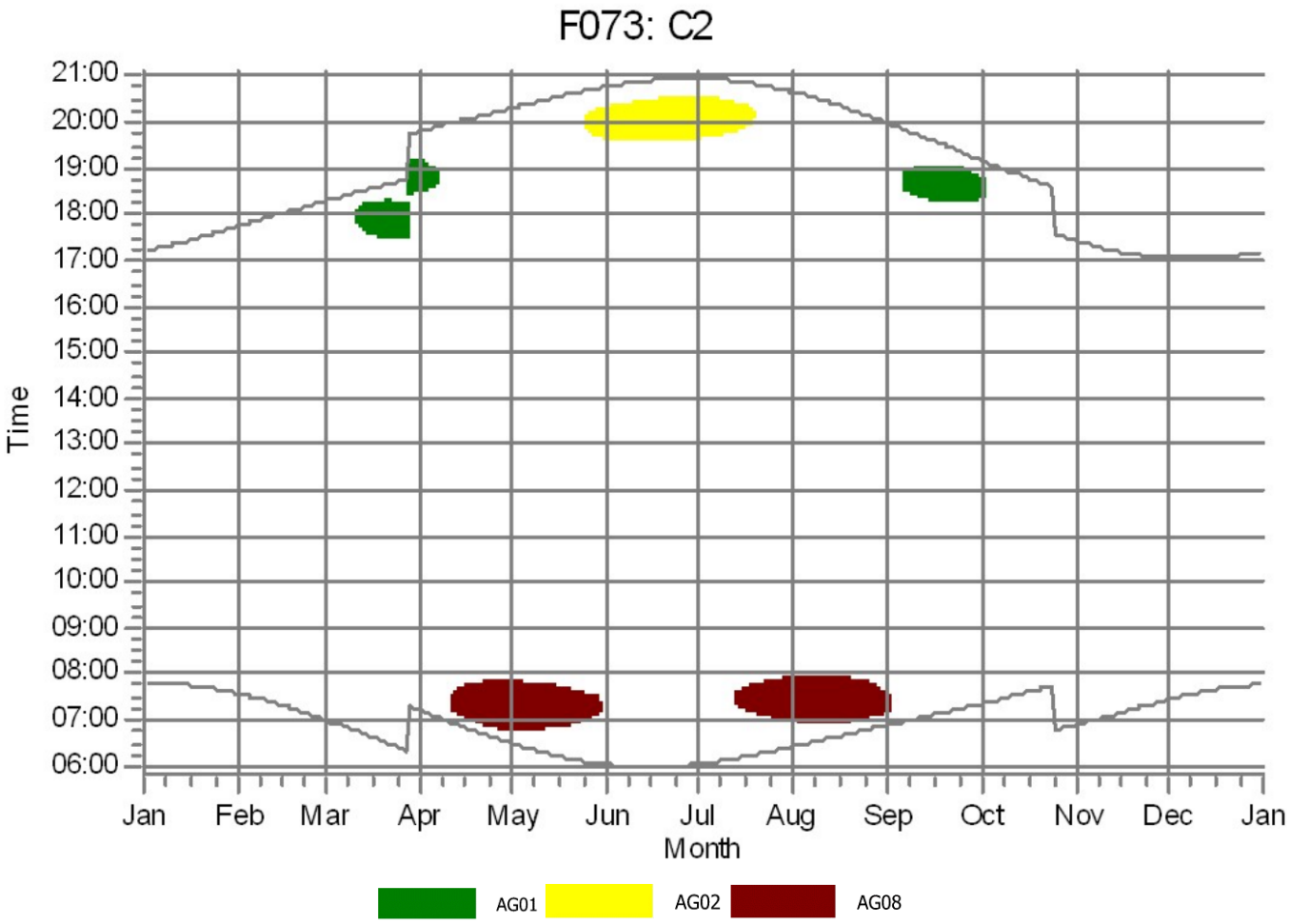

Figura 32 – Calendario dell'ombra relativo al ricettore F073

Figura 33 – Posizionamento del ricettore F073 rispetto agli aerogeneratori AG01, AG02 e AG08 a cui è attribuibile il contributo allo shadow-flickering

Figura 8.34 – Edificio F073 ed isolinee d'ombra proiettate dagli aerogeneratori AG01, AG02 e AG08 (vista zenitale). Si noti come la presenza di fasce alberate in corrispondenza del lato ovest dell'edificio nonché delle serre sul lato est possa esercitare un'efficace azione schermante rispetto al potenziale ombreggiamento apportato dagli aerogeneratori in progetto

Figura 35 – Prospetto est del fabbricato F073. Si noti la presenza di alberature in prossimità di entrambi i prospetti nonché della limitrofa presenza delle serre in grado di esercitare una efficace azione schermante rispetto al potenziale ombreggiamento esercitato dagli aerogeneratori in progetto.

8.10 Ricettore F077

Il calendario grafico dell'ombra relativo al ricettore F077 (Figura 13) mostra come il fenomeno dello SF sia atteso, nelle ore mattutine del periodo primaverile-estivo (fascia oraria 06:00-08:30 da aprile a settembre) ad opera degli aerogeneratori AG01 e AG02. Un ulteriore limitato contributo sarà apportato dall'aerogeneratore AG07 (nelle ore mattutine dei mesi di novembre e febbraio - fascia oraria 07:00-08:00).

Analizzando più in dettaglio le caratteristiche del fenomeno presso il ricettore F077 si ritiene opportuno formulare le seguenti considerazioni:

- Il complesso di edifici non presenta superfici fenestrate lungo il perimetro esterno e risulta palesemente destinato a funzioni agricole e non residenziali, come chiaramente evidenziato in Figura 39;

- la distanza dagli aerogeneratori WTG02 e WTG04 (a est-sudest del fabbricato) è significativa (indicativamente superiore ai 1.500 metri), il che presuppone che le relative ombre risulteranno "sfocate" e, dunque, meno avvertibili;
- Anche in questo caso si ribadisce che, affinché il fenomeno sia percepito come un disturbo da parte degli occupanti l'edificio, tutte le seguenti circostanze dovrebbero essere verificate:
    - Presenza degli occupanti presso l'ambiente esposto all'ombreggiamento;
    - Elevato contrasto luci/ombre (assenza di schermature nelle finestre)
    - gli individui potenzialmente soggetti ad un impatto da *shadow flickering* dovrebbero permanere esposti alla luce tremolante per un tempo sufficiente ad avvertire fastidio.

Tutto ciò considerato è ragionevole affermare che l'effettivo potenziale disturbo da *shadow flickering* risulterà significativamente più contenuto di quello prospettato dal software di simulazione, tale da potersi ricondurre ai predetti "valori guida" di 30 h/anno e da non arrecare apprezzabili disturbi ai fruitori del complesso di edifici in esame.

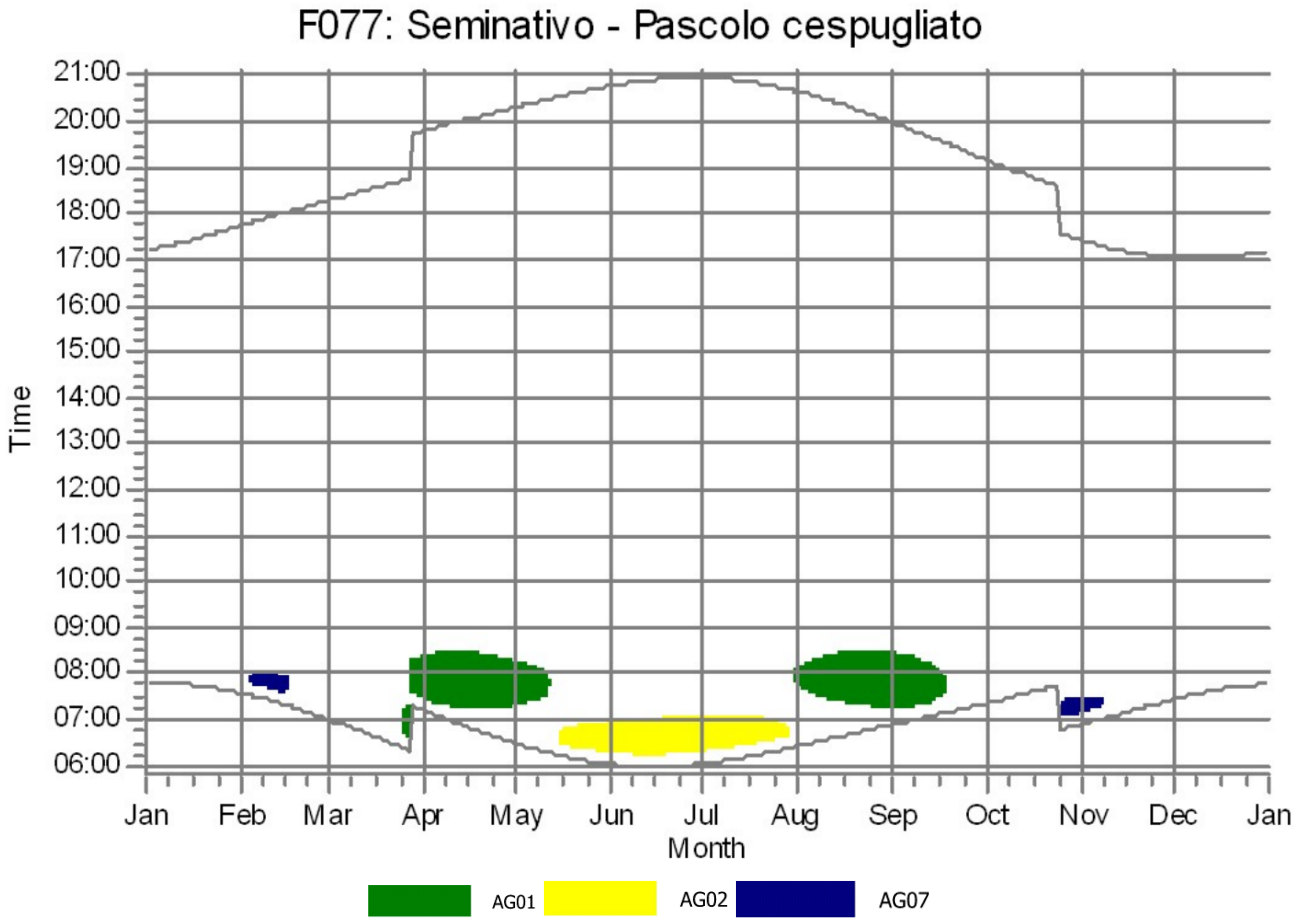

Figura 36 – Calendario dell'ombra relativo al ricettore F073

Figura 37 – Posizionamento del ricettore F077 (a sinistra nell'immagine) rispetto agli aerogeneratori AG01 e AG07 a cui è attribuibile il principale contributo allo shadow-flickering

Figura 8.38 – Edificio F077 ed isolinee d'ombra proiettate dagli aerogeneratori in progetto (vista zenitale). L'immagine evidenzia che l'ombreggiamento investe principalmente un corpo di fabbrica con funzioni di servizio all'attività agricola entro cui è ragionevolmente improbabile la presenza stabile di persone

Figura 39 – Complesso di edifici afferenti al ricettore F077. Si noti come trattasi di fabbricati con funzioni produttive e non residenziali. Si rileva inoltre la pressoché totale assenza di aperture fenestrate lungo il perimetro.

9 Conclusioni

Il documento ha esaminato compiutamente il potenziale disturbo da ombreggiamento intermittente (*shadow flickering*) in corrispondenza dei più prossimi fabbricati presenti nell'area interessata dal proposto parco eolico. L'individuazione dei ricettori ha fatto riferimento alla ricognizione sugli edifici esistenti eseguita nell'ambito della definizione del layout di impianto e dell'analisi ambientale, i cui risultati sono riepilogati in opportune "schede fabbricati" all'interno di apposito report allegato al progetto.

Ai fini dei calcoli di esposizione all'ombra intermittente, sono stati individuati come ricettori n. 38 fabbricati, ubicati entro una distanza di 1000 m dalle postazioni eoliche, aventi destinazione abitativa accertata (n. 23 edifici con categoria catastale "A") o presumibilmente frequentati per esigenze lavorative (n. 15 edifici di supporto all'attività agricola).

Per le finalità del presente studio, in assenza di una specifica disciplina normativa nazionale o regionale, si è fatto riferimento alle linee guida elaborate dal Gruppo Federale tedesco di Controllo delle Emissioni (*Bund-/Länder-Arbeitsgemeinschaft für Immissionsschutz - LAI*) – aggiornamento 2020.

L'analisi dell'effetto di *shadow flickering* è stata condotta con l'utilizzo del modulo SHADOW del software WindPro 3.4. Il programma esegue una simulazione completa del percorso del sole durante un intero anno.

I calcoli possono essere eseguiti secondo due scenari: lo scenario peggiore (*worst case*) e il caso reale (*real case*).

Nello scenario *real case*, il software può tenere conto delle reali condizioni di funzionamento degli aerogeneratori (in termini di ore di funzionamento attese per ogni settore angolare di provenienza del vento) nonché delle condizioni di Eliofania, ossia di durata media del soleggiamento della specifica zona di studio.

L'incidenza dell'ombreggiamento intermittente presso i ricettori considerati nello "scenario reale" è prevalentemente al disotto del valore guida di 30 h/anno. Fanno eccezione n. 12 fabbricati su 38, presso i quali l'ombreggiamento intermittente atteso è risultato potenzialmente superiore alla soglia guida con valori variabili nell'intervallo 32:08 h/anno (F001) – 69:35 h/anno (F032).

In riferimento a questi ultimi fabbricati gli approfondimenti condotti hanno riconosciuto la presenza di elementi antropici (edifici) e/o naturali (barriere verdi), non considerati dal modello di calcolo, in grado di esercitare un efficace effetto schermante rispetto all'azione di ombreggiamento attribuibile agli aerogeneratori. Inoltre, per taluni fabbricati, la limitata presenza di aperture fenestrate in corrispondenza del prospetto degli edifici potenzialmente più esposto alla proiezione dell'ombra consente di ritenere convenientemente attenuata l'effettiva incidenza del fenomeno.

In definitiva, considerata la conservatività delle stime in rapporto all'effettivo manifestarsi di un disturbo per gli occupanti gli edifici (aleatorietà circa la presenza degli occupanti l'edificio, presenza di un sufficiente contrasto luci-ombre, assenza di elementi schermanti quali tendaggi e/o alberature) è altamente verosimile che l'effettiva incidenza dello *shadow flickering* risulterà comunque più contenuta di quella prospettata dal software di simulazione nello scenario "*real case*".

Da tutto quanto precede si può concludere con ragionevole certezza che il potenziale disturbo associato al fenomeno di *shadow-flickering* risulterà inferiore alla soglia di significatività in corrispondenza di tutti i ricettori individuati.

Peraltro, laddove durante la fase operativa dell'impianto dovesse essere avvertito un effettivo disturbo da parte degli occupanti gli edifici più esposti, saranno attuate – a cura e spese della società proponente - efficaci misure di mitigazione quali la creazione e/o il rafforzamento di alberature perimetrali.

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Main Result

Calculation: Cumulativo_20240129

Assumptions for shadow calculations

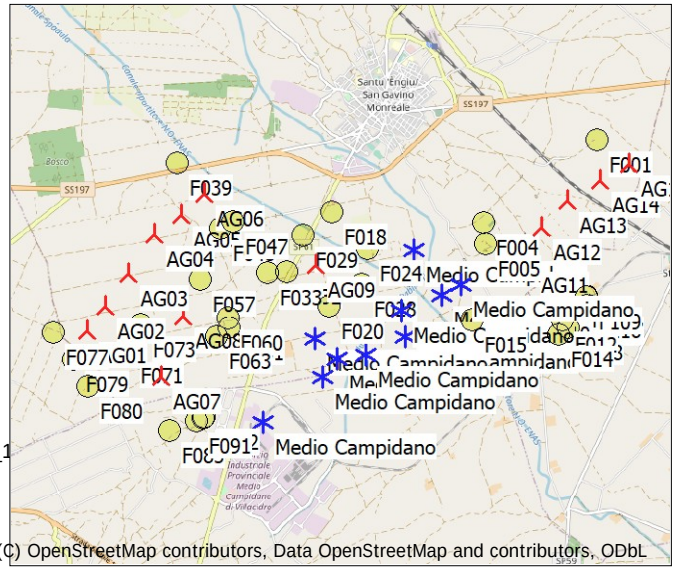
Maximum distance for influence
Calculate only when more than 20 % of sun is covered by the blade
Please look in WTG table

Minimum sun height over horizon for influence	3 °
Day step for calculation	1 days
Time step for calculation	1 minutes

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

A ZVI (Zones of Visual Influence) calculation is performed before flicker calculation so non visible WTG do not contribute to calculated flicker values. A WTG will be visible if it is visible from any part of the receiver window. The ZVI calculation is based on the following assumptions:
Height contours used: Height Contours: CONTOURLINE_Progetto_Monreale_1
Obstacles used in calculation
Eye height for map: 1,5 m
Grid resolution: 1,0 m

All coordinates are in
Italian Gauss-Boaga west-ROMA40 (IT-peninsular <±4m)



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

Scale 1:125.000

New WTG | Existing WTG | Shadow receptor

WTGs

	Easting	Northing	Z	Row data/Description	WTG type Valid	Manufact.	Type-generator	Power, rated	Rotor diameter	Hub height	Shadow data Calculation distance	RPM
			[m]					[kW]	[m]	[m]	[m]	[RPM]
AG01	1.477.153	4.374.065	115,5	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG02	1.477.472	4.374.454	104,8	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG03	1.477.848	4.374.991	92,3	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG04	1.478.274	4.375.630	80,0	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG05	1.478.727	4.375.957	70,0	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG06	1.479.112	4.376.298	60,4	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG07	1.478.381	4.373.299	100,0	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG08	1.478.743	4.374.293	86,8	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG09	1.480.955	4.375.125	60,0	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG10	1.484.500	4.374.379	50,6	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG11	1.484.479	4.375.183	53,6	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG12	1.484.680	4.375.730	56,7	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG13	1.485.117	4.376.170	60,3	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG14	1.485.658	4.376.505	65,7	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
AG15	1.486.134	4.376.777	70,2	VESTAS V162-6.0 60...	Yes	VESTAS	V162-6.0-6.000	6.000	162,0	125,0	2.044	0,0
Medio Campidano	1.482.343	4.374.376	57,8	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.482.416	4.373.952	60,0	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.482.572	4.375.371	53,2	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.483.029	4.374.642	54,2	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.480.928	4.373.922	70,0	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.480.060	4.372.540	90,0	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.483.333	4.374.810	52,4	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.481.053	4.373.281	73,7	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.481.779	4.373.658	66,8	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0
Medio Campidano	1.481.286	4.373.576	70,0	VESTAS V110-2.0 20...	Yes	VESTAS	V110-2.0-2.000	2.000	110,0	95,0	1.516	0,0

Shadow receptor-Input

No.	Name	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
F001	D10	1.485.596	4.377.173	69,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F004	A3	1.483.720	4.375.821	53,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F005	D7	1.483.748	4.375.473	51,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F010	A3	1.485.426	4.374.613	55,3	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F011	A3 - F4	1.485.384	4.374.412	54,3	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F012	A2 - D10	1.485.018	4.374.219	52,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F013	A2 - D10	1.485.094	4.374.137	52,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6

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Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Main Result

Calculation: Cumulativo_20240129

...continued from previous page

No.	Name	Easting	Northing	Z	Width	Height	Elevation a.g.l.	Slope of window	Direction mode	Eye height (ZVI) a.g.l.
				[m]	[m]	[m]	[m]	[°]		[m]
F014	A3 - F2	1.484.954	4.373.983	50,9	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F015	D10	1.483.527	4.374.228	53,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F018	A2	1.481.214	4.375.987	52,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F020	D10	1.481.177	4.374.446	64,6	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F024	D10 - A4	1.481.801	4.375.393	54,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F028	A2 - D10	1.481.702	4.374.812	58,9	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F029	A4	1.480.740	4.375.615	57,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F032	C2	1.480.462	4.375.020	65,4	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F033	A4	1.480.155	4.374.988	67,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F039	A3	1.478.648	4.376.809	58,7	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F047	Pascolo cespugliato	1.479.587	4.375.853	62,6	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F048	A2 - F3	1.479.374	4.375.728	66,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F057	A2	1.479.026	4.374.888	80,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F060	A2 - D10	1.479.499	4.374.264	80,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F061	A3	1.479.514	4.374.095	80,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F063	A2	1.479.302	4.373.950	80,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F071	D10	1.477.854	4.373.721	104,9	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F073	C2	1.478.062	4.374.146	100,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F077	Seminativo - Pascolo cespugliato	1.476.587	4.374.030	123,6	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F079	Ente urbano	1.476.937	4.373.578	124,5	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F080	Uliveto - Pascolo cespugliato	1.477.168	4.373.135	122,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F085	Ente urbano	1.478.522	4.372.418	106,4	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F091	Ente urbano	1.478.964	4.372.570	100,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F092	Ente urbano	1.479.102	4.372.637	100,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F093	Ente urbano	1.479.064	4.372.622	100,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F109	A3	1.485.435	4.374.603	55,3	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F115	A3 - F4	1.485.421	4.374.427	54,5	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F116	A3	1.485.433	4.374.448	54,7	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F117	A3 - F4	1.485.466	4.374.453	54,8	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F118	A2 - D10	1.485.124	4.374.088	52,0	1,2	1,4	1,2	90,0	"Green house mode"	2,6
F321	A2	1.485.042	4.374.197	52,1	1,2	1,4	1,2	90,0	"Green house mode"	2,6

Calculation Results

Shadow receptor

		Shadow, worst case		
No.	Name	Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]
F001	D10	93:34	112	0:58
F004	A3	79:29	184	0:40
F005	D7	101:36	216	0:48
F010	A3	25:16	58	0:39
F011	A3 - F4	29:03	55	0:42
F012	A2 - D10	124:33	118	1:12
F013	A2 - D10	82:02	92	1:02
F014	A3 - F2	0:00	0	0:00
F015	D10	41:41	91	0:52
F018	A2	4:27	26	0:15
F020	D10	11:27	55	0:20
F024	D10 - A4	56:52	148	0:42
F028	A2 - D10	109:44	197	0:50
F029	A4	16:41	78	0:20
F032	C2	162:19	172	1:15
F033	A4	61:03	118	0:49
F039	A3	41:31	60	0:51
F047	Pascolo cespugliato	67:21	149	0:44
F048	A2 - F3	124:21	204	0:58
F057	A2	29:39	74	0:44
F060	A2 - D10	68:10	186	0:58
F061	A3	99:01	219	0:49
F063	A2	49:40	114	0:36
F071	D10	125:24	162	0:59
F073	C2	127:18	195	0:55
F077	Seminativo - Pascolo cespugliato	119:54	195	1:05

To be continued on next page...

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
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SHADOW - Main Result

Calculation: Cumulativo_20240129

...continued from previous page

No.	Name	Shadow, worst case Shadow hours per year [h/year]	Shadow days per year [days/year]	Max shadow hours per day [h/day]
F079	Ente urbano	11:36	64	0:21
F080	Uliveto - Pascolo cespugliato	13:20	42	0:28
F085	Ente urbano	0:00	0	0:00
F091	Ente urbano	7:08	30	0:21
F092	Ente urbano	9:53	33	0:25
F093	Ente urbano	9:00	33	0:24
F109	A3	24:21	51	0:39
F115	A3 - F4	26:24	52	0:41
F116	A3	25:19	51	0:40
F117	A3 - F4	23:33	50	0:39
F118	A2 - D10	58:01	75	0:56
F321	A2	112:11	111	1:09

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

No.	Name	Worst case [h/year]
AG01	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11)	146:51
AG02	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12)	89:53
AG03	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13)	50:41
AG04	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14)	33:31
AG05	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15)	131:52
AG06	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (16)	53:49
AG07	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17)	155:10
AG08	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)	188:00
AG09	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)	269:12
AG10	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)	235:31
AG11	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (21)	76:23
AG12	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (22)	62:34
AG13	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (23)	29:21
AG14	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (24)	0:00
AG15	VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (25)	93:34
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (63)	55:04
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (62)	12:59
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (66)	35:39
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (64)	12:18
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (61)	6:12
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (57)	15:12
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (65)	0:00
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (58)	0:00
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (60)	0:00
Medio Campidano	VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (59)	0:00

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

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F001 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	07:46		08:13 (AG15)	07:34		08:21 (AG15)	07:00	07:11	06:27	06:00
	17:11	50	09:03 (AG15)	17:44	54	09:15 (AG15)	18:16	19:48	20:18	20:46
2	07:46		08:14 (AG15)	07:33		08:21 (AG15)	06:58	07:10	06:26	06:00
	17:12	51	09:05 (AG15)	17:45	53	09:14 (AG15)	18:18	19:49	20:19	20:47
3	07:46		08:14 (AG15)	07:32		08:22 (AG15)	06:57	07:08	06:25	05:59
	17:13	51	09:05 (AG15)	17:47	52	09:14 (AG15)	18:19	19:50	20:20	20:47
4	07:46		08:14 (AG15)	07:31		08:23 (AG15)	06:55	07:06	06:24	05:59
	17:14	52	09:06 (AG15)	17:48	50	09:13 (AG15)	18:20	19:51	20:21	20:48
5	07:46		08:14 (AG15)	07:30		08:24 (AG15)	06:54	07:05	06:23	05:59
	17:15	53	09:07 (AG15)	17:49	49	09:13 (AG15)	18:21	19:52	20:22	20:49
6	07:46		08:14 (AG15)	07:29		08:25 (AG15)	06:52	07:03	06:21	05:58
	17:16	52	09:06 (AG15)	17:50	47	09:12 (AG15)	18:22	19:53	20:23	20:49
7	07:46		08:14 (AG15)	07:28		08:26 (AG15)	06:51	07:02	06:20	05:58
	17:17	53	09:07 (AG15)	17:51	45	09:11 (AG15)	18:23	19:54	20:24	20:50
8	07:46		08:14 (AG15)	07:27		08:27 (AG15)	06:49	07:00	06:19	05:58
	17:18	54	09:08 (AG15)	17:53	43	09:10 (AG15)	18:24	19:55	20:25	20:50
9	07:46		08:15 (AG15)	07:26		08:29 (AG15)	06:48	06:59	06:18	05:58
	17:19	54	09:09 (AG15)	17:54	40	09:09 (AG15)	18:25	19:56	20:26	20:51
10	07:46		08:15 (AG15)	07:25		08:30 (AG15)	06:46	06:57	06:17	05:58
	17:20	55	09:10 (AG15)	17:55	38	09:08 (AG15)	18:26	19:57	20:27	20:52
11	07:46		08:14 (AG15)	07:23		08:32 (AG15)	06:45	06:55	06:16	05:57
	17:21	56	09:10 (AG15)	17:56	34	09:06 (AG15)	18:27	19:58	20:28	20:52
12	07:45		08:15 (AG15)	07:22		08:33 (AG15)	06:43	06:54	06:15	05:57
	17:22	56	09:11 (AG15)	17:57	30	09:03 (AG15)	18:28	19:59	20:29	20:53
13	07:45		08:15 (AG15)	07:21		08:35 (AG15)	06:41	06:52	06:14	05:57
	17:23	56	09:11 (AG15)	17:58	26	09:01 (AG15)	18:29	20:00	20:30	20:53
14	07:45		08:15 (AG15)	07:20		08:39 (AG15)	06:40	06:51	06:13	05:57
	17:24	56	09:11 (AG15)	18:00	19	08:58 (AG15)	18:30	20:01	20:31	20:54
15	07:44		08:15 (AG15)	07:19		08:44 (AG15)	06:38	06:49	06:12	05:57
	17:25	57	09:12 (AG15)	18:01	9	08:53 (AG15)	18:31	20:02	20:32	20:54
16	07:44		08:16 (AG15)	07:17			06:37	06:48	06:11	05:57
	17:26	57	09:13 (AG15)	18:02			18:32	20:03	20:33	20:54
17	07:44		08:16 (AG15)	07:16			06:35	06:46	06:10	05:57
	17:27	57	09:13 (AG15)	18:03			18:33	20:04	20:33	20:55
18	07:43		08:16 (AG15)	07:15			06:33	06:45	06:09	05:57
	17:28	58	09:14 (AG15)	18:04			18:34	20:05	20:34	20:55
19	07:43		08:16 (AG15)	07:14			06:32	06:44	06:08	05:57
	17:29	58	09:14 (AG15)	18:05			18:35	20:06	20:35	20:55
20	07:42		08:17 (AG15)	07:12			06:30	06:42	06:08	05:58
	17:30	58	09:15 (AG15)	18:06			18:36	20:07	20:36	20:56
21	07:42		08:17 (AG15)	07:11			06:29	06:41	06:07	05:58
	17:31	58	09:15 (AG15)	18:08			18:37	20:08	20:37	20:56
22	07:41		08:17 (AG15)	07:10			06:27	06:39	06:06	05:58
	17:33	58	09:15 (AG15)	18:09			18:38	20:09	20:38	20:56
23	07:41		08:18 (AG15)	07:08			06:25	06:38	06:05	05:58
	17:34	58	09:16 (AG15)	18:10			18:39	20:10	20:39	20:56
24	07:40		08:18 (AG15)	07:07			06:24	06:37	06:05	05:58
	17:35	58	09:16 (AG15)	18:11			18:40	20:11	20:40	20:56
25	07:39		08:18 (AG15)	07:05			06:22	06:35	06:04	05:59
	17:36	58	09:16 (AG15)	18:12			18:41	20:12	20:40	20:56
26	07:39		08:18 (AG15)	07:04			06:21	06:34	06:03	05:59
	17:37	58	09:16 (AG15)	18:13			18:42	20:13	20:41	20:57
27	07:38		08:19 (AG15)	07:03			06:19	06:33	06:03	05:59
	17:38	57	09:16 (AG15)	18:14			18:43	20:14	20:42	20:57
28	07:37		08:19 (AG15)	07:01			06:17	06:31	06:02	06:00
	17:40	57	09:16 (AG15)	18:15			18:44	20:15	20:43	20:57
29	07:36		08:20 (AG15)				07:16	06:30	06:02	06:00
	17:41	56	09:16 (AG15)				19:45	20:16	20:44	20:57
30	07:35		08:20 (AG15)				07:14	06:29	06:01	06:01
	17:42	56	09:16 (AG15)				19:46	20:17	20:44	20:57
31	07:35		08:20 (AG15)				07:13		06:01	
	17:43	55	09:15 (AG15)				19:47		20:45	
Potential sun hours	302			299			370	397	444	447
Total, worst case		1723			589					

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F001 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October			November			December		
1	06:01	06:24	06:52	07:20			06:52		07:59 (AG15)	07:26		07:57 (AG15)
	20:57	20:39	19:58	19:09			17:25	38	08:37 (AG15)	17:02	56	08:53 (AG15)
2	06:01	06:25	06:53	07:21			06:54		07:58 (AG15)	07:27		07:58 (AG15)
	20:56	20:38	19:56	19:08			17:24	41	08:39 (AG15)	17:02	55	08:53 (AG15)
3	06:02	06:26	06:54	07:22			06:55		07:57 (AG15)	07:28		07:59 (AG15)
	20:56	20:37	19:55	19:06			17:22	43	08:40 (AG15)	17:02	54	08:53 (AG15)
4	06:02	06:26	06:55	07:23			06:56		07:56 (AG15)	07:29		07:59 (AG15)
	20:56	20:36	19:53	19:04			17:21	45	08:41 (AG15)	17:01	54	08:53 (AG15)
5	06:03	06:27	06:56	07:24			06:57		07:54 (AG15)	07:30		07:59 (AG15)
	20:56	20:35	19:51	19:03			17:20	48	08:42 (AG15)	17:01	53	08:52 (AG15)
6	06:04	06:28	06:57	07:25			06:58		07:54 (AG15)	07:30		08:00 (AG15)
	20:56	20:33	19:50	19:01			17:19	49	08:43 (AG15)	17:01	52	08:52 (AG15)
7	06:04	06:29	06:58	07:26			06:59		07:54 (AG15)	07:31		08:00 (AG15)
	20:55	20:32	19:48	19:00			17:18	50	08:44 (AG15)	17:01	53	08:53 (AG15)
8	06:05	06:30	06:59	07:27			07:00		07:53 (AG15)	07:32		08:01 (AG15)
	20:55	20:31	19:47	18:58			17:17	52	08:45 (AG15)	17:01	52	08:53 (AG15)
9	06:05	06:31	07:00	07:28			07:01		07:52 (AG15)	07:33		08:02 (AG15)
	20:55	20:30	19:45	18:57			17:16	53	08:45 (AG15)	17:01	51	08:53 (AG15)
10	06:06	06:32	07:01	07:29			07:03		07:52 (AG15)	07:34		08:03 (AG15)
	20:54	20:29	19:43	18:55			17:15	54	08:46 (AG15)	17:01	51	08:54 (AG15)
11	06:07	06:33	07:02	07:30			07:04		07:51 (AG15)	07:35		08:04 (AG15)
	20:54	20:27	19:42	18:54			17:14	55	08:46 (AG15)	17:01	50	08:54 (AG15)
12	06:07	06:34	07:03	07:31			07:05		07:52 (AG15)	07:36		08:04 (AG15)
	20:54	20:26	19:40	18:52			17:13	56	08:48 (AG15)	17:01	51	08:55 (AG15)
13	06:08	06:35	07:04	07:32			07:06		07:51 (AG15)	07:36		08:04 (AG15)
	20:53	20:25	19:39	18:51			17:12	57	08:48 (AG15)	17:02	50	08:54 (AG15)
14	06:09	06:36	07:04	07:33			07:07		07:51 (AG15)	07:37		08:05 (AG15)
	20:53	20:24	19:37	18:49			17:12	57	08:48 (AG15)	17:02	50	08:55 (AG15)
15	06:10	06:37	07:05	07:34			07:08		07:51 (AG15)	07:38		08:06 (AG15)
	20:52	20:22	19:35	18:48			17:11	57	08:48 (AG15)	17:02	49	08:55 (AG15)
16	06:10	06:38	07:06	07:35			07:09		07:51 (AG15)	07:39		08:06 (AG15)
	20:52	20:21	19:34	18:46			17:10	58	08:49 (AG15)	17:02	49	08:55 (AG15)
17	06:11	06:39	07:07	07:36			07:10		07:52 (AG15)	07:39		08:07 (AG15)
	20:51	20:20	19:32	18:45			17:09	58	08:50 (AG15)	17:03	48	08:55 (AG15)
18	06:12	06:39	07:08	07:37			07:12		07:52 (AG15)	07:40		08:08 (AG15)
	20:50	20:18	19:30	18:43			17:08	58	08:50 (AG15)	17:03	48	08:56 (AG15)
19	06:13	06:40	07:09	07:38			07:13		07:52 (AG15)	07:41		08:08 (AG15)
	20:50	20:17	19:29	18:42			17:08	58	08:50 (AG15)	17:03	48	08:56 (AG15)
20	06:13	06:41	07:10	07:39			07:14		07:52 (AG15)	07:41		08:09 (AG15)
	20:49	20:16	19:27	18:40			17:07	58	08:50 (AG15)	17:04	48	08:57 (AG15)
21	06:14	06:42	07:11	07:40			07:15		07:52 (AG15)	07:42		08:09 (AG15)
	20:48	20:14	19:26	18:39			17:06	58	08:50 (AG15)	17:04	48	08:57 (AG15)
22	06:15	06:43	07:12	07:42			07:16		07:53 (AG15)	07:42		08:10 (AG15)
	20:48	20:13	19:24	18:38			17:06	58	08:51 (AG15)	17:05	48	08:58 (AG15)
23	06:16	06:44	07:13	07:43			07:17		07:53 (AG15)	07:43		08:10 (AG15)
	20:47	20:11	19:22	18:36			17:05	58	08:51 (AG15)	17:05	48	08:58 (AG15)
24	06:17	06:45	07:14	07:44			07:18		07:53 (AG15)	07:43		08:11 (AG15)
	20:46	20:10	19:21	18:35			17:05	58	08:51 (AG15)	17:06	48	08:59 (AG15)
25	06:18	06:46	07:15	06:45			07:19		07:54 (AG15)	07:44		08:11 (AG15)
	20:45	20:08	19:19	17:33			17:04	57	08:51 (AG15)	17:06	48	08:59 (AG15)
26	06:18	06:47	07:16	06:46			07:20		07:54 (AG15)	07:44		08:11 (AG15)
	20:44	20:07	19:17	17:32			17:04	57	08:51 (AG15)	17:07	48	08:59 (AG15)
27	06:19	06:48	07:17	06:47		08:11 (AG15)	07:21		07:54 (AG15)	07:44		08:12 (AG15)
	20:44	20:05	19:16	17:31	13	08:24 (AG15)	17:03	57	08:51 (AG15)	17:08	49	09:01 (AG15)
28	06:20	06:49	07:17	06:48		08:08 (AG15)	07:23		07:55 (AG15)	07:45		08:12 (AG15)
	20:43	20:04	19:14	17:30	21	08:29 (AG15)	17:03	56	08:51 (AG15)	17:08	49	09:01 (AG15)
29	06:21	06:50	07:18	06:49		08:05 (AG15)	07:24		07:55 (AG15)	07:45		08:12 (AG15)
	20:42	20:02	19:12	17:28	27	08:32 (AG15)	17:03	57	08:52 (AG15)	17:09	49	09:01 (AG15)
30	06:22	06:51	07:19	06:50		08:02 (AG15)	07:25		07:56 (AG15)	07:45		08:12 (AG15)
	20:41	20:01	19:11	17:27	32	08:34 (AG15)	17:02	56	08:52 (AG15)	17:10	50	09:02 (AG15)
31	06:23	06:52		06:51		08:00 (AG15)				07:45		08:12 (AG15)
	20:40	19:59		17:26	35	08:35 (AG15)				17:10	50	09:02 (AG15)
Potential sun hours	454	425	374	347			301			293		
Total, worst case					128			1617			1557	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F004 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June
1	07:46		08:21 (AG11)	07:34			07:00			07:11		07:53 (AG12)	06:27		06:48 (AG13)	06:00
	17:12	39	09:00 (AG11)	17:44			18:17			19:48	23	08:16 (AG12)	20:18	26	07:14 (AG13)	20:46
2	07:46		08:22 (AG11)	07:33			06:58			07:10		07:56 (AG12)	06:26		06:48 (AG13)	06:00
	17:12	39	09:01 (AG11)	17:46			18:18			19:49	18	08:14 (AG12)	20:19	25	07:13 (AG13)	20:47
3	07:46		08:22 (AG11)	07:32			06:57			07:08		07:59 (AG12)	06:25		06:49 (AG13)	06:00
	17:13	39	09:01 (AG11)	17:47			18:19			19:50	11	08:10 (AG12)	20:20	24	07:13 (AG13)	20:47
4	07:46		08:23 (AG11)	07:31			06:55			07:06			06:24		06:50 (AG13)	05:59
	17:14	38	09:01 (AG11)	17:48			18:20			19:51			20:21	22	07:12 (AG13)	20:48
5	07:46		08:24 (AG11)	07:30		17:24 (Medio Campidano)	06:54			07:05			06:23		06:50 (AG13)	05:59
	17:15	37	09:01 (AG11)	17:49	2	17:26 (Medio Campidano)	18:21			19:52			20:22	21	07:11 (AG13)	20:49
6	07:46		08:23 (AG11)	07:29		17:22 (Medio Campidano)	06:52			07:03			06:21		06:52 (AG13)	05:59
	17:16	38	09:01 (AG11)	17:50	5	17:27 (Medio Campidano)	18:22			19:53			20:23	18	07:10 (AG13)	20:49
7	07:46		08:24 (AG11)	07:28		17:21 (Medio Campidano)	06:51			07:02			06:20		06:53 (AG13)	05:58
	17:17	37	09:01 (AG11)	17:51	8	17:29 (Medio Campidano)	18:23			19:54			20:24	16	07:09 (AG13)	20:50
8	07:46		08:25 (AG11)	07:27		17:20 (Medio Campidano)	06:49			07:00			06:19		06:54 (AG13)	05:58
	17:18	36	09:01 (AG11)	17:53	10	17:30 (Medio Campidano)	18:24			19:55			20:25	12	07:06 (AG13)	20:51
9	07:46		08:26 (AG11)	07:26		17:19 (Medio Campidano)	06:48			06:59			06:18		06:57 (AG13)	05:58
	17:19	36	09:02 (AG11)	17:54	12	17:31 (Medio Campidano)	18:25			19:56			20:26	6	07:03 (AG13)	20:51
10	07:46		08:27 (AG11)	07:25		17:19 (Medio Campidano)	06:46			06:57			06:17			05:58
	17:20	35	09:02 (AG11)	17:55	14	17:33 (Medio Campidano)	18:26			19:57			20:27			20:52
11	07:46		08:28 (AG11)	07:24		17:19 (Medio Campidano)	06:45		07:04 (AG12)	06:56			06:16			05:58
	17:21	34	09:02 (AG11)	17:56	15	17:34 (Medio Campidano)	18:27	15	07:19 (AG12)	19:58			20:28			20:52
12	07:45		08:28 (AG11)	07:22		17:18 (Medio Campidano)	06:43		07:01 (AG12)	06:54			06:15			05:57
	17:22	33	09:01 (AG11)	17:57	17	17:35 (Medio Campidano)	18:28	20	07:21 (AG12)	19:59			20:29			20:53
13	07:45		08:30 (AG11)	07:21		17:18 (Medio Campidano)	06:41		07:00 (AG12)	06:53			06:14			05:57
	17:23	31	09:01 (AG11)	17:59	18	17:36 (Medio Campidano)	18:29	24	07:24 (AG12)	20:00			20:30			20:53
14	07:45		08:31 (AG11)	07:20		17:19 (Medio Campidano)	06:40		06:58 (AG12)	06:51			06:13			05:57
	17:24	30	09:01 (AG11)	18:00	19	17:38 (Medio Campidano)	18:30	27	07:25 (AG12)	20:01			20:31			20:54
15	07:44		08:31 (AG11)	07:19		17:19 (Medio Campidano)	06:38		06:57 (AG12)	06:50			06:12			05:57
	17:25	29	09:00 (AG11)	18:01	20	17:39 (Medio Campidano)	18:31	29	07:26 (AG12)	20:02			20:32			20:54
16	07:44		08:33 (AG11)	07:17		17:19 (Medio Campidano)	06:37		06:55 (AG12)	06:48			06:11			05:57
	17:26	27	09:00 (AG11)	18:02	19	17:38 (Medio Campidano)	18:32	32	07:27 (AG12)	20:03			20:33			20:54
17	07:44		08:34 (AG11)	07:16		17:20 (Medio Campidano)	06:35		06:53 (AG12)	06:47			06:10			05:57
	17:27	25	08:59 (AG11)	18:03	17	17:37 (Medio Campidano)	18:33	34	07:27 (AG12)	20:04			20:34			20:55
18	07:43		08:36 (AG11)	07:15		17:22 (Medio Campidano)	06:34		06:52 (AG12)	06:45			06:09			05:57
	17:28	23	08:59 (AG11)	18:04	14	17:36 (Medio Campidano)	18:34	36	07:28 (AG12)	20:05			20:34			20:55
19	07:43		08:37 (AG11)	07:14		17:23 (Medio Campidano)	06:32		06:50 (AG12)	06:44		07:02 (AG13)	06:09			05:58
	17:29	20	08:57 (AG11)	18:05	10	17:33 (Medio Campidano)	18:35	38	07:28 (AG12)	20:06	6	07:08 (AG13)	20:35			20:55
20	07:42		08:40 (AG11)	07:12			06:30		06:50 (AG12)	06:42		07:01 (AG13)	06:08			05:58
	17:30	16	08:56 (AG11)	18:07			18:36	38	07:28 (AG12)	20:07	10	07:11 (AG13)	20:36			20:56
21	07:42		08:42 (AG11)	07:11			06:29		06:50 (AG12)	06:41		06:59 (AG13)	06:07			05:58
	17:32	12	08:54 (AG11)	18:08			18:37	38	07:28 (AG12)	20:08	13	07:12 (AG13)	20:37			20:56
22	07:41			07:10			06:27		06:49 (AG12)	06:39		06:58 (AG13)	06:06			05:58
	17:33			18:09			18:38	38	07:27 (AG12)	20:09	15	07:13 (AG13)	20:38			20:56
23	07:41			07:08			06:26		06:49 (AG12)	06:38		06:56 (AG13)	06:06			05:58
	17:34			18:10			18:39	38	07:27 (AG12)	20:10	17	07:13 (AG13)	20:39			20:56
24	07:40			07:07			06:24		06:49 (AG12)	06:37		06:55 (AG13)	06:05			05:59
	17:35			18:11			18:40	37	07:26 (AG12)	20:11	19	07:14 (AG13)	20:40			20:56
25	07:39			07:05			06:22		06:49 (AG12)	06:35		06:54 (AG13)	06:04			05:59
	17:36			18:12			18:41	37	07:26 (AG12)	20:12	21	07:15 (AG13)	20:41			20:57
26	07:39			07:04			06:21		06:49 (AG12)	06:34		06:53 (AG13)	06:04			05:59
	17:37			18:13			18:42	36	07:25 (AG12)	20:13	22	07:15 (AG13)	20:41			20:57
27	07:38			07:03			06:19		06:49 (AG12)	06:33		06:51 (AG13)	06:03			05:59
	17:38			18:14			18:43	35	07:24 (AG12)	20:14	24	07:15 (AG13)	20:42			20:57
28	07:37			07:01			06:18		06:50 (AG12)	06:31		06:50 (AG13)	06:02			06:00
	17:40			18:15			18:44	33	07:23 (AG12)	20:15	25	07:15 (AG13)	20:43			20:57
29	07:36						07:16		07:50 (AG12)	06:30		06:49 (AG13)	06:02			06:00
	17:41						19:45	32	08:22 (AG12)	20:16	26	07:15 (AG13)	20:44			20:57
30	07:35						07:14		07:50 (AG12)	06:29		06:48 (AG13)	06:01			06:01
	17:42						19:46	30	08:20 (AG12)	20:17	27	07:15 (AG13)	20:44			20:57
31	07:35						07:13		07:52 (AG12)				06:01			
	17:43						19:47	27	08:19 (AG12)				20:45			
Potential sun hours	302			299			370			397			444			447
Total, worst case		654			200			674			277			170		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F004 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August			September			October			November			December		
1	06:01		06:24			06:53			07:20		07:40 (AG12)	06:52		16:48 (Medio Campidano)	07:26		08:10 (AG11)
	20:57		20:39			19:58			19:09	22	08:02 (AG12)	17:25	13	17:01 (Medio Campidano)	17:02	34	08:44 (AG11)
2	06:02		06:25			06:53			07:21		07:41 (AG12)	06:54		16:49 (Medio Campidano)	07:27		08:10 (AG11)
	20:57		20:38			19:56			19:08	18	07:59 (AG12)	17:24	12	17:01 (Medio Campidano)	17:02	35	08:45 (AG11)
3	06:02		06:26			06:54			07:22		07:45 (AG12)	06:55		16:50 (Medio Campidano)	07:28		08:10 (AG11)
	20:56		20:37			19:55			19:06	10	07:55 (AG12)	17:23	10	17:00 (Medio Campidano)	17:02	36	08:46 (AG11)
4	06:03		06:27		07:06 (AG13)	06:55			07:23			06:56		16:51 (Medio Campidano)	07:29		08:10 (AG11)
	20:56		20:36	9	07:15 (AG13)	19:53			19:05			17:21	7	16:58 (Medio Campidano)	17:02	36	08:46 (AG11)
5	06:03		06:27		07:04 (AG13)	06:56			07:24			06:57		16:52 (Medio Campidano)	07:30		08:10 (AG11)
	20:56		20:35	13	07:17 (AG13)	19:52			19:03			17:20	5	16:57 (Medio Campidano)	17:01	37	08:47 (AG11)
6	06:04		06:28		07:02 (AG13)	06:57			07:25			06:58		16:54 (Medio Campidano)	07:31		08:10 (AG11)
	20:56		20:33	17	07:19 (AG13)	19:50			19:01			17:19	2	16:56 (Medio Campidano)	17:01	37	08:47 (AG11)
7	06:04		06:29		07:01 (AG13)	06:58			07:26			06:59			07:31		08:10 (AG11)
	20:56		20:32	19	07:20 (AG13)	19:48			19:00			17:18			17:01	38	08:48 (AG11)
8	06:05		06:30		06:59 (AG13)	06:59			07:27			07:00			07:32		08:10 (AG11)
	20:55		20:31	21	07:20 (AG13)	19:47			18:58			17:17			17:01	38	08:48 (AG11)
9	06:06		06:31		06:58 (AG13)	07:00		07:53 (AG12)	07:28			07:02			07:33		08:11 (AG11)
	20:55		20:30	23	07:21 (AG13)	19:45	10	08:03 (AG12)	18:57			17:16			17:01	38	08:49 (AG11)
10	06:06		06:32		06:57 (AG13)	07:01		07:49 (AG12)	07:29			07:03			07:34		08:11 (AG11)
	20:55		20:29	25	07:22 (AG13)	19:44	18	08:07 (AG12)	18:55			17:15			17:01	39	08:50 (AG11)
11	06:07		06:33		06:57 (AG13)	07:02		07:47 (AG12)	07:30			07:04			07:35		08:11 (AG11)
	20:54		20:28	25	07:22 (AG13)	19:42	22	08:09 (AG12)	18:54			17:14			17:01	39	08:50 (AG11)
12	06:08		06:34		06:56 (AG13)	07:03		07:45 (AG12)	07:31			07:05			07:36		08:12 (AG11)
	20:54		20:26	26	07:22 (AG13)	19:40	26	08:11 (AG12)	18:52			17:13			17:02	39	08:51 (AG11)
13	06:08		06:35		06:56 (AG13)	07:04		07:42 (AG12)	07:32			07:06			07:36		08:12 (AG11)
	20:53		20:25	27	07:23 (AG13)	19:39	29	08:11 (AG12)	18:51			17:12			17:02	39	08:51 (AG11)
14	06:09		06:36		06:57 (AG13)	07:05		07:40 (AG12)	07:33			07:07			07:37		08:12 (AG11)
	20:53		20:24	26	07:23 (AG13)	19:37	32	08:12 (AG12)	18:49			17:12			17:02	40	08:52 (AG11)
15	06:10		06:37		06:58 (AG13)	07:05		07:39 (AG12)	07:34			07:08			07:38		08:13 (AG11)
	20:52		20:22	25	07:23 (AG13)	19:35	33	08:12 (AG12)	18:48			17:11			17:02	40	08:53 (AG11)
16	06:10		06:38		06:59 (AG13)	07:06		07:38 (AG12)	07:35			07:09			07:39		08:13 (AG11)
	20:52		20:21	23	07:22 (AG13)	19:34	35	08:13 (AG12)	18:46			17:10			17:02	39	08:52 (AG11)
17	06:11		06:39		07:00 (AG13)	07:07		07:37 (AG12)	07:36			07:11			07:39		08:13 (AG11)
	20:51		20:20	22	07:22 (AG13)	19:32	36	08:13 (AG12)	18:45			17:09			17:03	40	08:53 (AG11)
18	06:12		06:40		07:00 (AG13)	07:08		07:36 (AG12)	07:37			07:12			07:40		08:14 (AG11)
	20:51		20:18	21	07:21 (AG13)	19:31	38	08:14 (AG12)	18:43			17:09			17:03	40	08:54 (AG11)
19	06:13		06:40		07:01 (AG13)	07:09		07:36 (AG12)	07:38			07:13			07:41		08:14 (AG11)
	20:50		20:17	19	07:20 (AG13)	19:29	38	08:14 (AG12)	18:42			17:08			17:03	40	08:54 (AG11)
20	06:13		06:41		07:02 (AG13)	07:10		07:35 (AG12)	07:39			07:14			07:41		08:15 (AG11)
	20:49		20:16	17	07:19 (AG13)	19:27	39	08:14 (AG12)	18:40			17:07			17:04	40	08:55 (AG11)
21	06:14		06:42		07:03 (AG13)	07:11		07:35 (AG12)	07:41			07:15		08:17 (AG11)	07:42		08:15 (AG11)
	20:48		20:14	15	07:18 (AG13)	19:26	38	08:13 (AG12)	18:39			17:07	12	08:29 (AG11)	17:04	40	08:55 (AG11)
22	06:15		06:43		07:04 (AG13)	07:12		07:35 (AG12)	07:42		17:57 (Medio Campidano)	07:16		08:16 (AG11)	07:42		08:16 (AG11)
	20:48		20:13	12	07:16 (AG13)	19:24	38	08:13 (AG12)	18:38	5	18:02 (Medio Campidano)	17:06	16	08:32 (AG11)	17:05	40	08:56 (AG11)
23	06:16		06:44		07:05 (AG13)	07:13		07:34 (AG12)	07:43		17:53 (Medio Campidano)	07:17		08:14 (AG11)	07:43		08:16 (AG11)
	20:47		20:11	9	07:14 (AG13)	19:22	38	08:12 (AG12)	18:36	12	18:05 (Medio Campidano)	17:05	20	08:34 (AG11)	17:05	40	08:56 (AG11)
24	06:17		06:45		07:06 (AG13)	07:14		07:34 (AG12)	07:44		17:51 (Medio Campidano)	07:18		08:13 (AG11)	07:43		08:17 (AG11)
	20:46		20:10	5	07:11 (AG13)	19:21	37	08:11 (AG12)	18:35	15	18:06 (Medio Campidano)	17:05	23	08:36 (AG11)	17:06	40	08:57 (AG11)
25	06:18		06:46			07:15		07:34 (AG12)	06:45		16:50 (Medio Campidano)	07:19		08:12 (AG11)	07:44		08:17 (AG11)
	20:45		20:08			19:19	36	08:10 (AG12)	17:34	17	17:07 (Medio Campidano)	17:04	25	08:37 (AG11)	17:06	40	08:57 (AG11)
26	06:18		06:47			07:16		07:35 (AG12)	06:46		16:49 (Medio Campidano)	07:20		08:11 (AG11)	07:44		08:17 (AG11)
	20:45		20:07			19:17	35	08:10 (AG12)	17:32	19	17:08 (Medio Campidano)	17:04	27	08:38 (AG11)	17:07	40	08:57 (AG11)
27	06:19		06:48			07:17		07:36 (AG12)	06:47		16:49 (Medio Campidano)	07:22		08:11 (AG11)	07:44		08:19 (AG11)
	20:44		20:05			19:16	32	08:08 (AG12)	17:31	20	17:09 (Medio Campidano)	17:03	28	08:39 (AG11)	17:08	39	08:58 (AG11)
28	06:20		06:49			07:18		07:37 (AG12)	06:48		16:48 (Medio Campidano)	07:23		08:10 (AG11)	07:45		08:19 (AG11)
	20:43		20:04			19:14	30	08:07 (AG12)	17:30	19	17:07 (Medio Campidano)	17:03	30	08:40 (AG11)	17:08	40	08:59 (AG11)
29	06:21		06:50			07:19		07:38 (AG12)	06:49		16:48 (Medio Campidano)	07:24		08:10 (AG11)	07:45		08:19 (AG11)
	20:42		20:02			19:13	28	08:06 (AG12)	17:28	18	17:06 (Medio Campidano)	17:03	31	08:41 (AG11)	17:09	40	08:59 (AG11)
30	06:22		06:51			07:19		07:39 (AG12)	06:50		16:48 (Medio Campidano)	07:25		08:10 (AG11)	07:45		08:19 (AG11)
	20:41		20:01			19:11	25	08:04 (AG12)	17:27	16	17:04 (Medio Campidano)	17:02	33	08:43 (AG11)	17:10	40	08:59 (AG11)
31	06:23		06:52						06:51		16:48 (Medio Campidano)				07:46		08:20 (AG11)
	20:40		19:59						17:26	15	17:03 (Medio Campidano)				17:10	39	08:59 (AG11)
Potential sun hours	454		425			374			347			301			293		
Total, worst case				399			693			206			294			1202	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F005 - D7

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February		March		April		May		June	
1	07:46	07:34			07:00		07:40 (AG11)	07:11			06:27	06:46 (AG12)	06:00	06:21 (AG13)
	17:12	17:44			18:17	41	08:21 (AG11)	19:48			20:18	37 07:23 (AG12)	20:46	15 06:36 (AG13)
2	07:46	07:33			06:58		07:41 (AG11)	07:10			06:26	06:46 (AG12)	06:00	06:21 (AG13)
	17:12	17:46			18:18	39	08:20 (AG11)	19:49			20:19	38 07:24 (AG12)	20:47	16 06:37 (AG13)
3	07:46	07:32			06:57		07:41 (AG11)	07:08			06:25	06:45 (AG12)	06:00	06:20 (AG13)
	17:13	17:47			18:19	37	08:18 (AG11)	19:50			20:20	39 07:24 (AG12)	20:47	16 06:36 (AG13)
4	07:46	07:31		08:00 (AG11)	06:55		07:43 (AG11)	07:06			06:24	06:45 (AG12)	05:59	06:20 (AG13)
	17:14	17:48	2	08:02 (AG11)	18:20	34	08:17 (AG11)	19:51			20:21	39 07:24 (AG12)	20:48	17 06:37 (AG13)
5	07:46	07:30		07:54 (AG11)	06:54		07:44 (AG11)	07:05			06:23	06:45 (AG12)	05:59	06:20 (AG13)
	17:15	17:49	15	08:09 (AG11)	18:21	31	08:15 (AG11)	19:52			20:22	40 07:25 (AG12)	20:49	18 06:38 (AG13)
6	07:46	07:29		07:51 (AG11)	06:52		07:46 (AG11)	07:03			06:22	06:45 (AG12)	05:59	06:20 (AG13)
	17:16	17:50	21	08:12 (AG11)	18:22	28	08:14 (AG11)	19:53			20:23	40 07:25 (AG12)	20:49	19 06:39 (AG13)
7	07:46	07:28		07:49 (AG11)	06:51		07:47 (AG11)	07:02			06:20	06:45 (AG12)	05:58	06:19 (AG13)
	17:17	17:51	26	08:15 (AG11)	18:23	23	08:10 (AG11)	19:54			20:24	40 07:25 (AG12)	20:50	19 06:38 (AG13)
8	07:46	07:27		07:47 (AG11)	06:49		07:51 (AG11)	07:00			06:19	06:44 (AG12)	05:58	06:19 (AG13)
	17:18	17:53	30	08:17 (AG11)	18:24	16	08:07 (AG11)	19:55			20:25	40 07:24 (AG12)	20:51	20 06:39 (AG13)
9	07:46	07:26		07:46 (AG11)	06:48		07:58 (AG11)	06:59			06:18	06:44 (AG12)	05:58	06:19 (AG13)
	17:19	17:54	33	08:19 (AG11)	18:25	1	07:59 (AG11)	19:56			20:26	40 07:24 (AG12)	20:51	20 06:39 (AG13)
10	07:46	07:25		07:45 (AG11)	06:46			06:57			06:17	06:44 (AG12)	05:58	06:19 (AG13)
	17:20	17:55	35	08:20 (AG11)	18:26			19:57			20:27	39 07:23 (AG12)	20:52	21 06:40 (AG13)
11	07:46	07:24		07:44 (AG11)	06:45			06:56			06:16	06:44 (AG12)	05:58	06:19 (AG13)
	17:21	17:56	37	08:21 (AG11)	18:27			19:58			20:28	39 07:23 (AG12)	20:52	21 06:40 (AG13)
12	07:45	07:22		07:42 (AG11)	06:43		18:02 (Medio Campidano)	06:54			06:15	06:45 (AG12)	05:57	06:19 (AG13)
	17:22	17:57	40	08:22 (AG11)	18:28	5	18:07 (Medio Campidano)	19:59			20:29	39 07:24 (AG12)	20:53	21 06:40 (AG13)
13	07:45	07:21		07:41 (AG11)	06:41		18:00 (Medio Campidano)	06:53			06:14	06:46 (AG12)	05:57	06:19 (AG13)
	17:23	17:59	42	08:23 (AG11)	18:29	9	18:09 (Medio Campidano)	20:00			20:30	37 07:23 (AG12)	20:53	22 06:41 (AG13)
14	07:45	07:20		07:41 (AG11)	06:40		17:58 (Medio Campidano)	06:51			06:13	06:46 (AG12)	05:57	06:19 (AG13)
	17:24	18:00	43	08:24 (AG11)	18:30	11	18:09 (Medio Campidano)	20:01			20:31	37 07:23 (AG12)	20:54	22 06:41 (AG13)
15	07:44	07:19		07:41 (AG11)	06:38		17:58 (Medio Campidano)	06:50			06:12	06:46 (AG12)	05:57	06:19 (AG13)
	17:25	18:01	44	08:25 (AG11)	18:31	13	18:11 (Medio Campidano)	20:02			20:32	36 07:22 (AG12)	20:54	22 06:41 (AG13)
16	07:44	07:17		07:39 (AG11)	06:37		17:56 (Medio Campidano)	06:48			06:11	06:46 (AG12)	05:57	06:19 (AG13)
	17:26	18:02	45	08:24 (AG11)	18:32	16	18:12 (Medio Campidano)	20:03			20:33	35 07:21 (AG12)	20:54	22 06:41 (AG13)
17	07:44	07:16		07:39 (AG11)	06:35		17:55 (Medio Campidano)	06:47			06:10	06:47 (AG12)	05:57	06:19 (AG13)
	17:27	18:03	46	08:25 (AG11)	18:33	17	18:12 (Medio Campidano)	20:04			20:34	34 07:21 (AG12)	20:55	22 06:41 (AG13)
18	07:43	07:15		07:39 (AG11)	06:34		17:55 (Medio Campidano)	06:45			06:09	06:47 (AG12)	05:57	06:19 (AG13)
	17:28	18:04	47	08:26 (AG11)	18:34	19	18:14 (Medio Campidano)	20:05			20:34	33 07:20 (AG12)	20:55	22 06:41 (AG13)
19	07:43	07:14		07:38 (AG11)	06:32		17:55 (Medio Campidano)	06:44			06:09	06:49 (AG12)	05:58	06:19 (AG13)
	17:29	18:05	47	08:25 (AG11)	18:35	20	18:15 (Medio Campidano)	20:06			20:35	31 07:20 (AG12)	20:55	23 06:42 (AG13)
20	07:42	07:12		07:38 (AG11)	06:30		17:56 (Medio Campidano)	06:42			06:08	06:49 (AG12)	05:58	06:19 (AG13)
	17:30	18:07	48	08:26 (AG11)	18:36	20	18:16 (Medio Campidano)	20:07			20:36	30 07:19 (AG12)	20:56	23 06:42 (AG13)
21	07:42	07:11		07:38 (AG11)	06:29		17:56 (Medio Campidano)	06:41			06:07	06:50 (AG12)	05:58	06:20 (AG13)
	17:32	18:08	48	08:26 (AG11)	18:37	19	18:15 (Medio Campidano)	20:08			20:37	28 07:18 (AG12)	20:56	23 06:43 (AG13)
22	07:41	07:10		07:38 (AG11)	06:27		17:56 (Medio Campidano)	06:39	07:01 (AG12)		06:06	06:51 (AG12)	05:58	06:20 (AG13)
	17:33	18:09	47	08:25 (AG11)	18:38	17	18:13 (Medio Campidano)	20:09	12 07:13 (AG12)		20:38	26 07:17 (AG12)	20:56	23 06:43 (AG13)
23	07:41	07:08		07:38 (AG11)	06:26		17:58 (Medio Campidano)	06:38	06:56 (AG12)		06:06	06:52 (AG12)	05:58	06:20 (AG13)
	17:34	18:10	47	08:25 (AG11)	18:39	14	18:12 (Medio Campidano)	20:10	19 07:15 (AG12)		20:39	24 07:16 (AG12)	20:56	23 06:43 (AG13)
24	07:40	07:07		07:38 (AG11)	06:24		17:59 (Medio Campidano)	06:37	06:55 (AG12)		06:05	06:53 (AG12)	05:59	06:20 (AG13)
	17:35	18:11	47	08:25 (AG11)	18:40	10	18:09 (Medio Campidano)	20:11	23 07:18 (AG12)		20:40	22 07:15 (AG12)	20:56	23 06:43 (AG13)
25	07:39	07:05		07:38 (AG11)	06:22			06:35	06:54 (AG12)		06:04	06:25 (AG13)	05:59	06:21 (AG13)
	17:36	18:12	46	08:24 (AG11)	18:41			20:12	25 07:19 (AG12)		20:41	23 07:14 (AG12)	20:57	22 06:43 (AG13)
26	07:39	07:04		07:39 (AG11)	06:21			06:34	06:53 (AG12)		06:04	06:24 (AG13)	05:59	06:21 (AG13)
	17:37	18:13	45	08:24 (AG11)	18:42			20:13	28 07:21 (AG12)		20:41	23 07:13 (AG12)	20:57	22 06:43 (AG13)
27	07:38	07:03		07:39 (AG11)	06:19			06:33	06:51 (AG12)		06:03	06:23 (AG13)	06:00	06:21 (AG13)
	17:38	18:14	44	08:23 (AG11)	18:43			20:14	30 07:21 (AG12)		20:42	20 07:10 (AG12)	20:57	22 06:43 (AG13)
28	07:37	07:01		07:39 (AG11)	06:18			06:31	06:50 (AG12)		06:02	06:23 (AG13)	06:00	06:22 (AG13)
	17:40	18:15	43	08:22 (AG11)	18:44			20:15	32 07:22 (AG12)		20:43	17 07:08 (AG12)	20:57	22 06:44 (AG13)
29	07:36				07:16			06:30	06:49 (AG12)		06:02	06:22 (AG13)	06:00	06:22 (AG13)
	17:41				19:45			20:16	34 07:23 (AG12)		20:44	11 06:33 (AG13)	20:57	22 06:44 (AG13)
30	07:35				07:14			06:29	06:48 (AG12)		06:01	06:22 (AG13)	06:01	06:23 (AG13)
	17:42				19:46			20:17	36 07:24 (AG12)		20:44	13 06:35 (AG13)	20:57	21 06:44 (AG13)
31	07:35				07:13						06:01	06:22 (AG13)		
	17:43				19:47						20:45	14 06:36 (AG13)		
Potential sun hours	302		299		370			397			444		447	
Total, worst case			968			440			239			964		624

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F005 - D7

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October		November		December
1	06:01		06:23 (AG13)	06:24		06:55 (AG12)	06:53		07:20		18:41 (Medio Campidano)	06:52		07:14 (AG11)	07:26
	20:57	21	06:44 (AG13)	20:39	38	07:33 (AG12)	19:58		19:09	6	18:47 (Medio Campidano)	17:25	35	07:49 (AG11)	17:02
2	06:02		06:24 (AG13)	06:25		06:55 (AG12)	06:54		07:21		18:43 (Medio Campidano)	06:54		07:16 (AG11)	07:27
	20:56	21	06:45 (AG13)	20:38	39	07:34 (AG12)	19:56		19:08	3	18:46 (Medio Campidano)	17:24	32	07:48 (AG11)	17:02
3	06:02		06:24 (AG13)	06:26		06:55 (AG12)	06:54		07:22			06:55		07:17 (AG11)	07:28
	20:56	20	06:44 (AG13)	20:37	39	07:34 (AG12)	19:55		19:06			17:23	29	07:46 (AG11)	17:02
4	06:03		06:25 (AG13)	06:27		06:54 (AG12)	06:55		07:23			06:56		07:19 (AG11)	07:29
	20:56	20	06:45 (AG13)	20:36	40	07:34 (AG12)	19:53		19:05			17:21	25	07:44 (AG11)	17:02
5	06:03		06:25 (AG13)	06:27		06:54 (AG12)	06:56		07:24		08:30 (AG11)	06:57		07:21 (AG11)	07:30
	20:56	19	06:44 (AG13)	20:35	40	07:34 (AG12)	19:52		19:03	12	08:42 (AG11)	17:20	21	07:42 (AG11)	17:01
6	06:04		06:26 (AG13)	06:28		06:54 (AG12)	06:57		07:25		08:25 (AG11)	06:58		07:24 (AG11)	07:31
	20:56	19	06:45 (AG13)	20:33	40	07:34 (AG12)	19:50		19:01	21	08:46 (AG11)	17:19	15	07:39 (AG11)	17:01
7	06:04		06:26 (AG13)	06:29		06:54 (AG12)	06:58		07:26		08:22 (AG11)	06:59			07:31
	20:56	18	06:44 (AG13)	20:32	40	07:34 (AG12)	19:48		19:00	26	08:48 (AG11)	17:18			17:01
8	06:05		06:27 (AG13)	06:30		06:54 (AG12)	06:59		07:27		08:20 (AG11)	07:00			07:32
	20:55	18	06:45 (AG13)	20:31	39	07:33 (AG12)	19:47		18:58	30	08:50 (AG11)	17:17			17:01
9	06:06		06:27 (AG13)	06:31		06:54 (AG12)	07:00		07:28		08:18 (AG11)	07:01			07:33
	20:55	17	06:44 (AG13)	20:30	39	07:33 (AG12)	19:45		18:57	33	08:51 (AG11)	17:16			17:01
10	06:06		06:28 (AG13)	06:32		06:54 (AG12)	07:01		07:29		08:16 (AG11)	07:03			07:34
	20:55	16	06:44 (AG13)	20:29	39	07:33 (AG12)	19:44		18:55	36	08:52 (AG11)	17:15			17:01
11	06:07		06:29 (AG13)	06:33		06:54 (AG12)	07:02		07:30		08:15 (AG11)	07:04			07:35
	20:54	15	06:44 (AG13)	20:28	38	07:32 (AG12)	19:42		18:54	38	08:53 (AG11)	17:14			17:01
12	06:08		06:29 (AG13)	06:34		06:55 (AG12)	07:03		07:31		08:14 (AG11)	07:05			07:36
	20:54	14	06:43 (AG13)	20:26	37	07:32 (AG12)	19:40		18:52	40	08:54 (AG11)	17:13			17:02
13	06:08		06:30 (AG13)	06:35		06:56 (AG12)	07:04		07:32		08:13 (AG11)	07:06			07:36
	20:53	13	06:43 (AG13)	20:25	35	07:31 (AG12)	19:39		18:51	42	08:55 (AG11)	17:13			17:02
14	06:09		06:31 (AG13)	06:36		06:57 (AG12)	07:05		07:33		08:12 (AG11)	07:07			07:37
	20:53	12	06:43 (AG13)	20:24	34	07:31 (AG12)	19:37		18:49	43	08:55 (AG11)	17:12			17:02
15	06:10		06:31 (AG13)	06:37		06:58 (AG12)	07:05		07:34		08:11 (AG11)	07:08			07:38
	20:52	13	07:14 (AG12)	20:22	32	07:30 (AG12)	19:35		18:48	45	08:56 (AG11)	17:11			17:02
16	06:10		06:32 (AG13)	06:38		06:59 (AG12)	07:06		07:35		08:10 (AG11)	07:09			07:39
	20:52	20	07:19 (AG12)	20:21	30	07:29 (AG12)	19:34		18:46	46	08:56 (AG11)	17:10			17:02
17	06:11		06:33 (AG13)	06:39		07:00 (AG12)	07:07		07:36		08:09 (AG11)	07:11			07:39
	20:51	22	07:21 (AG12)	20:20	27	07:27 (AG12)	19:32		18:45	47	08:56 (AG11)	17:09			17:03
18	06:12		06:34 (AG13)	06:40		07:00 (AG12)	07:08		07:37		08:09 (AG11)	07:12			07:40
	20:51	23	07:23 (AG12)	20:18	25	07:25 (AG12)	19:31		18:43	47	08:56 (AG11)	17:09			17:03
19	06:13		06:34 (AG13)	06:40		07:01 (AG12)	07:09		18:47 (Medio Campidano)	07:38		08:08 (AG11)	07:13		07:41
	20:50	23	07:24 (AG12)	20:17	22	07:23 (AG12)	19:29	9	18:56 (Medio Campidano)	18:42	48	08:56 (AG11)	17:08		17:03
20	06:13		07:02 (AG12)	06:41		07:03 (AG12)	07:10		18:44 (Medio Campidano)	07:39		08:09 (AG11)	07:14		07:41
	20:49	23	07:25 (AG12)	20:16	18	07:21 (AG12)	19:27	14	18:58 (Medio Campidano)	18:40	48	08:57 (AG11)	17:07		17:04
21	06:14		07:02 (AG12)	06:42		07:06 (AG12)	07:11		18:43 (Medio Campidano)	07:41		08:09 (AG11)	07:15		07:42
	20:48	25	07:27 (AG12)	20:14	11	07:17 (AG12)	19:26	16	18:59 (Medio Campidano)	18:39	48	08:57 (AG11)	17:07		17:04
22	06:15		07:01 (AG12)	06:43			07:12		18:41 (Medio Campidano)	07:42		08:09 (AG11)	07:16		07:42
	20:48	27	07:28 (AG12)	20:13			19:24	19	19:00 (Medio Campidano)	18:38	47	08:56 (AG11)	17:06		17:05
23	06:16		07:00 (AG12)	06:44			07:13		18:39 (Medio Campidano)	07:43		08:09 (AG11)	07:17		07:43
	20:47	29	07:29 (AG12)	20:11			19:22	20	18:59 (Medio Campidano)	18:36	47	08:56 (AG11)	17:05		17:05
24	06:17		06:59 (AG12)	06:45			07:14		18:38 (Medio Campidano)	07:44		08:09 (AG11)	07:18		07:43
	20:46	30	07:29 (AG12)	20:10			19:21	20	18:58 (Medio Campidano)	18:35	46	08:55 (AG11)	17:05		17:06
25	06:18		06:58 (AG12)	06:46			07:15		18:38 (Medio Campidano)	06:45		07:09 (AG11)	07:19		07:44
	20:45	32	07:30 (AG12)	20:08			19:19	19	18:57 (Medio Campidano)	17:34	46	07:55 (AG11)	17:04		17:06
26	06:19		06:58 (AG12)	06:47			07:16		18:38 (Medio Campidano)	06:46		07:09 (AG11)	07:20		07:44
	20:45	33	07:31 (AG12)	20:07			19:17	17	18:55 (Medio Campidano)	17:32	45	07:54 (AG11)	17:04		17:07
27	06:19		06:57 (AG12)	06:48			07:17		18:38 (Medio Campidano)	06:47		07:10 (AG11)	07:22		07:44
	20:44	34	07:31 (AG12)	20:05			19:16	16	18:54 (Medio Campidano)	17:31	44	07:54 (AG11)	17:04		17:08
28	06:20		06:57 (AG12)	06:49			07:18		18:38 (Medio Campidano)	06:48		07:11 (AG11)	07:23		07:45
	20:43	35	07:32 (AG12)	20:04			19:14	14	18:52 (Medio Campidano)	17:30	42	07:53 (AG11)	17:03		17:08
29	06:21		06:57 (AG12)	06:50			07:19		18:38 (Medio Campidano)	06:49		07:11 (AG11)	07:24		07:45
	20:42	36	07:33 (AG12)	20:02			19:13	12	18:50 (Medio Campidano)	17:28	41	07:52 (AG11)	17:03		17:09
30	06:22		06:56 (AG12)	06:51			07:19		18:39 (Medio Campidano)	06:50		07:12 (AG11)	07:25		07:45
	20:41	37	07:33 (AG12)	20:01			19:11	10	18:49 (Medio Campidano)	17:27	39	07:51 (AG11)	17:02		17:10
31	06:23		06:55 (AG12)	06:52						06:51		07:13 (AG11)			07:45
	20:40	38	07:33 (AG12)	19:59						17:26	37	07:50 (AG11)			17:10
Potential sun hours	454			425			374			347			301		293
Total, worst case		723			702			186			1093			157	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F010 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June		
1	07:46	07:34			07:00		17:19 (AG10)	07:11	06:27	06:00		
	17:11	17:44			18:16	36	17:55 (AG10)	19:48	20:18	20:46		
2	07:46	07:33			06:58		17:19 (AG10)	07:10	06:26	06:00		
	17:12	17:45			18:18	38	17:57 (AG10)	19:49	20:19	20:47		
3	07:46	07:32			06:57		17:19 (AG10)	07:08	06:25	05:59		
	17:13	17:47			18:19	39	17:58 (AG10)	19:50	20:20	20:47		
4	07:46	07:31			06:55		17:19 (AG10)	07:06	06:24	05:59		
	17:14	17:48			18:20	39	17:58 (AG10)	19:51	20:21	20:48		
5	07:46	07:30			06:54		17:18 (AG10)	07:05	06:23	05:59		
	17:15	17:49			18:21	39	17:57 (AG10)	19:52	20:22	20:49		
6	07:46	07:29			06:52		17:19 (AG10)	07:03	06:21	05:58		
	17:16	17:50			18:22	38	17:57 (AG10)	19:53	20:23	20:49		
7	07:46	07:28			06:51		17:18 (AG10)	07:02	06:20	05:58		
	17:17	17:51			18:23	38	17:56 (AG10)	19:54	20:24	20:50		
8	07:46	07:27			06:49		17:19 (AG10)	07:00	06:19	05:58		
	17:18	17:53			18:24	37	17:56 (AG10)	19:55	20:25	20:50		
9	07:46	07:26			06:48		17:19 (AG10)	06:59	06:18	05:58		
	17:19	17:54			18:25	36	17:55 (AG10)	19:56	20:26	20:51		
10	07:46	07:25			06:46		17:19 (AG10)	06:57	06:17	05:58		
	17:20	17:55			18:26	35	17:54 (AG10)	19:57	20:27	20:52		
11	07:45	07:23			06:45		17:21 (AG10)	06:56	06:16	05:57		
	17:21	17:56			18:27	32	17:53 (AG10)	19:58	20:28	20:52		
12	07:45	07:22			06:43		17:21 (AG10)	06:54	06:15	05:57		
	17:22	17:57			18:28	30	17:51 (AG10)	19:59	20:29	20:53		
13	07:45	07:21			06:41		17:23 (AG10)	06:52	06:14	05:57		
	17:23	17:58			18:29	27	17:50 (AG10)	20:00	20:30	20:53		
14	07:45	07:20			06:40		17:24 (AG10)	06:51	06:13	05:57		
	17:24	18:00			18:30	24	17:48 (AG10)	20:01	20:31	20:53		
15	07:44	07:19			06:38		17:27 (AG10)	06:49	06:12	05:57		
	17:25	18:01			18:31	19	17:46 (AG10)	20:02	20:32	20:54		
16	07:44	07:17			06:37		17:29 (AG10)	06:48	06:11	05:57		
	17:26	18:02			18:32	13	17:42 (AG10)	20:03	20:33	20:54		
17	07:44	07:16			06:35			06:47	06:10	05:57		
	17:27	18:03			18:33			20:04	20:33	20:55		
18	07:43	07:15			06:33			06:45	06:09	05:57		20:27 (AG11)
	17:28	18:04			18:34			20:05	20:34	20:55	1	20:28 (AG11)
19	07:43	07:14			06:32			06:44	06:09	05:58		20:26 (AG11)
	17:29	18:05			18:35			20:06	20:35	20:55	4	20:30 (AG11)
20	07:42	07:12		17:33 (AG10)	06:30			06:42	06:08	05:58		20:26 (AG11)
	17:30	18:06	12	17:45 (AG10)	18:36			20:07	20:36	20:55	4	20:30 (AG11)
21	07:42	07:11		17:30 (AG10)	06:29			06:41	06:07	05:58		20:27 (AG11)
	17:31	18:08	16	17:46 (AG10)	18:37			20:08	20:37	20:56	4	20:31 (AG11)
22	07:41	07:10		17:27 (AG10)	06:27			06:39	06:06	05:58		20:27 (AG11)
	17:33	18:09	20	17:47 (AG10)	18:38			20:09	20:38	20:56	4	20:31 (AG11)
23	07:41	07:08		17:26 (AG10)	06:25			06:38	06:05	05:58		20:27 (AG11)
	17:34	18:10	23	17:49 (AG10)	18:39			20:10	20:39	20:56	4	20:31 (AG11)
24	07:40	07:07		17:24 (AG10)	06:24			06:37	06:05	05:59		20:28 (AG11)
	17:35	18:11	25	17:49 (AG10)	18:40			20:11	20:40	20:56	2	20:30 (AG11)
25	07:39	07:05		17:23 (AG10)	06:22			06:35	06:04	05:59		
	17:36	18:12	28	17:51 (AG10)	18:41			20:12	20:40	20:56		
26	07:38	07:04		17:22 (AG10)	06:21			06:34	06:03	05:59		
	17:37	18:13	30	17:52 (AG10)	18:42			20:13	20:41	20:57		
27	07:38	07:03		17:21 (AG10)	06:19			06:33	06:03	05:59		
	17:38	18:14	32	17:53 (AG10)	18:43			20:14	20:42	20:57		
28	07:37	07:01		17:21 (AG10)	06:17			06:31	06:02	06:00		
	17:40	18:15	34	17:55 (AG10)	18:44			20:15	20:43	20:57		
29	07:36				07:16			06:30	06:02	06:00		
	17:41				19:45			20:16	20:44	20:57		
30	07:35				07:14			06:29	06:01	06:01		
	17:42				19:46			20:17	20:44	20:57		
31	07:35				07:13				06:01			
	17:43				19:47				20:45			
Potential sun hours	302	299			370			397	444	447		
Total, worst case			220			520					23	

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F010 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November	December
1	06:01	06:24	06:53			07:20		18:01 (AG10)	06:52	07:26
	20:56	20:39	19:58			19:09	29	18:30 (AG10)	17:25	17:02
2	06:02	06:25	06:53			07:21		18:00 (AG10)	06:54	07:27
	20:56	20:38	19:56			19:08	31	18:31 (AG10)	17:24	17:02
3	06:02	06:26	06:54			07:22		17:58 (AG10)	06:55	07:28
	20:56	20:37	19:55			19:06	34	18:32 (AG10)	17:22	17:02
4	06:03	06:26	06:55			07:23		17:57 (AG10)	06:56	07:29
	20:56	20:36	19:53			19:04	35	18:32 (AG10)	17:21	17:01
5	06:03	06:27	06:56			07:24		17:56 (AG10)	06:57	07:29
	20:56	20:35	19:51			19:03	37	18:33 (AG10)	17:20	17:01
6	06:04	06:28	06:57			07:25		17:55 (AG10)	06:58	07:30
	20:56	20:33	19:50			19:01	38	18:33 (AG10)	17:19	17:01
7	06:04	06:29	06:58			07:26		17:55 (AG10)	06:59	07:31
	20:55	20:32	19:48			19:00	38	18:33 (AG10)	17:18	17:01
8	06:05	06:30	06:59			07:27		17:54 (AG10)	07:00	07:32
	20:55	20:31	19:47			18:58	39	18:33 (AG10)	17:17	17:01
9	06:05	06:31	07:00			07:28		17:54 (AG10)	07:01	07:33
	20:55	20:30	19:45			18:57	39	18:33 (AG10)	17:16	17:01
10	06:06	06:32	07:01			07:29		17:53 (AG10)	07:03	07:34
	20:54	20:29	19:43			18:55	39	18:32 (AG10)	17:15	17:01
11	06:07	06:33	07:02			07:30		17:53 (AG10)	07:04	07:35
	20:54	20:27	19:42			18:54	38	18:31 (AG10)	17:14	17:01
12	06:07	06:34	07:03			07:31		17:53 (AG10)	07:05	07:36
	20:54	20:26	19:40			18:52	37	18:30 (AG10)	17:13	17:01
13	06:08	06:35	07:04			07:32		17:53 (AG10)	07:06	07:36
	20:53	20:25	19:39			18:51	35	18:28 (AG10)	17:12	17:02
14	06:09	06:36	07:04			07:33		17:53 (AG10)	07:07	07:37
	20:53	20:24	19:37			18:49	34	18:27 (AG10)	17:12	17:02
15	06:10	06:37	07:05			07:34		17:54 (AG10)	07:08	07:38
	20:52	20:22	19:35			18:48	31	18:25 (AG10)	17:11	17:02
16	06:10	06:38	07:06			07:35		17:54 (AG10)	07:09	07:39
	20:52	20:21	19:34			18:46	29	18:23 (AG10)	17:10	17:02
17	06:11	06:39	07:07			07:36		17:55 (AG10)	07:10	07:39
	20:51	20:20	19:32			18:45	27	18:22 (AG10)	17:09	17:03
18	06:12	06:39	07:08			07:37		17:56 (AG10)	07:12	07:40
	20:50	20:18	19:30			18:43	24	18:20 (AG10)	17:08	17:03
19	06:13	06:40	07:09			07:38		17:57 (AG10)	07:13	07:40
	20:50	20:17	19:29			18:42	22	18:19 (AG10)	17:08	17:03
20	06:13	06:41	07:10			07:39		17:59 (AG10)	07:14	07:41
	20:49	20:15	19:27			18:40	19	18:18 (AG10)	17:07	17:04
21	06:14	06:42	07:11			07:40		18:02 (AG10)	07:15	07:42
	20:48	20:14	19:26			18:39	15	18:17 (AG10)	17:07	17:04
22	06:15	06:43	07:12			07:41		18:05 (AG10)	07:16	07:42
	20:48	20:13	19:24			18:38	10	18:15 (AG10)	17:06	17:05
23	06:16	06:44	07:13			07:43			07:17	07:43
	20:47	20:11	19:22			18:36			17:05	17:05
24	06:17	06:45	07:14			07:44			07:18	07:43
	20:46	20:10	19:21			18:35			17:05	17:06
25	06:18	06:46	07:15			06:45			07:19	07:44
	20:45	20:08	19:19			17:34			17:04	17:06
26	06:18	06:47	07:16			06:46			07:20	07:44
	20:44	20:07	19:17			17:32			17:04	17:07
27	06:19	06:48	07:17		18:13 (AG10)	06:47			07:21	07:44
	20:44	20:05	19:16	8	18:21 (AG10)	17:31			17:03	17:08
28	06:20	06:49	07:17		18:08 (AG10)	06:48			07:22	07:45
	20:43	20:04	19:14	17	18:25 (AG10)	17:30			17:03	17:08
29	06:21	06:50	07:18		18:05 (AG10)	06:49			07:24	07:45
	20:42	20:02	19:12	22	18:27 (AG10)	17:28			17:03	17:09
30	06:22	06:51	07:19		18:03 (AG10)	06:50			07:25	07:45
	20:41	20:01	19:11	26	18:29 (AG10)	17:27			17:02	17:10
31	06:23	06:52				06:51				07:45
	20:40	19:59				17:26				17:10
Potential sun hours	454	425	374			347			301	293
Total, worst case				73			680			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F011 - A3 - F4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April		May	June	July	August	September		October	November	December
1	07:46	07:34	07:00		07:11		18:39 (AG10)	06:27	06:00	06:01	06:24	06:53	18:52 (AG10)	07:20	06:52	07:26
	17:11	17:44	18:16		19:48	40	19:19 (AG10)	20:18	20:46	20:56	20:39	19:58	8	19:00 (AG10)	19:09	17:25	17:02
2	07:46	07:33	06:58		07:10		18:40 (AG10)	06:26	06:00	06:02	06:25	06:53	18:47 (AG10)	07:21	06:54	07:27
	17:12	17:45	18:18		19:49	39	19:19 (AG10)	20:19	20:47	20:56	20:38	19:56	17	19:04 (AG10)	19:08	17:24	17:02
3	07:46	07:32	06:57		07:08		18:40 (AG10)	06:25	05:59	06:02	06:26	06:54	18:44 (AG10)	07:22	06:55	07:28
	17:13	17:47	18:19		19:50	38	19:18 (AG10)	20:20	20:47	20:56	20:37	19:55	22	19:06 (AG10)	19:06	17:22	17:02
4	07:46	07:31	06:55		07:06		18:40 (AG10)	06:24	05:59	06:03	06:26	06:55	18:41 (AG10)	07:23	06:56	07:29
	17:14	17:48	18:20		19:51	36	19:16 (AG10)	20:21	20:48	20:56	20:36	19:53	26	19:07 (AG10)	19:04	17:21	17:01
5	07:46	07:30	06:54		07:05		18:41 (AG10)	06:23	05:59	06:03	06:27	06:56	18:39 (AG10)	07:24	06:57	07:29
	17:15	17:49	18:21		19:52	35	19:16 (AG10)	20:22	20:49	20:56	20:35	19:51	30	19:09 (AG10)	19:03	17:20	17:01
6	07:46	07:29	06:52		07:03		18:41 (AG10)	06:21	05:58	06:04	06:28	06:57	18:38 (AG10)	07:25	06:58	07:30
	17:16	17:50	18:22		19:53	33	19:14 (AG10)	20:23	20:49	20:56	20:33	19:50	32	19:10 (AG10)	19:01	17:19	17:01
7	07:46	07:28	06:51		07:02		18:43 (AG10)	06:20	05:58	06:04	06:29	06:58	18:36 (AG10)	07:26	06:59	07:31
	17:17	17:51	18:23		19:54	30	19:13 (AG10)	20:24	20:50	20:55	20:32	19:48	35	19:11 (AG10)	19:00	17:18	17:01
8	07:46	07:27	06:49		07:00		18:44 (AG10)	06:19	05:58	06:05	06:30	06:59	18:35 (AG10)	07:27	07:00	07:32
	17:18	17:53	18:24		19:55	26	19:10 (AG10)	20:25	20:50	20:55	20:31	19:47	36	19:11 (AG10)	18:58	17:17	17:01
9	07:46	07:26	06:48		06:59		18:46 (AG10)	06:18	05:58	06:05	06:31	07:00	18:34 (AG10)	07:28	07:01	07:33
	17:19	17:54	18:25		19:56	22	19:08 (AG10)	20:26	20:51	20:55	20:30	19:45	38	19:12 (AG10)	18:57	17:16	17:01
10	07:46	07:25	06:46		06:57		18:48 (AG10)	06:17	05:58	06:06	06:32	07:01	18:33 (AG10)	07:29	07:03	07:34
	17:20	17:55	18:26		19:57	17	19:05 (AG10)	20:27	20:52	20:54	20:29	19:43	39	19:12 (AG10)	18:55	17:15	17:01
11	07:45	07:23	06:45		06:56		18:53 (AG10)	06:16	05:57	06:07	06:33	07:02	18:32 (AG10)	07:30	07:04	07:35
	17:21	17:56	18:27		19:58	8	19:01 (AG10)	20:28	20:52	20:54	20:27	19:42	40	19:12 (AG10)	18:54	17:14	17:01
12	07:45	07:22	06:43		06:54			06:15	05:57	06:07	06:34	07:03	18:31 (AG10)	07:31	07:05	07:36
	17:22	17:57	18:28		19:59			20:29	20:53	20:54	20:26	19:40	41	19:12 (AG10)	18:52	17:13	17:01
13	07:45	07:21	06:41		06:52			06:14	05:57	06:08	06:35	07:04	18:30 (AG10)	07:32	07:06	07:36
	17:23	17:58	18:29		20:00			20:30	20:53	20:53	20:25	19:39	41	19:11 (AG10)	18:51	17:12	17:02
14	07:45	07:20	06:40		06:51			06:13	05:57	06:09	06:36	07:04	18:30 (AG10)	07:33	07:07	07:37
	17:24	18:00	18:30		20:01			20:31	20:53	20:53	20:24	19:37	41	19:11 (AG10)	18:49	17:12	17:02
15	07:44	07:19	06:38		06:49			06:12	05:57	06:10	06:37	07:05	18:29 (AG10)	07:34	07:08	07:38
	17:25	18:01	18:31		20:02			20:32	20:54	20:52	20:22	19:35	42	19:11 (AG10)	18:48	17:11	17:02
16	07:44	07:17	06:37		17:57 (AG10)		06:48	06:11	05:57	06:10	06:38	07:06	18:29 (AG10)	07:35	07:09	07:39
	17:26	18:02	18:32	15	18:12 (AG10)		20:03	20:32	20:54	20:52	20:21	19:34	42	19:11 (AG10)	18:46	17:10	17:02
17	07:44	07:16	06:35		17:53 (AG10)		06:47	06:10	05:57	06:11	06:39	07:07	18:29 (AG10)	07:36	07:10	07:39
	17:27	18:03	18:33	19	18:12 (AG10)		20:04	20:33	20:55	20:51	20:20	19:32	41	19:10 (AG10)	18:45	17:09	17:03
18	07:43	07:15	06:33		17:51 (AG10)		06:45	06:09	05:57	06:12	06:39	07:08	18:29 (AG10)	07:37	07:12	07:40
	17:28	18:04	18:34	23	18:14 (AG10)		20:05	20:34	20:55	20:50	20:18	19:30	40	19:09 (AG10)	18:43	17:08	17:03
19	07:43	07:14	06:32		17:48 (AG10)		06:44	06:09	05:58	06:13	06:40	07:09	18:29 (AG10)	07:38	07:13	07:40
	17:29	18:05	18:35	27	18:15 (AG10)		20:06	20:35	20:55	20:50	20:17	19:29	38	19:07 (AG10)	18:42	17:08	17:03
20	07:42	07:12	06:30		17:46 (AG10)		06:42	06:08	05:58	06:13	06:41	07:10	18:29 (AG10)	07:39	07:14	07:41
	17:30	18:06	18:36	29	18:15 (AG10)		20:07	20:36	20:55	20:49	20:15	19:27	37	19:06 (AG10)	18:40	17:07	17:04
21	07:42	07:11	06:29		17:45 (AG10)		06:41	06:07	05:58	06:14	06:42	07:11	18:30 (AG10)	07:40	07:15	07:42
	17:31	18:08	18:37	32	18:17 (AG10)		20:08	20:37	20:56	20:48	20:14	19:26	34	19:04 (AG10)	18:39	17:07	17:04
22	07:41	07:10	06:27		17:44 (AG10)		06:39	06:06	05:58	06:15	06:43	07:12	18:29 (AG10)	07:41	07:16	07:42
	17:33	18:09	18:38	33	18:17 (AG10)		20:09	20:38	20:56	20:48	20:13	19:24	33	19:02 (AG10)	18:38	17:06	17:05
23	07:41	07:08	06:26		17:43 (AG10)		06:38	06:05	05:58	06:16	06:44	07:13	18:30 (AG10)	07:43	07:17	07:43
	17:34	18:10	18:39	36	18:19 (AG10)		20:10	20:39	20:56	20:47	20:11	19:22	30	19:00 (AG10)	18:36	17:05	17:05
24	07:40	07:07	06:24		17:42 (AG10)		06:37	06:05	05:59	06:17	06:45	07:14	18:31 (AG10)	07:44	07:18	07:43
	17:35	18:11	18:40	38	18:20 (AG10)		20:11	20:40	20:56	20:46	20:10	19:21	27	18:58 (AG10)	18:35	17:05	17:06
25	07:39	07:05	06:22		17:41 (AG10)		06:35	06:04	05:59	06:18	06:46	07:15	18:33 (AG10)	06:45	07:19	07:44
	17:36	18:12	18:41	39	18:20 (AG10)		20:12	20:40	20:56	20:45	20:08	19:19	24	18:57 (AG10)	17:34	17:04	17:06
26	07:38	07:04	06:21		17:41 (AG10)		06:34	06:03	05:59	06:18	06:47	07:16	18:34 (AG10)	06:46	07:20	07:44
	17:37	18:13	18:42	41	18:22 (AG10)		20:13	20:41	20:57	20:44	20:07	19:17	21	18:55 (AG10)	17:32	17:04	17:07
27	07:38	07:03	06:19		17:40 (AG10)		06:33	06:03	05:59	06:19	06:48	07:17	18:37 (AG10)	06:47	07:21	07:44
	17:38	18:14	18:43	41	18:21 (AG10)		20:14	20:42	20:57	20:44	20:05	19:16	17	18:54 (AG10)	17:31	17:03	17:08
28	07:37	07:01	06:17		17:40 (AG10)		06:31	06:02	06:00	06:20	06:49	07:17	18:41 (AG10)	06:48	07:22	07:45
	17:40	18:15	18:44	42	18:22 (AG10)		20:15	20:43	20:57	20:43	20:04	19:14	8	18:49 (AG10)	17:30	17:03	17:08
29	07:36		07:16		18:39 (AG10)		06:30	06:02	06:00	06:21	06:50	07:18			06:49	07:24	07:45
	17:41		19:45	42	19:21 (AG10)		20:16	20:44	20:57	20:42	20:02	19:12			17:28	17:03	17:09
30	07:35		07:14		18:39 (AG10)		06:29	06:01	06:01	06:22	06:51	07:19			06:50	07:25	07:45
	17:42		19:46	41	19:20 (AG10)		20:17	20:44	20:57	20:41	20:01	19:11			17:27	17:02	17:10
31	07:35		07:13		18:39 (AG10)			06:01		06:23	06:52				06:51		07:45
	17:43		19:47	41	19:20 (AG10)			20:45		20:40	19:59				17:26		17:10
Potential sun hours	302	299	370				397		444	447	454	425	374		347	301	293
Total, worst case				539		324								880			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F012 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April			May			June		
1	07:46	07:34	07:00	07:11			06:27		18:59 (AG10)	06:00		18:50 (AG10)
	17:12	17:44	18:16	19:48			20:18	50	19:49 (AG10)	20:46	71	20:01 (AG10)
2	07:46	07:33	06:58	07:10			06:26		18:58 (AG10)	06:00		18:51 (AG10)
	17:12	17:46	18:18	19:49			20:19	52	19:50 (AG10)	20:47	70	20:01 (AG10)
3	07:46	07:32	06:57	07:08			06:25		18:57 (AG10)	05:59		18:50 (AG10)
	17:13	17:47	18:19	19:50			20:20	54	19:51 (AG10)	20:47	71	20:01 (AG10)
4	07:46	07:31	06:55	07:06			06:24		18:56 (AG10)	05:59		18:51 (AG10)
	17:14	17:48	18:20	19:51			20:21	57	19:53 (AG10)	20:48	70	20:01 (AG10)
5	07:46	07:30	06:54	07:05			06:23		18:55 (AG10)	05:59		18:51 (AG10)
	17:15	17:49	18:21	19:52			20:22	58	19:53 (AG10)	20:49	71	20:02 (AG10)
6	07:46	07:29	06:52	07:03			06:21		18:54 (AG10)	05:59		18:52 (AG10)
	17:16	17:50	18:22	19:53			20:23	60	19:54 (AG10)	20:49	70	20:02 (AG10)
7	07:46	07:28	06:51	07:02			06:20		18:53 (AG10)	05:58		18:51 (AG10)
	17:17	17:51	18:23	19:54			20:24	61	19:54 (AG10)	20:50	70	20:01 (AG10)
8	07:46	07:27	06:49	07:00			06:19		18:52 (AG10)	05:58		18:52 (AG10)
	17:18	17:53	18:24	19:55			20:25	63	19:55 (AG10)	20:50	69	20:01 (AG10)
9	07:46	07:26	06:48	06:59			06:18		18:51 (AG10)	05:58		18:52 (AG10)
	17:19	17:54	18:25	19:56			20:26	64	19:55 (AG10)	20:51	70	20:02 (AG10)
10	07:46	07:25	06:46	06:57			06:17		18:51 (AG10)	05:58		18:53 (AG10)
	17:20	17:55	18:26	19:57			20:27	65	19:56 (AG10)	20:52	69	20:02 (AG10)
11	07:45	07:23	06:45	06:56			06:16		18:50 (AG10)	05:58		18:53 (AG10)
	17:21	17:56	18:27	19:58			20:28	66	19:56 (AG10)	20:52	69	20:02 (AG10)
12	07:45	07:22	06:43	06:54			06:15		18:50 (AG10)	05:57		18:54 (AG10)
	17:22	17:57	18:28	19:59			20:29	67	19:57 (AG10)	20:53	68	20:02 (AG10)
13	07:45	07:21	06:41	06:52			06:14		18:50 (AG10)	05:57		18:54 (AG10)
	17:23	17:58	18:29	20:00			20:30	68	19:58 (AG10)	20:53	69	20:03 (AG10)
14	07:45	07:20	06:40	06:51			06:13		18:50 (AG10)	05:57		18:54 (AG10)
	17:24	18:00	18:30	20:01			20:31	68	19:58 (AG10)	20:53	69	20:03 (AG10)
15	07:44	07:19	06:38	06:50			06:12		18:50 (AG10)	05:57		18:54 (AG10)
	17:25	18:01	18:31	20:02			20:32	68	19:58 (AG10)	20:54	69	20:03 (AG10)
16	07:44	07:17	06:37	06:48			06:11		18:49 (AG10)	05:57		18:55 (AG10)
	17:26	18:02	18:32	20:03			20:33	70	19:59 (AG10)	20:54	68	20:03 (AG10)
17	07:44	07:16	06:35	06:47			06:10		18:49 (AG10)	05:57		18:55 (AG10)
	17:27	18:03	18:33	20:04			20:33	70	19:59 (AG10)	20:55	68	20:03 (AG10)
18	07:43	07:15	06:34	06:45			06:09		18:49 (AG10)	05:57		18:55 (AG10)
	17:28	18:04	18:34	20:05			20:34	70	19:59 (AG10)	20:55	68	20:03 (AG10)
19	07:43	07:14	06:32	06:44			06:09		18:49 (AG10)	05:58		18:55 (AG10)
	17:29	18:05	18:35	20:06			20:35	71	20:00 (AG10)	20:55	68	20:03 (AG10)
20	07:42	07:12	06:30	06:42			06:08		18:49 (AG10)	05:58		18:55 (AG10)
	17:30	18:07	18:36	20:07			20:36	71	20:00 (AG10)	20:56	68	20:03 (AG10)
21	07:42	07:11	06:29	06:41			06:07		18:49 (AG10)	05:58		18:56 (AG10)
	17:31	18:08	18:37	20:08			20:37	71	20:00 (AG10)	20:56	68	20:04 (AG10)
22	07:41	07:10	06:27	06:39			06:06		18:48 (AG10)	05:58		18:56 (AG10)
	17:33	18:09	18:38	20:09			20:38	71	19:59 (AG10)	20:56	68	20:04 (AG10)
23	07:41	07:08	06:26	06:38			06:05		18:49 (AG10)	05:58		18:56 (AG10)
	17:34	18:10	18:39	20:10			20:39	71	20:00 (AG10)	20:56	68	20:04 (AG10)
24	07:40	07:07	06:24	06:37		19:18 (AG10)	06:05		18:49 (AG10)	05:59		18:56 (AG10)
	17:35	18:11	18:40	20:11	15	19:33 (AG10)	20:40	71	20:00 (AG10)	20:56	68	20:04 (AG10)
25	07:39	07:05	06:22	06:35		19:13 (AG10)	06:04		18:48 (AG10)	05:59		18:57 (AG10)
	17:36	18:12	18:41	20:12	25	19:38 (AG10)	20:40	72	20:00 (AG10)	20:56	68	20:05 (AG10)
26	07:39	07:04	06:21	06:34		19:09 (AG10)	06:03		18:49 (AG10)	05:59		18:57 (AG10)
	17:37	18:13	18:42	20:13	31	19:40 (AG10)	20:41	71	20:00 (AG10)	20:57	68	20:05 (AG10)
27	07:38	07:03	06:19	06:33		19:07 (AG10)	06:03		18:49 (AG10)	05:59		18:56 (AG10)
	17:38	18:14	18:43	20:14	36	19:43 (AG10)	20:42	71	20:00 (AG10)	20:57	69	20:05 (AG10)
28	07:37	07:01	06:18	06:31		19:05 (AG10)	06:02		18:50 (AG10)	06:00		18:57 (AG10)
	17:40	18:15	18:44	20:15	40	19:45 (AG10)	20:43	71	20:01 (AG10)	20:57	69	20:06 (AG10)
29	07:36		07:16	06:30		19:03 (AG10)	06:02		18:49 (AG10)	06:00		18:57 (AG10)
	17:41		19:45	20:16	44	19:47 (AG10)	20:44	71	20:00 (AG10)	20:57	69	20:06 (AG10)
30	07:35		07:14	06:29		19:01 (AG10)	06:01		18:50 (AG10)	06:01		18:58 (AG10)
	17:42		19:46	20:17	47	19:48 (AG10)	20:44	71	20:01 (AG10)	20:57	69	20:07 (AG10)
31	07:35		07:13				06:01		18:51 (AG10)			
	17:43		19:47				20:45	70	20:01 (AG10)			
Potential sun hours	302	299	370	397			444			447		
Total, worst case					238			2054			2069	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F012 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September	October	November	December
1	06:01		18:57 (AG10)	06:24		19:01 (AG10)	06:53	07:20	06:52	07:26
	20:57	69	20:06 (AG10)	20:39	66	20:07 (AG10)	19:58	19:09	17:25	17:02
2	06:02		18:57 (AG10)	06:25		19:01 (AG10)	06:53	07:21	06:54	07:27
	20:56	69	20:06 (AG10)	20:38	66	20:07 (AG10)	19:56	19:08	17:24	17:02
3	06:02		18:58 (AG10)	06:26		19:02 (AG10)	06:54	07:22	06:55	07:28
	20:56	69	20:07 (AG10)	20:37	64	20:06 (AG10)	19:55	19:06	17:22	17:02
4	06:03		18:57 (AG10)	06:27		19:02 (AG10)	06:55	07:23	06:56	07:29
	20:56	70	20:07 (AG10)	20:36	64	20:06 (AG10)	19:53	19:05	17:21	17:02
5	06:03		18:58 (AG10)	06:27		19:03 (AG10)	06:56	07:24	06:57	07:29
	20:56	69	20:07 (AG10)	20:35	62	20:05 (AG10)	19:51	19:03	17:20	17:01
6	06:04		18:58 (AG10)	06:28		19:04 (AG10)	06:57	07:25	06:58	07:30
	20:56	70	20:08 (AG10)	20:33	60	20:04 (AG10)	19:50	19:01	17:19	17:01
7	06:04		18:58 (AG10)	06:29		19:04 (AG10)	06:58	07:26	06:59	07:31
	20:55	70	20:08 (AG10)	20:32	60	20:04 (AG10)	19:48	19:00	17:18	17:01
8	06:05		18:58 (AG10)	06:30		19:04 (AG10)	06:59	07:27	07:00	07:32
	20:55	70	20:08 (AG10)	20:31	58	20:02 (AG10)	19:47	18:58	17:17	17:01
9	06:06		18:58 (AG10)	06:31		19:05 (AG10)	07:00	07:28	07:01	07:33
	20:55	70	20:08 (AG10)	20:30	56	20:01 (AG10)	19:45	18:57	17:16	17:01
10	06:06		18:58 (AG10)	06:32		19:06 (AG10)	07:01	07:29	07:03	07:34
	20:54	71	20:09 (AG10)	20:29	54	20:00 (AG10)	19:43	18:55	17:15	17:01
11	06:07		18:58 (AG10)	06:33		19:07 (AG10)	07:02	07:30	07:04	07:35
	20:54	71	20:09 (AG10)	20:27	52	19:59 (AG10)	19:42	18:54	17:14	17:01
12	06:07		18:58 (AG10)	06:34		19:08 (AG10)	07:03	07:31	07:05	07:36
	20:54	71	20:09 (AG10)	20:26	49	19:57 (AG10)	19:40	18:52	17:13	17:01
13	06:08		18:58 (AG10)	06:35		19:10 (AG10)	07:04	07:32	07:06	07:36
	20:53	71	20:09 (AG10)	20:25	46	19:56 (AG10)	19:39	18:51	17:12	17:02
14	06:09		18:59 (AG10)	06:36		19:11 (AG10)	07:04	07:33	07:07	07:37
	20:53	71	20:10 (AG10)	20:24	43	19:54 (AG10)	19:37	18:49	17:12	17:02
15	06:10		18:58 (AG10)	06:37		19:13 (AG10)	07:05	07:34	07:08	07:38
	20:52	71	20:09 (AG10)	20:22	39	19:52 (AG10)	19:35	18:48	17:11	17:02
16	06:10		18:58 (AG10)	06:38		19:15 (AG10)	07:06	07:35	07:09	07:39
	20:52	71	20:09 (AG10)	20:21	35	19:50 (AG10)	19:34	18:46	17:10	17:02
17	06:11		18:59 (AG10)	06:39		19:17 (AG10)	07:07	07:36	07:10	07:39
	20:51	71	20:10 (AG10)	20:20	29	19:46 (AG10)	19:32	18:45	17:09	17:03
18	06:12		18:59 (AG10)	06:40		19:20 (AG10)	07:08	07:37	07:12	07:40
	20:50	71	20:10 (AG10)	20:18	23	19:43 (AG10)	19:30	18:43	17:09	17:03
19	06:13		18:58 (AG10)	06:40		19:25 (AG10)	07:09	07:38	07:13	07:40
	20:50	71	20:09 (AG10)	20:17	13	19:38 (AG10)	19:29	18:42	17:08	17:03
20	06:13		18:58 (AG10)	06:41			07:10	07:39	07:14	07:41
	20:49	72	20:10 (AG10)	20:16			19:27	18:40	17:07	17:04
21	06:14		18:59 (AG10)	06:42			07:11	07:40	07:15	07:42
	20:48	71	20:10 (AG10)	20:14			19:26	18:39	17:07	17:04
22	06:15		18:59 (AG10)	06:43			07:12	07:42	07:16	07:42
	20:48	71	20:10 (AG10)	20:13			19:24	18:38	17:06	17:05
23	06:16		18:59 (AG10)	06:44			07:13	07:43	07:17	07:43
	20:47	71	20:10 (AG10)	20:11			19:22	18:36	17:05	17:05
24	06:17		18:59 (AG10)	06:45			07:14	07:44	07:18	07:43
	20:46	70	20:09 (AG10)	20:10			19:21	18:35	17:05	17:06
25	06:18		18:59 (AG10)	06:46			07:15	06:45	07:19	07:44
	20:45	70	20:09 (AG10)	20:08			19:19	17:34	17:04	17:06
26	06:18		18:59 (AG10)	06:47			07:16	06:46	07:20	07:44
	20:44	70	20:09 (AG10)	20:07			19:17	17:32	17:04	17:07
27	06:19		19:00 (AG10)	06:48			07:17	06:47	07:21	07:44
	20:44	69	20:09 (AG10)	20:05			19:16	17:31	17:03	17:08
28	06:20		19:00 (AG10)	06:49			07:18	06:48	07:22	07:45
	20:43	69	20:09 (AG10)	20:04			19:14	17:30	17:03	17:08
29	06:21		19:00 (AG10)	06:50			07:18	06:49	07:24	07:45
	20:42	69	20:09 (AG10)	20:02			19:13	17:28	17:03	17:09
30	06:22		19:01 (AG10)	06:51			07:19	06:50	07:25	07:45
	20:41	68	20:09 (AG10)	20:01			19:11	17:27	17:02	17:10
31	06:23		19:00 (AG10)	06:52				06:51		07:45
	20:40	67	20:07 (AG10)	19:59				17:26		17:10
Potential sun hours	454			425			374	347	301	293
Total, worst case		2173			939					

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F013 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August		September	October	November	December
1	07:46	07:34	07:00	07:11	06:27		06:00		19:14 (AG10)	06:01		19:20 (AG10)	06:24		19:35 (AG10)	06:53	07:20	06:52	07:26
	17:11	17:44	18:16	19:48	20:18		20:46	61	20:15 (AG10)	20:56	62	20:22 (AG10)	20:39	37	20:12 (AG10)	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26		06:00		19:15 (AG10)	06:02		19:20 (AG10)	06:25		19:36 (AG10)	06:53	07:21	06:54	07:27
	17:12	17:46	18:18	19:49	20:19		20:47	60	20:15 (AG10)	20:56	61	20:21 (AG10)	20:38	34	20:10 (AG10)	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25		05:59		19:14 (AG10)	06:02		19:20 (AG10)	06:26		19:38 (AG10)	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20		20:47	61	20:15 (AG10)	20:56	62	20:22 (AG10)	20:37	31	20:09 (AG10)	19:55	19:06	17:22	17:02
4	07:46	07:31	06:55	07:06	06:24		05:59		19:15 (AG10)	06:03		19:20 (AG10)	06:27		19:41 (AG10)	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21		20:48	61	20:16 (AG10)	20:56	62	20:22 (AG10)	20:36	25	20:06 (AG10)	19:53	19:05	17:21	17:02
5	07:46	07:30	06:54	07:05	06:23		05:59		19:15 (AG10)	06:03		19:21 (AG10)	06:27		19:43 (AG10)	06:56	07:24	06:57	07:29
	17:15	17:49	18:21	19:52	20:22		20:49	61	20:16 (AG10)	20:56	61	20:22 (AG10)	20:35	21	20:04 (AG10)	19:51	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:21		05:59		19:15 (AG10)	06:04		19:21 (AG10)	06:28		19:48 (AG10)	06:57	07:25	06:58	07:30
	17:16	17:50	18:22	19:53	20:23		20:49	62	20:17 (AG10)	20:56	62	20:23 (AG10)	20:33	11	19:59 (AG10)	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20		19:35 (AG10)	05:58	19:15 (AG10)	06:04		19:21 (AG10)	06:29			06:58	07:26	06:59	07:31
	17:17	17:51	18:23	19:54	20:24	15	19:50 (AG10)	20:50	61	20:16 (AG10)	20:55	61	20:22 (AG10)	20:32		19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19		19:32 (AG10)	05:58	19:15 (AG10)	06:05		19:22 (AG10)	06:30			06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	22	19:54 (AG10)	20:50	61	20:16 (AG10)	20:55	61	20:23 (AG10)	20:31		19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18		19:29 (AG10)	05:58	19:15 (AG10)	06:06		19:21 (AG10)	06:31			07:00	07:28	07:01	07:33
	17:19	17:54	18:25	19:56	20:26	28	19:57 (AG10)	20:51	62	20:17 (AG10)	20:55	61	20:22 (AG10)	20:30		19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17		19:27 (AG10)	05:58	19:15 (AG10)	06:06		19:22 (AG10)	06:32			07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	32	19:59 (AG10)	20:52	62	20:17 (AG10)	20:54	61	20:23 (AG10)	20:29		19:43	18:55	17:15	17:01
11	07:45	07:23	06:45	06:56	06:16		19:25 (AG10)	05:58	19:16 (AG10)	06:07		19:23 (AG10)	06:33			07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	35	20:00 (AG10)	20:52	62	20:18 (AG10)	20:54	60	20:23 (AG10)	20:27		19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15		19:24 (AG10)	05:57	19:16 (AG10)	06:07		19:22 (AG10)	06:34			07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	38	20:02 (AG10)	20:53	62	20:18 (AG10)	20:54	60	20:22 (AG10)	20:26		19:40	18:52	17:13	17:01
13	07:45	07:21	06:41	06:52	06:14		19:23 (AG10)	05:57	19:16 (AG10)	06:08		19:23 (AG10)	06:35			07:04	07:32	07:06	07:36
	17:23	17:58	18:29	20:00	20:30	41	20:04 (AG10)	20:53	62	20:18 (AG10)	20:53	60	20:23 (AG10)	20:25		19:39	18:51	17:12	17:02
14	07:45	07:20	06:40	06:51	06:13		19:22 (AG10)	05:57	19:16 (AG10)	06:09		19:23 (AG10)	06:36			07:04	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	43	20:05 (AG10)	20:53	62	20:18 (AG10)	20:53	60	20:23 (AG10)	20:24		19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:49	06:12		19:21 (AG10)	05:57	19:17 (AG10)	06:10		19:23 (AG10)	06:37			07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	45	20:06 (AG10)	20:54	62	20:19 (AG10)	20:52	59	20:22 (AG10)	20:22		19:35	18:48	17:11	17:02
16	07:44	07:17	06:37	06:48	06:11		19:20 (AG10)	05:57	19:17 (AG10)	06:10		19:24 (AG10)	06:38			07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	47	20:07 (AG10)	20:54	62	20:19 (AG10)	20:52	58	20:22 (AG10)	20:21		19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:47	06:10		19:19 (AG10)	05:57	19:17 (AG10)	06:11		19:24 (AG10)	06:39			07:07	07:36	07:10	07:39
	17:27	18:03	18:33	20:04	20:33	48	20:07 (AG10)	20:55	62	20:19 (AG10)	20:51	58	20:22 (AG10)	20:20		19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:09		19:18 (AG10)	05:57	19:17 (AG10)	06:12		19:25 (AG10)	06:40			07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	50	20:08 (AG10)	20:55	62	20:19 (AG10)	20:50	57	20:22 (AG10)	20:18		19:30	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09		19:18 (AG10)	05:58	19:17 (AG10)	06:13		19:25 (AG10)	06:40			07:09	07:38	07:13	07:40
	17:29	18:05	18:35	20:06	20:35	51	20:09 (AG10)	20:55	62	20:19 (AG10)	20:50	56	20:21 (AG10)	20:17		19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42	06:08		19:17 (AG10)	05:58	19:17 (AG10)	06:13		19:25 (AG10)	06:41			07:10	07:39	07:14	07:41
	17:30	18:07	18:36	20:07	20:36	53	20:10 (AG10)	20:55	62	20:19 (AG10)	20:49	56	20:21 (AG10)	20:15		19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07		19:16 (AG10)	05:58	19:18 (AG10)	06:14		19:26 (AG10)	06:42			07:11	07:40	07:15	07:42
	17:31	18:08	18:37	20:08	20:37	54	20:10 (AG10)	20:56	62	20:20 (AG10)	20:48	55	20:21 (AG10)	20:14		19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:39	06:06		19:16 (AG10)	05:58	19:18 (AG10)	06:15		19:27 (AG10)	06:43			07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	54	20:10 (AG10)	20:56	62	20:20 (AG10)	20:48	54	20:21 (AG10)	20:13		19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:05		19:16 (AG10)	05:58	19:18 (AG10)	06:16		19:27 (AG10)	06:44			07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	55	20:11 (AG10)	20:56	62	20:20 (AG10)	20:47	53	20:20 (AG10)	20:11		19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37	06:05		19:15 (AG10)	05:59	19:18 (AG10)	06:17		19:27 (AG10)	06:45			07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	57	20:12 (AG10)	20:56	62	20:20 (AG10)	20:46	52	20:19 (AG10)	20:10		19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35	06:04		19:15 (AG10)	05:59	19:19 (AG10)	06:18		19:28 (AG10)	06:46			07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:40	57	20:12 (AG10)	20:56	62	20:21 (AG10)	20:45	51	20:19 (AG10)	20:08		19:19	17:34	17:04	17:06
26	07:39	07:04	06:21	06:34	06:03		19:15 (AG10)	05:59	19:19 (AG10)	06:18		19:29 (AG10)	06:47			07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	58	20:13 (AG10)	20:57	62	20:21 (AG10)	20:44	49	20:18 (AG10)	20:07		19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03		19:14 (AG10)	05:59	19:19 (AG10)	06:19		19:30 (AG10)	06:48			07:17	06:47	07:21	07:44
	17:38	18:14	18:43	20:14	20:42	59	20:13 (AG10)	20:57	62	20:21 (AG10)	20:44	48	20:18 (AG10)	20:05		19:16	17:31	17:03	17:08
28	07:37	07:01	06:18	06:31	06:02		19:15 (AG10)	06:00	19:19 (AG10)	06:20		19:31 (AG10)	06:49			07:18	06:48	07:22	07:45
	17:40	18:15	18:44	20:15	20:43	59	20:14 (AG10)	20:57	62	20:21 (AG10)	20:43	46	20:17 (AG10)	20:04		19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02		19:14 (AG10)	06:00	19:19 (AG10)	06:21		19:32 (AG10)	06:50			07:18	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	59	20:13 (AG10)	20:57	62	20:21 (AG10)	20:42	44	20:16 (AG10)	20:02		19:13	17:28	17:03	17:09
30	07:35		07:14	06:29	06:01		19:15 (AG10)	06:01	19:20 (AG10)	06:22		19:33 (AG10)	06:51			07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	59	20:14 (AG10)	20:57	62	20:22 (AG10)	20:41	42	20:15 (AG10)	20:01		19:11	17:27	17:02	17:10
31	07:35		07:13		06:01		19:15 (AG10)				06:23		19:33 (AG10)	06:52			06:51		07:45
	17:43		19:47		20:45	60	20:15 (AG10)				20:40	40	20:13 (AG10)	19:59			17:26		17:10
Potential sun hours	302	299	370	397	444		447		454		425		374	347	301	293
Total, worst case						1179		1852		1732		159				

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F014 - A3 - F2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:27	06:00	06:01	06:24	06:53	07:20	06:52	07:26
	17:12	17:44	18:16	19:48	20:18	20:46	20:56	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:53	07:21	06:54	07:27
	17:12	17:46	18:18	19:49	20:19	20:47	20:56	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	05:59	06:02	06:26	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:06	06:24	05:59	06:03	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:21	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:27	06:56	07:24	06:57	07:29
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:51	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:21	05:59	06:04	06:28	06:57	07:25	06:58	07:30
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:33	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:51	18:23	19:54	20:24	20:50	20:55	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:50	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:01	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:54	20:29	19:43	18:55	17:15	17:01
11	07:45	07:23	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:27	19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15	05:57	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:01
13	07:45	07:21	06:41	06:53	06:14	05:57	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:58	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:12	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57	06:09	06:36	07:04	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:53	20:53	20:24	19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:50	06:12	05:57	06:10	06:37	07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:17	06:37	06:48	06:11	05:57	06:10	06:38	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:47	06:10	05:57	06:11	06:39	07:07	07:36	07:10	07:39
	17:27	18:03	18:33	20:04	20:33	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:09	05:57	06:12	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:50	20:18	19:30	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:40	07:09	07:38	07:13	07:40
	17:29	18:05	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42	06:08	05:58	06:13	06:41	07:10	07:39	07:14	07:41
	17:30	18:07	18:36	20:07	20:36	20:55	20:49	20:16	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:40	07:15	07:42
	17:31	18:08	18:37	20:08	20:37	20:56	20:48	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:39	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:05	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:40	20:56	20:45	20:08	19:19	17:34	17:04	17:06
26	07:39	07:04	06:21	06:34	06:03	05:59	06:18	06:47	07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:44	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	05:59	06:19	06:48	07:17	06:47	07:21	07:44
	17:38	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:03	17:08
28	07:37	07:01	06:18	06:31	06:02	06:00	06:20	06:49	07:18	06:48	07:22	07:45
	17:40	18:15	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:18	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:28	17:03	17:09
30	07:35		07:14	06:29	06:01	06:01	06:22	06:51	07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	20:57	20:41	20:01	19:11	17:27	17:02	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:45
	17:43		19:47		20:45		20:40	19:59		17:26		17:10
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Total, worst case												

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F015 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April			May			June
1	07:46	07:34			07:00		17:34 (Medio Campidano)	07:11			06:28		07:08 (AG10)	06:00
	17:12	17:44			18:17	21	17:55 (Medio Campidano)	19:48			20:18	23	07:31 (AG10)	20:46
2	07:46	07:33			06:58		17:35 (Medio Campidano)	07:10			06:26		07:10 (AG10)	06:00
	17:12	17:46			18:18	22	17:57 (Medio Campidano)	19:49			20:19	19	07:29 (AG10)	20:47
3	07:46	07:32			06:57		17:34 (Medio Campidano)	07:08			06:25		07:12 (AG10)	06:00
	17:13	17:47			18:19	22	17:56 (Medio Campidano)	19:50			20:20	15	07:27 (AG10)	20:47
4	07:46	07:31			06:55		17:35 (Medio Campidano)	07:06			06:24		07:17 (AG10)	05:59
	17:14	17:48			18:20	21	17:56 (Medio Campidano)	19:51			20:21	5	07:22 (AG10)	20:48
5	07:46	07:30			06:54		17:35 (Medio Campidano)	07:05		19:25 (Medio Campidano)	06:23			05:59
	17:15	17:49			18:21	19	17:54 (Medio Campidano)	19:52	6	19:31 (Medio Campidano)	20:22			20:49
6	07:46	07:29			06:52		17:37 (Medio Campidano)	07:03		19:23 (Medio Campidano)	06:22			05:59
	17:16	17:50			18:22	16	17:53 (Medio Campidano)	19:53	9	19:32 (Medio Campidano)	20:23			20:49
7	07:46	07:28			06:51		17:38 (Medio Campidano)	07:02		07:20 (AG10)	06:20			05:58
	17:17	17:52			18:23	13	17:51 (Medio Campidano)	19:54	23	19:33 (Medio Campidano)	20:24			20:50
8	07:46	07:27			06:49		17:42 (Medio Campidano)	07:00		07:18 (AG10)	06:19			05:58
	17:18	17:53			18:24	6	17:48 (Medio Campidano)	19:55	30	19:34 (Medio Campidano)	20:25			20:50
9	07:46	07:26			06:48			06:59		07:17 (AG10)	06:18			05:58
	17:19	17:54			18:25			19:56	35	19:35 (Medio Campidano)	20:26			20:51
10	07:46	07:25			06:46			06:57		07:15 (AG10)	06:17			05:58
	17:20	17:55			18:26			19:57	41	19:36 (Medio Campidano)	20:27			20:52
11	07:46	07:23			06:45			06:56		07:14 (AG10)	06:16			05:58
	17:21	17:56			18:27			19:58	44	19:37 (Medio Campidano)	20:28			20:52
12	07:45	07:22			06:43			06:54		07:12 (AG10)	06:15			05:57
	17:22	17:57			18:28			19:59	48	19:38 (Medio Campidano)	20:29			20:53
13	07:45	07:21			06:41			06:53		07:11 (AG10)	06:14			05:57
	17:23	17:59			18:29			20:00	51	19:39 (Medio Campidano)	20:30			20:53
14	07:45	07:20			06:40			06:51		07:09 (AG10)	06:13			05:57
	17:24	18:00			18:30			20:01	52	19:38 (Medio Campidano)	20:31			20:54
15	07:44	07:19			06:38			06:50		07:08 (AG10)	06:12			05:57
	17:25	18:01			18:31			20:02	52	19:37 (Medio Campidano)	20:32			20:54
16	07:44	07:17			06:37			06:48		07:06 (AG10)	06:11			05:57
	17:26	18:02			18:32			20:03	51	19:35 (Medio Campidano)	20:33			20:54
17	07:44	07:16			06:35			06:47		07:05 (AG10)	06:10			05:57
	17:27	18:03			18:33			20:04	50	19:34 (Medio Campidano)	20:33			20:55
18	07:43	07:15			06:34			06:45		07:03 (AG10)	06:09			05:57
	17:28	18:04			18:34			20:05	46	19:31 (Medio Campidano)	20:34			20:55
19	07:43	07:14			06:32			06:44		07:03 (AG10)	06:09			05:58
	17:29	18:05			18:35			20:06	38	07:41 (AG10)	20:35			20:55
20	07:42	07:12			06:30			06:42		07:03 (AG10)	06:08			05:58
	17:30	18:07			18:36			20:07	39	07:42 (AG10)	20:36			20:56
21	07:42	07:11			06:29			06:41		07:02 (AG10)	06:07			05:58
	17:32	18:08			18:37			20:08	39	07:41 (AG10)	20:37			20:56
22	07:41	07:10		17:43 (Medio Campidano)	06:27			06:39		07:03 (AG10)	06:06			05:58
	17:33	18:09	4	17:47 (Medio Campidano)	18:38			20:09	38	07:41 (AG10)	20:38			20:56
23	07:41	07:08		17:40 (Medio Campidano)	06:26			06:38		07:03 (AG10)	06:06			05:58
	17:34	18:10	9	17:49 (Medio Campidano)	18:39			20:10	37	07:40 (AG10)	20:39			20:56
24	07:40	07:07		17:39 (Medio Campidano)	06:24			06:37		07:03 (AG10)	06:05			05:59
	17:35	18:11	11	17:50 (Medio Campidano)	18:40			20:11	36	07:39 (AG10)	20:40			20:56
25	07:39	07:05		17:37 (Medio Campidano)	06:22			06:35		07:03 (AG10)	06:04			05:59
	17:36	18:12	14	17:51 (Medio Campidano)	18:41			20:12	36	07:39 (AG10)	20:40			20:56
26	07:39	07:04		17:36 (Medio Campidano)	06:21			06:34		07:04 (AG10)	06:04			05:59
	17:37	18:13	16	17:52 (Medio Campidano)	18:42			20:13	34	07:38 (AG10)	20:41			20:57
27	07:38	07:03		17:35 (Medio Campidano)	06:19			06:33		07:04 (AG10)	06:03			06:00
	17:38	18:14	18	17:53 (Medio Campidano)	18:43			20:14	32	07:36 (AG10)	20:42			20:57
28	07:37	07:01		17:35 (Medio Campidano)	06:18			06:31		07:05 (AG10)	06:02			06:00
	17:40	18:15	20	17:55 (Medio Campidano)	18:44			20:15	31	07:36 (AG10)	20:43			20:57
29	07:36				07:16			06:30		07:06 (AG10)	06:02			06:00
	17:41				19:45			20:16	29	07:35 (AG10)	20:44			20:57
30	07:35				07:14			06:29		07:08 (AG10)	06:01			06:01
	17:42				19:46			20:17	25	07:33 (AG10)	20:44			20:57
31	07:35				07:13						06:01			
	17:43				19:47						20:45			
Potential sun hours	302	299			370			397			444			447
Total, worst case			92			140			952			62		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F015 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	06:01	06:24			06:53		07:13 (AG10)	07:20			06:52	07:26
	20:57	20:39			19:58	45	19:36 (Medio Campidano)	19:09			17:25	17:02
2	06:02	06:25			06:54		07:14 (AG10)	07:21			06:54	07:27
	20:56	20:38			19:56	41	19:35 (Medio Campidano)	19:08			17:24	17:02
3	06:02	06:26			06:54		07:15 (AG10)	07:22			06:55	07:28
	20:56	20:37			19:55	35	19:33 (Medio Campidano)	19:06			17:23	17:02
4	06:03	06:27			06:55		07:15 (AG10)	07:23			06:56	07:29
	20:56	20:36			19:53	31	19:31 (Medio Campidano)	19:05			17:21	17:02
5	06:03	06:27			06:56		07:16 (AG10)	07:24			06:57	07:30
	20:56	20:35			19:52	23	19:29 (Medio Campidano)	19:03			17:20	17:01
6	06:04	06:28			06:57		19:19 (Medio Campidano)	07:25		18:16 (Medio Campidano)	06:58	07:30
	20:56	20:33			19:50	9	19:28 (Medio Campidano)	19:01	10	18:26 (Medio Campidano)	17:19	17:01
7	06:04	06:29			06:58		19:20 (Medio Campidano)	07:26		18:13 (Medio Campidano)	06:59	07:31
	20:55	20:32			19:48	7	19:27 (Medio Campidano)	19:00	15	18:28 (Medio Campidano)	17:18	17:01
8	06:05	06:30			06:59		19:24 (Medio Campidano)	07:27		18:12 (Medio Campidano)	07:00	07:32
	20:55	20:31			19:47	1	19:25 (Medio Campidano)	18:58	17	18:29 (Medio Campidano)	17:17	17:01
9	06:06	06:31		07:24 (AG10)	07:00			07:28		18:10 (Medio Campidano)	07:01	07:33
	20:55	20:30	9	07:33 (AG10)	19:45			18:57	20	18:30 (Medio Campidano)	17:16	17:01
10	06:06	06:32		07:20 (AG10)	07:01			07:29		18:09 (Medio Campidano)	07:03	07:34
	20:55	20:29	16	07:36 (AG10)	19:44			18:55	21	18:30 (Medio Campidano)	17:15	17:01
11	06:07	06:33		07:18 (AG10)	07:02			07:30		18:08 (Medio Campidano)	07:04	07:35
	20:54	20:28	20	07:38 (AG10)	19:42			18:54	22	18:30 (Medio Campidano)	17:14	17:01
12	06:08	06:34		07:16 (AG10)	07:03			07:31		18:08 (Medio Campidano)	07:05	07:36
	20:54	20:26	24	07:40 (AG10)	19:40			18:52	22	18:30 (Medio Campidano)	17:13	17:02
13	06:08	06:35		07:15 (AG10)	07:04			07:32		18:08 (Medio Campidano)	07:06	07:36
	20:53	20:25	26	07:41 (AG10)	19:39			18:51	20	18:28 (Medio Campidano)	17:13	17:02
14	06:09	06:36		07:14 (AG10)	07:05			07:33		18:08 (Medio Campidano)	07:07	07:37
	20:53	20:24	29	07:43 (AG10)	19:37			18:49	19	18:27 (Medio Campidano)	17:12	17:02
15	06:10	06:37		07:13 (AG10)	07:05			07:34		18:08 (Medio Campidano)	07:08	07:38
	20:52	20:22	31	07:44 (AG10)	19:35			18:48	17	18:25 (Medio Campidano)	17:11	17:02
16	06:10	06:38		07:12 (AG10)	07:06			07:35		18:08 (Medio Campidano)	07:09	07:39
	20:52	20:21	32	07:44 (AG10)	19:34			18:46	15	18:23 (Medio Campidano)	17:10	17:02
17	06:11	06:39		07:11 (AG10)	07:07			07:36		18:09 (Medio Campidano)	07:11	07:39
	20:51	20:20	34	07:45 (AG10)	19:32			18:45	13	18:22 (Medio Campidano)	17:09	17:03
18	06:12	06:40		07:09 (AG10)	07:08			07:37		18:10 (Medio Campidano)	07:12	07:40
	20:50	20:18	35	07:44 (AG10)	19:31			18:43	10	18:20 (Medio Campidano)	17:09	17:03
19	06:13	06:41		07:09 (AG10)	07:09			07:38		18:11 (Medio Campidano)	07:13	07:41
	20:50	20:17	36	07:45 (AG10)	19:29			18:42	8	18:19 (Medio Campidano)	17:08	17:03
20	06:14	06:41		07:08 (AG10)	07:10			07:39		18:16 (Medio Campidano)	07:14	07:41
	20:49	20:16	37	07:45 (AG10)	19:27			18:40	2	18:18 (Medio Campidano)	17:07	17:04
21	06:14	06:42		07:08 (AG10)	07:11			07:41			07:15	07:42
	20:48	20:14	37	07:45 (AG10)	19:26			18:39			17:07	17:04
22	06:15	06:43		07:07 (AG10)	07:12			07:42			07:16	07:42
	20:48	20:13	38	07:45 (AG10)	19:24			18:38			17:06	17:05
23	06:16	06:44		07:07 (AG10)	07:13			07:43			07:17	07:43
	20:47	20:11	38	07:45 (AG10)	19:22			18:36			17:05	17:05
24	06:17	06:45		07:07 (AG10)	07:14			07:44			07:18	07:43
	20:46	20:10	38	07:45 (AG10)	19:21			18:35			17:05	17:06
25	06:18	06:46		07:07 (AG10)	07:15			06:45			07:19	07:44
	20:45	20:08	47	19:35 (Medio Campidano)	19:19			17:34			17:04	17:06
26	06:19	06:47		07:08 (AG10)	07:16			06:46			07:20	07:44
	20:45	20:07	50	19:37 (Medio Campidano)	19:17			17:32			17:04	17:07
27	06:19	06:48		07:08 (AG10)	07:17			06:47			07:22	07:44
	20:44	20:05	52	19:38 (Medio Campidano)	19:16			17:31			17:04	17:08
28	06:20	06:49		07:09 (AG10)	07:18			06:48			07:23	07:45
	20:43	20:04	52	19:38 (Medio Campidano)	19:14			17:30			17:03	17:08
29	06:21	06:50		07:10 (AG10)	07:19			06:49			07:24	07:45
	20:42	20:02	52	19:39 (Medio Campidano)	19:13			17:29			17:03	17:09
30	06:22	06:51		07:11 (AG10)	07:19			06:50			07:25	07:45
	20:41	20:01	51	19:39 (Medio Campidano)	19:11			17:27			17:02	17:10
31	06:23	06:52		07:12 (AG10)				06:51				07:45
	20:40	19:59	48	19:38 (Medio Campidano)				17:26				17:11
Potential sun hours	454	425			374			347			301	293
Total, worst case			832			192			231			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F018 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May	June
1	07:46			07:34		07:53 (Medio Campidano)	07:00	07:11	06:28	06:00
	17:12			17:44	7	08:00 (Medio Campidano)	18:17	19:48	20:18	20:46
2	07:46			07:33		07:52 (Medio Campidano)	06:58	07:10	06:26	06:00
	17:12			17:46	9	08:01 (Medio Campidano)	18:18	19:49	20:19	20:47
3	07:46			07:32		07:51 (Medio Campidano)	06:57	07:08	06:25	06:00
	17:13			17:47	10	08:01 (Medio Campidano)	18:19	19:50	20:20	20:47
4	07:46			07:31		07:50 (Medio Campidano)	06:55	07:07	06:24	05:59
	17:14			17:48	12	08:02 (Medio Campidano)	18:20	19:51	20:21	20:48
5	07:46			07:30		07:49 (Medio Campidano)	06:54	07:05	06:23	05:59
	17:15			17:49	13	08:02 (Medio Campidano)	18:21	19:52	20:22	20:49
6	07:46			07:29		07:48 (Medio Campidano)	06:52	07:03	06:22	05:59
	17:16			17:50	14	08:02 (Medio Campidano)	18:22	19:53	20:23	20:49
7	07:46			07:28		07:47 (Medio Campidano)	06:51	07:02	06:20	05:58
	17:17			17:52	15	08:02 (Medio Campidano)	18:23	19:54	20:24	20:50
8	07:46			07:27		07:46 (Medio Campidano)	06:49	07:00	06:19	05:58
	17:18			17:53	15	08:01 (Medio Campidano)	18:24	19:55	20:25	20:51
9	07:46			07:26		07:47 (Medio Campidano)	06:48	06:59	06:18	05:58
	17:19			17:54	13	08:00 (Medio Campidano)	18:25	19:56	20:26	20:51
10	07:46			07:25		07:48 (Medio Campidano)	06:46	06:57	06:17	05:58
	17:20			17:55	11	07:59 (Medio Campidano)	18:26	19:57	20:27	20:52
11	07:46			07:24		07:51 (Medio Campidano)	06:45	06:56	06:16	05:58
	17:21			17:56	6	07:57 (Medio Campidano)	18:27	19:58	20:28	20:52
12	07:45			07:22			06:43	06:54	06:15	05:58
	17:22			17:57			18:28	19:59	20:29	20:53
13	07:45			07:21			06:42	06:53	06:14	05:57
	17:23			17:59			18:29	20:00	20:30	20:53
14	07:45			07:20			06:40	06:51	06:13	05:57
	17:24			18:00			18:30	20:01	20:31	20:54
15	07:45			07:19			06:38	06:50	06:12	05:57
	17:25			18:01			18:31	20:02	20:32	20:54
16	07:44			07:18			06:37	06:48	06:11	05:57
	17:26			18:02			18:32	20:03	20:33	20:54
17	07:44			07:16			06:35	06:47	06:10	05:57
	17:27			18:03			18:33	20:04	20:34	20:55
18	07:43			07:15			06:34	06:45	06:10	05:58
	17:28			18:04			18:34	20:05	20:35	20:55
19	07:43			07:14			06:32	06:44	06:09	05:58
	17:29			18:06			18:35	20:06	20:35	20:55
20	07:42			07:12			06:30	06:42	06:08	05:58
	17:30			18:07			18:37	20:07	20:36	20:56
21	07:42			07:11			06:29	06:41	06:07	05:58
	17:32			18:08			18:38	20:08	20:37	20:56
22	07:41			07:10			06:27	06:40	06:06	05:58
	17:33			18:09			18:39	20:09	20:38	20:56
23	07:41			07:08			06:26	06:38	06:06	05:58
	17:34			18:10			18:40	20:10	20:39	20:56
24	07:40			07:07			06:24	06:37	06:05	05:59
	17:35			18:11			18:41	20:11	20:40	20:57
25	07:39			07:06			06:22	06:35	06:04	05:59
	17:36			18:12			18:42	20:12	20:41	20:57
26	07:39			07:04			06:21	06:34	06:04	05:59
	17:37			18:13			18:43	20:13	20:41	20:57
27	07:38			07:03			06:19	06:33	06:03	06:00
	17:39			18:14			18:44	20:14	20:42	20:57
28	07:37			07:01			06:18	06:31	06:02	06:00
	17:40			18:16			18:45	20:15	20:43	20:57
29	07:36						07:16	06:30	06:02	06:00
	17:41						19:45	20:16	20:44	20:57
30	07:36		07:55 (Medio Campidano)				07:14	06:29	06:01	06:01
	17:42	3	07:58 (Medio Campidano)				19:46	20:17	20:45	20:57
31	07:35		07:54 (Medio Campidano)				07:13		06:01	
	17:43	5	07:59 (Medio Campidano)				19:47		20:45	
Potential sun hours	302			299			370	397	444	447
Total, worst case		8			125					

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F018 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October			November			December
1	06:01	06:24	06:53	07:21			06:53		07:18 (Medio Campidano)	07:26
	20:57	20:39	19:58	19:09			17:25	11	07:29 (Medio Campidano)	17:02
2	06:02	06:25	06:54	07:22			06:54		07:16 (Medio Campidano)	07:27
	20:57	20:38	19:56	19:08			17:24	14	07:30 (Medio Campidano)	17:02
3	06:02	06:26	06:55	07:22			06:55		07:16 (Medio Campidano)	07:28
	20:57	20:37	19:55	19:06			17:23	15	07:31 (Medio Campidano)	17:02
4	06:03	06:27	06:55	07:23			06:56		07:17 (Medio Campidano)	07:29
	20:56	20:36	19:53	19:05			17:22	14	07:31 (Medio Campidano)	17:02
5	06:03	06:28	06:56	07:24			06:57		07:18 (Medio Campidano)	07:30
	20:56	20:35	19:52	19:03			17:20	14	07:32 (Medio Campidano)	17:02
6	06:04	06:28	06:57	07:25			06:58		07:20 (Medio Campidano)	07:31
	20:56	20:34	19:50	19:02			17:19	13	07:33 (Medio Campidano)	17:01
7	06:04	06:29	06:58	07:26			06:59		07:21 (Medio Campidano)	07:32
	20:56	20:32	19:48	19:00			17:18	11	07:32 (Medio Campidano)	17:01
8	06:05	06:30	06:59	07:27			07:00		07:22 (Medio Campidano)	07:32
	20:55	20:31	19:47	18:58			17:17	10	07:32 (Medio Campidano)	17:01
9	06:06	06:31	07:00	07:28			07:02		07:23 (Medio Campidano)	07:33
	20:55	20:30	19:45	18:57			17:16	9	07:32 (Medio Campidano)	17:01
10	06:06	06:32	07:01	07:29			07:03		07:24 (Medio Campidano)	07:34
	20:55	20:29	19:44	18:55			17:15	7	07:31 (Medio Campidano)	17:01
11	06:07	06:33	07:02	07:30			07:04		07:26 (Medio Campidano)	07:35
	20:54	20:28	19:42	18:54			17:14	5	07:31 (Medio Campidano)	17:01
12	06:08	06:34	07:03	07:31			07:05		07:27 (Medio Campidano)	07:36
	20:54	20:26	19:40	18:52			17:13	3	07:30 (Medio Campidano)	17:02
13	06:08	06:35	07:04	07:32			07:06			07:37
	20:53	20:25	19:39	18:51			17:13			17:02
14	06:09	06:36	07:05	07:33			07:07			07:37
	20:53	20:24	19:37	18:49			17:12			17:02
15	06:10	06:37	07:06	07:34			07:08			07:38
	20:52	20:23	19:36	18:48			17:11			17:02
16	06:10	06:38	07:06	07:35			07:10			07:39
	20:52	20:21	19:34	18:46			17:10			17:02
17	06:11	06:39	07:07	07:36			07:11			07:39
	20:51	20:20	19:32	18:45			17:09			17:03
18	06:12	06:40	07:08	07:38			07:12			07:40
	20:51	20:18	19:31	18:43			17:09			17:03
19	06:13	06:41	07:09	07:39			07:13			07:41
	20:50	20:17	19:29	18:42			17:08			17:04
20	06:14	06:42	07:10	07:40			07:14			07:41
	20:49	20:16	19:27	18:41			17:07			17:04
21	06:14	06:42	07:11	07:41			07:15			07:42
	20:49	20:14	19:26	18:39			17:07			17:04
22	06:15	06:43	07:12	07:42			07:16			07:42
	20:48	20:13	19:24	18:38			17:06			17:05
23	06:16	06:44	07:13	07:43			07:17			07:43
	20:47	20:11	19:22	18:36			17:06			17:05
24	06:17	06:45	07:14	07:44			07:18			07:43
	20:46	20:10	19:21	18:35			17:05			17:06
25	06:18	06:46	07:15	06:45			07:20			07:44
	20:45	20:09	19:19	17:34			17:04			17:06
26	06:19	06:47	07:16	06:46			07:21			07:44
	20:45	20:07	19:18	17:32			17:04			17:07
27	06:19	06:48	07:17	06:47			07:22			07:45
	20:44	20:06	19:16	17:31			17:04			17:08
28	06:20	06:49	07:18	06:48			07:23			07:45
	20:43	20:04	19:14	17:30			17:03			17:08
29	06:21	06:50	07:19	06:49			07:24			07:45
	20:42	20:03	19:13	17:29			17:03			17:09
30	06:22	06:51	07:20	06:50			07:25			07:45
	20:41	20:01	19:11	17:27			17:03			17:10
31	06:23	06:52		06:52		07:19 (Medio Campidano)				07:46
	20:40	19:59		17:26	8	07:27 (Medio Campidano)				17:11
Potential sun hours	454	425	374	347			301			293
Total, worst case					8			126		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
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SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F020 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June
1	07:46	07:34			07:00			07:11	06:28	06:00
	17:12	17:45			18:17			19:48	20:18	20:46
2	07:46	07:33			06:58			07:10	06:26	06:00
	17:12	17:46			18:18			19:49	20:19	20:47
3	07:46	07:32			06:57			07:08	06:25	06:00
	17:13	17:47			18:19			19:50	20:20	20:47
4	07:46	07:31			06:55			07:07	06:24	05:59
	17:14	17:48			18:20			19:51	20:21	20:48
5	07:46	07:30		07:49 (Medio Campidano)	06:54			07:05	06:23	05:59
	17:15	17:49	3	07:52 (Medio Campidano)	18:21			19:52	20:22	20:49
6	07:46	07:29		07:48 (Medio Campidano)	06:52			07:03	06:22	05:59
	17:16	17:50	5	07:53 (Medio Campidano)	18:22			19:53	20:23	20:49
7	07:46	07:28		07:47 (Medio Campidano)	06:51			07:02	06:21	05:58
	17:17	17:52	7	07:54 (Medio Campidano)	18:23			19:54	20:24	20:50
8	07:46	07:27		07:46 (Medio Campidano)	06:49			07:00	06:19	05:58
	17:18	17:53	9	07:55 (Medio Campidano)	18:24			19:55	20:25	20:51
9	07:46	07:26		07:45 (Medio Campidano)	06:48			06:59	06:18	05:58
	17:19	17:54	11	07:56 (Medio Campidano)	18:25			19:56	20:26	20:51
10	07:46	07:25		07:44 (Medio Campidano)	06:46			06:57	06:17	05:58
	17:20	17:55	13	07:57 (Medio Campidano)	18:26			19:57	20:27	20:52
11	07:46	07:24		07:43 (Medio Campidano)	06:45			06:56	06:16	05:58
	17:21	17:56	14	07:57 (Medio Campidano)	18:27			19:58	20:28	20:52
12	07:45	07:22		07:41 (Medio Campidano)	06:43			06:54	06:15	05:58
	17:22	17:58	15	07:56 (Medio Campidano)	18:28			19:59	20:29	20:53
13	07:45	07:21		07:40 (Medio Campidano)	06:42			06:53	06:14	05:58
	17:23	17:59	16	07:56 (Medio Campidano)	18:29			20:00	20:30	20:53
14	07:45	07:20		07:39 (Medio Campidano)	06:40			06:51	06:13	05:57
	17:24	18:00	17	07:56 (Medio Campidano)	18:30			20:01	20:31	20:54
15	07:45	07:19		07:39 (Medio Campidano)	06:38		06:57 (Medio Campidano)	06:50	06:12	05:57
	17:25	18:01	16	07:55 (Medio Campidano)	18:31	5	07:02 (Medio Campidano)	20:02	20:32	20:54
16	07:44	07:18		07:40 (Medio Campidano)	06:37		06:55 (Medio Campidano)	06:48	06:11	05:57
	17:26	18:02	15	07:55 (Medio Campidano)	18:32	8	07:03 (Medio Campidano)	20:03	20:33	20:54
17	07:44	07:16		07:41 (Medio Campidano)	06:35		06:54 (Medio Campidano)	06:47	06:10	05:58
	17:27	18:03	11	07:52 (Medio Campidano)	18:33	10	07:04 (Medio Campidano)	20:04	20:34	20:55
18	07:43	07:15		07:44 (Medio Campidano)	06:34		06:52 (Medio Campidano)	06:45	06:10	05:58
	17:28	18:04	5	07:49 (Medio Campidano)	18:34	13	07:05 (Medio Campidano)	20:05	20:35	20:55
19	07:43	07:14			06:32		06:50 (Medio Campidano)	06:44	06:09	05:58
	17:29	18:06			18:35	15	07:05 (Medio Campidano)	20:06	20:35	20:55
20	07:42	07:12			06:30		06:49 (Medio Campidano)	06:42	06:08	05:58
	17:31	18:07			18:37	16	07:05 (Medio Campidano)	20:07	20:36	20:56
21	07:42	07:11			06:29		06:47 (Medio Campidano)	06:41	06:07	05:58
	17:32	18:08			18:38	18	07:05 (Medio Campidano)	20:08	20:37	20:56
22	07:41	07:10			06:27		06:45 (Medio Campidano)	06:40	06:06	05:58
	17:33	18:09			18:39	19	07:04 (Medio Campidano)	20:09	20:38	20:56
23	07:41	07:08			06:26		06:44 (Medio Campidano)	06:38	06:06	05:58
	17:34	18:10			18:40	20	07:04 (Medio Campidano)	20:10	20:39	20:56
24	07:40	07:07			06:24		06:43 (Medio Campidano)	06:37	06:05	05:59
	17:35	18:11			18:41	19	07:02 (Medio Campidano)	20:11	20:40	20:56
25	07:39	07:06			06:22		06:44 (Medio Campidano)	06:35	06:04	05:59
	17:36	18:12			18:42	17	07:01 (Medio Campidano)	20:12	20:41	20:57
26	07:39	07:04			06:21		06:45 (Medio Campidano)	06:34	06:04	05:59
	17:37	18:13			18:43	14	06:59 (Medio Campidano)	20:13	20:41	20:57
27	07:38	07:03			06:19		06:46 (Medio Campidano)	06:33	06:03	06:00
	17:39	18:14			18:44	10	06:56 (Medio Campidano)	20:14	20:42	20:57
28	07:37	07:01			06:18			06:31	06:02	06:00
	17:40	18:16			18:44			20:15	20:43	20:57
29	07:36				07:16			06:30	06:02	06:00
	17:41				19:45			20:16	20:44	20:57
30	07:36				07:14			06:29	06:01	06:01
	17:42				19:46			20:17	20:45	20:57
31	07:35				07:13				06:01	
	17:43				19:47				20:45	
Potential sun hours	302	299			370			397	444	447
Total, worst case			157			184				

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F020 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November			December
1	06:01	06:24	06:53			07:21			06:53		07:14 (Medio Campidano)	07:26
	20:57	20:39	19:58			19:09			17:25	12	07:26 (Medio Campidano)	17:02
2	06:02	06:25	06:54			07:22			06:54		07:15 (Medio Campidano)	07:27
	20:57	20:38	19:56			19:08			17:24	11	07:26 (Medio Campidano)	17:02
3	06:02	06:26	06:55			07:22			06:55		07:16 (Medio Campidano)	07:28
	20:56	20:37	19:55			19:06			17:23	9	07:25 (Medio Campidano)	17:02
4	06:03	06:27	06:55			07:23			06:56		07:17 (Medio Campidano)	07:29
	20:56	20:36	19:53			19:05			17:22	7	07:24 (Medio Campidano)	17:02
5	06:03	06:28	06:56			07:24			06:57		07:18 (Medio Campidano)	07:30
	20:56	20:35	19:52			19:03			17:20	5	07:23 (Medio Campidano)	17:02
6	06:04	06:29	06:57			07:25			06:58		07:20 (Medio Campidano)	07:31
	20:56	20:34	19:50			19:02			17:19	2	07:22 (Medio Campidano)	17:01
7	06:04	06:29	06:58			07:26			06:59			07:32
	20:56	20:32	19:48			19:00			17:18			17:01
8	06:05	06:30	06:59			07:27			07:00			07:32
	20:55	20:31	19:47			18:58			17:17			17:01
9	06:06	06:31	07:00			07:28			07:02			07:33
	20:55	20:30	19:45			18:57			17:16			17:01
10	06:06	06:32	07:01			07:29			07:03			07:34
	20:55	20:29	19:44			18:55			17:15			17:01
11	06:07	06:33	07:02			07:30			07:04			07:35
	20:54	20:28	19:42			18:54			17:14			17:02
12	06:08	06:34	07:03			07:31			07:05			07:36
	20:54	20:26	19:40			18:52			17:14			17:02
13	06:08	06:35	07:04			07:32			07:06			07:37
	20:53	20:25	19:39			18:51			17:13			17:02
14	06:09	06:36	07:05			07:33			07:07			07:37
	20:53	20:24	19:37			18:49			17:12			17:02
15	06:10	06:37	07:06			07:34			07:08			07:38
	20:52	20:22	19:36			18:48			17:11			17:02
16	06:11	06:38	07:07		07:36 (Medio Campidano)	07:35			07:10			07:39
	20:52	20:21	19:34	9	07:45 (Medio Campidano)	18:46			17:10			17:03
17	06:11	06:39	07:07		07:34 (Medio Campidano)	07:36			07:11			07:39
	20:51	20:20	19:32	13	07:47 (Medio Campidano)	18:45			17:09			17:03
18	06:12	06:40	07:08		07:32 (Medio Campidano)	07:37			07:12			07:40
	20:51	20:18	19:31	16	07:48 (Medio Campidano)	18:43			17:09			17:03
19	06:13	06:41	07:09		07:30 (Medio Campidano)	07:39			07:13			07:41
	20:50	20:17	19:29	19	07:49 (Medio Campidano)	18:42			17:08			17:04
20	06:14	06:42	07:10		07:30 (Medio Campidano)	07:40			07:14			07:41
	20:49	20:16	19:27	20	07:50 (Medio Campidano)	18:41			17:07			17:04
21	06:14	06:42	07:11		07:31 (Medio Campidano)	07:41			07:15			07:42
	20:49	20:14	19:26	19	07:50 (Medio Campidano)	18:39			17:07			17:04
22	06:15	06:43	07:12		07:32 (Medio Campidano)	07:42			07:16			07:42
	20:48	20:13	19:24	18	07:50 (Medio Campidano)	18:38			17:06			17:05
23	06:16	06:44	07:13		07:33 (Medio Campidano)	07:43			07:17			07:43
	20:47	20:11	19:22	17	07:50 (Medio Campidano)	18:36			17:06			17:05
24	06:17	06:45	07:14		07:33 (Medio Campidano)	07:44		08:13 (Medio Campidano)	07:18			07:43
	20:46	20:10	19:21	15	07:48 (Medio Campidano)	18:35	7	08:20 (Medio Campidano)	17:05			17:06
25	06:18	06:46	07:15		07:34 (Medio Campidano)	06:45		07:10 (Medio Campidano)	07:19			07:44
	20:45	20:08	19:19	13	07:47 (Medio Campidano)	17:34	12	07:22 (Medio Campidano)	17:05			17:07
26	06:19	06:47	07:16		07:35 (Medio Campidano)	06:46		07:09 (Medio Campidano)	07:21			07:44
	20:45	20:07	19:18	11	07:46 (Medio Campidano)	17:32	15	07:24 (Medio Campidano)	17:04			17:07
27	06:20	06:48	07:17		07:36 (Medio Campidano)	06:47		07:08 (Medio Campidano)	07:22			07:44
	20:44	20:06	19:16	9	07:45 (Medio Campidano)	17:31	17	07:25 (Medio Campidano)	17:04			17:08
28	06:20	06:49	07:18		07:37 (Medio Campidano)	06:48		07:09 (Medio Campidano)	07:23			07:45
	20:43	20:04	19:14	6	07:43 (Medio Campidano)	17:30	17	07:26 (Medio Campidano)	17:03			17:08
29	06:21	06:50	07:19		07:38 (Medio Campidano)	06:49		07:10 (Medio Campidano)	07:24			07:45
	20:42	20:03	19:13	2	07:40 (Medio Campidano)	17:29	16	07:26 (Medio Campidano)	17:03			17:09
30	06:22	06:51	07:20			06:50		07:11 (Medio Campidano)	07:25			07:45
	20:41	20:01	19:11			17:27	15	07:26 (Medio Campidano)	17:03			17:10
31	06:23	06:52				06:51		07:12 (Medio Campidano)				07:46
	20:40	19:59				17:26	14	07:26 (Medio Campidano)				17:11
Potential sun hours	454	425	374			347			301			293
Total, worst case				187			113			46		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F024 - D10 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May	June
1	07:46			07:34			07:00		17:05 (AG09)	07:11		07:38 (Medio Campidano)	06:28	06:00
	17:12			17:44			18:17	42	17:47 (AG09)	19:48	30	08:08 (Medio Campidano)	20:18	20:46
2	07:46		08:08 (Medio Campidano)	07:33			06:58		17:06 (AG09)	07:10		07:38 (Medio Campidano)	06:26	06:00
	17:12	1	08:09 (Medio Campidano)	17:46			18:18	41	17:47 (AG09)	19:49	30	08:08 (Medio Campidano)	20:19	20:47
3	07:46		08:08 (Medio Campidano)	07:32			06:57		17:05 (AG09)	07:08		07:39 (Medio Campidano)	06:25	06:00
	17:13	2	08:10 (Medio Campidano)	17:47			18:19	41	17:46 (AG09)	19:50	27	08:06 (Medio Campidano)	20:20	20:47
4	07:46		08:08 (Medio Campidano)	07:31			06:55		17:06 (AG09)	07:07		07:40 (Medio Campidano)	06:24	05:59
	17:14	3	08:11 (Medio Campidano)	17:48			18:20	40	17:46 (AG09)	19:51	26	08:06 (Medio Campidano)	20:21	20:48
5	07:46		08:08 (Medio Campidano)	07:30			06:54		17:06 (AG09)	07:05		07:41 (Medio Campidano)	06:23	05:59
	17:15	4	08:12 (Medio Campidano)	17:49			18:21	38	17:44 (AG09)	19:52	22	08:03 (Medio Campidano)	20:22	20:49
6	07:46		08:08 (Medio Campidano)	07:29			06:52		17:07 (AG09)	07:03		07:42 (Medio Campidano)	06:22	05:59
	17:16	5	08:13 (Medio Campidano)	17:50			18:22	37	17:44 (AG09)	19:53	19	08:01 (Medio Campidano)	20:23	20:49
7	07:46		08:07 (Medio Campidano)	07:28			06:51		17:08 (AG09)	07:02		07:44 (Medio Campidano)	06:20	05:58
	17:17	6	08:13 (Medio Campidano)	17:52			18:23	34	17:42 (AG09)	19:54	15	07:59 (Medio Campidano)	20:24	20:50
8	07:46		08:07 (Medio Campidano)	07:27			06:49		17:09 (AG09)	07:00		07:48 (Medio Campidano)	06:19	05:58
	17:18	7	08:14 (Medio Campidano)	17:53			18:24	33	17:42 (AG09)	19:55	5	07:53 (Medio Campidano)	20:25	20:51
9	07:46		08:07 (Medio Campidano)	07:26			06:48		17:10 (AG09)	06:59			06:18	05:58
	17:19	8	08:15 (Medio Campidano)	17:54			18:25	30	17:40 (AG09)	19:56			20:26	20:51
10	07:46		08:07 (Medio Campidano)	07:25			06:46		17:12 (AG09)	06:57			06:17	05:58
	17:20	9	08:16 (Medio Campidano)	17:55			18:26	26	17:38 (AG09)	19:57			20:27	20:52
11	07:46		08:07 (Medio Campidano)	07:24			06:45		17:13 (AG09)	06:56			06:16	05:58
	17:21	10	08:17 (Medio Campidano)	17:56			18:27	22	17:35 (AG09)	19:58			20:28	20:52
12	07:45		08:06 (Medio Campidano)	07:22			06:43		17:16 (AG09)	06:54			06:15	05:58
	17:22	11	08:17 (Medio Campidano)	17:57			18:28	16	17:32 (AG09)	19:59			20:29	20:53
13	07:45		08:06 (Medio Campidano)	07:21			06:42		17:23 (AG09)	06:53			06:14	05:57
	17:23	12	08:18 (Medio Campidano)	17:59			18:29	3	17:26 (AG09)	20:00			20:30	20:53
14	07:45		08:06 (Medio Campidano)	07:20		17:20 (AG09)	06:40			06:51			06:13	05:57
	17:24	12	08:18 (Medio Campidano)	18:00	15	17:35 (AG09)	18:30			20:01			20:31	20:54
15	07:45		08:05 (Medio Campidano)	07:19		17:17 (AG09)	06:38			06:50			06:12	05:57
	17:25	13	08:18 (Medio Campidano)	18:01	21	17:38 (AG09)	18:31			20:02			20:32	20:54
16	07:44		08:05 (Medio Campidano)	07:18		17:15 (AG09)	06:37			06:48			06:11	05:57
	17:26	14	08:19 (Medio Campidano)	18:02	25	17:40 (AG09)	18:32			20:03			20:33	20:54
17	07:44		08:04 (Medio Campidano)	07:16		17:13 (AG09)	06:35			06:47			06:10	05:57
	17:27	15	08:19 (Medio Campidano)	18:03	28	17:41 (AG09)	18:33			20:04			20:34	20:55
18	07:43		08:04 (Medio Campidano)	07:15		17:12 (AG09)	06:34		06:57 (Medio Campidano)	06:45			06:10	05:58
	17:28	15	08:19 (Medio Campidano)	18:04	31	17:43 (AG09)	18:34	2	06:59 (Medio Campidano)	20:05			20:35	20:55
19	07:43		08:03 (Medio Campidano)	07:14		17:11 (AG09)	06:32		06:50 (Medio Campidano)	06:44			06:09	05:58
	17:29	16	08:19 (Medio Campidano)	18:06	33	17:44 (AG09)	18:35	14	07:04 (Medio Campidano)	20:06			20:35	20:55
20	07:42		08:03 (Medio Campidano)	07:12		17:09 (AG09)	06:30		06:49 (Medio Campidano)	06:42			06:08	05:58
	17:30	17	08:20 (Medio Campidano)	18:07	36	17:45 (AG09)	18:36	18	07:07 (Medio Campidano)	20:07			20:36	20:56
21	07:42		08:03 (Medio Campidano)	07:11		17:09 (AG09)	06:29		06:47 (Medio Campidano)	06:41			06:07	05:58
	17:32	16	08:19 (Medio Campidano)	18:08	37	17:46 (AG09)	18:37	21	07:08 (Medio Campidano)	20:08			20:37	20:56
22	07:41		08:03 (Medio Campidano)	07:10		17:07 (AG09)	06:27		06:45 (Medio Campidano)	06:40			06:06	05:58
	17:33	15	08:18 (Medio Campidano)	18:09	39	17:46 (AG09)	18:38	24	07:09 (Medio Campidano)	20:09			20:38	20:56
23	07:41		08:05 (Medio Campidano)	07:08		17:07 (AG09)	06:26		06:44 (Medio Campidano)	06:38			06:06	05:58
	17:34	13	08:18 (Medio Campidano)	18:10	40	17:47 (AG09)	18:39	27	07:11 (Medio Campidano)	20:10			20:39	20:56
24	07:40		08:07 (Medio Campidano)	07:07		17:07 (AG09)	06:24		06:42 (Medio Campidano)	06:37			06:05	05:59
	17:35	10	08:17 (Medio Campidano)	18:11	41	17:48 (AG09)	18:40	29	07:11 (Medio Campidano)	20:11			20:40	20:56
25	07:39		08:09 (Medio Campidano)	07:06		17:06 (AG09)	06:22		06:41 (Medio Campidano)	06:35			06:04	05:59
	17:36	6	08:15 (Medio Campidano)	18:12	41	17:47 (AG09)	18:41	31	07:12 (Medio Campidano)	20:12			20:41	20:57
26	07:39			07:04		17:06 (AG09)	06:21		06:39 (Medio Campidano)	06:34			06:04	05:59
	17:37			18:13	42	17:48 (AG09)	18:42	32	07:11 (Medio Campidano)	20:13			20:41	20:57
27	07:38			07:03		17:05 (AG09)	06:19		06:38 (Medio Campidano)	06:33			06:03	06:00
	17:39			18:14	42	17:47 (AG09)	18:43	33	07:11 (Medio Campidano)	20:14			20:42	20:57
28	07:37			07:01		17:06 (AG09)	06:18		06:38 (Medio Campidano)	06:31			06:02	06:00
	17:40			18:16	42	17:48 (AG09)	18:44	33	07:11 (Medio Campidano)	20:15			20:43	20:57
29	07:36						07:16		07:38 (Medio Campidano)	06:30			06:02	06:00
	17:41						19:45	33	08:11 (Medio Campidano)	20:16			20:44	20:57
30	07:36						07:14		07:38 (Medio Campidano)	06:29			06:01	06:01
	17:42						19:46	33	08:11 (Medio Campidano)	20:17			20:45	20:57
31	07:35						07:13		07:38 (Medio Campidano)				06:01	
	17:43						19:47	32	08:10 (Medio Campidano)				20:45	
Potential sun hours	302			299			370			397			444	447
Total, worst case		240			513			765			174			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F024 - D10 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September			October			November			December		
1	06:01		06:24		06:53			07:21		17:57 (AG09)	06:53			07:26		07:49 (Medio Campidano)
	20:57		20:39		19:58			19:09	13	18:10 (AG09)	17:25			17:02	10	07:59 (Medio Campidano)
2	06:02		06:25		06:54			07:21		17:53 (AG09)	06:54			07:27		07:50 (Medio Campidano)
	20:57		20:38		19:56			19:08	20	18:13 (AG09)	17:24			17:02	9	07:59 (Medio Campidano)
3	06:02		06:26		06:55			07:22		17:50 (AG09)	06:55			07:28		07:51 (Medio Campidano)
	20:56		20:37		19:55			19:06	25	18:15 (AG09)	17:23			17:02	8	07:59 (Medio Campidano)
4	06:03		06:27		06:55		07:46 (Medio Campidano)	07:23		17:48 (AG09)	06:56			07:29		07:52 (Medio Campidano)
	20:56		20:36		19:53	5	07:51 (Medio Campidano)	19:05	28	18:16 (AG09)	17:22			17:02	7	07:59 (Medio Campidano)
5	06:03		06:28		06:56		07:40 (Medio Campidano)	07:24		17:46 (AG09)	06:57			07:30		07:53 (Medio Campidano)
	20:56		20:35		19:52	15	07:55 (Medio Campidano)	19:03	32	18:18 (AG09)	17:20			17:02	6	07:59 (Medio Campidano)
6	06:04		06:28		06:57		07:38 (Medio Campidano)	07:25		17:45 (AG09)	06:58			07:31		07:54 (Medio Campidano)
	20:56		20:34		19:50	19	07:57 (Medio Campidano)	19:01	34	18:19 (AG09)	17:19			17:01	5	07:59 (Medio Campidano)
7	06:04		06:29		06:58		07:36 (Medio Campidano)	07:26		17:43 (AG09)	06:59			07:32		07:54 (Medio Campidano)
	20:56		20:32		19:48	22	07:58 (Medio Campidano)	19:00	36	18:19 (AG09)	17:18			17:01	4	07:58 (Medio Campidano)
8	06:05		06:30		06:59		07:34 (Medio Campidano)	07:27		17:42 (AG09)	07:00			07:32		07:55 (Medio Campidano)
	20:55		20:31		19:47	26	08:00 (Medio Campidano)	18:58	38	18:20 (AG09)	17:17			17:01	3	07:58 (Medio Campidano)
9	06:06		06:31		07:00		07:33 (Medio Campidano)	07:28		17:41 (AG09)	07:02			07:33		07:56 (Medio Campidano)
	20:55		20:30		19:45	27	08:00 (Medio Campidano)	18:57	39	18:20 (AG09)	17:16			17:01	2	07:58 (Medio Campidano)
10	06:06		06:32		07:01		07:32 (Medio Campidano)	07:29		17:40 (AG09)	07:03			07:34		07:57 (Medio Campidano)
	20:55		20:29		19:44	29	08:01 (Medio Campidano)	18:55	40	18:20 (AG09)	17:15			17:01	1	07:58 (Medio Campidano)
11	06:07		06:33		07:02		07:31 (Medio Campidano)	07:30		17:40 (AG09)	07:04			07:35		
	20:54		20:28		19:42	30	08:01 (Medio Campidano)	18:54	41	18:21 (AG09)	17:14			17:01		
12	06:08		06:34		07:03		07:30 (Medio Campidano)	07:31		17:39 (AG09)	07:05			07:36		
	20:54		20:26		19:40	32	08:02 (Medio Campidano)	18:52	41	18:20 (AG09)	17:13			17:02		
13	06:08		06:35		07:04		07:29 (Medio Campidano)	07:32		17:38 (AG09)	07:06			07:37		
	20:53		20:25		19:39	33	08:02 (Medio Campidano)	18:51	42	18:20 (AG09)	17:13			17:02		
14	06:09		06:36		07:05		07:28 (Medio Campidano)	07:33		17:38 (AG09)	07:07			07:37		
	20:53		20:24		19:37	33	08:01 (Medio Campidano)	18:49	42	18:20 (AG09)	17:12			17:02		
15	06:10		06:37		07:06		07:28 (Medio Campidano)	07:34		17:38 (AG09)	07:08			07:38		
	20:52		20:22		19:36	33	08:01 (Medio Campidano)	18:48	42	18:20 (AG09)	17:11			17:02		
16	06:10		06:38		07:06		07:28 (Medio Campidano)	07:35		17:38 (AG09)	07:10			07:39		
	20:52		20:21		19:34	32	08:00 (Medio Campidano)	18:46	41	18:19 (AG09)	17:10			17:02		
17	06:11		06:39		07:07		07:28 (Medio Campidano)	07:36		17:38 (AG09)	07:11		07:42 (Medio Campidano)	07:39		
	20:51		20:20		19:32	32	08:00 (Medio Campidano)	18:45	41	18:19 (AG09)	17:09	7	07:49 (Medio Campidano)	17:03		
18	06:12		06:40		07:08		07:28 (Medio Campidano)	07:37		17:38 (AG09)	07:12		07:40 (Medio Campidano)	07:40		
	20:51		20:18		19:31	31	07:59 (Medio Campidano)	18:43	40	18:18 (AG09)	17:09	11	07:51 (Medio Campidano)	17:03		
19	06:13		06:41		07:09		07:29 (Medio Campidano)	07:39		17:39 (AG09)	07:13		07:39 (Medio Campidano)	07:41		
	20:50		20:17		19:29	29	07:58 (Medio Campidano)	18:42	39	18:18 (AG09)	17:08	13	07:52 (Medio Campidano)	17:04		
20	06:14		06:42		07:10		07:30 (Medio Campidano)	07:40		17:39 (AG09)	07:14		07:38 (Medio Campidano)	07:41		
	20:49		20:16		19:27	27	07:57 (Medio Campidano)	18:41	39	18:18 (AG09)	17:07	15	07:53 (Medio Campidano)	17:04		
21	06:14		06:42		07:11		07:31 (Medio Campidano)	07:41		17:40 (AG09)	07:15		07:39 (Medio Campidano)	07:42		
	20:49		20:14		19:26	25	07:56 (Medio Campidano)	18:39	36	18:16 (AG09)	17:07	16	07:55 (Medio Campidano)	17:04		
22	06:15		06:43		07:12		07:32 (Medio Campidano)	07:42		17:40 (AG09)	07:16		07:39 (Medio Campidano)	07:42		
	20:48		20:13		19:24	22	07:54 (Medio Campidano)	18:38	35	18:15 (AG09)	17:06	17	07:56 (Medio Campidano)	17:05		
23	06:16		06:44		07:13		07:33 (Medio Campidano)	07:43		17:41 (AG09)	07:17		07:40 (Medio Campidano)	07:43		
	20:47		20:11		19:22	19	07:52 (Medio Campidano)	18:36	33	18:14 (AG09)	17:05	16	07:56 (Medio Campidano)	17:05		
24	06:17		06:45		07:14		07:33 (Medio Campidano)	07:44		17:42 (AG09)	07:18		07:41 (Medio Campidano)	07:43		
	20:46		20:10		19:21	16	07:49 (Medio Campidano)	18:35	30	18:12 (AG09)	17:05	15	07:56 (Medio Campidano)	17:06		
25	06:18		06:46		07:15		07:36 (Medio Campidano)	06:45		16:43 (AG09)	07:19		07:42 (Medio Campidano)	07:44		
	20:45		20:08		19:19	9	07:45 (Medio Campidano)	17:34	28	17:11 (AG09)	17:04	15	07:57 (Medio Campidano)	17:06		
26	06:19		06:47		07:16			06:46		16:45 (AG09)	07:21		07:43 (Medio Campidano)	07:44		
	20:45		20:07		19:18			17:32	24	17:09 (AG09)	17:04	14	07:57 (Medio Campidano)	17:07		
27	06:19		06:48		07:17			06:47		16:48 (AG09)	07:22		07:44 (Medio Campidano)	07:44		
	20:44		20:06		19:16			17:31	19	17:07 (AG09)	17:04	13	07:57 (Medio Campidano)	17:08		
28	06:20		06:49		07:18			06:48		16:51 (AG09)	07:23		07:45 (Medio Campidano)	07:45		
	20:43		20:04		19:14			17:30	13	17:04 (AG09)	17:03	13	07:58 (Medio Campidano)	17:08		
29	06:21		06:50		07:19			06:49			07:24		07:47 (Medio Campidano)	07:45		
	20:42		20:02		19:13			17:29			17:03	12	07:59 (Medio Campidano)	17:09		
30	06:22		06:51		07:20			06:50			07:25		07:48 (Medio Campidano)	07:45		
	20:41		20:01		19:11			17:27			17:03	11	07:59 (Medio Campidano)	17:10		
31	06:23		06:52					06:51						07:46		
	20:40		19:59					17:26						17:11		
Potential sun hours	454		425		374			347			301			293		
Total, worst case						546			931			188			55	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F028 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June		
1	07:46		08:08 (Medio Campidano)	07:34		08:23 (Medio Campidano)	07:00			07:11			06:28			06:00		19:28 (AG09)
	17:12	28	08:36 (Medio Campidano)	17:44	15	08:38 (Medio Campidano)	18:17			19:48			20:18			20:46	49	20:17 (AG09)
2	07:46		08:08 (Medio Campidano)	07:33		08:26 (Medio Campidano)	06:58			07:10			06:26			06:00		19:29 (AG09)
	17:12	29	08:37 (Medio Campidano)	17:46	9	08:35 (Medio Campidano)	18:18			19:49			20:19			20:47	49	20:18 (AG09)
3	07:46		08:08 (Medio Campidano)	07:32			06:57			07:08			06:25			06:00		19:29 (AG09)
	17:13	29	08:37 (Medio Campidano)	17:47			18:19			19:50			20:20			20:47	49	20:18 (AG09)
4	07:46		08:08 (Medio Campidano)	07:31			06:55			07:07			06:24			05:59		19:29 (AG09)
	17:14	30	08:38 (Medio Campidano)	17:48			18:20			19:51			20:21			20:48	49	20:18 (AG09)
5	07:46		08:08 (Medio Campidano)	07:30			06:54			07:05			06:23			05:59		19:29 (AG09)
	17:15	31	08:39 (Medio Campidano)	17:49			18:21			19:52			20:22			20:49	49	20:18 (AG09)
6	07:46		08:08 (Medio Campidano)	07:29			06:52			07:03			06:22			05:59		19:29 (AG09)
	17:16	32	08:40 (Medio Campidano)	17:50			18:22			19:53			20:23			20:49	50	20:19 (AG09)
7	07:46		08:07 (Medio Campidano)	07:28			06:51			07:02			06:20			05:58		19:30 (AG09)
	17:17	32	08:39 (Medio Campidano)	17:52			18:23			19:54			20:24			20:50	49	20:19 (AG09)
8	07:46		08:07 (Medio Campidano)	07:27			06:49		07:08 (Medio Campidano)	07:00			06:19			05:58		19:29 (AG09)
	17:18	33	08:40 (Medio Campidano)	17:53			18:24	4	07:12 (Medio Campidano)	19:55			20:25			20:51	50	20:19 (AG09)
9	07:46		08:08 (Medio Campidano)	07:26			06:48		07:06 (Medio Campidano)	06:59			06:18		19:47 (AG09)	05:58		19:30 (AG09)
	17:19	33	08:41 (Medio Campidano)	17:54			18:25	7	07:13 (Medio Campidano)	19:56			20:26	11	19:58 (AG09)	20:51	49	20:19 (AG09)
10	07:46		08:08 (Medio Campidano)	07:25			06:46		07:05 (Medio Campidano)	06:57			06:17		19:43 (AG09)	05:58		19:30 (AG09)
	17:20	34	08:42 (Medio Campidano)	17:55			18:26	9	07:14 (Medio Campidano)	19:57			20:27	18	20:01 (AG09)	20:52	49	20:19 (AG09)
11	07:46		08:09 (Medio Campidano)	07:24			06:45		07:03 (Medio Campidano)	06:56			06:16		19:41 (AG09)	05:58		19:30 (AG09)
	17:21	34	08:43 (Medio Campidano)	17:56			18:27	11	07:14 (Medio Campidano)	19:58			20:28	23	20:04 (AG09)	20:52	50	20:20 (AG09)
12	07:45		08:08 (Medio Campidano)	07:22			06:43		07:01 (Medio Campidano)	06:54			06:15		19:39 (AG09)	05:58		19:30 (AG09)
	17:22	34	08:42 (Medio Campidano)	17:57			18:28	13	07:14 (Medio Campidano)	19:59			20:29	26	20:05 (AG09)	20:53	50	20:20 (AG09)
13	07:45		08:09 (Medio Campidano)	07:21			06:42		07:00 (Medio Campidano)	06:53			06:14		19:37 (AG09)	05:57		19:31 (AG09)
	17:23	34	08:43 (Medio Campidano)	17:59			18:29	14	07:14 (Medio Campidano)	20:00			20:30	30	20:07 (AG09)	20:53	49	20:20 (AG09)
14	07:45		08:09 (Medio Campidano)	07:20			06:40		06:58 (Medio Campidano)	06:51			06:13		19:36 (AG09)	05:57		19:31 (AG09)
	17:24	35	08:44 (Medio Campidano)	18:00			18:30	15	07:13 (Medio Campidano)	20:01			20:31	32	20:08 (AG09)	20:54	49	20:20 (AG09)
15	07:45		08:09 (Medio Campidano)	07:19			06:38		06:57 (Medio Campidano)	06:50			06:12		19:34 (AG09)	05:57		19:31 (AG09)
	17:25	35	08:44 (Medio Campidano)	18:01			18:31	16	07:13 (Medio Campidano)	20:02			20:32	35	20:09 (AG09)	20:54	49	20:20 (AG09)
16	07:44		08:10 (Medio Campidano)	07:18			06:37		06:56 (Medio Campidano)	06:48			06:11		19:33 (AG09)	05:57		19:31 (AG09)
	17:26	35	08:45 (Medio Campidano)	18:02			18:32	15	07:11 (Medio Campidano)	20:03			20:33	36	20:09 (AG09)	20:54	50	20:21 (AG09)
17	07:44		08:10 (Medio Campidano)	07:16			06:35		06:56 (Medio Campidano)	06:47			06:10		19:32 (AG09)	05:57		19:31 (AG09)
	17:27	35	08:45 (Medio Campidano)	18:03			18:33	13	07:09 (Medio Campidano)	20:04			20:34	38	20:10 (AG09)	20:55	50	20:21 (AG09)
18	07:43		08:10 (Medio Campidano)	07:15			06:34		06:59 (Medio Campidano)	06:45			06:10		19:31 (AG09)	05:58		19:32 (AG09)
	17:28	35	08:45 (Medio Campidano)	18:04			18:34	8	07:07 (Medio Campidano)	20:05			20:35	40	20:11 (AG09)	20:55	49	20:21 (AG09)
19	07:43		08:10 (Medio Campidano)	07:14			06:32			06:44			06:09		19:32 (AG09)	05:58		19:32 (AG09)
	17:29	35	08:45 (Medio Campidano)	18:06			18:35			20:06			20:35	40	20:12 (AG09)	20:55	49	20:21 (AG09)
20	07:42		08:11 (Medio Campidano)	07:12			06:30			06:42			06:08		19:31 (AG09)	05:58		19:33 (AG09)
	17:30	35	08:46 (Medio Campidano)	18:07			18:36			20:07			20:36	42	20:13 (AG09)	20:56	49	20:22 (AG09)
21	07:42		08:11 (Medio Campidano)	07:11			06:29			06:41			06:07		19:30 (AG09)	05:58		19:33 (AG09)
	17:32	35	08:46 (Medio Campidano)	18:08			18:37			20:08			20:37	43	20:13 (AG09)	20:56	49	20:22 (AG09)
22	07:41		08:12 (Medio Campidano)	07:10			06:27			06:40			06:06		19:30 (AG09)	05:58		19:33 (AG09)
	17:33	33	08:45 (Medio Campidano)	18:09			18:38			20:09			20:38	44	20:14 (AG09)	20:56	49	20:22 (AG09)
23	07:41		08:13 (Medio Campidano)	07:08			06:26			06:38			06:06		19:30 (AG09)	05:58		19:33 (AG09)
	17:34	33	08:46 (Medio Campidano)	18:10			18:39			20:10			20:39	45	20:15 (AG09)	20:56	49	20:22 (AG09)
24	07:40		08:13 (Medio Campidano)	07:07			06:24			06:37			06:05		19:29 (AG09)	05:59		19:33 (AG09)
	17:35	32	08:45 (Medio Campidano)	18:11			18:40			20:11			20:40	46	20:15 (AG09)	20:56	49	20:22 (AG09)
25	07:39		08:14 (Medio Campidano)	07:06			06:22			06:35			06:04		19:29 (AG09)	05:59		19:33 (AG09)
	17:36	31	08:45 (Medio Campidano)	18:12			18:41			20:12			20:41	47	20:16 (AG09)	20:57	50	20:23 (AG09)
26	07:39		08:15 (Medio Campidano)	07:04			06:21			06:34			06:04		19:29 (AG09)	05:59		19:33 (AG09)
	17:37	30	08:45 (Medio Campidano)	18:13			18:42			20:13			20:41	47	20:16 (AG09)	20:57	50	20:23 (AG09)
27	07:38		08:16 (Medio Campidano)	07:03			06:19			06:33			06:03		19:29 (AG09)	06:00		19:33 (AG09)
	17:39	29	08:45 (Medio Campidano)	18:14			18:43			20:14			20:42	47	20:16 (AG09)	20:57	49	20:22 (AG09)
28	07:37		08:17 (Medio Campidano)	07:01			06:18			06:31			06:02		19:29 (AG09)	06:00		19:34 (AG09)
	17:40	27	08:44 (Medio Campidano)	18:16			18:44			20:15			20:43	47	20:16 (AG09)	20:57	49	20:23 (AG09)
29	07:36		08:18 (Medio Campidano)				07:16			06:30			06:02		19:29 (AG09)	06:00		19:34 (AG09)
	17:41	25	08:43 (Medio Campidano)				19:45			20:16			20:44	48	20:17 (AG09)	20:57	49	20:23 (AG09)
30	07:36		08:19 (Medio Campidano)				07:14			06:29			06:01		19:28 (AG09)	06:01		19:35 (AG09)
	17:42	23	08:42 (Medio Campidano)				19:46			20:17			20:45	49	20:17 (AG09)	20:57	49	20:24 (AG09)
31	07:35		08:21 (Medio Campidano)				07:13						06:01		19:29 (AG09)			
	17:43	19	08:40 (Medio Campidano)				19:47						20:45	49	20:18 (AG09)			
Potential sun hours	302			299			370			397			444			447		
Total, worst case		975			24			125						883			1478	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F028 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December		
1	06:01		19:34 (AG09)	06:24		19:49 (AG09)	06:53			07:21		07:40 (Medio Campidano)	06:53			07:26		07:51 (Medio Campidano)
	20:57	50	20:24 (AG09)	20:39	25	20:14 (AG09)	19:58			19:09	13	07:53 (Medio Campidano)	17:25			17:02	34	08:25 (Medio Campidano)
2	06:02		19:35 (AG09)	06:25		19:51 (AG09)	06:54			07:21		07:41 (Medio Campidano)	06:54			07:27		07:51 (Medio Campidano)
	20:57	49	20:24 (AG09)	20:38	21	20:12 (AG09)	19:56			19:08	12	07:53 (Medio Campidano)	17:24			17:02	34	08:25 (Medio Campidano)
3	06:02		19:35 (AG09)	06:26		19:54 (AG09)	06:55			07:22		07:42 (Medio Campidano)	06:55			07:28		07:52 (Medio Campidano)
	20:56	49	20:24 (AG09)	20:37	16	20:10 (AG09)	19:55			19:06	10	07:52 (Medio Campidano)	17:23			17:02	33	08:25 (Medio Campidano)
4	06:03		19:35 (AG09)	06:27		19:58 (AG09)	06:55			07:23		07:43 (Medio Campidano)	06:56			07:29		07:52 (Medio Campidano)
	20:56	50	20:25 (AG09)	20:36	7	20:05 (AG09)	19:53			19:05	8	07:51 (Medio Campidano)	17:22			17:02	33	08:25 (Medio Campidano)
5	06:03		19:35 (AG09)	06:28			06:56			07:24		07:44 (Medio Campidano)	06:57			07:30		07:53 (Medio Campidano)
	20:56	49	20:24 (AG09)	20:35			19:52			19:03	6	07:50 (Medio Campidano)	17:20			17:02	32	08:25 (Medio Campidano)
6	06:04		19:36 (AG09)	06:28			06:57			07:25		07:45 (Medio Campidano)	06:58			07:31		07:54 (Medio Campidano)
	20:56	49	20:25 (AG09)	20:34			19:50			19:02	2	07:47 (Medio Campidano)	17:19			17:01	32	08:26 (Medio Campidano)
7	06:04		19:35 (AG09)	06:29			06:58			07:26			06:59			07:31		07:54 (Medio Campidano)
	20:56	50	20:25 (AG09)	20:32			19:48			19:00			17:18			17:01	31	08:25 (Medio Campidano)
8	06:05		19:36 (AG09)	06:30			06:59			07:27			07:00			07:32		07:55 (Medio Campidano)
	20:55	49	20:25 (AG09)	20:31			19:47			18:58			17:17			17:01	30	08:25 (Medio Campidano)
9	06:06		19:36 (AG09)	06:31			07:00			07:28			07:02		07:57 (Medio Campidano)	07:33		07:56 (Medio Campidano)
	20:55	50	20:26 (AG09)	20:30			19:45			18:57			17:16	9	08:06 (Medio Campidano)	17:01	29	08:25 (Medio Campidano)
10	06:06		19:36 (AG09)	06:32			07:01			07:29			07:03		07:54 (Medio Campidano)	07:34		07:57 (Medio Campidano)
	20:55	49	20:25 (AG09)	20:29			19:44			18:55			17:15	15	08:09 (Medio Campidano)	17:01	29	08:26 (Medio Campidano)
11	06:07		19:37 (AG09)	06:33			07:02			07:30			07:04		07:53 (Medio Campidano)	07:35		07:58 (Medio Campidano)
	20:54	48	20:25 (AG09)	20:28			19:42			18:54			17:14	19	08:12 (Medio Campidano)	17:02	28	08:26 (Medio Campidano)
12	06:08		19:36 (AG09)	06:34			07:03			07:31			07:05		07:51 (Medio Campidano)	07:36		07:59 (Medio Campidano)
	20:54	49	20:25 (AG09)	20:26			19:40			18:52			17:13	23	08:14 (Medio Campidano)	17:02	28	08:27 (Medio Campidano)
13	06:08		19:37 (AG09)	06:35			07:04			07:32			07:06		07:50 (Medio Campidano)	07:37		07:59 (Medio Campidano)
	20:53	48	20:25 (AG09)	20:25			19:39			18:51			17:13	25	08:15 (Medio Campidano)	17:02	27	08:26 (Medio Campidano)
14	06:09		19:37 (AG09)	06:36			07:05			07:33			07:07		07:49 (Medio Campidano)	07:37		08:00 (Medio Campidano)
	20:53	48	20:25 (AG09)	20:24			19:37			18:49			17:12	27	08:16 (Medio Campidano)	17:02	27	08:27 (Medio Campidano)
15	06:10		19:38 (AG09)	06:37			07:06			07:34			07:08		07:48 (Medio Campidano)	07:38		08:01 (Medio Campidano)
	20:52	48	20:26 (AG09)	20:22			19:36			18:48			17:11	29	08:17 (Medio Campidano)	17:02	26	08:27 (Medio Campidano)
16	06:11		19:37 (AG09)	06:38			07:06			07:35			07:10		07:48 (Medio Campidano)	07:39		08:01 (Medio Campidano)
	20:52	48	20:25 (AG09)	20:21			19:34			18:46			17:10	30	08:18 (Medio Campidano)	17:02	26	08:27 (Medio Campidano)
17	06:11		19:38 (AG09)	06:39			07:07			07:36			07:11		07:48 (Medio Campidano)	07:39		08:02 (Medio Campidano)
	20:51	47	20:25 (AG09)	20:20			19:32			18:45			17:09	31	08:19 (Medio Campidano)	17:03	25	08:27 (Medio Campidano)
18	06:12		19:39 (AG09)	06:40			07:08			07:37			07:12		07:47 (Medio Campidano)	07:40		08:03 (Medio Campidano)
	20:51	46	20:25 (AG09)	20:18			19:31			18:43			17:09	32	08:19 (Medio Campidano)	17:03	25	08:28 (Medio Campidano)
19	06:13		19:39 (AG09)	06:41			07:09			07:39			07:13		07:47 (Medio Campidano)	07:41		08:03 (Medio Campidano)
	20:50	46	20:25 (AG09)	20:17			19:29			18:42			17:08	33	08:20 (Medio Campidano)	17:04	25	08:28 (Medio Campidano)
20	06:14		19:39 (AG09)	06:42			07:10			07:40			07:14		07:47 (Medio Campidano)	07:41		08:04 (Medio Campidano)
	20:49	45	20:24 (AG09)	20:16			19:27			18:41			17:07	33	08:20 (Medio Campidano)	17:04	25	08:29 (Medio Campidano)
21	06:14		19:39 (AG09)	06:42			07:11			07:41			07:15		07:47 (Medio Campidano)	07:42		08:04 (Medio Campidano)
	20:49	45	20:24 (AG09)	20:14			19:26			18:39			17:07	35	08:22 (Medio Campidano)	17:04	25	08:29 (Medio Campidano)
22	06:15		19:40 (AG09)	06:43			07:12			07:42			07:16		07:47 (Medio Campidano)	07:42		08:05 (Medio Campidano)
	20:48	44	20:24 (AG09)	20:13			19:24			18:38			17:06	35	08:22 (Medio Campidano)	17:05	25	08:30 (Medio Campidano)
23	06:16		19:41 (AG09)	06:44			07:13			07:43			07:17		07:47 (Medio Campidano)	07:43		08:05 (Medio Campidano)
	20:47	43	20:24 (AG09)	20:11			19:22			18:36			17:06	35	08:22 (Medio Campidano)	17:05	25	08:30 (Medio Campidano)
24	06:17		19:42 (AG09)	06:45			07:14			07:44			07:18		07:47 (Medio Campidano)	07:43		08:06 (Medio Campidano)
	20:46	41	20:23 (AG09)	20:10			19:21			18:35			17:05	35	08:22 (Medio Campidano)	17:06	25	08:31 (Medio Campidano)
25	06:18		19:41 (AG09)	06:46			07:15		07:43 (Medio Campidano)	06:45			07:19		07:48 (Medio Campidano)	07:44		08:06 (Medio Campidano)
	20:45	40	20:21 (AG09)	20:08			19:19	6	07:49 (Medio Campidano)	17:34			17:04	35	08:23 (Medio Campidano)	17:07	25	08:31 (Medio Campidano)
26	06:19		19:42 (AG09)	06:47			07:16		07:39 (Medio Campidano)	06:46			07:21		07:48 (Medio Campidano)	07:44		08:06 (Medio Campidano)
	20:45	39	20:21 (AG09)	20:07			19:18	12	07:51 (Medio Campidano)	17:32			17:04	35	08:23 (Medio Campidano)	17:07	25	08:31 (Medio Campidano)
27	06:19		19:43 (AG09)	06:48			07:17		07:38 (Medio Campidano)	06:47			07:22		07:48 (Medio Campidano)	07:44		08:07 (Medio Campidano)
	20:44	37	20:20 (AG09)	20:06			19:16	14	07:52 (Medio Campidano)	17:31			17:04	35	08:23 (Medio Campidano)	17:08	26	08:33 (Medio Campidano)
28	06:20		19:44 (AG09)	06:49			07:18		07:37 (Medio Campidano)	06:48			07:23		07:48 (Medio Campidano)	07:45		08:07 (Medio Campidano)
	20:43	36	20:20 (AG09)	20:04			19:14	16	07:53 (Medio Campidano)	17:30			17:03	35	08:23 (Medio Campidano)	17:08	26	08:33 (Medio Campidano)
29	06:21		19:46 (AG09)	06:50			07:19		07:38 (Medio Campidano)	06:49			07:24		07:50 (Medio Campidano)	07:45		08:07 (Medio Campidano)
	20:42	33	20:19 (AG09)	20:02			19:13	16	07:54 (Medio Campidano)	17:29			17:03	34	08:24 (Medio Campidano)	17:09	26	08:33 (Medio Campidano)
30	06:22		19:47 (AG09)	06:51			07:20		07:39 (Medio Campidano)	06:50			07:25		07:50 (Medio Campidano)	07:45		08:07 (Medio Campidano)
	20:41	31	20:18 (AG09)	20:01			19:11	15	07:54 (Medio Campidano)	17:27			17:03	34	08:24 (Medio Campidano)	17:10	27	08:34 (Medio Campidano)
31	06:23		19:48 (AG09)	06:52						06:51						07:46		08:07 (Medio Campidano)
	20:40	29	20:17 (AG09)	19:59						17:26						17:11	27	08:34 (Medio Campidano)
Potential sun hours	454			425			374			347			301			293		
Total, worst case		1385			69			79			51			654			861	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F029 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April		May		June		
1	07:46	07:34	07:00	07:11		06:28		06:00		20:01 (AG06)
	17:12	17:45	18:17	19:48		20:18		20:46	14	20:15 (AG06)
2	07:46	07:33	06:58	07:10		06:26		06:00		20:03 (AG06)
	17:12	17:46	18:18	19:49		20:19		20:47	12	20:15 (AG06)
3	07:46	07:32	06:57	07:08		06:25		06:00		20:04 (AG06)
	17:13	17:47	18:19	19:50		20:20		20:48	10	20:14 (AG06)
4	07:46	07:31	06:55	07:07		06:24		05:59		20:05 (AG06)
	17:14	17:48	18:20	19:51		20:21		20:48	7	20:12 (AG06)
5	07:46	07:30	06:54	07:05		06:23		05:59		20:07 (AG06)
	17:15	17:49	18:21	19:52		20:22		20:49	4	20:11 (AG06)
6	07:46	07:29	06:52	07:03		06:22		05:59		
	17:16	17:50	18:22	19:53		20:23		20:49		
7	07:46	07:28	06:51	07:02		06:21		05:58		
	17:17	17:52	18:23	19:54		20:24		20:50		
8	07:46	07:27	06:49	07:00		06:19		05:58		
	17:18	17:53	18:24	19:55		20:25		20:51		
9	07:46	07:26	06:48	06:59		06:18		05:58		
	17:19	17:54	18:25	19:56		20:26		20:51		
10	07:46	07:25	06:46	06:57	19:32 (AG05)	06:17	20:02 (AG06)	05:58		
	17:20	17:55	18:26	19:57	4 19:36 (AG05)	20:27	2 20:04 (AG06)	20:52		
11	07:46	07:24	06:45	06:56	19:31 (AG05)	06:16	20:00 (AG06)	05:58		
	17:21	17:56	18:27	19:58	6 19:37 (AG05)	20:28	5 20:05 (AG06)	20:52		
12	07:46	07:22	06:43	06:54	19:29 (AG05)	06:15	19:59 (AG06)	05:58		
	17:22	17:58	18:28	19:59	9 19:38 (AG05)	20:29	7 20:06 (AG06)	20:53		
13	07:45	07:21	06:42	06:53	19:29 (AG05)	06:14	19:58 (AG06)	05:57		
	17:23	17:59	18:29	20:00	10 19:39 (AG05)	20:30	9 20:07 (AG06)	20:53		
14	07:45	07:20	06:40	06:51	19:28 (AG05)	06:13	19:57 (AG06)	05:57		
	17:24	18:00	18:30	20:01	12 19:40 (AG05)	20:31	11 20:08 (AG06)	20:54		
15	07:45	07:19	06:38	06:50	19:28 (AG05)	06:12	19:57 (AG06)	05:57		
	17:25	18:01	18:31	20:02	13 19:41 (AG05)	20:32	12 20:09 (AG06)	20:54		
16	07:44	07:18	06:37	06:48	19:27 (AG05)	06:11	19:56 (AG06)	05:57		
	17:26	18:02	18:32	20:03	14 19:41 (AG05)	20:33	13 20:09 (AG06)	20:54		
17	07:44	07:16	06:35	06:47	19:28 (AG05)	06:10	19:56 (AG06)	05:58		
	17:27	18:03	18:33	20:04	15 19:43 (AG05)	20:34	14 20:10 (AG06)	20:55		
18	07:43	07:15	06:34	06:45	19:29 (AG05)	06:10	19:55 (AG06)	05:58		
	17:28	18:04	18:35	20:05	15 19:44 (AG05)	20:35	16 20:11 (AG06)	20:55		
19	07:43	07:14	06:32	06:44	19:29 (AG05)	06:09	19:56 (AG06)	05:58		
	17:29	18:06	18:36	20:06	14 19:43 (AG05)	20:35	16 20:12 (AG06)	20:55		
20	07:42	07:12	06:31	06:42	19:30 (AG05)	06:08	19:56 (AG06)	05:58		
	17:31	18:07	18:37	20:07	12 19:42 (AG05)	20:36	17 20:13 (AG06)	20:56		
21	07:42	07:11	06:29	06:41	19:32 (AG05)	06:07	19:56 (AG06)	05:58		
	17:32	18:08	18:38	20:08	7 19:39 (AG05)	20:37	17 20:13 (AG06)	20:56		
22	07:41	07:10	06:27	06:40		06:06	19:57 (AG06)	05:58		
	17:33	18:09	18:39	20:09		20:38	18 20:15 (AG06)	20:56		
23	07:41	07:08	06:26	06:38		06:06	19:56 (AG06)	05:58		
	17:34	18:10	18:40	20:10		20:39	19 20:15 (AG06)	20:56		
24	07:40	07:07	06:24	06:37		06:05	19:56 (AG06)	05:59		
	17:35	18:11	18:41	20:11		20:40	20 20:16 (AG06)	20:57		
25	07:39	07:06	06:23	06:35		06:04	19:57 (AG06)	05:59		
	17:36	18:12	18:42	20:12		20:41	20 20:17 (AG06)	20:57		
26	07:39	07:04	06:21	06:34		06:04	19:57 (AG06)	05:59		
	17:37	18:13	18:43	20:13		20:41	20 20:17 (AG06)	20:57		
27	07:38	07:03	06:19	06:33		06:03	19:58 (AG06)	06:00		
	17:39	18:14	18:44	20:14		20:42	20 20:18 (AG06)	20:57		
28	07:37	07:01	06:18	06:31		06:02	19:59 (AG06)	06:00		
	17:40	18:16	18:45	20:15		20:43	18 20:17 (AG06)	20:57		
29	07:36		07:16	06:30		06:02	20:00 (AG06)	06:00		
	17:41		19:46	20:16		20:44	17 20:17 (AG06)	20:57		
30	07:36		07:15	06:29		06:01	20:00 (AG06)	06:01		
	17:42		19:47	20:17		20:45	16 20:16 (AG06)	20:57		
31	07:35		07:13			06:01	20:01 (AG06)			
	17:43		19:48			20:45	15 20:16 (AG06)			
Potential sun hours	302	299	370	397		444		447		
Total, worst case					131		322		47	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F029 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October	November	December
1	06:01			06:24		20:09 (AG06)	06:53		19:30 (AG05)	07:21	06:53	07:26
	20:57			20:39	6	20:15 (AG06)	19:58	6	19:36 (AG05)	19:09	17:25	17:02
2	06:02			06:25		20:11 (AG06)	06:54		19:31 (AG05)	07:22	06:54	07:27
	20:57			20:38	4	20:15 (AG06)	19:56	4	19:35 (AG05)	19:08	17:24	17:02
3	06:02			06:26		20:13 (AG06)	06:55			07:23	06:55	07:28
	20:57			20:37	1	20:14 (AG06)	19:55			19:06	17:23	17:02
4	06:03			06:27			06:55			07:23	06:56	07:29
	20:56			20:36			19:53			19:05	17:22	17:02
5	06:03			06:28			06:56			07:24	06:57	07:30
	20:56			20:35			19:52			19:03	17:20	17:02
6	06:04			06:29			06:57			07:25	06:58	07:31
	20:56			20:34			19:50			19:02	17:19	17:01
7	06:04			06:29			06:58			07:26	06:59	07:32
	20:56			20:32			19:48			19:00	17:18	17:01
8	06:05		20:13 (AG06)	06:30			06:59			07:27	07:01	07:32
	20:55	6	20:19 (AG06)	20:31			19:47			18:58	17:17	17:01
9	06:06		20:12 (AG06)	06:31			07:00			07:28	07:02	07:33
	20:55	9	20:21 (AG06)	20:30			19:45			18:57	17:16	17:01
10	06:06		20:10 (AG06)	06:32			07:01			07:29	07:03	07:34
	20:55	11	20:21 (AG06)	20:29			19:44			18:55	17:15	17:01
11	06:07		20:10 (AG06)	06:33			07:02			07:30	07:04	07:35
	20:54	13	20:23 (AG06)	20:28			19:42			18:54	17:14	17:02
12	06:08		20:10 (AG06)	06:34			07:03			07:31	07:05	07:36
	20:54	14	20:24 (AG06)	20:26			19:40			18:52	17:14	17:02
13	06:08		20:08 (AG06)	06:35			07:04			07:32	07:06	07:37
	20:53	16	20:24 (AG06)	20:25			19:39			18:51	17:13	17:02
14	06:09		20:08 (AG06)	06:36			07:05			07:33	07:07	07:37
	20:53	17	20:25 (AG06)	20:24			19:37			18:49	17:12	17:02
15	06:10		20:08 (AG06)	06:37			07:06			07:34	07:08	07:38
	20:52	18	20:26 (AG06)	20:23			19:36			18:48	17:11	17:02
16	06:11		20:07 (AG06)	06:38			07:07			07:35	07:10	07:39
	20:52	19	20:26 (AG06)	20:21			19:34			18:46	17:10	17:03
17	06:11		20:07 (AG06)	06:39			07:07			07:36	07:11	07:39
	20:51	20	20:27 (AG06)	20:20			19:32			18:45	17:09	17:03
18	06:12		20:07 (AG06)	06:40			07:08			07:38	07:12	07:40
	20:51	20	20:27 (AG06)	20:18			19:31			18:43	17:09	17:03
19	06:13		20:07 (AG06)	06:41			07:09			07:39	07:13	07:41
	20:50	19	20:26 (AG06)	20:17			19:29			18:42	17:08	17:04
20	06:14		20:06 (AG06)	06:42			07:10			07:40	07:14	07:41
	20:49	19	20:25 (AG06)	20:16			19:27			18:41	17:07	17:04
21	06:14		20:06 (AG06)	06:42			07:11			07:41	07:15	07:42
	20:49	19	20:25 (AG06)	20:14			19:26			18:39	17:07	17:04
22	06:15		20:06 (AG06)	06:43		19:36 (AG05)	07:12			07:42	07:16	07:42
	20:48	18	20:24 (AG06)	20:13	8	19:44 (AG05)	19:24			18:38	17:06	17:05
23	06:16		20:06 (AG06)	06:44		19:34 (AG05)	07:13			07:43	07:17	07:43
	20:47	18	20:24 (AG06)	20:11	12	19:46 (AG05)	19:22			18:36	17:06	17:05
24	06:17		20:07 (AG06)	06:45		19:33 (AG05)	07:14			07:44	07:18	07:43
	20:46	16	20:23 (AG06)	20:10	14	19:47 (AG05)	19:21			18:35	17:05	17:06
25	06:18		20:06 (AG06)	06:46		19:31 (AG05)	07:15			06:45	07:20	07:44
	20:46	16	20:22 (AG06)	20:09	16	19:47 (AG05)	19:19			17:34	17:05	17:07
26	06:19		20:06 (AG06)	06:47		19:31 (AG05)	07:16			06:46	07:21	07:44
	20:45	15	20:21 (AG06)	20:07	15	19:46 (AG05)	19:18			17:32	17:04	17:07
27	06:20		20:07 (AG06)	06:48		19:30 (AG05)	07:17			06:47	07:22	07:45
	20:44	13	20:20 (AG06)	20:06	14	19:44 (AG05)	19:16			17:31	17:04	17:08
28	06:20		20:07 (AG06)	06:49		19:29 (AG05)	07:18			06:48	07:23	07:45
	20:43	13	20:20 (AG06)	20:04	13	19:42 (AG05)	19:14			17:30	17:03	17:08
29	06:21		20:08 (AG06)	06:50		19:29 (AG05)	07:19			06:49	07:24	07:45
	20:42	11	20:19 (AG06)	20:03	11	19:40 (AG05)	19:13			17:29	17:03	17:09
30	06:22		20:08 (AG06)	06:51		19:29 (AG05)	07:20			06:50	07:25	07:45
	20:41	10	20:18 (AG06)	20:01	10	19:39 (AG05)	19:11			17:27	17:03	17:10
31	06:23		20:09 (AG06)	06:52		19:29 (AG05)				06:52		07:46
	20:40	8	20:17 (AG06)	19:59	9	19:38 (AG05)				17:26		17:11
Potential sun hours	454			425			374			347	301	293
Total, worst case		358			133			10				

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F032 - C2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March		April			May			June		
1	07:46		07:34			07:00		07:11			06:28		06:55 (AG09)	06:00		06:59 (AG09)
	17:12		17:45			18:17		19:49			20:18	72	08:07 (AG09)	20:46	67	20:22 (AG05)
2	07:46		07:33		17:18 (AG08)	06:58		07:10			06:26		06:55 (AG09)	06:00		06:59 (AG09)
	17:13		17:46	4	17:22 (AG08)	18:18		19:49			20:19	73	08:08 (AG09)	20:47	68	20:23 (AG05)
3	07:46		07:32		17:16 (AG08)	06:57		07:08			06:25		06:55 (AG09)	06:00		07:00 (AG09)
	17:13		17:47	7	17:23 (AG08)	18:19		19:50			20:20	73	08:08 (AG09)	20:48	68	20:24 (AG05)
4	07:46		07:31		17:15 (AG08)	06:55		07:07			06:24		06:55 (AG09)	05:59		07:00 (AG09)
	17:14		17:48	10	17:25 (AG08)	18:20		19:51			20:21	73	08:08 (AG09)	20:48	67	20:23 (AG05)
5	07:46		07:30		17:15 (AG08)	06:54		07:05			06:23		06:54 (AG09)	05:59		07:01 (AG09)
	17:15		17:49	11	17:26 (AG08)	18:21		19:52			20:22	74	08:08 (AG09)	20:49	67	20:24 (AG05)
6	07:46		07:29		17:14 (AG08)	06:52		07:03			06:22		06:54 (AG09)	05:59		07:01 (AG09)
	17:16		17:50	13	17:27 (AG08)	18:22		19:53			20:23	75	08:09 (AG09)	20:49	69	20:25 (AG05)
7	07:46		07:28		17:14 (AG08)	06:51		07:02			06:21		06:54 (AG09)	05:58		07:02 (AG09)
	17:17		17:52	15	17:29 (AG08)	18:23		19:54			20:24	75	08:09 (AG09)	20:50	69	20:26 (AG05)
8	07:46		07:27		17:14 (AG08)	06:49		07:00			06:19		06:54 (AG09)	05:58		07:02 (AG09)
	17:18		17:53	16	17:30 (AG08)	18:24		19:55			20:25	75	08:09 (AG09)	20:51	69	20:26 (AG05)
9	07:46		07:26		17:14 (AG08)	06:48		06:59			06:18		06:54 (AG09)	05:58		07:02 (AG09)
	17:19		17:54	17	17:31 (AG08)	18:25		19:56			20:26	75	08:09 (AG09)	20:51	69	20:26 (AG05)
10	07:46		07:25		17:14 (AG08)	06:46		06:57			06:17		06:54 (AG09)	05:58		07:03 (AG09)
	17:20		17:55	19	17:33 (AG08)	18:26		19:57			20:27	74	08:08 (AG09)	20:52	69	20:27 (AG05)
11	07:46		07:24		17:15 (AG08)	06:45		06:56			06:16		06:54 (AG09)	05:58		07:03 (AG09)
	17:21		17:56	19	17:34 (AG08)	18:27		19:58			20:28	74	08:08 (AG09)	20:52	70	20:28 (AG05)
12	07:46		07:22		17:15 (AG08)	06:43		06:54		07:30 (AG09)	06:15		06:54 (AG09)	05:58		07:04 (AG09)
	17:22		17:58	19	17:34 (AG08)	18:28		19:59	12	07:42 (AG09)	20:29	74	08:08 (AG09)	20:53	68	20:28 (AG05)
13	07:45		07:21		17:15 (AG08)	06:42		06:53		07:24 (AG09)	06:14		06:53 (AG09)	05:58		07:04 (AG09)
	17:23		17:59	18	17:33 (AG08)	18:29		20:00	24	07:48 (AG09)	20:30	75	08:08 (AG09)	20:53	69	20:29 (AG05)
14	07:45		07:20		17:16 (AG08)	06:40		06:51		07:20 (AG09)	06:13		06:53 (AG09)	05:57		07:05 (AG09)
	17:24		18:00	16	17:32 (AG08)	18:30		20:01	31	07:51 (AG09)	20:31	75	08:08 (AG09)	20:54	68	20:29 (AG05)
15	07:45		07:19		17:18 (AG08)	06:38		06:50		07:17 (AG09)	06:12		06:53 (AG09)	05:57		07:05 (AG09)
	17:25		18:01	13	17:31 (AG08)	18:31		20:02	37	07:54 (AG09)	20:32	74	08:07 (AG09)	20:54	68	20:29 (AG05)
16	07:44		07:18		17:21 (AG08)	06:37		06:48		07:14 (AG09)	06:11		06:53 (AG09)	05:57		07:05 (AG09)
	17:26		18:02	8	17:29 (AG08)	18:32		20:03	42	07:56 (AG09)	20:33	74	08:07 (AG09)	20:54	69	20:30 (AG05)
17	07:44		07:16			06:35		06:47		07:12 (AG09)	06:10		06:53 (AG09)	05:58		07:05 (AG09)
	17:27		18:03			18:34		20:04	46	07:58 (AG09)	20:34	74	08:07 (AG09)	20:55	69	20:30 (AG05)
18	07:43		07:15			06:34		06:45		07:10 (AG09)	06:10		06:53 (AG09)	05:58		07:06 (AG09)
	17:28		18:04			18:35		20:05	50	08:00 (AG09)	20:35	73	08:06 (AG09)	20:55	68	20:30 (AG05)
19	07:43		07:14			06:32		06:44		07:08 (AG09)	06:09		06:54 (AG09)	05:58		07:06 (AG09)
	17:29		18:06			18:36		20:06	53	08:01 (AG09)	20:35	73	08:07 (AG09)	20:55	68	20:30 (AG05)
20	07:42		07:12			06:31		06:42		07:07 (AG09)	06:08		06:54 (AG09)	05:58		07:07 (AG09)
	17:31		18:07			18:37		20:07	55	08:02 (AG09)	20:36	72	08:06 (AG09)	20:56	68	20:31 (AG05)
21	07:42		07:11			06:29		06:41		07:05 (AG09)	06:07		06:54 (AG09)	05:58		07:07 (AG09)
	17:32		18:08			18:38		20:08	57	08:02 (AG09)	20:37	72	08:06 (AG09)	20:56	68	20:31 (AG05)
22	07:41		07:10			06:27		06:40		07:04 (AG09)	06:06		06:55 (AG09)	05:58		07:07 (AG09)
	17:33		18:09			18:39		20:09	60	08:04 (AG09)	20:38	71	08:06 (AG09)	20:56	68	20:31 (AG05)
23	07:41		07:08			06:26		06:38		07:03 (AG09)	06:06		06:55 (AG09)	05:58		07:07 (AG09)
	17:34		18:10			18:40		20:10	62	08:05 (AG09)	20:39	71	08:06 (AG09)	20:56	68	20:31 (AG05)
24	07:40		07:07			06:24		06:37		07:01 (AG09)	06:05		06:55 (AG09)	05:59		07:08 (AG09)
	17:35		18:11			18:41		20:11	64	08:05 (AG09)	20:40	70	08:05 (AG09)	20:57	68	20:32 (AG05)
25	07:39		07:06			06:23		06:35		07:00 (AG09)	06:04		06:56 (AG09)	05:59		07:08 (AG09)
	17:36		18:12			18:42		20:12	66	08:06 (AG09)	20:41	69	08:05 (AG09)	20:57	68	20:32 (AG05)
26	07:39		07:04			06:21		06:34		07:00 (AG09)	06:04		06:56 (AG09)	05:59		07:07 (AG09)
	17:37		18:13			18:43		20:13	67	08:07 (AG09)	20:41	69	08:05 (AG09)	20:57	69	20:32 (AG05)
27	07:38		07:03			06:19		06:33		06:58 (AG09)	06:03		06:57 (AG09)	06:00		07:08 (AG09)
	17:39		18:15			18:44		20:14	68	08:06 (AG09)	20:42	68	08:05 (AG09)	20:57	68	20:32 (AG05)
28	07:37		07:01			06:18		06:31		06:58 (AG09)	06:02		06:57 (AG09)	06:00		07:08 (AG09)
	17:40		18:16			18:45		20:15	69	08:07 (AG09)	20:43	67	08:04 (AG09)	20:57	68	20:32 (AG05)
29	07:36					07:16		06:30		06:57 (AG09)	06:02		06:58 (AG09)	06:00		07:07 (AG09)
	17:41					19:46		20:16	71	08:08 (AG09)	20:44	66	08:04 (AG09)	20:57	69	20:32 (AG05)
30	07:36					07:15		06:29		06:57 (AG09)	06:01		06:58 (AG09)	06:01		07:08 (AG09)
	17:42					19:47		20:17	71	08:08 (AG09)	20:45	66	08:04 (AG09)	20:57	68	20:32 (AG05)
31	07:35					07:13					06:01		06:59 (AG09)			
	17:43					19:48					20:45	66	20:21 (AG05)			
Potential sun hours	302		299			370		397			444			447		
Total, worst case				205					1005			2232			2049	

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F032 - C2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September	October			November			December
1	06:01		07:07 (AG09)	06:24		07:03 (AG09)	06:53	07:21			06:53		16:44 (AG08)	07:26
	20:57	69	20:32 (AG05)	20:39	75	08:18 (AG09)	19:58	19:10			17:25	18	17:02 (AG08)	17:02
2	06:02		07:08 (AG09)	06:25		07:03 (AG09)	06:54	07:22			06:54		16:44 (AG08)	07:27
	20:57	69	20:32 (AG05)	20:38	75	08:18 (AG09)	19:56	19:08			17:24	17	17:01 (AG08)	17:02
3	06:02		07:07 (AG09)	06:26		07:03 (AG09)	06:55	07:23			06:55		16:44 (AG08)	07:28
	20:57	70	20:32 (AG05)	20:37	75	08:18 (AG09)	19:55	19:06			17:23	16	17:00 (AG08)	17:02
4	06:03		07:08 (AG09)	06:27		07:03 (AG09)	06:56	07:23			06:56		16:44 (AG08)	07:29
	20:56	69	20:32 (AG05)	20:36	75	08:18 (AG09)	19:53	19:05			17:22	14	16:58 (AG08)	17:02
5	06:03		07:07 (AG09)	06:28		07:04 (AG09)	06:56	07:24			06:57		16:44 (AG08)	07:30
	20:56	69	20:31 (AG05)	20:35	74	08:18 (AG09)	19:52	19:03			17:20	13	16:57 (AG08)	17:02
6	06:04		07:08 (AG09)	06:29		07:04 (AG09)	06:57	07:25			06:58		16:46 (AG08)	07:31
	20:56	69	20:32 (AG05)	20:34	74	08:18 (AG09)	19:50	19:02			17:19	11	16:57 (AG08)	17:01
7	06:04		07:07 (AG09)	06:29		07:04 (AG09)	06:58	07:26			06:59		16:46 (AG08)	07:32
	20:56	69	20:31 (AG05)	20:32	74	08:18 (AG09)	19:49	19:00			17:18	9	16:55 (AG08)	17:01
8	06:05		07:07 (AG09)	06:30		07:04 (AG09)	06:59	07:27			07:01		16:48 (AG08)	07:32
	20:55	68	20:31 (AG05)	20:31	74	08:18 (AG09)	19:47	18:58			17:17	6	16:54 (AG08)	17:01
9	06:06		07:07 (AG09)	06:31		07:04 (AG09)	07:00	07:28			07:02		16:49 (AG08)	07:33
	20:55	68	20:31 (AG05)	20:30	74	08:18 (AG09)	19:45	18:57			17:16	4	16:53 (AG08)	17:01
10	06:06		07:07 (AG09)	06:32		07:04 (AG09)	07:01	07:29			07:03			07:34
	20:55	67	20:30 (AG05)	20:29	73	08:17 (AG09)	19:44	18:55			17:15			17:01
11	06:07		07:07 (AG09)	06:33		07:04 (AG09)	07:02	07:30			07:04			07:35
	20:54	67	20:30 (AG05)	20:28	72	08:16 (AG09)	19:42	18:54			17:14			17:02
12	06:08		07:07 (AG09)	06:34		07:04 (AG09)	07:03	07:31			07:05			07:36
	20:54	67	20:30 (AG05)	20:26	72	08:16 (AG09)	19:40	18:52			17:14			17:02
13	06:08		07:06 (AG09)	06:35		07:05 (AG09)	07:04	07:32			07:06			07:37
	20:53	67	20:29 (AG05)	20:25	71	08:16 (AG09)	19:39	18:51			17:13			17:02
14	06:09		07:06 (AG09)	06:36		07:05 (AG09)	07:05	07:33			07:07			07:37
	20:53	66	08:12 (AG09)	20:24	70	08:15 (AG09)	19:37	18:49			17:12			17:02
15	06:10		07:06 (AG09)	06:37		07:06 (AG09)	07:06	07:34			07:08			07:38
	20:52	67	08:13 (AG09)	20:23	69	08:15 (AG09)	19:36	18:48			17:11			17:02
16	06:11		07:06 (AG09)	06:38		07:06 (AG09)	07:07	07:35			07:10			07:39
	20:52	67	08:13 (AG09)	20:21	68	08:14 (AG09)	19:34	18:46			17:10			17:03
17	06:11		07:06 (AG09)	06:39		07:07 (AG09)	07:07	07:36			07:11			07:39
	20:51	68	08:14 (AG09)	20:20	66	08:13 (AG09)	19:32	18:45			17:09			17:03
18	06:12		07:06 (AG09)	06:40		07:07 (AG09)	07:08	07:38			07:12			07:40
	20:51	68	08:14 (AG09)	20:19	65	08:12 (AG09)	19:31	18:43			17:09			17:03
19	06:13		07:06 (AG09)	06:41		07:07 (AG09)	07:09	07:39			07:13			07:41
	20:50	69	08:15 (AG09)	20:17	63	08:10 (AG09)	19:29	18:42			17:08			17:04
20	06:14		07:05 (AG09)	06:42		07:08 (AG09)	07:10	07:40			07:14			07:41
	20:49	70	08:15 (AG09)	20:16	61	08:09 (AG09)	19:27	18:41			17:07			17:04
21	06:14		07:05 (AG09)	06:43		07:09 (AG09)	07:11	07:41			07:15			07:42
	20:49	70	08:15 (AG09)	20:14	59	08:08 (AG09)	19:26	18:39			17:07			17:04
22	06:15		07:05 (AG09)	06:43		07:10 (AG09)	07:12	07:42			07:16			07:42
	20:48	71	08:16 (AG09)	20:13	57	08:07 (AG09)	19:24	18:38			17:06			17:05
23	06:16		07:05 (AG09)	06:44		07:11 (AG09)	07:13	07:43			07:17			07:43
	20:47	71	08:16 (AG09)	20:11	55	08:06 (AG09)	19:22	18:36			17:06			17:05
24	06:17		07:05 (AG09)	06:45		07:12 (AG09)	07:14	07:44			07:18			07:43
	20:46	72	08:17 (AG09)	20:10	52	08:04 (AG09)	19:21	18:35			17:05			17:06
25	06:18		07:04 (AG09)	06:46		07:13 (AG09)	07:15	06:45			07:20			07:44
	20:46	72	08:16 (AG09)	20:09	49	08:02 (AG09)	19:19	17:34			17:05			17:07
26	06:19		07:04 (AG09)	06:47		07:15 (AG09)	07:16	06:46		16:50 (AG08)	07:21			07:44
	20:45	73	08:17 (AG09)	20:07	45	08:00 (AG09)	19:18	17:32	10	17:00 (AG08)	17:04			17:07
27	06:20		07:04 (AG09)	06:48		07:17 (AG09)	07:17	06:47		16:47 (AG08)	07:22			07:45
	20:44	73	08:17 (AG09)	20:06	41	07:58 (AG09)	19:16	17:31	14	17:01 (AG08)	17:04			17:08
28	06:20		07:04 (AG09)	06:49		07:18 (AG09)	07:18	06:48		16:46 (AG08)	07:23			07:45
	20:43	74	08:18 (AG09)	20:04	37	07:55 (AG09)	19:14	17:30	16	17:02 (AG08)	17:03			17:08
29	06:21		07:04 (AG09)	06:50		07:21 (AG09)	07:19	06:49		16:45 (AG08)	07:24			07:45
	20:42	74	08:18 (AG09)	20:03	31	07:52 (AG09)	19:13	17:29	18	17:03 (AG08)	17:03			17:09
30	06:22		07:04 (AG09)	06:51		07:24 (AG09)	07:20	06:50		16:44 (AG08)	07:25			07:45
	20:41	74	08:18 (AG09)	20:01	24	07:48 (AG09)	19:11	17:27	19	17:03 (AG08)	17:03			17:10
31	06:23		07:04 (AG09)	06:52		07:30 (AG09)		06:52		16:43 (AG08)				07:46
	20:40	75	08:19 (AG09)	19:59	11	07:41 (AG09)		17:26	20	17:03 (AG08)				17:11
Potential sun hours	454			425			374	347			301			293
Total, worst case		2162			1881				97			108		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F033 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March	April			May			June
1	07:46			07:34		16:59 (AG08)	07:00	07:11			06:28		07:00 (AG09)	06:01
	17:12			17:45	22	17:21 (AG08)	18:17	19:49			20:18	46	19:55 (AG04)	20:46
2	07:46			07:33		16:59 (AG08)	06:58	07:10			06:26		07:00 (AG09)	06:00
	17:13			17:46	23	17:22 (AG08)	18:18	19:50			20:19	48	19:56 (AG04)	20:47
3	07:46			07:32		16:59 (AG08)	06:57	07:08			06:25		07:01 (AG09)	06:00
	17:13			17:47	24	17:23 (AG08)	18:19	19:51			20:20	49	19:58 (AG04)	20:48
4	07:46			07:31		16:59 (AG08)	06:55	07:07			06:24		07:02 (AG09)	05:59
	17:14			17:48	25	17:24 (AG08)	18:20	19:51			20:21	49	19:59 (AG04)	20:48
5	07:46			07:30		17:00 (AG08)	06:54	07:05			06:23		07:03 (AG09)	05:59
	17:15			17:49	24	17:24 (AG08)	18:21	19:52			20:22	48	20:00 (AG04)	20:49
6	07:46			07:29		17:00 (AG08)	06:52	07:03			06:22		07:04 (AG09)	05:59
	17:16			17:50	24	17:24 (AG08)	18:22	19:53			20:23	47	20:01 (AG04)	20:49
7	07:46			07:28		17:01 (AG08)	06:51	07:02			06:21		07:05 (AG09)	05:58
	17:17			17:52	23	17:24 (AG08)	18:23	19:54			20:24	46	20:02 (AG04)	20:50
8	07:46			07:27		17:02 (AG08)	06:49	07:00		07:21 (AG09)	06:19		07:06 (AG09)	05:58
	17:18			17:53	21	17:23 (AG08)	18:24	19:55	11	07:32 (AG09)	20:25	45	20:03 (AG04)	20:51
9	07:46			07:26		17:03 (AG08)	06:48	06:59		07:17 (AG09)	06:18		07:07 (AG09)	05:58
	17:19			17:54	19	17:22 (AG08)	18:25	19:56	19	07:36 (AG09)	20:26	44	20:04 (AG04)	20:51
10	07:46			07:25		17:04 (AG08)	06:46	06:57		07:15 (AG09)	06:17		07:09 (AG09)	05:58
	17:20			17:55	17	17:21 (AG08)	18:26	19:57	23	07:38 (AG09)	20:27	40	20:04 (AG04)	20:52
11	07:46			07:24		17:06 (AG08)	06:45	06:56		07:14 (AG09)	06:16		07:11 (AG09)	05:58
	17:21			17:56	14	17:20 (AG08)	18:27	19:58	27	07:41 (AG09)	20:28	37	20:05 (AG04)	20:52
12	07:46			07:23		17:09 (AG08)	06:43	06:54		07:12 (AG09)	06:15		07:13 (AG09)	05:58
	17:22			17:58	9	17:18 (AG08)	18:28	19:59	30	07:42 (AG09)	20:29	31	20:05 (AG04)	20:53
13	07:45			07:21			06:42	06:53		07:11 (AG09)	06:14		07:17 (AG09)	05:58
	17:23			17:59			18:29	20:00	32	07:43 (AG09)	20:30	22	20:05 (AG04)	20:53
14	07:45			07:20			06:40	06:51		07:09 (AG09)	06:13		19:50 (AG04)	05:57
	17:24			18:00			18:30	20:01	35	07:44 (AG09)	20:31	13	20:03 (AG04)	20:54
15	07:45			07:19			06:38	06:50		07:08 (AG09)	06:12		19:52 (AG04)	05:57
	17:25			18:01			18:31	20:02	37	07:45 (AG09)	20:32	10	20:02 (AG04)	20:54
16	07:44			07:18			06:37	06:48		07:06 (AG09)	06:11		19:54 (AG04)	05:58
	17:26			18:02			18:32	20:03	39	07:45 (AG09)	20:33	6	20:00 (AG04)	20:54
17	07:44			07:16			06:35	06:47		07:05 (AG09)	06:10			05:58
	17:27			18:03			18:34	20:04	41	07:46 (AG09)	20:34			20:55
18	07:43			07:15			06:34	06:45		07:04 (AG09)	06:10			05:58
	17:28			18:04			18:35	20:05	43	07:47 (AG09)	20:35			20:55
19	07:43			07:14			06:32	06:44		07:02 (AG09)	06:09			05:58
	17:29			18:06			18:36	20:06	44	07:46 (AG09)	20:35			20:55
20	07:42			07:12			06:31	06:42		07:01 (AG09)	06:08			05:58
	17:31			18:07			18:37	20:07	46	07:47 (AG09)	20:36			20:56
21	07:42			07:11			06:29	06:41		07:00 (AG09)	06:07			05:58
	17:32			18:08			18:38	20:08	46	07:46 (AG09)	20:37			20:56
22	07:41			07:10			06:27	06:40		07:00 (AG09)	06:06			05:58
	17:33			18:09			18:39	20:09	46	07:46 (AG09)	20:38			20:56
23	07:41			07:08			06:26	06:38		07:00 (AG09)	06:06			05:58
	17:34			18:10			18:40	20:10	47	07:47 (AG09)	20:39			20:56
24	07:40		17:05 (AG08)	07:07			06:24	06:37		06:59 (AG09)	06:05			05:59
	17:35	6	17:11 (AG08)	18:11			18:41	20:11	47	07:46 (AG09)	20:40			20:57
25	07:39		17:03 (AG08)	07:06			06:23	06:35		06:59 (AG09)	06:04			05:59
	17:36	9	17:12 (AG08)	18:12			18:42	20:12	47	07:46 (AG09)	20:41			20:57
26	07:39		17:03 (AG08)	07:04			06:21	06:34		06:59 (AG09)	06:04			05:59
	17:37	11	17:14 (AG08)	18:13			18:43	20:13	47	07:46 (AG09)	20:41			20:57
27	07:38		17:02 (AG08)	07:03			06:19	06:33		06:59 (AG09)	06:03			06:00
	17:39	13	17:15 (AG08)	18:15			18:44	20:14	46	07:45 (AG09)	20:42			20:57
28	07:37		17:01 (AG08)	07:01			06:18	06:31		06:59 (AG09)	06:03			06:00
	17:40	15	17:16 (AG08)	18:16			18:45	20:15	45	07:44 (AG09)	20:43			20:57
29	07:36		17:00 (AG08)				07:16	06:30		07:00 (AG09)	06:02			06:00
	17:41	17	17:17 (AG08)				19:46	20:16	44	07:44 (AG09)	20:44			20:57
30	07:36		17:00 (AG08)				07:15	06:29		07:00 (AG09)	06:01			06:01
	17:42	18	17:18 (AG08)				19:47	20:17	45	19:55 (AG04)	20:45			20:57
31	07:35		16:59 (AG08)				07:13				06:01			
	17:43	21	17:20 (AG08)				19:48				20:45			
Potential sun hours	302			299			370	397			444			447
Total, worst case		110			245				887			581		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F033 - A4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December
1	06:01			06:24		07:22 (AG09)	06:53		07:13 (AG09)	07:21			06:53		16:34 (AG08)	07:26
	20:57			20:39	34	20:15 (AG04)	19:58	27	07:40 (AG09)	19:10			17:25	17	16:51 (AG08)	17:02
2	06:02			06:25		07:19 (AG09)	06:54		07:14 (AG09)	07:22			06:54		16:33 (AG08)	07:27
	20:57			20:38	39	20:15 (AG04)	19:56	23	07:37 (AG09)	19:08			17:24	19	16:52 (AG08)	17:02
3	06:02			06:26		07:18 (AG09)	06:55		07:15 (AG09)	07:23			06:55		16:31 (AG08)	07:28
	20:57			20:37	42	20:14 (AG04)	19:55	19	07:34 (AG09)	19:06			17:23	22	16:53 (AG08)	17:02
4	06:03			06:27		07:16 (AG09)	06:56		07:19 (AG09)	07:24			06:56		16:31 (AG08)	07:29
	20:56			20:36	45	20:13 (AG04)	19:53	11	07:30 (AG09)	19:05			17:22	22	16:53 (AG08)	17:02
5	06:03			06:28		07:15 (AG09)	06:56			07:24			06:57		16:30 (AG08)	07:30
	20:56			20:35	46	20:12 (AG04)	19:52			19:03			17:20	24	16:54 (AG08)	17:02
6	06:04			06:29		07:14 (AG09)	06:57			07:25			06:58		16:31 (AG08)	07:31
	20:56			20:34	47	20:11 (AG04)	19:50			19:02			17:19	24	16:55 (AG08)	17:01
7	06:04			06:29		07:13 (AG09)	06:58			07:26			06:59		16:30 (AG08)	07:32
	20:56			20:32	48	20:10 (AG04)	19:49			19:00			17:18	25	16:55 (AG08)	17:01
8	06:05			06:30		07:12 (AG09)	06:59			07:27			07:01		16:30 (AG08)	07:32
	20:55			20:31	48	20:09 (AG04)	19:47			18:58			17:17	24	16:54 (AG08)	17:01
9	06:06			06:31		07:11 (AG09)	07:00			07:28			07:02		16:30 (AG08)	07:33
	20:55			20:30	49	20:08 (AG04)	19:45			18:57			17:16	23	16:53 (AG08)	17:01
10	06:06			06:32		07:09 (AG09)	07:01			07:29			07:03		16:30 (AG08)	07:34
	20:55			20:29	49	20:06 (AG04)	19:44			18:55			17:15	22	16:52 (AG08)	17:01
11	06:07			06:33		07:09 (AG09)	07:02			07:30			07:04		16:31 (AG08)	07:35
	20:54			20:28	47	20:05 (AG04)	19:42			18:54			17:14	20	16:51 (AG08)	17:02
12	06:08			06:34		07:08 (AG09)	07:03			07:31			07:05		16:32 (AG08)	07:36
	20:54			20:26	47	20:04 (AG04)	19:40			18:52			17:14	18	16:50 (AG08)	17:02
13	06:08			06:35		07:08 (AG09)	07:04			07:32			07:06		16:32 (AG08)	07:37
	20:53			20:25	44	20:03 (AG04)	19:39			18:51			17:13	17	16:49 (AG08)	17:02
14	06:09			06:36		07:07 (AG09)	07:05			07:33			07:07		16:33 (AG08)	07:37
	20:53			20:24	45	07:52 (AG09)	19:37			18:49			17:12	15	16:48 (AG08)	17:02
15	06:10			06:37		07:07 (AG09)	07:06			07:34			07:08		16:34 (AG08)	07:38
	20:52			20:23	45	07:52 (AG09)	19:36			18:48			17:11	13	16:47 (AG08)	17:02
16	06:11			06:38		07:06 (AG09)	07:07			07:35			07:10		16:36 (AG08)	07:39
	20:52			20:21	46	07:52 (AG09)	19:34			18:46			17:10	11	16:47 (AG08)	17:03
17	06:11			06:39		07:06 (AG09)	07:07			07:37			07:11		16:37 (AG08)	07:39
	20:51			20:20	46	07:52 (AG09)	19:32			18:45			17:09	9	16:46 (AG08)	17:03
18	06:12			06:40		07:06 (AG09)	07:08			07:38			07:12		16:39 (AG08)	07:40
	20:51			20:19	47	07:53 (AG09)	19:31			18:43			17:09	6	16:45 (AG08)	17:03
19	06:13			06:41		07:05 (AG09)	07:09			07:39			07:13			07:41
	20:50			20:17	47	07:52 (AG09)	19:29			18:42			17:08			17:04
20	06:14			06:42		07:05 (AG09)	07:10			07:40			07:14			07:41
	20:49			20:16	46	07:51 (AG09)	19:27			18:41			17:07			17:04
21	06:14			06:43		07:05 (AG09)	07:11			07:41			07:15			07:42
	20:49			20:14	46	07:51 (AG09)	19:26			18:39			17:07			17:04
22	06:15			06:43		07:05 (AG09)	07:12			07:42			07:16			07:42
	20:48			20:13	46	07:51 (AG09)	19:24			18:38			17:06			17:05
23	06:16			06:44		07:05 (AG09)	07:13			07:43			07:17			07:43
	20:47			20:11	45	07:50 (AG09)	19:22			18:36			17:06			17:05
24	06:17			06:45		07:06 (AG09)	07:14			07:44			07:18			07:43
	20:46			20:10	44	07:50 (AG09)	19:21			18:35			17:05			17:06
25	06:18			06:46		07:07 (AG09)	07:15			06:45			07:20			07:44
	20:46			20:09	42	07:49 (AG09)	19:19			17:34			17:05			17:07
26	06:19			06:47		07:08 (AG09)	07:16			06:46			07:21			07:44
	20:45			20:07	41	07:49 (AG09)	19:18			17:32			17:04			17:07
27	06:20			06:48		07:09 (AG09)	07:17			06:47			07:22			07:45
	20:44			20:06	39	07:48 (AG09)	19:16			17:31			17:04			17:08
28	06:20		20:03 (AG04)	06:49		07:09 (AG09)	07:18			06:48			07:23			07:45
	20:43	9	20:12 (AG04)	20:04	37	07:46 (AG09)	19:14			17:30			17:03			17:08
29	06:21		20:02 (AG04)	06:50		07:10 (AG09)	07:19			06:49			07:24			07:45
	20:42	11	20:13 (AG04)	20:03	35	07:45 (AG09)	19:13			17:29			17:03			17:09
30	06:22		20:01 (AG04)	06:51		07:11 (AG09)	07:20			06:50		16:37 (AG08)	07:25			07:45
	20:41	14	20:15 (AG04)	20:01	32	07:43 (AG09)	19:11			17:27	10	16:47 (AG08)	17:03			17:10
31	06:23		07:26 (AG09)	06:52		07:12 (AG09)				06:52		16:35 (AG08)				07:46
	20:40	27	20:16 (AG04)	20:00	30	07:42 (AG09)				17:26	14	16:49 (AG08)				17:11
Potential sun hours	454			425			374			347			301			293
Total, worst case		61			1344			80			24			331		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F039 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February	March	April	May	June	July	August	September	October	November			December		
1	07:46		08:51 (AG06)	07:34	07:00	07:11	06:28	06:01	06:01	06:24	06:53	07:21	06:53			07:26		08:42 (AG06)
	17:12	49	09:40 (AG06)	17:45	18:17	19:49	20:18	20:46	20:57	20:39	19:58	19:10	17:25			17:02	39	09:21 (AG06)
2	07:46		08:52 (AG06)	07:33	06:59	07:10	06:26	06:00	06:02	06:25	06:54	07:22	06:54			07:27		08:41 (AG06)
	17:13	48	09:40 (AG06)	17:46	18:18	19:50	20:19	20:47	20:57	20:38	19:56	19:08	17:24			17:02	41	09:22 (AG06)
3	07:46		08:52 (AG06)	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:23	06:55			07:28		08:41 (AG06)
	17:13	48	09:40 (AG06)	17:47	18:19	19:51	20:20	20:48	20:57	20:37	19:55	19:06	17:23			17:02	42	09:23 (AG06)
4	07:46		08:53 (AG06)	07:31	06:56	07:07	06:24	05:59	06:03	06:27	06:56	07:24	06:56			07:29		08:41 (AG06)
	17:14	47	09:40 (AG06)	17:48	18:20	19:52	20:21	20:48	20:56	20:36	19:53	19:05	17:22			17:02	43	09:24 (AG06)
5	07:46		08:54 (AG06)	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:56	07:25	06:57			07:30		08:41 (AG06)
	17:15	46	09:40 (AG06)	17:49	18:21	19:53	20:22	20:49	20:56	20:35	19:52	19:03	17:21			17:02	44	09:25 (AG06)
6	07:46		08:55 (AG06)	07:29	06:53	07:04	06:22	05:59	06:04	06:29	06:57	07:26	06:58			07:31		08:41 (AG06)
	17:16	45	09:40 (AG06)	17:51	18:22	19:54	20:23	20:50	20:56	20:34	19:50	19:02	17:19			17:02	45	09:26 (AG06)
7	07:46		08:56 (AG06)	07:28	06:51	07:02	06:21	05:58	06:05	06:30	06:58	07:27	06:59			07:32		08:41 (AG06)
	17:17	44	09:40 (AG06)	17:52	18:23	19:55	20:24	20:50	20:56	20:33	19:49	19:00	17:18			17:01	46	09:27 (AG06)
8	07:46		08:56 (AG06)	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:01			07:33		08:41 (AG06)
	17:18	43	09:39 (AG06)	17:53	18:24	19:56	20:25	20:51	20:55	20:31	19:47	18:59	17:17			17:01	47	09:28 (AG06)
9	07:46		08:57 (AG06)	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02			07:33		08:41 (AG06)
	17:19	42	09:39 (AG06)	17:54	18:25	19:57	20:26	20:51	20:55	20:30	19:45	18:57	17:16			17:01	47	09:28 (AG06)
10	07:46		08:58 (AG06)	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03			07:34		08:41 (AG06)
	17:20	41	09:39 (AG06)	17:55	18:26	19:58	20:27	20:52	20:55	20:29	19:44	18:55	17:15			17:02	48	09:29 (AG06)
11	07:46		09:00 (AG06)	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04			07:35		08:41 (AG06)
	17:21	39	09:39 (AG06)	17:56	18:27	19:59	20:28	20:52	20:54	20:28	19:42	18:54	17:15			17:02	49	09:30 (AG06)
12	07:46		09:00 (AG06)	07:23	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31	07:05			07:36		08:42 (AG06)
	17:22	38	09:38 (AG06)	17:58	18:28	20:00	20:29	20:53	20:54	20:27	19:41	18:52	17:14			17:02	49	09:31 (AG06)
13	07:45		09:02 (AG06)	07:21	06:42	06:53	06:14	05:58	06:08	06:35	07:04	07:32	07:06			07:37		08:42 (AG06)
	17:23	36	09:38 (AG06)	17:59	18:29	20:01	20:30	20:53	20:54	20:25	19:39	18:51	17:13			17:02	50	09:32 (AG06)
14	07:45		09:03 (AG06)	07:20	06:40	06:51	06:13	05:58	06:09	06:36	07:05	07:34	07:07			07:37		08:42 (AG06)
	17:24	35	09:38 (AG06)	18:00	18:31	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12			17:02	50	09:32 (AG06)
15	07:45		09:04 (AG06)	07:19	06:39	06:50	06:12	05:57	06:10	06:37	07:06	07:35	07:09			07:38		08:42 (AG06)
	17:25	32	09:36 (AG06)	18:01	18:32	20:02	20:32	20:54	20:53	20:23	19:36	18:48	17:11			17:02	51	09:33 (AG06)
16	07:44		09:06 (AG06)	07:18	06:37	06:48	06:11	05:58	06:11	06:38	07:07	07:36	07:10			07:39		08:43 (AG06)
	17:26	30	09:36 (AG06)	18:02	18:33	20:03	20:33	20:55	20:52	20:21	19:34	18:46	17:10			17:03	50	09:33 (AG06)
17	07:44		09:07 (AG06)	07:16	06:35	06:47	06:11	05:58	06:11	06:39	07:08	07:37	07:11			07:40		08:43 (AG06)
	17:27	27	09:34 (AG06)	18:03	18:34	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09			17:03	50	09:33 (AG06)
18	07:44		09:10 (AG06)	07:15	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:38	07:12			07:40		08:43 (AG06)
	17:28	23	09:33 (AG06)	18:05	18:35	20:05	20:35	20:55	20:51	20:19	19:31	18:43	17:09			17:03	51	09:34 (AG06)
19	07:43		09:12 (AG06)	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:39	07:13			07:41		08:44 (AG06)
	17:29	18	09:30 (AG06)	18:06	18:36	20:06	20:36	20:56	20:50	20:17	19:29	18:42	17:08			17:04	51	09:35 (AG06)
20	07:43		09:17 (AG06)	07:13	06:31	06:42	06:08	05:58	06:14	06:42	07:10	07:40	07:14			07:41		08:44 (AG06)
	17:31	10	09:27 (AG06)	18:07	18:37	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07			17:04	51	09:35 (AG06)
21	07:42			07:11	06:29	06:41	06:07	05:58	06:15	06:43	07:11	07:41	07:15			07:42		08:45 (AG06)
	17:32			18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07			17:04	51	09:36 (AG06)
22	07:41			07:10	06:27	06:40	06:06	05:58	06:15	06:44	07:12	07:42	07:16		08:53 (AG06)	07:42		08:45 (AG06)
	17:33			18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	10	09:03 (AG06)	17:05	51	09:36 (AG06)
23	07:41			07:09	06:26	06:38	06:06	05:59	06:16	06:44	07:13	07:43	07:17		08:49 (AG06)	07:43		08:45 (AG06)
	17:34			18:10	18:40	20:10	20:39	20:57	20:47	20:12	19:23	18:36	17:06	18	09:07 (AG06)	17:05	51	09:36 (AG06)
24	07:40			07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:19		08:47 (AG06)	07:43		08:46 (AG06)
	17:35			18:11	18:41	20:11	20:40	20:57	20:46	20:10	19:21	18:35	17:05	23	09:10 (AG06)	17:06	51	09:37 (AG06)
25	07:40			07:06	06:23	06:36	06:04	05:59	06:18	06:46	07:15	06:45	07:20		08:46 (AG06)	07:44		08:46 (AG06)
	17:36			18:12	18:42	20:12	20:41	20:57	20:46	20:09	19:19	17:34	17:05	26	09:12 (AG06)	17:07	51	09:37 (AG06)
26	07:39			07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:21		08:44 (AG06)	07:44		08:47 (AG06)
	17:37			18:13	18:43	20:13	20:42	20:57	20:45	20:07	19:18	17:33	17:04	30	09:14 (AG06)	17:07	51	09:38 (AG06)
27	07:38			07:03	06:19	06:33	06:03	06:00	06:20	06:48	07:17	06:47	07:22		08:44 (AG06)	07:45		08:48 (AG06)
	17:39			18:15	18:44	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	32	09:16 (AG06)	17:08	50	09:38 (AG06)
28	07:37			07:01	06:18	06:32	06:03	06:00	06:20	06:49	07:18	06:48	07:23		08:43 (AG06)	07:45		08:48 (AG06)
	17:40			18:16	18:45	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	35	09:18 (AG06)	17:09	51	09:39 (AG06)
29	07:37				07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49	07:24		08:43 (AG06)	07:45		08:48 (AG06)
	17:41				19:46	20:16	20:44	20:57	20:42	20:03	19:13	17:29	17:03	36	09:19 (AG06)	17:09	51	09:39 (AG06)
30	07:36				07:15	06:29	06:01	06:01	06:22	06:51	07:20	06:51	07:25		08:42 (AG06)	07:46		08:50 (AG06)
	17:42				19:47	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	38	09:20 (AG06)	17:10	50	09:40 (AG06)
31	07:35				07:13		06:01		06:23	06:52		06:52				07:46		08:50 (AG06)
	17:43				19:48		20:46		20:40	20:00		17:26				17:11	50	09:40 (AG06)
Potential sun hours	302			299	370	397	444	447	454	425	374	347	301			293		
Total, worst case		741												248			1502	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F047 - Pascolo cespugliato

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March			April			May			June
1	07:46			07:34		07:53 (AG09)	07:00			07:11			06:28		19:00 (AG05)	06:01
	17:12			17:45	42	17:21 (AG03)	18:17			19:49			20:18	24	19:24 (AG05)	20:46
2	07:46			07:33		07:55 (AG09)	06:58			07:10			06:26		19:02 (AG05)	06:00
	17:13			17:46	42	17:23 (AG03)	18:18			19:50			20:19	20	19:22 (AG05)	20:47
3	07:46			07:32		07:56 (AG09)	06:57		17:48 (AG04)	07:08		19:16 (AG05)	06:25		19:05 (AG05)	06:00
	17:13			17:47	41	17:24 (AG03)	18:19	10	17:58 (AG04)	19:51	5	19:21 (AG05)	20:20	14	19:19 (AG05)	20:48
4	07:46			07:31		07:57 (AG09)	06:55		17:45 (AG04)	07:07		19:10 (AG05)	06:24			05:59
	17:14			17:48	39	17:24 (AG03)	18:20	14	17:59 (AG04)	19:52	17	19:27 (AG05)	20:21			20:48
5	07:46			07:30		07:57 (AG09)	06:54		17:42 (AG04)	07:05		19:07 (AG05)	06:23			05:59
	17:15			17:49	35	17:22 (AG03)	18:21	18	18:00 (AG04)	19:53	22	19:29 (AG05)	20:22			20:49
6	07:46			07:29		07:59 (AG09)	06:52		17:41 (AG04)	07:03		19:05 (AG05)	06:22			05:59
	17:16			17:50	30	17:22 (AG03)	18:22	20	18:01 (AG04)	19:54	27	19:32 (AG05)	20:23			20:50
7	07:46			07:28		08:01 (AG09)	06:51		17:40 (AG04)	07:02		19:02 (AG05)	06:21			05:58
	17:17			17:52	24	17:21 (AG03)	18:23	22	18:02 (AG04)	19:55	31	19:33 (AG05)	20:24			20:50
8	07:46			07:27		17:09 (AG03)	06:49		17:39 (AG04)	07:00		19:00 (AG05)	06:19			05:58
	17:18			17:53	10	17:19 (AG03)	18:24	25	18:04 (AG04)	19:55	33	19:33 (AG05)	20:25			20:51
9	07:46			07:26		17:13 (AG03)	06:48		17:38 (AG04)	06:59		18:59 (AG05)	06:18			05:58
	17:19			17:54	3	17:16 (AG03)	18:25	26	18:04 (AG04)	19:56	36	19:35 (AG05)	20:26			20:51
10	07:46			07:25			06:46		17:38 (AG04)	06:57		18:57 (AG05)	06:17			05:58
	17:20			17:55			18:26	28	18:06 (AG04)	19:57	38	19:35 (AG05)	20:27			20:52
11	07:46			07:24			06:45		17:38 (AG04)	06:56		18:57 (AG05)	06:16			05:58
	17:21			17:56			18:27	28	18:06 (AG04)	19:58	39	19:36 (AG05)	20:28			20:52
12	07:46			07:23			06:43		17:38 (AG04)	06:54		18:55 (AG05)	06:15			05:58
	17:22			17:58			18:28	28	18:06 (AG04)	19:59	41	19:36 (AG05)	20:29			20:53
13	07:45			07:21			06:42		17:37 (AG04)	06:53		18:55 (AG05)	06:14			05:58
	17:23			17:59			18:29	28	18:05 (AG04)	20:00	42	19:37 (AG05)	20:30			20:53
14	07:45			07:20			06:40		17:37 (AG04)	06:51		18:54 (AG05)	06:13			05:57
	17:24			18:00			18:30	27	18:04 (AG04)	20:01	42	19:36 (AG05)	20:31			20:54
15	07:45			07:19			06:39		17:38 (AG04)	06:50		18:54 (AG05)	06:12			05:57
	17:25			18:01			18:31	25	18:03 (AG04)	20:02	43	19:37 (AG05)	20:32			20:54
16	07:44		08:05 (AG09)	07:18			06:37		17:38 (AG04)	06:48		18:53 (AG05)	06:11			05:58
	17:26	1	08:06 (AG09)	18:02			18:33	24	18:02 (AG04)	20:03	43	19:36 (AG05)	20:33			20:55
17	07:44		08:04 (AG09)	07:16			06:35		17:40 (AG04)	06:47		18:53 (AG05)	06:10			05:58
	17:27	3	08:07 (AG09)	18:03			18:34	21	18:01 (AG04)	20:04	43	19:36 (AG05)	20:34			20:55
18	07:43		08:04 (AG09)	07:15			06:34		17:41 (AG04)	06:45		18:53 (AG05)	06:10			05:58
	17:28	6	08:10 (AG09)	18:04			18:35	18	17:59 (AG04)	20:05	44	19:37 (AG05)	20:35			20:55
19	07:43		08:03 (AG09)	07:14			06:32		17:43 (AG04)	06:44		18:53 (AG05)	06:09			05:58
	17:29	8	08:11 (AG09)	18:06			18:36	13	17:56 (AG04)	20:06	43	19:36 (AG05)	20:36			20:56
20	07:43		08:03 (AG09)	07:13			06:31		17:48 (AG04)	06:42		18:53 (AG05)	06:08			05:58
	17:31	9	08:12 (AG09)	18:07			18:37	3	17:51 (AG04)	20:07	43	19:36 (AG05)	20:36			20:56
21	07:42		08:02 (AG09)	07:11			06:29			06:41		18:52 (AG05)	06:07			05:58
	17:32	11	08:13 (AG09)	18:08			18:38			20:08	43	19:35 (AG05)	20:37			20:56
22	07:41		08:02 (AG09)	07:10			06:27			06:40		18:53 (AG05)	06:06			05:58
	17:33	13	08:15 (AG09)	18:09			18:39			20:09	41	19:34 (AG05)	20:38			20:56
23	07:41		08:01 (AG09)	07:08			06:26			06:38		18:54 (AG05)	06:06			05:58
	17:34	14	08:15 (AG09)	18:10			18:40			20:10	40	19:34 (AG05)	20:39			20:56
24	07:40		08:00 (AG09)	07:07			06:24			06:37		18:53 (AG05)	06:05			05:59
	17:35	20	17:11 (AG03)	18:11			18:41			20:11	40	19:33 (AG05)	20:40			20:57
25	07:39		07:59 (AG09)	07:06			06:23			06:35		18:54 (AG05)	06:04			05:59
	17:36	24	17:12 (AG03)	18:12			18:42			20:12	38	19:32 (AG05)	20:41			20:57
26	07:39		07:59 (AG09)	07:04			06:21			06:34		18:55 (AG05)	06:04			05:59
	17:37	27	17:14 (AG03)	18:13			18:43			20:13	36	19:31 (AG05)	20:42			20:57
27	07:38		07:58 (AG09)	07:03			06:19			06:33		18:55 (AG05)	06:03			06:00
	17:39	30	17:15 (AG03)	18:15			18:44			20:14	35	19:30 (AG05)	20:42			20:57
28	07:37		07:57 (AG09)	07:01			06:18			06:31		18:56 (AG05)	06:03			06:00
	17:40	33	17:16 (AG03)	18:16			18:45			20:15	33	19:29 (AG05)	20:43			20:57
29	07:37		07:56 (AG09)				07:16			06:30		18:58 (AG05)	06:02			06:00
	17:41	36	17:17 (AG03)				19:46			20:16	30	19:28 (AG05)	20:44			20:57
30	07:36		07:55 (AG09)				07:15			06:29		18:59 (AG05)	06:01			06:01
	17:42	38	17:18 (AG03)				19:47			20:17	27	19:26 (AG05)	20:45			20:57
31	07:35		07:54 (AG09)				07:13						06:01			
	17:43	40	17:20 (AG03)				19:48						20:45			
Potential sun hours	302			299			370			397			444			447
Total, worst case		313			266			378			995			58		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F047 - Pascolo cespugliato

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November			December
1	06:01	06:24			06:53		18:56 (AG05)	07:21		18:17 (AG04)	06:53			07:26
	20:57	20:39			19:58	39	19:35 (AG05)	19:10	27	18:44 (AG04)	17:25			17:02
2	06:02	06:25			06:54		18:56 (AG05)	07:22		18:16 (AG04)	06:54		16:41 (AG03)	07:27
	20:57	20:38			19:56	38	19:34 (AG05)	19:08	28	18:44 (AG04)	17:24	6	16:47 (AG03)	17:02
3	06:02	06:26			06:55		18:57 (AG05)	07:23		18:16 (AG04)	06:55		16:38 (AG03)	07:28
	20:57	20:37			19:55	36	19:33 (AG05)	19:06	28	18:44 (AG04)	17:23	11	16:49 (AG03)	17:02
4	06:03	06:27			06:56		18:58 (AG05)	07:24		18:16 (AG04)	06:56		07:30 (AG09)	07:29
	20:56	20:36			19:53	33	19:31 (AG05)	19:05	26	18:42 (AG04)	17:22	25	16:51 (AG03)	17:02
5	06:03	06:28			06:56		18:59 (AG05)	07:25		18:16 (AG04)	06:57		07:28 (AG09)	07:30
	20:56	20:35			19:52	31	19:30 (AG05)	19:03	25	18:41 (AG04)	17:21	32	16:52 (AG03)	17:02
6	06:04	06:29			06:57		19:00 (AG05)	07:25		18:16 (AG04)	06:58		07:28 (AG09)	07:31
	20:56	20:34			19:50	27	19:27 (AG05)	19:02	23	18:39 (AG04)	17:19	36	16:53 (AG03)	17:02
7	06:04	06:29			06:58		19:02 (AG05)	07:26		18:17 (AG04)	06:59		07:26 (AG09)	07:32
	20:56	20:33			19:49	22	19:24 (AG05)	19:00	21	18:38 (AG04)	17:18	39	16:54 (AG03)	17:01
8	06:05	06:30			06:59		19:04 (AG05)	07:27		18:17 (AG04)	07:01		07:25 (AG09)	07:33
	20:55	20:31			19:47	17	19:21 (AG05)	18:58	19	18:36 (AG04)	17:17	42	16:54 (AG03)	17:01
9	06:06	06:31		19:18 (AG05)	07:00		19:09 (AG05)	07:28		18:19 (AG04)	07:02		07:25 (AG09)	07:33
	20:55	20:30	7	19:25 (AG05)	19:45	7	19:16 (AG05)	18:57	15	18:34 (AG04)	17:16	42	16:53 (AG03)	17:01
10	06:06	06:32		19:13 (AG05)	07:01			07:29		18:20 (AG04)	07:03		07:24 (AG09)	07:34
	20:55	20:29	15	19:28 (AG05)	19:44			18:55	13	18:33 (AG04)	17:15	42	16:52 (AG03)	17:01
11	06:07	06:33		19:10 (AG05)	07:02			07:30		18:23 (AG04)	07:04		07:26 (AG09)	07:35
	20:54	20:28	21	19:31 (AG05)	19:42			18:54	8	18:31 (AG04)	17:14	39	16:51 (AG03)	17:02
12	06:08	06:34		19:08 (AG05)	07:03			07:31			07:05		07:27 (AG09)	07:36
	20:54	20:26	25	19:33 (AG05)	19:40			18:52			17:14	37	16:50 (AG03)	17:02
13	06:08	06:35		19:07 (AG05)	07:04			07:32			07:06		07:28 (AG09)	07:37
	20:53	20:25	27	19:34 (AG05)	19:39			18:51			17:13	36	16:49 (AG03)	17:02
14	06:09	06:36		19:05 (AG05)	07:05			07:33			07:07		07:29 (AG09)	07:37
	20:53	20:24	31	19:36 (AG05)	19:37			18:49			17:12	32	16:48 (AG03)	17:02
15	06:10	06:37		19:04 (AG05)	07:06			07:34			07:08		07:31 (AG09)	07:38
	20:52	20:23	33	19:37 (AG05)	19:36			18:48			17:11	30	16:48 (AG03)	17:02
16	06:11	06:38		19:03 (AG05)	07:07			07:36			07:10		07:32 (AG09)	07:39
	20:52	20:21	35	19:38 (AG05)	19:34			18:46			17:10	27	16:47 (AG03)	17:03
17	06:11	06:39		19:02 (AG05)	07:07			07:37			07:11		07:33 (AG09)	07:39
	20:51	20:20	36	19:38 (AG05)	19:32			18:45			17:09	24	16:46 (AG03)	17:03
18	06:12	06:40		19:01 (AG05)	07:08			07:38			07:12		07:34 (AG09)	07:40
	20:51	20:19	38	19:39 (AG05)	19:31			18:43			17:09	20	16:45 (AG03)	17:03
19	06:13	06:41		18:59 (AG05)	07:09			07:39			07:13		07:35 (AG09)	07:41
	20:50	20:17	40	19:39 (AG05)	19:29			18:42			17:08	14	07:49 (AG09)	17:04
20	06:14	06:42		18:58 (AG05)	07:10			07:40			07:14		07:36 (AG09)	07:41
	20:49	20:16	41	19:39 (AG05)	19:27			18:41			17:07	13	07:49 (AG09)	17:04
21	06:14	06:43		18:58 (AG05)	07:11			07:41			07:15		07:38 (AG09)	07:42
	20:49	20:14	41	19:39 (AG05)	19:26			18:39			17:07	11	07:49 (AG09)	17:04
22	06:15	06:43		18:57 (AG05)	07:12			07:42			07:16		07:39 (AG09)	07:42
	20:48	20:13	42	19:39 (AG05)	19:24			18:38			17:06	9	07:48 (AG09)	17:05
23	06:16	06:44		18:57 (AG05)	07:13			07:43			07:17		07:40 (AG09)	07:43
	20:47	20:12	43	19:40 (AG05)	19:23			18:36			17:06	8	07:48 (AG09)	17:05
24	06:17	06:45		18:56 (AG05)	07:14		18:28 (AG04)	07:44			07:19		07:41 (AG09)	07:43
	20:46	20:10	44	19:40 (AG05)	19:21	11	18:39 (AG04)	18:35			17:05	6	07:47 (AG09)	17:06
25	06:18	06:46		18:56 (AG05)	07:15		18:24 (AG04)	06:45			07:20		07:42 (AG09)	07:44
	20:46	20:09	43	19:39 (AG05)	19:19	16	18:40 (AG04)	17:34			17:05	3	07:45 (AG09)	17:07
26	06:19	06:47		18:56 (AG05)	07:16		18:22 (AG04)	06:46			07:21		07:43 (AG09)	07:44
	20:45	20:07	43	19:39 (AG05)	19:18	20	18:42 (AG04)	17:32			17:04	1	07:44 (AG09)	17:07
27	06:20	06:48		18:56 (AG05)	07:17		18:20 (AG04)	06:47			07:22			07:45
	20:44	20:06	43	19:39 (AG05)	19:16	23	18:43 (AG04)	17:31			17:04			17:08
28	06:20	06:49		18:55 (AG05)	07:18		18:19 (AG04)	06:48			07:23			07:45
	20:43	20:04	43	19:38 (AG05)	19:14	25	18:44 (AG04)	17:30			17:03			17:08
29	06:21	06:50		18:55 (AG05)	07:19		18:18 (AG04)	06:49			07:24			07:45
	20:42	20:03	42	19:37 (AG05)	19:13	26	18:44 (AG04)	17:29			17:03			17:09
30	06:22	06:51		18:55 (AG05)	07:20		18:17 (AG04)	06:50			07:25			07:45
	20:41	20:01	41	19:36 (AG05)	19:11	27	18:44 (AG04)	17:27			17:03			17:10
31	06:23	06:52		18:55 (AG05)				06:52						07:46
	20:40	20:00	41	19:36 (AG05)				17:26						17:11
Potential sun hours	454	425			374			347			301			293
Total, worst case			815			398			233			585		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F048 - A2 - F3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January			February			March			April			May			June		
1	07:46			07:34		17:02 (AG03)	07:00			07:11		18:49 (AG04)	06:28		19:31 (AG05)	06:01		19:10 (AG05)
	17:12			17:45	19	17:21 (AG03)	18:17			19:49	9	18:58 (AG04)	20:18	15	19:46 (AG05)	20:46	57	20:07 (AG05)
2	07:46			07:33		17:03 (AG03)	06:58			07:10			06:26		19:26 (AG05)	06:00		19:10 (AG05)
	17:13			17:46	20	17:23 (AG03)	18:18			19:50			20:19	23	19:49 (AG05)	20:47	57	20:07 (AG05)
3	07:46			07:32		17:03 (AG03)	06:57			07:08			06:25		19:24 (AG05)	06:00		19:11 (AG05)
	17:13			17:47	21	17:24 (AG03)	18:19			19:51			20:20	27	19:51 (AG05)	20:48	57	20:08 (AG05)
4	07:46			07:31		17:03 (AG03)	06:56			07:07			06:24		19:22 (AG05)	05:59		19:11 (AG05)
	17:14			17:48	23	17:26 (AG03)	18:20			19:52			20:21	31	19:53 (AG05)	20:48	56	20:07 (AG05)
5	07:46			07:30		17:03 (AG03)	06:54			07:05			06:23		19:20 (AG05)	05:59		19:11 (AG05)
	17:15			17:49	23	17:26 (AG03)	18:21			19:53			20:22	35	19:55 (AG05)	20:49	57	20:08 (AG05)
6	07:46			07:29		07:48 (AG09)	06:52			07:04			06:22		19:19 (AG05)	05:59		19:12 (AG05)
	17:16			17:51	24	17:25 (AG03)	18:22			19:54			20:23	38	19:57 (AG05)	20:50	56	20:08 (AG05)
7	07:46			07:28		07:47 (AG09)	06:51			07:02			06:21		19:17 (AG05)	05:58		19:12 (AG05)
	17:17			17:52	27	17:25 (AG03)	18:23			19:55			20:24	41	19:58 (AG05)	20:50	56	20:08 (AG05)
8	07:46			07:27		07:46 (AG09)	06:49			07:00			06:19		19:16 (AG05)	05:58		19:12 (AG05)
	17:18			17:53	27	17:24 (AG03)	18:24			19:56			20:25	43	19:59 (AG05)	20:51	56	20:08 (AG05)
9	07:46			07:26		07:45 (AG09)	06:48			06:59			06:18		19:15 (AG05)	05:58		19:12 (AG05)
	17:19			17:54	28	17:24 (AG03)	18:25			19:56			20:26	45	20:00 (AG05)	20:51	56	20:08 (AG05)
10	07:46			07:25		07:44 (AG09)	06:46			06:57			06:17		19:14 (AG05)	05:58		19:12 (AG05)
	17:20			17:55	28	17:23 (AG03)	18:26			19:57			20:27	47	20:01 (AG05)	20:52	56	20:08 (AG05)
11	07:46			07:24		07:43 (AG09)	06:45		17:59 (AG04)	06:56			06:16		19:14 (AG05)	05:58		19:13 (AG05)
	17:21			17:56	26	17:21 (AG03)	18:27	2	18:01 (AG04)	19:58			20:28	47	20:01 (AG05)	20:52	55	20:08 (AG05)
12	07:46			07:23		07:42 (AG09)	06:43		17:53 (AG04)	06:54			06:15		19:13 (AG05)	05:58		19:13 (AG05)
	17:22			17:58	23	17:19 (AG03)	18:28	14	18:07 (AG04)	19:59			20:29	49	20:02 (AG05)	20:53	56	20:09 (AG05)
13	07:45			07:21		07:40 (AG09)	06:42		17:50 (AG04)	06:53			06:14		19:12 (AG05)	05:58		19:13 (AG05)
	17:23			17:59	16	07:56 (AG09)	18:29	19	18:09 (AG04)	20:00			20:30	51	20:03 (AG05)	20:53	56	20:09 (AG05)
14	07:45			07:20		07:39 (AG09)	06:40		17:47 (AG04)	06:51			06:13		19:11 (AG05)	05:58		19:14 (AG05)
	17:24			18:00	17	07:56 (AG09)	18:30	22	18:09 (AG04)	20:01			20:31	52	20:03 (AG05)	20:54	55	20:09 (AG05)
15	07:45			07:19		07:38 (AG09)	06:39		17:46 (AG04)	06:50			06:12		19:11 (AG05)	05:57		19:14 (AG05)
	17:25			18:01	18	07:56 (AG09)	18:32	25	18:11 (AG04)	20:02			20:32	52	20:03 (AG05)	20:54	55	20:09 (AG05)
16	07:44			07:18		07:37 (AG09)	06:37		17:44 (AG04)	06:48			06:11		19:10 (AG05)	05:58		19:14 (AG05)
	17:26			18:02	19	07:56 (AG09)	18:33	28	18:12 (AG04)	20:03			20:33	54	20:04 (AG05)	20:55	55	20:09 (AG05)
17	07:44			07:16		07:35 (AG09)	06:35		17:44 (AG04)	06:47			06:11		19:10 (AG05)	05:58		19:14 (AG05)
	17:27			18:03	20	07:55 (AG09)	18:34	29	18:13 (AG04)	20:04			20:34	54	20:04 (AG05)	20:55	55	20:09 (AG05)
18	07:43			07:15		07:36 (AG09)	06:34		17:42 (AG04)	06:45			06:10		19:10 (AG05)	05:58		19:14 (AG05)
	17:28			18:04	18	07:54 (AG09)	18:35	32	18:14 (AG04)	20:05			20:35	55	20:05 (AG05)	20:55	55	20:09 (AG05)
19	07:43			07:14		07:37 (AG09)	06:32		17:41 (AG04)	06:44			06:09		19:10 (AG05)	05:58		19:15 (AG05)
	17:29			18:06	16	07:53 (AG09)	18:36	33	18:14 (AG04)	20:06			20:36	55	20:05 (AG05)	20:56	54	20:09 (AG05)
20	07:43			07:13		07:38 (AG09)	06:31		17:41 (AG04)	06:42			06:08		19:09 (AG05)	05:58		19:16 (AG05)
	17:31			18:07	13	07:51 (AG09)	18:37	33	18:14 (AG04)	20:07			20:36	56	20:05 (AG05)	20:56	54	20:10 (AG05)
21	07:42			07:11		07:41 (AG09)	06:29		17:40 (AG04)	06:41			06:07		19:09 (AG05)	05:58		19:16 (AG05)
	17:32			18:08	7	07:48 (AG09)	18:38	34	18:14 (AG04)	20:08			20:37	56	20:05 (AG05)	20:56	54	20:10 (AG05)
22	07:41			07:10			06:27		17:41 (AG04)	06:40			06:06		19:10 (AG05)	05:58		19:16 (AG05)
	17:33			18:09			18:39	33	18:14 (AG04)	20:09			20:38	56	20:06 (AG05)	20:56	54	20:10 (AG05)
23	07:41			07:08			06:26		17:40 (AG04)	06:38			06:06		19:09 (AG05)	05:58		19:16 (AG05)
	17:34			18:10			18:40	33	18:13 (AG04)	20:10			20:39	57	20:06 (AG05)	20:56	54	20:10 (AG05)
24	07:40			07:07			06:24		17:40 (AG04)	06:37			06:05		19:09 (AG05)	05:59		19:16 (AG05)
	17:35			18:11			18:41	32	18:12 (AG04)	20:11			20:40	57	20:06 (AG05)	20:57	55	20:11 (AG05)
25	07:40		17:09 (AG03)	07:06			06:23		17:40 (AG04)	06:35			06:04		19:10 (AG05)	05:59		19:16 (AG05)
	17:36	3	17:12 (AG03)	18:12			18:42	32	18:12 (AG04)	20:12			20:41	57	20:07 (AG05)	20:57	55	20:11 (AG05)
26	07:39		17:07 (AG03)	07:04			06:21		17:40 (AG04)	06:34			06:04		19:09 (AG05)	05:59		19:16 (AG05)
	17:37	7	17:14 (AG03)	18:13			18:43	31	18:11 (AG04)	20:13			20:42	57	20:06 (AG05)	20:57	55	20:11 (AG05)
27	07:38		17:06 (AG03)	07:03			06:19		17:41 (AG04)	06:33			06:03		19:10 (AG05)	06:00		19:17 (AG05)
	17:39	9	17:15 (AG03)	18:15			18:44	28	18:09 (AG04)	20:14			20:42	57	20:07 (AG05)	20:57	55	20:12 (AG05)
28	07:37		17:04 (AG03)	07:01			06:18		17:42 (AG04)	06:32			06:03		19:09 (AG05)	06:00		19:17 (AG05)
	17:40	12	17:16 (AG03)	18:16			18:45	27	18:09 (AG04)	20:15			20:43	58	20:07 (AG05)	20:57	55	20:12 (AG05)
29	07:37		17:03 (AG03)				07:16		18:43 (AG04)	06:30			06:02		19:10 (AG05)	06:00		19:17 (AG05)
	17:41	14	17:17 (AG03)				19:46	24	19:07 (AG04)	20:16			20:44	57	20:07 (AG05)	20:57	55	20:12 (AG05)
30	07:36		17:03 (AG03)				07:15		18:45 (AG04)	06:29			06:01		19:10 (AG05)	06:01		19:17 (AG05)
	17:42	15	17:18 (AG03)				19:47	20	19:05 (AG04)	20:17			20:45	57	20:07 (AG05)	20:57	56	20:13 (AG05)
31	07:35		17:02 (AG03)				07:13		18:46 (AG04)				06:01		19:10 (AG05)			
	17:43	18	17:20 (AG03)				19:48	16	19:02 (AG04)				20:45	57	20:07 (AG05)			
Potential sun hours	302			299			370			397			444			447		
Total, worst case		78			433			547			9			1496			1662	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F048 - A2 - F3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December
1	06:01		19:17 (AG05)	06:24		19:23 (AG05)	06:53			07:21		18:30 (AG04)	06:53		07:14 (AG09)	07:26
	20:57	55	20:12 (AG05)	20:39	48	20:11 (AG05)	19:58			19:10	17	18:47 (AG04)	17:25	28	16:53 (AG03)	17:02
2	06:02		19:18 (AG05)	06:25		19:23 (AG05)	06:54			07:22		18:34 (AG04)	06:54		07:15 (AG09)	07:27
	20:57	55	20:13 (AG05)	20:38	48	20:11 (AG05)	19:56			19:08	9	18:43 (AG04)	17:24	27	16:53 (AG03)	17:02
3	06:02		19:17 (AG05)	06:26		19:24 (AG05)	06:55			07:23			06:55		07:16 (AG09)	07:28
	20:57	56	20:13 (AG05)	20:37	46	20:10 (AG05)	19:55			19:06			17:23	27	16:54 (AG03)	17:02
4	06:03		19:18 (AG05)	06:27		19:25 (AG05)	06:56			07:24			06:56		07:17 (AG09)	07:29
	20:56	56	20:14 (AG05)	20:36	44	20:09 (AG05)	19:53			19:05			17:22	25	16:54 (AG03)	17:02
5	06:03		19:17 (AG05)	06:28		19:26 (AG05)	06:56			07:25			06:57		07:18 (AG09)	07:30
	20:56	56	20:13 (AG05)	20:35	42	20:08 (AG05)	19:52			19:03			17:21	24	16:55 (AG03)	17:02
6	06:04		19:18 (AG05)	06:29		19:27 (AG05)	06:57			07:25			06:58		16:33 (AG03)	07:31
	20:56	56	20:14 (AG05)	20:34	40	20:07 (AG05)	19:50			19:02			17:19	23	16:56 (AG03)	17:02
7	06:05		19:17 (AG05)	06:30		19:29 (AG05)	06:58			07:26			06:59		16:33 (AG03)	07:32
	20:56	57	20:14 (AG05)	20:33	37	20:06 (AG05)	19:49			19:00			17:18	22	16:55 (AG03)	17:01
8	06:05		19:18 (AG05)	06:30		19:30 (AG05)	06:59			07:27			07:01		16:33 (AG03)	07:33
	20:55	56	20:14 (AG05)	20:31	34	20:04 (AG05)	19:47			18:58			17:17	21	16:54 (AG03)	17:01
9	06:06		19:18 (AG05)	06:31		19:32 (AG05)	07:00			07:28			07:02		16:33 (AG03)	07:33
	20:55	57	20:15 (AG05)	20:30	31	20:03 (AG05)	19:45			18:57			17:16	20	16:53 (AG03)	17:01
10	06:06		19:18 (AG05)	06:32		19:33 (AG05)	07:01			07:29			07:03		16:33 (AG03)	07:34
	20:55	57	20:15 (AG05)	20:29	26	19:59 (AG05)	19:44			18:55			17:15	19	16:52 (AG03)	17:01
11	06:07		19:18 (AG05)	06:33		19:36 (AG05)	07:02		18:43 (AG04)	07:30			07:04		16:34 (AG03)	07:35
	20:54	57	20:15 (AG05)	20:28	21	19:57 (AG05)	19:42	7	18:50 (AG04)	18:54			17:14	17	16:51 (AG03)	17:02
12	06:08		19:19 (AG05)	06:34		19:40 (AG05)	07:03		18:39 (AG04)	07:31			07:05		16:35 (AG03)	07:36
	20:54	57	20:16 (AG05)	20:26	13	19:53 (AG05)	19:41	15	18:54 (AG04)	18:52			17:14	15	16:50 (AG03)	17:02
13	06:08		19:18 (AG05)	06:35			07:04		18:36 (AG04)	07:32			07:06		16:35 (AG03)	07:37
	20:53	57	20:15 (AG05)	20:25			19:39	20	18:56 (AG04)	18:51			17:13	14	16:49 (AG03)	17:02
14	06:09		19:18 (AG05)	06:36			07:05		18:34 (AG04)	07:33			07:07		16:36 (AG03)	07:37
	20:53	58	20:16 (AG05)	20:24			19:37	24	18:58 (AG04)	18:49			17:12	12	16:48 (AG03)	17:02
15	06:10		19:19 (AG05)	06:37			07:06		18:31 (AG04)	07:34			07:09		16:39 (AG03)	07:38
	20:52	57	20:16 (AG05)	20:23			19:36	27	18:58 (AG04)	18:48			17:11	9	16:48 (AG03)	17:02
16	06:11		19:18 (AG05)	06:38			07:07		18:30 (AG04)	07:36			07:10		16:40 (AG03)	07:39
	20:52	57	20:15 (AG05)	20:21			19:34	29	18:59 (AG04)	18:46			17:10	7	16:47 (AG03)	17:03
17	06:11		19:19 (AG05)	06:39			07:08		18:29 (AG04)	07:37			07:11		16:43 (AG03)	07:39
	20:51	57	20:16 (AG05)	20:20			19:32	30	18:59 (AG04)	18:45			17:09	3	16:46 (AG03)	17:03
18	06:12		19:19 (AG05)	06:40			07:08		18:28 (AG04)	07:38			07:12			07:40
	20:51	57	20:16 (AG05)	20:19			19:31	31	18:59 (AG04)	18:43			17:09			17:03
19	06:13		19:19 (AG05)	06:41			07:09		18:27 (AG04)	07:39			07:13			07:41
	20:50	57	20:16 (AG05)	20:17			19:29	33	19:00 (AG04)	18:42			17:08			17:04
20	06:14		19:19 (AG05)	06:42			07:10		18:27 (AG04)	07:40			07:14			07:41
	20:49	56	20:15 (AG05)	20:16			19:27	33	19:00 (AG04)	18:41			17:07			17:04
21	06:15		19:19 (AG05)	06:43			07:11		18:26 (AG04)	07:41		08:11 (AG09)	07:15			07:42
	20:49	57	20:16 (AG05)	20:14			19:26	34	19:00 (AG04)	18:39	9	08:20 (AG09)	17:07			17:04
22	06:15		19:19 (AG05)	06:43			07:12		18:26 (AG04)	07:42		08:08 (AG09)	07:16			07:42
	20:48	57	20:16 (AG05)	20:13			19:24	33	18:59 (AG04)	18:38	14	08:22 (AG09)	17:06			17:05
23	06:16		19:20 (AG05)	06:44			07:13		18:25 (AG04)	07:43		08:06 (AG09)	07:17			07:43
	20:47	56	20:16 (AG05)	20:12			19:23	34	18:59 (AG04)	18:36	17	08:23 (AG09)	17:06			17:05
24	06:17		19:20 (AG05)	06:45			07:14		18:25 (AG04)	07:44		08:05 (AG09)	07:19			07:43
	20:46	56	20:16 (AG05)	20:10			19:21	33	18:58 (AG04)	18:35	19	08:24 (AG09)	17:05			17:06
25	06:18		19:21 (AG05)	06:46			07:15		18:25 (AG04)	06:45		07:05 (AG09)	07:20			07:44
	20:46	55	20:16 (AG05)	20:09			19:19	32	18:57 (AG04)	17:34	20	07:25 (AG09)	17:05			17:07
26	06:19		19:20 (AG05)	06:47			07:16		18:25 (AG04)	06:46		07:07 (AG09)	07:21			07:44
	20:45	54	20:14 (AG05)	20:07			19:18	30	18:55 (AG04)	17:32	19	07:26 (AG09)	17:04			17:07
27	06:20		19:21 (AG05)	06:48			07:17		18:25 (AG04)	06:47		07:08 (AG09)	07:22			07:45
	20:44	53	20:14 (AG05)	20:06			19:16	29	18:54 (AG04)	17:31	18	07:26 (AG09)	17:04			17:08
28	06:20		19:21 (AG05)	06:49			07:18		18:26 (AG04)	06:48		07:09 (AG09)	07:23			07:45
	20:43	53	20:14 (AG05)	20:04			19:14	26	18:52 (AG04)	17:30	17	07:26 (AG09)	17:03			17:09
29	06:21		19:22 (AG05)	06:50			07:19		18:27 (AG04)	06:49		07:10 (AG09)	07:24			07:45
	20:42	52	20:14 (AG05)	20:03			19:13	23	18:50 (AG04)	17:29	16	07:26 (AG09)	17:03			17:09
30	06:22		19:22 (AG05)	06:51			07:20		18:28 (AG04)	06:50		07:11 (AG09)	07:25			07:45
	20:41	51	20:13 (AG05)	20:01			19:11	21	18:49 (AG04)	17:27	23	16:48 (AG03)	17:03			17:10
31	06:23		19:23 (AG05)	06:52						06:52		07:12 (AG09)				07:46
	20:40	50	20:13 (AG05)	20:00						17:26	26	16:50 (AG03)				17:11
Potential sun hours	454			425			374			347			301			293
Total, worst case		1725			430			544			224			313		

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F057 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April			May	June
1	07:46	07:34			07:00		17:30 (AG02)	07:11		19:13 (AG03)	06:28	06:01
	17:12	17:45			18:17	22	17:52 (AG02)	19:49	15	19:28 (AG03)	20:18	20:46
2	07:46	07:33			06:58		17:30 (AG02)	07:10		19:10 (AG03)	06:26	06:00
	17:13	17:46			18:18	21	17:51 (AG02)	19:50	19	19:29 (AG03)	20:19	20:47
3	07:46	07:32			06:57		17:32 (AG02)	07:08		19:08 (AG03)	06:25	06:00
	17:13	17:47			18:19	18	17:50 (AG02)	19:51	21	19:29 (AG03)	20:20	20:48
4	07:46	07:31			06:56		17:33 (AG02)	07:07		07:25 (AG09)	06:24	05:59
	17:14	17:48			18:20	15	17:48 (AG02)	19:52	25	19:31 (AG03)	20:21	20:48
5	07:46	07:30			06:54		17:34 (AG02)	07:05		07:23 (AG09)	06:23	05:59
	17:15	17:49			18:21	10	17:44 (AG02)	19:53	29	19:31 (AG03)	20:22	20:49
6	07:46	07:29			06:53			07:04		07:22 (AG09)	06:22	05:59
	17:16	17:51			18:22			19:54	34	19:33 (AG03)	20:23	20:50
7	07:46	07:28			06:51			07:02		07:20 (AG09)	06:21	05:59
	17:17	17:52			18:23			19:55	36	19:33 (AG03)	20:24	20:50
8	07:46	07:27			06:49			07:00		07:19 (AG09)	06:19	05:58
	17:18	17:53			18:24			19:56	40	19:35 (AG03)	20:25	20:51
9	07:46	07:26			06:48			06:59		07:17 (AG09)	06:18	05:58
	17:19	17:54			18:25			19:57	41	19:34 (AG03)	20:26	20:51
10	07:46	07:25			06:46			06:57		07:15 (AG09)	06:17	05:58
	17:20	17:55			18:26			19:57	43	19:34 (AG03)	20:27	20:52
11	07:46	07:24			06:45			06:56		07:14 (AG09)	06:16	05:58
	17:21	17:56			18:27			19:58	44	19:34 (AG03)	20:28	20:52
12	07:46	07:23			06:43			06:54		07:12 (AG09)	06:15	05:58
	17:22	17:58			18:28			19:59	44	19:33 (AG03)	20:29	20:53
13	07:45	07:21			06:42			06:53		07:11 (AG09)	06:14	05:58
	17:23	17:59			18:29			20:00	44	19:33 (AG03)	20:30	20:53
14	07:45	07:20			06:40			06:51		07:10 (AG09)	06:13	05:58
	17:24	18:00			18:31			20:01	40	19:31 (AG03)	20:31	20:54
15	07:45	07:19			06:39			06:50		07:13 (AG09)	06:12	05:58
	17:25	18:01			18:32			20:02	34	19:31 (AG03)	20:32	20:54
16	07:44	07:18			06:37			06:48		19:04 (AG03)	06:11	05:58
	17:26	18:02			18:33			20:03	26	19:30 (AG03)	20:33	20:55
17	07:44	07:16			06:35			06:47		19:04 (AG03)	06:11	05:58
	17:27	18:03			18:34			20:04	24	19:28 (AG03)	20:34	20:55
18	07:43	07:15			06:34			06:45		19:06 (AG03)	06:10	05:58
	17:28	18:05			18:35			20:05	21	19:27 (AG03)	20:35	20:55
19	07:43	07:14		17:37 (AG02)	06:32			06:44		19:07 (AG03)	06:09	05:58
	17:29	18:06	7	17:44 (AG02)	18:36			20:06	17	19:24 (AG03)	20:36	20:56
20	07:43	07:13		17:34 (AG02)	06:31			06:42		19:10 (AG03)	06:08	05:58
	17:31	18:07	11	17:45 (AG02)	18:37			20:07	12	19:22 (AG03)	20:36	20:56
21	07:42	07:11		17:33 (AG02)	06:29			06:41			06:07	05:58
	17:32	18:08	13	17:46 (AG02)	18:38			20:08			20:37	20:56
22	07:41	07:10		17:32 (AG02)	06:27			06:40			06:06	05:58
	17:33	18:09	16	17:48 (AG02)	18:39			20:09			20:38	20:56
23	07:41	07:08		17:31 (AG02)	06:26			06:38			06:06	05:59
	17:34	18:10	18	17:49 (AG02)	18:40			20:10			20:39	20:56
24	07:40	07:07		17:30 (AG02)	06:24			06:37			06:05	05:59
	17:35	18:11	20	17:50 (AG02)	18:41			20:11			20:40	20:57
25	07:40	07:06		17:29 (AG02)	06:23			06:36			06:04	05:59
	17:36	18:12	22	17:51 (AG02)	18:42			20:12			20:41	20:57
26	07:39	07:04		17:29 (AG02)	06:21			06:34			06:04	05:59
	17:38	18:13	23	17:52 (AG02)	18:43			20:13			20:42	20:57
27	07:38	07:03		17:29 (AG02)	06:19			06:33			06:03	06:00
	17:39	18:15	23	17:52 (AG02)	18:44			20:14			20:42	20:57
28	07:37	07:01		17:29 (AG02)	06:18			06:32			06:03	06:00
	17:40	18:16	23	17:52 (AG02)	18:45			20:15			20:43	20:57
29	07:37				07:16			06:30			06:02	06:01
	17:41				19:46			20:16			20:44	20:57
30	07:36				07:15			06:29			06:02	06:01
	17:42				19:47			20:17			20:45	20:57
31	07:35				07:13		19:16 (AG03)				06:01	
	17:43				19:48	10	19:26 (AG03)				20:45	
Potential sun hours	302	299			370			397			444	447
Total, worst case			176			96			609			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F057 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September			October			November	December
1	06:01	06:24			06:53		07:13 (AG09)	07:21			06:53	07:26
	20:57	20:39			19:58	44	19:33 (AG03)	19:10			17:25	17:02
2	06:02	06:25			06:54		07:14 (AG09)	07:22			06:54	07:27
	20:57	20:38			19:56	43	19:33 (AG03)	19:08			17:24	17:02
3	06:02	06:26			06:55		07:15 (AG09)	07:23			06:55	07:28
	20:57	20:37			19:55	41	19:32 (AG03)	19:06			17:23	17:02
4	06:03	06:27			06:56		07:16 (AG09)	07:24			06:56	07:29
	20:56	20:36			19:53	40	19:32 (AG03)	19:05			17:22	17:02
5	06:03	06:28			06:56		07:17 (AG09)	07:25			06:57	07:30
	20:56	20:35			19:52	37	19:30 (AG03)	19:03			17:21	17:02
6	06:04	06:29			06:57		07:17 (AG09)	07:26			06:58	07:31
	20:56	20:34			19:50	34	19:28 (AG03)	19:02			17:19	17:02
7	06:05	06:30			06:58		07:18 (AG09)	07:26			06:59	07:32
	20:56	20:33			19:49	31	19:27 (AG03)	19:00			17:18	17:01
8	06:05	06:30			06:59		07:19 (AG09)	07:27		18:12 (AG02)	07:01	07:33
	20:55	20:31			19:47	25	19:25 (AG03)	18:58	6	18:18 (AG02)	17:17	17:01
9	06:06	06:31			07:00		19:02 (AG03)	07:28		18:08 (AG02)	07:02	07:33
	20:55	20:30			19:45	22	19:24 (AG03)	18:57	13	18:21 (AG02)	17:16	17:01
10	06:06	06:32			07:01		19:03 (AG03)	07:29		18:06 (AG02)	07:03	07:34
	20:55	20:29			19:44	19	19:22 (AG03)	18:55	17	18:23 (AG02)	17:15	17:02
11	06:07	06:33			07:02		19:05 (AG03)	07:30		18:05 (AG02)	07:04	07:35
	20:54	20:28			19:42	16	19:21 (AG03)	18:54	19	18:24 (AG02)	17:15	17:02
12	06:08	06:34			07:03		19:08 (AG03)	07:31		18:03 (AG02)	07:05	07:36
	20:54	20:26			19:41	11	19:19 (AG03)	18:52	21	18:24 (AG02)	17:14	17:02
13	06:08	06:35			07:04			07:32		18:02 (AG02)	07:06	07:37
	20:53	20:25			19:39			18:51	23	18:25 (AG02)	17:13	17:02
14	06:09	06:36			07:05			07:33		18:02 (AG02)	07:07	07:37
	20:53	20:24			19:37			18:49	23	18:25 (AG02)	17:12	17:02
15	06:10	06:37			07:06			07:35		18:01 (AG02)	07:09	07:38
	20:52	20:23			19:36			18:48	24	18:25 (AG02)	17:11	17:02
16	06:11	06:38			07:07			07:36		18:01 (AG02)	07:10	07:39
	20:52	20:21			19:34			18:46	22	18:23 (AG02)	17:10	17:03
17	06:11	06:39			07:08			07:37		18:02 (AG02)	07:11	07:39
	20:51	20:20			19:32			18:45	21	18:23 (AG02)	17:10	17:03
18	06:12	06:40			07:08			07:38		18:02 (AG02)	07:12	07:40
	20:51	20:19			19:31			18:43	19	18:21 (AG02)	17:09	17:03
19	06:13	06:41			07:09			07:39		18:02 (AG02)	07:13	07:41
	20:50	20:17			19:29			18:42	18	18:20 (AG02)	17:08	17:04
20	06:14	06:42			07:10			07:40		18:03 (AG02)	07:14	07:41
	20:49	20:16			19:27			18:41	15	18:18 (AG02)	17:07	17:04
21	06:15	06:43			07:11			07:41		18:04 (AG02)	07:15	07:42
	20:49	20:14			19:26			18:39	13	18:17 (AG02)	17:07	17:05
22	06:15	06:44		19:19 (AG03)	07:12			07:42		18:05 (AG02)	07:16	07:42
	20:48	20:13	2	19:21 (AG03)	19:24			18:38	10	18:15 (AG02)	17:06	17:05
23	06:16	06:44		19:13 (AG03)	07:13			07:43		18:08 (AG02)	07:17	07:43
	20:47	20:12	13	19:26 (AG03)	19:23			18:37	6	18:14 (AG02)	17:06	17:05
24	06:17	06:45		19:11 (AG03)	07:14			07:44			07:19	07:43
	20:46	20:10	17	19:28 (AG03)	19:21			18:35			17:05	17:06
25	06:18	06:46		19:09 (AG03)	07:15			06:45			07:20	07:44
	20:46	20:09	21	19:30 (AG03)	19:19			17:34			17:05	17:07
26	06:19	06:47		19:07 (AG03)	07:16			06:46			07:21	07:44
	20:45	20:07	24	19:31 (AG03)	19:18			17:33			17:04	17:07
27	06:20	06:48		19:06 (AG03)	07:17			06:47			07:22	07:45
	20:44	20:06	26	19:32 (AG03)	19:16			17:31			17:04	17:08
28	06:20	06:49		07:15 (AG09)	07:18			06:48			07:23	07:45
	20:43	20:04	34	19:33 (AG03)	19:14			17:30			17:03	17:09
29	06:21	06:50		07:11 (AG09)	07:19			06:49			07:24	07:45
	20:42	20:03	40	19:32 (AG03)	19:13			17:29			17:03	17:09
30	06:22	06:51		07:11 (AG09)	07:20			06:50			07:25	07:45
	20:41	20:01	44	19:33 (AG03)	19:11			17:27			17:03	17:10
31	06:23	06:52		07:12 (AG09)				06:52				07:46
	20:40	20:00	44	19:33 (AG03)				17:26				17:11
Potential sun hours	454	425			374			347			301	293
Total, worst case			265			363			270			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F060 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February			March			April			May			June		
1	07:46	07:34				07:00		07:18 (Medio Campidano)	07:11		18:42 (AG08)	06:28			06:01		20:00 (AG03)
	17:12	17:45				18:17	12	07:30 (Medio Campidano)	19:49	44	19:27 (AG02)	20:18			20:46	20	20:20 (AG03)
2	07:46	07:33				06:58		07:17 (Medio Campidano)	07:10		18:42 (AG08)	06:26			06:00		20:01 (AG03)
	17:13	17:46				18:18	12	07:29 (Medio Campidano)	19:50	47	19:29 (AG02)	20:19			20:47	19	20:20 (AG03)
3	07:46	07:32				06:57		07:16 (Medio Campidano)	07:08		18:40 (AG08)	06:25			06:00		20:02 (AG03)
	17:13	17:47				18:19	13	07:29 (Medio Campidano)	19:51	49	19:29 (AG02)	20:20			20:48	18	20:20 (AG03)
4	07:46	07:31				06:55		07:16 (Medio Campidano)	07:07		18:40 (AG08)	06:24			05:59		20:02 (AG03)
	17:14	17:48				18:20	11	07:27 (Medio Campidano)	19:52	51	19:31 (AG02)	20:21			20:48	17	20:19 (AG03)
5	07:46	07:30				06:54		07:18 (Medio Campidano)	07:05		18:39 (AG08)	06:23			05:59		20:03 (AG03)
	17:15	17:49				18:21	5	07:23 (Medio Campidano)	19:53	52	19:31 (AG02)	20:22			20:49	16	20:19 (AG03)
6	07:46	07:29				06:52			07:04		18:39 (AG08)	06:22			05:59		20:03 (AG03)
	17:16	17:51				18:22			19:54	54	19:33 (AG02)	20:23			20:49	16	20:19 (AG03)
7	07:46	07:28				06:51			07:02		18:38 (AG08)	06:21			05:59		20:04 (AG03)
	17:17	17:52				18:23			19:54	55	19:33 (AG02)	20:24			20:50	15	20:19 (AG03)
8	07:46	07:27				06:49			07:00		18:38 (AG08)	06:19			05:58		20:04 (AG03)
	17:18	17:53				18:24			19:55	57	19:35 (AG02)	20:25			20:51	14	20:18 (AG03)
9	07:46	07:26				06:48			06:59		18:37 (AG08)	06:18			05:58		20:05 (AG03)
	17:19	17:54				18:25			19:56	58	19:35 (AG02)	20:26			20:51	13	20:18 (AG03)
10	07:46	07:25				06:46			06:57		18:36 (AG08)	06:17			05:58		20:06 (AG03)
	17:20	17:55				18:26			19:57	58	19:34 (AG02)	20:27			20:52	12	20:18 (AG03)
11	07:46	07:24				06:45			06:56		18:37 (AG08)	06:16			05:58		20:07 (AG03)
	17:21	17:56				18:27			19:58	56	19:33 (AG02)	20:28			20:52	11	20:18 (AG03)
12	07:46	07:23				06:43			06:54		18:36 (AG08)	06:15			05:58		20:07 (AG03)
	17:22	17:58				18:28			19:59	54	19:30 (AG02)	20:29			20:53	10	20:17 (AG03)
13	07:45	07:21				06:42			06:53		18:37 (AG08)	06:14		20:06 (AG03)	05:58		20:08 (AG03)
	17:23	17:59				18:29			20:00	47	19:24 (AG08)	20:30	1	20:07 (AG03)	20:53	9	20:17 (AG03)
14	07:45	07:20				06:40			06:51		18:36 (AG08)	06:13		20:04 (AG03)	05:58		20:09 (AG03)
	17:24	18:00				18:30			20:01	47	19:23 (AG08)	20:31	4	20:08 (AG03)	20:54	8	20:17 (AG03)
15	07:45	07:19				06:39			06:50		18:37 (AG08)	06:12		20:02 (AG03)	05:58		20:10 (AG03)
	17:25	18:01				18:32			20:02	46	19:23 (AG08)	20:32	7	20:09 (AG03)	20:54	6	20:16 (AG03)
16	07:44	07:18				06:37			06:48		18:38 (AG08)	06:11		20:01 (AG03)	05:58		06:19 (AG09)
	17:26	18:02				18:33			20:03	45	19:23 (AG08)	20:33	8	20:09 (AG03)	20:55	7	20:16 (AG03)
17	07:44	07:16				06:35			06:47		18:38 (AG08)	06:11		20:00 (AG03)	05:58		06:19 (AG09)
	17:27	18:03				18:34			20:04	43	19:21 (AG08)	20:34	10	20:10 (AG03)	20:55	5	20:15 (AG03)
18	07:43	07:15				06:34			06:45		18:39 (AG08)	06:10		20:00 (AG03)	05:58		06:19 (AG09)
	17:28	18:05				18:35			20:05	42	19:21 (AG08)	20:35	12	20:12 (AG03)	20:55	4	20:15 (AG03)
19	07:43	07:14				06:32			06:44		18:39 (AG08)	06:09		19:59 (AG03)	05:58		06:19 (AG09)
	17:29	18:06				18:36			20:06	40	19:19 (AG08)	20:35	13	20:12 (AG03)	20:55	2	20:14 (AG03)
20	07:42	07:13				06:31			06:42		18:40 (AG08)	06:08		19:59 (AG03)	05:58		06:20 (AG09)
	17:31	18:07				18:37			20:07	38	19:18 (AG08)	20:36	14	20:13 (AG03)	20:56	2	06:22 (AG09)
21	07:42	07:11				06:29			06:41		18:41 (AG08)	06:07		19:58 (AG03)	05:58		06:20 (AG09)
	17:32	18:08				18:38			20:08	35	19:16 (AG08)	20:37	15	20:13 (AG03)	20:56	2	06:22 (AG09)
22	07:41	07:10				06:27			06:40		18:42 (AG08)	06:06		19:59 (AG03)	05:58		06:20 (AG09)
	17:33	18:09				18:39			20:09	33	19:15 (AG08)	20:38	16	20:15 (AG03)	20:56	2	06:22 (AG09)
23	07:41	07:08		07:27 (Medio Campidano)		06:26			06:38		18:44 (AG08)	06:06		19:58 (AG03)	05:59		06:20 (AG09)
	17:34	18:10	1	07:28 (Medio Campidano)		18:40			20:10	29	19:13 (AG08)	20:39	17	20:15 (AG03)	20:56	2	06:22 (AG09)
24	07:40	07:07		07:26 (Medio Campidano)		06:24			06:37		18:45 (AG08)	06:05		19:58 (AG03)	05:59		06:21 (AG09)
	17:35	18:11	3	07:29 (Medio Campidano)		18:41			20:11	26	19:11 (AG08)	20:40	18	20:16 (AG03)	20:57	4	20:17 (AG03)
25	07:39	07:06		07:24 (Medio Campidano)		06:23		18:01 (AG08)	06:36		18:47 (AG08)	06:04		19:59 (AG03)	05:59		06:21 (AG09)
	17:36	18:12	6	07:30 (Medio Campidano)		18:42	11	18:12 (AG08)	20:12	22	19:09 (AG08)	20:41	18	20:17 (AG03)	20:57	5	20:17 (AG03)
26	07:39	07:04		07:23 (Medio Campidano)		06:21		17:55 (AG08)	06:34		18:51 (AG08)	06:04		19:58 (AG03)	05:59		06:21 (AG09)
	17:38	18:13	8	07:31 (Medio Campidano)		18:43	21	18:16 (AG08)	20:13	15	19:06 (AG08)	20:42	19	20:17 (AG03)	20:57	6	20:18 (AG03)
27	07:38	07:03		07:21 (Medio Campidano)		06:19		17:52 (AG08)	06:33			06:03		19:59 (AG03)	06:00		20:13 (AG03)
	17:39	18:15	9	07:30 (Medio Campidano)		18:44	26	18:18 (AG08)	20:14			20:42	20	20:19 (AG03)	20:57	6	20:19 (AG03)
28	07:37	07:01		07:20 (Medio Campidano)		06:18		17:50 (AG08)	06:32			06:03		19:59 (AG03)	06:00		20:12 (AG03)
	17:40	18:16	11	07:31 (Medio Campidano)		18:45	30	18:20 (AG08)	20:15			20:43	20	20:19 (AG03)	20:57	8	20:20 (AG03)
29	07:36					07:16		18:47 (AG08)	06:30			06:02		20:00 (AG03)	06:01		20:11 (AG03)
	17:41					19:46	35	19:22 (AG08)	20:16			20:44	20	20:20 (AG03)	20:57	9	20:20 (AG03)
30	07:36					07:15		18:46 (AG08)	06:29			06:01		20:00 (AG03)	06:01		20:12 (AG03)
	17:42					19:47	37	19:23 (AG08)	20:17			20:45	20	20:20 (AG03)	20:57	9	20:21 (AG03)
31	07:35					07:13		18:44 (AG08)				06:01		20:00 (AG03)			
	17:43					19:48	40	19:24 (AG08)				20:45	21	20:21 (AG03)			
Potential sun hours	302	299				370			397			444			447		
Total, worst case			38				253			1143			273			277	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F060 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November	December		
1	06:01		20:11 (AG03)	06:24			06:53		18:36 (AG08)	07:21			06:53	07:26		
	20:57	11	20:22 (AG03)	20:39			19:58	56	19:32 (AG02)	19:10			17:25	17:02		
2	06:02		20:11 (AG03)	06:25			06:54		18:35 (AG08)	07:22			06:54	07:27		
	20:57	12	20:23 (AG03)	20:38			19:56	58	19:33 (AG02)	19:08			17:24	17:02		
3	06:02		20:10 (AG03)	06:26			06:55		18:35 (AG08)	07:23			06:55	07:28		
	20:57	13	20:23 (AG03)	20:37			19:55	58	19:33 (AG02)	19:06			17:23	17:02		
4	06:03		20:10 (AG03)	06:27			06:56		18:35 (AG08)	07:24			06:56	07:29		
	20:56	14	20:24 (AG03)	20:36			19:53	57	19:32 (AG02)	19:05			17:22	17:02		
5	06:03		20:10 (AG03)	06:28			06:56		18:35 (AG08)	07:25			06:57	07:30		
	20:56	14	20:24 (AG03)	20:35			19:52	55	19:30 (AG02)	19:03			17:21	17:02		
6	06:04		20:10 (AG03)	06:29			06:57		18:34 (AG08)	07:25			06:58	07:31		
	20:56	15	20:25 (AG03)	20:34			19:50	54	19:28 (AG02)	19:02			17:19	17:02		
7	06:05		20:09 (AG03)	06:30			06:58		18:34 (AG08)	07:26			06:59	07:32		
	20:56	16	20:25 (AG03)	20:33			19:49	53	19:27 (AG02)	19:00			17:18	17:01		
8	06:05		20:09 (AG03)	06:30			06:59		18:34 (AG08)	07:27			07:01	07:32		
	20:55	17	20:26 (AG03)	20:31			19:47	51	19:25 (AG02)	18:58			17:17	17:01		
9	06:06		20:09 (AG03)	06:31			07:00		18:34 (AG08)	07:28		07:51 (Medio Campidano)	07:02	07:33		
	20:55	18	20:27 (AG03)	20:30			19:45	50	19:24 (AG02)	18:57	9	08:00 (Medio Campidano)	17:16	17:01		
10	06:06		20:08 (AG03)	06:32			07:01		18:35 (AG08)	07:29		07:49 (Medio Campidano)	07:03	07:34		
	20:55	19	20:27 (AG03)	20:29			19:44	47	19:22 (AG02)	18:55	13	08:02 (Medio Campidano)	17:15	17:02		
11	06:07		20:09 (AG03)	06:33			07:02		18:35 (AG08)	07:30		07:50 (Medio Campidano)	07:04	07:35		
	20:54	19	20:28 (AG03)	20:28			19:42	45	19:21 (AG02)	18:54	13	08:03 (Medio Campidano)	17:15	17:02		
12	06:08		20:09 (AG03)	06:34			07:03		18:36 (AG08)	07:31		07:51 (Medio Campidano)	07:05	07:36		
	20:54	20	20:29 (AG03)	20:26			19:40	40	19:16 (AG08)	18:52	12	08:03 (Medio Campidano)	17:14	17:02		
13	06:08		20:08 (AG03)	06:35			07:04		18:37 (AG08)	07:32		07:52 (Medio Campidano)	07:06	07:37		16:03 (AG07)
	20:53	20	20:28 (AG03)	20:25			19:39	38	19:15 (AG08)	18:51	11	08:03 (Medio Campidano)	17:13	17:02	6	16:09 (AG07)
14	06:09		20:08 (AG03)	06:36			07:05		18:38 (AG08)	07:33		07:53 (Medio Campidano)	07:07	07:37		16:03 (AG07)
	20:53	21	20:29 (AG03)	20:24			19:37	35	19:13 (AG08)	18:49	10	08:03 (Medio Campidano)	17:12	17:02	8	16:11 (AG07)
15	06:10		20:08 (AG03)	06:37			07:06		18:39 (AG08)	07:34		07:54 (Medio Campidano)	07:08	07:38		16:03 (AG07)
	20:52	21	20:29 (AG03)	20:23			19:36	31	19:10 (AG08)	18:48	9	08:03 (Medio Campidano)	17:11	17:02	9	16:12 (AG07)
16	06:11		20:08 (AG03)	06:38		19:02 (AG08)	07:07		18:41 (AG08)	07:35		07:55 (Medio Campidano)	07:10	07:39		16:03 (AG07)
	20:52	19	20:27 (AG03)	20:21	6	19:08 (AG08)	19:34	27	19:08 (AG08)	18:46	7	08:02 (Medio Campidano)	17:10	17:03	10	16:13 (AG07)
17	06:11		20:08 (AG03)	06:39		18:57 (AG08)	07:08		18:43 (AG08)	07:37		07:56 (Medio Campidano)	07:11	07:39		16:02 (AG07)
	20:51	19	20:27 (AG03)	20:20	16	19:13 (AG08)	19:32	22	19:05 (AG08)	18:45	5	08:01 (Medio Campidano)	17:10	17:03	12	16:14 (AG07)
18	06:12		20:08 (AG03)	06:40		18:54 (AG08)	07:08		18:47 (AG08)	07:38		07:58 (Medio Campidano)	07:12	07:40		16:03 (AG07)
	20:51	19	20:27 (AG03)	20:19	22	19:16 (AG08)	19:31	14	19:01 (AG08)	18:43	3	08:01 (Medio Campidano)	17:09	17:03	12	16:15 (AG07)
19	06:13		20:08 (AG03)	06:41		18:51 (AG08)	07:09			07:39			07:13	07:41		16:03 (AG07)
	20:50	18	20:26 (AG03)	20:17	27	19:18 (AG08)	19:29			18:42			17:08	17:04	12	16:15 (AG07)
20	06:14		20:08 (AG03)	06:42		18:48 (AG08)	07:10			07:40			07:14	07:41		16:03 (AG07)
	20:49	17	20:25 (AG03)	20:16	31	19:19 (AG08)	19:27			18:41			17:07	17:04	13	16:16 (AG07)
21	06:15		20:08 (AG03)	06:43		18:47 (AG08)	07:11			07:41			07:15	07:42		16:03 (AG07)
	20:49	17	20:25 (AG03)	20:14	33	19:20 (AG08)	19:26			18:39			17:07	17:04	13	16:16 (AG07)
22	06:15		20:09 (AG03)	06:43		18:45 (AG08)	07:12			07:42			07:16	07:42		16:04 (AG07)
	20:48	15	20:24 (AG03)	20:13	36	19:21 (AG08)	19:24			18:38			17:06	17:05	13	16:17 (AG07)
23	06:16		20:09 (AG03)	06:44		18:44 (AG08)	07:13			07:43			07:17	07:43		16:04 (AG07)
	20:47	15	20:24 (AG03)	20:11	38	19:22 (AG08)	19:23			18:36			17:06	17:05	13	16:17 (AG07)
24	06:17		20:10 (AG03)	06:45		18:43 (AG08)	07:14			07:44			07:18	07:43		16:05 (AG07)
	20:46	13	20:23 (AG03)	20:10	40	19:23 (AG08)	19:21			18:35			17:05	17:06	13	16:18 (AG07)
25	06:18		20:10 (AG03)	06:46		18:42 (AG08)	07:15			06:45			07:20	07:44		16:06 (AG07)
	20:46	12	20:22 (AG03)	20:09	42	19:24 (AG08)	19:19			17:34			17:05	17:07	12	16:18 (AG07)
26	06:19		20:10 (AG03)	06:47		18:41 (AG08)	07:16			06:46			07:21	07:44		16:06 (AG07)
	20:45	11	20:21 (AG03)	20:07	43	19:24 (AG08)	19:18			17:33			17:04	17:07	12	16:18 (AG07)
27	06:20		20:11 (AG03)	06:48		18:40 (AG08)	07:17			06:47			07:22	07:45		16:08 (AG07)
	20:44	9	20:20 (AG03)	20:06	45	19:25 (AG08)	19:16			17:31			17:04	17:08	11	16:19 (AG07)
28	06:20		20:12 (AG03)	06:49		18:39 (AG08)	07:18			06:48			07:23	07:45		16:08 (AG07)
	20:43	8	20:20 (AG03)	20:04	46	19:25 (AG08)	19:14			17:30			17:03	17:09	10	16:18 (AG07)
29	06:21		20:13 (AG03)	06:50		18:37 (AG08)	07:19			06:49			07:24	07:45		16:09 (AG07)
	20:42	6	20:19 (AG03)	20:03	47	19:24 (AG08)	19:13			17:29			17:03	17:09	9	16:18 (AG07)
30	06:22		20:15 (AG03)	06:51		18:37 (AG08)	07:20			06:50			07:25	07:45		16:10 (AG07)
	20:41	3	20:18 (AG03)	20:01	47	19:24 (AG08)	19:11			17:27			17:03	17:10	7	16:17 (AG07)
31	06:23			06:52		18:36 (AG08)				06:52				07:46		16:13 (AG07)
	20:40			20:00	54	19:30 (AG02)				17:26				17:11	4	16:17 (AG07)
Potential sun hours	454			425			374			347			301	293		
Total, worst case		451			573			791			92				199	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F061 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February		March			April			May			June		
1	07:46		16:19 (AG07)	07:34		07:00			07:11			06:28		19:06 (AG08)	06:01		19:19 (AG08)
	17:12	28	16:47 (AG07)	17:45		18:17			19:49			20:18	46	19:52 (AG08)	20:46	25	20:21 (AG03)
2	07:46		16:19 (AG07)	07:33		06:58			07:10			06:26		19:05 (AG08)	06:00		19:21 (AG08)
	17:13	29	16:48 (AG07)	17:46		18:18			19:50			20:19	47	19:52 (AG08)	20:47	24	20:23 (AG03)
3	07:46		16:19 (AG07)	07:32		06:57			07:08			06:25		19:05 (AG08)	06:00		19:23 (AG08)
	17:13	29	16:48 (AG07)	17:47		18:19			19:51			20:20	47	19:52 (AG08)	20:48	21	20:23 (AG03)
4	07:46		16:20 (AG07)	07:31		06:55			07:07			06:24		19:05 (AG08)	05:59		19:24 (AG08)
	17:14	29	16:49 (AG07)	17:48		18:20			19:52			20:21	47	19:52 (AG08)	20:48	19	20:23 (AG03)
5	07:46		16:20 (AG07)	07:30		06:54			07:05			06:23		19:04 (AG08)	05:59		19:26 (AG08)
	17:15	29	16:49 (AG07)	17:49		18:21			19:53			20:22	48	19:52 (AG08)	20:49	16	20:24 (AG03)
6	07:46		16:21 (AG07)	07:29		06:52			07:04			06:22		19:04 (AG08)	05:59		20:16 (AG03)
	17:16	29	16:50 (AG07)	17:51		18:22			19:54			20:23	49	19:53 (AG08)	20:49	9	20:25 (AG03)
7	07:46		16:21 (AG07)	07:28		06:51			07:02			06:21		19:04 (AG08)	05:59		20:16 (AG03)
	17:17	29	16:50 (AG07)	17:52		18:23			19:54			20:24	49	19:53 (AG08)	20:50	10	20:26 (AG03)
8	07:46		16:21 (AG07)	07:27		06:49		07:08 (Medio Campidano)	07:00			06:19		19:04 (AG08)	05:58		20:15 (AG03)
	17:18	29	16:50 (AG07)	17:53		18:24	1	07:09 (Medio Campidano)	19:55			20:25	49	19:53 (AG08)	20:51	11	20:26 (AG03)
9	07:46		16:21 (AG07)	07:26		06:48		07:06 (Medio Campidano)	06:59			06:18		19:05 (AG08)	05:58		20:15 (AG03)
	17:19	29	16:50 (AG07)	17:54		18:25	4	07:10 (Medio Campidano)	19:56			20:26	48	19:53 (AG08)	20:51	11	20:26 (AG03)
10	07:46		16:22 (AG07)	07:25		06:46		07:05 (Medio Campidano)	06:57			06:17		19:05 (AG08)	05:58		20:16 (AG03)
	17:20	29	16:51 (AG07)	17:55		18:26	6	07:11 (Medio Campidano)	19:57			20:27	47	19:52 (AG08)	20:52	11	20:27 (AG03)
11	07:46		16:23 (AG07)	07:24		06:45		07:03 (Medio Campidano)	06:56			06:16		19:05 (AG08)	05:58		20:16 (AG03)
	17:21	29	16:52 (AG07)	17:56		18:27	8	07:11 (Medio Campidano)	19:58			20:28	47	19:52 (AG08)	20:52	12	20:28 (AG03)
12	07:46		16:23 (AG07)	07:23		06:43		07:02 (Medio Campidano)	06:54			06:15		19:05 (AG08)	05:58		20:16 (AG03)
	17:22	28	16:51 (AG07)	17:58		18:28	10	07:12 (Medio Campidano)	19:59			20:29	47	19:52 (AG08)	20:53	12	20:28 (AG03)
13	07:45		16:23 (AG07)	07:21		06:42		07:00 (Medio Campidano)	06:53			06:14		19:05 (AG08)	05:58		20:16 (AG03)
	17:23	29	16:52 (AG07)	17:59		18:29	11	07:11 (Medio Campidano)	20:00			20:30	47	19:52 (AG08)	20:53	13	20:29 (AG03)
14	07:45		16:24 (AG07)	07:20		06:40		06:58 (Medio Campidano)	06:51			06:13		19:05 (AG08)	05:58		20:16 (AG03)
	17:24	28	16:52 (AG07)	18:00		18:30	12	07:10 (Medio Campidano)	20:01			20:31	46	19:51 (AG08)	20:54	13	20:29 (AG03)
15	07:45		16:24 (AG07)	07:19		06:39		06:57 (Medio Campidano)	06:50			06:12		19:06 (AG08)	05:58		20:16 (AG03)
	17:25	28	16:52 (AG07)	18:01		18:32	13	07:10 (Medio Campidano)	20:02			20:32	45	19:51 (AG08)	20:54	13	20:29 (AG03)
16	07:44		16:26 (AG07)	07:18		06:37		06:55 (Medio Campidano)	06:48			06:11		19:06 (AG08)	05:58		20:16 (AG03)
	17:26	26	16:52 (AG07)	18:02		18:33	13	07:08 (Medio Campidano)	20:03			20:33	44	19:50 (AG08)	20:54	14	20:30 (AG03)
17	07:44		16:26 (AG07)	07:16		06:35		06:56 (Medio Campidano)	06:47			06:11		19:06 (AG08)	05:58		20:16 (AG03)
	17:27	26	16:52 (AG07)	18:03		18:34	11	07:07 (Medio Campidano)	20:04			20:34	44	19:50 (AG08)	20:55	14	20:30 (AG03)
18	07:43		16:27 (AG07)	07:15		06:34		06:59 (Medio Campidano)	06:45			06:10		19:07 (AG08)	05:58		20:16 (AG03)
	17:28	25	16:52 (AG07)	18:05		18:35	4	07:03 (Medio Campidano)	20:05			20:35	43	19:50 (AG08)	20:55	14	20:30 (AG03)
19	07:43		16:27 (AG07)	07:14		06:32			06:44		19:26 (AG08)	06:09		19:08 (AG08)	05:58		20:16 (AG03)
	17:29	25	16:52 (AG07)	18:06		18:36			20:06	10	19:36 (AG08)	20:35	41	19:49 (AG08)	20:55	14	20:30 (AG03)
20	07:42		16:29 (AG07)	07:13		06:31			06:42		19:21 (AG08)	06:08		19:08 (AG08)	05:58		20:18 (AG03)
	17:31	23	16:52 (AG07)	18:07		18:37			20:07	19	19:40 (AG08)	20:36	41	19:49 (AG08)	20:56	13	20:31 (AG03)
21	07:42		16:30 (AG07)	07:11		06:29			06:41		19:18 (AG08)	06:07		19:09 (AG08)	05:58		20:18 (AG03)
	17:32	21	16:51 (AG07)	18:08		18:38			20:08	24	19:42 (AG08)	20:37	39	19:48 (AG08)	20:56	13	20:31 (AG03)
22	07:41		16:31 (AG07)	07:10		06:27			06:40		19:16 (AG08)	06:06		19:10 (AG08)	05:58		20:18 (AG03)
	17:33	19	16:50 (AG07)	18:09		18:39			20:09	29	19:45 (AG08)	20:38	38	19:48 (AG08)	20:56	13	20:31 (AG03)
23	07:41		16:33 (AG07)	07:08		06:26			06:38		19:14 (AG08)	06:06		19:10 (AG08)	05:59		20:17 (AG03)
	17:34	17	16:50 (AG07)	18:10		18:40			20:10	32	19:46 (AG08)	20:39	37	19:47 (AG08)	20:56	14	20:31 (AG03)
24	07:40		16:34 (AG07)	07:07		06:24			06:37		19:12 (AG08)	06:05		19:11 (AG08)	05:59		20:18 (AG03)
	17:35	14	16:48 (AG07)	18:11		18:41			20:11	35	19:47 (AG08)	20:40	35	19:46 (AG08)	20:57	14	20:32 (AG03)
25	07:39		16:37 (AG07)	07:06		06:23			06:36		19:11 (AG08)	06:04		19:12 (AG08)	05:59		20:18 (AG03)
	17:36	8	16:45 (AG07)	18:12		18:42			20:12	37	19:48 (AG08)	20:41	34	19:46 (AG08)	20:57	14	20:32 (AG03)
26	07:39			07:04		06:21			06:34		19:10 (AG08)	06:04		19:13 (AG08)	05:59		20:18 (AG03)
	17:38			18:13		18:43			20:13	39	19:49 (AG08)	20:41	32	19:45 (AG08)	20:57	14	20:32 (AG03)
27	07:38			07:03		06:19			06:33		19:08 (AG08)	06:03		19:14 (AG08)	06:00		20:19 (AG03)
	17:39			18:15		18:44			20:14	41	19:49 (AG08)	20:42	31	19:45 (AG08)	20:57	13	20:32 (AG03)
28	07:37			07:01		06:18			06:32		19:08 (AG08)	06:03		19:15 (AG08)	06:00		20:19 (AG03)
	17:40			18:16		18:45			20:15	42	19:50 (AG08)	20:43	28	19:43 (AG08)	20:57	13	20:32 (AG03)
29	07:36					07:16			06:30		19:07 (AG08)	06:02		19:16 (AG08)	06:01		20:19 (AG03)
	17:41					19:46			20:16	44	19:51 (AG08)	20:44	27	19:43 (AG08)	20:57	13	20:32 (AG03)
30	07:36					07:15			06:29		19:07 (AG08)	06:01		19:17 (AG08)	06:01		20:20 (AG03)
	17:42					19:47			20:17	45	19:52 (AG08)	20:45	25	19:42 (AG08)	20:57	12	20:32 (AG03)
31	07:35					07:13						06:01		19:18 (AG08)			
	17:43					19:48						20:45	25	20:21 (AG03)			
Potential sun hours	302			299		370			397			444			447		
Total, worst case		635					93			397			1273			422	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F061 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December		
1	06:01		20:20 (AG03)	06:24		19:14 (AG08)	06:53			07:21		07:40 (Medio Campidano)	06:53			07:26		16:05 (AG07)
	20:57	12	20:32 (AG03)	20:39	48	20:02 (AG08)	19:58			19:10	11	07:51 (Medio Campidano)	17:25			17:02	29	16:34 (AG07)
2	06:02		20:21 (AG03)	06:25		19:14 (AG08)	06:54			07:22		07:41 (Medio Campidano)	06:54			07:27		16:05 (AG07)
	20:57	11	20:32 (AG03)	20:38	48	20:02 (AG08)	19:56			19:08	9	07:50 (Medio Campidano)	17:24			17:02	29	16:34 (AG07)
3	06:02		20:20 (AG03)	06:26		19:14 (AG08)	06:55			07:23		07:42 (Medio Campidano)	06:55			07:28		16:05 (AG07)
	20:57	12	20:32 (AG03)	20:37	48	20:02 (AG08)	19:55			19:06	7	07:49 (Medio Campidano)	17:23			17:02	29	16:34 (AG07)
4	06:03		20:21 (AG03)	06:27		19:14 (AG08)	06:56			07:24		07:43 (Medio Campidano)	06:56			07:29		16:06 (AG07)
	20:56	11	20:32 (AG03)	20:36	48	20:02 (AG08)	19:53			19:05	5	07:48 (Medio Campidano)	17:22			17:02	29	16:35 (AG07)
5	06:03		20:21 (AG03)	06:28		19:14 (AG08)	06:56			07:25		07:44 (Medio Campidano)	06:57			07:30		16:06 (AG07)
	20:56	10	20:31 (AG03)	20:35	48	20:02 (AG08)	19:52			19:03	3	07:47 (Medio Campidano)	17:21			17:02	29	16:35 (AG07)
6	06:04		20:22 (AG03)	06:29		19:14 (AG08)	06:57			07:25			06:58			07:31		16:07 (AG07)
	20:56	9	20:31 (AG03)	20:34	48	20:02 (AG08)	19:50			19:02			17:19			17:02	29	16:36 (AG07)
7	06:05		19:34 (AG08)	06:30		19:14 (AG08)	06:58			07:26			06:59			07:32		16:07 (AG07)
	20:56	14	20:31 (AG03)	20:33	48	20:02 (AG08)	19:49			19:00			17:18			17:01	29	16:36 (AG07)
8	06:05		19:32 (AG08)	06:30		19:14 (AG08)	06:59			07:27			07:01			07:32		16:07 (AG07)
	20:55	18	20:31 (AG03)	20:31	48	20:02 (AG08)	19:47			18:58			17:17			17:01	29	16:36 (AG07)
9	06:06		19:31 (AG08)	06:31		19:14 (AG08)	07:00			07:28			07:02			07:33		16:07 (AG07)
	20:55	21	20:31 (AG03)	20:30	48	20:02 (AG08)	19:45			18:57			17:16			17:01	29	16:36 (AG07)
10	06:06		19:29 (AG08)	06:32		19:14 (AG08)	07:01			07:29			07:03			07:34		16:08 (AG07)
	20:55	23	20:30 (AG03)	20:29	47	20:01 (AG08)	19:44			18:55			17:15			17:02	29	16:37 (AG07)
11	06:07		19:28 (AG08)	06:33		19:14 (AG08)	07:02			07:30			07:04			07:35		16:09 (AG07)
	20:54	24	20:30 (AG03)	20:28	46	20:00 (AG08)	19:42			18:54			17:15			17:02	28	16:37 (AG07)
12	06:08		19:27 (AG08)	06:34		19:14 (AG08)	07:03			07:31			07:05			07:36		16:10 (AG07)
	20:54	25	20:30 (AG03)	20:26	46	20:00 (AG08)	19:40			18:52			17:14			17:02	27	16:37 (AG07)
13	06:08		19:25 (AG08)	06:35		19:15 (AG08)	07:04			07:32			07:06			07:37		16:09 (AG07)
	20:53	27	20:29 (AG03)	20:25	44	19:59 (AG08)	19:39			18:51			17:13			17:02	28	16:37 (AG07)
14	06:09		19:25 (AG08)	06:36		19:15 (AG08)	07:05			07:33			07:07			07:37		16:10 (AG07)
	20:53	26	19:51 (AG08)	20:24	44	19:59 (AG08)	19:37			18:49			17:12			17:02	27	16:37 (AG07)
15	06:10		19:24 (AG08)	06:37		19:16 (AG08)	07:06			07:34			07:08			07:38		16:11 (AG07)
	20:52	28	19:52 (AG08)	20:23	42	19:58 (AG08)	19:36			18:48			17:11			17:02	27	16:38 (AG07)
16	06:11		19:23 (AG08)	06:38		19:16 (AG08)	07:07			07:35			07:10			07:39		16:12 (AG07)
	20:52	30	19:53 (AG08)	20:21	41	19:57 (AG08)	19:34			18:46			17:10			17:03	26	16:38 (AG07)
17	06:11		19:22 (AG08)	06:39		19:17 (AG08)	07:08			07:37			07:11		16:11 (AG07)	07:39		16:12 (AG07)
	20:51	32	19:54 (AG08)	20:20	39	19:56 (AG08)	19:32			18:45			17:10	8	16:19 (AG07)	17:03	26	16:38 (AG07)
18	06:12		19:22 (AG08)	06:40		19:18 (AG08)	07:08			07:38			07:12		16:08 (AG07)	07:40		16:13 (AG07)
	20:51	33	19:55 (AG08)	20:19	37	19:55 (AG08)	19:31			18:43			17:09	14	16:22 (AG07)	17:03	25	16:38 (AG07)
19	06:13		19:21 (AG08)	06:41		19:19 (AG08)	07:09			07:39			07:13		16:07 (AG07)	07:41		16:13 (AG07)
	20:50	35	19:56 (AG08)	20:17	34	19:53 (AG08)	19:29			18:42			17:08	17	16:24 (AG07)	17:04	25	16:38 (AG07)
20	06:14		19:20 (AG08)	06:42		19:19 (AG08)	07:10			07:40			07:14		16:06 (AG07)	07:41		16:13 (AG07)
	20:49	36	19:56 (AG08)	20:16	32	19:51 (AG08)	19:27			18:41			17:07	19	16:25 (AG07)	17:04	26	16:39 (AG07)
21	06:15		19:20 (AG08)	06:43		19:21 (AG08)	07:11			07:41			07:15		16:06 (AG07)	07:42		16:13 (AG07)
	20:49	37	19:57 (AG08)	20:14	28	19:49 (AG08)	19:26			18:39			17:07	21	16:27 (AG07)	17:05	26	16:39 (AG07)
22	06:15		19:19 (AG08)	06:43		19:23 (AG08)	07:12			07:42			07:16		16:05 (AG07)	07:42		16:14 (AG07)
	20:48	39	19:58 (AG08)	20:13	24	19:47 (AG08)	19:24			18:38			17:06	23	16:28 (AG07)	17:05	26	16:40 (AG07)
23	06:16		19:19 (AG08)	06:44		19:26 (AG08)	07:13			07:43			07:17		16:04 (AG07)	07:43		16:14 (AG07)
	20:47	40	19:59 (AG08)	20:11	18	19:44 (AG08)	19:23			18:36			17:06	25	16:29 (AG07)	17:05	26	16:40 (AG07)
24	06:17		19:19 (AG08)	06:45		19:31 (AG08)	07:14			07:44			07:18		16:04 (AG07)	07:43		16:16 (AG07)
	20:46	40	19:59 (AG08)	20:10	8	19:39 (AG08)	19:21			18:35			17:05	25	16:29 (AG07)	17:06	25	16:41 (AG07)
25	06:18		19:18 (AG08)	06:46			07:15			06:45			07:20		16:04 (AG07)	07:44		16:16 (AG07)
	20:46	42	20:00 (AG08)	20:09			19:19			17:34			17:05	26	16:30 (AG07)	17:07	25	16:41 (AG07)
26	06:19		19:17 (AG08)	06:47			07:16		07:38 (Medio Campidano)	06:46			07:21		16:04 (AG07)	07:44		16:16 (AG07)
	20:45	43	20:00 (AG08)	20:07			19:18	10	07:48 (Medio Campidano)	17:33			17:04	26	16:30 (AG07)	17:07	26	16:42 (AG07)
27	06:20		19:17 (AG08)	06:48			07:17		07:36 (Medio Campidano)	06:47			07:22		16:03 (AG07)	07:45		16:17 (AG07)
	20:44	43	20:00 (AG08)	20:06			19:16	13	07:49 (Medio Campidano)	17:31			17:04	28	16:31 (AG07)	17:08	26	16:43 (AG07)
28	06:20		19:16 (AG08)	06:49			07:18		07:37 (Medio Campidano)	06:48			07:23		16:04 (AG07)	07:45		16:17 (AG07)
	20:43	45	20:01 (AG08)	20:04			19:14	13	07:50 (Medio Campidano)	17:30			17:03	28	16:32 (AG07)	17:09	26	16:43 (AG07)
29	06:21		19:16 (AG08)	06:50			07:19		07:38 (Medio Campidano)	06:49			07:24		16:05 (AG07)	07:45		16:17 (AG07)
	20:42	46	20:02 (AG08)	20:03			19:13	13	07:51 (Medio Campidano)	17:29			17:03	28	16:33 (AG07)	17:09	27	16:44 (AG07)
30	06:22		19:16 (AG08)	06:51			07:20		07:39 (Medio Campidano)	06:50			07:25		16:05 (AG07)	07:45		16:17 (AG07)
	20:41	46	20:02 (AG08)	20:01			19:11	12	07:51 (Medio Campidano)	17:27			17:03	28	16:33 (AG07)	17:10	27	16:44 (AG07)
31	06:23		19:16 (AG08)	06:52						06:52						07:46		16:18 (AG07)
	20:40	46	20:02 (AG08)	20:00						17:26						17:11	28	16:46 (AG07)
Potential sun hours	454			425			374			347			301			293		
Total, worst case		904			962			61			35			316			843	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F063 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February	March	April			May			June
1	07:46		16:12 (AG07)	07:34	07:00	07:11			06:28		19:37 (AG02)	06:01
	17:12	33	16:45 (AG07)	17:45	18:17	19:49			20:18	19	19:56 (AG02)	20:46
2	07:46		16:13 (AG07)	07:33	06:58	07:10			06:26		19:37 (AG02)	06:00
	17:13	32	16:45 (AG07)	17:46	18:18	19:50			20:19	19	19:56 (AG02)	20:47
3	07:46		16:13 (AG07)	07:32	06:57	07:08			06:25		19:37 (AG02)	06:00
	17:13	33	16:46 (AG07)	17:47	18:19	19:51			20:20	19	19:56 (AG02)	20:48
4	07:46		16:13 (AG07)	07:31	06:55	07:07			06:24		19:38 (AG02)	05:59
	17:14	33	16:46 (AG07)	17:48	18:20	19:52			20:21	17	19:55 (AG02)	20:48
5	07:46		16:13 (AG07)	07:30	06:54	07:05			06:23		19:39 (AG02)	05:59
	17:15	34	16:47 (AG07)	17:49	18:21	19:53			20:22	15	19:54 (AG02)	20:49
6	07:46		16:14 (AG07)	07:29	06:52	07:04			06:22		19:40 (AG02)	05:59
	17:16	34	16:48 (AG07)	17:51	18:22	19:54			20:23	13	19:53 (AG02)	20:49
7	07:46		16:14 (AG07)	07:28	06:51	07:02			06:21		19:42 (AG02)	05:59
	17:17	34	16:48 (AG07)	17:52	18:23	19:55			20:24	9	19:51 (AG02)	20:50
8	07:46		16:14 (AG07)	07:27	06:49	07:00			06:19			05:58
	17:18	34	16:48 (AG07)	17:53	18:24	19:55			20:25			20:51
9	07:46		16:14 (AG07)	07:26	06:48	06:59			06:18			05:58
	17:19	35	16:49 (AG07)	17:54	18:25	19:56			20:26			20:51
10	07:46		16:15 (AG07)	07:25	06:46	06:57			06:17			05:58
	17:20	35	16:50 (AG07)	17:55	18:26	19:57			20:27			20:52
11	07:46		16:15 (AG07)	07:24	06:45	06:56			06:16			05:58
	17:21	35	16:50 (AG07)	17:56	18:27	19:58			20:28			20:52
12	07:46		16:15 (AG07)	07:23	06:43	06:54			06:15			05:58
	17:22	35	16:50 (AG07)	17:58	18:28	19:59			20:29			20:53
13	07:45		16:16 (AG07)	07:21	06:42	06:53			06:14			05:58
	17:23	35	16:51 (AG07)	17:59	18:29	20:00			20:30			20:53
14	07:45		16:16 (AG07)	07:20	06:40	06:51			06:13			05:58
	17:24	36	16:52 (AG07)	18:00	18:30	20:01			20:31			20:54
15	07:45		16:16 (AG07)	07:19	06:39	06:50			06:12			05:58
	17:25	35	16:51 (AG07)	18:01	18:32	20:02			20:32			20:54
16	07:44		16:17 (AG07)	07:18	06:37	06:48			06:11			05:58
	17:26	35	16:52 (AG07)	18:02	18:33	20:03			20:33			20:55
17	07:44		16:17 (AG07)	07:16	06:35	06:47			06:11			05:58
	17:27	35	16:52 (AG07)	18:03	18:34	20:04			20:34			20:55
18	07:43		16:18 (AG07)	07:15	06:34	06:45			06:10			05:58
	17:28	34	16:52 (AG07)	18:05	18:35	20:05			20:35			20:55
19	07:43		16:18 (AG07)	07:14	06:32	06:44			06:09			05:58
	17:30	34	16:52 (AG07)	18:06	18:36	20:06			20:35			20:55
20	07:42		16:19 (AG07)	07:13	06:31	06:42			06:08			05:58
	17:31	34	16:53 (AG07)	18:07	18:37	20:07			20:36			20:56
21	07:42		16:19 (AG07)	07:11	06:29	06:41			06:07			05:58
	17:32	33	16:52 (AG07)	18:08	18:38	20:08			20:37			20:56
22	07:41		16:20 (AG07)	07:10	06:27	06:40		19:46 (AG02)	06:06			05:58
	17:33	32	16:52 (AG07)	18:09	18:39	20:09	1	19:47 (AG02)	20:38			20:56
23	07:41		16:21 (AG07)	07:08	06:26	06:38		19:43 (AG02)	06:06			05:59
	17:34	31	16:52 (AG07)	18:10	18:40	20:10	6	19:49 (AG02)	20:39			20:56
24	07:40		16:22 (AG07)	07:07	06:24	06:37		19:40 (AG02)	06:05			05:59
	17:35	30	16:52 (AG07)	18:11	18:41	20:11	9	19:49 (AG02)	20:40			20:57
25	07:39		16:23 (AG07)	07:06	06:23	06:36		19:39 (AG02)	06:04			05:59
	17:36	28	16:51 (AG07)	18:12	18:42	20:12	11	19:50 (AG02)	20:41			20:57
26	07:39		16:24 (AG07)	07:04	06:21	06:34		19:39 (AG02)	06:04			05:59
	17:38	27	16:51 (AG07)	18:13	18:43	20:13	12	19:51 (AG02)	20:42			20:57
27	07:38		16:25 (AG07)	07:03	06:19	06:33		19:37 (AG02)	06:03			06:00
	17:39	25	16:50 (AG07)	18:15	18:44	20:14	15	19:52 (AG02)	20:42			20:57
28	07:37		16:27 (AG07)	07:01	06:18	06:32		19:37 (AG02)	06:03			06:00
	17:40	22	16:49 (AG07)	18:16	18:45	20:15	16	19:53 (AG02)	20:43			20:57
29	07:36		16:28 (AG07)		07:16	06:30		19:37 (AG02)	06:02			06:01
	17:41	20	16:48 (AG07)		19:46	20:16	17	19:54 (AG02)	20:44			20:57
30	07:36		16:30 (AG07)		07:15	06:29		19:37 (AG02)	06:02			06:01
	17:42	16	16:46 (AG07)		19:47	20:17	18	19:55 (AG02)	20:45			20:57
31	07:35		16:33 (AG07)		07:13				06:01			
	17:43	10	16:43 (AG07)		19:48				20:45			
Potential sun hours	302			299	370	397			444			447
Total, worst case		959					105			111		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F063 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August			September	October	November			December		
1	06:01	06:24			06:53	07:21	06:53			07:26		15:57 (AG07)
	20:57	20:39			19:58	19:10	17:25			17:02	35	16:32 (AG07)
2	06:02	06:25			06:54	07:22	06:54			07:27		15:58 (AG07)
	20:57	20:38			19:56	19:08	17:24			17:02	35	16:33 (AG07)
3	06:02	06:26			06:55	07:23	06:55			07:28		15:58 (AG07)
	20:57	20:37			19:55	19:06	17:23			17:02	35	16:33 (AG07)
4	06:03	06:27			06:56	07:24	06:56			07:29		15:59 (AG07)
	20:56	20:36			19:53	19:05	17:22			17:02	34	16:33 (AG07)
5	06:03	06:28		19:54 (AG02)	06:56	07:25	06:57			07:30		15:59 (AG07)
	20:56	20:35	4	19:58 (AG02)	19:52	19:03	17:21			17:02	35	16:34 (AG07)
6	06:04	06:29		19:51 (AG02)	06:57	07:25	06:58			07:31		16:00 (AG07)
	20:56	20:34	10	20:01 (AG02)	19:50	19:02	17:19			17:02	34	16:34 (AG07)
7	06:05	06:30		19:50 (AG02)	06:58	07:26	06:59			07:32		16:00 (AG07)
	20:56	20:33	13	20:03 (AG02)	19:49	19:00	17:18			17:02	34	16:34 (AG07)
8	06:05	06:30		19:48 (AG02)	06:59	07:27	07:01			07:32		16:00 (AG07)
	20:55	20:31	16	20:04 (AG02)	19:47	18:58	17:17			17:01	34	16:34 (AG07)
9	06:06	06:31		19:47 (AG02)	07:00	07:28	07:02			07:33		16:01 (AG07)
	20:55	20:30	18	20:05 (AG02)	19:45	18:57	17:16			17:01	33	16:34 (AG07)
10	06:06	06:32		19:46 (AG02)	07:01	07:29	07:03			07:34		16:02 (AG07)
	20:55	20:29	18	20:04 (AG02)	19:44	18:55	17:15			17:02	32	16:34 (AG07)
11	06:07	06:33		19:45 (AG02)	07:02	07:30	07:04		16:05 (AG07)	07:35		16:02 (AG07)
	20:54	20:28	20	20:05 (AG02)	19:42	18:54	17:15	10	16:15 (AG07)	17:02	33	16:35 (AG07)
12	06:08	06:34		19:45 (AG02)	07:03	07:31	07:05		16:02 (AG07)	07:36		16:03 (AG07)
	20:54	20:26	19	20:04 (AG02)	19:40	18:52	17:14	16	16:18 (AG07)	17:02	32	16:35 (AG07)
13	06:08	06:35		19:45 (AG02)	07:04	07:32	07:06		16:00 (AG07)	07:37		16:03 (AG07)
	20:53	20:25	18	20:03 (AG02)	19:39	18:51	17:13	20	16:20 (AG07)	17:02	32	16:35 (AG07)
14	06:09	06:36		19:45 (AG02)	07:05	07:33	07:07		15:59 (AG07)	07:37		16:04 (AG07)
	20:53	20:24	17	20:02 (AG02)	19:37	18:49	17:12	22	16:21 (AG07)	17:02	31	16:35 (AG07)
15	06:10	06:37		19:45 (AG02)	07:06	07:34	07:08		15:58 (AG07)	07:38		16:05 (AG07)
	20:52	20:23	15	20:00 (AG02)	19:36	18:48	17:11	25	16:23 (AG07)	17:02	31	16:36 (AG07)
16	06:11	06:38		19:45 (AG02)	07:07	07:36	07:10		15:57 (AG07)	07:39		16:06 (AG07)
	20:52	20:21	14	19:59 (AG02)	19:34	18:46	17:10	27	16:24 (AG07)	17:03	31	16:37 (AG07)
17	06:11	06:39		19:46 (AG02)	07:08	07:37	07:11		15:56 (AG07)	07:39		16:06 (AG07)
	20:51	20:20	12	19:58 (AG02)	19:32	18:45	17:10	29	16:25 (AG07)	17:03	30	16:36 (AG07)
18	06:12	06:40		19:46 (AG02)	07:08	07:38	07:12		15:56 (AG07)	07:40		16:06 (AG07)
	20:51	20:19	11	19:57 (AG02)	19:31	18:43	17:09	30	16:26 (AG07)	17:03	31	16:37 (AG07)
19	06:13	06:41		19:47 (AG02)	07:09	07:39	07:13		15:55 (AG07)	07:41		16:06 (AG07)
	20:50	20:17	9	19:56 (AG02)	19:29	18:42	17:08	31	16:26 (AG07)	17:04	31	16:37 (AG07)
20	06:14	06:42		19:48 (AG02)	07:10	07:40	07:14		15:55 (AG07)	07:41		16:07 (AG07)
	20:49	20:16	5	19:53 (AG02)	19:27	18:41	17:07	32	16:27 (AG07)	17:04	31	16:38 (AG07)
21	06:15	06:43			07:11	07:41	07:15		15:55 (AG07)	07:42		16:07 (AG07)
	20:49	20:14			19:26	18:39	17:07	33	16:28 (AG07)	17:05	31	16:38 (AG07)
22	06:15	06:44			07:12	07:42	07:16		15:55 (AG07)	07:42		16:08 (AG07)
	20:48	20:13			19:24	18:38	17:06	34	16:29 (AG07)	17:05	31	16:39 (AG07)
23	06:16	06:44			07:13	07:43	07:17		15:55 (AG07)	07:43		16:08 (AG07)
	20:47	20:11			19:23	18:36	17:06	34	16:29 (AG07)	17:06	31	16:39 (AG07)
24	06:17	06:45			07:14	07:44	07:18		15:55 (AG07)	07:43		16:09 (AG07)
	20:46	20:10			19:21	18:35	17:05	35	16:30 (AG07)	17:06	31	16:40 (AG07)
25	06:18	06:46			07:15	06:45	07:20		15:55 (AG07)	07:44		16:09 (AG07)
	20:46	20:09			19:19	17:34	17:05	35	16:30 (AG07)	17:07	31	16:40 (AG07)
26	06:19	06:47			07:16	06:46	07:21		15:55 (AG07)	07:44		16:09 (AG07)
	20:45	20:07			19:18	17:33	17:04	35	16:30 (AG07)	17:07	31	16:40 (AG07)
27	06:20	06:48			07:17	06:47	07:22		15:55 (AG07)	07:45		16:11 (AG07)
	20:44	20:06			19:16	17:31	17:04	35	16:30 (AG07)	17:08	31	16:42 (AG07)
28	06:20	06:49			07:18	06:48	07:23		15:56 (AG07)	07:45		16:11 (AG07)
	20:43	20:04			19:14	17:30	17:03	36	16:32 (AG07)	17:09	31	16:42 (AG07)
29	06:21	06:50			07:19	06:49	07:24		15:57 (AG07)	07:45		16:11 (AG07)
	20:42	20:03			19:13	17:29	17:03	35	16:32 (AG07)	17:09	31	16:42 (AG07)
30	06:22	06:51			07:20	06:50	07:25		15:57 (AG07)	07:45		16:11 (AG07)
	20:41	20:01			19:11	17:27	17:03	35	16:32 (AG07)	17:10	32	16:43 (AG07)
31	06:23	06:52				06:52				07:46		16:12 (AG07)
	20:40	20:00				17:26				17:11	32	16:44 (AG07)
Potential sun hours	454	425			374	347	301			293		
Total, worst case			219					589			997	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F071 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January			February			March	April	May			June		
1	07:46		08:16 (AG07)	07:34		08:32 (AG07)	07:00	07:11	06:28			06:01		19:40 (AG01)
	17:12	57	09:13 (AG07)	17:45	44	09:16 (AG07)	18:17	19:49	20:18			20:46	37	20:17 (AG01)
2	07:46		08:16 (AG07)	07:33		08:33 (AG07)	06:59	07:10	06:27			06:00		19:40 (AG01)
	17:13	57	09:13 (AG07)	17:46	42	09:15 (AG07)	18:18	19:50	20:19			20:47	38	20:18 (AG01)
3	07:46		08:16 (AG07)	07:32		08:35 (AG07)	06:57	07:08	06:25			06:00		19:40 (AG01)
	17:14	58	09:14 (AG07)	17:47	39	09:14 (AG07)	18:19	19:51	20:20			20:48	39	20:19 (AG01)
4	07:46		08:17 (AG07)	07:31		08:36 (AG07)	06:56	07:07	06:24			05:59		19:39 (AG01)
	17:14	57	09:14 (AG07)	17:48	37	09:13 (AG07)	18:20	19:52	20:21			20:48	40	20:19 (AG01)
5	07:46		08:17 (AG07)	07:30		08:38 (AG07)	06:54	07:05	06:23			05:59		19:39 (AG01)
	17:15	58	09:15 (AG07)	17:49	33	09:11 (AG07)	18:21	19:53	20:22			20:49	41	20:20 (AG01)
6	07:46		08:18 (AG07)	07:29		08:39 (AG07)	06:53	07:04	06:22			05:59		19:39 (AG01)
	17:16	58	09:16 (AG07)	17:51	30	09:09 (AG07)	18:22	19:54	20:23			20:50	42	20:21 (AG01)
7	07:46		08:18 (AG07)	07:28		08:41 (AG07)	06:51	07:02	06:21			05:59		19:39 (AG01)
	17:17	58	09:16 (AG07)	17:52	25	09:06 (AG07)	18:23	19:55	20:24			20:50	43	20:22 (AG01)
8	07:46		08:18 (AG07)	07:27		08:44 (AG07)	06:50	07:00	06:20			05:58		19:39 (AG01)
	17:18	58	09:16 (AG07)	17:53	19	09:03 (AG07)	18:24	19:56	20:25			20:51	43	20:22 (AG01)
9	07:46		08:18 (AG07)	07:26		08:49 (AG07)	06:48	06:59	06:18			05:58		19:38 (AG01)
	17:19	58	09:16 (AG07)	17:54	10	08:59 (AG07)	18:25	19:57	20:26			20:51	44	20:22 (AG01)
10	07:46		08:19 (AG07)	07:25			06:46	06:57	06:17			05:58		19:38 (AG01)
	17:20	58	09:17 (AG07)	17:55			18:26	19:58	20:27			20:52	44	20:22 (AG01)
11	07:46		08:19 (AG07)	07:24			06:45	06:56	06:16			05:58		19:38 (AG01)
	17:21	59	09:18 (AG07)	17:56			18:27	19:59	20:28			20:52	45	20:23 (AG01)
12	07:46		08:19 (AG07)	07:23			06:43	06:54	06:15			05:58		19:38 (AG01)
	17:22	59	09:18 (AG07)	17:58			18:28	20:00	20:29			20:53	45	20:23 (AG01)
13	07:45		08:20 (AG07)	07:21			06:42	06:53	06:14			05:58		19:38 (AG01)
	17:23	58	09:18 (AG07)	17:59			18:30	20:01	20:30			20:53	46	20:24 (AG01)
14	07:45		08:20 (AG07)	07:20			06:40	06:51	06:13			05:58		19:38 (AG01)
	17:24	59	09:19 (AG07)	18:00			18:31	20:02	20:31			20:54	46	20:24 (AG01)
15	07:45		08:20 (AG07)	07:19			06:39	06:50	06:12			05:58		19:39 (AG01)
	17:25	59	09:19 (AG07)	18:01			18:32	20:02	20:32			20:54	45	20:24 (AG01)
16	07:44		08:21 (AG07)	07:18			06:37	06:48	06:12			05:58		19:39 (AG01)
	17:26	58	09:19 (AG07)	18:02			18:33	20:03	20:33			20:55	46	20:25 (AG01)
17	07:44		08:21 (AG07)	07:16			06:35	06:47	06:11			05:58		19:39 (AG01)
	17:27	58	09:19 (AG07)	18:03			18:34	20:04	20:34			20:55	46	20:25 (AG01)
18	07:44		08:22 (AG07)	07:15			06:34	06:45	06:10			05:58		19:39 (AG01)
	17:28	58	09:20 (AG07)	18:05			18:35	20:05	20:35			20:55	46	20:25 (AG01)
19	07:43		08:22 (AG07)	07:14			06:32	06:44	06:09			05:58		19:40 (AG01)
	17:30	57	09:19 (AG07)	18:06			18:36	20:06	20:36			20:56	46	20:26 (AG01)
20	07:43		08:23 (AG07)	07:13			06:31	06:43	06:08			05:58		19:40 (AG01)
	17:31	57	09:20 (AG07)	18:07			18:37	20:07	20:36			20:56	46	20:26 (AG01)
21	07:42		08:23 (AG07)	07:11			06:29	06:41	06:07			05:58		19:40 (AG01)
	17:32	57	09:20 (AG07)	18:08			18:38	20:08	20:37			20:56	46	20:26 (AG01)
22	07:41		08:24 (AG07)	07:10			06:27	06:40	06:07		19:52 (AG01)	05:58		19:40 (AG01)
	17:33	56	09:20 (AG07)	18:09			18:39	20:09	20:38	12	20:04 (AG01)	20:56	46	20:26 (AG01)
23	07:41		08:24 (AG07)	07:09			06:26	06:38	06:06		19:49 (AG01)	05:59		19:40 (AG01)
	17:34	56	09:20 (AG07)	18:10			18:40	20:10	20:39	18	20:07 (AG01)	20:56	46	20:26 (AG01)
24	07:40		08:25 (AG07)	07:07			06:24	06:37	06:05		19:47 (AG01)	05:59		19:41 (AG01)
	17:35	55	09:20 (AG07)	18:11			18:41	20:11	20:40	21	20:08 (AG01)	20:57	46	20:27 (AG01)
25	07:40		08:25 (AG07)	07:06			06:23	06:36	06:04		19:46 (AG01)	05:59		19:41 (AG01)
	17:36	54	09:19 (AG07)	18:12			18:42	20:12	20:41	25	20:11 (AG01)	20:57	46	20:27 (AG01)
26	07:39		08:27 (AG07)	07:04			06:21	06:34	06:04		19:44 (AG01)	05:59		19:41 (AG01)
	17:38	53	09:20 (AG07)	18:14			18:43	20:13	20:42	28	20:12 (AG01)	20:57	46	20:27 (AG01)
27	07:38		08:27 (AG07)	07:03			06:19	06:33	06:03		19:44 (AG01)	06:00		19:42 (AG01)
	17:39	52	09:19 (AG07)	18:15			18:44	20:14	20:42	29	20:13 (AG01)	20:57	45	20:27 (AG01)
28	07:37		08:28 (AG07)	07:01			06:18	06:32	06:03		19:42 (AG01)	06:00		19:42 (AG01)
	17:40	50	09:18 (AG07)	18:16			18:45	20:15	20:43	32	20:14 (AG01)	20:57	45	20:27 (AG01)
29	07:37		08:28 (AG07)				07:16	06:30	06:02		19:42 (AG01)	06:01		19:41 (AG01)
	17:41	50	09:18 (AG07)				19:46	20:16	20:44	34	20:16 (AG01)	20:57	46	20:27 (AG01)
30	07:36		08:29 (AG07)				07:15	06:29	06:02		19:41 (AG01)	06:01		19:42 (AG01)
	17:42	48	09:17 (AG07)				19:47	20:17	20:45	35	20:16 (AG01)	20:57	45	20:27 (AG01)
31	07:35		08:30 (AG07)				07:13		06:01		19:41 (AG01)			
	17:43	46	09:16 (AG07)				19:48		20:45	36	20:17 (AG01)			
Potential sun hours	302			299			370	397	444			447		
Total, worst case		1736			279					270			1325	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F071 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August	September	October	November			December		
1	06:01		19:42 (AG01)	06:24	06:53	07:21	06:53			07:26		08:01 (AG07)
	20:57	45	20:27 (AG01)	20:39	19:58	19:10	17:25			17:02	59	09:00 (AG07)
2	06:02		19:43 (AG01)	06:25	06:54	07:22	06:54		08:18 (AG07)	07:27		08:02 (AG07)
	20:57	45	20:28 (AG01)	20:38	19:57	19:08	17:24	12	08:30 (AG07)	17:02	58	09:00 (AG07)
3	06:02		19:43 (AG01)	06:26	06:55	07:23	06:55		08:13 (AG07)	07:28		08:02 (AG07)
	20:57	44	20:27 (AG01)	20:37	19:55	19:06	17:23	21	08:34 (AG07)	17:02	59	09:01 (AG07)
4	06:03		19:44 (AG01)	06:27	06:56	07:24	06:56		08:11 (AG07)	07:29		08:03 (AG07)
	20:56	43	20:27 (AG01)	20:36	19:53	19:05	17:22	26	08:37 (AG07)	17:02	58	09:01 (AG07)
5	06:03		19:44 (AG01)	06:28	06:57	07:25	06:57		08:08 (AG07)	07:30		08:03 (AG07)
	20:56	43	20:27 (AG01)	20:35	19:52	19:03	17:21	31	08:39 (AG07)	17:02	58	09:01 (AG07)
6	06:04		19:45 (AG01)	06:29	06:57	07:26	06:58		08:07 (AG07)	07:31		08:04 (AG07)
	20:56	42	20:27 (AG01)	20:34	19:50	19:02	17:20	34	08:41 (AG07)	17:02	58	09:02 (AG07)
7	06:05		19:46 (AG01)	06:30	06:58	07:27	06:59		08:06 (AG07)	07:32		08:04 (AG07)
	20:56	41	20:27 (AG01)	20:33	19:49	19:00	17:19	37	08:43 (AG07)	17:02	58	09:02 (AG07)
8	06:05		19:46 (AG01)	06:31	06:59	07:28	07:01		08:04 (AG07)	07:33		08:04 (AG07)
	20:55	41	20:27 (AG01)	20:31	19:47	18:59	17:17	40	08:44 (AG07)	17:02	58	09:02 (AG07)
9	06:06		19:47 (AG01)	06:31	07:00	07:29	07:02		08:03 (AG07)	07:33		08:04 (AG07)
	20:55	40	20:27 (AG01)	20:30	19:45	18:57	17:17	42	08:45 (AG07)	17:02	58	09:02 (AG07)
10	06:07		19:47 (AG01)	06:32	07:01	07:30	07:03		08:03 (AG07)	07:34		08:05 (AG07)
	20:55	39	20:26 (AG01)	20:29	19:44	18:55	17:16	44	08:47 (AG07)	17:02	58	09:03 (AG07)
11	06:07		19:48 (AG01)	06:33	07:02	07:31	07:04		08:02 (AG07)	07:35		08:06 (AG07)
	20:54	38	20:26 (AG01)	20:28	19:42	18:54	17:15	46	08:48 (AG07)	17:02	57	09:03 (AG07)
12	06:08		19:49 (AG01)	06:34	07:03	07:32	07:05		08:01 (AG07)	07:36		08:06 (AG07)
	20:54	37	20:26 (AG01)	20:27	19:41	18:52	17:14	48	08:49 (AG07)	17:02	58	09:04 (AG07)
13	06:09		19:49 (AG01)	06:35	07:04	07:33	07:06		08:00 (AG07)	07:37		08:07 (AG07)
	20:53	35	20:24 (AG01)	20:25	19:39	18:51	17:13	50	08:50 (AG07)	17:02	57	09:04 (AG07)
14	06:09		19:50 (AG01)	06:36	07:05	07:34	07:07		08:00 (AG07)	07:37		08:07 (AG07)
	20:53	34	20:24 (AG01)	20:24	19:37	18:49	17:12	50	08:50 (AG07)	17:02	57	09:04 (AG07)
15	06:10		19:51 (AG01)	06:37	07:06	07:35	07:09		08:00 (AG07)	07:38		08:08 (AG07)
	20:52	33	20:24 (AG01)	20:23	19:36	18:48	17:11	52	08:52 (AG07)	17:02	57	09:05 (AG07)
16	06:11		19:53 (AG01)	06:38	07:07	07:36	07:10		08:00 (AG07)	07:39		08:09 (AG07)
	20:52	30	20:23 (AG01)	20:21	19:34	18:46	17:10	53	08:53 (AG07)	17:03	56	09:05 (AG07)
17	06:11		19:53 (AG01)	06:39	07:08	07:37	07:11		07:59 (AG07)	07:40		08:09 (AG07)
	20:51	29	20:22 (AG01)	20:20	19:32	18:45	17:10	54	08:53 (AG07)	17:03	56	09:05 (AG07)
18	06:12		19:55 (AG01)	06:40	07:09	07:38	07:12		07:59 (AG07)	07:40		08:09 (AG07)
	20:51	26	20:21 (AG01)	20:19	19:31	18:44	17:09	55	08:54 (AG07)	17:03	57	09:06 (AG07)
19	06:13		19:56 (AG01)	06:41	07:09	07:39	07:13		07:58 (AG07)	07:41		08:09 (AG07)
	20:50	24	20:20 (AG01)	20:17	19:29	18:42	17:08	56	08:54 (AG07)	17:04	57	09:06 (AG07)
20	06:14		19:58 (AG01)	06:42	07:10	07:40	07:14		07:59 (AG07)	07:41		08:10 (AG07)
	20:49	20	20:18 (AG01)	20:16	19:28	18:41	17:08	56	08:55 (AG07)	17:04	57	09:07 (AG07)
21	06:15		20:00 (AG01)	06:43	07:11	07:41	07:15		07:59 (AG07)	07:42		08:10 (AG07)
	20:49	15	20:15 (AG01)	20:14	19:26	18:39	17:07	57	08:56 (AG07)	17:05	57	09:07 (AG07)
22	06:15		20:04 (AG01)	06:44	07:12	07:42	07:16		07:59 (AG07)	07:42		08:11 (AG07)
	20:48	8	20:12 (AG01)	20:13	19:24	18:38	17:06	57	08:56 (AG07)	17:05	57	09:08 (AG07)
23	06:16			06:45	07:13	07:43	07:17		07:59 (AG07)	07:43		08:11 (AG07)
	20:47			20:12	19:23	18:37	17:06	57	08:56 (AG07)	17:06	57	09:08 (AG07)
24	06:17			06:45	07:14	07:44	07:19		07:59 (AG07)	07:43		08:12 (AG07)
	20:46			20:10	19:21	18:35	17:05	58	08:57 (AG07)	17:06	57	09:09 (AG07)
25	06:18			06:46	07:15	06:45	07:20		07:59 (AG07)	07:44		08:12 (AG07)
	20:46			20:09	19:19	17:34	17:05	58	08:57 (AG07)	17:07	57	09:09 (AG07)
26	06:19			06:47	07:16	06:46	07:21		07:59 (AG07)	07:44		08:14 (AG07)
	20:45			20:07	19:18	17:33	17:04	58	08:57 (AG07)	17:07	56	09:10 (AG07)
27	06:20			06:48	07:17	06:47	07:22		08:00 (AG07)	07:45		08:14 (AG07)
	20:44			20:06	19:16	17:31	17:04	59	08:59 (AG07)	17:08	56	09:10 (AG07)
28	06:21			06:49	07:18	06:48	07:23		08:00 (AG07)	07:45		08:14 (AG07)
	20:43			20:04	19:14	17:30	17:03	59	08:59 (AG07)	17:09	56	09:10 (AG07)
29	06:21			06:50	07:19	06:49	07:24		08:01 (AG07)	07:45		08:14 (AG07)
	20:42			20:03	19:13	17:29	17:03	58	08:59 (AG07)	17:09	57	09:11 (AG07)
30	06:22			06:51	07:20	06:51	07:25		08:01 (AG07)	07:45		08:14 (AG07)
	20:41			20:01	19:11	17:28	17:03	59	09:00 (AG07)	17:10	57	09:11 (AG07)
31	06:23			06:52		06:52				07:46		08:15 (AG07)
	20:40			20:00		17:26				17:11	57	09:12 (AG07)
Potential sun hours	454			425	374	347	301			293		
Total, worst case		752						1387			1775	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F073 - C2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March			April			May			June		
1	07:46	07:34	07:00			07:11		18:34 (AG01)	06:28		06:51 (AG08)	06:01		19:43 (AG02)
	17:12	17:45	18:17			19:49	32	19:06 (AG01)	20:18	55	07:46 (AG08)	20:46	31	20:14 (AG02)
2	07:46	07:33	06:59			07:10		18:34 (AG01)	06:27		06:50 (AG08)	06:00		19:42 (AG02)
	17:13	17:46	18:18			19:50	30	19:04 (AG01)	20:19	55	07:45 (AG08)	20:47	34	20:16 (AG02)
3	07:46	07:32	06:57			07:08		18:35 (AG01)	06:25		06:50 (AG08)	06:00		19:42 (AG02)
	17:13	17:47	18:19			19:51	26	19:01 (AG01)	20:20	55	07:45 (AG08)	20:48	35	20:17 (AG02)
4	07:46	07:31	06:56			07:07		18:38 (AG01)	06:24		06:50 (AG08)	05:59		19:41 (AG02)
	17:14	17:48	18:20			19:52	22	19:00 (AG01)	20:21	55	07:45 (AG08)	20:48	36	20:17 (AG02)
5	07:46	07:30	06:54			07:05		18:40 (AG01)	06:23		06:50 (AG08)	05:59		19:40 (AG02)
	17:15	17:49	18:21			19:53	16	18:56 (AG01)	20:22	54	07:44 (AG08)	20:49	38	20:18 (AG02)
6	07:46	07:29	06:53			07:04		18:45 (AG01)	06:22		06:51 (AG08)	05:59		19:40 (AG02)
	17:16	17:51	18:22			19:54	7	18:52 (AG01)	20:23	53	07:44 (AG08)	20:50	39	20:19 (AG02)
7	07:46	07:28	06:51			07:02			06:21		06:51 (AG08)	05:59		19:40 (AG02)
	17:17	17:52	18:23			19:55			20:24	53	07:44 (AG08)	20:50	40	20:20 (AG02)
8	07:46	07:27	06:49			07:00			06:20		06:51 (AG08)	05:58		19:40 (AG02)
	17:18	17:53	18:24			19:56			20:25	52	07:43 (AG08)	20:51	41	20:21 (AG02)
9	07:46	07:26	06:48			06:59			06:18		06:51 (AG08)	05:58		19:39 (AG02)
	17:19	17:54	18:25			19:57			20:26	52	07:43 (AG08)	20:51	42	20:21 (AG02)
10	07:46	07:25	06:46			06:57			06:17		06:52 (AG08)	05:58		19:39 (AG02)
	17:20	17:55	18:26			19:58			20:27	51	07:43 (AG08)	20:52	43	20:22 (AG02)
11	07:46	07:24	06:45			06:56			06:16		06:52 (AG08)	05:58		19:39 (AG02)
	17:21	17:56	18:27			19:59			20:28	50	07:42 (AG08)	20:52	43	20:22 (AG02)
12	07:46	07:23	06:43		17:49 (AG01)	06:54		07:16 (AG08)	06:15		06:53 (AG08)	05:58		19:39 (AG02)
	17:22	17:58	18:28	13	18:02 (AG01)	20:00	11	07:27 (AG08)	20:29	48	07:41 (AG08)	20:53	44	20:23 (AG02)
13	07:45	07:21	06:42		17:45 (AG01)	06:53		07:12 (AG08)	06:14		06:53 (AG08)	05:58		19:39 (AG02)
	17:23	17:59	18:30	20	18:05 (AG01)	20:01	20	07:32 (AG08)	20:30	48	07:41 (AG08)	20:53	44	20:23 (AG02)
14	07:45	07:20	06:40		17:42 (AG01)	06:51		07:10 (AG08)	06:13		06:53 (AG08)	05:58		19:39 (AG02)
	17:24	18:00	18:31	24	18:06 (AG01)	20:01	26	07:36 (AG08)	20:31	47	07:40 (AG08)	20:54	45	20:24 (AG02)
15	07:45	07:19	06:39		17:40 (AG01)	06:50		07:08 (AG08)	06:12		06:54 (AG08)	05:58		19:39 (AG02)
	17:25	18:01	18:32	29	18:09 (AG01)	20:02	29	07:37 (AG08)	20:32	45	07:39 (AG08)	20:54	45	20:24 (AG02)
16	07:44	07:18	06:37		17:38 (AG01)	06:48		07:07 (AG08)	06:11		06:54 (AG08)	05:58		19:39 (AG02)
	17:26	18:02	18:33	31	18:09 (AG01)	20:03	32	07:39 (AG08)	20:33	44	07:38 (AG08)	20:55	45	20:24 (AG02)
17	07:44	07:16	06:35		17:37 (AG01)	06:47		07:05 (AG08)	06:11		06:55 (AG08)	05:58		19:39 (AG02)
	17:27	18:03	18:34	34	18:11 (AG01)	20:04	35	07:40 (AG08)	20:34	42	07:37 (AG08)	20:55	46	20:25 (AG02)
18	07:44	07:15	06:34		17:35 (AG01)	06:45		07:04 (AG08)	06:10		06:57 (AG08)	05:58		19:39 (AG02)
	17:28	18:05	18:35	36	18:11 (AG01)	20:05	38	07:42 (AG08)	20:35	40	07:37 (AG08)	20:55	46	20:25 (AG02)
19	07:43	07:14	06:32		17:34 (AG01)	06:44		07:02 (AG08)	06:09		06:57 (AG08)	05:58		19:40 (AG02)
	17:30	18:06	18:36	37	18:11 (AG01)	20:06	40	07:42 (AG08)	20:36	39	07:36 (AG08)	20:56	46	20:26 (AG02)
20	07:43	07:13	06:31		17:34 (AG01)	06:43		07:01 (AG08)	06:08		06:58 (AG08)	05:58		19:40 (AG02)
	17:31	18:07	18:37	38	18:12 (AG01)	20:07	42	07:43 (AG08)	20:36	37	07:35 (AG08)	20:56	46	20:26 (AG02)
21	07:42	07:11	06:29		17:33 (AG01)	06:41		07:00 (AG08)	06:07		06:59 (AG08)	05:58		19:40 (AG02)
	17:32	18:08	18:38	39	18:12 (AG01)	20:08	44	07:44 (AG08)	20:37	35	07:34 (AG08)	20:56	46	20:26 (AG02)
22	07:41	07:10	06:27		17:33 (AG01)	06:40		06:58 (AG08)	06:07		07:00 (AG08)	05:58		19:40 (AG02)
	17:33	18:09	18:39	40	18:13 (AG01)	20:09	46	07:44 (AG08)	20:38	34	07:34 (AG08)	20:56	46	20:26 (AG02)
23	07:41	07:09	06:26		17:32 (AG01)	06:38		06:57 (AG08)	06:06		07:01 (AG08)	05:59		19:40 (AG02)
	17:34	18:10	18:40	40	18:12 (AG01)	20:10	48	07:45 (AG08)	20:39	31	07:32 (AG08)	20:56	46	20:26 (AG02)
24	07:40	07:07	06:24		17:31 (AG01)	06:37		06:55 (AG08)	06:05		07:02 (AG08)	05:59		19:41 (AG02)
	17:35	18:11	18:41	40	18:11 (AG01)	20:11	49	07:44 (AG08)	20:40	29	07:31 (AG08)	20:57	46	20:27 (AG02)
25	07:40	07:06	06:23		17:31 (AG01)	06:36		06:54 (AG08)	06:04		07:04 (AG08)	05:59		19:41 (AG02)
	17:36	18:12	18:42	41	18:12 (AG01)	20:12	51	07:45 (AG08)	20:41	26	07:30 (AG08)	20:57	46	20:27 (AG02)
26	07:39	07:04	06:21		17:31 (AG01)	06:34		06:53 (AG08)	06:04		07:05 (AG08)	05:59		19:41 (AG02)
	17:38	18:14	18:43	40	18:11 (AG01)	20:13	52	07:45 (AG08)	20:42	34	20:03 (AG02)	20:57	46	20:27 (AG02)
27	07:38	07:03	06:19		17:32 (AG01)	06:33		06:52 (AG08)	06:03		07:07 (AG08)	06:00		19:42 (AG02)
	17:39	18:15	18:44	39	18:11 (AG01)	20:14	54	07:46 (AG08)	20:42	38	20:07 (AG02)	20:57	45	20:27 (AG02)
28	07:37	07:01	06:18		17:31 (AG01)	06:32		06:51 (AG08)	06:03		07:08 (AG08)	06:00		19:42 (AG02)
	17:40	18:16	18:45	39	18:10 (AG01)	20:15	54	07:45 (AG08)	20:43	39	20:09 (AG02)	20:57	45	20:27 (AG02)
29	07:37		07:16		18:31 (AG01)	06:30		06:51 (AG08)	06:02		07:11 (AG08)	06:01		19:42 (AG02)
	17:41		19:46	37	19:08 (AG01)	20:16	54	07:45 (AG08)	20:44	37	20:11 (AG02)	20:57	44	20:26 (AG02)
30	07:36		07:15		18:32 (AG01)	06:29		06:51 (AG08)	06:02		07:15 (AG08)	06:01		19:43 (AG02)
	17:42		19:47	36	19:08 (AG01)	20:17	55	07:46 (AG08)	20:45	32	20:12 (AG02)	20:57	44	20:27 (AG02)
31	07:35		07:13		18:32 (AG01)				06:01		19:44 (AG02)			
	17:43		19:48	34	19:06 (AG01)				20:45	30	20:14 (AG02)			
Potential sun hours	302	299	370			397			444			447		
Total, worst case				687			913			1340			1283	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F073 - C2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November	December
1	06:01		19:43 (AG02)	06:24		07:03 (AG08)	06:53			07:21		18:26 (AG01)	06:53	07:26
	20:57	43	20:26 (AG02)	20:39	49	07:52 (AG08)	19:58			19:10	16	18:42 (AG01)	17:25	17:02
2	06:02		19:44 (AG02)	06:25		07:02 (AG08)	06:54			07:22		18:31 (AG01)	06:54	07:27
	20:57	43	20:27 (AG02)	20:38	50	07:52 (AG08)	19:56			19:08	5	18:36 (AG01)	17:24	17:02
3	06:02		19:44 (AG02)	06:26		07:01 (AG08)	06:55			07:23			06:55	07:28
	20:57	42	20:26 (AG02)	20:37	51	07:52 (AG08)	19:55			19:06			17:23	17:02
4	06:03		19:45 (AG02)	06:27		07:01 (AG08)	06:56			07:24			06:56	07:29
	20:56	42	20:27 (AG02)	20:36	52	07:53 (AG08)	19:53			19:05			17:22	17:02
5	06:03		19:45 (AG02)	06:28		07:01 (AG08)	06:57			07:25			06:57	07:30
	20:56	41	20:26 (AG02)	20:35	52	07:53 (AG08)	19:52			19:03			17:21	17:02
6	06:04		19:46 (AG02)	06:29		07:00 (AG08)	06:57		18:41 (AG01)	07:26			06:58	07:31
	20:56	40	20:26 (AG02)	20:34	54	07:54 (AG08)	19:50	6	18:47 (AG01)	19:02			17:20	17:02
7	06:05		19:47 (AG02)	06:30		07:00 (AG08)	06:58		18:35 (AG01)	07:27			06:59	07:32
	20:56	39	20:26 (AG02)	20:33	54	07:54 (AG08)	19:49	16	18:51 (AG01)	19:00			17:18	17:02
8	06:05		19:47 (AG02)	06:31		07:00 (AG08)	06:59		18:32 (AG01)	07:28			07:01	07:33
	20:55	38	20:25 (AG02)	20:31	54	07:54 (AG08)	19:47	22	18:54 (AG01)	18:59			17:17	17:02
9	06:06		19:49 (AG02)	06:31		07:00 (AG08)	07:00		18:30 (AG01)	07:29			07:02	07:33
	20:55	36	20:25 (AG02)	20:30	54	07:54 (AG08)	19:45	25	18:55 (AG01)	18:57			17:16	17:02
10	06:06		19:49 (AG02)	06:32		07:00 (AG08)	07:01		18:28 (AG01)	07:29			07:03	07:34
	20:55	34	20:23 (AG02)	20:29	54	07:54 (AG08)	19:44	29	18:57 (AG01)	18:55			17:16	17:02
11	06:07		19:50 (AG02)	06:33		06:59 (AG08)	07:02		18:26 (AG01)	07:30			07:04	07:35
	20:54	33	20:23 (AG02)	20:28	54	07:53 (AG08)	19:42	32	18:58 (AG01)	18:54			17:15	17:02
12	06:08		19:52 (AG02)	06:34		06:59 (AG08)	07:03		18:25 (AG01)	07:31			07:05	07:36
	20:54	31	20:23 (AG02)	20:27	54	07:53 (AG08)	19:41	33	18:58 (AG01)	18:52			17:14	17:02
13	06:09		19:52 (AG02)	06:35		06:59 (AG08)	07:04		18:24 (AG01)	07:33			07:06	07:37
	20:53	29	20:21 (AG02)	20:25	54	07:53 (AG08)	19:39	35	18:59 (AG01)	18:51			17:13	17:02
14	06:09		07:21 (AG08)	06:36		06:59 (AG08)	07:05		18:23 (AG01)	07:34			07:07	07:37
	20:53	36	20:20 (AG02)	20:24	54	07:53 (AG08)	19:37	37	19:00 (AG01)	18:49			17:12	17:02
15	06:10		07:19 (AG08)	06:37		06:59 (AG08)	07:06		18:21 (AG01)	07:35			07:09	07:38
	20:52	38	20:19 (AG02)	20:23	54	07:53 (AG08)	19:36	38	18:59 (AG01)	18:48			17:11	17:02
16	06:11		07:17 (AG08)	06:38		06:59 (AG08)	07:07		18:20 (AG01)	07:36			07:10	07:39
	20:52	38	20:17 (AG02)	20:21	54	07:53 (AG08)	19:34	39	18:59 (AG01)	18:46			17:10	17:03
17	06:11		07:15 (AG08)	06:39		07:00 (AG08)	07:08		18:19 (AG01)	07:37			07:11	07:40
	20:51	36	20:14 (AG02)	20:20	52	07:52 (AG08)	19:32	40	18:59 (AG01)	18:45			17:10	17:03
18	06:12		07:14 (AG08)	06:40		07:01 (AG08)	07:08		18:19 (AG01)	07:38			07:12	07:40
	20:51	26	20:08 (AG02)	20:19	51	07:52 (AG08)	19:31	40	18:59 (AG01)	18:44			17:09	17:03
19	06:13		07:13 (AG08)	06:41		07:02 (AG08)	07:09		18:18 (AG01)	07:39			07:13	07:41
	20:50	28	07:41 (AG08)	20:17	49	07:51 (AG08)	19:29	41	18:59 (AG01)	18:42			17:08	17:04
20	06:14		07:12 (AG08)	06:42		07:02 (AG08)	07:10		18:18 (AG01)	07:40			07:14	07:41
	20:49	30	07:42 (AG08)	20:16	47	07:49 (AG08)	19:27	40	18:58 (AG01)	18:41			17:07	17:04
21	06:15		07:10 (AG08)	06:43		07:03 (AG08)	07:11		18:18 (AG01)	07:41			07:15	07:42
	20:49	33	07:43 (AG08)	20:14	46	07:49 (AG08)	19:26	40	18:58 (AG01)	18:39			17:07	17:05
22	06:15		07:09 (AG08)	06:44		07:04 (AG08)	07:12		18:18 (AG01)	07:42			07:16	07:42
	20:48	35	07:44 (AG08)	20:13	44	07:48 (AG08)	19:24	39	18:57 (AG01)	18:38			17:06	17:05
23	06:16		07:09 (AG08)	06:44		07:05 (AG08)	07:13		18:18 (AG01)	07:43			07:17	07:43
	20:47	36	07:45 (AG08)	20:12	42	07:47 (AG08)	19:23	39	18:57 (AG01)	18:37			17:06	17:06
24	06:17		07:08 (AG08)	06:45		07:06 (AG08)	07:14		18:18 (AG01)	07:44			07:19	07:43
	20:46	38	07:46 (AG08)	20:10	40	07:46 (AG08)	19:21	38	18:56 (AG01)	18:35			17:05	17:06
25	06:18		07:07 (AG08)	06:46		07:07 (AG08)	07:15		18:19 (AG01)	06:45			07:20	07:44
	20:46	40	07:47 (AG08)	20:09	37	07:44 (AG08)	19:19	36	18:55 (AG01)	17:34			17:05	17:07
26	06:19		07:06 (AG08)	06:47		07:08 (AG08)	07:16		18:18 (AG01)	06:46			07:21	07:44
	20:45	41	07:47 (AG08)	20:07	35	07:43 (AG08)	19:18	35	18:53 (AG01)	17:33			17:04	17:07
27	06:20		07:05 (AG08)	06:48		07:09 (AG08)	07:17		18:19 (AG01)	06:47			07:22	07:45
	20:44	43	07:48 (AG08)	20:06	32	07:41 (AG08)	19:16	32	18:51 (AG01)	17:31			17:04	17:08
28	06:21		07:05 (AG08)	06:49		07:10 (AG08)	07:18		18:20 (AG01)	06:48			07:23	07:45
	20:43	44	07:49 (AG08)	20:04	29	07:39 (AG08)	19:14	30	18:50 (AG01)	17:30			17:03	17:09
29	06:21		07:04 (AG08)	06:50		07:10 (AG08)	07:19		18:21 (AG01)	06:49			07:24	07:45
	20:42	46	07:50 (AG08)	20:03	25	07:35 (AG08)	19:13	27	18:48 (AG01)	17:29			17:03	17:09
30	06:22		07:04 (AG08)	06:51		07:12 (AG08)	07:20		18:23 (AG01)	06:51			07:25	07:45
	20:41	47	07:51 (AG08)	20:01	20	07:32 (AG08)	19:11	22	18:45 (AG01)	17:28			17:03	17:10
31	06:23		07:03 (AG08)	06:52		07:16 (AG08)				06:52				07:46
	20:40	49	07:52 (AG08)	20:00	11	07:27 (AG08)				17:26				17:11
Potential sun hours	454			425			374			347			301	293
Total, worst case		1175			1408			811			21			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F077 - Seminativo - Pascolo cespugliato

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April			May			June		
1	07:46	07:34			07:00			07:12		07:32 (AG01)	06:28		07:22 (AG01)	06:01		06:22 (AG02)
	17:12	17:45			18:17			19:49	48	08:20 (AG01)	20:18	50	08:12 (AG01)	20:46	31	06:53 (AG02)
2	07:46	07:33			06:59			07:10		07:30 (AG01)	06:27		07:22 (AG01)	06:00		06:21 (AG02)
	17:13	17:46			18:18			19:50	50	08:20 (AG01)	20:19	48	08:10 (AG01)	20:47	32	06:53 (AG02)
3	07:46	07:32			06:57			07:08		07:28 (AG01)	06:25		07:23 (AG01)	06:00		06:21 (AG02)
	17:14	17:47			18:19			19:51	53	08:21 (AG01)	20:20	46	08:09 (AG01)	20:48	33	06:54 (AG02)
4	07:46	07:31		07:51 (AG07)	06:56			07:07		07:27 (AG01)	06:24		07:24 (AG01)	06:00		06:21 (AG02)
	17:14	17:48	2	07:53 (AG07)	18:20			19:52	55	08:22 (AG01)	20:21	44	08:08 (AG01)	20:48	33	06:54 (AG02)
5	07:46	07:30		07:50 (AG07)	06:54			07:05		07:25 (AG01)	06:23		07:26 (AG01)	05:59		06:20 (AG02)
	17:15	17:49	4	07:54 (AG07)	18:21			19:53	57	08:22 (AG01)	20:22	41	08:07 (AG01)	20:49	34	06:54 (AG02)
6	07:46	07:29		07:49 (AG07)	06:53			07:04		07:25 (AG01)	06:22		07:27 (AG01)	05:59		06:20 (AG02)
	17:16	17:51	6	07:55 (AG07)	18:22			19:54	58	08:23 (AG01)	20:23	38	08:05 (AG01)	20:50	34	06:54 (AG02)
7	07:46	07:28		07:47 (AG07)	06:51			07:02		07:23 (AG01)	06:21		07:29 (AG01)	05:59		06:20 (AG02)
	17:17	17:52	8	07:55 (AG07)	18:23			19:55	60	08:23 (AG01)	20:24	35	08:04 (AG01)	20:50	35	06:55 (AG02)
8	07:46	07:27		07:46 (AG07)	06:50			07:01		07:23 (AG01)	06:20		07:30 (AG01)	05:58		06:20 (AG02)
	17:18	17:53	9	07:55 (AG07)	18:24			19:56	61	08:24 (AG01)	20:25	32	08:02 (AG01)	20:51	35	06:55 (AG02)
9	07:46	07:26		07:45 (AG07)	06:48			06:59		07:22 (AG01)	06:19		07:32 (AG01)	05:58		06:19 (AG02)
	17:19	17:54	10	07:55 (AG07)	18:25			19:57	62	08:24 (AG01)	20:26	28	08:00 (AG01)	20:51	36	06:55 (AG02)
10	07:46	07:25		07:44 (AG07)	06:46			06:57		07:21 (AG01)	06:17		07:35 (AG01)	05:58		06:19 (AG02)
	17:20	17:55	11	07:55 (AG07)	18:26			19:58	63	08:24 (AG01)	20:27	22	07:57 (AG01)	20:52	36	06:55 (AG02)
11	07:46	07:24		07:43 (AG07)	06:45			06:56		07:20 (AG01)	06:16		07:38 (AG01)	05:58		06:19 (AG02)
	17:21	17:57	12	07:55 (AG07)	18:28			19:59	64	08:24 (AG01)	20:28	16	07:54 (AG01)	20:52	36	06:55 (AG02)
12	07:46	07:23		07:42 (AG07)	06:43			06:54		07:20 (AG01)	06:15		07:45 (AG01)	05:58		06:19 (AG02)
	17:22	17:58	13	07:55 (AG07)	18:29			20:00	64	08:24 (AG01)	20:29	1	07:46 (AG01)	20:53	37	06:56 (AG02)
13	07:45	07:21		07:40 (AG07)	06:42			06:53		07:19 (AG01)	06:14			05:58		06:19 (AG02)
	17:23	17:59	13	07:53 (AG07)	18:30			20:01	65	08:24 (AG01)	20:30			20:53	37	06:56 (AG02)
14	07:45	07:20		07:39 (AG07)	06:40			06:51		07:19 (AG01)	06:13			05:58		06:19 (AG02)
	17:24	18:00	13	07:52 (AG07)	18:31			20:02	65	08:24 (AG01)	20:31			20:54	37	06:56 (AG02)
15	07:45	07:19		07:41 (AG07)	06:39			06:50		07:18 (AG01)	06:12			05:58		06:19 (AG02)
	17:25	18:01	9	07:50 (AG07)	18:32			20:03	65	08:23 (AG01)	20:32			20:54	37	06:56 (AG02)
16	07:44	07:18			06:37			06:48		07:18 (AG01)	06:12		06:31 (AG02)	05:58		06:19 (AG02)
	17:26	18:02			18:33			20:04	65	08:23 (AG01)	20:33	7	06:38 (AG02)	20:55	37	06:56 (AG02)
17	07:44	07:17			06:35			06:47		07:18 (AG01)	06:11		06:30 (AG02)	05:58		06:19 (AG02)
	17:27	18:04			18:34			20:05	64	08:22 (AG01)	20:34	10	06:40 (AG02)	20:55	37	06:56 (AG02)
18	07:44	07:15			06:34			06:45		07:18 (AG01)	06:10		06:30 (AG02)	05:58		06:19 (AG02)
	17:29	18:05			18:35			20:06	65	08:23 (AG01)	20:35	13	06:43 (AG02)	20:55	38	06:57 (AG02)
19	07:43	07:14			06:32			06:44		07:17 (AG01)	06:09		06:29 (AG02)	05:58		06:20 (AG02)
	17:30	18:06			18:36			20:07	64	08:21 (AG01)	20:36	15	06:44 (AG02)	20:56	38	06:58 (AG02)
20	07:43	07:13			06:31			06:43		07:17 (AG01)	06:08		06:28 (AG02)	05:58		06:20 (AG02)
	17:31	18:07			18:37			20:08	64	08:21 (AG01)	20:37	17	06:45 (AG02)	20:56	38	06:58 (AG02)
21	07:42	07:11			06:29			06:41		07:18 (AG01)	06:07		06:27 (AG02)	05:58		06:20 (AG02)
	17:32	18:08			18:38			20:09	63	08:21 (AG01)	20:37	19	06:46 (AG02)	20:56	38	06:58 (AG02)
22	07:42	07:10			06:28			06:40		07:17 (AG01)	06:07		06:27 (AG02)	05:58		06:20 (AG02)
	17:33	18:09			18:39			20:09	63	08:20 (AG01)	20:38	20	06:47 (AG02)	20:56	38	06:58 (AG02)
23	07:41	07:09			06:26			06:38		07:18 (AG01)	06:06		06:26 (AG02)	05:59		06:20 (AG02)
	17:34	18:10			18:40			20:10	62	08:20 (AG01)	20:39	22	06:48 (AG02)	20:57	38	06:58 (AG02)
24	07:40	07:07			06:24			06:37		07:18 (AG01)	06:05		06:25 (AG02)	05:59		06:21 (AG02)
	17:35	18:11			18:41			20:11	61	08:19 (AG01)	20:40	23	06:48 (AG02)	20:57	38	06:59 (AG02)
25	07:40	07:06			06:23			06:36		07:18 (AG01)	06:05		06:25 (AG02)	05:59		06:21 (AG02)
	17:36	18:13			18:42			20:12	60	08:18 (AG01)	20:41	24	06:49 (AG02)	20:57	38	06:59 (AG02)
26	07:39	07:04			06:21		06:50 (AG01)	06:34		07:19 (AG01)	06:04		06:24 (AG02)	06:00		06:21 (AG02)
	17:38	18:14			18:43	14	07:04 (AG01)	20:13	58	08:17 (AG01)	20:42	26	06:50 (AG02)	20:57	37	06:58 (AG02)
27	07:38	07:03			06:20		06:45 (AG01)	06:33		07:19 (AG01)	06:03		06:24 (AG02)	06:00		06:22 (AG02)
	17:39	18:15			18:44	25	07:10 (AG01)	20:14	57	08:16 (AG01)	20:42	27	06:51 (AG02)	20:57	37	06:59 (AG02)
28	07:37	07:02			06:18		06:41 (AG01)	06:32		07:19 (AG01)	06:03		06:23 (AG02)	06:00		06:22 (AG02)
	17:40	18:16			18:45	31	07:12 (AG01)	20:15	56	08:15 (AG01)	20:43	28	06:51 (AG02)	20:57	37	06:59 (AG02)
29	07:37				07:16		07:38 (AG01)	06:30		07:20 (AG01)	06:02		06:23 (AG02)	06:01		06:23 (AG02)
	17:41				19:46	36	08:14 (AG01)	20:16	54	08:14 (AG01)	20:44	29	06:52 (AG02)	20:57	37	07:00 (AG02)
30	07:36				07:15		07:36 (AG01)	06:29		07:21 (AG01)	06:02		06:22 (AG02)	06:01		06:23 (AG02)
	17:42				19:47	41	08:17 (AG01)	20:17	52	08:13 (AG01)	20:45	30	06:52 (AG02)	20:57	37	07:00 (AG02)
31	07:35				07:13		07:33 (AG01)				06:01		06:22 (AG02)			
	17:44				19:48	45	08:18 (AG01)				20:46	30	06:52 (AG02)			
Potential sun hours	302	299			370			397			444			447		
Total, worst case			110			192			1798			741			1086	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F077 - Seminativo - Pascolo cespugliato

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November			December
1	06:02		06:23 (AG02)	06:24		07:51 (AG01)	06:53		07:19 (AG01)	07:21			06:53		07:14 (AG07)	07:26
	20:57	36	06:59 (AG02)	20:39	10	08:01 (AG01)	19:58	64	08:23 (AG01)	19:10			17:25	11	07:25 (AG07)	17:03
2	06:02		06:24 (AG02)	06:25		07:47 (AG01)	06:54		07:19 (AG01)	07:22			06:54		07:15 (AG07)	07:27
	20:57	36	07:00 (AG02)	20:38	19	08:06 (AG01)	19:57	63	08:22 (AG01)	19:08			17:24	10	07:25 (AG07)	17:02
3	06:02		06:24 (AG02)	06:26		07:43 (AG01)	06:55		07:20 (AG01)	07:23			06:55		07:16 (AG07)	07:28
	20:57	36	07:00 (AG02)	20:37	25	08:08 (AG01)	19:55	62	08:22 (AG01)	19:06			17:23	9	07:25 (AG07)	17:02
4	06:03		06:25 (AG02)	06:27		07:41 (AG01)	06:56		07:20 (AG01)	07:24			06:56		07:17 (AG07)	07:29
	20:56	35	07:00 (AG02)	20:36	29	08:10 (AG01)	19:53	61	08:21 (AG01)	19:05			17:22	7	07:24 (AG07)	17:02
5	06:04		06:25 (AG02)	06:28		07:39 (AG01)	06:57		07:20 (AG01)	07:25			06:57		07:19 (AG07)	07:30
	20:56	35	07:00 (AG02)	20:35	33	08:12 (AG01)	19:52	60	08:20 (AG01)	19:03			17:21	6	07:25 (AG07)	17:02
6	06:04		06:26 (AG02)	06:29		07:38 (AG01)	06:58		07:21 (AG01)	07:26			06:58		07:20 (AG07)	07:31
	20:56	34	07:00 (AG02)	20:34	36	08:14 (AG01)	19:50	58	08:19 (AG01)	19:02			17:20	4	07:24 (AG07)	17:02
7	06:05		06:27 (AG02)	06:30		07:36 (AG01)	06:58		07:20 (AG01)	07:27			07:00		07:21 (AG07)	07:32
	20:56	34	07:01 (AG02)	20:33	39	08:15 (AG01)	19:49	57	08:17 (AG01)	19:00			17:19	2	07:23 (AG07)	17:02
8	06:05		06:27 (AG02)	06:31		07:35 (AG01)	06:59		07:21 (AG01)	07:28			07:01			07:33
	20:56	33	07:00 (AG02)	20:31	42	08:17 (AG01)	19:47	55	08:16 (AG01)	18:59			17:18			17:02
9	06:06		06:28 (AG02)	06:32		07:34 (AG01)	07:00		07:22 (AG01)	07:29			07:02			07:33
	20:55	33	07:01 (AG02)	20:30	44	08:18 (AG01)	19:45	53	08:15 (AG01)	18:57			17:17			17:02
10	06:07		06:28 (AG02)	06:32		07:32 (AG01)	07:01		07:23 (AG01)	07:30			07:03			07:34
	20:55	32	07:00 (AG02)	20:29	47	08:19 (AG01)	19:44	50	08:13 (AG01)	18:56			17:16			17:02
11	06:07		06:29 (AG02)	06:33		07:30 (AG01)	07:02		07:24 (AG01)	07:31			07:04			07:35
	20:54	31	07:00 (AG02)	20:28	49	08:19 (AG01)	19:42	48	08:12 (AG01)	18:54			17:15			17:02
12	06:08		06:30 (AG02)	06:34		07:29 (AG01)	07:03		07:25 (AG01)	07:32			07:05			07:36
	20:54	31	07:01 (AG02)	20:27	51	08:20 (AG01)	19:41	45	08:10 (AG01)	18:52			17:14			17:02
13	06:09		06:30 (AG02)	06:35		07:28 (AG01)	07:04		07:27 (AG01)	07:33			07:06			07:37
	20:54	30	07:00 (AG02)	20:25	53	08:21 (AG01)	19:39	41	08:08 (AG01)	18:51			17:13			17:02
14	06:09		06:31 (AG02)	06:36		07:28 (AG01)	07:05		07:29 (AG01)	07:34			07:07			07:37
	20:53	29	07:00 (AG02)	20:24	54	08:22 (AG01)	19:37	37	08:06 (AG01)	18:49			17:12			17:02
15	06:10		06:32 (AG02)	06:37		07:27 (AG01)	07:06		07:31 (AG01)	07:35			07:09			07:38
	20:53	28	07:00 (AG02)	20:23	56	08:23 (AG01)	19:36	32	08:03 (AG01)	18:48			17:11			17:02
16	06:11		06:33 (AG02)	06:38		07:26 (AG01)	07:07		07:33 (AG01)	07:36			07:10			07:39
	20:52	27	07:00 (AG02)	20:21	57	08:23 (AG01)	19:34	26	07:59 (AG01)	18:47			17:10			17:03
17	06:12		06:33 (AG02)	06:39		07:25 (AG01)	07:08		07:37 (AG01)	07:37			07:11			07:40
	20:51	26	06:59 (AG02)	20:20	59	08:24 (AG01)	19:32	17	07:54 (AG01)	18:45			17:10			17:03
18	06:12		06:34 (AG02)	06:40		07:25 (AG01)	07:09			07:38			07:12			07:40
	20:51	25	06:59 (AG02)	20:19	60	08:25 (AG01)	19:31			18:44			17:09			17:03
19	06:13		06:35 (AG02)	06:41		07:24 (AG01)	07:09			07:39			07:13			07:41
	20:50	24	06:59 (AG02)	20:17	61	08:25 (AG01)	19:29			18:42			17:08			17:04
20	06:14		06:36 (AG02)	06:42		07:24 (AG01)	07:10			07:40			07:14			07:41
	20:49	23	06:59 (AG02)	20:16	61	08:25 (AG01)	19:28			18:41			17:08			17:04
21	06:15		06:36 (AG02)	06:43		07:22 (AG01)	07:11			07:41			07:15			07:42
	20:49	21	06:57 (AG02)	20:14	63	08:25 (AG01)	19:26			18:39			17:07			17:05
22	06:15		06:37 (AG02)	06:44		07:22 (AG01)	07:12			07:42			07:16			07:43
	20:48	20	06:57 (AG02)	20:13	63	08:25 (AG01)	19:24			18:38			17:06			17:05
23	06:16		06:38 (AG02)	06:45		07:21 (AG01)	07:13			07:43			07:18			07:43
	20:47	18	06:56 (AG02)	20:12	64	08:25 (AG01)	19:23			18:37			17:06			17:06
24	06:17		06:39 (AG02)	06:45		07:21 (AG01)	07:14			07:44			07:19			07:43
	20:46	16	06:55 (AG02)	20:10	64	08:25 (AG01)	19:21			18:35			17:05			17:06
25	06:18		06:40 (AG02)	06:46		07:21 (AG01)	07:15			06:45			07:20			07:44
	20:46	14	06:54 (AG02)	20:09	64	08:25 (AG01)	19:19			17:34			17:05			17:07
26	06:19		06:40 (AG02)	06:47		07:20 (AG01)	07:16			06:46		07:14 (AG07)	07:21			07:44
	20:45	12	06:52 (AG02)	20:07	65	08:25 (AG01)	19:18			17:33	3	07:17 (AG07)	17:04			17:07
27	06:20		06:41 (AG02)	06:48		07:20 (AG01)	07:17			06:47		07:10 (AG07)	07:22			07:45
	20:44	9	06:50 (AG02)	20:06	65	08:25 (AG01)	19:16			17:31	10	07:20 (AG07)	17:04			17:08
28	06:21		06:42 (AG02)	06:49		07:20 (AG01)	07:18			06:48		07:09 (AG07)	07:23			07:45
	20:43	5	06:47 (AG02)	20:04	65	08:25 (AG01)	19:15			17:30	13	07:22 (AG07)	17:03			17:09
29	06:21			06:50		07:20 (AG01)	07:19			06:49		07:10 (AG07)	07:24			07:45
	20:42			20:03	65	08:25 (AG01)	19:13			17:29	13	07:23 (AG07)	17:03			17:09
30	06:22			06:51		07:19 (AG01)	07:20			06:51		07:11 (AG07)	07:25			07:46
	20:41			20:01	65	08:24 (AG01)	19:11			17:28	13	07:24 (AG07)	17:03			17:10
31	06:23			06:52		07:19 (AG01)				06:52		07:13 (AG07)				07:46
	20:40			20:00	64	08:23 (AG01)				17:26	12	07:25 (AG07)				17:11
Potential sun hours	454			425			374			347			301			293
Total, worst case		733			1592			829			64			49		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F079 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May			June
1	07:46	07:34			07:00		07:19 (AG07)	07:12	06:28			06:01
	17:12	17:45			18:17	9	07:28 (AG07)	19:49	20:18			20:46
2	07:46	07:33			06:59		07:17 (AG07)	07:10	06:27			06:00
	17:13	17:46			18:18	11	07:28 (AG07)	19:50	20:19			20:47
3	07:46	07:32			06:57		07:16 (AG07)	07:08	06:25			06:00
	17:14	17:47			18:19	13	07:29 (AG07)	19:51	20:20			20:48
4	07:46	07:31			06:56		07:14 (AG07)	07:07	06:24			06:00
	17:14	17:48			18:20	15	07:29 (AG07)	19:52	20:21			20:48
5	07:46	07:30			06:54		07:13 (AG07)	07:05	06:23			05:59
	17:15	17:49			18:21	16	07:29 (AG07)	19:53	20:22			20:49
6	07:46	07:29			06:53		07:11 (AG07)	07:04	06:22			05:59
	17:16	17:51			18:22	18	07:29 (AG07)	19:54	20:23			20:50
7	07:46	07:28			06:51		07:10 (AG07)	07:02	06:21			05:59
	17:17	17:52			18:23	19	07:29 (AG07)	19:55	20:24			20:50
8	07:46	07:27			06:50		07:08 (AG07)	07:01	06:20		06:39 (AG08)	05:58
	17:18	17:53			18:24	20	07:28 (AG07)	19:56	20:25	2	06:41 (AG08)	20:51
9	07:46	07:26			06:48		07:06 (AG07)	06:59	06:19		06:38 (AG08)	05:58
	17:19	17:54			18:25	20	07:26 (AG07)	19:57	20:26	3	06:41 (AG08)	20:51
10	07:46	07:25			06:46		07:05 (AG07)	06:57	06:17		06:37 (AG08)	05:58
	17:20	17:55			18:26	21	07:26 (AG07)	19:58	20:27	5	06:42 (AG08)	20:52
11	07:46	07:24			06:45		07:05 (AG07)	06:56	06:16		06:36 (AG08)	05:58
	17:21	17:57			18:28	19	07:24 (AG07)	19:59	20:28	6	06:42 (AG08)	20:52
12	07:46	07:23			06:43		07:07 (AG07)	06:54	06:15		06:35 (AG08)	05:58
	17:22	17:58			18:29	16	07:23 (AG07)	20:00	20:29	7	06:42 (AG08)	20:53
13	07:45	07:21			06:42		07:09 (AG07)	06:53	06:14		06:34 (AG08)	05:58
	17:23	17:59			18:30	10	07:19 (AG07)	20:01	20:30	8	06:42 (AG08)	20:53
14	07:45	07:20			06:40			06:51	06:13		06:33 (AG08)	05:58
	17:24	18:00			18:31			20:02	20:31	9	06:42 (AG08)	20:54
15	07:45	07:19			06:39			06:50	06:12		06:32 (AG08)	05:58
	17:25	18:01			18:32			20:03	20:32	9	06:41 (AG08)	20:54
16	07:44	07:18			06:37			06:48	06:12		06:31 (AG08)	05:58
	17:26	18:02			18:33			20:04	20:33	10	06:41 (AG08)	20:55
17	07:44	07:17			06:35			06:47	06:11		06:30 (AG08)	05:58
	17:27	18:03			18:34			20:05	20:34	10	06:40 (AG08)	20:55
18	07:44	07:15			06:34			06:45	06:10		06:30 (AG08)	05:58
	17:29	18:05			18:35			20:06	20:35	11	06:41 (AG08)	20:55
19	07:43	07:14			06:32			06:44	06:09		06:29 (AG08)	05:58
	17:30	18:06			18:36			20:06	20:36	11	06:40 (AG08)	20:56
20	07:43	07:13			06:31			06:43	06:08		06:28 (AG08)	05:58
	17:31	18:07			18:37			20:07	20:36	11	06:39 (AG08)	20:56
21	07:42	07:11			06:29			06:41	06:07		06:27 (AG08)	05:58
	17:32	18:08			18:38			20:08	20:37	11	06:38 (AG08)	20:56
22	07:41	07:10			06:27			06:40	06:07		06:27 (AG08)	05:58
	17:33	18:09			18:39			20:09	20:38	10	06:37 (AG08)	20:56
23	07:41	07:09			06:26			06:38	06:06		06:28 (AG08)	05:59
	17:34	18:10			18:40			20:10	20:39	7	06:35 (AG08)	20:57
24	07:40	07:07			06:24			06:37	06:05			05:59
	17:35	18:11			18:41			20:11	20:40			20:57
25	07:40	07:06			06:23			06:36	06:05			05:59
	17:36	18:12			18:42			20:12	20:41			20:57
26	07:39	07:04			06:21			06:34	06:04			06:00
	17:38	18:14			18:43			20:13	20:42			20:57
27	07:38	07:03		07:22 (AG07)	06:19			06:33	06:03			06:00
	17:39	18:15	3	07:25 (AG07)	18:44			20:14	20:42			20:57
28	07:37	07:01		07:20 (AG07)	06:18			06:32	06:03			06:00
	17:40	18:16	6	07:26 (AG07)	18:45			20:15	20:43			20:57
29	07:37				07:16			06:30	06:02			06:01
	17:41				19:46			20:16	20:44			20:57
30	07:36				07:15			06:29	06:02			06:01
	17:42				19:47			20:17	20:45			20:57
31	07:35				07:13				06:01			
	17:44				19:48				20:45			
Potential sun hours	302	299			370			397	444			447
Total, worst case			9			207				130		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F079 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September			October			November	December
1	06:02			06:24		06:46 (AG08)	06:53			07:21		07:46 (AG07)	06:53	07:26
	20:57			20:39	6	06:52 (AG08)	19:58			19:10	14	08:00 (AG07)	17:25	17:03
2	06:02			06:25		06:47 (AG08)	06:54			07:22		07:44 (AG07)	06:54	07:27
	20:57			20:38	5	06:52 (AG08)	19:57			19:08	18	08:02 (AG07)	17:24	17:02
3	06:02			06:26		06:47 (AG08)	06:55			07:23		07:42 (AG07)	06:55	07:28
	20:57			20:37	4	06:51 (AG08)	19:55			19:06	21	08:03 (AG07)	17:23	17:02
4	06:03			06:27		06:48 (AG08)	06:56			07:24		07:43 (AG07)	06:56	07:29
	20:56			20:36	3	06:51 (AG08)	19:53			19:05	21	08:04 (AG07)	17:22	17:02
5	06:04			06:28		06:49 (AG08)	06:57			07:25		07:44 (AG07)	06:57	07:30
	20:56			20:35	1	06:50 (AG08)	19:52			19:03	20	08:04 (AG07)	17:21	17:02
6	06:04			06:29			06:58			07:26		07:45 (AG07)	06:58	07:31
	20:56			20:34			19:50			19:02	19	08:04 (AG07)	17:20	17:02
7	06:05			06:30			06:58			07:27		07:46 (AG07)	07:00	07:32
	20:56			20:33			19:49			19:00	18	08:04 (AG07)	17:19	17:02
8	06:05			06:31			06:59			07:28		07:47 (AG07)	07:01	07:33
	20:55			20:31			19:47			18:59	17	08:04 (AG07)	17:18	17:02
9	06:06			06:32			07:00			07:29		07:48 (AG07)	07:02	07:33
	20:55			20:30			19:45			18:57	16	08:04 (AG07)	17:17	17:02
10	06:07			06:32			07:01			07:30		07:49 (AG07)	07:03	07:34
	20:55			20:29			19:44			18:56	14	08:03 (AG07)	17:16	17:02
11	06:07			06:33			07:02			07:31		07:50 (AG07)	07:04	07:35
	20:54			20:28			19:42			18:54	12	08:02 (AG07)	17:15	17:02
12	06:08			06:34			07:03			07:32		07:51 (AG07)	07:05	07:36
	20:54			20:27			19:41			18:52	10	08:01 (AG07)	17:14	17:02
13	06:09			06:35			07:04			07:33		07:52 (AG07)	07:06	07:37
	20:54			20:25			19:39			18:51	8	08:00 (AG07)	17:13	17:02
14	06:09			06:36			07:05			07:34		07:53 (AG07)	07:07	07:37
	20:53			20:24			19:37			18:49	5	07:58 (AG07)	17:12	17:02
15	06:10			06:37			07:06			07:35		07:54 (AG07)	07:09	07:38
	20:53			20:23			19:36			18:48	2	07:56 (AG07)	17:11	17:02
16	06:11			06:38			07:07			07:36			07:10	07:39
	20:52			20:21			19:34			18:47			17:10	17:03
17	06:12			06:39			07:08			07:37			07:11	07:40
	20:51			20:20			19:32			18:45			17:10	17:03
18	06:12			06:40			07:09			07:38			07:12	07:40
	20:51			20:19			19:31			18:44			17:09	17:03
19	06:13			06:41			07:09			07:39			07:13	07:41
	20:50			20:17			19:29			18:42			17:08	17:04
20	06:14		06:41 (AG08)	06:42			07:10			07:40			07:14	07:41
	20:49	3	06:44 (AG08)	20:16			19:28			18:41			17:08	17:04
21	06:15		06:37 (AG08)	06:43			07:11			07:41			07:15	07:42
	20:49	9	06:46 (AG08)	20:14			19:26			18:39			17:07	17:05
22	06:15		06:37 (AG08)	06:44			07:12			07:42			07:16	07:42
	20:48	10	06:47 (AG08)	20:13			19:24			18:38			17:06	17:05
23	06:16		06:38 (AG08)	06:45			07:13			07:43			07:17	07:43
	20:47	11	06:49 (AG08)	20:12			19:23			18:37			17:06	17:06
24	06:17		06:39 (AG08)	06:45			07:14			07:44			07:19	07:43
	20:46	11	06:50 (AG08)	20:10			19:21			18:35			17:05	17:06
25	06:18		06:40 (AG08)	06:46			07:15			06:45			07:20	07:44
	20:46	11	06:51 (AG08)	20:09			19:19			17:34			17:05	17:07
26	06:19		06:40 (AG08)	06:47			07:16			06:46			07:21	07:44
	20:45	10	06:50 (AG08)	20:07			19:18			17:33			17:04	17:07
27	06:20		06:41 (AG08)	06:48			07:17			06:47			07:22	07:45
	20:44	10	06:51 (AG08)	20:06			19:16			17:31			17:04	17:08
28	06:21		06:42 (AG08)	06:49			07:18			06:48			07:23	07:45
	20:43	10	06:52 (AG08)	20:04			19:15			17:30			17:03	17:09
29	06:21		06:43 (AG08)	06:50			07:19			06:49			07:24	07:45
	20:42	9	06:52 (AG08)	20:03			19:13			17:29			17:03	17:09
30	06:22		06:44 (AG08)	06:51			07:20		07:50 (AG07)	06:51			07:25	07:46
	20:41	8	06:52 (AG08)	20:01			19:11	7	07:57 (AG07)	17:28			17:03	17:10
31	06:23		06:45 (AG08)	06:52						06:52				07:46
	20:40	7	06:52 (AG08)	20:00						17:26				17:11
Potential sun hours	454			425			374			347			301	293
Total, worst case		109			19			7			215			

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F080 - Uliveto - Pascolo cespugliato

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April		May	June	July	August		September		October	November	December
1	07:46	07:34	07:00	07:12		06:28	06:01	06:02	06:24		06:53	07:13 (AG07)	07:21	06:53	07:26
	17:12	17:45	18:17	19:49		20:18	20:46	20:57	20:39		19:58	07:34 (AG07)	19:10	17:25	17:03
2	07:46	07:33	06:59	07:10		06:27	06:00	06:02	06:25		06:54	07:14 (AG07)	07:22	06:54	07:27
	17:13	17:46	18:18	19:50		20:19	20:47	20:57	20:38		19:57	07:34 (AG07)	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08		06:25	06:00	06:02	06:26		06:55	07:15 (AG07)	07:23	06:55	07:28
	17:14	17:47	18:19	19:51		20:20	20:48	20:57	20:37		19:55	07:33 (AG07)	19:06	17:23	17:02
4	07:46	07:31	06:56	07:07	07:25 (AG07)	06:24	06:00	06:03	06:27		06:56	07:16 (AG07)	07:24	06:56	07:29
	17:14	17:48	18:20	19:52	5 07:30 (AG07)	20:21	20:48	20:56	20:36		19:53	16 07:32 (AG07)	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	07:23 (AG07)	06:23	05:59	06:04	06:28		06:57	07:17 (AG07)	07:25	06:57	07:30
	17:15	17:49	18:21	19:53	8 07:31 (AG07)	20:22	20:49	20:56	20:35		19:52	14 07:31 (AG07)	19:03	17:21	17:02
6	07:46	07:29	06:53	07:04	07:22 (AG07)	06:22	05:59	06:04	06:29		06:58	07:18 (AG07)	07:26	06:58	07:31
	17:16	17:51	18:22	19:54	11 07:33 (AG07)	20:23	20:50	20:56	20:34		19:50	12 07:30 (AG07)	19:02	17:20	17:02
7	07:46	07:28	06:51	07:02	07:20 (AG07)	06:21	05:59	06:05	06:30		06:58	07:18 (AG07)	07:27	06:59	07:32
	17:17	17:52	18:23	19:55	14 07:34 (AG07)	20:24	20:50	20:56	20:33		19:49	9 07:27 (AG07)	19:00	17:19	17:02
8	07:46	07:27	06:50	07:01	07:19 (AG07)	06:20	05:58	06:05	06:31		06:59	07:19 (AG07)	07:28	07:01	07:33
	17:18	17:53	18:24	19:56	16 07:35 (AG07)	20:25	20:51	20:55	20:31		19:47	5 07:24 (AG07)	18:59	17:18	17:02
9	07:46	07:26	06:48	06:59	07:17 (AG07)	06:19	05:58	06:06	06:32		07:00		07:29	07:02	07:33
	17:19	17:54	18:25	19:57	18 07:35 (AG07)	20:26	20:51	20:55	20:30		19:45		18:57	17:17	17:02
10	07:46	07:25	06:46	06:57	07:16 (AG07)	06:17	05:58	06:07	06:32		07:01		07:30	07:03	07:34
	17:20	17:55	18:26	19:58	20 07:36 (AG07)	20:27	20:52	20:55	20:29		19:44		18:56	17:16	17:02
11	07:46	07:24	06:45	06:56	07:14 (AG07)	06:16	05:58	06:07	06:33		07:02		07:31	07:04	07:35
	17:21	17:57	18:27	19:59	21 07:35 (AG07)	20:28	20:52	20:54	20:28		19:42		18:54	17:15	17:02
12	07:46	07:23	06:43	06:54	07:13 (AG07)	06:15	05:58	06:08	06:34		07:03		07:32	07:05	07:36
	17:22	17:58	18:29	20:00	23 07:36 (AG07)	20:29	20:53	20:54	20:27		19:41		18:52	17:14	17:02
13	07:45	07:21	06:42	06:53	07:11 (AG07)	06:14	05:58	06:09	06:35		07:04		07:33	07:06	07:37
	17:23	17:59	18:30	20:01	24 07:35 (AG07)	20:30	20:53	20:54	20:25		19:39		18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	07:10 (AG07)	06:13	05:58	06:09	06:36		07:05		07:34	07:07	07:37
	17:24	18:00	18:31	20:02	25 07:35 (AG07)	20:31	20:54	20:53	20:24		19:37		18:49	17:12	17:02
15	07:45	07:19	06:39	06:50	07:08 (AG07)	06:12	05:58	06:10	06:37		07:06		07:35	07:09	07:38
	17:25	18:01	18:32	20:03	26 07:34 (AG07)	20:32	20:54	20:52	20:23		19:36		18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	07:07 (AG07)	06:12	05:58	06:11	06:38		07:07		07:36	07:10	07:39
	17:26	18:02	18:33	20:04	27 07:34 (AG07)	20:33	20:55	20:52	20:21		19:34		18:46	17:10	17:03
17	07:44	07:17	06:35	06:47	07:05 (AG07)	06:11	05:58	06:12	06:39		07:08		07:37	07:11	07:40
	17:27	18:03	18:34	20:04	28 07:33 (AG07)	20:34	20:55	20:51	20:20		19:32		18:45	17:10	17:03
18	07:44	07:15	06:34	06:45	07:05 (AG07)	06:10	05:58	06:12	06:40		07:09		07:38	07:12	07:40
	17:29	18:05	18:35	20:05	27 07:32 (AG07)	20:35	20:55	20:51	20:19		19:31		18:44	17:09	17:03
19	07:43	07:14	06:32	06:44	07:05 (AG07)	06:09	05:58	06:13	06:41	07:20 (AG07)	07:09		07:39	07:13	07:41
	17:30	18:06	18:36	20:06	26 07:31 (AG07)	20:36	20:56	20:50	20:17	6 07:26 (AG07)	19:29		18:42	17:08	17:04
20	07:43	07:13	06:31	06:43	07:06 (AG07)	06:08	05:58	06:14	06:42	07:16 (AG07)	07:10		07:40	07:14	07:41
	17:31	18:07	18:37	20:07	24 07:30 (AG07)	20:36	20:56	20:49	20:16	14 07:30 (AG07)	19:28		18:41	17:08	17:04
21	07:42	07:11	06:29	06:41	07:08 (AG07)	06:07	05:58	06:15	06:43	07:13 (AG07)	07:11		07:41	07:15	07:42
	17:32	18:08	18:38	20:08	21 07:29 (AG07)	20:37	20:56	20:49	20:14	18 07:31 (AG07)	19:26		18:39	17:07	17:05
22	07:41	07:10	06:27	06:40	07:09 (AG07)	06:07	05:58	06:15	06:44	07:11 (AG07)	07:12		07:42	07:16	07:42
	17:33	18:09	18:39	20:09	17 07:26 (AG07)	20:38	20:56	20:48	20:13	22 07:33 (AG07)	19:24		18:38	17:06	17:05
23	07:41	07:09	06:26	06:38	07:11 (AG07)	06:06	05:59	06:16	06:45	07:10 (AG07)	07:13		07:43	07:17	07:43
	17:34	18:10	18:40	20:10	13 07:24 (AG07)	20:39	20:56	20:47	20:12	24 07:34 (AG07)	19:23		18:37	17:06	17:06
24	07:40	07:07	06:24	06:37	07:16 (AG07)	06:05	05:59	06:17	06:45	07:09 (AG07)	07:14		07:44	07:19	07:43
	17:35	18:11	18:41	20:11	1 07:17 (AG07)	20:40	20:57	20:46	20:10	26 07:35 (AG07)	19:21		18:35	17:05	17:06
25	07:40	07:06	06:23	06:36		06:05	05:59	06:18	06:46	07:08 (AG07)	07:15		06:45	07:20	07:44
	17:36	18:12	18:42	20:12		20:41	20:57	20:46	20:09	27 07:35 (AG07)	19:19		17:34	17:05	17:07
26	07:39	07:04	06:21	06:34		06:04	06:00	06:19	06:47	07:08 (AG07)	07:16		06:46	07:21	07:44
	17:38	18:14	18:43	20:13		20:42	20:57	20:45	20:07	28 07:36 (AG07)	19:18		17:33	17:04	17:07
27	07:38	07:03	06:19	06:33		06:03	06:00	06:20	06:48	07:09 (AG07)	07:17		06:47	07:22	07:45
	17:39	18:15	18:44	20:14		20:42	20:57	20:44	20:06	27 07:36 (AG07)	19:16		17:31	17:04	17:08
28	07:37	07:01	06:18	06:32		06:03	06:00	06:21	06:49	07:10 (AG07)	07:18		06:48	07:23	07:45
	17:40	18:16	18:45	20:15		20:43	20:57	20:43	20:04	26 07:36 (AG07)	19:14		17:30	17:03	17:09
29	07:37		07:16	06:30		06:02	06:01	06:21	06:50	07:11 (AG07)	07:19		06:49	07:24	07:45
	17:41		19:46	20:16		20:44	20:57	20:42	20:03	25 07:36 (AG07)	19:13		17:29	17:03	17:09
30	07:36		07:15	06:29		06:02	06:01	06:22	06:51	07:11 (AG07)	07:20		06:51	07:25	07:46
	17:42		19:47	20:17		20:45	20:57	20:41	20:01	24 07:35 (AG07)	19:11		17:28	17:03	17:10
31	07:35		07:13			06:01		06:23	06:52	07:12 (AG07)			06:52		07:46
	17:44		19:48			20:45		20:40	20:00	23 07:35 (AG07)			17:26		17:11
Potential sun hours	302	299	370	397		444	447	454	425		374		347	301	293
Total, worst case					395					290		115			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F085 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:28	06:01	06:01	06:24	06:53	07:21	06:53	07:26
	17:12	17:45	18:17	19:49	20:18	20:46	20:57	20:39	19:58	19:10	17:25	17:02
2	07:46	07:33	06:58	07:10	06:27	06:00	06:02	06:25	06:54	07:22	06:54	07:27
	17:13	17:46	18:18	19:50	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:23	06:55	07:28
	17:14	17:47	18:19	19:51	20:20	20:48	20:57	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:56	07:07	06:24	05:59	06:03	06:27	06:56	07:24	06:56	07:29
	17:14	17:48	18:20	19:52	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:57	07:25	06:57	07:30
	17:15	17:49	18:21	19:53	20:22	20:49	20:56	20:35	19:52	19:03	17:21	17:02
6	07:46	07:29	06:53	07:04	06:22	05:59	06:04	06:29	06:57	07:26	06:58	07:31
	17:16	17:51	18:22	19:54	20:23	20:49	20:56	20:34	19:50	19:02	17:20	17:02
7	07:46	07:28	06:51	07:02	06:21	05:59	06:05	06:30	06:58	07:26	06:59	07:32
	17:17	17:52	18:23	19:55	20:24	20:50	20:56	20:33	19:49	19:00	17:19	17:02
8	07:46	07:27	06:49	07:00	06:20	05:58	06:05	06:31	06:59	07:27	07:01	07:32
	17:18	17:53	18:24	19:56	20:25	20:51	20:55	20:31	19:47	18:59	17:17	17:02
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:57	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:02
10	07:46	07:25	06:46	06:57	06:17	05:58	06:07	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:16	17:02
11	07:46	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:15	17:02
12	07:46	07:23	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:58	18:28	19:59	20:29	20:53	20:54	20:26	19:41	18:52	17:14	17:02
13	07:45	07:21	06:42	06:53	06:14	05:58	06:09	06:35	07:04	07:32	07:06	07:37
	17:23	17:59	18:30	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	06:13	05:58	06:09	06:36	07:05	07:33	07:07	07:37
	17:24	18:00	18:31	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:39	06:50	06:12	05:58	06:10	06:37	07:06	07:35	07:08	07:38
	17:25	18:01	18:32	20:02	20:32	20:54	20:52	20:23	19:36	18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	06:12	05:58	06:11	06:38	07:07	07:36	07:10	07:39
	17:26	18:02	18:33	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35	06:47	06:11	05:58	06:11	06:39	07:08	07:37	07:11	07:39
	17:27	18:03	18:34	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:10	17:03
18	07:43	07:15	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:38	07:12	07:40
	17:28	18:05	18:35	20:05	20:35	20:55	20:51	20:19	19:31	18:44	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:39	07:13	07:41
	17:30	18:06	18:36	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:13	06:31	06:43	06:08	05:58	06:14	06:42	07:10	07:40	07:14	07:41
	17:31	18:07	18:37	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:08	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:15	06:43	07:11	07:41	07:15	07:42
	17:32	18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:05
22	07:41	07:10	06:27	06:40	06:07	05:58	06:15	06:44	07:12	07:42	07:16	07:42
	17:33	18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:06	05:59	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:40	20:10	20:39	20:56	20:47	20:12	19:23	18:37	17:06	17:06
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:41	20:11	20:40	20:57	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06	06:23	06:36	06:04	05:59	06:18	06:46	07:15	06:45	07:20	07:44
	17:36	18:12	18:42	20:12	20:41	20:57	20:46	20:09	19:19	17:34	17:05	17:07
26	07:39	07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:21	07:44
	17:38	18:14	18:43	20:13	20:41	20:57	20:45	20:07	19:18	17:33	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	06:00	06:20	06:48	07:17	06:47	07:22	07:45
	17:39	18:15	18:44	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18	06:32	06:03	06:00	06:21	06:49	07:18	06:48	07:23	07:45
	17:40	18:16	18:45	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:09
29	07:36		07:16	06:30	06:02	06:01	06:21	06:50	07:19	06:49	07:24	07:45
	17:41		19:46	20:16	20:44	20:57	20:42	20:03	19:13	17:29	17:03	17:09
30	07:36		07:15	06:29	06:02	06:01	06:22	06:51	07:20	06:50	07:25	07:45
	17:42		19:47	20:17	20:45	20:57	20:41	20:01	19:11	17:28	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:52		07:46
	17:43		19:48		20:45		20:40	20:00		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Total, worst case												

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F091 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March			April			May	June
1	07:46	07:34	07:00			07:11		07:44 (Medio Campidano)	06:28	06:01
	17:12	17:45	18:17			19:49	4	07:48 (Medio Campidano)	20:18	20:46
2	07:46	07:33	06:58			07:10			06:27	06:00
	17:13	17:46	18:18			19:50			20:19	20:47
3	07:46	07:32	06:57			07:08			06:25	06:00
	17:13	17:47	18:19			19:51			20:20	20:48
4	07:46	07:31	06:55			07:07			06:24	05:59
	17:14	17:48	18:20			19:52			20:21	20:48
5	07:46	07:30	06:54			07:05			06:23	05:59
	17:15	17:49	18:21			19:53			20:22	20:49
6	07:46	07:29	06:52			07:04			06:22	05:59
	17:16	17:51	18:22			19:54			20:23	20:49
7	07:46	07:28	06:51			07:02			06:21	05:59
	17:17	17:52	18:23			19:55			20:24	20:50
8	07:46	07:27	06:49			07:00			06:20	05:58
	17:18	17:53	18:24			19:55			20:25	20:51
9	07:46	07:26	06:48			06:59			06:18	05:58
	17:19	17:54	18:25			19:56			20:26	20:51
10	07:46	07:25	06:46			06:57			06:17	05:58
	17:20	17:55	18:26			19:57			20:27	20:52
11	07:46	07:24	06:45			06:56			06:16	05:58
	17:21	17:56	18:27			19:58			20:28	20:52
12	07:46	07:23	06:43			06:54			06:15	05:58
	17:22	17:58	18:28			19:59			20:29	20:53
13	07:45	07:21	06:42			06:53			06:14	05:58
	17:23	17:59	18:29			20:00			20:30	20:53
14	07:45	07:20	06:40			06:51			06:13	05:58
	17:24	18:00	18:31			20:01			20:31	20:54
15	07:45	07:19	06:39			06:50			06:12	05:58
	17:25	18:01	18:32			20:02			20:32	20:54
16	07:44	07:18	06:37			06:48			06:11	05:58
	17:26	18:02	18:33			20:03			20:33	20:54
17	07:44	07:16	06:35			06:47			06:11	05:58
	17:27	18:03	18:34			20:04			20:34	20:55
18	07:43	07:15	06:34		06:52 (Medio Campidano)	06:45			06:10	05:58
	17:28	18:05	18:35	3	06:55 (Medio Campidano)	20:05			20:35	20:55
19	07:43	07:14	06:32		06:50 (Medio Campidano)	06:44			06:09	05:58
	17:30	18:06	18:36	7	06:57 (Medio Campidano)	20:06			20:35	20:55
20	07:42	07:13	06:31		06:49 (Medio Campidano)	06:43			06:08	05:58
	17:31	18:07	18:37	10	06:59 (Medio Campidano)	20:07			20:36	20:56
21	07:42	07:11	06:29		06:47 (Medio Campidano)	06:41			06:07	05:58
	17:32	18:08	18:38	12	06:59 (Medio Campidano)	20:08			20:37	20:56
22	07:41	07:10	06:27		06:46 (Medio Campidano)	06:40			06:07	05:58
	17:33	18:09	18:39	14	07:00 (Medio Campidano)	20:09			20:38	20:56
23	07:41	07:08	06:26		06:44 (Medio Campidano)	06:38			06:06	05:59
	17:34	18:10	18:40	16	07:00 (Medio Campidano)	20:10			20:39	20:56
24	07:40	07:07	06:24		06:42 (Medio Campidano)	06:37			06:05	05:59
	17:35	18:11	18:41	18	07:00 (Medio Campidano)	20:11			20:40	20:57
25	07:39	07:06	06:23		06:41 (Medio Campidano)	06:36			06:04	05:59
	17:36	18:12	18:42	19	07:00 (Medio Campidano)	20:12			20:41	20:57
26	07:39	07:04	06:21		06:39 (Medio Campidano)	06:34			06:04	05:59
	17:38	18:14	18:43	20	06:59 (Medio Campidano)	20:13			20:41	20:57
27	07:38	07:03	06:19		06:38 (Medio Campidano)	06:33			06:03	06:00
	17:39	18:15	18:44	21	06:59 (Medio Campidano)	20:14			20:42	20:57
28	07:37	07:01	06:18		06:37 (Medio Campidano)	06:32			06:03	06:00
	17:40	18:16	18:45	21	06:58 (Medio Campidano)	20:15			20:43	20:57
29	07:36		07:16		07:37 (Medio Campidano)	06:30			06:02	06:01
	17:41		19:46	19	07:56 (Medio Campidano)	20:16			20:44	20:57
30	07:36		07:15		07:39 (Medio Campidano)	06:29			06:02	06:01
	17:42		19:47	16	07:55 (Medio Campidano)	20:17			20:45	20:57
31	07:35		07:13		07:40 (Medio Campidano)				06:01	
	17:43		19:48	12	07:52 (Medio Campidano)				20:45	
Potential sun hours	302	299	370			397			444	447
Total, worst case				208			4			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F091 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October	November	December
1	06:01	06:24	06:53			07:21	06:53	07:26
	20:57	20:39	19:58			19:10	17:25	17:02
2	06:02	06:25	06:54			07:22	06:54	07:27
	20:57	20:38	19:56			19:08	17:24	17:02
3	06:02	06:26	06:55			07:23	06:55	07:28
	20:57	20:37	19:55			19:06	17:23	17:02
4	06:03	06:27	06:56			07:24	06:56	07:29
	20:56	20:36	19:53			19:05	17:22	17:02
5	06:03	06:28	06:57			07:25	06:57	07:30
	20:56	20:35	19:52			19:03	17:21	17:02
6	06:04	06:29	06:57			07:25	06:58	07:31
	20:56	20:34	19:50			19:02	17:20	17:02
7	06:05	06:30	06:58			07:26	06:59	07:32
	20:56	20:33	19:49			19:00	17:18	17:02
8	06:05	06:31	06:59			07:27	07:01	07:32
	20:55	20:31	19:47			18:59	17:17	17:02
9	06:06	06:31	07:00			07:28	07:02	07:33
	20:55	20:30	19:45			18:57	17:16	17:02
10	06:06	06:32	07:01			07:29	07:03	07:34
	20:55	20:29	19:44			18:55	17:16	17:02
11	06:07	06:33	07:02		07:38 (Medio Campidano)	07:30	07:04	07:35
	20:54	20:28	19:42	1	07:39 (Medio Campidano)	18:54	17:15	17:02
12	06:08	06:34	07:03		07:32 (Medio Campidano)	07:31	07:05	07:36
	20:54	20:26	19:41	12	07:44 (Medio Campidano)	18:52	17:14	17:02
13	06:09	06:35	07:04		07:30 (Medio Campidano)	07:32	07:06	07:37
	20:53	20:25	19:39	16	07:46 (Medio Campidano)	18:51	17:13	17:02
14	06:09	06:36	07:05		07:28 (Medio Campidano)	07:33	07:07	07:37
	20:53	20:24	19:37	19	07:47 (Medio Campidano)	18:49	17:12	17:02
15	06:10	06:37	07:06		07:26 (Medio Campidano)	07:34	07:08	07:38
	20:52	20:23	19:36	21	07:47 (Medio Campidano)	18:48	17:11	17:02
16	06:11	06:38	07:07		07:26 (Medio Campidano)	07:36	07:10	07:39
	20:52	20:21	19:34	21	07:47 (Medio Campidano)	18:46	17:10	17:03
17	06:11	06:39	07:08		07:27 (Medio Campidano)	07:37	07:11	07:39
	20:51	20:20	19:32	20	07:47 (Medio Campidano)	18:45	17:10	17:03
18	06:12	06:40	07:08		07:28 (Medio Campidano)	07:38	07:12	07:40
	20:51	20:19	19:31	19	07:47 (Medio Campidano)	18:44	17:09	17:03
19	06:13	06:41	07:09		07:29 (Medio Campidano)	07:39	07:13	07:41
	20:50	20:17	19:29	18	07:47 (Medio Campidano)	18:42	17:08	17:04
20	06:14	06:42	07:10		07:30 (Medio Campidano)	07:40	07:14	07:41
	20:49	20:16	19:27	17	07:47 (Medio Campidano)	18:41	17:07	17:04
21	06:15	06:43	07:11		07:31 (Medio Campidano)	07:41	07:15	07:42
	20:49	20:14	19:26	15	07:46 (Medio Campidano)	18:39	17:07	17:05
22	06:15	06:44	07:12		07:32 (Medio Campidano)	07:42	07:16	07:42
	20:48	20:13	19:24	13	07:45 (Medio Campidano)	18:38	17:06	17:05
23	06:16	06:44	07:13		07:33 (Medio Campidano)	07:43	07:17	07:43
	20:47	20:11	19:23	11	07:44 (Medio Campidano)	18:37	17:06	17:06
24	06:17	06:45	07:14		07:34 (Medio Campidano)	07:44	07:18	07:43
	20:46	20:10	19:21	8	07:42 (Medio Campidano)	18:35	17:05	17:06
25	06:18	06:46	07:15		07:34 (Medio Campidano)	06:45	07:20	07:44
	20:46	20:09	19:19	5	07:39 (Medio Campidano)	17:34	17:05	17:07
26	06:19	06:47	07:16			06:46	07:21	07:44
	20:45	20:07	19:18			17:33	17:04	17:07
27	06:20	06:48	07:17			06:47	07:22	07:45
	20:44	20:06	19:16			17:31	17:04	17:08
28	06:21	06:49	07:18			06:48	07:23	07:45
	20:43	20:04	19:14			17:30	17:03	17:09
29	06:21	06:50	07:19			06:49	07:24	07:45
	20:42	20:03	19:13			17:29	17:03	17:09
30	06:22	06:51	07:20			06:50	07:25	07:45
	20:41	20:01	19:11			17:28	17:03	17:10
31	06:23	06:52				06:52		07:46
	20:40	20:00				17:26		17:11
Potential sun hours	454	425	374			347	301	293
Total, worst case				216				

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
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SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F092 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March			April	May	June
1	07:46	07:34	07:00			07:11	06:28	06:01
	17:12	17:45	18:17			19:49	20:18	20:46
2	07:46	07:33	06:58			07:10	06:27	06:00
	17:13	17:46	18:18			19:50	20:19	20:47
3	07:46	07:32	06:57			07:08	06:25	06:00
	17:13	17:47	18:19			19:51	20:20	20:48
4	07:46	07:31	06:55			07:07	06:24	05:59
	17:14	17:48	18:20			19:52	20:21	20:48
5	07:46	07:30	06:54			07:05	06:23	05:59
	17:15	17:49	18:21			19:53	20:22	20:49
6	07:46	07:29	06:52			07:04	06:22	05:59
	17:16	17:51	18:22			19:54	20:23	20:49
7	07:46	07:28	06:51			07:02	06:21	05:59
	17:17	17:52	18:23			19:55	20:24	20:50
8	07:46	07:27	06:49			07:00	06:20	05:58
	17:18	17:53	18:24			19:55	20:25	20:51
9	07:46	07:26	06:48			06:59	06:18	05:58
	17:19	17:54	18:25			19:56	20:26	20:51
10	07:46	07:25	06:46		07:05 (Medio Campidano)	06:57	06:17	05:58
	17:20	17:55	18:26	6	07:11 (Medio Campidano)	19:57	20:27	20:52
11	07:46	07:24	06:45		07:03 (Medio Campidano)	06:56	06:16	05:58
	17:21	17:56	18:27	10	07:13 (Medio Campidano)	19:58	20:28	20:52
12	07:46	07:23	06:43		07:02 (Medio Campidano)	06:54	06:15	05:58
	17:22	17:58	18:28	13	07:15 (Medio Campidano)	19:59	20:29	20:53
13	07:45	07:21	06:42		07:00 (Medio Campidano)	06:53	06:14	05:58
	17:23	17:59	18:29	15	07:15 (Medio Campidano)	20:00	20:30	20:53
14	07:45	07:20	06:40		06:58 (Medio Campidano)	06:51	06:13	05:58
	17:24	18:00	18:31	18	07:16 (Medio Campidano)	20:01	20:31	20:54
15	07:45	07:19	06:39		06:57 (Medio Campidano)	06:50	06:12	05:58
	17:25	18:01	18:32	20	07:17 (Medio Campidano)	20:02	20:32	20:54
16	07:44	07:18	06:37		06:55 (Medio Campidano)	06:48	06:11	05:58
	17:26	18:02	18:33	21	07:16 (Medio Campidano)	20:03	20:33	20:54
17	07:44	07:16	06:35		06:54 (Medio Campidano)	06:47	06:11	05:58
	17:27	18:03	18:34	23	07:17 (Medio Campidano)	20:04	20:34	20:55
18	07:43	07:15	06:34		06:52 (Medio Campidano)	06:45	06:10	05:58
	17:28	18:05	18:35	24	07:16 (Medio Campidano)	20:05	20:35	20:55
19	07:43	07:14	06:32		06:50 (Medio Campidano)	06:44	06:09	05:58
	17:30	18:06	18:36	25	07:15 (Medio Campidano)	20:06	20:35	20:55
20	07:42	07:13	06:31		06:50 (Medio Campidano)	06:43	06:08	05:58
	17:31	18:07	18:37	25	07:15 (Medio Campidano)	20:07	20:36	20:56
21	07:42	07:11	06:29		06:50 (Medio Campidano)	06:41	06:07	05:58
	17:32	18:08	18:38	24	07:14 (Medio Campidano)	20:08	20:37	20:56
22	07:41	07:10	06:27		06:51 (Medio Campidano)	06:40	06:07	05:58
	17:33	18:09	18:39	22	07:13 (Medio Campidano)	20:09	20:38	20:56
23	07:41	07:08	06:26		06:51 (Medio Campidano)	06:38	06:06	05:59
	17:34	18:10	18:40	20	07:11 (Medio Campidano)	20:10	20:39	20:56
24	07:40	07:07	06:24		06:52 (Medio Campidano)	06:37	06:05	05:59
	17:35	18:11	18:41	17	07:09 (Medio Campidano)	20:11	20:40	20:57
25	07:39	07:06	06:23		06:55 (Medio Campidano)	06:36	06:04	05:59
	17:36	18:12	18:42	11	07:06 (Medio Campidano)	20:12	20:41	20:57
26	07:39	07:04	06:21			06:34	06:04	05:59
	17:38	18:13	18:43			20:13	20:41	20:57
27	07:38	07:03	06:19			06:33	06:03	06:00
	17:39	18:15	18:44			20:14	20:42	20:57
28	07:37	07:01	06:18			06:32	06:03	06:00
	17:40	18:16	18:45			20:15	20:43	20:57
29	07:36		07:16			06:30	06:02	06:01
	17:41		19:46			20:16	20:44	20:57
30	07:36		07:15			06:29	06:02	06:01
	17:42		19:47			20:17	20:45	20:57
31	07:35		07:13				06:01	
	17:43		19:48				20:45	
Potential sun hours	302	299	370			397	444	447
Total, worst case				294				

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F092 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November	December
1	06:01	06:24	06:53			07:21		07:40 (Medio Campidano)	06:53	07:26
	20:57	20:39	19:58			19:10	14	07:54 (Medio Campidano)	17:25	17:02
2	06:02	06:25	06:54			07:22		07:41 (Medio Campidano)	06:54	07:27
	20:57	20:38	19:56			19:08	11	07:52 (Medio Campidano)	17:24	17:02
3	06:02	06:26	06:55			07:23		07:42 (Medio Campidano)	06:55	07:28
	20:57	20:37	19:55			19:06	8	07:50 (Medio Campidano)	17:23	17:02
4	06:03	06:27	06:56			07:24		07:43 (Medio Campidano)	06:56	07:29
	20:56	20:36	19:53			19:05	4	07:47 (Medio Campidano)	17:22	17:02
5	06:03	06:28	06:57			07:25			06:57	07:30
	20:56	20:35	19:52			19:03			17:21	17:02
6	06:04	06:29	06:57			07:25			06:58	07:31
	20:56	20:34	19:50			19:02			17:20	17:02
7	06:05	06:30	06:58			07:26			06:59	07:32
	20:56	20:33	19:49			19:00			17:18	17:02
8	06:05	06:31	06:59			07:27			07:01	07:32
	20:55	20:31	19:47			18:59			17:17	17:02
9	06:06	06:31	07:00			07:28			07:02	07:33
	20:55	20:30	19:45			18:57			17:16	17:02
10	06:06	06:32	07:01			07:29			07:03	07:34
	20:55	20:29	19:44			18:55			17:15	17:02
11	06:07	06:33	07:02			07:30			07:04	07:35
	20:54	20:28	19:42			18:54			17:15	17:02
12	06:08	06:34	07:03			07:31			07:05	07:36
	20:54	20:26	19:40			18:52			17:14	17:02
13	06:09	06:35	07:04			07:32			07:06	07:37
	20:53	20:25	19:39			18:51			17:13	17:02
14	06:09	06:36	07:05			07:33			07:07	07:37
	20:53	20:24	19:37			18:49			17:12	17:02
15	06:10	06:37	07:06			07:34			07:08	07:38
	20:52	20:23	19:36			18:48			17:11	17:02
16	06:11	06:38	07:07			07:36			07:10	07:39
	20:52	20:21	19:34			18:46			17:10	17:03
17	06:11	06:39	07:08			07:37			07:11	07:39
	20:51	20:20	19:32			18:45			17:10	17:03
18	06:12	06:40	07:08		07:43 (Medio Campidano)	07:38			07:12	07:40
	20:51	20:19	19:31	10	07:53 (Medio Campidano)	18:44			17:09	17:03
19	06:13	06:41	07:09		07:40 (Medio Campidano)	07:39			07:13	07:41
	20:50	20:17	19:29	15	07:55 (Medio Campidano)	18:42			17:08	17:04
20	06:14	06:42	07:10		07:38 (Medio Campidano)	07:40			07:14	07:41
	20:49	20:16	19:27	19	07:57 (Medio Campidano)	18:41			17:07	17:04
21	06:15	06:43	07:11		07:37 (Medio Campidano)	07:41			07:15	07:42
	20:49	20:14	19:26	21	07:58 (Medio Campidano)	18:39			17:07	17:05
22	06:15	06:44	07:12		07:35 (Medio Campidano)	07:42			07:16	07:42
	20:48	20:13	19:24	24	07:59 (Medio Campidano)	18:38			17:06	17:05
23	06:16	06:44	07:13		07:34 (Medio Campidano)	07:43			07:17	07:43
	20:47	20:11	19:23	25	07:59 (Medio Campidano)	18:37			17:06	17:06
24	06:17	06:45	07:14		07:34 (Medio Campidano)	07:44			07:18	07:43
	20:46	20:10	19:21	25	07:59 (Medio Campidano)	18:35			17:05	17:06
25	06:18	06:46	07:15		07:34 (Medio Campidano)	06:45			07:20	07:44
	20:46	20:09	19:19	24	07:58 (Medio Campidano)	17:34			17:05	17:07
26	06:19	06:47	07:16		07:35 (Medio Campidano)	06:46			07:21	07:44
	20:45	20:07	19:18	23	07:58 (Medio Campidano)	17:33			17:04	17:07
27	06:20	06:48	07:17		07:36 (Medio Campidano)	06:47			07:22	07:45
	20:44	20:06	19:16	22	07:58 (Medio Campidano)	17:31			17:04	17:08
28	06:21	06:49	07:18		07:37 (Medio Campidano)	06:48			07:23	07:45
	20:43	20:04	19:14	20	07:57 (Medio Campidano)	17:30			17:03	17:09
29	06:21	06:50	07:19		07:38 (Medio Campidano)	06:49			07:24	07:45
	20:42	20:03	19:13	18	07:56 (Medio Campidano)	17:29			17:03	17:09
30	06:22	06:51	07:20		07:39 (Medio Campidano)	06:50			07:25	07:45
	20:41	20:01	19:11	16	07:55 (Medio Campidano)	17:27			17:03	17:10
31	06:23	06:52				06:52				07:46
	20:40	20:00				17:26				17:11
Potential sun hours	454	425	374			347			301	293
Total, worst case				262			37			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
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Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F093 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March			April	May	June
1	07:46	07:34	07:00			07:11	06:28	06:01
	17:12	17:45	18:17			19:49	20:18	20:46
2	07:46	07:33	06:58			07:10	06:27	06:00
	17:13	17:46	18:18			19:50	20:19	20:47
3	07:46	07:32	06:57			07:08	06:25	06:00
	17:13	17:47	18:19			19:51	20:20	20:48
4	07:46	07:31	06:55			07:07	06:24	05:59
	17:14	17:48	18:20			19:52	20:21	20:48
5	07:46	07:30	06:54			07:05	06:23	05:59
	17:15	17:49	18:21			19:53	20:22	20:49
6	07:46	07:29	06:52			07:04	06:22	05:59
	17:16	17:51	18:22			19:54	20:23	20:49
7	07:46	07:28	06:51			07:02	06:21	05:59
	17:17	17:52	18:23			19:55	20:24	20:50
8	07:46	07:27	06:49			07:00	06:20	05:58
	17:18	17:53	18:24			19:55	20:25	20:51
9	07:46	07:26	06:48			06:59	06:18	05:58
	17:19	17:54	18:25			19:56	20:26	20:51
10	07:46	07:25	06:46			06:57	06:17	05:58
	17:20	17:55	18:26			19:57	20:27	20:52
11	07:46	07:24	06:45			06:56	06:16	05:58
	17:21	17:56	18:27			19:58	20:28	20:52
12	07:46	07:23	06:43		07:02 (Medio Campidano)	06:54	06:15	05:58
	17:22	17:58	18:28	5	07:07 (Medio Campidano)	19:59	20:29	20:53
13	07:45	07:21	06:42		07:00 (Medio Campidano)	06:53	06:14	05:58
	17:23	17:59	18:29	9	07:09 (Medio Campidano)	20:00	20:30	20:53
14	07:45	07:20	06:40		06:58 (Medio Campidano)	06:51	06:13	05:58
	17:24	18:00	18:31	12	07:10 (Medio Campidano)	20:01	20:31	20:54
15	07:45	07:19	06:39		06:57 (Medio Campidano)	06:50	06:12	05:58
	17:25	18:01	18:32	14	07:11 (Medio Campidano)	20:02	20:32	20:54
16	07:44	07:18	06:37		06:55 (Medio Campidano)	06:48	06:11	05:58
	17:26	18:02	18:33	17	07:12 (Medio Campidano)	20:03	20:33	20:54
17	07:44	07:16	06:35		06:54 (Medio Campidano)	06:47	06:11	05:58
	17:27	18:03	18:34	18	07:12 (Medio Campidano)	20:04	20:34	20:55
18	07:43	07:15	06:34		06:52 (Medio Campidano)	06:45	06:10	05:58
	17:28	18:05	18:35	20	07:12 (Medio Campidano)	20:05	20:35	20:55
19	07:43	07:14	06:32		06:50 (Medio Campidano)	06:44	06:09	05:58
	17:30	18:06	18:36	22	07:12 (Medio Campidano)	20:06	20:35	20:55
20	07:42	07:13	06:31		06:49 (Medio Campidano)	06:43	06:08	05:58
	17:31	18:07	18:37	23	07:12 (Medio Campidano)	20:07	20:36	20:56
21	07:42	07:11	06:29		06:47 (Medio Campidano)	06:41	06:07	05:58
	17:32	18:08	18:38	24	07:11 (Medio Campidano)	20:08	20:37	20:56
22	07:41	07:10	06:27		06:47 (Medio Campidano)	06:40	06:07	05:58
	17:33	18:09	18:39	24	07:11 (Medio Campidano)	20:09	20:38	20:56
23	07:41	07:08	06:26		06:47 (Medio Campidano)	06:38	06:06	05:59
	17:34	18:10	18:40	22	07:09 (Medio Campidano)	20:10	20:39	20:56
24	07:40	07:07	06:24		06:47 (Medio Campidano)	06:37	06:05	05:59
	17:35	18:11	18:41	20	07:07 (Medio Campidano)	20:11	20:40	20:57
25	07:39	07:06	06:23		06:49 (Medio Campidano)	06:36	06:04	05:59
	17:36	18:12	18:42	17	07:06 (Medio Campidano)	20:12	20:41	20:57
26	07:39	07:04	06:21		06:50 (Medio Campidano)	06:34	06:04	05:59
	17:38	18:14	18:43	14	07:04 (Medio Campidano)	20:13	20:41	20:57
27	07:38	07:03	06:19		06:54 (Medio Campidano)	06:33	06:03	06:00
	17:39	18:15	18:44	7	07:01 (Medio Campidano)	20:14	20:42	20:57
28	07:37	07:01	06:18			06:32	06:03	06:00
	17:40	18:16	18:45			20:15	20:43	20:57
29	07:36		07:16			06:30	06:02	06:01
	17:41		19:46			20:16	20:44	20:57
30	07:36		07:15			06:29	06:02	06:01
	17:42		19:47			20:17	20:45	20:57
31	07:35		07:13				06:01	
	17:43		19:48				20:45	
Potential sun hours	302	299	370			397	444	447
Total, worst case				268				

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

Day in month	Sun rise (hh:mm) Sun set (hh:mm)	Minutes with flicker	First time (hh:mm) with flicker Last time (hh:mm) with flicker	(WTG causing flicker first time) (WTG causing flicker last time)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
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Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F093 - Ente urbano

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September			October			November	December
1	06:01	06:24	06:53			07:21		07:40 (Medio Campidano)	06:53	07:26
	20:57	20:39	19:58			19:10	7	07:47 (Medio Campidano)	17:25	17:02
2	06:02	06:25	06:54			07:22		07:41 (Medio Campidano)	06:54	07:27
	20:57	20:38	19:56			19:08	2	07:43 (Medio Campidano)	17:24	17:02
3	06:02	06:26	06:55			07:23			06:55	07:28
	20:57	20:37	19:55			19:06			17:23	17:02
4	06:03	06:27	06:56			07:24			06:56	07:29
	20:56	20:36	19:53			19:05			17:22	17:02
5	06:03	06:28	06:57			07:25			06:57	07:30
	20:56	20:35	19:52			19:03			17:21	17:02
6	06:04	06:29	06:57			07:25			06:58	07:31
	20:56	20:34	19:50			19:02			17:20	17:02
7	06:05	06:30	06:58			07:26			06:59	07:32
	20:56	20:33	19:49			19:00			17:18	17:02
8	06:05	06:31	06:59			07:27			07:01	07:32
	20:55	20:31	19:47			18:59			17:17	17:02
9	06:06	06:31	07:00			07:28			07:02	07:33
	20:55	20:30	19:45			18:57			17:16	17:02
10	06:06	06:32	07:01			07:29			07:03	07:34
	20:55	20:29	19:44			18:55			17:16	17:02
11	06:07	06:33	07:02			07:30			07:04	07:35
	20:54	20:28	19:42			18:54			17:15	17:02
12	06:08	06:34	07:03			07:31			07:05	07:36
	20:54	20:26	19:40			18:52			17:14	17:02
13	06:09	06:35	07:04			07:32			07:06	07:37
	20:53	20:25	19:39			18:51			17:13	17:02
14	06:09	06:36	07:05			07:33			07:07	07:37
	20:53	20:24	19:37			18:49			17:12	17:02
15	06:10	06:37	07:06			07:34			07:08	07:38
	20:52	20:23	19:36			18:48			17:11	17:02
16	06:11	06:38	07:07		07:43 (Medio Campidano)	07:36			07:10	07:39
	20:52	20:21	19:34	5	07:48 (Medio Campidano)	18:46			17:10	17:03
17	06:11	06:39	07:08		07:39 (Medio Campidano)	07:37			07:11	07:39
	20:51	20:20	19:32	12	07:51 (Medio Campidano)	18:45			17:10	17:03
18	06:12	06:40	07:08		07:36 (Medio Campidano)	07:38			07:12	07:40
	20:51	20:19	19:31	17	07:53 (Medio Campidano)	18:44			17:09	17:03
19	06:13	06:41	07:09		07:35 (Medio Campidano)	07:39			07:13	07:41
	20:50	20:17	19:29	19	07:54 (Medio Campidano)	18:42			17:08	17:04
20	06:14	06:42	07:10		07:33 (Medio Campidano)	07:40			07:14	07:41
	20:49	20:16	19:27	22	07:55 (Medio Campidano)	18:41			17:07	17:04
21	06:15	06:43	07:11		07:32 (Medio Campidano)	07:41			07:15	07:42
	20:49	20:14	19:26	24	07:56 (Medio Campidano)	18:39			17:07	17:05
22	06:15	06:44	07:12		07:32 (Medio Campidano)	07:42			07:16	07:42
	20:48	20:13	19:24	24	07:56 (Medio Campidano)	18:38			17:06	17:05
23	06:16	06:44	07:13		07:33 (Medio Campidano)	07:43			07:17	07:43
	20:47	20:11	19:23	23	07:56 (Medio Campidano)	18:37			17:06	17:06
24	06:17	06:45	07:14		07:34 (Medio Campidano)	07:44			07:18	07:43
	20:46	20:10	19:21	22	07:56 (Medio Campidano)	18:35			17:05	17:06
25	06:18	06:46	07:15		07:34 (Medio Campidano)	06:45			07:20	07:44
	20:46	20:09	19:19	21	07:55 (Medio Campidano)	17:34			17:05	17:07
26	06:19	06:47	07:16		07:35 (Medio Campidano)	06:46			07:21	07:44
	20:45	20:07	19:18	19	07:54 (Medio Campidano)	17:33			17:04	17:07
27	06:20	06:48	07:17		07:36 (Medio Campidano)	06:47			07:22	07:45
	20:44	20:06	19:16	17	07:53 (Medio Campidano)	17:31			17:04	17:08
28	06:21	06:49	07:18		07:37 (Medio Campidano)	06:48			07:23	07:45
	20:43	20:04	19:14	15	07:52 (Medio Campidano)	17:30			17:03	17:09
29	06:21	06:50	07:19		07:38 (Medio Campidano)	06:49			07:24	07:45
	20:42	20:03	19:13	13	07:51 (Medio Campidano)	17:29			17:03	17:09
30	06:22	06:51	07:20		07:39 (Medio Campidano)	06:50			07:25	07:45
	20:41	20:01	19:11	10	07:49 (Medio Campidano)	17:28			17:03	17:10
31	06:23	06:52				06:52				07:46
	20:40	20:00				17:26				17:11
Potential sun hours	454	425	374			347			301	293
Total, worst case				263			9			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

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+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F109 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February			March			April	May	June	July	August	September			October			November	December
1	07:46	07:34			07:00		17:22 (AG10)	07:11	06:27	06:00	06:01	06:24	06:53			07:20		18:02 (AG10)	06:52	07:26
	17:11	17:44			18:16	33	17:55 (AG10)	19:48	20:18	20:46	20:56	20:39	19:58			19:09	32	18:34 (AG10)	17:25	17:02
2	07:46	07:33			06:58		17:22 (AG10)	07:10	06:26	06:00	06:02	06:25	06:53			07:21		18:00 (AG10)	06:54	07:27
	17:12	17:45			18:18	35	17:57 (AG10)	19:49	20:19	20:47	20:56	20:38	19:56			19:08	34	18:34 (AG10)	17:24	17:02
3	07:46	07:32			06:57		17:21 (AG10)	07:08	06:25	05:59	06:02	06:26	06:54			07:22		17:59 (AG10)	06:55	07:28
	17:13	17:47			18:19	37	17:58 (AG10)	19:50	20:20	20:47	20:56	20:37	19:55			19:06	36	18:35 (AG10)	17:22	17:02
4	07:46	07:31			06:55		17:21 (AG10)	07:06	06:24	05:59	06:03	06:26	06:55			07:23		17:58 (AG10)	06:56	07:29
	17:14	17:48			18:20	38	17:59 (AG10)	19:51	20:21	20:48	20:56	20:36	19:53			19:04	37	18:35 (AG10)	17:21	17:01
5	07:46	07:30			06:54		17:20 (AG10)	07:05	06:23	05:59	06:03	06:27	06:56			07:24		17:58 (AG10)	06:57	07:29
	17:15	17:49			18:21	39	17:59 (AG10)	19:52	20:22	20:49	20:56	20:35	19:51			19:03	37	18:35 (AG10)	17:20	17:01
6	07:46	07:29			06:52		17:21 (AG10)	07:03	06:21	05:58	06:04	06:28	06:57			07:25		17:57 (AG10)	06:58	07:30
	17:16	17:50			18:22	38	17:59 (AG10)	19:53	20:23	20:49	20:56	20:33	19:50			19:01	38	18:35 (AG10)	17:19	17:01
7	07:46	07:28			06:51		17:20 (AG10)	07:02	06:20	05:58	06:04	06:29	06:58			07:26		17:56 (AG10)	06:59	07:31
	17:17	17:51			18:23	39	17:59 (AG10)	19:54	20:24	20:50	20:55	20:32	19:48			19:00	39	18:35 (AG10)	17:18	17:01
8	07:46	07:27			06:49		17:21 (AG10)	07:00	06:19	05:58	06:05	06:30	06:59			07:27		17:56 (AG10)	07:00	07:32
	17:18	17:53			18:24	38	17:59 (AG10)	19:55	20:25	20:50	20:55	20:31	19:47			18:58	39	18:35 (AG10)	17:17	17:01
9	07:46	07:26			06:48		17:21 (AG10)	06:59	06:18	05:58	06:05	06:31	07:00			07:28		17:56 (AG10)	07:01	07:33
	17:19	17:54			18:25	37	17:58 (AG10)	19:56	20:26	20:51	20:55	20:30	19:45			18:57	38	18:34 (AG10)	17:16	17:01
10	07:46	07:25			06:46		17:20 (AG10)	06:57	06:17	05:58	06:06	06:32	07:01			07:29		17:56 (AG10)	07:03	07:34
	17:20	17:55			18:26	36	17:56 (AG10)	19:57	20:27	20:52	20:54	20:29	19:43			18:55	37	18:33 (AG10)	17:15	17:01
11	07:45	07:23			06:45		17:22 (AG10)	06:56	06:16	05:57	06:07	06:33	07:02			07:30		17:56 (AG10)	07:04	07:35
	17:21	17:56			18:27	34	17:56 (AG10)	19:58	20:28	20:52	20:54	20:27	19:42			18:54	35	18:31 (AG10)	17:14	17:01
12	07:45	07:22			06:43		17:22 (AG10)	06:54	06:15	05:57	06:07	06:34	07:03			07:31		17:56 (AG10)	07:05	07:36
	17:22	17:57			18:28	32	17:54 (AG10)	19:59	20:29	20:53	20:54	20:26	19:40			18:52	34	18:30 (AG10)	17:13	17:01
13	07:45	07:21			06:41		17:23 (AG10)	06:52	06:14	05:57	06:08	06:35	07:04			07:32		17:56 (AG10)	07:06	07:36
	17:23	17:58			18:29	31	17:54 (AG10)	20:00	20:30	20:53	20:53	20:25	19:39			18:51	32	18:28 (AG10)	17:12	17:02
14	07:45	07:20			06:40		17:24 (AG10)	06:51	06:13	05:57	06:09	06:36	07:04			07:33		17:56 (AG10)	07:07	07:37
	17:24	18:00			18:30	28	17:52 (AG10)	20:01	20:31	20:53	20:53	20:24	19:37			18:49	31	18:27 (AG10)	17:12	17:02
15	07:44	07:19			06:38		17:26 (AG10)	06:49	06:12	05:57	06:10	06:37	07:05			07:34		17:57 (AG10)	07:08	07:38
	17:25	18:01			18:31	24	17:50 (AG10)	20:02	20:32	20:54	20:52	20:22	19:35			18:48	28	18:25 (AG10)	17:11	17:02
16	07:44	07:17			06:37		17:27 (AG10)	06:48	06:11	05:57	06:10	06:38	07:06			07:35		17:58 (AG10)	07:09	07:39
	17:26	18:02			18:32	20	17:47 (AG10)	20:03	20:33	20:54	20:52	20:21	19:34			18:46	25	18:23 (AG10)	17:10	17:02
17	07:44	07:16			06:35		17:30 (AG10)	06:47	06:10	05:57	06:11	06:39	07:07			07:36		17:59 (AG10)	07:10	07:39
	17:27	18:03			18:33	14	17:44 (AG10)	20:04	20:33	20:55	20:51	20:20	19:32			18:45	23	18:22 (AG10)	17:09	17:03
18	07:43	07:15			06:33			06:45	06:09	05:57	06:12	06:39	07:08			07:37		18:00 (AG10)	07:12	07:40
	17:28	18:04			18:34			20:05	20:34	20:55	20:50	20:18	19:30			18:43	20	18:20 (AG10)	17:08	17:03
19	07:43	07:14			06:32			06:44	06:09	05:58	06:13	06:40	07:09			07:38		18:02 (AG10)	07:13	07:40
	17:29	18:05			18:35			20:06	20:35	20:55	20:50	20:17	19:29			18:42	17	18:19 (AG10)	17:08	17:03
20	07:42	07:12			06:30			06:42	06:08	05:58	06:13	06:41	07:10			07:39		18:05 (AG10)	07:14	07:41
	17:30	18:06			18:36			20:07	20:36	20:55	20:49	20:15	19:27			18:40	13	18:18 (AG10)	17:07	17:04
21	07:42	07:11		17:38 (AG10)	06:29			06:41	06:07	05:58	06:14	06:42	07:11			07:40		18:11 (AG10)	07:15	07:42
	17:31	18:08	8	17:46 (AG10)	18:37			20:08	20:37	20:56	20:48	20:14	19:26			18:39	3	18:14 (AG10)	17:07	17:04
22	07:41	07:10		17:33 (AG10)	06:27			06:39	06:06	05:58	06:15	06:43	07:12			07:41			07:16	07:42
	17:33	18:09	14	17:47 (AG10)	18:38			20:09	20:38	20:56	20:48	20:13	19:24			18:38			17:06	17:05
23	07:41	07:08		17:31 (AG10)	06:25			06:38	06:05	05:58	06:16	06:44	07:13			07:43			07:17	07:43
	17:34	18:10	18	17:49 (AG10)	18:39			20:10	20:39	20:56	20:47	20:11	19:22			18:36			17:05	17:05
24	07:40	07:07		17:28 (AG10)	06:24			06:37	06:05	05:59	06:17	06:45	07:14			07:44			07:18	07:43
	17:35	18:11	21	17:49 (AG10)	18:40			20:11	20:40	20:56	20:46	20:10	19:21			18:35			17:05	17:06
25	07:39	07:05		17:27 (AG10)	06:22			06:35	06:04	05:59	06:18	06:46	07:15			06:45			07:19	07:44
	17:36	18:12	24	17:51 (AG10)	18:41			20:12	20:40	20:56	20:45	20:08	19:19			17:34			17:04	17:06
26	07:38	07:04		17:26 (AG10)	06:21			06:34	06:03	05:59	06:18	06:47	07:16		18:14 (AG10)	06:46			07:20	07:44
	17:37	18:13	26	17:52 (AG10)	18:42			20:13	20:41	20:57	20:44	20:07	19:17	11	18:25 (AG10)	17:32			17:04	17:07
27	07:38	07:03		17:24 (AG10)	06:19			06:33	06:03	05:59	06:19	06:48	07:17		18:10 (AG10)	06:47			07:21	07:44
	17:38	18:14	29	17:53 (AG10)	18:43			20:14	20:42	20:57	20:44	20:05	19:16	18	18:28 (AG10)	17:31			17:03	17:08
28	07:37	07:01		17:24 (AG10)	06:17			06:31	06:02	06:00	06:20	06:49	07:17		18:07 (AG10)	06:48			07:22	07:45
	17:40	18:15	31	17:55 (AG10)	18:44			20:15	20:43	20:57	20:43	20:04	19:14	23	18:30 (AG10)	17:30			17:03	17:08
29	07:36				07:16			06:30	06:02	06:00	06:21	06:50	07:18		18:05 (AG10)	06:49			07:24	07:45
	17:41				19:45			20:16	20:44	20:57	20:42	20:02	19:12	27	18:32 (AG10)	17:28			17:03	17:09
30	07:35				07:14			06:29	06:01	06:01	06:22	06:51	07:19		18:03 (AG10)	06:50			07:25	07:45
	17:42				19:46			20:17	20:44	20:57	20:41	20:01	19:11	30	18:33 (AG10)	17:27			17:02	17:10
31	07:35				07:13				06:01		06:23	06:52				06:51				07:45
	17:43				19:47				20:45		20:40	19:59				17:26				17:10
Potential sun hours	302	299			370			397	444	447	454	425	374			347			301	293
Total, worst case			171			553								109			628			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F115 - A3 - F4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April		May	June	July	August	September		October	November	December
1	07:46	07:34	07:00		07:11		18:40 (AG10)	06:27	06:00	06:01	06:24	06:53		07:20	06:52	07:26
	17:11	17:44	18:16		19:48	36	19:16 (AG10)	20:18	20:46	20:56	20:39	19:58		19:09	17:25	17:02
2	07:46	07:33	06:58		07:10		18:41 (AG10)	06:26	06:00	06:02	06:25	06:53		07:21	06:54	07:27
	17:12	17:45	18:18		19:49	34	19:15 (AG10)	20:19	20:47	20:56	20:38	19:56		19:08	17:24	17:02
3	07:46	07:32	06:57		07:08		18:42 (AG10)	06:25	05:59	06:02	06:26	06:54		07:22	06:55	07:28
	17:13	17:47	18:19		19:50	32	19:14 (AG10)	20:20	20:47	20:56	20:37	19:55		19:06	17:22	17:02
4	07:46	07:31	06:55		07:06		18:42 (AG10)	06:24	05:59	06:03	06:26	06:55	18:49 (AG10)	07:23	06:56	07:29
	17:14	17:48	18:20		19:51	30	19:12 (AG10)	20:21	20:48	20:56	20:36	19:53	8 18:57 (AG10)	19:04	17:21	17:01
5	07:46	07:30	06:54		07:05		18:44 (AG10)	06:23	05:59	06:03	06:27	06:56	18:44 (AG10)	07:24	06:57	07:29
	17:15	17:49	18:21		19:52	26	19:10 (AG10)	20:22	20:49	20:56	20:35	19:51	17 19:01 (AG10)	19:03	17:20	17:01
6	07:46	07:29	06:52		07:03		18:45 (AG10)	06:21	05:58	06:04	06:28	06:57	18:41 (AG10)	07:25	06:58	07:30
	17:16	17:50	18:22		19:53	23	19:08 (AG10)	20:23	20:49	20:56	20:33	19:50	23 19:04 (AG10)	19:01	17:19	17:01
7	07:46	07:28	06:51		07:02		18:48 (AG10)	06:20	05:58	06:04	06:29	06:58	18:39 (AG10)	07:26	06:59	07:31
	17:17	17:51	18:23		19:54	17	19:05 (AG10)	20:24	20:50	20:55	20:32	19:48	26 19:05 (AG10)	19:00	17:18	17:01
8	07:46	07:27	06:49		07:00		18:51 (AG10)	06:19	05:58	06:05	06:30	06:59	18:37 (AG10)	07:27	07:00	07:32
	17:18	17:53	18:24		19:55	10	19:01 (AG10)	20:25	20:50	20:55	20:31	19:47	30 19:07 (AG10)	18:58	17:17	17:01
9	07:46	07:26	06:48		06:59			06:18	05:58	06:05	06:31	07:00	18:36 (AG10)	07:28	07:01	07:33
	17:19	17:54	18:25		19:56			20:26	20:51	20:55	20:30	19:45	32 19:08 (AG10)	18:57	17:16	17:01
10	07:46	07:25	06:46		06:57			06:17	05:58	06:06	06:32	07:01	18:35 (AG10)	07:29	07:03	07:34
	17:20	17:55	18:26		19:57			20:27	20:52	20:54	20:29	19:43	33 19:08 (AG10)	18:55	17:15	17:01
11	07:45	07:23	06:45		06:56			06:16	05:57	06:07	06:33	07:02	18:33 (AG10)	07:30	07:04	07:35
	17:21	17:56	18:27		19:58			20:28	20:52	20:54	20:27	19:42	36 19:09 (AG10)	18:54	17:14	17:01
12	07:45	07:22	06:43		06:54			06:15	05:57	06:07	06:34	07:03	18:31 (AG10)	07:31	07:05	07:36
	17:22	17:57	18:28		19:59			20:29	20:53	20:54	20:26	19:40	37 19:08 (AG10)	18:52	17:13	17:01
13	07:45	07:21	06:41		06:52			06:14	05:57	06:08	06:35	07:04	18:31 (AG10)	07:32	07:06	07:36
	17:23	17:58	18:29		20:00			20:30	20:53	20:53	20:25	19:39	38 19:09 (AG10)	18:51	17:12	17:02
14	07:45	07:20	06:40	17:58 (AG10)	06:51			06:13	05:57	06:09	06:36	07:04	18:30 (AG10)	07:33	07:07	07:37
	17:24	18:00	18:30	11 18:09 (AG10)	20:01			20:31	20:53	20:53	20:24	19:37	39 19:09 (AG10)	18:49	17:12	17:02
15	07:44	07:19	06:38	17:54 (AG10)	06:49			06:12	05:57	06:10	06:37	07:05	18:29 (AG10)	07:34	07:08	07:38
	17:25	18:01	18:31	17 18:11 (AG10)	20:02			20:32	20:54	20:52	20:22	19:35	40 19:09 (AG10)	18:48	17:11	17:02
16	07:44	07:17	06:37	17:51 (AG10)	06:48			06:11	05:57	06:10	06:38	07:06	18:29 (AG10)	07:35	07:09	07:39
	17:26	18:02	18:32	21 18:12 (AG10)	20:03			20:32	20:54	20:52	20:21	19:34	40 19:09 (AG10)	18:46	17:10	17:02
17	07:44	07:16	06:35	17:49 (AG10)	06:47			06:10	05:57	06:11	06:39	07:07	18:28 (AG10)	07:36	07:10	07:39
	17:27	18:03	18:33	23 18:12 (AG10)	20:04			20:33	20:55	20:51	20:20	19:32	41 19:09 (AG10)	18:45	17:09	17:03
18	07:43	07:15	06:33	17:47 (AG10)	06:45			06:09	05:57	06:12	06:39	07:08	18:28 (AG10)	07:37	07:12	07:40
	17:28	18:04	18:34	27 18:14 (AG10)	20:05			20:34	20:55	20:50	20:18	19:30	40 19:08 (AG10)	18:43	17:08	17:03
19	07:43	07:14	06:32	17:45 (AG10)	06:44			06:09	05:58	06:13	06:40	07:09	18:28 (AG10)	07:38	07:13	07:40
	17:29	18:05	18:35	30 18:15 (AG10)	20:06			20:35	20:55	20:50	20:17	19:29	39 19:07 (AG10)	18:42	17:08	17:03
20	07:42	07:12	06:30	17:44 (AG10)	06:42			06:08	05:58	06:13	06:41	07:10	18:28 (AG10)	07:39	07:14	07:41
	17:30	18:06	18:36	31 18:15 (AG10)	20:07			20:36	20:55	20:49	20:15	19:27	38 19:06 (AG10)	18:40	17:07	17:04
21	07:42	07:11	06:29	17:43 (AG10)	06:41			06:07	05:58	06:14	06:42	07:11	18:28 (AG10)	07:40	07:15	07:42
	17:31	18:08	18:37	34 18:17 (AG10)	20:08			20:37	20:56	20:48	20:14	19:26	36 19:04 (AG10)	18:39	17:07	17:04
22	07:41	07:10	06:27	17:42 (AG10)	06:39			06:06	05:58	06:15	06:43	07:12	18:27 (AG10)	07:41	07:16	07:42
	17:33	18:09	18:38	35 18:17 (AG10)	20:09			20:38	20:56	20:48	20:13	19:24	35 19:02 (AG10)	18:38	17:06	17:05
23	07:41	07:08	06:25	17:42 (AG10)	06:38			06:05	05:58	06:16	06:44	07:13	18:28 (AG10)	07:43	07:17	07:43
	17:34	18:10	18:39	37 18:19 (AG10)	20:10			20:39	20:56	20:47	20:11	19:22	32 19:00 (AG10)	18:36	17:05	17:05
24	07:40	07:07	06:24	17:41 (AG10)	06:37			06:05	05:59	06:17	06:45	07:14	18:29 (AG10)	07:44	07:18	07:43
	17:35	18:11	18:40	39 18:20 (AG10)	20:11			20:40	20:56	20:46	20:10	19:21	29 18:58 (AG10)	18:35	17:05	17:06
25	07:39	07:05	06:22	17:40 (AG10)	06:35			06:04	05:59	06:18	06:46	07:15	18:29 (AG10)	06:45	07:19	07:44
	17:36	18:12	18:41	40 18:20 (AG10)	20:12			20:40	20:56	20:45	20:08	19:19	28 18:57 (AG10)	17:34	17:04	17:06
26	07:38	07:04	06:21	17:40 (AG10)	06:34			06:03	05:59	06:18	06:47	07:16	18:30 (AG10)	06:46	07:20	07:44
	17:37	18:13	18:42	40 18:20 (AG10)	20:13			20:41	20:56	20:44	20:07	19:17	25 18:55 (AG10)	17:32	17:04	17:07
27	07:38	07:03	06:19	17:39 (AG10)	06:33			06:03	05:59	06:19	06:48	07:17	18:32 (AG10)	06:47	07:21	07:44
	17:38	18:14	18:43	41 18:20 (AG10)	20:14			20:42	20:57	20:44	20:05	19:16	22 18:54 (AG10)	17:31	17:03	17:08
28	07:37	07:01	06:17	17:40 (AG10)	06:31			06:02	06:00	06:20	06:49	07:17	18:34 (AG10)	06:48	07:22	07:45
	17:40	18:15	18:44	40 18:20 (AG10)	20:15			20:43	20:57	20:43	20:04	19:14	18 18:52 (AG10)	17:30	17:03	17:08
29	07:36		07:16	18:40 (AG10)	06:30			06:02	06:00	06:21	06:50	07:18	18:37 (AG10)	06:49	07:24	07:45
	17:41		19:45	39 19:19 (AG10)	20:16			20:44	20:57	20:42	20:02	19:12	13 18:50 (AG10)	17:28	17:03	17:09
30	07:35		07:14	18:39 (AG10)	06:29			06:01	06:01	06:22	06:51	07:19		06:50	07:25	07:45
	17:42		19:46	39 19:18 (AG10)	20:17			20:44	20:57	20:41	20:01	19:11		17:27	17:02	17:10
31	07:35		07:13	18:40 (AG10)				06:01		06:23	06:52			06:51		07:45
	17:43		19:47	37 19:17 (AG10)				20:45		20:40	19:59			17:26		17:10
Potential sun hours	302	299	370		397			444	447	454	425	374		347	301	293
Total, worst case				581		208							795			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F116 - A3

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April			May	June	July	August	September			October			November	December
1	07:46	07:34	07:00		07:11		18:40 (AG10)	06:27	06:00	06:01	06:24	06:53			07:20		18:32 (AG10)	06:52	07:26
	17:11	17:44	18:16		19:48	30	19:10 (AG10)	20:18	20:46	20:56	20:39	19:58			19:09	15	18:47 (AG10)	17:25	17:02
2	07:46	07:33	06:58		07:10		18:42 (AG10)	06:26	06:00	06:02	06:25	06:53			07:21		18:36 (AG10)	06:54	07:27
	17:12	17:45	18:18		19:49	27	19:09 (AG10)	20:19	20:47	20:56	20:38	19:56			19:08	9	18:45 (AG10)	17:24	17:02
3	07:46	07:32	06:57		07:08		18:43 (AG10)	06:25	05:59	06:02	06:26	06:54			07:22			06:55	07:28
	17:13	17:47	18:19		19:50	23	19:06 (AG10)	20:20	20:47	20:56	20:37	19:55			19:06			17:22	17:02
4	07:46	07:31	06:55		07:06		18:45 (AG10)	06:24	05:59	06:03	06:26	06:55			07:23			06:56	07:29
	17:14	17:48	18:20		19:51	18	19:03 (AG10)	20:21	20:48	20:56	20:36	19:53			19:04			17:21	17:01
5	07:46	07:30	06:54		07:05		18:49 (AG10)	06:23	05:59	06:03	06:27	06:56			07:24			06:57	07:29
	17:15	17:49	18:21		19:52	11	19:00 (AG10)	20:22	20:49	20:56	20:35	19:51			19:03			17:20	17:01
6	07:46	07:29	06:52		07:03			06:21	05:58	06:04	06:28	06:57			07:25			06:58	07:30
	17:16	17:50	18:22		19:53			20:23	20:49	20:56	20:33	19:50			19:01			17:19	17:01
7	07:46	07:28	06:51		07:02			06:20	05:58	06:04	06:29	06:58		18:45 (AG10)	07:26			06:59	07:31
	17:17	17:51	18:23		19:54			20:24	20:50	20:55	20:32	19:48	9	18:54 (AG10)	19:00			17:18	17:01
8	07:46	07:27	06:49		07:00			06:19	05:58	06:05	06:30	06:59		18:40 (AG10)	07:27			07:00	07:32
	17:18	17:53	18:24		19:55			20:25	20:50	20:55	20:31	19:47	18	18:58 (AG10)	18:58			17:17	17:01
9	07:46	07:26	06:48		06:59			06:18	05:58	06:05	06:31	07:00		18:38 (AG10)	07:28			07:01	07:33
	17:19	17:54	18:25		19:56			20:26	20:51	20:55	20:30	19:45	22	19:00 (AG10)	18:57			17:16	17:01
10	07:46	07:25	06:46		06:57			06:17	05:58	06:06	06:32	07:01		18:36 (AG10)	07:29			07:03	07:34
	17:20	17:55	18:26		19:57			20:27	20:52	20:54	20:29	19:43	26	19:02 (AG10)	18:55			17:15	17:01
11	07:45	07:23	06:45		06:56			06:16	05:57	06:07	06:33	07:02		18:34 (AG10)	07:30			07:04	07:35
	17:21	17:56	18:27		19:58			20:28	20:52	20:54	20:27	19:42	29	19:03 (AG10)	18:54			17:14	17:01
12	07:45	07:22	06:43		17:54 (AG10)			06:15	05:57	06:07	06:34	07:03		18:31 (AG10)	07:31			07:05	07:36
	17:22	17:57	18:28	13	18:07 (AG10)			20:29	20:53	20:54	20:26	19:40	32	19:03 (AG10)	18:52			17:13	17:01
13	07:45	07:21	06:41		17:51 (AG10)			06:14	05:57	06:08	06:35	07:04		18:30 (AG10)	07:32			07:06	07:36
	17:23	17:58	18:29	18	18:09 (AG10)			20:30	20:53	20:53	20:25	19:39	34	19:04 (AG10)	18:51			17:12	17:02
14	07:45	07:20	06:40		17:48 (AG10)			06:13	05:57	06:09	06:36	07:04		18:29 (AG10)	07:33			07:07	07:37
	17:24	18:00	18:30	21	18:09 (AG10)			20:31	20:53	20:53	20:24	19:37	35	19:04 (AG10)	18:49			17:12	17:02
15	07:44	07:19	06:38		17:47 (AG10)			06:12	05:57	06:10	06:37	07:05		18:28 (AG10)	07:34			07:08	07:38
	17:25	18:01	18:31	24	18:11 (AG10)			20:32	20:54	20:52	20:22	19:35	37	19:05 (AG10)	18:48			17:11	17:02
16	07:44	07:17	06:37		17:45 (AG10)			06:11	05:57	06:10	06:38	07:06		18:27 (AG10)	07:35			07:09	07:39
	17:26	18:02	18:32	27	18:12 (AG10)			20:32	20:54	20:52	20:21	19:34	38	19:05 (AG10)	18:46			17:10	17:02
17	07:44	07:16	06:35		17:43 (AG10)			06:10	05:57	06:11	06:39	07:07		18:26 (AG10)	07:36			07:10	07:39
	17:27	18:03	18:33	29	18:12 (AG10)			20:33	20:55	20:51	20:20	19:32	39	19:05 (AG10)	18:45			17:09	17:03
18	07:43	07:15	06:33		17:42 (AG10)			06:09	05:57	06:12	06:39	07:08		18:26 (AG10)	07:37			07:12	07:40
	17:28	18:04	18:34	32	18:14 (AG10)			20:34	20:55	20:50	20:18	19:30	39	19:05 (AG10)	18:43			17:08	17:03
19	07:43	07:14	06:32		17:41 (AG10)			06:09	05:58	06:13	06:40	07:09		18:25 (AG10)	07:38			07:13	07:40
	17:29	18:05	18:35	34	18:15 (AG10)			20:35	20:55	20:50	20:17	19:29	40	19:05 (AG10)	18:42			17:08	17:03
20	07:42	07:12	06:30		17:40 (AG10)			06:08	05:58	06:13	06:41	07:10		18:25 (AG10)	07:39			07:14	07:41
	17:30	18:06	18:36	35	18:15 (AG10)			20:36	20:55	20:49	20:15	19:27	40	19:05 (AG10)	18:40			17:07	17:04
21	07:42	07:11	06:29		17:39 (AG10)			06:07	05:58	06:14	06:42	07:11		18:25 (AG10)	07:40			07:15	07:42
	17:31	18:08	18:37	38	18:17 (AG10)			20:37	20:56	20:48	20:14	19:26	39	19:04 (AG10)	18:39			17:07	17:04
22	07:41	07:10	06:27		17:39 (AG10)			06:06	05:58	06:15	06:43	07:12		18:24 (AG10)	07:41			07:16	07:42
	17:33	18:09	18:38	38	18:17 (AG10)			20:38	20:56	20:48	20:13	19:24	38	19:02 (AG10)	18:38			17:06	17:05
23	07:41	07:08	06:25		17:39 (AG10)			06:05	05:58	06:16	06:44	07:13		18:24 (AG10)	07:43			07:17	07:43
	17:34	18:10	18:39	39	18:18 (AG10)			20:39	20:56	20:47	20:11	19:22	36	19:00 (AG10)	18:36			17:05	17:05
24	07:40	07:07	06:24		17:38 (AG10)			06:05	05:59	06:17	06:45	07:14		18:24 (AG10)	07:44			07:18	07:43
	17:35	18:11	18:40	40	18:18 (AG10)			20:40	20:56	20:46	20:10	19:21	34	18:58 (AG10)	18:35			17:05	17:06
25	07:39	07:05	06:22		17:37 (AG10)			06:04	05:59	06:18	06:46	07:15		18:24 (AG10)	06:45			07:19	07:44
	17:36	18:12	18:41	40	18:17 (AG10)			20:40	20:56	20:45	20:08	19:19	33	18:57 (AG10)	17:34			17:04	17:06
26	07:38	07:04	06:21		17:38 (AG10)			06:03	05:59	06:18	06:47	07:16		18:25 (AG10)	06:46			07:20	07:44
	17:37	18:13	18:42	39	18:17 (AG10)			20:41	20:56	20:44	20:07	19:17	30	18:55 (AG10)	17:32			17:04	17:07
27	07:38	07:03	06:19		17:38 (AG10)			06:03	05:59	06:19	06:48	07:17		18:26 (AG10)	06:47			07:21	07:44
	17:38	18:14	18:43	38	18:16 (AG10)			20:42	20:57	20:44	20:05	19:16	28	18:54 (AG10)	17:31			17:03	17:08
28	07:37	07:01	06:17		17:39 (AG10)			06:02	06:00	06:20	06:49	07:17		18:27 (AG10)	06:48			07:22	07:45
	17:40	18:15	18:44	37	18:16 (AG10)			20:43	20:57	20:43	20:04	19:14	25	18:52 (AG10)	17:30			17:03	17:08
29	07:36		07:16		18:39 (AG10)			06:02	06:00	06:21	06:50	07:18		18:28 (AG10)	06:49			07:24	07:45
	17:41		19:45	35	19:14 (AG10)			20:44	20:57	20:42	20:02	19:12	22	18:50 (AG10)	17:28			17:03	17:09
30	07:35		07:14		18:39 (AG10)			06:01	06:01	06:22	06:51	07:19		18:29 (AG10)	06:50			07:25	07:45
	17:42		19:46	34	19:13 (AG10)			20:44	20:57	20:41	20:01	19:11	20	18:49 (AG10)	17:27			17:02	17:10
31	07:35		07:13		18:40 (AG10)			06:01		06:23	06:52				06:51				07:45
	17:43		19:47	32	19:12 (AG10)			20:45		20:40	19:59				17:26				17:10
Potential sun hours	302	299	370		397			444	447	454	425	374			347			301	293
Total, worst case				643		109							743			24			

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F117 - A3 - F4

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April		May	June	July	August	September		October		November	December
1	07:46	07:34	07:00		07:11	18:43 (AG10)	06:27	06:00	06:01	06:24	06:53		07:20	18:31 (AG10)	06:52	07:26
	17:11	17:44	18:16		19:48	25 19:08 (AG10)	20:18	20:46	20:56	20:39	19:58		19:09	16 18:47 (AG10)	17:25	17:02
2	07:46	07:33	06:58		07:10	18:45 (AG10)	06:26	06:00	06:02	06:25	06:53		07:21	18:35 (AG10)	06:54	07:27
	17:12	17:45	18:18		19:49	22 19:07 (AG10)	20:19	20:47	20:56	20:38	19:56		19:08	11 18:46 (AG10)	17:24	17:02
3	07:46	07:32	06:57		07:08	18:47 (AG10)	06:25	05:59	06:02	06:26	06:54		07:22		06:55	07:28
	17:13	17:47	18:19		19:50	17 19:04 (AG10)	20:20	20:47	20:56	20:37	19:55		19:06		17:22	17:02
4	07:46	07:31	06:55		07:06	18:50 (AG10)	06:24	05:59	06:03	06:26	06:55		07:23		06:56	07:29
	17:14	17:48	18:20		19:51	9 18:59 (AG10)	20:21	20:48	20:56	20:36	19:53		19:04		17:21	17:01
5	07:46	07:30	06:54		07:05		06:23	05:59	06:03	06:27	06:56		07:24		06:57	07:29
	17:15	17:49	18:21		19:52		20:22	20:49	20:56	20:35	19:51		19:03		17:20	17:01
6	07:46	07:29	06:52		07:03		06:21	05:58	06:04	06:28	06:57		07:25		06:58	07:30
	17:16	17:50	18:22		19:53		20:23	20:49	20:56	20:33	19:50		19:01		17:19	17:01
7	07:46	07:28	06:51		07:02		06:20	05:58	06:04	06:29	06:58		07:26		06:59	07:31
	17:17	17:51	18:23		19:54		20:24	20:50	20:55	20:32	19:48		19:00		17:18	17:01
8	07:46	07:27	06:49		07:00		06:19	05:58	06:05	06:30	06:59	18:46 (AG10)	07:27		07:00	07:32
	17:18	17:53	18:24		19:55		20:25	20:50	20:55	20:31	19:47	7 18:53 (AG10)	18:58		17:17	17:01
9	07:46	07:26	06:48		06:59		06:18	05:58	06:05	06:31	07:00	18:41 (AG10)	07:28		07:01	07:33
	17:19	17:54	18:25		19:56		20:26	20:51	20:55	20:30	19:45	16 18:57 (AG10)	18:57		17:16	17:01
10	07:46	07:25	06:46		06:57		06:17	05:58	06:06	06:32	07:01	18:38 (AG10)	07:29		07:03	07:34
	17:20	17:55	18:26		19:57		20:27	20:52	20:54	20:29	19:43	22 19:00 (AG10)	18:55		17:15	17:01
11	07:45	07:23	06:45	17:59 (AG10)	06:56		06:16	05:57	06:07	06:33	07:02	18:36 (AG10)	07:30		07:04	07:35
	17:21	17:56	18:27	7 18:06 (AG10)	19:58		20:28	20:52	20:54	20:27	19:42	25 19:01 (AG10)	18:54		17:14	17:01
12	07:45	07:22	06:43	17:53 (AG10)	06:54		06:15	05:57	06:07	06:34	07:03	18:33 (AG10)	07:31		07:05	07:36
	17:22	17:57	18:28	14 18:07 (AG10)	19:59		20:29	20:53	20:54	20:26	19:40	29 19:02 (AG10)	18:52		17:13	17:01
13	07:45	07:21	06:41	17:51 (AG10)	06:52		06:14	05:57	06:08	06:35	07:04	18:32 (AG10)	07:32		07:06	07:36
	17:23	17:58	18:29	18 18:09 (AG10)	20:00		20:30	20:53	20:53	20:25	19:39	31 19:03 (AG10)	18:51		17:12	17:02
14	07:45	07:20	06:40	17:48 (AG10)	06:51		06:13	05:57	06:09	06:36	07:04	18:31 (AG10)	07:33		07:07	07:37
	17:24	18:00	18:30	21 18:09 (AG10)	20:01		20:31	20:53	20:53	20:24	19:37	32 19:03 (AG10)	18:49		17:12	17:02
15	07:44	07:19	06:38	17:47 (AG10)	06:49		06:12	05:57	06:10	06:37	07:05	18:29 (AG10)	07:34		07:08	07:38
	17:25	18:01	18:31	24 18:11 (AG10)	20:02		20:32	20:54	20:52	20:22	19:35	35 19:04 (AG10)	18:48		17:11	17:02
16	07:44	07:17	06:37	17:45 (AG10)	06:48		06:11	05:57	06:10	06:38	07:06	18:29 (AG10)	07:35		07:09	07:39
	17:26	18:02	18:32	27 18:12 (AG10)	20:03		20:32	20:54	20:52	20:21	19:34	35 19:04 (AG10)	18:46		17:10	17:02
17	07:44	07:16	06:35	17:43 (AG10)	06:47		06:10	05:57	06:11	06:39	07:07	18:28 (AG10)	07:36		07:10	07:39
	17:27	18:03	18:33	29 18:12 (AG10)	20:04		20:33	20:55	20:51	20:20	19:32	37 19:05 (AG10)	18:45		17:09	17:03
18	07:43	07:15	06:33	17:43 (AG10)	06:45		06:09	05:57	06:12	06:39	07:08	18:27 (AG10)	07:37		07:12	07:40
	17:28	18:04	18:34	31 18:14 (AG10)	20:05		20:34	20:55	20:50	20:18	19:30	38 19:05 (AG10)	18:43		17:08	17:03
19	07:43	07:14	06:32	17:41 (AG10)	06:44		06:09	05:58	06:13	06:40	07:09	18:26 (AG10)	07:38		07:13	07:40
	17:29	18:05	18:35	34 18:15 (AG10)	20:06		20:35	20:55	20:50	20:17	19:29	39 19:05 (AG10)	18:42		17:08	17:03
20	07:42	07:12	06:30	17:40 (AG10)	06:42		06:08	05:58	06:13	06:41	07:10	18:26 (AG10)	07:39		07:14	07:41
	17:30	18:06	18:36	35 18:15 (AG10)	20:07		20:36	20:55	20:49	20:15	19:27	38 19:04 (AG10)	18:40		17:07	17:04
21	07:42	07:11	06:29	17:40 (AG10)	06:41		06:07	05:58	06:14	06:42	07:11	18:26 (AG10)	07:40		07:15	07:42
	17:31	18:08	18:37	37 18:17 (AG10)	20:08		20:37	20:56	20:48	20:14	19:26	38 19:04 (AG10)	18:39		17:07	17:04
22	07:41	07:10	06:27	17:39 (AG10)	06:39		06:06	05:58	06:15	06:43	07:12	18:25 (AG10)	07:41		07:16	07:42
	17:33	18:09	18:38	38 18:17 (AG10)	20:09		20:38	20:56	20:48	20:13	19:24	37 19:02 (AG10)	18:38		17:06	17:05
23	07:40	07:08	06:25	17:40 (AG10)	06:38		06:05	05:58	06:16	06:44	07:13	18:25 (AG10)	07:43		07:17	07:43
	17:34	18:10	18:39	38 18:18 (AG10)	20:10		20:39	20:56	20:47	20:11	19:22	35 19:00 (AG10)	18:36		17:05	17:05
24	07:40	07:07	06:24	17:39 (AG10)	06:37		06:05	05:59	06:17	06:45	07:14	18:25 (AG10)	07:44		07:18	07:43
	17:35	18:11	18:40	38 18:17 (AG10)	20:11		20:40	20:56	20:46	20:10	19:21	33 18:58 (AG10)	18:35		17:05	17:06
25	07:39	07:05	06:22	17:39 (AG10)	06:35		06:04	05:59	06:18	06:46	07:15	18:25 (AG10)	06:45		07:19	07:44
	17:36	18:12	18:41	37 18:16 (AG10)	20:12		20:40	20:56	20:45	20:08	19:19	32 18:57 (AG10)	17:34		17:04	17:06
26	07:38	07:04	06:21	17:39 (AG10)	06:34		06:03	05:59	06:18	06:47	07:16	18:25 (AG10)	06:46		07:20	07:44
	17:37	18:13	18:42	37 18:16 (AG10)	20:13		20:41	20:56	20:44	20:07	19:17	30 18:55 (AG10)	17:32		17:04	17:07
27	07:38	07:03	06:19	17:39 (AG10)	06:33		06:03	05:59	06:19	06:48	07:17	18:26 (AG10)	06:47		07:21	07:44
	17:38	18:14	18:43	36 18:15 (AG10)	20:14		20:42	20:57	20:44	20:05	19:16	28 18:54 (AG10)	17:31		17:03	17:08
28	07:37	07:01	06:17	17:40 (AG10)	06:31		06:02	06:00	06:20	06:49	07:17	18:27 (AG10)	06:48		07:22	07:45
	17:40	18:15	18:44	35 18:15 (AG10)	20:15		20:43	20:57	20:43	20:04	19:14	25 18:52 (AG10)	17:30		17:03	17:08
29	07:36		07:16	18:40 (AG10)	06:30		06:02	06:00	06:21	06:50	07:18	18:28 (AG10)	06:49		07:24	07:45
	17:41		19:45	33 19:13 (AG10)	20:16		20:44	20:57	20:42	20:02	19:12	22 18:50 (AG10)	17:28		17:03	17:09
30	07:35		07:14	18:41 (AG10)	06:29		06:01	06:01	06:22	06:51	07:19	18:29 (AG10)	06:50		07:25	07:45
	17:42		19:46	31 19:12 (AG10)	20:17		20:44	20:57	20:41	20:01	19:11	20 18:49 (AG10)	17:27		17:02	17:10
31	07:35		07:13	18:42 (AG10)			06:01		06:23	06:52			06:51			07:45
	17:43		19:47	29 19:11 (AG10)			20:45		20:40	19:59			17:26			17:10
Potential sun hours	302	299	370		397		444	447	454	425	374		347		301	293
Total, worst case				629		73						684		27		

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F118 - A2 - D10

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May		June		July		August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:27		06:00		19:29 (AG10)	06:01	19:33 (AG10)	06:24	06:53	07:20	06:52	07:26
	17:11	17:44	18:16	19:48	20:18		20:46	51	20:21 (AG10)	20:56	20:28 (AG10)	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26		06:00		19:30 (AG10)	06:02	19:33 (AG10)	06:25	06:53	07:21	06:54	07:27
	17:12	17:46	18:18	19:49	20:19		20:47	50	20:20 (AG10)	20:56	20:28 (AG10)	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25		05:59		19:29 (AG10)	06:02	19:34 (AG10)	06:26	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20		20:47	51	20:20 (AG10)	20:56	20:28 (AG10)	20:37	19:55	19:06	17:22	17:02
4	07:46	07:31	06:55	07:06	06:24		05:59		19:29 (AG10)	06:03	19:34 (AG10)	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21		20:48	52	20:21 (AG10)	20:56	20:28 (AG10)	20:36	19:53	19:05	17:21	17:02
5	07:46	07:30	06:54	07:05	06:23		05:59		19:29 (AG10)	06:03	19:35 (AG10)	06:27	06:56	07:24	06:57	07:29
	17:15	17:49	18:21	19:52	20:22		20:49	53	20:22 (AG10)	20:56	20:28 (AG10)	20:35	19:51	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:21		05:59		19:29 (AG10)	06:04	19:35 (AG10)	06:28	06:57	07:25	06:58	07:30
	17:16	17:50	18:22	19:53	20:23		20:49	53	20:22 (AG10)	20:56	20:29 (AG10)	20:33	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20		05:58		19:28 (AG10)	06:04	19:35 (AG10)	06:29	06:58	07:26	06:59	07:31
	17:17	17:51	18:23	19:54	20:24		20:50	54	20:22 (AG10)	20:55	20:28 (AG10)	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19		05:58		19:29 (AG10)	06:05	19:36 (AG10)	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25		20:50	54	20:23 (AG10)	20:55	20:28 (AG10)	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18		05:58		19:29 (AG10)	06:06	19:36 (AG10)	06:31	07:00	07:28	07:01	07:33
	17:19	17:54	18:25	19:56	20:26		20:51	54	20:23 (AG10)	20:55	20:28 (AG10)	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17		05:58		19:29 (AG10)	06:06	19:37 (AG10)	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27		20:52	55	20:24 (AG10)	20:54	20:28 (AG10)	20:29	19:43	18:55	17:15	17:01
11	07:45	07:23	06:45	06:56	06:16		05:58		19:29 (AG10)	06:07	19:37 (AG10)	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28		20:52	55	20:24 (AG10)	20:54	20:28 (AG10)	20:27	19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15		05:57		19:29 (AG10)	06:07	19:37 (AG10)	06:34	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29		20:53	55	20:24 (AG10)	20:54	20:27 (AG10)	20:26	19:40	18:52	17:13	17:01
13	07:45	07:21	06:41	06:52	06:14		05:57		19:29 (AG10)	06:08	19:38 (AG10)	06:35	07:04	07:32	07:06	07:36
	17:23	17:58	18:29	20:00	20:30		20:53	56	20:25 (AG10)	20:53	20:27 (AG10)	20:25	19:39	18:51	17:12	17:02
14	07:45	07:20	06:40	06:51	06:13		05:57		19:30 (AG10)	06:09	19:39 (AG10)	06:36	07:04	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31		20:53	55	20:25 (AG10)	20:53	20:27 (AG10)	20:24	19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:49	06:12	19:49 (AG10)	05:57		19:30 (AG10)	06:10	19:39 (AG10)	06:37	07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	9 19:58 (AG10)	20:54	55	20:25 (AG10)	20:52	20:26 (AG10)	20:22	19:35	18:48	17:11	17:02
16	07:44	07:17	06:37	06:48	06:11	19:45 (AG10)	05:57		19:30 (AG10)	06:10	19:40 (AG10)	06:38	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	17 20:02 (AG10)	20:54	55	20:25 (AG10)	20:52	20:26 (AG10)	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:47	06:10	19:42 (AG10)	05:57		19:30 (AG10)	06:11	19:41 (AG10)	06:39	07:07	07:36	07:10	07:39
	17:27	18:03	18:33	20:04	20:33	23 20:05 (AG10)	20:55	56	20:26 (AG10)	20:51	20:26 (AG10)	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:09	19:40 (AG10)	05:57		19:30 (AG10)	06:12	19:42 (AG10)	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	26 20:06 (AG10)	20:55	56	20:26 (AG10)	20:50	20:25 (AG10)	20:18	19:30	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	19:39 (AG10)	05:58		19:30 (AG10)	06:13	19:42 (AG10)	06:40	07:09	07:38	07:13	07:40
	17:29	18:05	18:35	20:06	20:35	30 20:09 (AG10)	20:55	56	20:26 (AG10)	20:50	20:24 (AG10)	20:17	19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42	06:08	19:37 (AG10)	05:58		19:30 (AG10)	06:13	19:43 (AG10)	06:41	07:10	07:39	07:14	07:41
	17:30	18:07	18:36	20:07	20:36	33 20:10 (AG10)	20:55	56	20:26 (AG10)	20:49	20:23 (AG10)	20:15	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	19:36 (AG10)	05:58		19:31 (AG10)	06:14	19:44 (AG10)	06:42	07:11	07:40	07:15	07:42
	17:31	18:08	18:37	20:08	20:37	35 20:11 (AG10)	20:56	56	20:27 (AG10)	20:48	20:23 (AG10)	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:39	06:06	19:34 (AG10)	05:58		19:31 (AG10)	06:15	19:45 (AG10)	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	38 20:12 (AG10)	20:56	56	20:27 (AG10)	20:48	20:22 (AG10)	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:05	19:34 (AG10)	05:58		19:31 (AG10)	06:16	19:47 (AG10)	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	40 20:14 (AG10)	20:56	56	20:27 (AG10)	20:47	20:21 (AG10)	20:11	19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37	06:05	19:33 (AG10)	05:59		19:31 (AG10)	06:17	19:47 (AG10)	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	41 20:14 (AG10)	20:56	56	20:27 (AG10)	20:46	20:19 (AG10)	20:10	19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35	06:04	19:32 (AG10)	05:59		19:32 (AG10)	06:18	19:49 (AG10)	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:40	43 20:15 (AG10)	20:56	56	20:28 (AG10)	20:45	20:18 (AG10)	20:08	19:19	17:34	17:04	17:06
26	07:39	07:04	06:21	06:34	06:03	19:32 (AG10)	05:59		19:32 (AG10)	06:18	19:51 (AG10)	06:47	07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	44 20:16 (AG10)	20:57	56	20:28 (AG10)	20:44	20:16 (AG10)	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	19:31 (AG10)	05:59		19:32 (AG10)	06:19	19:54 (AG10)	06:48	07:17	06:47	07:21	07:44
	17:38	18:14	18:43	20:14	20:42	45 20:16 (AG10)	20:57	55	20:27 (AG10)	20:44	20:14 (AG10)	20:05	19:16	17:31	17:03	17:08
28	07:37	07:01	06:18	06:31	06:02	19:31 (AG10)	06:00		19:33 (AG10)	06:20	19:57 (AG10)	06:49	07:18	06:48	07:22	07:45
	17:40	18:15	18:44	20:15	20:43	47 20:18 (AG10)	20:57	55	20:28 (AG10)	20:43	20:11 (AG10)	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	19:30 (AG10)	06:00		19:33 (AG10)	06:21		06:50	07:18	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	48 20:18 (AG10)	20:57	55	20:28 (AG10)	20:42		20:02	19:13	17:28	17:03	17:09
30	07:35		07:14	06:29	06:01	19:30 (AG10)	06:01		19:33 (AG10)	06:22		06:51	07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	49 20:19 (AG10)	20:57	56	20:29 (AG10)	20:41		20:01	19:11	17:27	17:02	17:10
31	07:35		07:13		06:01	19:30 (AG10)				06:23		06:52		06:51		07:45
	17:43		19:47		20:45	50 20:20 (AG10)				20:40		19:59		17:26		17:10
Potential sun hours	302	299	370	397	444		447			454		425	374	347	301	293
Total, worst case						618		1639			1224					

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F321 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April			May			June		
1	07:46	07:34	07:00	07:11			06:27		19:11 (AG10)	06:00		18:57 (AG10)
	17:11	17:44	18:16	19:48			20:18	37	19:48 (AG10)	20:46	68	20:05 (AG10)
2	07:46	07:33	06:58	07:10			06:26		19:10 (AG10)	06:00		18:58 (AG10)
	17:12	17:46	18:18	19:49			20:19	40	19:50 (AG10)	20:47	68	20:06 (AG10)
3	07:46	07:32	06:57	07:08			06:25		19:08 (AG10)	05:59		18:57 (AG10)
	17:13	17:47	18:19	19:50			20:20	44	19:52 (AG10)	20:47	68	20:05 (AG10)
4	07:46	07:31	06:55	07:06			06:24		19:07 (AG10)	05:59		18:58 (AG10)
	17:14	17:48	18:20	19:51			20:21	46	19:53 (AG10)	20:48	68	20:06 (AG10)
5	07:46	07:30	06:54	07:05			06:23		19:06 (AG10)	05:59		18:58 (AG10)
	17:15	17:49	18:21	19:52			20:22	49	19:55 (AG10)	20:49	68	20:06 (AG10)
6	07:46	07:29	06:52	07:03			06:21		19:04 (AG10)	05:59		18:59 (AG10)
	17:16	17:50	18:22	19:53			20:23	52	19:56 (AG10)	20:49	67	20:06 (AG10)
7	07:46	07:28	06:51	07:02			06:20		19:02 (AG10)	05:58		18:58 (AG10)
	17:17	17:51	18:23	19:54			20:24	54	19:56 (AG10)	20:50	68	20:06 (AG10)
8	07:46	07:27	06:49	07:00			06:19		19:02 (AG10)	05:58		18:59 (AG10)
	17:18	17:53	18:24	19:55			20:25	55	19:57 (AG10)	20:50	67	20:06 (AG10)
9	07:46	07:26	06:48	06:59			06:18		19:01 (AG10)	05:58		18:59 (AG10)
	17:19	17:54	18:25	19:56			20:26	56	19:57 (AG10)	20:51	67	20:06 (AG10)
10	07:46	07:25	06:46	06:57			06:17		19:00 (AG10)	05:58		18:59 (AG10)
	17:20	17:55	18:26	19:57			20:27	58	19:58 (AG10)	20:52	68	20:07 (AG10)
11	07:45	07:23	06:45	06:56			06:16		18:59 (AG10)	05:58		19:00 (AG10)
	17:21	17:56	18:27	19:58			20:28	60	19:59 (AG10)	20:52	67	20:07 (AG10)
12	07:45	07:22	06:43	06:54			06:15		18:59 (AG10)	05:57		19:00 (AG10)
	17:22	17:57	18:28	19:59			20:29	60	19:59 (AG10)	20:53	67	20:07 (AG10)
13	07:45	07:21	06:41	06:52			06:14		18:59 (AG10)	05:57		19:00 (AG10)
	17:23	17:58	18:29	20:00			20:30	62	20:01 (AG10)	20:53	67	20:07 (AG10)
14	07:45	07:20	06:40	06:51			06:13		18:58 (AG10)	05:57		19:01 (AG10)
	17:24	18:00	18:30	20:01			20:31	63	20:01 (AG10)	20:53	66	20:07 (AG10)
15	07:44	07:19	06:38	06:50			06:12		18:58 (AG10)	05:57		19:01 (AG10)
	17:25	18:01	18:31	20:02			20:32	63	20:01 (AG10)	20:54	67	20:08 (AG10)
16	07:44	07:17	06:37	06:48			06:11		18:57 (AG10)	05:57		19:01 (AG10)
	17:26	18:02	18:32	20:03			20:33	65	20:02 (AG10)	20:54	67	20:08 (AG10)
17	07:44	07:16	06:35	06:47			06:10		18:57 (AG10)	05:57		19:01 (AG10)
	17:27	18:03	18:33	20:04			20:33	65	20:02 (AG10)	20:55	67	20:08 (AG10)
18	07:43	07:15	06:34	06:45			06:09		18:57 (AG10)	05:57		19:01 (AG10)
	17:28	18:04	18:34	20:05			20:34	65	20:02 (AG10)	20:55	67	20:08 (AG10)
19	07:43	07:14	06:32	06:44			06:09		18:57 (AG10)	05:58		19:01 (AG10)
	17:29	18:05	18:35	20:06			20:35	66	20:03 (AG10)	20:55	67	20:08 (AG10)
20	07:42	07:12	06:30	06:42			06:08		18:57 (AG10)	05:58		19:01 (AG10)
	17:30	18:07	18:36	20:07			20:36	66	20:03 (AG10)	20:56	67	20:08 (AG10)
21	07:42	07:11	06:29	06:41			06:07		18:56 (AG10)	05:58		19:02 (AG10)
	17:31	18:08	18:37	20:08			20:37	67	20:03 (AG10)	20:56	67	20:09 (AG10)
22	07:41	07:10	06:27	06:39			06:06		18:56 (AG10)	05:58		19:02 (AG10)
	17:33	18:09	18:38	20:09			20:38	67	20:03 (AG10)	20:56	67	20:09 (AG10)
23	07:41	07:08	06:26	06:38			06:05		18:57 (AG10)	05:58		19:02 (AG10)
	17:34	18:10	18:39	20:10			20:39	67	20:04 (AG10)	20:56	67	20:09 (AG10)
24	07:40	07:07	06:24	06:37			06:05		18:56 (AG10)	05:59		19:02 (AG10)
	17:35	18:11	18:40	20:11			20:40	68	20:04 (AG10)	20:56	67	20:09 (AG10)
25	07:39	07:05	06:22	06:35			06:04		18:56 (AG10)	05:59		19:03 (AG10)
	17:36	18:12	18:41	20:12			20:40	68	20:04 (AG10)	20:56	67	20:10 (AG10)
26	07:39	07:04	06:21	06:34			06:03		18:56 (AG10)	05:59		19:03 (AG10)
	17:37	18:13	18:42	20:13			20:41	68	20:04 (AG10)	20:57	67	20:10 (AG10)
27	07:38	07:03	06:19	06:33		19:26 (AG10)	06:03		18:56 (AG10)	05:59		19:03 (AG10)
	17:38	18:14	18:43	20:14	9	19:35 (AG10)	20:42	68	20:04 (AG10)	20:57	67	20:10 (AG10)
28	07:37	07:01	06:18	06:31		19:20 (AG10)	06:02		18:57 (AG10)	06:00		19:04 (AG10)
	17:40	18:15	18:44	20:15	21	19:41 (AG10)	20:43	68	20:05 (AG10)	20:57	66	20:10 (AG10)
29	07:36		07:16	06:30		19:17 (AG10)	06:02		18:56 (AG10)	06:00		19:03 (AG10)
	17:41		19:45	20:16	28	19:45 (AG10)	20:44	68	20:04 (AG10)	20:57	67	20:10 (AG10)
30	07:35		07:14	06:29		19:13 (AG10)	06:01		18:57 (AG10)	06:01		19:04 (AG10)
	17:42		19:46	20:17	33	19:46 (AG10)	20:44	68	20:05 (AG10)	20:57	67	20:11 (AG10)
31	07:35		07:13				06:01		18:57 (AG10)			
	17:43		19:47				20:45	69	20:06 (AG10)			
Potential sun hours	302	299	370	397			444			447		
Total, worst case					91			1872			2015	

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

Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar

Calculation: Cumulativo_20240129Shadow receptor: F321 - A2

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July			August			September	October	November	December
1	06:01		19:04 (AG10)	06:24		19:09 (AG10)	06:53	07:20	06:52	07:26
	20:57	67	20:11 (AG10)	20:39	61	20:10 (AG10)	19:58	19:09	17:25	17:02
2	06:02		19:03 (AG10)	06:25		19:10 (AG10)	06:53	07:21	06:54	07:27
	20:56	68	20:11 (AG10)	20:38	59	20:09 (AG10)	19:56	19:08	17:24	17:02
3	06:02		19:04 (AG10)	06:26		19:11 (AG10)	06:54	07:22	06:55	07:28
	20:56	67	20:11 (AG10)	20:37	57	20:08 (AG10)	19:55	19:06	17:22	17:02
4	06:03		19:04 (AG10)	06:27		19:12 (AG10)	06:55	07:23	06:56	07:29
	20:56	67	20:11 (AG10)	20:36	56	20:08 (AG10)	19:53	19:05	17:21	17:02
5	06:03		19:04 (AG10)	06:27		19:12 (AG10)	06:56	07:24	06:57	07:29
	20:56	68	20:12 (AG10)	20:35	55	20:07 (AG10)	19:51	19:03	17:20	17:01
6	06:04		19:05 (AG10)	06:28		19:13 (AG10)	06:57	07:25	06:58	07:30
	20:56	67	20:12 (AG10)	20:33	53	20:06 (AG10)	19:50	19:01	17:19	17:01
7	06:04		19:04 (AG10)	06:29		19:14 (AG10)	06:58	07:26	06:59	07:31
	20:55	68	20:12 (AG10)	20:32	51	20:05 (AG10)	19:48	19:00	17:18	17:01
8	06:05		19:05 (AG10)	06:30		19:15 (AG10)	06:59	07:27	07:00	07:32
	20:55	68	20:13 (AG10)	20:31	48	20:03 (AG10)	19:47	18:58	17:17	17:01
9	06:06		19:04 (AG10)	06:31		19:16 (AG10)	07:00	07:28	07:01	07:33
	20:55	68	20:12 (AG10)	20:30	46	20:02 (AG10)	19:45	18:57	17:16	17:01
10	06:06		19:05 (AG10)	06:32		19:17 (AG10)	07:01	07:29	07:03	07:34
	20:54	68	20:13 (AG10)	20:29	43	20:00 (AG10)	19:43	18:55	17:15	17:01
11	06:07		19:05 (AG10)	06:33		19:19 (AG10)	07:02	07:30	07:04	07:35
	20:54	68	20:13 (AG10)	20:27	40	19:59 (AG10)	19:42	18:54	17:14	17:01
12	06:07		19:05 (AG10)	06:34		19:21 (AG10)	07:03	07:31	07:05	07:36
	20:54	68	20:13 (AG10)	20:26	36	19:57 (AG10)	19:40	18:52	17:13	17:01
13	06:08		19:05 (AG10)	06:35		19:23 (AG10)	07:04	07:32	07:06	07:36
	20:53	68	20:13 (AG10)	20:25	31	19:54 (AG10)	19:39	18:51	17:12	17:02
14	06:09		19:06 (AG10)	06:36		19:25 (AG10)	07:04	07:33	07:07	07:37
	20:53	68	20:14 (AG10)	20:24	27	19:52 (AG10)	19:37	18:49	17:12	17:02
15	06:10		19:05 (AG10)	06:37		19:29 (AG10)	07:05	07:34	07:08	07:38
	20:52	68	20:13 (AG10)	20:22	19	19:48 (AG10)	19:35	18:48	17:11	17:02
16	06:10		19:05 (AG10)	06:38			07:06	07:35	07:09	07:39
	20:52	68	20:13 (AG10)	20:21			19:34	18:46	17:10	17:02
17	06:11		19:06 (AG10)	06:39			07:07	07:36	07:10	07:39
	20:51	68	20:14 (AG10)	20:20			19:32	18:45	17:09	17:03
18	06:12		19:06 (AG10)	06:40			07:08	07:37	07:12	07:40
	20:50	68	20:14 (AG10)	20:18			19:30	18:43	17:09	17:03
19	06:13		19:05 (AG10)	06:40			07:09	07:38	07:13	07:40
	20:50	68	20:13 (AG10)	20:17			19:29	18:42	17:08	17:03
20	06:13		19:06 (AG10)	06:41			07:10	07:39	07:14	07:41
	20:49	67	20:13 (AG10)	20:16			19:27	18:40	17:07	17:04
21	06:14		19:06 (AG10)	06:42			07:11	07:40	07:15	07:42
	20:48	68	20:14 (AG10)	20:14			19:26	18:39	17:07	17:04
22	06:15		19:07 (AG10)	06:43			07:12	07:42	07:16	07:42
	20:48	67	20:14 (AG10)	20:13			19:24	18:38	17:06	17:05
23	06:16		19:07 (AG10)	06:44			07:13	07:43	07:17	07:43
	20:47	67	20:14 (AG10)	20:11			19:22	18:36	17:05	17:05
24	06:17		19:06 (AG10)	06:45			07:14	07:44	07:18	07:43
	20:46	67	20:13 (AG10)	20:10			19:21	18:35	17:05	17:06
25	06:18		19:07 (AG10)	06:46			07:15	06:45	07:19	07:44
	20:45	66	20:13 (AG10)	20:08			19:19	17:34	17:04	17:06
26	06:18		19:07 (AG10)	06:47			07:16	06:46	07:20	07:44
	20:44	66	20:13 (AG10)	20:07			19:17	17:32	17:04	17:07
27	06:19		19:08 (AG10)	06:48			07:17	06:47	07:21	07:44
	20:44	64	20:12 (AG10)	20:05			19:16	17:31	17:03	17:08
28	06:20		19:08 (AG10)	06:49			07:18	06:48	07:22	07:45
	20:43	64	20:12 (AG10)	20:04			19:14	17:30	17:03	17:08
29	06:21		19:09 (AG10)	06:50			07:18	06:49	07:24	07:45
	20:42	63	20:12 (AG10)	20:02			19:13	17:28	17:03	17:09
30	06:22		19:09 (AG10)	06:51			07:19	06:50	07:25	07:45
	20:41	63	20:12 (AG10)	20:01			19:11	17:27	17:02	17:10
31	06:23		19:09 (AG10)	06:52				06:51		07:45
	20:40	61	20:10 (AG10)	19:59				17:26		17:10
Potential sun hours	454			425			374	347	301	293
Total, worst case		2071			682					

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

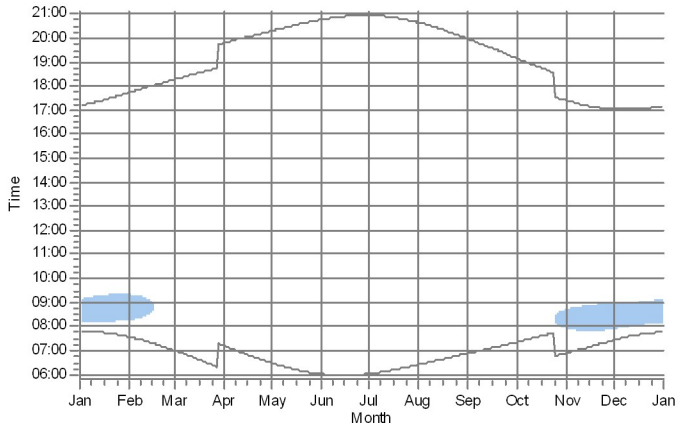
Day in month	Sun rise (hh:mm)		First time (hh:mm) with flicker	(WTG causing flicker first time)
	Sun set (hh:mm)	Minutes with flicker	Last time (hh:mm) with flicker	(WTG causing flicker last time)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

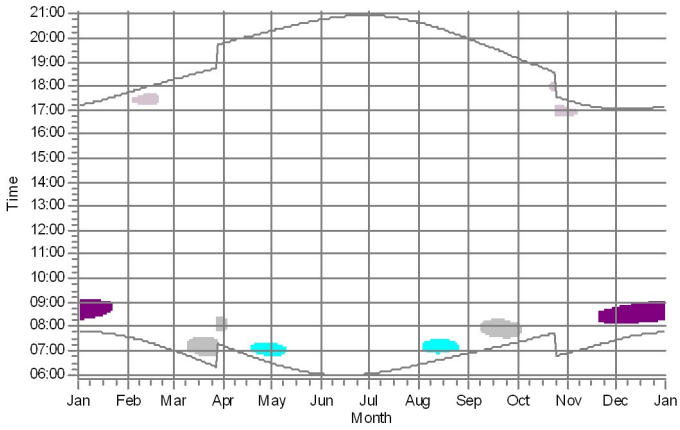
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

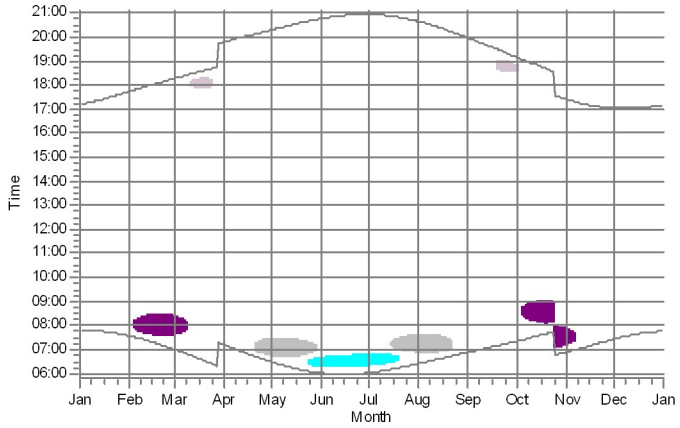
F001: D10



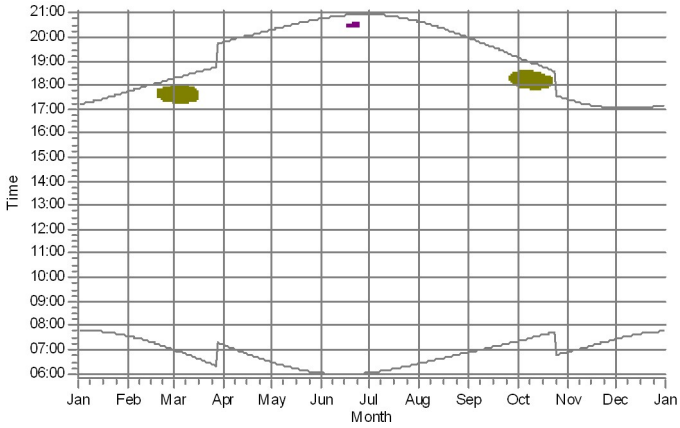
F004: A3



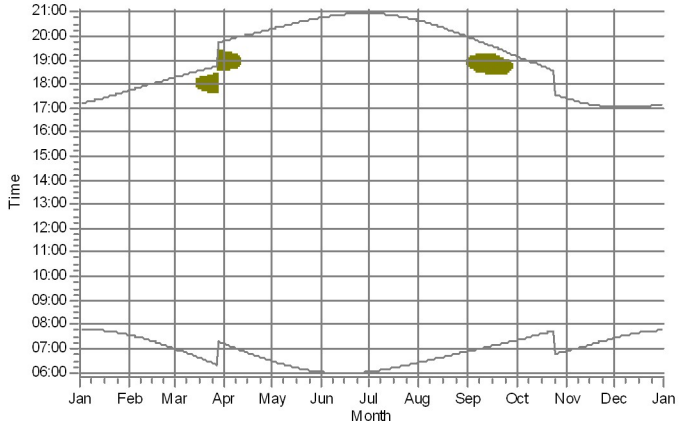
F005: D7



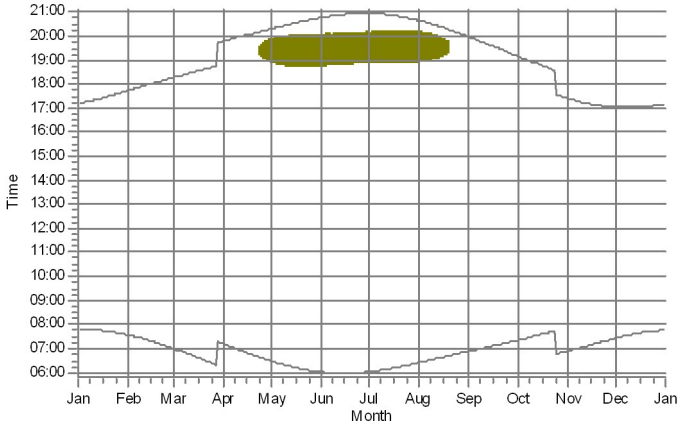
F010: A3



F011: A3 - F4



F012: A2 - D10



WTGs

AG10: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)
AG11: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (21)
AG12: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (22)
AG13: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (23)
AG15: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (25)
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (66)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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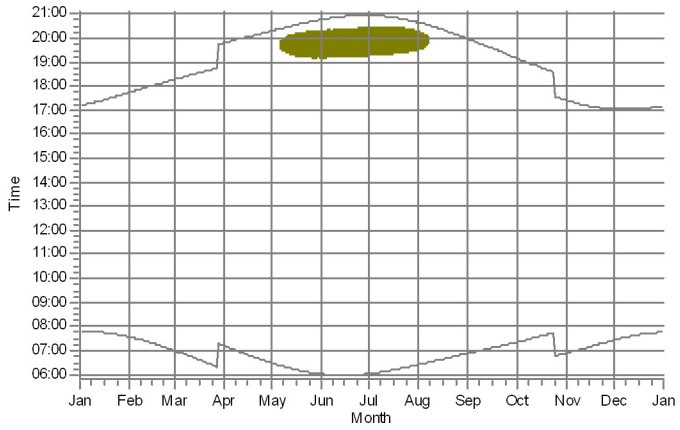
07/05/2024 15:42/3.4.415

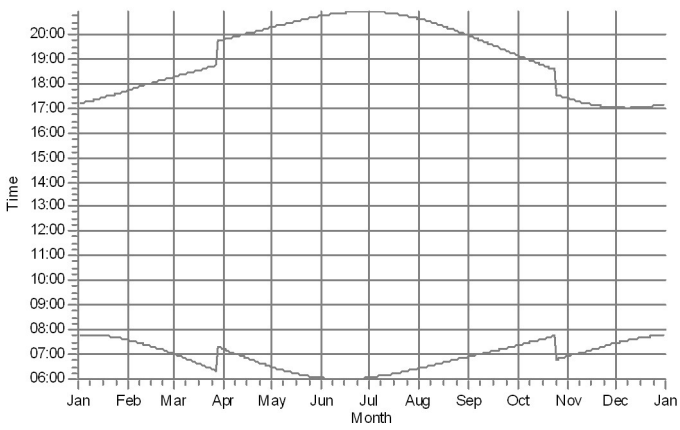
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

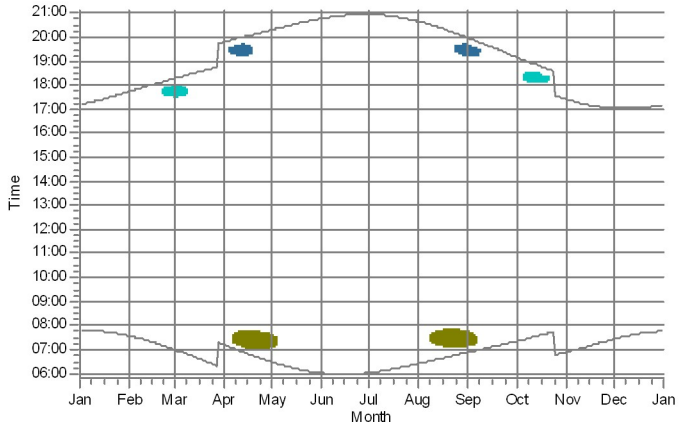
F013: A2 - D10



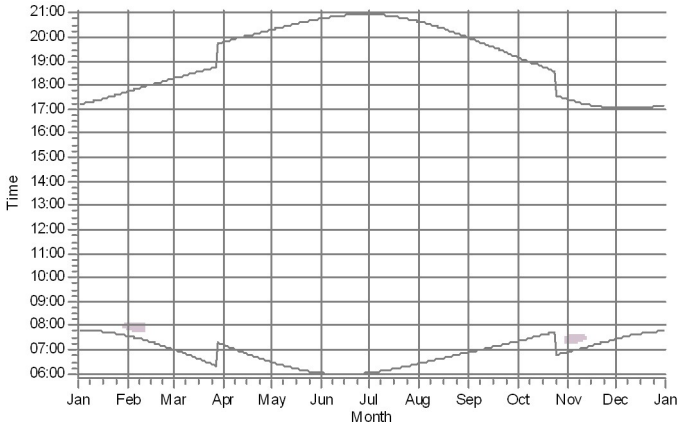
F014: A3 - F2



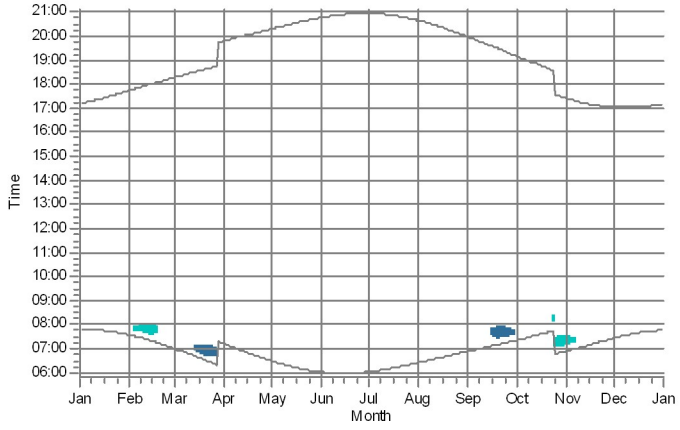
F015: D10



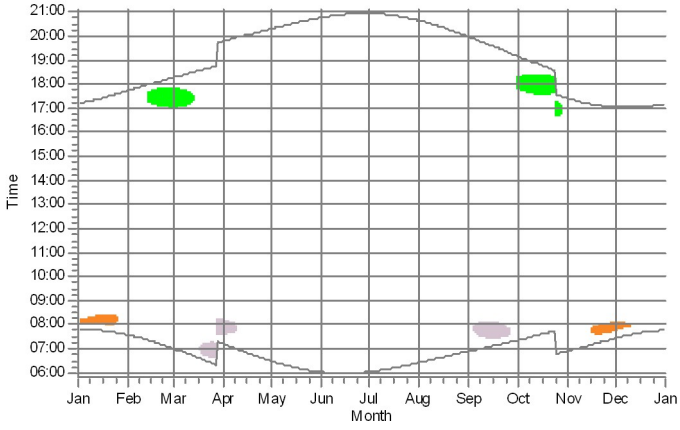
F018: A2



F020: D10



F024: D10 - A4



WTGs

- AG09: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)
- AG10: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (62)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (63)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (64)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (66)

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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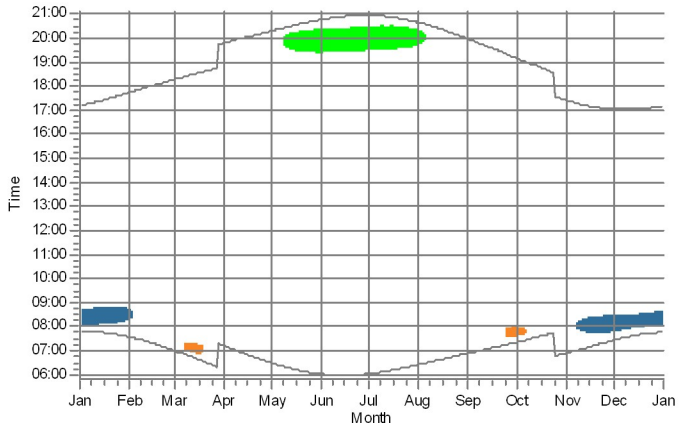
07/05/2024 15:42/3.4.415

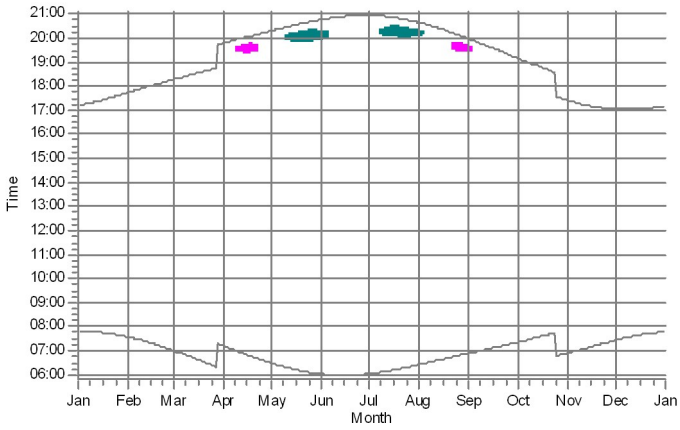
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

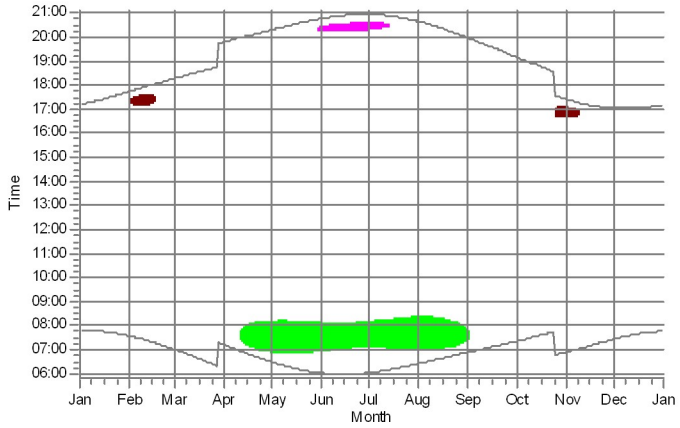
F028: A2 - D10



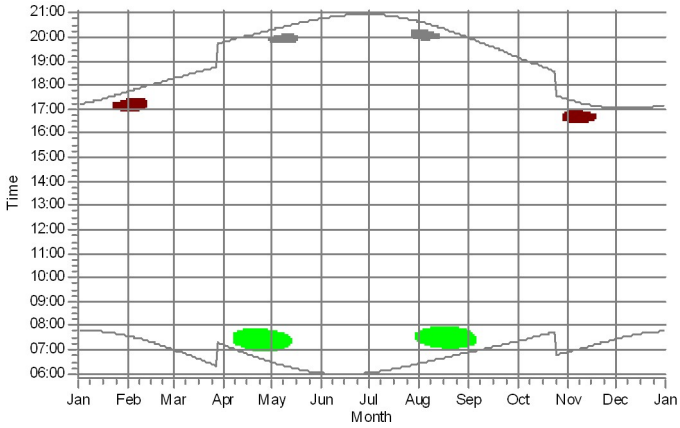
F029: A4



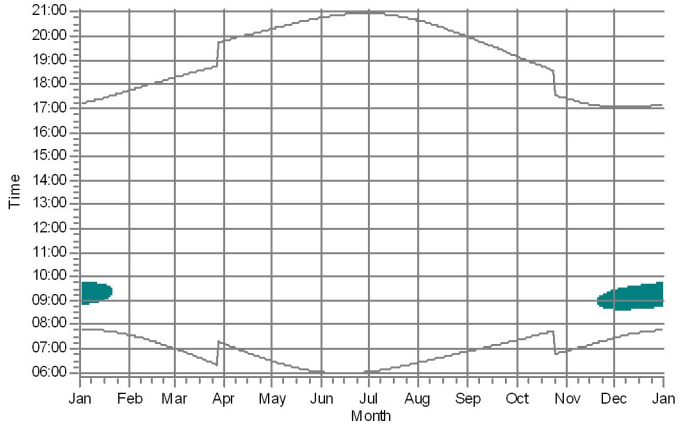
F032: C2



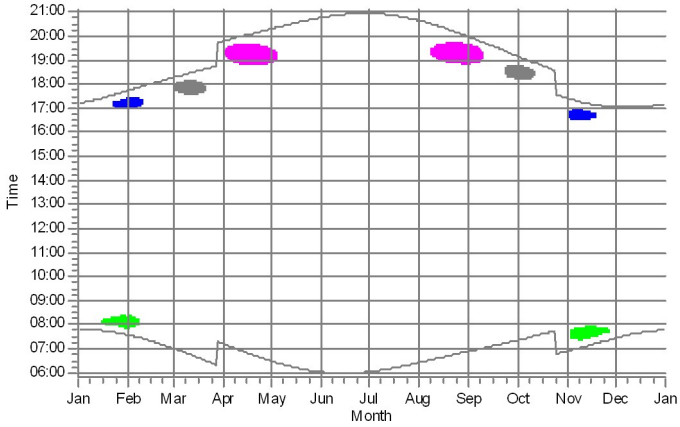
F033: A4



F039: A3



F047: Pascolo cespugliato



WTGs

- AG03: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13)
- AG04: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14)
- AG05: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15)
- AG06: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (16)
- AG08: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)
- AG09: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (63)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (64)

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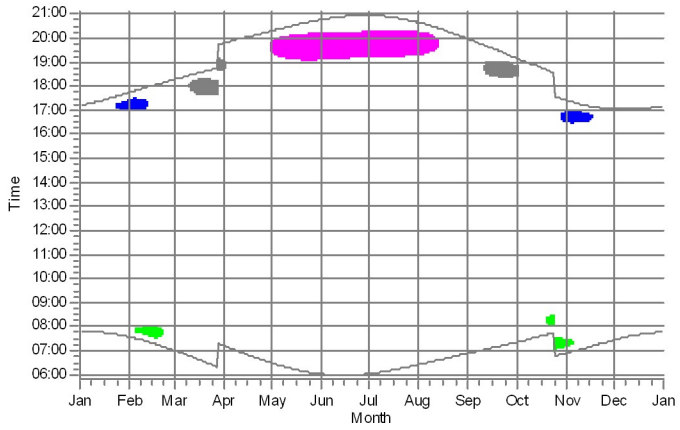
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

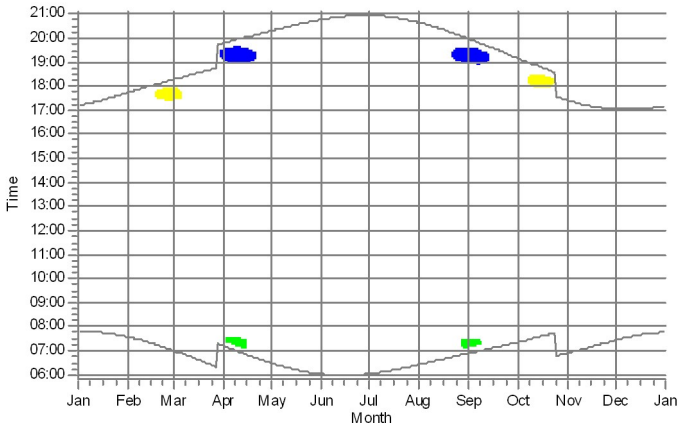
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

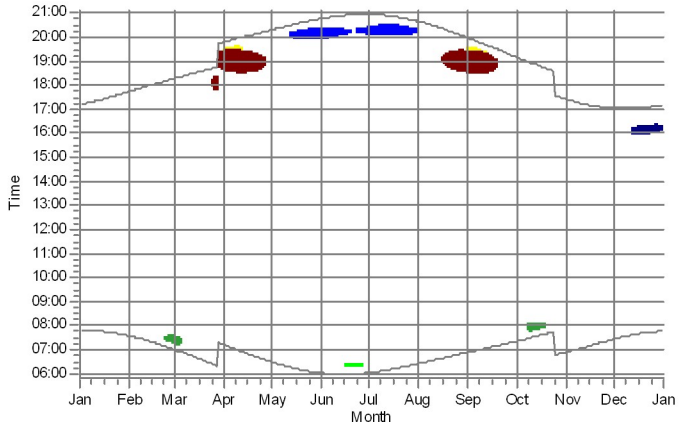
F048: A2 - F3



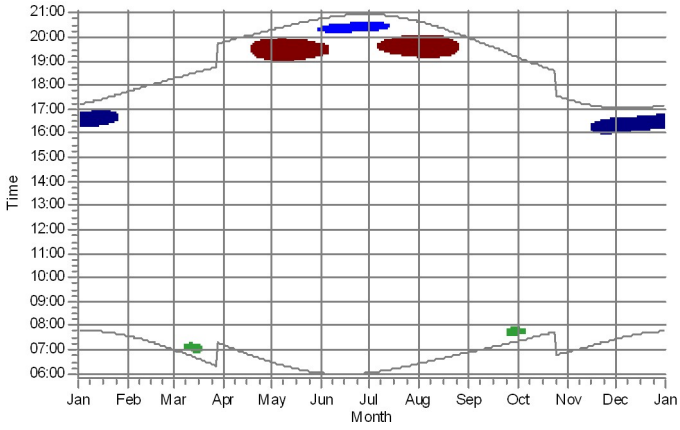
F057: A2



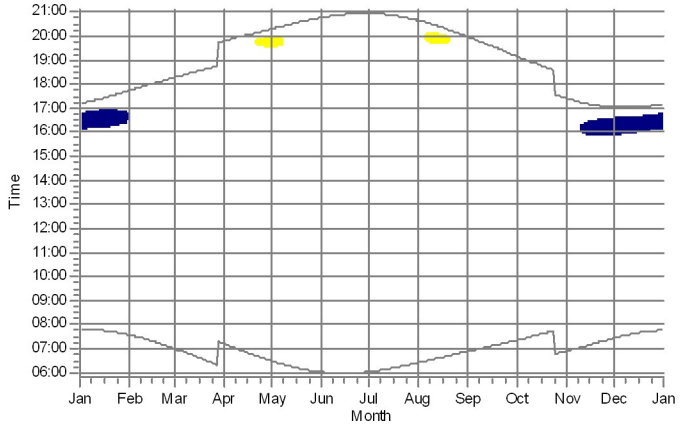
F060: A2 - D10



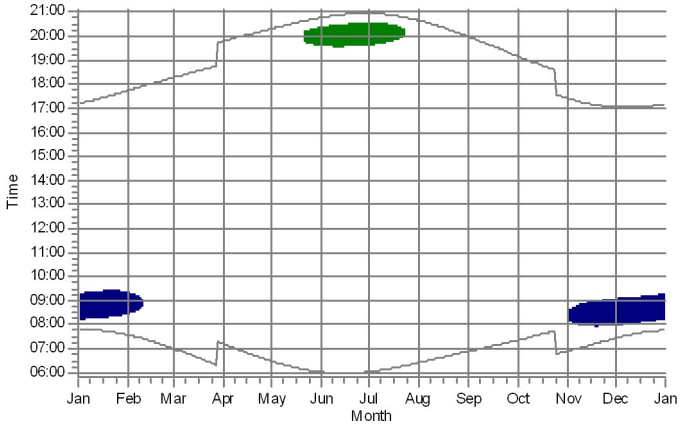
F061: A3



F063: A2



F071: D10



WTGs

- AG01: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11)
- AG02: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12)
- AG03: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13)
- AG04: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14)
- AG05: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15)
- AG07: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17)
- AG08: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)
- AG09: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)
- Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (61)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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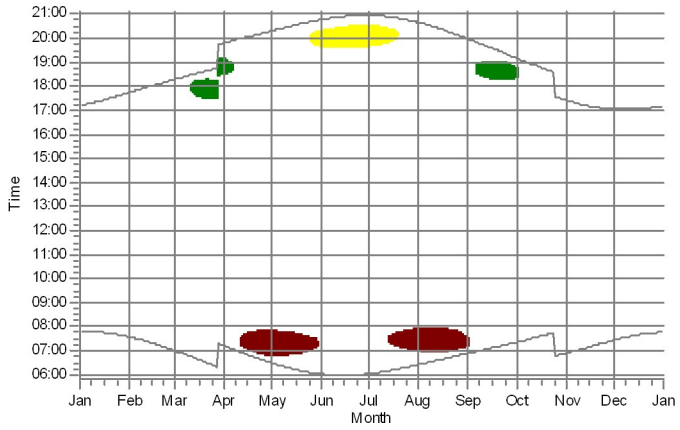
07/05/2024 15:42/3.4.415

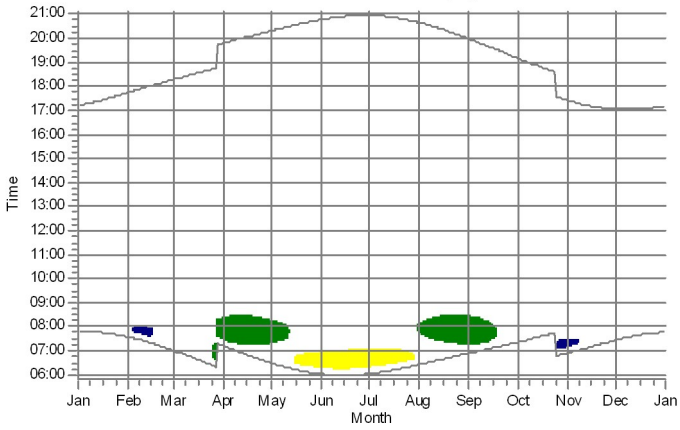
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

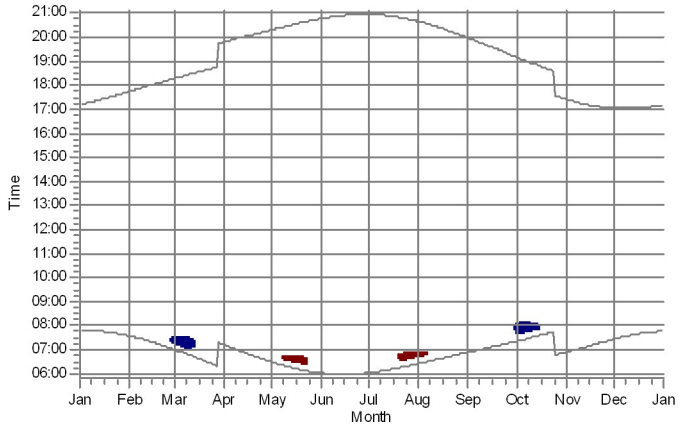
F073: C2



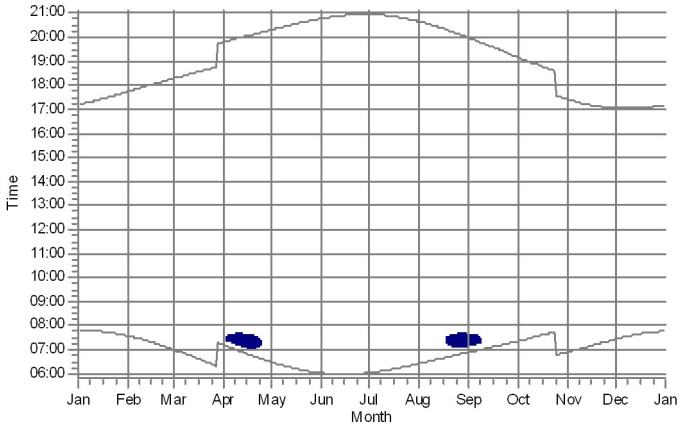
F077: Seminativo - Pascolo cespugliato



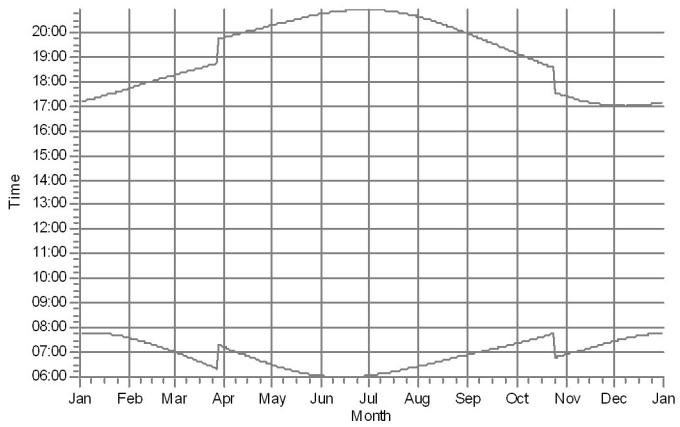
F079: Ente urbano



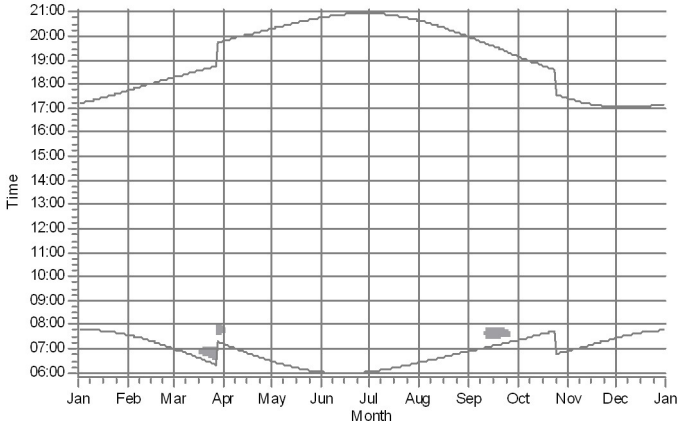
F080: Uliveto - Pascolo cespugliato



F085: Ente urbano



F091: Ente urbano



WTGs

AG01: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11)
AG02: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12)
AG07: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17)
AG08: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (57)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
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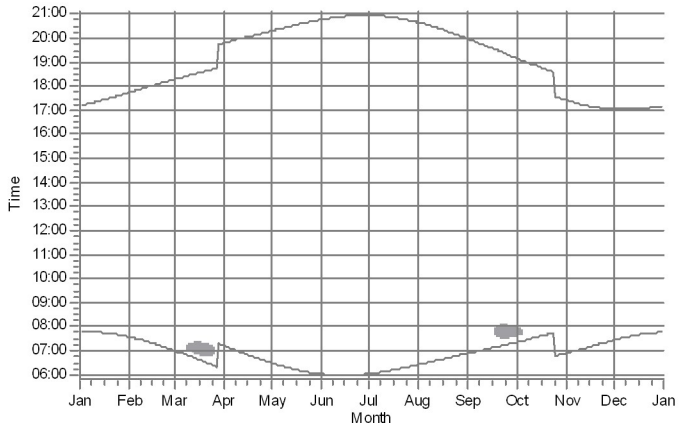
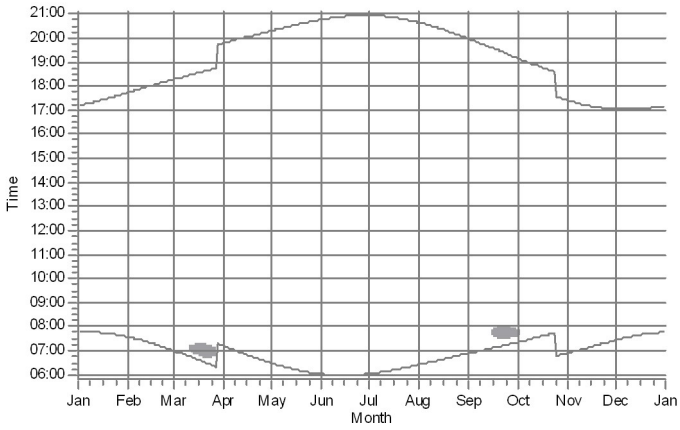
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

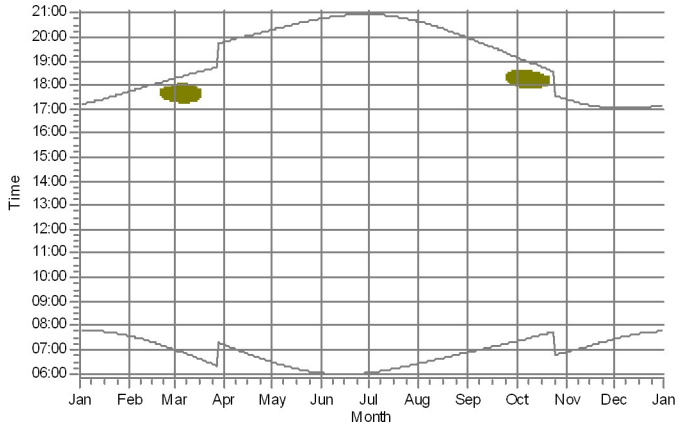
F092: Ente urbano



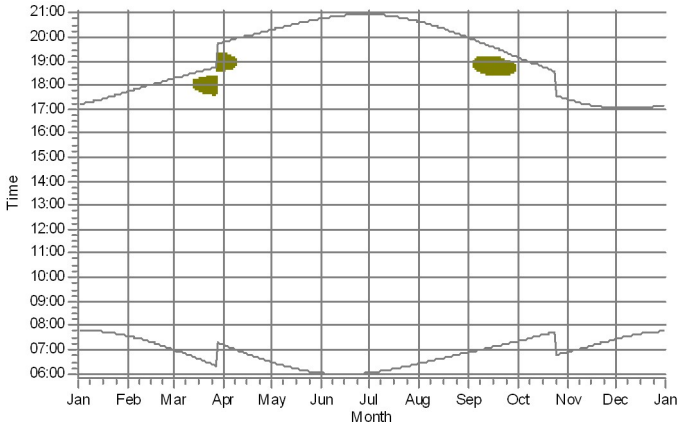
F093: Ente urbano



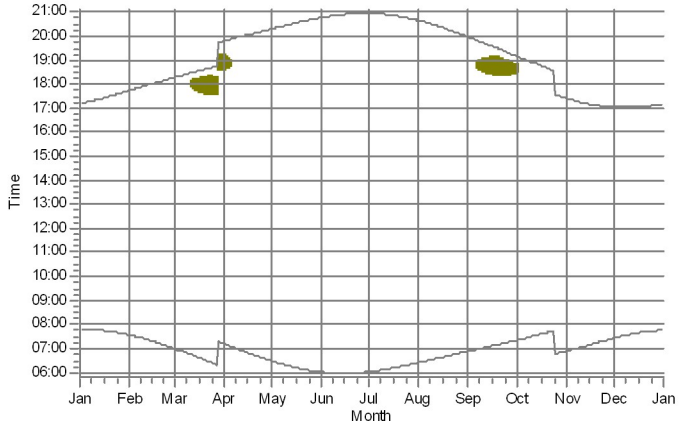
F109: A3



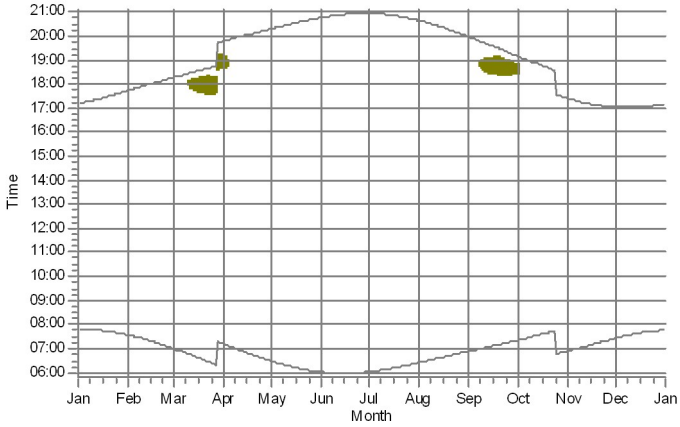
F115: A3 - F4



F116: A3



F117: A3 - F4



WTGs

AG10: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)

Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (57)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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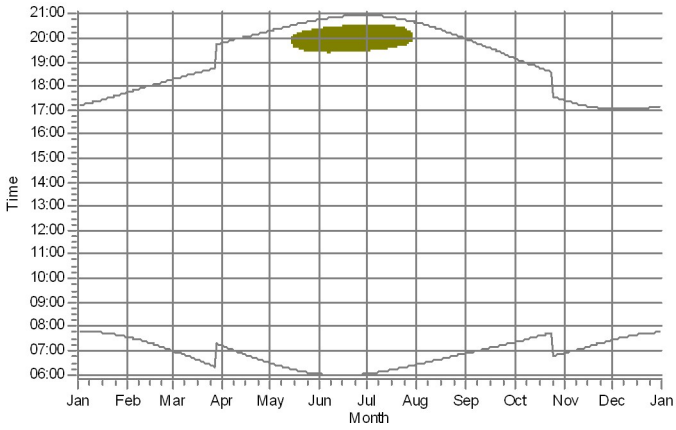
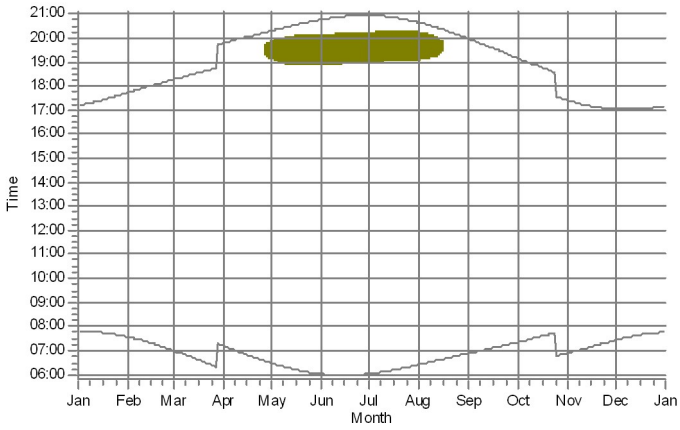
SHADOW - Calendar, graphical

Calculation: Cumulativo_20240129

F118: A2 - D10



F321: A2



WTGs

AG10: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG01 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March		April		May		June	
1	07:46	07:34	07:00		07:11	07:32-08:20/48	06:28	07:22-08:12/50	06:01	19:40-20:17/37
	17:12	17:45	18:17		19:49	18:34-19:06/32	20:18		20:46	
2	07:46	07:33	06:59		07:10	07:30-08:20/50	06:27	07:22-08:10/48	06:00	19:40-20:18/38
	17:13	17:46	18:18		19:50	18:34-19:04/30	20:19		20:47	
3	07:46	07:32	06:57		07:08	07:28-08:21/53	06:25	07:23-08:09/46	06:00	19:40-20:19/39
	17:14	17:47	18:19		19:51	18:35-19:01/26	20:20		20:48	
4	07:46	07:31	06:56		07:07	07:27-08:22/55	06:24	07:24-08:08/44	06:00	19:39-20:19/40
	17:14	17:48	18:20		19:52	18:38-19:00/22	20:21		20:48	
5	07:46	07:30	06:54		07:05	07:25-08:22/57	06:23	07:26-08:07/41	05:59	19:39-20:20/41
	17:15	17:49	18:21		19:53	18:40-18:56/16	20:22		20:49	
6	07:46	07:29	06:53		07:04	07:25-08:23/58	06:22	07:27-08:05/38	05:59	19:39-20:21/42
	17:16	17:51	18:22		19:54	18:45-18:52/7	20:23		20:50	
7	07:46	07:28	06:51		07:02	07:23-08:23/60	06:21	07:29-08:04/35	05:59	19:39-20:22/43
	17:17	17:52	18:23		19:55		20:24		20:50	
8	07:46	07:27	06:50		07:01	07:23-08:24/61	06:20	07:30-08:02/32	05:58	19:39-20:22/43
	17:18	17:53	18:24		19:56		20:25		20:51	
9	07:46	07:26	06:48		06:59	07:22-08:24/62	06:18	07:32-08:00/28	05:58	19:38-20:22/44
	17:19	17:54	18:25		19:57		20:26		20:51	
10	07:46	07:25	06:46		06:57	07:21-08:24/63	06:17	07:35-07:57/22	05:58	19:38-20:22/44
	17:20	17:55	18:26		19:58		20:27		20:52	
11	07:46	07:24	06:45		06:56	07:20-08:24/64	06:16	07:38-07:54/16	05:58	19:38-20:23/45
	17:21	17:57	18:27		19:59		20:28		20:52	
12	07:46	07:23	06:43	17:49-18:02/13	06:54	07:20-08:24/64	06:15	07:45-07:46/1	05:58	19:38-20:23/45
	17:22	17:58	18:29		20:00		20:29		20:53	
13	07:45	07:21	06:42	17:45-18:05/20	06:53	07:19-08:24/65	06:14		05:58	19:38-20:24/46
	17:23	17:59	18:30		20:01		20:30		20:53	
14	07:45	07:20	06:40	17:42-18:06/24	06:51	07:19-08:24/65	06:13		05:58	19:38-20:24/46
	17:24	18:00	18:31		20:02		20:31		20:54	
15	07:45	07:19	06:39	17:40-18:09/29	06:50	07:18-08:23/65	06:12		05:58	19:39-20:24/45
	17:25	18:01	18:32		20:03		20:32		20:54	
16	07:44	07:18	06:37	17:38-18:09/31	06:48	07:18-08:23/65	06:12		05:58	19:39-20:25/46
	17:26	18:02	18:33		20:04		20:33		20:55	
17	07:44	07:17	06:35	17:37-18:11/34	06:47	07:18-08:22/64	06:11		05:58	19:39-20:25/46
	17:27	18:03	18:34		20:05		20:34		20:55	
18	07:44	07:15	06:34	17:35-18:11/36	06:45	07:18-08:23/65	06:10		05:58	19:39-20:25/46
	17:28	18:05	18:35		20:06		20:35		20:55	
19	07:43	07:14	06:32	17:34-18:11/37	06:44	07:17-08:21/64	06:09		05:58	19:40-20:26/46
	17:30	18:06	18:36		20:06		20:36		20:56	
20	07:43	07:13	06:31	17:34-18:12/38	06:43	07:17-08:21/64	06:08		05:58	19:40-20:26/46
	17:31	18:07	18:37		20:07		20:36		20:56	
21	07:42	07:11	06:29	17:33-18:12/39	06:41	07:18-08:21/63	06:07		05:58	19:40-20:26/46
	17:32	18:08	18:38		20:08		20:37		20:56	
22	07:41	07:10	06:27	17:33-18:13/40	06:40	07:17-08:20/63	06:07	19:52-20:04/12	05:58	19:40-20:26/46
	17:33	18:09	18:39		20:09		20:38		20:56	
23	07:41	07:09	06:26	17:32-18:12/40	06:38	07:18-08:20/62	06:06	19:49-20:07/18	05:59	19:40-20:26/46
	17:34	18:10	18:40		20:10		20:39		20:57	
24	07:40	07:07	06:24	17:31-18:11/40	06:37	07:18-08:19/61	06:05	19:47-20:08/21	05:59	19:41-20:27/46
	17:35	18:11	18:41		20:11		20:40		20:57	
25	07:40	07:06	06:23	17:31-18:12/41	06:36	07:18-08:18/60	06:04	19:46-20:11/25	05:59	19:41-20:27/46
	17:36	18:12	18:42		20:12		20:41		20:57	
26	07:39	07:04	06:21	06:50-07:04/14	06:34	07:19-08:17/58	06:04	19:44-20:12/28	06:00	19:41-20:27/46
	17:38	18:14	18:43	17:31-18:11/40	20:13		20:42		20:57	
27	07:38	07:03	06:19	06:45-07:10/25	06:33	07:19-08:16/57	06:03	19:44-20:13/29	06:00	19:42-20:27/45
	17:39	18:15	18:44	17:32-18:11/39	20:14		20:42		20:57	
28	07:37	07:01	06:18	06:41-07:12/31	06:32	07:19-08:15/56	06:03	19:42-20:14/32	06:00	19:42-20:27/45
	17:40	18:16	18:45	17:31-18:10/39	20:15		20:43		20:57	
29	07:37		07:16	07:38-08:14/36	06:30	07:20-08:14/54	06:02	19:42-20:16/34	06:01	19:41-20:27/46
	17:41		19:46	18:31-19:08/37	20:16		20:44		20:57	
30	07:36		07:15	07:36-08:17/41	06:29	07:21-08:13/52	06:02	19:41-20:16/35	06:01	19:42-20:27/45
	17:42		19:47	18:32-19:08/36	20:17		20:45		20:57	
31	07:35		07:13	07:33-08:18/45			06:01	19:41-20:17/36		
	17:44		19:48	18:32-19:06/34			20:45			
Potential sun hours	302	299	370		397		444		447	
Sum of minutes with flicker	0	0	879		1931		671		1325	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
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Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG01 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October		November	December
1	06:01	19:42-20:27/45	06:24	07:51-08:01/10	06:53	07:19-08:23/64	07:21	18:26-18:42/16	06:53	07:26
	20:57		20:39		19:58		19:10		17:25	17:03
2	06:02	19:43-20:28/45	06:25	07:47-08:06/19	06:54	07:19-08:22/63	07:22	18:31-18:36/5	06:54	07:27
	20:57		20:38		19:57		19:08		17:24	17:02
3	06:02	19:43-20:27/44	06:26	07:43-08:08/25	06:55	07:20-08:22/62	07:23		06:55	07:28
	20:57		20:37		19:55		19:06		17:23	17:02
4	06:03	19:44-20:27/43	06:27	07:41-08:10/29	06:56	07:20-08:21/61	07:24		06:56	07:29
	20:56		20:36		19:53		19:05		17:22	17:02
5	06:04	19:44-20:27/43	06:28	07:39-08:12/33	06:57	07:20-08:20/60	07:25		06:57	07:30
	20:56		20:35		19:52		19:03		17:21	17:02
6	06:04	19:45-20:27/42	06:29	07:38-08:14/36	06:58	07:21-08:19/58	07:26		06:58	07:31
	20:56		20:34		19:50	18:41-18:47/6	19:02		17:20	17:02
7	06:05	19:46-20:27/41	06:30	07:36-08:15/39	06:58	07:20-08:17/57	07:27		07:00	07:32
	20:56		20:33		19:49	18:35-18:51/16	19:00		17:19	17:02
8	06:05	19:46-20:27/41	06:31	07:35-08:17/42	06:59	07:21-08:16/55	07:28		07:01	07:33
	20:55		20:31		19:47	18:32-18:54/22	18:59		17:18	17:02
9	06:06	19:47-20:27/40	06:31	07:34-08:18/44	07:00	07:22-08:15/53	07:29		07:02	07:33
	20:55		20:30		19:45	18:30-18:55/25	18:57		17:17	17:02
10	06:07	19:47-20:26/39	06:32	07:32-08:19/47	07:01	07:23-08:13/50	07:30		07:03	07:34
	20:55		20:29		19:44	18:28-18:57/29	18:55		17:16	17:02
11	06:07	19:48-20:26/38	06:33	07:30-08:19/49	07:02	07:24-08:12/48	07:31		07:04	07:35
	20:54		20:28		19:42	18:26-18:58/32	18:54		17:15	17:02
12	06:08	19:49-20:26/37	06:34	07:29-08:20/51	07:03	07:25-08:10/45	07:32		07:05	07:36
	20:54		20:27		19:41	18:25-18:58/33	18:52		17:14	17:02
13	06:09	19:49-20:24/35	06:35	07:28-08:21/53	07:04	07:27-08:08/41	07:33		07:06	07:37
	20:54		20:25		19:39	18:24-18:59/35	18:51		17:13	17:02
14	06:09	19:50-20:24/34	06:36	07:28-08:22/54	07:05	07:29-08:06/37	07:34		07:07	07:37
	20:53		20:24		19:37	18:23-19:00/37	18:49		17:12	17:02
15	06:10	19:51-20:24/33	06:37	07:27-08:23/56	07:06	07:31-08:03/32	07:35		07:09	07:38
	20:53		20:23		19:36	18:21-18:59/38	18:48		17:11	17:02
16	06:11	19:53-20:23/30	06:38	07:26-08:23/57	07:07	07:33-07:59/26	07:36		07:10	07:39
	20:52		20:21		19:34	18:20-18:59/39	18:46		17:10	17:03
17	06:11	19:53-20:22/29	06:39	07:25-08:24/59	07:08	07:37-07:54/17	07:37		07:11	07:40
	20:51		20:20		19:32	18:19-18:59/40	18:45		17:10	17:03
18	06:12	19:55-20:21/26	06:40	07:25-08:25/60	07:09	18:19-18:59/40	07:38		07:12	07:40
	20:51		20:19		19:31		18:44		17:09	17:03
19	06:13	19:56-20:20/24	06:41	07:24-08:25/61	07:09	18:18-18:59/41	07:39		07:13	07:41
	20:50		20:17		19:29		18:42		17:08	17:04
20	06:14	19:58-20:18/20	06:42	07:24-08:25/61	07:10	18:18-18:58/40	07:40		07:14	07:41
	20:49		20:16		19:28		18:41		17:08	17:04
21	06:15	20:00-20:15/15	06:43	07:22-08:25/63	07:11	18:18-18:58/40	07:41		07:15	07:42
	20:49		20:14		19:26		18:39		17:07	17:05
22	06:15	20:04-20:12/8	06:44	07:22-08:25/63	07:12	18:18-18:57/39	07:42		07:16	07:42
	20:48		20:13		19:24		18:38		17:06	17:05
23	06:16		06:45	07:21-08:25/64	07:13	18:18-18:57/39	07:43		07:17	07:43
	20:47		20:12		19:23		18:37		17:06	17:06
24	06:17		06:45	07:21-08:25/64	07:14	18:18-18:56/38	07:44		07:19	07:43
	20:46		20:10		19:21		18:35		17:05	17:06
25	06:18		06:46	07:21-08:25/64	07:15	18:19-18:55/36	06:45		07:20	07:44
	20:46		20:09		19:19		17:34		17:05	17:07
26	06:19		06:47	07:20-08:25/65	07:16	18:18-18:53/35	06:46		07:21	07:44
	20:45		20:07		19:18		17:33		17:04	17:07
27	06:20		06:48	07:20-08:25/65	07:17	18:19-18:51/32	06:47		07:22	07:45
	20:44		20:06		19:16		17:31		17:04	17:08
28	06:21		06:49	07:20-08:25/65	07:18	18:20-18:50/30	06:48		07:23	07:45
	20:43		20:04		19:14		17:30		17:03	17:09
29	06:21		06:50	07:20-08:25/65	07:19	18:21-18:48/27	06:49		07:24	07:45
	20:42		20:03		19:13		17:29		17:03	17:09
30	06:22		06:51	07:19-08:24/65	07:20	18:23-18:45/22	06:51		07:25	07:46
	20:41		20:01		19:11		17:28		17:03	17:10
31	06:23		06:52	07:19-08:23/64			06:52			07:46
	20:40		20:00				17:26			17:11
Potential sun hours	454		425		374		347		301	293
Sum of minutes with flicker	752		1592		1640		21		0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG02 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:46	07:34	07:00 17:30-17:52/22	07:11 19:25-19:27/2	06:28 19:37-19:56/19	06:01 06:22-06:53/31
	17:12	17:45	18:17	19:49	20:18	20:46 19:43-20:14/31
2	07:46	07:33	06:59 17:30-17:51/21	07:10 19:23-19:29/6	06:27 19:37-19:56/19	06:00 06:21-06:53/32
	17:13	17:46	18:18	19:50	20:19	20:47 19:42-20:16/34
3	07:46	07:32	06:57 17:32-17:50/18	07:08 19:21-19:29/8	06:25 19:37-19:56/19	06:00 06:21-06:54/33
	17:13	17:47	18:19	19:51	20:20	20:48 19:42-20:17/35
4	07:46	07:31	06:56 17:33-17:48/15	07:07 19:20-19:31/11	06:24 19:38-19:55/17	05:59 06:21-06:54/33
	17:14	17:48	18:20	19:52	20:21	20:48 19:41-20:17/36
5	07:46	07:30	06:54 17:34-17:44/10	07:05 19:19-19:31/12	06:23 19:39-19:54/15	05:59 06:20-06:54/34
	17:15	17:49	18:21	19:53	20:22	20:49 19:40-20:18/38
6	07:46	07:29	06:53	07:04 19:19-19:33/14	06:22 19:40-19:53/13	05:59 06:20-06:54/34
	17:16	17:51	18:22	19:54	20:23	20:50 19:40-20:19/39
7	07:46	07:28	06:51	07:02 19:18-19:33/15	06:21 19:42-19:51/9	05:59 06:20-06:55/35
	17:17	17:52	18:23	19:55	20:24	20:50 19:40-20:20/40
8	07:46	07:27	06:50	07:00 19:19-19:35/16	06:20	05:58 06:20-06:55/35
	17:18	17:53	18:24	19:56	20:25	20:51 19:40-20:21/41
9	07:46	07:26	06:48	06:59 19:18-19:35/17	06:18	05:58 06:19-06:55/36
	17:19	17:54	18:25	19:57	20:26	20:51 19:39-20:21/42
10	07:46	07:25	06:46	06:57 19:18-19:34/16	06:17	05:58 06:19-06:55/36
	17:20	17:55	18:26	19:58	20:27	20:52 19:39-20:22/43
11	07:46	07:24	06:45	06:56 19:20-19:33/13	06:16	05:58 06:19-06:55/36
	17:21	17:57	18:27	19:59	20:28	20:52 19:39-20:22/43
12	07:46	07:23	06:43	06:54 19:21-19:30/9	06:15	05:58 06:19-06:56/37
	17:22	17:58	18:29	20:00	20:29	20:53 19:39-20:23/44
13	07:45	07:21	06:42	06:53	06:14	05:58 06:19-06:56/37
	17:23	17:59	18:30	20:01	20:30	20:53 19:39-20:23/44
14	07:45	07:20	06:40	06:51	06:13	05:58 06:19-06:56/37
	17:24	18:00	18:31	20:02	20:31	20:54 19:39-20:24/45
15	07:45	07:19	06:39	06:50	06:12	05:58 06:19-06:56/37
	17:25	18:01	18:32	20:03	20:32	20:54 19:39-20:24/45
16	07:44	07:18	06:37	06:48	06:12 06:31-06:38/7	05:58 06:19-06:56/37
	17:26	18:02	18:33	20:04	20:33	20:55 19:39-20:24/45
17	07:44	07:17	06:35	06:47	06:11 06:30-06:40/10	05:58 06:19-06:56/37
	17:27	18:03	18:34	20:05	20:34	20:55 19:39-20:25/46
18	07:44	07:15	06:34	06:45	06:10 06:30-06:43/13	05:58 06:19-06:57/38
	17:28	18:05	18:35	20:05	20:35	20:55 19:39-20:25/46
19	07:43	07:14 17:37-17:44/7	06:32	06:44	06:09 06:29-06:44/15	05:58 06:20-06:58/38
	17:30	18:06	18:36	20:06	20:36	20:56 19:40-20:26/46
20	07:43	07:13 17:34-17:45/11	06:31	06:43	06:08 06:28-06:45/17	05:58 06:20-06:58/38
	17:31	18:07	18:37	20:07	20:36	20:56 19:40-20:26/46
21	07:42	07:11 17:33-17:46/13	06:29	06:41	06:07 06:27-06:46/19	05:58 06:20-06:58/38
	17:32	18:08	18:38	20:08	20:37	20:56 19:40-20:26/46
22	07:41	07:10 17:32-17:48/16	06:27	06:40 19:46-19:47/1	06:07 06:27-06:47/20	05:58 06:20-06:58/38
	17:33	18:09	18:39	20:09	20:38	20:56 19:40-20:26/46
23	07:41	07:09 17:31-17:49/18	06:26	06:38 19:43-19:49/6	06:06 06:26-06:48/22	05:59 06:20-06:58/38
	17:34	18:10	18:40	20:10	20:39	20:57 19:40-20:26/46
24	07:40	07:07 17:30-17:50/20	06:24	06:37 19:40-19:49/9	06:05 06:25-06:48/23	05:59 06:21-06:59/38
	17:35	18:11	18:41	20:11	20:40	20:57 19:41-20:27/46
25	07:40	07:06 17:29-17:51/22	06:23	06:36 19:39-19:50/11	06:04 06:25-06:49/24	05:59 06:21-06:59/38
	17:36	18:12	18:42	20:12	20:41	20:57 19:41-20:27/46
26	07:39	07:04 17:29-17:52/23	06:21	06:34 19:39-19:51/12	06:04 06:24-06:50/26	05:59 06:21-06:58/37
	17:38	18:14	18:43	20:13	20:42 19:53-20:03/10	20:57 19:41-20:27/46
27	07:38	07:03 17:29-17:52/23	06:19	06:33 19:37-19:52/15	06:03 06:24-06:51/27	06:00 06:22-06:59/37
	17:39	18:15	18:44	20:14	20:42 19:50-20:07/17	20:57 19:42-20:27/45
28	07:37	07:01 17:29-17:52/23	06:18	06:32 19:37-19:53/16	06:03 06:23-06:51/28	06:00 06:22-06:59/37
	17:40	18:16	18:45	20:15	20:43 19:48-20:09/21	20:57 19:42-20:27/45
29	07:37		07:16	06:30 19:37-19:54/17	06:02 06:23-06:52/29	06:01 06:23-07:00/37
	17:41		19:46	20:16	20:44 19:47-20:11/24	20:57 19:42-20:26/44
30	07:36		07:15	06:29 19:37-19:55/18	06:02 06:22-06:52/30	06:01 06:23-07:00/37
	17:42		19:47	20:17	20:45 19:45-20:12/27	20:57 19:43-20:27/44
31	07:35		07:13		06:01 06:22-06:52/30	
	17:43		19:48		20:45 19:44-20:14/30	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	0	176	86	244	580	2369

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG02 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01 06:23-06:59/36	06:24	06:53 19:19-19:32/13	07:21	06:53	07:26
	20:57 19:43-20:26/43	20:39	19:58	19:10	17:25	17:02
2	06:02 06:24-07:00/36	06:25	06:54 19:17-19:33/16	07:22	06:54	07:27
	20:57 19:44-20:27/43	20:38	19:57	19:08	17:24	17:02
3	06:02 06:24-07:00/36	06:26	06:55 19:16-19:33/17	07:23	06:55	07:28
	20:57 19:44-20:26/42	20:37	19:55	19:06	17:23	17:02
4	06:03 06:25-07:00/35	06:27	06:56 19:16-19:32/16	07:24	06:56	07:29
	20:56 19:45-20:27/42	20:36	19:53	19:05	17:22	17:02
5	06:03 06:25-07:00/35	06:28 19:54-19:58/4	06:57 19:15-19:30/15	07:25	06:57	07:30
	20:56 19:45-20:26/41	20:35	19:52	19:03	17:21	17:02
6	06:04 06:26-07:00/34	06:29 19:51-20:01/10	06:57 19:14-19:28/14	07:26	06:58	07:31
	20:56 19:46-20:26/40	20:34	19:50	19:02	17:20	17:02
7	06:05 06:27-07:01/34	06:30 19:50-20:03/13	06:58 19:14-19:27/13	07:27	07:00	07:32
	20:56 19:47-20:26/39	20:33	19:49	19:00	17:19	17:02
8	06:05 06:27-07:00/33	06:31 19:48-20:04/16	06:59 19:14-19:25/11	07:28 18:12-18:18/6	07:01	07:33
	20:55 19:47-20:25/38	20:31	19:47	18:59	17:17	17:02
9	06:06 06:28-07:01/33	06:31 19:47-20:05/18	07:00 19:15-19:24/9	07:29 18:08-18:21/13	07:02	07:33
	20:55 19:49-20:25/36	20:30	19:45	18:57	17:17	17:02
10	06:06 06:28-07:00/32	06:32 19:46-20:04/18	07:01 19:16-19:22/6	07:30 18:06-18:23/17	07:03	07:34
	20:55 19:49-20:23/34	20:29	19:44	18:55	17:16	17:02
11	06:07 06:29-07:00/31	06:33 19:45-20:05/20	07:02 19:18-19:21/3	07:31 18:05-18:24/19	07:04	07:35
	20:54 19:50-20:23/33	20:28	19:42	18:54	17:15	17:02
12	06:08 06:30-07:01/31	06:34 19:45-20:04/19	07:03	07:32 18:03-18:24/21	07:05	07:36
	20:54 19:52-20:23/31	20:27	19:41	18:52	17:14	17:02
13	06:09 06:30-07:00/30	06:35 19:45-20:03/18	07:04	07:33 18:02-18:25/23	07:06	07:37
	20:54 19:52-20:21/29	20:25	19:39	18:51	17:13	17:02
14	06:09 06:31-07:00/29	06:36 19:45-20:02/17	07:05	07:34 18:02-18:25/23	07:07	07:37
	20:53 19:54-20:20/26	20:24	19:37	18:49	17:12	17:02
15	06:10 06:32-07:00/28	06:37 19:45-20:00/15	07:06	07:35 18:01-18:25/24	07:09	07:38
	20:53 19:56-20:19/23	20:23	19:36	18:48	17:11	17:02
16	06:11 06:33-07:00/27	06:38 19:45-19:59/14	07:07	07:36 18:01-18:23/22	07:10	07:39
	20:52 19:58-20:17/19	20:21	19:34	18:46	17:10	17:03
17	06:11 06:33-06:59/26	06:39 19:46-19:58/12	07:08	07:37 18:02-18:23/21	07:11	07:40
	20:51 20:00-20:14/14	20:20	19:32	18:45	17:10	17:03
18	06:12 06:34-06:59/25	06:40 19:46-19:57/11	07:09	07:38 18:02-18:21/19	07:12	07:40
	20:51 20:07-20:08/1	20:19	19:31	18:44	17:09	17:03
19	06:13 06:35-06:59/24	06:41 19:47-19:56/9	07:09	07:39 18:02-18:20/18	07:13	07:41
	20:50	20:17	19:29	18:42	17:08	17:04
20	06:14 06:36-06:59/23	06:42 19:48-19:53/5	07:10	07:40 18:03-18:18/15	07:14	07:41
	20:49	20:16	19:28	18:41	17:08	17:04
21	06:15 06:36-06:57/21	06:43	07:11	07:41 18:04-18:17/13	07:15	07:42
	20:49	20:14	19:26	18:39	17:07	17:05
22	06:15 06:37-06:57/20	06:44	07:12	07:42 18:05-18:15/10	07:16	07:42
	20:48	20:13	19:24	18:38	17:06	17:05
23	06:16 06:38-06:56/18	06:45	07:13	07:43 18:08-18:14/6	07:17	07:43
	20:47	20:12	19:23	18:37	17:06	17:06
24	06:17 06:39-06:55/16	06:45	07:14	07:44	07:19	07:43
	20:46	20:10	19:21	18:35	17:05	17:06
25	06:18 06:40-06:54/14	06:46	07:15	06:45	07:20	07:44
	20:46	20:09	19:19	17:34	17:05	17:07
26	06:19 06:40-06:52/12	06:47	07:16	06:46	07:21	07:44
	20:45	20:07	19:18	17:33	17:04	17:07
27	06:20 06:41-06:50/9	06:48	07:17	06:47	07:22	07:45
	20:44	20:06	19:16	17:31	17:04	17:08
28	06:21 06:42-06:47/5	06:49	07:18	06:48	07:23	07:45
	20:43	20:04	19:14	17:30	17:03	17:09
29	06:21	06:50	07:19	06:49	07:24	07:45
	20:42	20:03	19:13	17:29	17:03	17:09
30	06:22	06:51	07:20	06:51	07:25	07:46
	20:41	20:01	19:11	17:28	17:03	17:10
31	06:23	06:52 19:21-19:30/9		06:52		07:46
	20:40	20:00		17:26		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	1307	228	133	270	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG03 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46 17:12	07:34 17:02-17:21/19 17:45	07:00 18:17	07:11 19:13-19:28/15 19:49	06:28 20:18	06:01 20:00-20:21/21 20:46
2	07:46 17:13	07:33 17:03-17:23/20 17:46	06:59 18:18	07:10 19:10-19:29/19 19:50	06:27 20:19	06:00 20:01-20:23/22 20:47
3	07:46 17:13	07:32 17:03-17:24/21 17:47	06:57 18:19	07:08 19:08-19:29/21 19:51	06:25 20:20	06:00 20:02-20:23/21 20:48
4	07:46 17:14	07:31 17:03-17:26/23 17:48	06:56 18:20	07:07 19:07-19:31/24 19:52	06:24 20:21	05:59 20:02-20:23/21 20:48
5	07:46 17:15	07:30 17:03-17:26/23 17:49	06:54 18:21	07:05 19:05-19:31/26 19:53	06:23 20:22	05:59 20:03-20:24/21 20:49
6	07:46 17:16	07:29 17:03-17:25/22 17:51	06:53 18:22	07:04 19:05-19:33/28 19:54	06:22 20:23	05:59 20:03-20:25/22 20:50
7	07:46 17:17	07:28 17:03-17:25/22 17:52	06:51 18:23	07:02 19:04-19:33/29 19:55	06:21 20:24	05:59 20:04-20:26/22 20:50
8	07:46 17:18	07:27 17:04-17:24/20 17:53	06:50 18:24	07:00 19:04-19:35/31 19:56	06:20 20:25	05:58 20:04-20:26/22 20:51
9	07:46 17:19	07:26 17:05-17:24/19 17:54	06:48 18:25	06:59 19:03-19:34/31 19:57	06:18 20:26	05:58 20:05-20:26/21 20:51
10	07:46 17:20	07:25 17:06-17:23/17 17:55	06:46 18:26	06:57 19:02-19:34/32 19:58	06:17 20:27	05:58 20:06-20:27/21 20:52
11	07:46 17:21	07:24 17:08-17:21/13 17:56	06:45 18:27	06:56 19:02-19:34/32 19:59	06:16 20:28	05:58 20:07-20:28/21 20:52
12	07:46 17:22	07:23 17:11-17:19/8 17:58	06:43 18:28	06:54 19:02-19:33/31 20:00	06:15 20:29	05:58 20:07-20:28/21 20:53
13	07:45 17:23	07:21 17:59	06:42 18:30	06:53 19:02-19:33/31 20:01	06:14 20:06-20:07/1 20:30	05:58 20:08-20:29/21 20:53
14	07:45 17:24	07:20 18:00	06:40 18:31	06:51 19:02-19:31/29 20:02	06:13 20:04-20:08/4 20:31	05:58 20:09-20:29/20 20:54
15	07:45 17:25	07:19 18:01	06:39 18:32	06:50 19:03-19:31/28 20:03	06:12 20:02-20:09/7 20:32	05:58 20:10-20:29/19 20:54
16	07:44 17:26	07:18 18:02	06:37 18:33	06:48 19:04-19:30/26 20:03	06:11 20:01-20:09/8 20:33	05:58 20:10-20:30/20 20:55
17	07:44 17:27	07:16 18:03	06:35 18:34	06:47 19:04-19:28/24 20:04	06:11 20:00-20:10/10 20:34	05:58 20:16-20:30/14 20:55 20:11-20:15/4
18	07:44 17:28	07:15 18:05	06:34 18:35	06:45 19:06-19:27/21 20:05	06:10 20:00-20:12/12 20:35	05:58 20:16-20:30/14 20:55 20:12-20:15/3
19	07:43 17:30	07:14 18:06	06:32 18:36	06:44 19:07-19:24/17 20:06	06:09 19:59-20:12/13 20:36	05:58 20:16-20:30/14 20:56 20:13-20:14/1
20	07:43 17:31	07:13 18:07	06:31 18:37	06:43 19:10-19:22/12 20:07	06:08 19:59-20:13/14 20:36	05:58 20:18-20:31/13 20:56
21	07:42 17:32	07:11 18:08	06:29 18:38	06:41 20:08	06:07 19:58-20:13/15 20:37	05:58 20:18-20:31/13 20:56
22	07:41 17:33	07:10 18:09	06:27 18:39	06:40 20:09	06:07 19:59-20:15/16 20:38	05:58 20:18-20:31/13 20:56
23	07:41 17:34	07:09 18:10	06:26 18:40	06:38 20:10	06:06 19:58-20:15/17 20:39	05:59 20:17-20:31/14 20:56
24	07:40 17:07-17:11/4 17:35	07:07 18:11	06:24 18:41	06:37 20:11	06:05 19:58-20:16/18 20:40	05:59 20:18-20:32/14 20:57 20:14-20:17/3
25	07:40 17:05-17:12/7 17:36	07:06 18:12	06:23 18:42	06:36 20:12	06:04 19:59-20:17/18 20:41	05:59 20:18-20:32/14 20:57 20:13-20:17/4
26	07:39 17:05-17:14/9 17:38	07:04 18:14	06:21 18:43	06:34 20:13	06:04 19:58-20:17/19 20:42	05:59 20:13-20:32/19 20:57
27	07:38 17:04-17:15/11 17:39	07:03 18:15	06:19 18:44	06:33 20:14	06:03 19:59-20:19/20 20:42	06:00 20:13-20:32/19 20:57
28	07:37 17:04-17:16/12 17:40	07:01 18:16	06:18 18:45	06:32 20:15	06:03 19:59-20:19/20 20:43	06:00 20:12-20:32/20 20:57
29	07:37 17:03-17:17/14 17:41		07:16 19:46	06:30 20:16	06:02 20:00-20:20/20 20:44	06:01 20:11-20:32/21 20:57
30	07:36 17:03-17:18/15 17:42		07:15 19:47	06:29 20:17	06:02 20:00-20:20/20 20:45	06:01 20:12-20:32/20 20:57
31	07:35 17:02-17:20/18 17:43		07:13 19:16-19:26/10 19:48		06:01 20:00-20:21/21 20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	90	227	10	507	273	573

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG03 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July	August	September	October	November	December
1	06:01 20:11-20:32/21 20:57	06:24 20:39	06:53 19:01-19:33/32 19:58	07:21 19:10	06:53 16:36-16:53/17 17:25	07:26 17:02
2	06:02 20:11-20:32/21 20:57	06:25 20:38	06:54 19:01-19:33/32 19:57	07:22 19:08	06:54 16:35-16:53/18 17:24	07:27 17:02
3	06:02 20:10-20:32/22 20:57	06:26 20:37	06:55 19:01-19:32/31 19:55	07:23 19:06	06:55 16:34-16:54/20 17:23	07:28 17:02
4	06:03 20:10-20:32/22 20:56	06:27 20:36	06:56 19:01-19:32/31 19:53	07:24 19:05	06:56 16:33-16:54/21 17:22	07:29 17:02
5	06:03 20:10-20:31/21 20:56	06:28 20:35	06:57 19:01-19:30/29 19:52	07:25 19:03	06:57 16:32-16:55/23 17:21	07:30 17:02
6	06:04 20:10-20:31/21 20:56	06:29 20:34	06:57 19:00-19:28/28 19:50	07:26 19:02	06:58 16:33-16:56/23 17:20	07:31 17:02
7	06:05 20:09-20:31/22 20:56	06:30 20:33	06:58 19:00-19:27/27 19:49	07:27 19:00	06:59 16:33-16:55/22 17:18	07:32 17:02
8	06:05 20:09-20:31/22 20:55	06:31 20:31	06:59 19:01-19:25/24 19:47	07:28 18:59	07:01 16:33-16:54/21 17:17	07:33 17:02
9	06:06 20:09-20:31/22 20:55	06:31 20:30	07:00 19:02-19:24/22 19:45	07:29 18:57	07:02 16:33-16:53/20 17:16	07:33 17:02
10	06:06 20:08-20:30/22 20:55	06:32 20:29	07:01 19:03-19:22/19 19:44	07:30 18:55	07:03 16:33-16:52/19 17:16	07:34 17:02
11	06:07 20:09-20:30/21 20:54	06:33 20:28	07:02 19:05-19:21/16 19:42	07:31 18:54	07:04 16:34-16:51/17 17:15	07:35 17:02
12	06:08 20:09-20:30/21 20:54	06:34 20:27	07:03 19:08-19:19/11 19:41	07:32 18:52	07:05 16:35-16:50/15 17:14	07:36 17:02
13	06:08 20:08-20:29/21 20:54	06:35 20:25	07:04 19:39	07:33 18:51	07:06 16:35-16:49/14 17:13	07:37 17:02
14	06:09 20:08-20:29/21 20:53	06:36 20:24	07:05 19:37	07:34 18:49	07:07 16:36-16:48/12 17:12	07:37 17:02
15	06:10 20:08-20:29/21 20:53	06:37 20:23	07:06 19:36	07:35 18:48	07:09 16:37-16:48/11 17:11	07:38 17:02
16	06:11 20:08-20:27/19 20:52	06:38 20:21	07:07 19:34	07:36 18:46	07:10 16:38-16:47/9 17:10	07:39 17:03
17	06:11 20:08-20:27/19 20:51	06:39 20:20	07:08 19:32	07:37 18:45	07:11 16:39-16:46/7 17:10	07:40 17:03
18	06:12 20:08-20:27/19 20:51	06:40 20:19	07:09 19:31	07:38 18:44	07:12 16:41-16:45/4 17:09	07:40 17:03
19	06:13 20:08-20:26/18 20:50	06:41 20:17	07:09 19:29	07:39 18:42	07:13 17:08	07:41 17:04
20	06:14 20:08-20:25/17 20:49	06:42 20:16	07:10 19:28	07:40 18:41	07:14 17:07	07:41 17:04
21	06:15 20:08-20:25/17 20:49	06:43 20:14	07:11 19:26	07:41 18:39	07:15 17:07	07:42 17:05
22	06:15 20:09-20:24/15 20:48	06:44 19:19-19:21/2 20:13	07:12 19:24	07:42 18:38	07:16 17:06	07:42 17:05
23	06:16 20:09-20:24/15 20:47	06:44 19:13-19:26/13 20:12	07:13 19:23	07:43 18:37	07:17 17:06	07:43 17:06
24	06:17 20:10-20:23/13 20:46	06:45 19:11-19:28/17 20:10	07:14 19:21	07:44 18:35	07:19 17:05	07:43 17:06
25	06:18 20:10-20:22/12 20:46	06:46 19:09-19:30/21 20:09	07:15 19:19	06:45 17:34	07:20 17:05	07:44 17:07
26	06:19 20:10-20:21/11 20:45	06:47 19:07-19:31/24 20:07	07:16 19:18	06:46 17:33	07:21 17:04	07:44 17:07
27	06:20 20:11-20:20/9 20:44	06:48 19:06-19:32/26 20:06	07:17 19:16	06:47 17:31	07:22 17:04	07:45 17:08
28	06:21 20:12-20:20/8 20:43	06:49 19:05-19:33/28 20:04	07:18 19:14	06:48 17:30	07:23 17:03	07:45 17:09
29	06:21 20:13-20:19/6 20:42	06:50 19:03-19:32/29 20:03	07:19 19:13	06:49 17:29	07:24 17:03	07:45 17:09
30	06:22 20:15-20:18/3 20:41	06:51 19:02-19:33/31 20:01	07:20 19:11	06:51 16:39-16:48/9 17:28	07:25 17:03	07:46 17:10
31	06:23 20:40	06:52 19:02-19:33/31 20:00		06:52 16:37-16:50/13 17:26		07:46 17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	522	222	302	22	293	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG04 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:46 17:12	07:34 17:45	07:00 18:17	07:11 18:49-18:58/9 19:49	06:28 19:51-19:55/4 20:18	06:01 20:46
2	07:46 17:13	07:33 17:46	06:59 18:18	07:10 19:50	06:27 19:50-19:56/6 20:19	06:00 20:47
3	07:46 17:13	07:32 17:47	06:57 17:48-17:58/10 18:19	07:08 19:51	06:25 19:49-19:58/9 20:20	06:00 20:48
4	07:46 17:14	07:31 17:48	06:56 17:45-17:59/14 18:20	07:07 19:52	06:24 19:48-19:59/11 20:21	05:59 20:48
5	07:46 17:15	07:30 17:49	06:54 17:42-18:00/18 18:21	07:05 19:53	06:23 19:48-20:00/12 20:22	05:59 20:49
6	07:46 17:16	07:29 17:51	06:53 17:41-18:01/20 18:22	07:04 19:54	06:22 19:48-20:01/13 20:23	05:59 20:50
7	07:46 17:17	07:28 17:52	06:51 17:40-18:02/22 18:23	07:02 19:55	06:21 19:48-20:02/14 20:24	05:59 20:50
8	07:46 17:18	07:27 17:53	06:49 17:39-18:04/25 18:24	07:00 19:56	06:20 19:48-20:03/15 20:25	05:58 20:51
9	07:46 17:19	07:26 17:54	06:48 17:38-18:04/26 18:25	06:59 19:57	06:18 19:48-20:04/16 20:26	05:58 20:51
10	07:46 17:20	07:25 17:55	06:46 17:38-18:06/28 18:26	06:57 19:58	06:17 19:48-20:04/16 20:27	05:58 20:52
11	07:46 17:21	07:24 17:56	06:45 17:38-18:06/28 18:27	06:56 19:59	06:16 19:48-20:05/17 20:28	05:58 20:52
12	07:46 17:22	07:23 17:58	06:43 17:38-18:07/29 18:28	06:54 20:00	06:15 19:49-20:05/16 20:29	05:58 20:53
13	07:45 17:23	07:21 17:59	06:42 17:37-18:09/32 18:30	06:53 20:01	06:14 19:50-20:05/15 20:30	05:58 20:53
14	07:45 17:24	07:20 18:00	06:40 17:37-18:09/32 18:31	06:51 20:02	06:13 19:50-20:03/13 20:31	05:58 20:54
15	07:45 17:25	07:19 18:01	06:39 17:38-18:11/33 18:32	06:50 20:02	06:12 19:52-20:02/10 20:32	05:58 20:54
16	07:44 17:26	07:18 18:02	06:37 17:38-18:12/34 18:33	06:48 20:03	06:11 19:54-20:00/6 20:33	05:58 20:55
17	07:44 17:27	07:16 18:03	06:35 17:40-18:13/33 18:34	06:47 20:04	06:11 20:34	05:58 20:55
18	07:44 17:28	07:15 18:05	06:34 17:41-18:14/33 18:35	06:45 20:05	06:10 20:35	05:58 20:55
19	07:43 17:30	07:14 18:06	06:32 17:41-18:14/33 18:36	06:44 20:06	06:09 20:36	05:58 20:56
20	07:43 17:31	07:13 18:07	06:31 17:41-18:14/33 18:37	06:43 20:07	06:08 20:36	05:58 20:56
21	07:42 17:32	07:11 18:08	06:29 17:40-18:14/34 18:38	06:41 20:08	06:07 20:37	05:58 20:56
22	07:41 17:33	07:10 18:09	06:27 17:41-18:14/33 18:39	06:40 20:09	06:06 20:38	05:58 20:56
23	07:41 17:34	07:09 18:10	06:26 17:40-18:13/33 18:40	06:38 20:10	06:06 20:39	05:59 20:56
24	07:40 17:35	07:07 18:11	06:24 17:40-18:12/32 18:41	06:37 20:11	06:05 20:40	05:59 20:57
25	07:40 17:36	07:06 18:12	06:23 17:40-18:12/32 18:42	06:36 20:12	06:04 20:41	05:59 20:57
26	07:39 17:38	07:04 18:14	06:21 17:40-18:11/31 18:43	06:34 20:13	06:04 20:42	05:59 20:57
27	07:38 17:39	07:03 18:15	06:19 17:41-18:09/28 18:44	06:33 20:14	06:03 20:42	06:00 20:57
28	07:37 17:40	07:01 18:16	06:18 17:42-18:09/27 18:45	06:32 20:15	06:03 20:43	06:00 20:57
29	07:37 17:41		07:16 18:43-19:07/24 19:46	06:30 20:16	06:02 20:44	06:01 20:57
30	07:36 17:42		07:15 18:45-19:05/20 19:47	06:29 19:54-19:55/1 20:17	06:02 20:45	06:01 20:57
31	07:35 17:43		07:13 18:46-19:02/16 19:48		06:01 20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	0	0	793	10	193	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG04 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September		October		November	December
1	06:01		06:24	19:58-20:15/17	06:53		07:21	18:17-18:47/30	06:53	07:26
	20:57		20:39		19:58		19:10		17:25	17:02
2	06:02		06:25	19:58-20:15/17	06:54		07:22	18:16-18:44/28	06:54	07:27
	20:57		20:38		19:56		19:08		17:24	17:02
3	06:02		06:26	19:57-20:14/17	06:55		07:23	18:16-18:44/28	06:55	07:28
	20:57		20:37		19:55		19:06		17:23	17:02
4	06:03		06:27	19:57-20:13/16	06:56		07:24	18:16-18:42/26	06:56	07:29
	20:56		20:36		19:53		19:05		17:22	17:02
5	06:03		06:28	19:57-20:12/15	06:57		07:25	18:16-18:41/25	06:57	07:30
	20:56		20:35		19:52		19:03		17:21	17:02
6	06:04		06:29	19:57-20:11/14	06:57		07:26	18:16-18:39/23	06:58	07:31
	20:56		20:34		19:50		19:02		17:20	17:02
7	06:05		06:30	19:57-20:10/13	06:58		07:27	18:17-18:38/21	06:59	07:32
	20:56		20:33		19:49		19:00		17:18	17:02
8	06:05		06:30	19:58-20:09/11	06:59		07:28	18:17-18:36/19	07:01	07:33
	20:55		20:31		19:47		18:59		17:17	17:01
9	06:06		06:31	19:58-20:08/10	07:00		07:28	18:19-18:34/15	07:02	07:33
	20:55		20:30		19:45		18:57		17:16	17:01
10	06:06		06:32	19:58-20:06/8	07:01		07:29	18:20-18:33/13	07:03	07:34
	20:55		20:29		19:44		18:55		17:15	17:02
11	06:07		06:33	19:59-20:05/6	07:02	18:43-18:50/7	07:30	18:23-18:31/8	07:04	07:35
	20:54		20:28		19:42		18:54		17:15	17:02
12	06:08		06:34	20:00-20:04/4	07:03	18:39-18:54/15	07:31		07:05	07:36
	20:54		20:27		19:41		18:52		17:14	17:02
13	06:08		06:35	20:02-20:03/1	07:04	18:36-18:56/20	07:33		07:06	07:37
	20:54		20:25		19:39		18:51		17:13	17:02
14	06:09		06:36		07:05	18:34-18:58/24	07:34		07:07	07:37
	20:53		20:24		19:37		18:49		17:12	17:02
15	06:10		06:37		07:06	18:31-18:58/27	07:35		07:09	07:38
	20:53		20:23		19:36		18:48		17:11	17:02
16	06:11		06:38		07:07	18:30-18:59/29	07:36		07:10	07:39
	20:52		20:21		19:34		18:46		17:10	17:03
17	06:11		06:39		07:08	18:29-18:59/30	07:37		07:11	07:40
	20:51		20:20		19:32		18:45		17:10	17:03
18	06:12		06:40		07:08	18:28-18:59/31	07:38		07:12	07:40
	20:51		20:19		19:31		18:44		17:09	17:03
19	06:13		06:41		07:09	18:27-19:00/33	07:39		07:13	07:41
	20:50		20:17		19:29		18:42		17:08	17:04
20	06:14		06:42		07:10	18:27-19:00/33	07:40		07:14	07:41
	20:49		20:16		19:27		18:41		17:07	17:04
21	06:15		06:43		07:11	18:26-19:00/34	07:41		07:15	07:42
	20:49		20:14		19:26		18:39		17:07	17:05
22	06:15		06:44		07:12	18:26-18:59/33	07:42		07:16	07:42
	20:48		20:13		19:24		18:38		17:06	17:05
23	06:16		06:44		07:13	18:25-18:59/34	07:43		07:17	07:43
	20:47		20:12		19:23		18:37		17:06	17:06
24	06:17		06:45		07:14	18:25-18:58/33	07:44		07:19	07:43
	20:46		20:10		19:21		18:35		17:05	17:06
25	06:18		06:46		07:15	18:24-18:57/33	06:45		07:20	07:44
	20:46		20:09		19:19		17:34		17:05	17:07
26	06:19		06:47		07:16	18:22-18:55/33	06:46		07:21	07:44
	20:45		20:07		19:18		17:33		17:04	17:07
27	06:20		06:48		07:17	18:20-18:54/34	06:47		07:22	07:45
	20:44		20:06		19:16		17:31		17:04	17:08
28	06:20	20:03-20:12/9	06:49		07:18	18:19-18:52/33	06:48		07:23	07:45
	20:43		20:04		19:14		17:30		17:03	17:09
29	06:21	20:02-20:13/11	06:50		07:19	18:18-18:50/32	06:49		07:24	07:45
	20:42		20:03		19:13		17:29		17:03	17:09
30	06:22	20:01-20:15/14	06:51		07:20	18:17-18:49/32	06:51		07:25	07:46
	20:41		20:01		19:11		17:27		17:03	17:10
31	06:23	20:00-20:16/16	06:52				06:52			07:46
	20:40		20:00				17:26			17:11
Potential sun hours	454		425		374		347		301	293
Sum of minutes with flicker	50		149		580		236		0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG05 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April		May		June	
1	07:46	07:34	07:00	07:11		06:28	19:31-19:46/15	06:01	19:10-20:07/57
	17:12	17:45	18:17	19:49		20:18	19:00-19:24/24	20:46	20:19-20:22/3
2	07:46	07:33	06:59	07:10		06:26	19:26-19:49/23	06:00	19:10-20:07/57
	17:13	17:46	18:18	19:50		20:19	19:02-19:22/20	20:47	20:19-20:23/4
3	07:46	07:32	06:57	07:08	19:16-19:21/5	06:25	19:24-19:51/27	06:00	19:11-20:08/57
	17:13	17:47	18:19	19:51		20:20	19:05-19:19/14	20:48	20:19-20:24/5
4	07:46	07:31	06:56	07:07	19:10-19:27/17	06:24	19:22-19:53/31	05:59	19:11-20:07/56
	17:14	17:48	18:20	19:52		20:21		20:48	20:18-20:23/5
5	07:46	07:30	06:54	07:05	19:07-19:29/22	06:23	19:20-19:55/35	05:59	19:11-20:08/57
	17:15	17:49	18:21	19:53		20:22		20:49	20:18-20:24/6
6	07:46	07:29	06:53	07:04	19:05-19:32/27	06:22	19:19-19:57/38	05:59	19:12-20:08/56
	17:16	17:51	18:22	19:54		20:23		20:50	20:18-20:25/7
7	07:46	07:28	06:51	07:02	19:02-19:33/31	06:21	19:17-19:58/41	05:58	19:12-20:08/56
	17:17	17:52	18:23	19:55		20:24		20:50	20:18-20:26/8
8	07:46	07:27	06:49	07:00	19:00-19:33/33	06:19	19:16-19:59/43	05:58	19:12-20:08/56
	17:18	17:53	18:24	19:56		20:25		20:51	20:17-20:26/9
9	07:46	07:26	06:48	06:59	18:59-19:35/36	06:18	19:15-20:00/45	05:58	19:12-20:08/56
	17:19	17:54	18:25	19:57		20:26		20:51	20:17-20:26/9
10	07:46	07:25	06:46	06:57	18:57-19:36/39	06:17	19:14-20:01/47	05:58	19:12-20:08/56
	17:20	17:55	18:26	19:58		20:27		20:52	20:17-20:27/10
11	07:46	07:24	06:45	06:56	18:57-19:37/40	06:16	19:14-20:01/47	05:58	19:13-20:08/55
	17:21	17:56	18:27	19:59		20:28		20:52	20:17-20:28/11
12	07:46	07:23	06:43	06:54	18:55-19:38/43	06:15	19:13-20:02/49	05:58	19:13-20:09/56
	17:22	17:58	18:28	20:00		20:29		20:53	20:18-20:28/10
13	07:45	07:21	06:42	06:53	18:55-19:39/44	06:14	19:12-20:03/51	05:58	19:13-20:09/56
	17:23	17:59	18:29	20:00		20:30		20:53	20:18-20:29/11
14	07:45	07:20	06:40	06:51	18:54-19:40/46	06:13	19:11-20:03/52	05:58	19:14-20:09/55
	17:24	18:00	18:31	20:01		20:31		20:54	20:18-20:29/11
15	07:45	07:19	06:39	06:50	18:54-19:41/47	06:12	19:11-20:03/52	05:58	19:14-20:09/55
	17:25	18:01	18:32	20:02		20:32		20:54	20:18-20:29/11
16	07:44	07:18	06:37	06:48	18:53-19:41/48	06:11	19:10-20:04/54	05:58	19:14-20:09/55
	17:26	18:02	18:33	20:03		20:33		20:55	20:18-20:30/12
17	07:44	07:16	06:35	06:47	18:53-19:43/50	06:11	19:10-20:04/54	05:58	19:14-20:09/55
	17:27	18:03	18:34	20:04		20:34		20:55	20:18-20:30/12
18	07:44	07:15	06:34	06:45	18:53-19:44/51	06:10	19:10-20:05/55	05:58	19:14-20:09/55
	17:28	18:05	18:35	20:05		20:35		20:55	20:18-20:30/12
19	07:43	07:14	06:32	06:44	18:53-19:43/50	06:09	19:10-20:05/55	05:58	19:15-20:09/54
	17:29	18:06	18:36	20:06		20:36		20:56	20:18-20:30/12
20	07:43	07:13	06:31	06:42	18:53-19:42/49	06:08	19:09-20:05/56	05:58	19:16-20:10/54
	17:31	18:07	18:37	20:07		20:36		20:56	20:19-20:31/12
21	07:42	07:11	06:29	06:41	18:52-19:39/47	06:07	19:09-20:05/56	05:58	19:16-20:10/54
	17:32	18:08	18:38	20:08		20:37		20:56	20:19-20:31/12
22	07:41	07:10	06:27	06:40	18:53-19:34/41	06:06	19:10-20:06/56	05:58	19:16-20:10/54
	17:33	18:09	18:39	20:09		20:38		20:56	20:19-20:31/12
23	07:41	07:08	06:26	06:38	18:54-19:34/40	06:06	19:09-20:06/57	05:59	19:16-20:10/54
	17:34	18:10	18:40	20:10		20:39		20:56	20:19-20:31/12
24	07:40	07:07	06:24	06:37	18:53-19:33/40	06:05	19:09-20:06/57	05:59	19:16-20:11/55
	17:35	18:11	18:41	20:11		20:40		20:57	20:20-20:32/12
25	07:40	07:06	06:23	06:36	18:54-19:32/38	06:04	19:10-20:07/57	05:59	19:16-20:11/55
	17:36	18:12	18:42	20:12		20:41		20:57	20:20-20:32/12
26	07:39	07:04	06:21	06:34	18:55-19:31/36	06:04	19:09-20:06/57	05:59	19:16-20:11/55
	17:38	18:13	18:43	20:13		20:42		20:57	20:20-20:32/12
27	07:38	07:03	06:19	06:33	18:55-19:30/35	06:03	19:10-20:07/57	06:00	19:17-20:12/55
	17:39	18:15	18:44	20:14		20:42		20:57	20:21-20:32/11
28	07:37	07:01	06:18	06:32	18:56-19:29/33	06:03	19:09-20:07/58	06:00	19:17-20:12/55
	17:40	18:16	18:45	20:15		20:43		20:57	20:21-20:32/11
29	07:37		07:16	06:30	18:58-19:28/30	06:02	19:10-20:07/57	06:00	19:17-20:12/55
	17:41		19:46	20:16		20:44		20:57	20:21-20:32/11
30	07:36		07:15	06:29	18:59-19:26/27	06:01	19:10-20:07/57	06:01	19:17-20:13/56
	17:42		19:47	20:17		20:45		20:57	20:22-20:32/10
31	07:35		07:13			06:01	19:10-20:07/57		
	17:43		19:48			20:45	20:20-20:21/1		
Potential sun hours	302	299	370	397		444		447	
Sum of minutes with flicker	0	0	0	1045		1555		1957	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG05 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01 19:17-20:12/55	06:24 19:23-20:11/48	06:53 18:56-19:36/40	07:21	06:53	07:26
	20:57 20:22-20:32/10	20:39	19:58	19:10	17:25	17:02
2	06:02 19:18-20:13/55	06:25 19:23-20:11/48	06:54 18:56-19:35/39	07:22	06:54	07:27
	20:57 20:22-20:32/10	20:38	19:56	19:08	17:24	17:02
3	06:02 19:17-20:13/56	06:26 19:24-20:10/46	06:55 18:57-19:33/36	07:23	06:55	07:28
	20:57 20:22-20:32/10	20:37	19:55	19:06	17:23	17:02
4	06:03 19:18-20:14/56	06:27 19:25-20:09/44	06:56 18:58-19:31/33	07:24	06:56	07:29
	20:56 20:23-20:32/9	20:36	19:53	19:05	17:22	17:02
5	06:03 19:17-20:13/56	06:28 19:26-20:08/42	06:56 18:59-19:30/31	07:25	06:57	07:30
	20:56 20:23-20:31/8	20:35	19:52	19:03	17:21	17:02
6	06:04 19:18-20:14/56	06:29 19:27-20:07/40	06:57 19:00-19:27/27	07:26	06:58	07:31
	20:56 20:24-20:32/8	20:34	19:50	19:02	17:19	17:02
7	06:05 19:17-20:14/57	06:30 19:29-20:06/37	06:58 19:02-19:24/22	07:27	06:59	07:32
	20:56 20:24-20:31/7	20:33	19:49	19:00	17:18	17:01
8	06:05 19:18-20:14/56	06:30 19:30-20:04/34	06:59 19:04-19:21/17	07:27	07:01	07:33
	20:55 20:25-20:31/6	20:31	19:47	18:59	17:17	17:01
9	06:06 19:18-20:15/57	06:31 19:32-20:03/31	07:00 19:09-19:16/7	07:28	07:02	07:33
	20:55 20:26-20:31/5	20:30 19:18-19:25/7	19:45	18:57	17:16	17:01
10	06:06 19:18-20:15/57	06:32 19:33-19:59/26	07:01	07:29	07:03	07:34
	20:55 20:26-20:30/4	20:29 19:13-19:28/15	19:44	18:55	17:15	17:02
11	06:07 19:18-20:15/57	06:33 19:36-19:57/21	07:02	07:30	07:04	07:35
	20:54 20:27-20:30/3	20:28 19:10-19:31/21	19:42	18:54	17:15	17:02
12	06:08 19:19-20:16/57	06:34 19:40-19:53/13	07:03	07:31	07:05	07:36
	20:54 20:28-20:30/2	20:27 19:08-19:33/25	19:41	18:52	17:14	17:02
13	06:08 19:18-20:15/57	06:35 19:07-19:34/27	07:04	07:32	07:06	07:37
	20:54 20:28-20:29/1	20:25	19:39	18:51	17:13	17:02
14	06:09 19:18-20:16/58	06:36 19:05-19:36/31	07:05	07:34	07:07	07:37
	20:53	20:24	19:37	18:49	17:12	17:02
15	06:10 19:19-20:16/57	06:37 19:04-19:37/33	07:06	07:35	07:09	07:38
	20:52	20:23	19:36	18:48	17:11	17:02
16	06:11 19:18-20:15/57	06:38 19:03-19:38/35	07:07	07:36	07:10	07:39
	20:52	20:21	19:34	18:46	17:10	17:03
17	06:11 19:19-20:16/57	06:39 19:02-19:38/36	07:08	07:37	07:11	07:40
	20:51	20:20	19:32	18:45	17:10	17:03
18	06:12 19:19-20:16/57	06:40 19:01-19:39/38	07:08	07:38	07:12	07:40
	20:51	20:19	19:31	18:43	17:09	17:03
19	06:13 19:19-20:16/57	06:41 18:59-19:39/40	07:09	07:39	07:13	07:41
	20:50	20:17	19:29	18:42	17:08	17:04
20	06:14 19:19-20:15/56	06:42 18:58-19:39/41	07:10	07:40	07:14	07:41
	20:49	20:16	19:27	18:41	17:07	17:04
21	06:15 19:19-20:16/57	06:43 18:58-19:39/41	07:11	07:41	07:15	07:42
	20:49	20:14	19:26	18:39	17:07	17:04
22	06:15 19:19-20:16/57	06:44 18:57-19:44/47	07:12	07:42	07:16	07:42
	20:48	20:13	19:24	18:38	17:06	17:05
23	06:16 19:20-20:16/56	06:44 18:57-19:46/49	07:13	07:43	07:17	07:43
	20:47	20:12	19:23	18:37	17:06	17:05
24	06:17 19:20-20:16/56	06:45 18:56-19:47/51	07:14	07:44	07:19	07:43
	20:46	20:10	19:21	18:35	17:05	17:06
25	06:18 19:21-20:16/55	06:46 18:56-19:47/51	07:15	06:45	07:20	07:44
	20:46	20:09	19:19	17:34	17:05	17:07
26	06:19 19:20-20:14/54	06:47 18:56-19:46/50	07:16	06:46	07:21	07:44
	20:45	20:07	19:18	17:33	17:04	17:07
27	06:20 19:21-20:14/53	06:48 18:56-19:44/48	07:17	06:47	07:22	07:45
	20:44	20:06	19:16	17:31	17:04	17:08
28	06:20 19:21-20:14/53	06:49 18:55-19:42/47	07:18	06:48	07:23	07:45
	20:43	20:04	19:14	17:30	17:03	17:09
29	06:21 19:22-20:14/52	06:50 18:55-19:40/45	07:19	06:49	07:24	07:45
	20:42	20:03	19:13	17:29	17:03	17:09
30	06:22 19:22-20:13/51	06:51 18:55-19:39/44	07:20	06:51	07:25	07:46
	20:41	20:01	19:11	17:27	17:03	17:10
31	06:23 19:23-20:13/50	06:52 18:55-19:38/43		06:52		07:46
	20:40	20:00		17:26		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	1808	1295	252	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG06 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (16)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March	April	May		June	
1	07:46	08:51-09:40/49	07:34	07:00	07:11	06:28		06:01	20:01-20:15/14
	17:12		17:45	18:17	19:49	20:18		20:46	
2	07:46	08:52-09:40/48	07:33	06:58	07:10	06:26		06:00	20:03-20:15/12
	17:13		17:46	18:18	19:50	20:19		20:47	
3	07:46	08:52-09:40/48	07:32	06:57	07:08	06:25		06:00	20:04-20:14/10
	17:13		17:47	18:19	19:51	20:20		20:48	
4	07:46	08:53-09:40/47	07:31	06:56	07:07	06:24		05:59	20:05-20:12/7
	17:14		17:48	18:20	19:52	20:21		20:48	
5	07:46	08:54-09:40/46	07:30	06:54	07:05	06:23		05:59	20:07-20:11/4
	17:15		17:49	18:21	19:53	20:22		20:49	
6	07:46	08:55-09:40/45	07:29	06:53	07:04	06:22		05:59	
	17:16		17:51	18:22	19:54	20:23		20:50	
7	07:46	08:56-09:40/44	07:28	06:51	07:02	06:21		05:58	
	17:17		17:52	18:23	19:55	20:24		20:50	
8	07:46	08:56-09:39/43	07:27	06:49	07:00	06:19		05:58	
	17:18		17:53	18:24	19:56	20:25		20:51	
9	07:46	08:57-09:39/42	07:26	06:48	06:59	06:18		05:58	
	17:19		17:54	18:25	19:57	20:26		20:51	
10	07:46	08:58-09:39/41	07:25	06:46	06:57	06:17	20:02-20:04/2	05:58	
	17:20		17:55	18:26	19:58	20:27		20:52	
11	07:46	09:00-09:39/39	07:24	06:45	06:56	06:16	20:00-20:05/5	05:58	
	17:21		17:56	18:27	19:58	20:28		20:52	
12	07:46	09:00-09:38/38	07:23	06:43	06:54	06:15	19:59-20:06/7	05:58	
	17:22		17:58	18:28	19:59	20:29		20:53	
13	07:45	09:02-09:38/36	07:21	06:42	06:53	06:14	19:58-20:07/9	05:58	
	17:23		17:59	18:29	20:00	20:30		20:53	
14	07:45	09:03-09:38/35	07:20	06:40	06:51	06:13	19:57-20:08/11	05:58	
	17:24		18:00	18:30	20:01	20:31		20:54	
15	07:45	09:04-09:36/32	07:19	06:39	06:50	06:12	19:57-20:09/12	05:57	
	17:25		18:01	18:32	20:02	20:32		20:54	
16	07:44	09:06-09:36/30	07:18	06:37	06:48	06:11	19:56-20:09/13	05:58	
	17:26		18:02	18:33	20:03	20:33		20:55	
17	07:44	09:07-09:34/27	07:16	06:35	06:47	06:11	19:56-20:10/14	05:58	
	17:27		18:03	18:34	20:04	20:34		20:55	
18	07:44	09:10-09:33/23	07:15	06:34	06:45	06:10	19:55-20:11/16	05:58	
	17:28		18:04	18:35	20:05	20:35		20:55	
19	07:43	09:12-09:30/18	07:14	06:32	06:44	06:09	19:56-20:12/16	05:58	
	17:29		18:06	18:36	20:06	20:36		20:56	
20	07:43	09:17-09:27/10	07:13	06:31	06:42	06:08	19:56-20:13/17	05:58	
	17:31		18:07	18:37	20:07	20:36		20:56	
21	07:42		07:11	06:29	06:41	06:07	19:56-20:13/17	05:58	
	17:32		18:08	18:38	20:08	20:37		20:56	
22	07:41		07:10	06:27	06:40	06:06	19:57-20:15/18	05:58	
	17:33		18:09	18:39	20:09	20:38		20:56	
23	07:41		07:08	06:26	06:38	06:06	19:56-20:15/19	05:58	
	17:34		18:10	18:40	20:10	20:39		20:56	
24	07:40		07:07	06:24	06:37	06:05	19:56-20:16/20	05:59	
	17:35		18:11	18:41	20:11	20:40		20:57	
25	07:40		07:06	06:23	06:36	06:04	19:57-20:17/20	05:59	
	17:36		18:12	18:42	20:12	20:41		20:57	
26	07:39		07:04	06:21	06:34	06:04	19:57-20:17/20	05:59	
	17:37		18:13	18:43	20:13	20:42		20:57	
27	07:38		07:03	06:19	06:33	06:03	19:58-20:18/20	06:00	
	17:39		18:15	18:44	20:14	20:42		20:57	
28	07:37		07:01	06:18	06:32	06:03	19:59-20:17/18	06:00	
	17:40		18:16	18:45	20:15	20:43		20:57	
29	07:37			07:16	06:30	06:02	20:00-20:17/17	06:00	
	17:41			19:46	20:16	20:44		20:57	
30	07:36			07:15	06:29	06:01	20:00-20:16/16	06:01	
	17:42			19:47	20:17	20:45		20:57	
31	07:35			07:13		06:01	20:01-20:16/15		
	17:43			19:48		20:45			
Potential sun hours	302		299	370	397	444		447	
Sum of minutes with flicker		741		0	0	0	322		47

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG06 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (16)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	July		August		September	October	November		December	
1	06:01		06:24	20:09-20:15/6	06:53	07:21	06:53		07:26	08:42-09:21/39
	20:57		20:39		19:58	19:10	17:25		17:02	
2	06:02		06:25	20:11-20:15/4	06:54	07:22	06:54		07:27	08:41-09:22/41
	20:57		20:38		19:56	19:08	17:24		17:02	
3	06:02		06:26	20:13-20:14/1	06:55	07:23	06:55		07:28	08:41-09:23/42
	20:57		20:37		19:55	19:06	17:23		17:02	
4	06:03		06:27		06:56	07:24	06:56		07:29	08:41-09:24/43
	20:56		20:36		19:53	19:05	17:22		17:02	
5	06:03		06:28		06:56	07:25	06:57		07:30	08:41-09:25/44
	20:56		20:35		19:52	19:03	17:21		17:02	
6	06:04		06:29		06:57	07:26	06:58		07:31	08:41-09:26/45
	20:56		20:34		19:50	19:02	17:19		17:02	
7	06:05		06:30		06:58	07:26	06:59		07:32	08:41-09:27/46
	20:56		20:33		19:49	19:00	17:18		17:01	
8	06:05	20:13-20:19/6	06:30		06:59	07:27	07:01		07:33	08:41-09:28/47
	20:55		20:31		19:47	18:58	17:17		17:01	
9	06:06	20:12-20:21/9	06:31		07:00	07:28	07:02		07:33	08:41-09:28/47
	20:55		20:30		19:45	18:57	17:16		17:01	
10	06:06	20:10-20:21/11	06:32		07:01	07:29	07:03		07:34	08:41-09:29/48
	20:55		20:29		19:44	18:55	17:15		17:01	
11	06:07	20:10-20:23/13	06:33		07:02	07:30	07:04		07:35	08:41-09:30/49
	20:54		20:28		19:42	18:54	17:14		17:02	
12	06:08	20:10-20:24/14	06:34		07:03	07:31	07:05		07:36	08:42-09:31/49
	20:54		20:27		19:41	18:52	17:14		17:02	
13	06:08	20:08-20:24/16	06:35		07:04	07:32	07:06		07:37	08:42-09:32/50
	20:53		20:25		19:39	18:51	17:13		17:02	
14	06:09	20:08-20:25/17	06:36		07:05	07:33	07:07		07:37	08:42-09:32/50
	20:53		20:24		19:37	18:49	17:12		17:02	
15	06:10	20:08-20:26/18	06:37		07:06	07:35	07:09		07:38	08:42-09:33/51
	20:52		20:23		19:36	18:48	17:11		17:02	
16	06:11	20:07-20:26/19	06:38		07:07	07:36	07:10		07:39	08:43-09:33/50
	20:52		20:21		19:34	18:46	17:10		17:03	
17	06:11	20:07-20:27/20	06:39		07:08	07:37	07:11		07:40	08:43-09:33/50
	20:51		20:20		19:32	18:45	17:09		17:03	
18	06:12	20:07-20:27/20	06:40		07:08	07:38	07:12		07:40	08:43-09:34/51
	20:51		20:19		19:31	18:43	17:09		17:03	
19	06:13	20:07-20:26/19	06:41		07:09	07:39	07:13		07:41	08:44-09:35/51
	20:50		20:17		19:29	18:42	17:08		17:04	
20	06:14	20:06-20:25/19	06:42		07:10	07:40	07:14		07:41	08:44-09:35/51
	20:49		20:16		19:27	18:41	17:07		17:04	
21	06:14	20:06-20:25/19	06:43		07:11	07:41	07:15		07:42	08:45-09:36/51
	20:49		20:14		19:26	18:39	17:07		17:04	
22	06:15	20:06-20:24/18	06:43		07:12	07:42	07:16	08:53-09:03/10	07:42	08:45-09:36/51
	20:48		20:13		19:24	18:38	17:06		17:05	
23	06:16	20:06-20:24/18	06:44		07:13	07:43	07:17	08:49-09:07/18	07:43	08:45-09:36/51
	20:47		20:12		19:23	18:36	17:06		17:05	
24	06:17	20:07-20:23/16	06:45		07:14	07:44	07:19	08:47-09:10/23	07:43	08:46-09:37/51
	20:46		20:10		19:21	18:35	17:05		17:06	
25	06:18	20:06-20:22/16	06:46		07:15	06:45	07:20	08:46-09:12/26	07:44	08:46-09:37/51
	20:46		20:09		19:19	17:34	17:05		17:07	
26	06:19	20:06-20:21/15	06:47		07:16	06:46	07:21	08:44-09:14/30	07:44	08:47-09:38/51
	20:45		20:07		19:18	17:32	17:04		17:07	
27	06:20	20:07-20:20/13	06:48		07:17	06:47	07:22	08:44-09:16/32	07:45	08:48-09:38/50
	20:44		20:06		19:16	17:31	17:04		17:08	
28	06:20	20:07-20:20/13	06:49		07:18	06:48	07:23	08:43-09:18/35	07:45	08:48-09:39/51
	20:43		20:04		19:14	17:30	17:03		17:09	
29	06:21	20:08-20:19/11	06:50		07:19	06:49	07:24	08:43-09:19/36	07:45	08:48-09:39/51
	20:42		20:03		19:13	17:29	17:03		17:09	
30	06:22	20:08-20:18/10	06:51		07:20	06:51	07:25	08:42-09:20/38	07:46	08:50-09:40/50
	20:41		20:01		19:11	17:27	17:03		17:10	
31	06:23	20:09-20:17/8	06:52			06:52			07:46	08:50-09:40/50
	20:40		20:00			17:26			17:11	
Potential sun hours	454		425		374	347	301		293	
Sum of minutes with flicker	358		11		0	0	248		1502	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG07 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:46 08:16-09:13/57	07:34 08:32-09:16/44	07:00 07:19-07:28/9	07:11	06:28	06:01
	17:12 16:12-16:47/35	17:45	18:17	19:49	20:18	20:46
2	07:46 08:16-09:13/57	07:33 08:33-09:15/42	06:58 07:17-07:28/11	07:10	06:27	06:00
	17:13 16:13-16:48/35	17:46	18:18	19:50	20:19	20:47
3	07:46 08:16-09:14/58	07:32 08:35-09:14/39	06:57 07:16-07:29/13	07:08	06:25	06:00
	17:13 16:13-16:48/35	17:47	18:19	19:51	20:20	20:48
4	07:46 08:17-09:14/57	07:31 07:51-07:53/2	06:56 07:14-07:29/15	07:07 07:25-07:30/5	06:24	05:59
	17:14 16:13-16:49/36	17:48 08:36-09:13/37	18:20	19:52	20:21	20:48
5	07:46 08:17-09:15/58	07:30 07:50-07:54/4	06:54 07:13-07:29/16	07:05 07:23-07:31/8	06:23	05:59
	17:15 16:13-16:49/36	17:49 08:38-09:11/33	18:21	19:53	20:22	20:49
6	07:46 08:18-09:16/58	07:29 07:49-07:55/6	06:53 07:11-07:29/18	07:04 07:22-07:33/11	06:22	05:59
	17:16 16:14-16:50/36	17:51 08:39-09:09/30	18:22	19:54	20:23	20:50
7	07:46 08:18-09:16/58	07:28 07:47-07:55/8	06:51 07:10-07:29/19	07:02 07:20-07:34/14	06:21	05:59
	17:17 16:14-16:50/36	17:52 08:41-09:06/25	18:23	19:55	20:24	20:50
8	07:46 08:18-09:16/58	07:27 07:46-07:55/9	06:49 07:08-07:28/20	07:00 07:19-07:35/16	06:20	05:58
	17:18 16:14-16:50/36	17:53 08:44-09:03/19	18:24	19:56	20:25	20:51
9	07:46 08:18-09:16/58	07:26 07:45-07:55/10	06:48 07:06-07:26/20	06:59 07:17-07:35/18	06:18	05:58
	17:19 16:14-16:50/36	17:54 08:49-08:59/10	18:25	19:57	20:26	20:51
10	07:46 08:19-09:17/58	07:25 07:44-07:55/11	06:46 07:05-07:26/21	06:57 07:16-07:36/20	06:17	05:58
	17:20 16:15-16:51/36	17:55	18:26	19:58	20:27	20:52
11	07:46 08:19-09:18/59	07:24 07:43-07:55/12	06:45 07:05-07:24/19	06:56 07:14-07:35/21	06:16	05:58
	17:21 16:15-16:52/37	17:56	18:27	19:59	20:28	20:52
12	07:46 08:19-09:18/59	07:23 07:42-07:55/13	06:43 07:07-07:23/16	06:54 07:13-07:36/23	06:15	05:58
	17:22 16:15-16:51/36	17:58	18:28	19:59	20:29	20:53
13	07:45 08:20-09:18/58	07:21 07:40-07:53/13	06:42 07:09-07:19/10	06:53 07:11-07:35/24	06:14	05:58
	17:23 16:16-16:52/36	17:59	18:30	20:00	20:30	20:53
14	07:45 08:20-09:19/59	07:20 07:39-07:52/13	06:40	06:51 07:10-07:35/25	06:13	05:58
	17:24 16:16-16:52/36	18:00	18:31	20:01	20:31	20:54
15	07:45 08:20-09:19/59	07:19 07:41-07:50/9	06:39	06:50 07:08-07:34/26	06:12	05:58
	17:25 16:16-16:52/36	18:01	18:32	20:02	20:32	20:54
16	07:44 08:21-09:19/58	07:18	06:37	06:48 07:07-07:34/27	06:11	05:58
	17:26 16:17-16:52/35	18:02	18:33	20:03	20:33	20:55
17	07:44 08:21-09:19/58	07:16	06:35	06:47 07:05-07:33/28	06:11	05:58
	17:27 16:17-16:52/35	18:03	18:34	20:04	20:34	20:55
18	07:43 08:22-09:20/58	07:15	06:34	06:45 07:05-07:32/27	06:10	05:58
	17:28 16:18-16:52/34	18:05	18:35	20:05	20:35	20:55
19	07:43 08:22-09:19/57	07:14	06:32	06:44 07:05-07:31/26	06:09	05:58
	17:30 16:18-16:52/34	18:06	18:36	20:06	20:36	20:56
20	07:43 08:23-09:20/57	07:13	06:31	06:43 07:06-07:30/24	06:08	05:58
	17:31 16:19-16:53/34	18:07	18:37	20:07	20:36	20:56
21	07:42 08:23-09:20/57	07:11	06:29	06:41 07:08-07:29/21	06:07	05:58
	17:32 16:19-16:52/33	18:08	18:38	20:08	20:37	20:56
22	07:41 08:24-09:20/56	07:10	06:27	06:40 07:09-07:26/17	06:07	05:58
	17:33 16:20-16:52/32	18:09	18:39	20:09	20:38	20:56
23	07:41 08:24-09:20/56	07:08	06:26	06:38 07:11-07:24/13	06:06	05:59
	17:34 16:21-16:52/31	18:10	18:40	20:10	20:39	20:56
24	07:40 08:25-09:20/55	07:07	06:24	06:37 07:16-07:17/1	06:05	05:59
	17:35 16:22-16:52/30	18:11	18:41	20:11	20:40	20:57
25	07:39 08:25-09:19/54	07:06	06:23	06:36	06:04	05:59
	17:36 16:23-16:51/28	18:12	18:42	20:12	20:41	20:57
26	07:39 08:27-09:20/53	07:04	06:21	06:34	06:04	05:59
	17:38 16:24-16:51/27	18:14	18:43	20:13	20:42	20:57
27	07:38 08:27-09:19/52	07:03 07:22-07:25/3	06:19	06:33	06:03	06:00
	17:39 16:25-16:50/25	18:15	18:44	20:14	20:42	20:57
28	07:37 08:28-09:18/50	07:01 07:20-07:26/6	06:18	06:32	06:03	06:00
	17:40 16:27-16:49/22	18:16	18:45	20:15	20:43	20:57
29	07:37 08:28-09:18/50		07:16	06:30	06:02	06:01
	17:41 16:28-16:48/20		19:46	20:16	20:44	20:57
30	07:36 08:29-09:17/48		07:15	06:29	06:02	06:01
	17:42 16:30-16:46/16		19:47	20:17	20:45	20:57
31	07:35 08:30-09:16/46		07:13		06:01	
	17:43 16:33-16:43/10		19:48		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	2720	398	207	395	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG07 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01	06:24	06:53 07:13-07:34/21	07:21 07:46-08:00/14	06:53 07:14-07:25/11	07:26 08:01-09:00/59
	20:57	20:39	19:58	19:10	17:25	17:02 15:57-16:34/37
2	06:02	06:25	06:54 07:14-07:34/20	07:22 07:44-08:02/18	06:54 07:15-07:25/10	07:27 08:02-09:00/58
	20:57	20:38	19:56	19:08	17:24 08:18-08:30/12	17:02 15:58-16:34/36
3	06:02	06:26	06:55 07:15-07:33/18	07:23 07:42-08:03/21	06:55 07:16-07:25/9	07:28 08:02-09:01/59
	20:57	20:37	19:55	19:06	17:23 08:13-08:34/21	17:02 15:58-16:34/36
4	06:03	06:27	06:56 07:16-07:32/16	07:24 07:43-08:04/21	06:56 07:17-07:24/7	07:29 08:03-09:01/58
	20:56	20:36	19:53	19:05	17:22 08:11-08:37/26	17:02 15:59-16:35/36
5	06:03	06:28	06:57 07:17-07:31/14	07:25 07:44-08:04/20	06:57 07:19-07:25/6	07:30 08:03-09:01/58
	20:56	20:35	19:52	19:03	17:21 08:08-08:39/31	17:02 15:59-16:35/36
6	06:04	06:29	06:57 07:18-07:30/12	07:26 07:45-08:04/19	06:58 07:20-07:24/4	07:31 08:04-09:02/58
	20:56	20:34	19:50	19:02	17:20 08:07-08:41/34	17:02 16:00-16:36/36
7	06:05	06:30	06:58 07:18-07:27/9	07:27 07:46-08:04/18	06:59 07:21-07:23/2	07:32 08:04-09:02/58
	20:56	20:33	19:49	19:00	17:18 08:06-08:43/37	17:02 16:00-16:36/36
8	06:05	06:31	06:59 07:19-07:24/5	07:27 07:47-08:04/17	07:01 08:04-08:44/40	07:33 08:04-09:02/58
	20:55	20:31	19:47	18:59	17:17	17:02 16:00-16:36/36
9	06:06	06:31	07:00	07:28 07:48-08:04/16	07:02 08:03-08:45/42	07:33 08:04-09:02/58
	20:55	20:30	19:45	18:57	17:16	17:02 16:01-16:36/35
10	06:06	06:32	07:01	07:29 07:49-08:03/14	07:03 08:03-08:47/44	07:34 08:05-09:03/58
	20:55	20:29	19:44	18:55	17:16	17:02 16:02-16:37/35
11	06:07	06:33	07:02	07:30 07:50-08:02/12	07:04 08:02-08:48/46	07:35 08:06-09:03/57
	20:54	20:28	19:42	18:54	17:15 16:05-16:15/10	17:02 16:02-16:37/35
12	06:08	06:34	07:03	07:31 07:51-08:01/10	07:05 08:01-08:49/48	07:36 08:06-09:04/58
	20:54	20:26	19:41	18:52	17:14 16:02-16:18/16	17:02 16:03-16:37/34
13	06:09	06:35	07:04	07:32 07:52-08:00/8	07:06 08:00-08:50/50	07:37 08:07-09:04/57
	20:53	20:25	19:39	18:51	17:13 16:00-16:20/20	17:02 16:03-16:37/34
14	06:09	06:36	07:05	07:33 07:53-07:58/5	07:07 08:00-08:50/50	07:37 08:07-09:04/57
	20:53	20:24	19:37	18:49	17:12 15:59-16:21/22	17:02 16:03-16:37/34
15	06:10	06:37	07:06	07:35 07:54-07:56/2	07:08 08:00-08:52/52	07:38 08:08-09:05/57
	20:52	20:23	19:36	18:48	17:11 15:58-16:23/25	17:02 16:03-16:38/35
16	06:11	06:38	07:07	07:36	07:10 08:00-08:53/53	07:39 08:09-09:05/56
	20:52	20:21	19:34	18:46	17:10 15:57-16:24/27	17:03 16:03-16:38/35
17	06:11	06:39	07:08	07:37	07:11 07:59-08:53/54	07:39 08:09-09:05/56
	20:51	20:20	19:32	18:45	17:10 15:56-16:25/29	17:03 16:02-16:38/36
18	06:12	06:40	07:08	07:38	07:12 07:59-08:54/55	07:40 08:09-09:06/57
	20:51	20:19	19:31	18:44	17:09 15:56-16:26/30	17:03 16:03-16:38/35
19	06:13	06:41 07:20-07:26/6	07:09	07:39	07:13 07:58-08:54/56	07:41 08:09-09:06/57
	20:50	20:17	19:29	18:42	17:08 15:55-16:26/31	17:04 16:03-16:38/35
20	06:14	06:42 07:16-07:30/14	07:10	07:40	07:14 07:59-08:55/56	07:41 08:10-09:07/57
	20:49	20:16	19:27	18:41	17:07 15:55-16:27/32	17:04 16:03-16:39/36
21	06:15	06:43 07:13-07:31/18	07:11	07:41	07:15 07:59-08:56/57	07:42 08:10-09:07/57
	20:49	20:14	19:26	18:39	17:07 15:55-16:28/33	17:05 16:03-16:39/36
22	06:15	06:44 07:11-07:33/22	07:12	07:42	07:16 07:59-08:56/57	07:42 08:11-09:08/57
	20:48	20:13	19:24	18:38	17:06 15:55-16:29/34	17:05 16:04-16:40/36
23	06:16	06:44 07:10-07:34/24	07:13	07:43	07:17 07:59-08:56/57	07:43 08:11-09:08/57
	20:47	20:12	19:23	18:37	17:06 15:55-16:29/34	17:06 16:04-16:40/36
24	06:17	06:45 07:09-07:35/26	07:14	07:44	07:19 07:59-08:57/58	07:43 08:12-09:09/57
	20:46	20:10	19:21	18:35	17:05 15:55-16:30/35	17:06 16:05-16:41/36
25	06:18	06:46 07:08-07:35/27	07:15	06:45	07:20 07:59-08:57/58	07:44 08:12-09:09/57
	20:46	20:09	19:19	17:34	17:05 15:55-16:30/35	17:07 16:06-16:41/35
26	06:19	06:47 07:08-07:36/28	07:16	06:46 07:14-07:17/3	07:21 07:59-08:57/58	07:44 08:14-09:10/56
	20:45	20:07	19:18	17:33	17:04 15:55-16:30/35	17:07 16:06-16:42/36
27	06:20	06:48 07:09-07:36/27	07:17	06:47 07:10-07:20/10	07:22 08:00-08:59/59	07:45 08:14-09:10/56
	20:44	20:06	19:16	17:31	17:04 15:55-16:31/36	17:08 16:08-16:43/35
28	06:21	06:49 07:10-07:36/26	07:18	06:48 07:09-07:22/13	07:23 08:00-08:59/59	07:45 08:14-09:10/56
	20:43	20:04	19:14	17:30	17:03 15:56-16:32/36	17:09 16:08-16:43/35
29	06:21	06:50 07:11-07:36/25	07:19	06:49 07:10-07:23/13	07:24 08:01-08:59/58	07:45 08:14-09:11/57
	20:42	20:03	19:13	17:29	17:03 15:57-16:33/36	17:09 16:09-16:44/35
30	06:22	06:51 07:11-07:35/24	07:20 07:50-07:57/7	06:50 07:11-07:24/13	07:25 08:01-09:00/59	07:45 08:14-09:11/57
	20:41	20:01	19:11	17:28	17:03 15:57-16:33/36	17:10 16:10-16:44/34
31	06:23	06:52 07:12-07:35/23		06:52 07:13-07:25/12		07:46 08:15-09:12/57
	20:40	20:00		17:26		17:11 16:12-16:46/34
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	0	290	122	279	2028	2871

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG08 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46	07:34 16:59-17:21/22	07:00	07:11 18:42-19:24/42	06:28 06:51-07:46/55	06:01 19:19-19:40/21
	17:12	17:45	18:17	19:49	20:18 19:06-19:52/46	20:46
2	07:46	07:33 16:59-17:22/23	06:58	07:10 18:42-19:25/43	06:27 06:50-07:45/55	06:00 19:21-19:39/18
	17:13	17:46	18:18	19:50	20:19 19:05-19:52/47	20:47
3	07:46	07:32 16:59-17:23/24	06:57	07:08 18:40-19:25/45	06:25 06:50-07:45/55	06:00 19:23-19:38/15
	17:13	17:47	18:19	19:51	20:20 19:05-19:52/47	20:48
4	07:46	07:31 16:59-17:25/26	06:56	07:07 18:40-19:26/46	06:24 06:50-07:45/55	05:59 19:24-19:36/12
	17:14	17:48	18:20	19:52	20:21 19:05-19:52/47	20:48
5	07:46	07:30 17:00-17:26/26	06:54	07:05 18:39-19:26/47	06:23 06:50-07:44/54	05:59 19:26-19:34/8
	17:15	17:49	18:21	19:53	20:22 19:04-19:52/48	20:49
6	07:46	07:29 17:00-17:27/27	06:53	07:04 18:39-19:27/48	06:22 06:51-07:44/53	05:59
	17:16	17:51	18:22	19:54	20:23 19:04-19:53/49	20:50
7	07:46	07:28 17:01-17:29/28	06:51	07:02 18:38-19:26/48	06:21 06:51-07:44/53	05:59
	17:17	17:52	18:23	19:55	20:24 19:04-19:53/49	20:50
8	07:46	07:27 17:02-17:30/28	06:49	07:00 18:38-19:27/49	06:20 06:39-06:41/2 19:04-19:53/49	05:58
	17:18	17:53	18:24	19:56	20:25 06:51-07:43/52	20:51
9	07:46	07:26 17:03-17:31/28	06:48	06:59 18:37-19:26/49	06:18 06:38-06:41/3 19:05-19:53/48	05:58
	17:19	17:54	18:25	19:57	20:26 06:51-07:43/52	20:51
10	07:46	07:25 17:04-17:33/29	06:46	06:57 18:36-19:25/49	06:17 06:37-06:42/5 19:05-19:52/47	05:58
	17:20	17:55	18:26	19:58	20:27 06:52-07:43/51	20:52
11	07:46	07:24 17:06-17:34/28	06:45	06:56 18:37-19:25/48	06:16 06:36-06:42/6 19:05-19:52/47	05:58
	17:21	17:56	18:27	19:58	20:28 06:52-07:42/50	20:52
12	07:46	07:23 17:09-17:34/25	06:43	06:54 07:16-07:27/11	06:15 06:35-06:42/7 19:05-19:52/47	05:58
	17:22	17:58	18:28	19:59 18:36-19:24/48	20:29 06:53-07:41/48	20:53
13	07:45	07:21 17:15-17:33/18	06:42	06:53 07:12-07:32/20	06:14 06:34-06:42/8 19:05-19:52/47	05:58
	17:23	17:59	18:29	20:00 18:37-19:24/47	20:30 06:53-07:41/48	20:53
14	07:45	07:20 17:16-17:32/16	06:40	06:51 07:10-07:36/26	06:13 06:33-06:42/9 19:05-19:51/46	05:58
	17:24	18:00	18:31	20:01 18:36-19:23/47	20:31 06:53-07:40/47	20:54
15	07:45	07:19 17:18-17:31/13	06:39	06:50 07:08-07:37/29	06:12 06:32-06:41/9 19:06-19:51/45	05:58
	17:25	18:01	18:32	20:02 18:37-19:23/46	20:32 06:54-07:39/45	20:54
16	07:44	07:18 17:21-17:29/8	06:37	06:48 07:07-07:39/32	06:11 06:31-06:41/10 19:06-19:50/44	05:58
	17:26	18:02	18:33	20:03 18:38-19:23/45	20:33 06:54-07:38/44	20:55
17	07:44	07:16	06:35	06:47 07:05-07:40/35	06:11 06:30-06:40/10 19:06-19:50/44	05:58
	17:27	18:03	18:34	20:04 18:38-19:21/43	20:34 06:55-07:37/42	20:55
18	07:43	07:15	06:34	06:45 07:04-07:42/38	06:10 06:30-06:41/11 19:07-19:50/43	05:58
	17:28	18:05	18:35	20:05 18:39-19:21/42	20:35 06:57-07:37/40	20:55
19	07:43	07:14	06:32	06:44 07:02-07:42/40 18:39-19:19/40	06:09 06:29-06:40/11 19:08-19:49/41	05:58
	17:30	18:06	18:36	20:06 19:26-19:36/10	20:36 06:57-07:36/39	20:56
20	07:43	07:13	06:31	06:43 07:01-07:43/42 18:40-19:18/38	06:08 06:28-06:39/11 19:08-19:49/41	05:58
	17:31	18:07	18:37	20:07 19:21-19:40/19	20:36 06:58-07:35/37	20:56
21	07:42	07:11	06:29	06:41 07:00-07:44/44 18:41-19:16/35	06:07 06:27-06:38/11 19:09-19:48/39	05:58
	17:32	18:08	18:38	20:08 19:18-19:42/24	20:37 06:59-07:34/35	20:56
22	07:41	07:10	06:27	06:40 06:58-07:44/46 18:42-19:15/33	06:07 06:27-06:37/10 19:10-19:48/38	05:58
	17:33	18:09	18:39	20:09 19:16-19:45/29	20:38 07:00-07:34/34	20:56
23	07:41	07:08	06:26	06:38 06:57-07:45/48 18:44-19:13/29	06:06 06:28-06:35/7 19:10-19:47/37	05:59
	17:34	18:10	18:40	20:10 19:14-19:46/32	20:39 07:01-07:32/31	20:56
24	07:40 17:05-17:11/6	07:07	06:24	06:37 06:55-07:44/49 18:45-19:11/26	06:05 07:02-07:31/29	05:59
	17:35	18:11	18:41	20:11 19:12-19:47/35	20:40 19:11-19:46/35	20:57
25	07:40 17:03-17:12/9	07:06	06:23 18:01-18:12/11	06:36 06:54-07:45/51 18:47-19:09/22	06:04 07:04-07:30/26	05:59
	17:36	18:12	18:42	20:12 19:11-19:48/37	20:41 19:12-19:46/34	20:57
26	07:39 17:03-17:14/11	07:04	06:21 17:55-18:16/21	06:34 06:53-07:45/52 18:51-19:06/15	06:04 07:05-07:29/24	05:59
	17:38	18:14	18:43	20:13 19:10-19:49/39	20:42 19:13-19:45/32	20:57
27	07:38 17:02-17:15/13	07:03	06:19 17:52-18:18/26	06:33 06:52-07:46/54	06:03 07:07-07:28/21	06:00
	17:39	18:15	18:44	20:14 19:08-19:49/41	20:42 19:14-19:45/31	20:57
28	07:37 17:01-17:16/15	07:01	06:18 17:50-18:20/30	06:32 06:51-07:45/54	06:03 07:08-07:26/18	06:00
	17:40	18:16	18:45	20:15 19:08-19:50/42	20:43 19:15-19:43/28	20:57
29	07:37 17:00-17:17/17		07:16 18:47-19:22/35	06:30 06:51-07:45/54	06:02 07:11-07:24/13	06:01
	17:41		19:46	20:16 19:07-19:51/44	20:44 19:16-19:43/27	20:57
30	07:36 17:00-17:18/18		07:15 18:46-19:23/37	06:29 06:51-07:46/55	06:02 07:15-07:20/5	06:01
	17:42		19:47	20:17 19:07-19:52/45	20:45 19:17-19:42/25	20:57
31	07:35 16:59-17:20/21		07:13 18:44-19:24/40		06:01 19:18-19:41/23	
	17:43		19:48		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	110	369	200	2247	2612	74

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG08 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01 20:57	06:24 06:46-06:52/6 19:14-20:02/48 20:39 07:03-07:52/49	06:53 18:36-19:24/48 19:58	07:21 19:10	06:53 16:34-17:02/28 17:25	07:26 17:02
2	06:02 20:57	06:25 06:47-06:52/5 19:14-20:02/48 20:38 07:02-07:52/50	06:54 18:35-19:24/49 19:56	07:22 19:08	06:54 16:33-17:01/28 17:24	07:27 17:02
3	06:02 20:57	06:26 06:47-06:51/4 19:14-20:02/48 20:37 07:01-07:52/51	06:55 18:35-19:24/49 19:55	07:23 19:06	06:55 16:31-17:00/29 17:23	07:28 17:02
4	06:03 20:56	06:27 06:48-06:51/3 19:14-20:02/48 20:36 07:01-07:53/52	06:56 18:35-19:24/49 19:53	07:24 19:05	06:56 16:31-16:58/27 17:22	07:29 17:02
5	06:03 20:56	06:28 06:49-06:50/1 19:14-20:02/48 20:35 07:01-07:53/52	06:57 18:35-19:23/48 19:52	07:25 19:03	06:57 16:30-16:57/27 17:21	07:30 17:02
6	06:04 20:56	06:29 07:00-07:54/54 20:34 19:14-20:02/48	06:57 18:34-19:22/48 19:50	07:26 19:02	06:58 16:31-16:57/26 17:20	07:31 17:02
7	06:05 19:34-19:39/5 20:56	06:30 07:00-07:54/54 20:33 19:14-20:02/48	06:58 18:34-19:21/47 19:49	07:26 19:00	06:59 16:30-16:55/25 17:18	07:32 17:02
8	06:05 19:32-19:42/10 20:55	06:30 07:00-07:54/54 20:31 19:14-20:02/48	06:59 18:34-19:20/46 19:47	07:27 18:59	07:01 16:30-16:54/24 17:17	07:33 17:01
9	06:06 19:31-19:45/14 20:55	06:31 07:00-07:54/54 20:30 19:14-20:02/48	07:00 18:34-19:20/46 19:45	07:28 18:57	07:02 16:30-16:53/23 17:16	07:33 17:02
10	06:06 19:29-19:46/17 20:55	06:32 07:00-07:54/54 20:29 19:14-20:01/47	07:01 18:35-19:19/44 19:44	07:29 18:55	07:03 16:30-16:52/22 17:15	07:34 17:02
11	06:07 19:28-19:47/19 20:54	06:33 06:59-07:53/54 20:28 19:14-20:00/46	07:02 18:35-19:17/42 19:42	07:30 18:54	07:04 16:31-16:51/20 17:15	07:35 17:02
12	06:08 19:27-19:49/22 20:54	06:34 06:59-07:53/54 20:26 19:14-20:00/46	07:03 18:36-19:16/40 19:41	07:31 18:52	07:05 16:32-16:50/18 17:14	07:36 17:02
13	06:08 19:25-19:50/25 20:53	06:35 06:59-07:53/54 20:25 19:15-19:59/44	07:04 18:37-19:15/38 19:39	07:32 18:51	07:06 16:32-16:49/17 17:13	07:37 17:02
14	06:09 07:21-07:31/10 20:53 19:25-19:51/26	06:36 06:59-07:53/54 20:24 19:15-19:59/44	07:05 18:38-19:13/35 19:37	07:33 18:49	07:07 16:33-16:48/15 17:12	07:37 17:02
15	06:10 07:19-07:34/15 20:52 19:24-19:52/28	06:37 06:59-07:53/54 20:23 19:16-19:58/42	07:06 18:39-19:10/31 19:36	07:35 18:48	07:09 16:34-16:47/13 17:11	07:38 17:02
16	06:11 07:17-07:36/19 20:52 19:23-19:53/30	06:38 06:59-07:53/54 19:02-19:08/6 20:21 19:16-19:57/41	07:07 18:41-19:08/27 19:34	07:36 18:46	07:10 16:36-16:47/11 17:10	07:39 17:03
17	06:11 07:15-07:37/22 20:51 19:22-19:54/32	06:39 07:00-07:52/52 18:57-19:13/16 20:20 19:17-19:56/39	07:08 18:43-19:05/22 19:32	07:37 18:45	07:11 16:37-16:46/9 17:10	07:39 17:03
18	06:12 07:14-07:39/25 20:51 19:22-19:55/33	06:40 07:01-07:52/51 18:54-19:16/22 20:19 19:18-19:55/37	07:08 18:47-19:01/14 19:31	07:38 18:44	07:12 16:39-16:45/6 17:09	07:40 17:03
19	06:13 07:13-07:41/28 20:50 19:21-19:56/35	06:41 07:02-07:51/49 18:51-19:18/27 20:17 19:19-19:53/34	07:09 19:29	07:39 18:42	07:13 17:08	07:41 17:04
20	06:14 06:41-06:44/3 19:20-19:56/36 20:49 07:12-07:42/30	06:42 07:02-07:49/47 20:16 18:48-19:51/63	07:10 19:27	07:40 18:41	07:14 17:07	07:41 17:04
21	06:15 06:37-06:46/9 19:20-19:57/37 20:49 07:10-07:43/33	06:43 07:03-07:49/46 18:47-19:20/33 20:14 19:21-19:49/28	07:11 19:26	07:41 18:39	07:15 17:07	07:42 17:05
22	06:15 06:37-06:47/10 19:19-19:58/39 20:48 07:09-07:44/35	06:44 07:04-07:48/44 18:45-19:21/36 20:13 19:23-19:47/24	07:12 19:24	07:42 18:38	07:16 17:06	07:42 17:05
23	06:16 06:38-06:49/11 19:19-19:59/40 20:47 07:09-07:45/36	06:44 07:05-07:47/42 18:44-19:22/38 20:12 19:26-19:44/18	07:13 19:23	07:43 18:37	07:17 17:06	07:43 17:06
24	06:17 06:39-06:50/11 19:19-19:59/40 20:46 07:08-07:46/38	06:45 07:06-07:46/40 18:43-19:23/40 20:10 19:31-19:39/8	07:14 19:21	07:44 18:35	07:19 17:05	07:43 17:06
25	06:18 06:40-06:51/11 19:18-20:00/42 20:46 07:07-07:47/40	06:46 07:07-07:44/37 20:09 18:42-19:24/42	07:15 19:19	06:45 17:34	07:20 17:05	07:44 17:07
26	06:19 06:40-06:50/10 19:17-20:00/43 20:45 07:06-07:47/41	06:47 07:08-07:43/35 20:07 18:41-19:24/43	07:16 19:18	06:46 16:50-17:00/10 17:33	07:21 17:04	07:44 17:07
27	06:20 06:41-06:51/10 19:17-20:00/43 20:44 07:05-07:48/43	06:48 07:09-07:41/32 20:06 18:40-19:25/45	07:17 19:16	06:47 16:47-17:01/14 17:31	07:22 17:04	07:45 17:08
28	06:21 06:42-06:52/10 19:16-20:01/45 20:43 07:05-07:49/44	06:49 07:10-07:39/29 20:04 18:39-19:25/46	07:18 19:14	06:48 16:46-17:02/16 17:30	07:23 17:03	07:45 17:09
29	06:21 06:43-06:52/9 19:16-20:02/46 20:42 07:04-07:50/46	06:50 07:10-07:35/25 20:03 18:37-19:24/47	07:19 19:13	06:49 16:45-17:03/18 17:29	07:24 17:03	07:45 17:09
30	06:22 06:44-06:52/8 19:16-20:02/46 20:41 07:04-07:51/47	06:51 07:12-07:32/20 20:01 18:37-19:24/47	07:20 19:11	06:50 16:37-17:03/26 17:27	07:25 17:03	07:45 17:10
31	06:23 06:45-06:52/7 19:16-20:02/46 20:40 07:03-07:52/49	06:52 07:16-07:27/11 20:00 18:36-19:24/48		06:52 16:35-17:03/28 17:26		07:46 17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	1509	2956	723	112	368	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG09 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46	07:34 07:53-08:17/24	07:00 17:05-17:47/42	07:11	06:28 06:55-08:07/72	06:00 06:59-08:03/64
	17:12	17:45	18:17	19:48	20:18	20:46 19:28-20:17/49
2	07:46	07:33 07:55-08:18/23	06:58 17:06-17:47/41	07:10	06:26 06:55-08:08/73	06:00 06:59-08:03/64
	17:12	17:46	18:18	19:49	20:19	20:47 19:29-20:18/49
3	07:46	07:32 07:56-08:17/21	06:57 17:05-17:46/41	07:08	06:25 06:55-08:08/73	06:00 07:00-08:03/63
	17:13	17:47	18:19	19:50	20:20	20:47 19:29-20:18/49
4	07:46	07:31 07:57-08:17/20	06:55 17:06-17:46/40	07:07 07:25-07:26/1	06:24 06:55-08:08/73	05:59 07:00-08:02/62
	17:14	17:48	18:20	19:51	20:21	20:48 19:29-20:18/49
5	07:46	07:30 07:57-08:15/18	06:54 17:06-17:44/38	07:05 07:23-07:26/3	06:23 06:54-08:08/74	05:59 07:01-08:02/61
	17:15	17:49	18:21	19:52	20:22	20:49 19:29-20:18/49
6	07:46	07:29 07:48-07:50/2	06:52 17:07-17:44/37	07:03 07:22-07:28/6	06:22 06:54-08:09/75	05:59 07:01-08:03/62
	17:16	17:50 07:59-08:13/14	18:22	19:53	20:23	20:49 19:29-20:19/50
7	07:46	07:28 07:47-07:52/5	06:51 17:08-17:42/34	07:02 07:20-07:27/7	06:21 06:54-08:09/75	05:58 07:02-08:03/61
	17:17	17:52 08:01-08:11/10	18:23	19:54	20:24	20:50 19:30-20:19/49
8	07:46	07:27 07:46-07:53/7	06:49 17:09-17:42/33	07:00 07:19-07:32/13	06:19 06:54-08:09/75	05:58 07:02-08:02/60
	17:18	17:53	18:24	19:55	20:25	20:51 19:29-20:19/50
9	07:46	07:26 07:45-07:54/9	06:48 17:10-17:40/30	06:59 07:17-07:36/19	06:18 06:54-08:09/75	05:58 07:02-08:02/60
	17:19	17:54	18:25	19:56	20:26 19:47-19:58/11	20:51 19:30-20:19/49
10	07:46	07:25 07:44-07:55/11	06:46 17:12-17:38/26	06:57 07:15-07:38/23	06:17 06:54-08:08/74	05:58 07:03-08:02/59
	17:20	17:55	18:26	19:57	20:27 19:43-20:01/18	20:52 19:30-20:19/49
11	07:46	07:24 07:43-07:56/13	06:45 17:13-17:35/22	06:56 07:14-07:41/27	06:16 06:54-08:08/74	05:58 07:03-08:02/59
	17:21	17:56	18:27	19:58	20:28 19:41-20:04/23	20:52 19:30-20:20/50
12	07:45	07:22 07:42-07:57/15	06:43 17:16-17:32/16	06:54 07:12-07:42/30	06:15 06:54-08:08/74	05:58 07:04-08:02/58
	17:22	17:58	18:28	19:59	20:29 19:39-20:05/26	20:53 19:30-20:20/50
13	07:45	07:21 07:40-07:56/16	06:42 17:23-17:26/3	06:53 07:11-07:48/37	06:14 06:53-08:08/75	05:57 07:04-08:02/58
	17:23	17:59	18:29	20:00	20:30 19:37-20:07/30	20:53 19:31-20:20/49
14	07:45	07:20 07:39-07:56/17	06:40	06:51 07:09-07:51/42	06:13 06:53-08:08/75	05:57 07:05-08:02/57
	17:24	18:00 17:20-17:35/15	18:30	20:01	20:31 19:36-20:08/32	20:54 19:31-20:20/49
15	07:45	07:19 07:38-07:56/18	06:38	06:50 07:08-07:54/46	06:12 06:53-08:07/74	05:57 07:05-08:02/57
	17:25	18:01 17:17-17:38/21	18:31	20:02	20:32 19:34-20:09/35	20:54 19:31-20:20/49
16	07:44 08:05-08:06/1	07:18 07:37-07:56/19	06:37	06:48 07:06-07:56/50	06:11 06:53-08:07/74	05:57 06:19-06:20/1 19:31-20:21/50
	17:26	18:02 17:15-17:40/25	18:32	20:03	20:33 19:33-20:09/36	20:54 07:05-08:02/57
17	07:44 08:04-08:07/3	07:16 07:35-07:55/20	06:35	06:47 07:05-07:58/53	06:10 06:53-08:07/74	05:58 06:19-06:20/1 19:31-20:21/50
	17:27	18:03 17:13-17:41/28	18:33	20:04	20:34 19:32-20:10/38	20:55 07:05-08:02/57
18	07:43 08:04-08:10/6	07:15 07:36-07:54/18	06:34	06:45 07:04-08:00/56	06:10 06:53-08:06/73	05:58 06:19-06:20/1 19:32-20:21/49
	17:28	18:04 17:12-17:43/31	18:34	20:05	20:35 19:31-20:11/40	20:55 07:06-08:02/56
19	07:43 08:03-08:11/8	07:14 07:37-07:53/16	06:32	06:44 07:02-08:01/59	06:09 06:54-08:07/73	05:58 06:19-06:20/1 19:32-20:21/49
	17:29	18:06 17:11-17:44/33	18:36	20:06	20:35 19:32-20:12/40	20:55 07:06-08:02/56
20	07:42 08:03-08:12/9	07:12 07:38-07:51/13	06:31	06:42 07:01-08:02/61	06:08 06:54-08:06/72	05:58 06:20-06:22/2 19:33-20:22/49
	17:31	18:07 17:09-17:45/36	18:37	20:07	20:36 19:31-20:13/42	20:56 07:07-08:03/56
21	07:42 08:02-08:13/11	07:11 07:41-07:48/7	06:29	06:41 07:00-08:02/62	06:07 06:54-08:06/72	05:58 06:20-06:22/2 19:33-20:22/49
	17:32	18:08 17:09-17:46/37	18:38	20:08	20:37 19:30-20:13/43	20:56 07:07-08:03/56
22	07:41 08:02-08:15/13	07:10 17:07-17:46/39	06:27	06:40 07:00-08:04/64	06:06 06:55-08:06/71	05:58 06:20-06:22/2 19:33-20:22/49
	17:33	18:09	18:39	20:09	20:38 19:30-20:14/44	20:56 07:07-08:03/56
23	07:41 08:01-08:15/14	07:08 17:07-17:47/40	06:26	06:38 07:00-08:05/65	06:06 06:55-08:06/71	05:58 06:20-06:22/2 19:33-20:22/49
	17:34	18:10	18:40	20:10	20:39 19:30-20:15/45	20:56 07:07-08:03/56
24	07:40 08:00-08:16/16	07:07 17:07-17:48/41	06:24	06:37 06:59-08:05/66	06:05 06:55-08:05/70	05:59 06:21-06:22/1 19:33-20:22/49
	17:35	18:11	18:41	20:11	20:40 19:29-20:15/46	20:57 07:08-08:04/56
25	07:39 07:59-08:16/17	07:06 17:06-17:47/41	06:22	06:35 06:59-08:06/67	06:04 06:56-08:05/69	05:59 06:21-06:22/1 19:33-20:23/50
	17:36	18:12	18:42	20:12	20:41 19:29-20:16/47	20:57 07:08-08:04/56
26	07:39 07:59-08:17/18	07:04 17:06-17:48/42	06:21	06:34 06:59-08:07/68	06:04 06:56-08:05/69	05:59 06:21-06:22/1 19:33-20:23/50
	17:37	18:13	18:43	20:13	20:41 19:29-20:16/47	20:57 07:07-08:04/57
27	07:38 07:58-08:17/19	07:03 17:05-17:47/42	06:19	06:33 06:58-08:06/68	06:03 06:57-08:05/68	06:00 07:08-08:05/57
	17:39	18:14	18:44	20:14	20:42 19:29-20:16/47	20:57 19:33-20:22/49
28	07:37 07:57-08:18/21	07:01 17:06-17:48/42	06:18	06:31 06:58-08:07/69	06:02 06:57-08:04/67	06:00 07:08-08:05/57
	17:40	18:16	18:45	20:15	20:43 19:29-20:16/47	20:57 19:34-20:23/49
29	07:36 07:56-08:18/22		07:16	06:30 06:57-08:08/71	06:02 06:58-08:04/66	06:00 07:07-08:05/58
	17:41		19:46	20:16	20:44 19:29-20:17/48	20:57 19:34-20:23/49
30	07:36 07:55-08:18/23		07:14	06:29 06:57-08:08/71	06:01 06:58-08:04/66	06:01 07:08-08:06/58
	17:42		19:46	20:17	20:45 19:28-20:17/49	20:57 19:35-20:24/49
31	07:35 07:54-08:17/23		07:13		06:01 06:59-08:04/65	
	17:43		19:47		20:45 19:29-20:18/49	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	224	849	403	1204	3114	3247

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG09 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01 07:07-08:06/59	06:24 07:03-08:18/75	06:53 07:13-07:40/27	07:21 17:57-18:10/13	06:53 07:14-07:25/11	07:26
	20:57 19:34-20:24/50	20:39 19:49-20:14/25	19:58	19:09	17:25	17:02
2	06:02 07:08-08:07/59	06:25 07:03-08:18/75	06:54 07:14-07:37/23	07:22 17:53-18:13/20	06:54 07:15-07:24/9	07:27
	20:57 19:35-20:24/49	20:38 19:51-20:12/21	19:56	19:08	17:24	17:02
3	06:02 07:07-08:07/60	06:26 07:03-08:18/75	06:55 07:15-07:34/19	07:22 17:50-18:15/25	06:55 07:16-07:23/7	07:28
	20:56 19:35-20:24/49	20:37 19:54-20:10/16	19:55	19:06	17:23	17:02
4	06:03 07:08-08:08/60	06:27 07:03-08:18/75	06:55 07:16-07:30/14	07:23 17:48-18:16/28	06:56 07:17-07:21/4	07:29
	20:56 19:35-20:25/50	20:36 19:58-20:05/7	19:53	19:05	17:22 07:30-07:41/11	17:02
5	06:03 07:07-08:08/61	06:28 07:04-08:18/74	06:56 07:17-07:25/8	07:24 17:46-18:18/32	06:57 07:18-07:19/1	07:30
	20:56 19:35-20:24/49	20:35	19:52	19:03	17:20 07:28-07:43/15	17:02
6	06:04 07:08-08:09/61	06:29 07:04-08:18/74	06:57 07:17-07:23/6	07:25 17:45-18:19/34	06:58 07:28-07:46/18	07:31
	20:56 19:36-20:25/49	20:34	19:50	19:02	17:19	17:01
7	06:04 07:07-08:09/62	06:29 07:04-08:18/74	06:58 07:18-07:22/4	07:26 17:43-18:19/36	06:59 07:26-07:46/20	07:32
	20:56 19:35-20:25/50	20:32	19:48	19:00	17:18	17:01
8	06:05 07:07-08:09/62	06:30 07:04-08:18/74	06:59 07:19-07:20/1	07:27 17:42-18:20/38	07:00 07:25-07:47/22	07:32
	20:55 19:36-20:25/49	20:31	19:47	18:58	17:17	17:01
9	06:06 07:07-08:10/63	06:31 07:04-08:18/74	07:00	07:28 17:41-18:20/39	07:02 07:25-07:48/23	07:33
	20:55 19:36-20:26/50	20:30	19:45	18:57	17:16	17:01
10	06:06 07:07-08:10/63	06:32 07:04-08:17/73	07:01	07:29 17:40-18:20/40	07:03 07:24-07:48/24	07:34
	20:55 19:36-20:25/49	20:29	19:44	18:55	17:15	17:01
11	06:07 07:07-08:11/64	06:33 07:04-08:16/72	07:02	07:30 17:40-18:21/41	07:04 07:26-07:49/23	07:35
	20:54 19:37-20:25/48	20:28	19:42	18:54	17:14	17:02
12	06:08 07:07-08:12/65	06:34 07:04-08:16/72	07:03	07:31 17:39-18:20/41	07:05 07:27-07:49/22	07:36
	20:54 19:36-20:25/49	20:26	19:40	18:52	17:14	17:02
13	06:08 07:06-08:12/66	06:35 07:05-08:16/71	07:04	07:32 17:38-18:20/42	07:06 07:28-07:50/22	07:37
	20:53 19:37-20:25/48	20:25	19:39	18:51	17:13	17:02
14	06:09 07:06-08:12/66	06:36 07:05-08:15/70	07:05	07:33 17:38-18:20/42	07:07 07:29-07:49/20	07:37
	20:53 19:37-20:25/48	20:24	19:37	18:49	17:12	17:02
15	06:10 07:06-08:13/67	06:37 07:06-08:15/69	07:06	07:34 17:38-18:20/42	07:08 07:31-07:50/19	07:38
	20:52 19:38-20:26/48	20:23	19:36	18:48	17:11	17:02
16	06:11 07:06-08:13/67	06:38 07:06-08:14/68	07:07	07:35 17:38-18:19/41	07:10 07:32-07:50/18	07:39
	20:52 19:37-20:25/48	20:21	19:34	18:46	17:10	17:03
17	06:11 07:06-08:14/68	06:39 07:06-08:13/67	07:07	07:36 17:38-18:19/41	07:11 07:33-07:50/17	07:39
	20:51 19:38-20:25/47	20:20	19:32	18:45	17:09	17:03
18	06:12 07:06-08:14/68	06:40 07:06-08:12/66	07:08	07:38 17:38-18:18/40	07:12 07:34-07:50/16	07:40
	20:51 19:39-20:25/46	20:18	19:31	18:43	17:09	17:03
19	06:13 07:06-08:15/69	06:41 07:05-08:10/65	07:09	07:39 17:39-18:18/39	07:13 07:35-07:49/14	07:41
	20:50 19:39-20:25/46	20:17	19:29	18:42	17:08	17:04
20	06:14 07:05-08:15/70	06:42 07:05-08:09/64	07:10	07:40 17:39-18:18/39	07:14 07:36-07:49/13	07:41
	20:49 19:39-20:24/45	20:16	19:27	18:41	17:07	17:04
21	06:14 07:05-08:15/70	06:42 07:05-08:08/63	07:11	07:41 08:11-08:20/9	07:15 07:38-07:49/11	07:42
	20:49 19:39-20:24/45	20:14	19:26	18:39 17:40-18:16/36	17:07	17:04
22	06:15 07:05-08:16/71	06:43 07:05-08:07/62	07:12	07:42 08:08-08:22/14	07:16 07:39-07:48/9	07:42
	20:48 19:40-20:24/44	20:13	19:24	18:38 17:40-18:15/35	17:06	17:05
23	06:16 07:05-08:16/71	06:44 07:05-08:06/61	07:13	07:43 08:06-08:23/17	07:17 07:40-07:48/8	07:43
	20:47 19:41-20:24/43	20:11	19:22	18:36 17:41-18:14/33	17:06	17:05
24	06:17 07:05-08:17/72	06:45 07:06-08:04/58	07:14	07:44 08:05-08:24/19	07:18 07:41-07:47/6	07:43
	20:46 19:42-20:23/41	20:10	19:21	18:35 17:42-18:12/30	17:05	17:06
25	06:18 07:04-08:16/72	06:46 07:07-08:02/55	07:15	06:45 07:05-07:25/20	07:20 07:42-07:45/3	07:44
	20:45 19:41-20:21/40	20:09	19:19	17:34 16:43-17:11/28	17:05	17:07
26	06:19 07:04-08:17/73	06:47 07:08-08:00/52	07:16	06:46 07:07-07:26/19	07:21 07:43-07:44/1	07:44
	20:45 19:42-20:21/39	20:07	19:18	17:32 16:45-17:09/24	17:04	17:07
27	06:20 07:04-08:17/73	06:48 07:09-07:58/49	07:17	06:47 07:08-07:26/18	07:22	07:44
	20:44 19:43-20:20/37	20:06	19:16	17:31 16:48-17:07/19	17:04	17:08
28	06:20 07:04-08:18/74	06:49 07:09-07:55/46	07:18	06:48 07:09-07:26/17	07:23	07:45
	20:43 19:44-20:20/36	20:04	19:14	17:30 16:51-17:04/13	17:03	17:08
29	06:21 07:04-08:18/74	06:50 07:10-07:52/42	07:19	06:49 07:10-07:26/16	07:24	07:45
	20:42 19:46-20:19/33	20:03	19:13	17:29	17:03	17:09
30	06:22 07:04-08:18/74	06:51 07:11-07:48/37	07:20	06:50 07:11-07:25/14	07:25	07:45
	20:41 19:47-20:18/31	20:01	19:11	17:27	17:03	17:10
31	06:23 07:04-08:19/75	06:52 07:12-07:42/30		06:52 07:12-07:25/13		07:46
	20:40 19:48-20:17/29	19:59		17:26		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	3464	2051	102	1107	387	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG10 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46	07:34	07:00 17:19-17:55/36	07:11 18:39-19:19/40	06:27 18:59-19:49/50	06:00 18:50-20:20/90
	17:12	17:44	18:17	19:48	20:18 07:08-07:31/23	20:46
2	07:46	07:33	06:58 17:19-17:57/38	07:10 18:40-19:19/39	06:26 18:58-19:50/52	06:00 18:51-20:20/89
	17:12	17:46	18:18	19:49	20:19 07:10-07:29/19	20:47
3	07:46	07:32	06:57 17:19-17:58/39	07:08 18:40-19:18/38	06:25 18:57-19:52/55	06:00 18:50-20:20/90
	17:13	17:47	18:19	19:50	20:20 07:12-07:27/15	20:47
4	07:46	07:31	06:55 17:19-17:59/40	07:06 18:40-19:16/36	06:24 18:56-19:53/57	05:59 18:51-20:21/90
	17:14	17:48	18:20	19:51	20:21 07:17-07:22/5	20:48
5	07:46	07:30	06:54 17:18-17:59/41	07:05 18:41-19:16/35	06:23 18:55-19:55/60	05:59 18:51-20:22/91
	17:15	17:49	18:21	19:52	20:22	20:49
6	07:46	07:29	06:52 17:19-17:59/40	07:03 18:41-19:14/33	06:21 18:54-19:56/62	05:59 18:52-20:22/90
	17:16	17:50	18:22	19:53	20:23	20:49
7	07:46	07:28	06:51 17:18-17:59/41	07:02 18:43-19:13/30	06:20 18:53-19:56/63	05:58 18:51-20:22/91
	17:17	17:51	18:23	19:54 07:20-07:32/12	20:24	20:50
8	07:46	07:27	06:49 17:19-17:59/40	07:00 18:44-19:10/26	06:19 18:52-19:57/65	05:58 18:52-20:23/91
	17:18	17:53	18:24	19:55 07:18-07:34/16	20:25	20:50
9	07:46	07:26	06:48 17:19-17:58/39	06:59 07:17-07:37/20	06:18 18:51-19:57/66	05:58 18:52-20:23/91
	17:19	17:54	18:25	19:56 18:46-19:08/22	20:26	20:51
10	07:46	07:25	06:46 17:19-17:56/37	06:57 07:15-07:38/23	06:17 18:51-19:59/68	05:58 18:53-20:24/91
	17:20	17:55	18:26	19:57 18:48-19:05/17	20:27	20:52
11	07:46	07:23	06:45 17:59-18:06/7	06:56 07:14-07:40/26	06:16 18:50-20:00/70	05:58 18:53-20:24/91
	17:21	17:56	18:27 17:21-17:56/35	19:58 18:53-19:01/8	20:28	20:52
12	07:45	07:22	06:43 17:21-18:07/46	06:54 07:12-07:40/28	06:15 18:50-20:02/72	05:57 18:54-20:24/90
	17:22	17:57	18:28	19:59	20:29	20:53
13	07:45	07:21	06:41 17:23-18:09/46	06:53 07:11-07:41/30	06:14 18:50-20:04/74	05:57 18:54-20:25/91
	17:23	17:59	18:29	20:00	20:30	20:53
14	07:45	07:20	06:40 17:24-18:09/45	06:51 07:09-07:41/32	06:13 18:50-20:05/75	05:57 18:54-20:25/91
	17:24	18:00	18:30	20:01	20:31	20:53
15	07:44	07:19	06:38 17:26-18:11/45	06:50 07:08-07:42/34	06:12 18:50-20:06/76	05:57 18:54-20:25/91
	17:25	18:01	18:31	20:02	20:32	20:54
16	07:44	07:17	06:37 17:27-18:12/45	06:48 07:06-07:41/35	06:11 18:49-20:07/78	05:57 18:55-20:25/90
	17:26	18:02	18:32	20:03	20:33	20:54
17	07:44	07:16	06:35 17:30-18:12/42	06:47 07:05-07:42/37	06:10 18:49-20:07/78	05:57 18:55-20:26/91
	17:27	18:03	18:33	20:04	20:33	20:55
18	07:43	07:15	06:34 17:42-18:14/32	06:45 07:03-07:41/38	06:09 18:49-20:08/79	05:57 18:55-20:26/91
	17:28	18:04	18:34	20:05	20:34	20:55
19	07:43	07:14	06:32 17:41-18:15/34	06:44 07:03-07:41/38	06:09 18:49-20:09/80	05:58 18:55-20:26/91
	17:29	18:05	18:35	20:06	20:35	20:55
20	07:42	07:12 17:33-17:45/12	06:30 17:40-18:15/35	06:42 07:03-07:42/39	06:08 18:49-20:10/81	05:58 18:55-20:26/91
	17:30	18:07	18:36	20:07	20:36	20:56
21	07:42	07:11 17:30-17:46/16	06:29 17:39-18:17/38	06:41 07:02-07:41/39	06:07 18:49-20:11/82	05:58 18:56-20:27/91
	17:32	18:08	18:37	20:08	20:37	20:56
22	07:41	07:10 17:27-17:47/20	06:27 17:39-18:17/38	06:39 07:03-07:41/38	06:06 18:48-20:12/84	05:58 18:56-20:27/91
	17:33	18:09	18:38	20:09	20:38	20:56
23	07:41	07:08 17:26-17:49/23	06:26 17:39-18:19/40	06:38 07:03-07:40/37	06:06 18:49-20:14/85	05:58 18:56-20:27/91
	17:34	18:10	18:39	20:10	20:39	20:56
24	07:40	07:07 17:24-17:49/25	06:24 17:38-18:20/42	06:37 07:03-07:39/36	06:05 18:49-20:14/85	05:59 18:56-20:27/91
	17:35	18:11	18:40	20:11 19:18-19:33/15	20:40	20:56
25	07:39	07:05 17:23-17:51/28	06:22 17:37-18:20/43	06:35 07:03-07:39/36	06:04 18:48-20:15/87	05:59 18:57-20:28/91
	17:36	18:12	18:41	20:12 19:13-19:38/25	20:40	20:56
26	07:39	07:04 17:22-17:52/30	06:21 17:38-18:22/44	06:34 07:04-07:38/34	06:04 18:49-20:16/87	05:59 18:57-20:28/91
	17:37	18:13	18:42	20:13 19:09-19:40/31	20:41	20:57
27	07:38	07:03 17:21-17:53/32	06:19 17:38-18:21/43	06:33 19:07-19:43/36	06:03 18:49-20:16/87	06:00 18:56-20:27/91
	17:38	18:14	18:43	20:14 07:04-07:36/32	20:42	20:57
28	07:37	07:01 17:21-17:55/34	06:18 17:39-18:22/43	06:31 19:05-19:45/40	06:02 18:50-20:18/88	06:00 18:57-20:28/91
	17:40	18:15	18:44	20:15 07:05-07:36/31	20:43	20:57
29	07:36		07:16 18:39-19:21/42	06:30 19:03-19:47/44	06:02 18:49-20:18/89	06:00 18:57-20:28/91
	17:41		19:45	20:16 07:06-07:35/29	20:44	20:57
30	07:35		07:14 18:39-19:20/41	06:29 19:01-19:48/47	06:01 18:50-20:19/89	06:01 18:58-20:29/91
	17:42		19:46	20:17 07:08-07:33/25	20:44	20:57
31	07:35		07:13 18:39-19:20/41		06:01 18:51-20:20/89	
	17:43		19:47		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	0	220	1258	1307	2375	2722

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG10 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01 18:57-20:28/91 20:57	06:24 19:01-20:12/71 20:39	06:53 07:13-07:39/26 19:58 18:52-19:00/8	07:20 18:01-18:47/46 19:09	06:52 17:25	07:26 17:02
2	06:02 18:57-20:28/91 20:56	06:25 19:01-20:10/69 20:38	06:53 07:14-07:37/23 19:56 18:47-19:04/17	07:21 18:35-18:46/11 19:08 18:00-18:34/34	06:54 17:24	07:27 17:02
3	06:02 18:58-20:28/90 20:56	06:26 19:02-20:09/67 20:37	06:54 07:15-07:35/20 19:55 18:44-19:06/22	07:22 17:58-18:35/37 19:06	06:55 17:23	07:28 17:02
4	06:03 18:57-20:28/91 20:56	06:27 19:02-20:08/66 20:36	06:55 18:41-19:07/26 19:53 07:15-07:32/17	07:23 17:57-18:35/38 19:05	06:56 17:21	07:29 17:02
5	06:03 18:58-20:28/90 20:56	06:27 19:03-20:07/64 20:35	06:56 18:39-19:09/30 19:51 07:16-07:28/12	07:24 17:56-18:35/39 19:03	06:57 17:20	07:30 17:01
6	06:04 18:58-20:29/91 20:56	06:28 19:04-20:06/62 20:33	06:57 18:38-19:10/32 19:50	07:25 17:55-18:35/40 19:01	06:58 17:19	07:30 17:01
7	06:04 18:58-20:28/90 20:55	06:29 19:04-20:05/61 20:32	06:58 18:36-19:11/35 19:48	07:26 17:55-18:35/40 19:00	06:59 17:18	07:31 17:01
8	06:05 18:58-20:28/90 20:55	06:30 19:04-20:03/59 20:31	06:59 18:35-19:11/36 19:47	07:27 17:54-18:35/41 18:58	07:00 17:17	07:32 17:01
9	06:06 18:58-20:28/90 20:55	06:31 19:05-20:02/57 20:30 07:24-07:33/9	07:00 18:34-19:12/38 19:45	07:28 17:54-18:34/40 18:57	07:01 17:16	07:33 17:01
10	06:06 18:58-20:28/90 20:54	06:32 19:06-20:00/54 20:29 07:20-07:36/16	07:01 18:33-19:12/39 19:43	07:29 17:53-18:33/40 18:55	07:03 17:15	07:34 17:01
11	06:07 18:58-20:28/90 20:54	06:33 19:07-19:59/52 20:27 07:18-07:38/20	07:02 18:32-19:12/40 19:42	07:30 17:53-18:31/38 18:54	07:04 17:14	07:35 17:01
12	06:08 18:58-20:27/89 20:54	06:34 19:08-19:57/49 20:26 07:16-07:40/24	07:03 18:31-19:12/41 19:40	07:31 17:53-18:30/37 18:52	07:05 17:13	07:36 17:02
13	06:08 18:58-20:27/89 20:53	06:35 19:10-19:56/46 20:25 07:15-07:41/26	07:04 18:30-19:11/41 19:39	07:32 17:53-18:28/35 18:51	07:06 17:12	07:36 17:02
14	06:09 18:59-20:27/88 20:53	06:36 19:11-19:54/43 20:24 07:14-07:43/29	07:05 18:29-19:11/42 19:37	07:33 17:53-18:27/34 18:49	07:07 17:12	07:37 17:02
15	06:10 18:58-20:26/88 20:52	06:37 19:13-19:52/39 20:22 07:13-07:44/31	07:05 18:28-19:11/43 19:35	07:34 17:54-18:25/31 18:48	07:08 17:11	07:38 17:02
16	06:10 18:58-20:26/88 20:52	06:38 07:12-07:44/32 20:21 19:15-19:50/35	07:06 18:27-19:11/44 19:34	07:35 17:54-18:23/29 18:46	07:09 17:10	07:39 17:02
17	06:11 18:59-20:26/87 20:51	06:39 07:11-07:45/34 20:20 19:17-19:46/29	07:07 18:26-19:10/44 19:32	07:36 17:55-18:22/27 18:45	07:10 17:09	07:39 17:03
18	06:12 18:59-20:25/86 20:50	06:40 07:09-07:44/35 20:18 19:20-19:43/23	07:08 18:26-19:09/43 19:30	07:37 17:56-18:20/24 18:43	07:12 17:09	07:40 17:03
19	06:13 18:58-20:24/86 20:50	06:40 07:09-07:45/36 20:17 19:25-19:38/13	07:09 18:25-19:07/42 19:29	07:38 17:57-18:19/22 18:42	07:13 17:08	07:40 17:03
20	06:13 18:58-20:23/85 20:49	06:41 07:08-07:45/37 20:16	07:10 18:25-19:06/41 19:27	07:39 17:59-18:18/19 18:40	07:14 17:07	07:41 17:04
21	06:14 18:59-20:23/84 20:48	06:42 07:08-07:45/37 20:14	07:11 18:25-19:04/39 19:26	07:40 18:02-18:17/15 18:39	07:15 17:07	07:42 17:04
22	06:15 18:59-20:22/83 20:48	06:43 07:07-07:45/38 20:13	07:12 18:24-19:02/38 19:24	07:42 18:05-18:15/10 18:38	07:16 17:06	07:42 17:05
23	06:16 18:59-20:21/82 20:47	06:44 07:07-07:45/38 20:11	07:13 18:24-19:00/36 19:22	07:43 18:36	07:17 17:05	07:43 17:05
24	06:17 18:59-20:19/80 20:46	06:45 07:07-07:45/38 20:10	07:14 18:24-18:58/34 19:21	07:44 18:35	07:18 17:05	07:43 17:06
25	06:18 18:59-20:19/80 20:45	06:46 07:07-07:45/38 20:08	07:15 18:24-18:57/33 19:19	06:45 17:34	07:19 17:04	07:44 17:06
26	06:18 18:59-20:18/79 20:44	06:47 07:08-07:45/37 20:07	07:16 18:14-18:55/41 19:17	06:46 17:32	07:20 17:04	07:44 17:07
27	06:19 19:00-20:18/78 20:44	06:48 07:08-07:43/35 20:05	07:17 18:10-18:54/44 19:16	06:47 17:31	07:21 17:03	07:44 17:08
28	06:20 19:00-20:17/77 20:43	06:49 07:09-07:43/34 20:04	07:18 18:07-18:52/45 19:14	06:48 17:30	07:23 17:03	07:45 17:08
29	06:21 19:00-20:16/76 20:42	06:50 07:10-07:42/32 20:02	07:18 18:05-18:50/45 19:13	06:49 17:28	07:24 17:03	07:45 17:09
30	06:22 19:01-20:15/74 20:41	06:51 07:11-07:41/30 20:01	07:19 18:03-18:49/46 19:11	06:50 17:27	07:25 17:02	07:45 17:10
31	06:23 19:00-20:13/73 20:40	06:52 07:12-07:40/28 19:59		06:51 17:26		07:45 17:10
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	2646	1673	1203	727	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG11 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (21)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46 08:21-09:00/39	07:34	07:00 07:40-08:21/41	07:11	06:27	06:00
	17:11	17:44	18:17	19:48	20:18	20:46
2	07:46 08:22-09:01/39	07:33	06:58 07:41-08:20/39	07:10	06:26	06:00
	17:12	17:46	18:18	19:49	20:19	20:47
3	07:46 08:22-09:01/39	07:32	06:57 07:41-08:18/37	07:08	06:25	05:59
	17:13	17:47	18:19	19:50	20:20	20:47
4	07:46 08:23-09:01/38	07:31 08:00-08:02/2	06:55 07:43-08:17/34	07:06	06:24	05:59
	17:14	17:48	18:20	19:51	20:21	20:48
5	07:46 08:24-09:01/37	07:30 07:54-08:09/15	06:54 07:44-08:15/31	07:05	06:23	05:59
	17:15	17:49	18:21	19:52	20:22	20:49
6	07:46 08:23-09:01/38	07:29 07:51-08:12/21	06:52 07:46-08:14/28	07:03	06:21	05:59
	17:16	17:50	18:22	19:53	20:23	20:49
7	07:46 08:24-09:01/37	07:28 07:49-08:15/26	06:51 07:47-08:10/23	07:02	06:20	05:58
	17:17	17:51	18:23	19:54	20:24	20:50
8	07:46 08:25-09:01/36	07:27 07:47-08:17/30	06:49 07:51-08:07/16	07:00	06:19	05:58
	17:18	17:53	18:24	19:55	20:25	20:50
9	07:46 08:26-09:02/36	07:26 07:46-08:19/33	06:48 07:58-07:59/1	06:59	06:18	05:58
	17:19	17:54	18:25	19:56	20:26	20:51
10	07:46 08:27-09:02/35	07:25 07:45-08:20/35	06:46	06:57	06:17	05:58
	17:20	17:55	18:26	19:57	20:27	20:52
11	07:46 08:28-09:02/34	07:23 07:44-08:21/37	06:45	06:56	06:16	05:58
	17:21	17:56	18:27	19:58	20:28	20:52
12	07:45 08:28-09:01/33	07:22 07:42-08:22/40	06:43	06:54	06:15	05:57
	17:22	17:57	18:28	19:59	20:29	20:53
13	07:45 08:30-09:01/31	07:21 07:41-08:23/42	06:41	06:53	06:14	05:57
	17:23	17:59	18:29	20:00	20:30	20:53
14	07:45 08:31-09:01/30	07:20 07:41-08:24/43	06:40	06:51	06:13	05:57
	17:24	18:00	18:30	20:01	20:31	20:53
15	07:44 08:31-09:00/29	07:19 07:41-08:25/44	06:38	06:50	06:12	05:57
	17:25	18:01	18:31	20:02	20:32	20:54
16	07:44 08:33-09:00/27	07:17 07:39-08:24/45	06:37	06:48	06:11	05:57
	17:26	18:02	18:32	20:03	20:33	20:54
17	07:44 08:34-08:59/25	07:16 07:39-08:25/46	06:35	06:47	06:10	05:57
	17:27	18:03	18:33	20:04	20:33	20:55
18	07:43 08:36-08:59/23	07:15 07:39-08:26/47	06:34	06:45	06:09	05:57 20:27-20:28/1
	17:28	18:04	18:34	20:05	20:34	20:55
19	07:43 08:37-08:57/20	07:14 07:38-08:25/47	06:32	06:44	06:09	05:58 20:26-20:30/4
	17:29	18:05	18:35	20:06	20:35	20:55
20	07:42 08:40-08:56/16	07:12 07:38-08:26/48	06:30	06:42	06:08	05:58 20:26-20:30/4
	17:30	18:07	18:36	20:07	20:36	20:56
21	07:42 08:42-08:54/12	07:11 07:38-08:26/48	06:29	06:41	06:07	05:58 20:27-20:31/4
	17:31	18:08	18:37	20:08	20:37	20:56
22	07:41	07:10 07:38-08:25/47	06:27	06:39	06:06	05:58 20:27-20:31/4
	17:33	18:09	18:38	20:09	20:38	20:56
23	07:41	07:08 07:38-08:25/47	06:26	06:38	06:05	05:58 20:27-20:31/4
	17:34	18:10	18:39	20:10	20:39	20:56
24	07:40	07:07 07:38-08:25/47	06:24	06:37	06:05	05:59 20:28-20:30/2
	17:35	18:11	18:40	20:11	20:40	20:56
25	07:39	07:05 07:38-08:24/46	06:22	06:35	06:04	05:59
	17:36	18:12	18:41	20:12	20:40	20:56
26	07:39	07:04 07:39-08:24/45	06:21	06:34	06:03	05:59
	17:37	18:13	18:42	20:13	20:41	20:57
27	07:38	07:03 07:39-08:23/44	06:19	06:33	06:03	05:59
	17:38	18:14	18:43	20:14	20:42	20:57
28	07:37	07:01 07:39-08:22/43	06:18	06:31	06:02	06:00
	17:40	18:15	18:44	20:15	20:43	20:57
29	07:36		07:16	06:30	06:02	06:00
	17:41		19:45	20:16	20:44	20:57
30	07:35		07:14	06:29	06:01	06:01
	17:42		19:46	20:17	20:44	20:57
31	07:35		07:13		06:01	
	17:43		19:47		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	654	968	250	0	0	23

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG11 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (21)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October		November		December	
1	06:01	06:24	06:53	07:20		06:52	07:14-07:49/35	07:26	08:10-08:44/34
	20:57	20:39	19:58	19:09		17:25		17:02	
2	06:02	06:25	06:53	07:21		06:54	07:16-07:48/32	07:27	08:10-08:45/35
	20:56	20:38	19:56	19:08		17:24		17:02	
3	06:02	06:26	06:54	07:22		06:55	07:17-07:46/29	07:28	08:10-08:46/36
	20:56	20:37	19:55	19:06		17:23		17:02	
4	06:03	06:27	06:55	07:23		06:56	07:19-07:44/25	07:29	08:10-08:46/36
	20:56	20:36	19:53	19:05		17:21		17:02	
5	06:03	06:27	06:56	07:24	08:30-08:42/12	06:57	07:21-07:42/21	07:30	08:10-08:47/37
	20:56	20:35	19:51	19:03		17:20		17:01	
6	06:04	06:28	06:57	07:25	08:25-08:46/21	06:58	07:24-07:39/15	07:30	08:10-08:47/37
	20:56	20:33	19:50	19:01		17:19		17:01	
7	06:04	06:29	06:58	07:26	08:22-08:48/26	06:59		07:31	08:10-08:48/38
	20:55	20:32	19:48	19:00		17:18		17:01	
8	06:05	06:30	06:59	07:27	08:20-08:50/30	07:00		07:32	08:10-08:48/38
	20:55	20:31	19:47	18:58		17:17		17:01	
9	06:06	06:31	07:00	07:28	08:18-08:51/33	07:01		07:33	08:11-08:49/38
	20:55	20:30	19:45	18:57		17:16		17:01	
10	06:06	06:32	07:01	07:29	08:16-08:52/36	07:03		07:34	08:11-08:50/39
	20:54	20:29	19:43	18:55		17:15		17:01	
11	06:07	06:33	07:02	07:30	08:15-08:53/38	07:04		07:35	08:11-08:50/39
	20:54	20:27	19:42	18:54		17:14		17:01	
12	06:07	06:34	07:03	07:31	08:14-08:54/40	07:05		07:36	08:12-08:51/39
	20:54	20:26	19:40	18:52		17:13		17:01	
13	06:08	06:35	07:04	07:32	08:13-08:55/42	07:06		07:36	08:12-08:51/39
	20:53	20:25	19:39	18:51		17:12		17:02	
14	06:09	06:36	07:05	07:33	08:12-08:55/43	07:07		07:37	08:12-08:52/40
	20:53	20:24	19:37	18:49		17:12		17:02	
15	06:10	06:37	07:05	07:34	08:11-08:56/45	07:08		07:38	08:13-08:53/40
	20:52	20:22	19:35	18:48		17:11		17:02	
16	06:10	06:38	07:06	07:35	08:10-08:56/46	07:09		07:39	08:13-08:52/39
	20:52	20:21	19:34	18:46		17:10		17:02	
17	06:11	06:39	07:07	07:36	08:09-08:56/47	07:11		07:39	08:13-08:53/40
	20:51	20:20	19:32	18:45		17:09		17:03	
18	06:12	06:40	07:08	07:37	08:09-08:56/47	07:12		07:40	08:14-08:54/40
	20:50	20:18	19:30	18:43		17:09		17:03	
19	06:13	06:40	07:09	07:38	08:08-08:56/48	07:13		07:41	08:14-08:54/40
	20:50	20:17	19:29	18:42		17:08		17:03	
20	06:13	06:41	07:10	07:39	08:09-08:57/48	07:14		07:41	08:15-08:55/40
	20:49	20:16	19:27	18:40		17:07		17:04	
21	06:14	06:42	07:11	07:40	08:09-08:57/48	07:15	08:17-08:29/12	07:42	08:15-08:55/40
	20:48	20:14	19:26	18:39		17:07		17:04	
22	06:15	06:43	07:12	07:42	08:09-08:56/47	07:16	08:16-08:32/16	07:42	08:16-08:56/40
	20:48	20:13	19:24	18:38		17:06		17:05	
23	06:16	06:44	07:13	07:43	08:09-08:56/47	07:17	08:14-08:34/20	07:43	08:16-08:56/40
	20:47	20:11	19:22	18:36		17:05		17:05	
24	06:17	06:45	07:14	07:44	08:09-08:55/46	07:18	08:13-08:36/23	07:43	08:17-08:57/40
	20:46	20:10	19:21	18:35		17:05		17:06	
25	06:18	06:46	07:15	06:45	07:09-07:55/46	07:19	08:12-08:37/25	07:44	08:17-08:57/40
	20:45	20:08	19:19	17:34		17:04		17:06	
26	06:18	06:47	07:16	06:46	07:09-07:54/45	07:20	08:11-08:38/27	07:44	08:17-08:57/40
	20:44	20:07	19:17	17:32		17:04		17:07	
27	06:19	06:48	07:17	06:47	07:10-07:54/44	07:21	08:11-08:39/28	07:44	08:19-08:58/39
	20:44	20:05	19:16	17:31		17:03		17:08	
28	06:20	06:49	07:18	06:48	07:11-07:53/42	07:23	08:10-08:40/30	07:45	08:19-08:59/40
	20:43	20:04	19:14	17:30		17:03		17:08	
29	06:21	06:50	07:18	06:49	07:11-07:52/41	07:24	08:10-08:41/31	07:45	08:19-08:59/40
	20:42	20:02	19:13	17:28		17:03		17:09	
30	06:22	06:51	07:19	06:50	07:12-07:51/39	07:25	08:10-08:43/33	07:45	08:19-08:59/40
	20:41	20:01	19:11	17:27		17:02		17:10	
31	06:23	06:52		06:51	07:13-07:50/37			07:45	08:20-08:59/39
	20:40	19:59		17:26				17:10	
Potential sun hours	454	425	374	347		301		293	
Sum of minutes with flicker	0	0	0	1084		402		1202	

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG12 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (22)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March		April		May		June
1	07:46	07:34	07:00		07:11	07:53-08:16/23	06:27	06:46-07:23/37	06:00
	17:11	17:44	18:16		19:48		20:18		20:46
2	07:46	07:33	06:58		07:10	07:56-08:14/18	06:26	06:46-07:24/38	06:00
	17:12	17:46	18:18		19:49		20:19		20:47
3	07:46	07:32	06:57		07:08	07:59-08:10/11	06:25	06:45-07:24/39	05:59
	17:13	17:47	18:19		19:50		20:20		20:47
4	07:46	07:31	06:55		07:06		06:24	06:45-07:24/39	05:59
	17:14	17:48	18:20		19:51		20:21		20:48
5	07:46	07:30	06:54		07:05		06:23	06:45-07:25/40	05:59
	17:15	17:49	18:21		19:52		20:22		20:49
6	07:46	07:29	06:52		07:03		06:21	06:45-07:25/40	05:58
	17:16	17:50	18:22		19:53		20:23		20:49
7	07:46	07:28	06:51		07:02		06:20	06:45-07:25/40	05:58
	17:17	17:51	18:23		19:54		20:24		20:50
8	07:46	07:27	06:49		07:00		06:19	06:44-07:24/40	05:58
	17:18	17:53	18:24		19:55		20:25		20:50
9	07:46	07:26	06:48		06:59		06:18	06:44-07:24/40	05:58
	17:19	17:54	18:25		19:56		20:26		20:51
10	07:46	07:25	06:46		06:57		06:17	06:44-07:23/39	05:58
	17:20	17:55	18:26		19:57		20:27		20:52
11	07:46	07:23	06:45	07:04-07:19/15	06:56		06:16	06:44-07:23/39	05:57
	17:21	17:56	18:27		19:58		20:28		20:52
12	07:45	07:22	06:43	07:01-07:21/20	06:54		06:15	06:45-07:24/39	05:57
	17:22	17:57	18:28		19:59		20:29		20:53
13	07:45	07:21	06:41	07:00-07:24/24	06:52		06:14	06:46-07:23/37	05:57
	17:23	17:58	18:29		20:00		20:30		20:53
14	07:45	07:20	06:40	06:58-07:25/27	06:51		06:13	06:46-07:23/37	05:57
	17:24	18:00	18:30		20:01		20:31		20:54
15	07:44	07:19	06:38	06:57-07:26/29	06:50		06:12	06:46-07:22/36	05:57
	17:25	18:01	18:31		20:02		20:32		20:54
16	07:44	07:17	06:37	06:55-07:27/32	06:48		06:11	06:46-07:21/35	05:57
	17:26	18:02	18:32		20:03		20:33		20:54
17	07:44	07:16	06:35	06:53-07:27/34	06:47		06:10	06:47-07:21/34	05:57
	17:27	18:03	18:33		20:04		20:33		20:55
18	07:43	07:15	06:34	06:52-07:28/36	06:45		06:09	06:47-07:20/33	05:57
	17:28	18:04	18:34		20:05		20:34		20:55
19	07:43	07:14	06:32	06:50-07:28/38	06:44		06:09	06:49-07:20/31	05:58
	17:29	18:05	18:35		20:06		20:35		20:55
20	07:42	07:12	06:30	06:50-07:28/38	06:42		06:08	06:49-07:19/30	05:58
	17:30	18:07	18:36		20:07		20:36		20:56
21	07:42	07:11	06:29	06:50-07:28/38	06:41		06:07	06:50-07:18/28	05:58
	17:31	18:08	18:37		20:08		20:37		20:56
22	07:41	07:10	06:27	06:49-07:27/38	06:39	07:01-07:13/12	06:06	06:51-07:17/26	05:58
	17:33	18:09	18:38		20:09		20:38		20:56
23	07:41	07:08	06:26	06:49-07:27/38	06:38	06:56-07:15/19	06:05	06:52-07:16/24	05:58
	17:34	18:10	18:39		20:10		20:39		20:56
24	07:40	07:07	06:24	06:49-07:26/37	06:37	06:55-07:18/23	06:05	06:53-07:15/22	05:59
	17:35	18:11	18:40		20:11		20:40		20:56
25	07:39	07:05	06:22	06:49-07:26/37	06:35	06:54-07:19/25	06:04	06:55-07:14/19	05:59
	17:36	18:12	18:41		20:12		20:40		20:56
26	07:39	07:04	06:21	06:49-07:25/36	06:34	06:53-07:21/28	06:03	06:56-07:13/17	05:59
	17:37	18:13	18:42		20:13		20:41		20:57
27	07:38	07:03	06:19	06:49-07:24/35	06:33	06:51-07:21/30	06:03	06:58-07:10/12	05:59
	17:38	18:14	18:43		20:14		20:42		20:57
28	07:37	07:01	06:18	06:50-07:23/33	06:31	06:50-07:22/32	06:02	07:01-07:08/7	06:00
	17:40	18:15	18:44		20:15		20:43		20:57
29	07:36		07:16	07:50-08:22/32	06:30	06:49-07:23/34	06:02		06:00
	17:41		19:45		20:16		20:44		20:57
30	07:35		07:14	07:50-08:20/30	06:29	06:48-07:24/36	06:01		06:01
	17:42		19:46		20:17		20:44		20:57
31	07:35		07:13	07:52-08:19/27			06:01		
	17:43		19:47				20:45		
Potential sun hours	302	299	370		397		444		447
Sum of minutes with flicker	0	0	674		291		898		0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG12 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (22)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July		August		September		October		November	December
1	06:01		06:24	06:55-07:33/38	06:53		07:20	07:40-08:02/22	06:52	07:26
	20:57		20:39		19:58		19:09		17:25	17:02
2	06:02		06:25	06:55-07:34/39	06:53		07:21	07:41-07:59/18	06:54	07:27
	20:56		20:38		19:56		19:08		17:24	17:02
3	06:02		06:26	06:55-07:34/39	06:54		07:22	07:45-07:55/10	06:55	07:28
	20:56		20:37		19:55		19:06		17:22	17:02
4	06:03		06:26	06:54-07:34/40	06:55		07:23		06:56	07:29
	20:56		20:36		19:53		19:05		17:21	17:01
5	06:03		06:27	06:54-07:34/40	06:56		07:24		06:57	07:30
	20:56		20:35		19:51		19:03		17:20	17:01
6	06:04		06:28	06:54-07:34/40	06:57		07:25		06:58	07:30
	20:56		20:33		19:50		19:01		17:19	17:01
7	06:04		06:29	06:54-07:34/40	06:58		07:26		06:59	07:31
	20:55		20:32		19:48		19:00		17:18	17:01
8	06:05		06:30	06:54-07:33/39	06:59		07:27		07:00	07:32
	20:55		20:31		19:47		18:58		17:17	17:01
9	06:05		06:31	06:54-07:33/39	07:00	07:53-08:03/10	07:28		07:01	07:33
	20:55		20:30		19:45		18:57		17:16	17:01
10	06:06		06:32	06:54-07:33/39	07:01	07:49-08:07/18	07:29		07:03	07:34
	20:55		20:29		19:43		18:55		17:15	17:01
11	06:07		06:33	06:54-07:32/38	07:02	07:47-08:09/22	07:30		07:04	07:35
	20:54		20:27		19:42		18:54		17:14	17:01
12	06:07		06:34	06:55-07:32/37	07:03	07:45-08:11/26	07:31		07:05	07:36
	20:54		20:26		19:40		18:52		17:13	17:01
13	06:08		06:35	06:56-07:31/35	07:04	07:42-08:11/29	07:32		07:06	07:36
	20:53		20:25		19:39		18:51		17:12	17:02
14	06:09		06:36	06:57-07:31/34	07:04	07:40-08:12/32	07:33		07:07	07:37
	20:53		20:24		19:37		18:49		17:12	17:02
15	06:10	07:12-07:14/2	06:37	06:58-07:30/32	07:05	07:39-08:12/33	07:34		07:08	07:38
	20:52		20:22		19:35		18:48		17:11	17:02
16	06:10	07:08-07:19/11	06:38	06:59-07:29/30	07:06	07:38-08:13/35	07:35		07:09	07:39
	20:52		20:21		19:34		18:46		17:10	17:02
17	06:11	07:06-07:21/15	06:39	07:00-07:27/27	07:07	07:37-08:13/36	07:36		07:11	07:39
	20:51		20:20		19:32		18:45		17:09	17:03
18	06:12	07:05-07:23/18	06:40	07:00-07:25/25	07:08	07:36-08:14/38	07:37		07:12	07:40
	20:50		20:18		19:30		18:43		17:09	17:03
19	06:13	07:03-07:24/21	06:40	07:01-07:23/22	07:09	07:36-08:14/38	07:38		07:13	07:41
	20:50		20:17		19:29		18:42		17:08	17:03
20	06:13	07:02-07:25/23	06:41	07:03-07:21/18	07:10	07:35-08:14/39	07:39		07:14	07:41
	20:49		20:16		19:27		18:40		17:07	17:04
21	06:14	07:02-07:27/25	06:42	07:06-07:17/11	07:11	07:35-08:13/38	07:40		07:15	07:42
	20:48		20:14		19:26		18:39		17:07	17:04
22	06:15	07:01-07:28/27	06:43		07:12	07:35-08:13/38	07:42		07:16	07:42
	20:48		20:13		19:24		18:38		17:06	17:05
23	06:16	07:00-07:29/29	06:44		07:13	07:34-08:12/38	07:43		07:17	07:43
	20:47		20:11		19:22		18:36		17:05	17:05
24	06:17	06:59-07:29/30	06:45		07:14	07:34-08:11/37	07:44		07:18	07:43
	20:46		20:10		19:21		18:35		17:05	17:06
25	06:18	06:58-07:30/32	06:46		07:15	07:34-08:10/36	06:45		07:19	07:44
	20:45		20:08		19:19		17:34		17:04	17:06
26	06:18	06:58-07:31/33	06:47		07:16	07:35-08:10/35	06:46		07:20	07:44
	20:44		20:07		19:17		17:32		17:04	17:07
27	06:19	06:57-07:31/34	06:48		07:17	07:36-08:08/32	06:47		07:21	07:44
	20:44		20:05		19:16		17:31		17:03	17:08
28	06:20	06:57-07:32/35	06:49		07:18	07:37-08:07/30	06:48		07:23	07:45
	20:43		20:04		19:14		17:30		17:03	17:08
29	06:21	06:57-07:33/36	06:50		07:18	07:38-08:06/28	06:49		07:24	07:45
	20:42		20:02		19:13		17:28		17:03	17:09
30	06:22	06:56-07:33/37	06:51		07:19	07:39-08:04/25	06:50		07:25	07:45
	20:41		20:01		19:11		17:27		17:02	17:10
31	06:23	06:55-07:33/38	06:52				06:51			07:45
	20:40		19:59				17:26			17:10
Potential sun hours	454		425		374		347		301	293
Sum of minutes with flicker	446		702		693		50		0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG13 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (23)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:27 06:48-07:14/26	06:00 06:21-06:36/15	06:01 06:23-06:44/21	06:24	06:53	07:20	06:52	07:26
	17:11	17:44	18:16	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26 06:48-07:13/25	06:00 06:21-06:37/16	06:02 06:24-06:45/21	06:25	06:53	07:21	06:54	07:27
	17:12	17:45	18:18	19:49	20:19	20:47	20:56	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25 06:49-07:13/24	05:59 06:20-06:36/16	06:02 06:24-06:44/20	06:26	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:22	17:02
4	07:46	07:31	06:55	07:06	06:24 06:50-07:12/22	05:59 06:20-06:37/17	06:03 06:25-06:45/20	06:26 07:06-07:15/9	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:04	17:21	17:01
5	07:46	07:30	06:54	07:05	06:23 06:50-07:11/21	05:59 06:20-06:38/18	06:03 06:25-06:44/19	06:27 07:04-07:17/13	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:51	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:21 06:52-07:10/18	05:58 06:20-06:39/19	06:04 06:26-06:45/19	06:28 07:02-07:19/17	06:57	07:25	06:58	07:30
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:33	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20 06:53-07:09/16	05:58 06:19-06:38/19	06:04 06:26-06:44/18	06:29 07:01-07:20/19	06:58	07:26	06:59	07:31
	17:17	17:51	18:23	19:54	20:24	20:50	20:55	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19 06:54-07:06/12	05:58 06:19-06:39/20	06:05 06:27-06:45/18	06:30 06:59-07:20/21	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:50	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18 06:57-07:03/6	05:58 06:19-06:39/20	06:05 06:27-06:44/17	06:31 06:58-07:21/23	07:00	07:28	07:01	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58 06:19-06:40/21	06:06 06:28-06:44/16	06:32 06:57-07:22/25	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:54	20:29	19:43	18:55	17:15	17:01
11	07:46	07:23	06:45	06:56	06:16	05:57 06:19-06:40/21	06:07 06:29-06:44/15	06:33 06:57-07:22/25	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:27	19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15	05:57 06:19-06:40/21	06:07 06:29-06:43/14	06:34 06:56-07:22/26	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:01
13	07:45	07:21	06:41	06:52	06:14	05:57 06:19-06:41/22	06:08 06:30-06:43/13	06:35 06:56-07:23/27	07:04	07:32	07:06	07:36
	17:23	17:58	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:12	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57 06:19-06:41/22	06:09 06:31-06:43/12	06:36 06:57-07:23/26	07:04	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:53	20:53	20:24	19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:49	06:12	05:57 06:19-06:41/22	06:10 06:31-06:42/11	06:37 06:58-07:23/25	07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:17	06:37	06:48	06:11	05:57 06:19-06:41/22	06:10 06:32-06:41/9	06:38 06:59-07:22/23	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:47	06:10	05:57 06:19-06:41/22	06:11 06:33-06:40/7	06:39 07:00-07:22/22	07:07	07:36	07:11	07:39
	17:27	18:03	18:33	20:04	20:33	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:09	05:57 06:19-06:41/22	06:12 06:34-06:39/5	06:39 07:00-07:21/21	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:50	20:18	19:30	18:43	17:08	17:03
19	07:43	07:14	06:32	06:44 07:02-07:08/6	06:09	05:57 06:19-06:42/23	06:13 06:34-06:36/2	06:40 07:01-07:20/19	07:09	07:38	07:13	07:41
	17:29	18:05	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42 07:01-07:11/10	06:08	05:58 06:19-06:42/23	06:13	06:41 07:02-07:19/17	07:10	07:39	07:14	07:41
	17:30	18:06	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41 06:59-07:12/13	06:07	05:58 06:20-06:43/23	06:14	06:42 07:03-07:18/15	07:11	07:40	07:15	07:42
	17:31	18:08	18:37	20:08	20:37	20:56	20:48	20:14	19:26	18:39	17:06	17:04
22	07:41	07:10	06:27	06:39 06:58-07:13/15	06:06	05:58 06:20-06:43/23	06:15	06:43 07:04-07:16/12	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38 06:56-07:13/17	06:05	05:58 06:20-06:43/23	06:16	06:44 07:05-07:14/9	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37 06:55-07:14/19	06:05	05:58 06:20-06:43/23	06:17	06:45 07:06-07:11/5	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35 06:54-07:15/21	06:04 06:25-06:29/4	05:59 06:21-06:43/22	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:40	20:56	20:45	20:08	19:19	17:34	17:04	17:06
26	07:39	07:04	06:21	06:34 06:53-07:15/22	06:03 06:24-06:30/6	05:59 06:21-06:43/22	06:18	06:47	07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:44	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33 06:51-07:15/24	06:03 06:23-06:31/8	05:59 06:21-06:43/22	06:19	06:48	07:17	06:47	07:21	07:44
	17:38	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:03	17:08
28	07:37	07:01	06:17	06:31 06:50-07:15/25	06:02 06:23-06:33/10	06:00 06:22-06:44/22	06:20	06:49	07:18	06:48	07:23	07:45
	17:40	18:15	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30 06:49-07:15/26	06:02 06:22-06:33/11	06:00 06:22-06:44/22	06:21	06:50	07:18	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:28	17:03	17:09
30	07:35		07:14	06:29 06:48-07:15/27	06:01 06:22-06:35/13	06:01 06:23-06:44/21	06:22	06:51	07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	20:57	20:41	20:01	19:11	17:27	17:02	17:10
31	07:35		07:13		06:01 06:22-06:36/14		06:23	06:52		06:51		07:45
	17:43		19:47		20:45		20:40	19:59		17:26		17:10
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	225	236	624	277	399	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG14 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (24)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:27	06:00	06:01	06:24	06:52	07:20	06:52	07:26
	17:11	17:44	18:16	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:01	06:25	06:53	07:21	06:54	07:27
	17:12	17:45	18:18	19:49	20:19	20:47	20:56	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	05:59	06:02	06:26	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:22	17:02
4	07:46	07:31	06:55	07:06	06:24	05:59	06:03	06:26	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:04	17:21	17:01
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:27	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:51	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:21	05:58	06:04	06:28	06:57	07:25	06:58	07:30
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:33	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:51	18:23	19:54	20:24	20:50	20:55	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:50	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:05	06:31	07:00	07:28	07:01	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:54	20:29	19:43	18:55	17:15	17:01
11	07:46	07:23	06:45	06:55	06:16	05:57	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:27	19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15	05:57	06:07	06:34	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:01
13	07:45	07:21	06:41	06:52	06:14	05:57	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:58	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:12	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57	06:09	06:36	07:04	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:53	20:53	20:24	19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:49	06:12	05:57	06:10	06:37	07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:17	06:37	06:48	06:11	05:57	06:10	06:38	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:46	06:10	05:57	06:11	06:39	07:07	07:36	07:10	07:39
	17:27	18:03	18:33	20:04	20:33	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:33	06:45	06:09	05:57	06:12	06:39	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:50	20:18	19:30	18:43	17:08	17:03
19	07:43	07:14	06:32	06:44	06:08	05:57	06:13	06:40	07:09	07:38	07:13	07:40
	17:29	18:05	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42	06:08	05:58	06:13	06:41	07:10	07:39	07:14	07:41
	17:30	18:06	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:40	07:15	07:42
	17:31	18:08	18:37	20:08	20:37	20:56	20:48	20:14	19:26	18:39	17:06	17:04
22	07:41	07:10	06:27	06:39	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:25	06:38	06:05	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37	06:05	05:58	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:40	20:56	20:45	20:08	19:19	17:33	17:04	17:06
26	07:39	07:04	06:21	06:34	06:03	05:59	06:18	06:47	07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:44	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	05:59	06:19	06:48	07:17	06:47	07:21	07:44
	17:38	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:03	17:08
28	07:37	07:01	06:17	06:31	06:02	06:00	06:20	06:49	07:17	06:48	07:23	07:45
	17:40	18:15	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:18	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:12	17:28	17:03	17:09
30	07:35		07:14	06:29	06:01	06:01	06:22	06:51	07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	20:57	20:41	20:01	19:11	17:27	17:02	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:45
	17:43		19:47		20:45		20:40	19:59		17:26		17:10
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: AG15 - VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (25)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46 08:13-09:03/50	07:34 08:21-09:15/54	07:00	07:11	06:27	06:00	06:01	06:24	06:52	07:20	06:52 07:59-08:37/38	07:26 07:57-08:53/56
	17:11	17:44	18:16	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46 08:14-09:05/51	07:33 08:21-09:14/53	06:58	07:09	06:26	06:00	06:01	06:25	06:53	07:21	06:54 07:58-08:39/41	07:27 07:58-08:53/55
	17:12	17:45	18:18	19:49	20:19	20:47	20:56	20:38	19:56	19:08	17:24	17:02
3	07:46 08:14-09:05/51	07:32 08:22-09:14/52	06:57	07:08	06:25	05:59	06:02	06:25	06:54	07:22	06:55 07:57-08:40/43	07:28 07:59-08:53/54
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:22	17:02
4	07:46 08:14-09:06/52	07:31 08:23-09:13/50	06:55	07:06	06:24	05:59	06:02	06:26	06:55	07:23	06:56 07:56-08:41/45	07:29 07:59-08:53/54
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:04	17:21	17:01
5	07:46 08:14-09:07/53	07:30 08:24-09:13/49	06:54	07:05	06:23	05:59	06:03	06:27	06:56	07:24	06:57 07:54-08:42/48	07:29 07:59-08:52/53
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:51	19:03	17:20	17:01
6	07:46 08:14-09:06/52	07:29 08:25-09:12/47	06:52	07:03	06:21	05:58	06:04	06:28	06:57	07:25	06:58 07:54-08:43/49	07:30 08:00-08:52/52
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:33	19:50	19:01	17:19	17:01
7	07:46 08:14-09:07/53	07:28 08:26-09:11/45	06:51	07:02	06:20	05:58	06:04	06:29	06:58	07:26	06:59 07:54-08:44/50	07:31 08:00-08:53/53
	17:17	17:51	18:23	19:54	20:24	20:50	20:55	20:32	19:48	19:00	17:18	17:01
8	07:46 08:14-09:08/54	07:27 08:27-09:10/43	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00 07:53-08:45/52	07:32 08:01-08:53/52
	17:18	17:53	18:24	19:55	20:25	20:50	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46 08:15-09:09/54	07:26 08:29-09:09/40	06:48	06:59	06:18	05:58	06:05	06:31	07:00	07:28	07:01 07:52-08:45/53	07:33 08:02-08:53/51
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46 08:15-09:10/55	07:25 08:30-09:08/38	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03 07:52-08:46/54	07:34 08:03-08:54/51
	17:20	17:55	18:26	19:57	20:27	20:52	20:54	20:29	19:43	18:55	17:15	17:01
11	07:46 08:14-09:10/56	07:23 08:32-09:06/34	06:45	06:55	06:16	05:57	06:07	06:33	07:02	07:30	07:04 07:51-08:46/55	07:35 08:04-08:54/50
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:27	19:42	18:54	17:14	17:01
12	07:45 08:15-09:11/56	07:22 08:33-09:03/30	06:43	06:54	06:15	05:57	06:07	06:34	07:03	07:31	07:05 07:52-08:48/56	07:36 08:04-08:55/51
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:01
13	07:45 08:15-09:11/56	07:21 08:35-09:01/26	06:41	06:52	06:14	05:57	06:08	06:35	07:04	07:32	07:06 07:51-08:48/57	07:36 08:04-08:54/50
	17:23	17:58	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:12	17:02
14	07:45 08:15-09:11/56	07:20 08:39-08:58/19	06:40	06:51	06:13	05:57	06:09	06:36	07:04	07:33	07:07 07:51-08:48/57	07:37 08:05-08:55/50
	17:24	18:00	18:30	20:01	20:31	20:53	20:53	20:24	19:37	18:49	17:12	17:02
15	07:44 08:15-09:12/57	07:19 08:44-08:53/9	06:38	06:49	06:12	05:57	06:10	06:37	07:05	07:34	07:08 07:51-08:48/57	07:38 08:06-08:55/49
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44 08:16-09:13/57	07:17	06:37	06:48	06:11	05:57	06:10	06:38	07:06	07:35	07:09 07:51-08:49/58	07:39 08:06-08:55/49
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44 08:16-09:13/57	07:16	06:35	06:46	06:10	05:57	06:11	06:38	07:07	07:36	07:10 07:52-08:50/58	07:39 08:07-08:55/48
	17:27	18:03	18:33	20:04	20:33	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43 08:16-09:14/58	07:15	06:33	06:45	06:09	05:57	06:12	06:39	07:08	07:37	07:12 07:52-08:50/58	07:40 08:08-08:56/48
	17:28	18:04	18:34	20:05	20:34	20:55	20:50	20:18	19:30	18:43	17:08	17:03
19	07:43 08:16-09:14/58	07:14	06:32	06:44	06:08	05:57	06:13	06:40	07:09	07:38	07:13 07:52-08:50/58	07:40 08:08-08:56/48
	17:29	18:05	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:03
20	07:42 08:17-09:15/58	07:12	06:30	06:42	06:08	05:58	06:13	06:41	07:10	07:39	07:14 07:52-08:50/58	07:41 08:09-08:57/48
	17:30	18:06	18:36	20:07	20:36	20:56	20:49	20:15	19:27	18:40	17:07	17:04
21	07:42 08:17-09:15/58	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:40	07:15 07:52-08:50/58	07:42 08:09-08:57/48
	17:31	18:08	18:37	20:08	20:37	20:56	20:48	20:14	19:25	18:39	17:06	17:04
22	07:41 08:17-09:15/58	07:10	06:27	06:39	06:06	05:58	06:15	06:43	07:12	07:41	07:16 07:53-08:51/58	07:42 08:10-08:58/48
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41 08:18-09:16/58	07:08	06:25	06:38	06:05	05:58	06:16	06:44	07:13	07:43	07:17 07:53-08:51/58	07:43 08:10-08:58/48
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:05	17:05
24	07:40 08:18-09:16/58	07:07	06:24	06:37	06:05	05:58	06:17	06:45	07:14	07:44	07:18 07:53-08:51/58	07:43 08:11-08:59/48
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39 08:18-09:16/58	07:05	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19 07:54-08:51/57	07:44 08:11-08:59/48
	17:36	18:12	18:41	20:12	20:40	20:56	20:45	20:08	19:19	17:33	17:04	17:06
26	07:39 08:18-09:16/58	07:04	06:21	06:34	06:03	05:59	06:18	06:47	07:16	06:46	07:20 07:54-08:51/57	07:44 08:11-08:59/48
	17:37	18:13	18:42	20:13	20:41	20:57	20:44	20:07	19:17	17:32	17:04	17:07
27	07:38 08:19-09:16/57	07:03	06:19	06:32	06:03	05:59	06:19	06:48	07:17	06:47 08:11-08:24/13	07:21 07:54-08:51/57	07:44 08:12-09:01/49
	17:38	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:03	17:07
28	07:37 08:19-09:16/57	07:01	06:17	06:31	06:02	06:00	06:20	06:49	07:17	06:48 08:08-08:29/21	07:23 07:55-08:51/56	07:45 08:12-09:01/49
	17:39	18:15	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36 08:20-09:16/56		07:16	06:30	06:02	06:00	06:21	06:50	07:18	06:49 08:05-08:32/27	07:24 07:55-08:52/57	07:45 08:12-09:01/49
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:12	17:28	17:03	17:09
30	07:35 08:20-09:16/56		07:14	06:29	06:01	06:01	06:22	06:51	07:19	06:50 08:02-08:34/32	07:25 07:56-08:52/56	07:45 08:12-09:02/50
	17:42		19:46	20:17	20:44	20:57	20:41	20:01	19:11	17:27	17:02	17:10
31	07:35 08:20-09:15/55		07:13		06:01		06:23	06:52		06:51 08:00-08:35/35		07:45 08:12-09:02/50
	17:43		19:47		20:45		20:40	19:59		17:26		17:10
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	1723	589	0	0	0	0	0	0	0	128	1617	1557

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (57)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11 07:44-07:48/4	06:28	06:01	06:01	06:24	06:53	07:21 07:40-07:54/14	06:53	07:26
	17:12	17:45	18:17	19:49	20:18	20:46	20:57	20:39	19:58	19:10	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:54	07:22 07:41-07:52/11	06:54	07:27
	17:13	17:46	18:18	19:50	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:23 07:42-07:50/8	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:07	06:24	05:59	06:03	06:27	06:56	07:23 07:43-07:47/4	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:21	17:02
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:29	06:57	07:25	06:58	07:31
	17:16	17:51	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:02	17:19	17:02
7	07:46	07:28	06:51	07:02	06:21	05:59	06:05	06:30	06:58	07:26	06:59	07:32
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:49	19:00	17:18	17:02
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46 07:05-07:11/6	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:02
11	07:46	07:24	06:45 07:03-07:13/10	06:56	06:16	05:58	06:07	06:33	07:02 07:38-07:39/1	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:15	17:02
12	07:45	07:22	06:43 07:02-07:15/13	06:54	06:15	05:58	06:08	06:34	07:03 07:32-07:44/12	07:31	07:05	07:36
	17:22	17:58	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:14	17:02
13	07:45	07:21	06:42 07:00-07:15/15	06:53	06:14	05:58	06:08	06:35	07:04 07:30-07:46/16	07:32	07:06	07:37
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40 06:58-07:16/18	06:51	06:13	05:58	06:09	06:36	07:05 07:28-07:47/19	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:38 06:57-07:17/20	06:50	06:12	05:58	06:10	06:37	07:06 07:26-07:47/21	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:23	19:36	18:48	17:11	17:02
16	07:44	07:18	06:37 06:55-07:16/21	06:48	06:11	05:58	06:11	06:38	07:07 07:26-07:48/22	07:35	07:10	07:39
	17:26	18:02	18:33	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35 06:54-07:17/23	06:47	06:11	05:58	06:11	06:39	07:07 07:27-07:51/24	07:36	07:11	07:39
	17:27	18:03	18:34	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:10	17:03
18	07:43	07:15	06:34 06:52-07:16/24	06:45	06:10	05:58	06:12	06:40	07:08 07:28-07:53/25	07:38	07:12	07:40
	17:28	18:04	18:35	20:05	20:35	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32 06:50-07:15/25	06:44	06:09	05:58	06:13	06:41	07:09 07:29-07:55/26	07:39	07:13	07:41
	17:30	18:06	18:36	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:31 06:49-07:15/26	06:42	06:08	05:58	06:14	06:42	07:10 07:30-07:57/27	07:40	07:14	07:41
	17:31	18:07	18:37	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07	17:04
21	07:42	07:11	06:29 06:47-07:14/27	06:41	06:07	05:58	06:15	06:43	07:11 07:31-07:58/27	07:41	07:15	07:42
	17:32	18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:05
22	07:41	07:10	06:27 06:46-07:13/27	06:40	06:06	05:58	06:15	06:43	07:12 07:32-07:59/27	07:42	07:16	07:42
	17:33	18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26 06:44-07:11/27	06:38	06:06	05:59	06:16	06:44	07:13 07:33-07:59/26	07:43	07:17	07:43
	17:34	18:10	18:40	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:06
24	07:40	07:07	06:24 06:42-07:09/27	06:37	06:05	05:59	06:17	06:45	07:14 07:34-07:59/25	07:44	07:18	07:43
	17:35	18:11	18:41	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06	06:23 06:41-07:06/25	06:36	06:04	05:59	06:18	06:46	07:15 07:34-07:58/24	06:45	07:20	07:44
	17:36	18:12	18:42	20:12	20:41	20:57	20:45	20:09	19:19	17:34	17:05	17:07
26	07:39	07:04	06:21 06:39-07:04/25	06:34	06:04	05:59	06:19	06:47	07:16 07:35-07:58/23	06:46	07:21	07:44
	17:38	18:13	18:43	20:13	20:41	20:57	20:45	20:07	19:18	17:32	17:04	17:07
27	07:38	07:03	06:19 06:38-07:01/23	06:33	06:03	06:00	06:20	06:48	07:17 07:36-07:58/22	06:47	07:22	07:44
	17:39	18:15	18:44	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18 06:37-06:58/21	06:32	06:03	06:00	06:20	06:49	07:18 07:37-07:57/20	06:48	07:23	07:45
	17:40	18:16	18:45	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:09
29	07:36		07:16 07:37-07:56/19	06:30	06:02	06:01	06:21	06:50	07:19 07:38-07:56/18	06:49	07:24	07:45
	17:41		19:46	20:16	20:44	20:57	20:42	20:03	19:13	17:29	17:03	17:09
30	07:36		07:15 07:39-07:55/16	06:29	06:02	06:01	06:22	06:51	07:20 07:39-07:55/16	06:50	07:25	07:45
	17:42		19:47	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13 07:40-07:52/12		06:01		06:23	06:52		06:52		07:46
	17:43		19:48		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	450	4	0	0	0	0	421	37	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (58)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:28	06:01	06:01	06:24	06:53	07:21	06:53	07:26
	17:12	17:45	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:54	07:22	06:54	07:27
	17:13	17:46	18:18	19:49	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:07	06:24	05:59	06:03	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:02
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:29	06:57	07:25	06:58	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:02	17:19	17:01
7	07:46	07:28	06:51	07:02	06:21	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:02
12	07:45	07:22	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:58	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:14	17:02
13	07:45	07:21	06:42	06:53	06:14	05:58	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	06:13	05:58	06:09	06:36	07:05	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:38	06:50	06:12	05:57	06:10	06:37	07:06	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:36	18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	06:11	05:58	06:11	06:38	07:07	07:35	07:10	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35	06:47	06:10	05:58	06:11	06:39	07:07	07:36	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:35	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:39	07:13	07:41
	17:29	18:06	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:31	06:42	06:08	05:58	06:14	06:42	07:10	07:40	07:14	07:41
	17:31	18:07	18:37	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:43	07:11	07:41	07:15	07:42
	17:32	18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:40	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:40	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:05
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:41	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:42	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:05	17:07
26	07:39	07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:21	07:44
	17:37	18:13	18:43	20:13	20:41	20:57	20:45	20:07	19:18	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	06:00	06:20	06:48	07:17	06:47	07:22	07:44
	17:39	18:15	18:44	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18	06:31	06:03	06:00	06:20	06:49	07:18	06:48	07:23	07:45
	17:40	18:16	18:45	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:03	19:13	17:29	17:03	17:09
30	07:36		07:15	06:29	06:01	06:01	06:22	06:51	07:20	06:50	07:25	07:45
	17:42		19:46	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:46
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (59)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:28	06:00	06:01	06:24	06:53	07:21	06:53	07:26
	17:12	17:45	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:54	07:22	06:54	07:27
	17:13	17:46	18:18	19:49	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:07	06:24	05:59	06:03	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:02
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:29	06:57	07:25	06:58	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:02	17:19	17:01
7	07:46	07:28	06:51	07:02	06:21	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:02
12	07:45	07:22	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:58	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:14	17:02
13	07:45	07:21	06:42	06:53	06:14	05:58	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57	06:09	06:36	07:05	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:38	06:50	06:12	05:57	06:10	06:37	07:06	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:36	18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	06:11	05:57	06:11	06:38	07:07	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35	06:47	06:10	05:58	06:11	06:39	07:07	07:36	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:39	07:13	07:41
	17:29	18:06	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:30	06:42	06:08	05:58	06:14	06:42	07:10	07:40	07:14	07:41
	17:31	18:07	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:41	07:15	07:42
	17:32	18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:40	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:40	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:05
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:41	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:42	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:05	17:07
26	07:39	07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:21	07:44
	17:37	18:13	18:43	20:13	20:41	20:57	20:45	20:07	19:18	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	06:00	06:20	06:48	07:17	06:47	07:22	07:44
	17:39	18:14	18:43	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18	06:31	06:02	06:00	06:20	06:49	07:18	06:48	07:23	07:45
	17:40	18:16	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:29	17:03	17:09
30	07:36		07:14	06:29	06:01	06:01	06:22	06:51	07:20	06:50	07:25	07:45
	17:42		19:46	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:46
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (60)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:28	06:00	06:01	06:24	06:53	07:21	06:53	07:26
	17:12	17:44	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:54	07:21	06:54	07:27
	17:12	17:46	18:18	19:49	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:55	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:07	06:24	05:59	06:03	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:28	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:02
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:29	06:57	07:25	06:58	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:02	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:02
12	07:45	07:22	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:14	17:02
13	07:45	07:21	06:42	06:53	06:14	05:57	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57	06:09	06:36	07:05	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:38	06:50	06:12	05:57	06:10	06:37	07:06	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	06:11	05:57	06:11	06:38	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35	06:47	06:10	05:58	06:11	06:39	07:07	07:36	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:38	07:13	07:41
	17:29	18:06	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:30	06:42	06:08	05:58	06:14	06:42	07:10	07:40	07:14	07:41
	17:31	18:07	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:41	07:15	07:42
	17:32	18:08	18:37	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:40	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:05
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:05	17:07
26	07:39	07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:21	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:45	20:07	19:18	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	06:00	06:20	06:48	07:17	06:47	07:22	07:44
	17:39	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18	06:31	06:02	06:00	06:20	06:49	07:18	06:48	07:23	07:45
	17:40	18:16	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:29	17:03	17:09
30	07:36		07:14	06:29	06:01	06:01	06:22	06:51	07:20	06:50	07:25	07:45
	17:42		19:46	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:46
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (61)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00 07:18-07:30/12	07:11	06:28	06:00	06:01	06:24	06:53	07:21 07:40-07:51/11	06:53	07:26
	17:12	17:45	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58 07:17-07:29/12	07:10	06:26	06:00	06:02	06:25	06:54	07:22 07:41-07:50/9	06:54	07:27
	17:13	17:46	18:18	19:49	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57 07:16-07:29/13	07:08	06:25	06:00	06:02	06:26	06:55	07:22 07:42-07:49/7	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55 07:16-07:27/11	07:07	06:24	05:59	06:03	06:27	06:55	07:23 07:43-07:48/5	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30	06:54 07:18-07:23/5	07:05	06:23	05:59	06:03	06:28	06:56	07:24 07:44-07:47/3	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:02
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:29	06:57	07:25	06:58	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:02	17:19	17:01
7	07:46	07:28	06:51	07:02	06:21	05:58	06:04	06:29	06:58	07:26	06:59	07:32
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49 07:08-07:09/1	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48 07:06-07:10/4	06:59	06:18	05:58	06:06	06:31	07:00	07:28 07:51-08:00/9	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46 07:05-07:11/6	06:57	06:17	05:58	06:06	06:32	07:01	07:29 07:49-08:02/13	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24	06:45 07:03-07:11/8	06:56	06:16	05:58	06:07	06:33	07:02	07:30 07:50-08:03/13	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:02
12	07:45	07:22	06:43 07:02-07:12/10	06:54	06:15	05:58	06:08	06:34	07:03	07:31 07:51-08:03/12	07:05	07:36
	17:22	17:58	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:14	17:02
13	07:45	07:21	06:42 07:00-07:11/11	06:53	06:14	05:58	06:08	06:35	07:04	07:32 07:52-08:03/11	07:06	07:37
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40 06:58-07:10/12	06:51	06:13	05:57	06:09	06:36	07:05	07:33 07:53-08:03/10	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19	06:38 06:57-07:10/13	06:50	06:12	05:57	06:10	06:37	07:06	07:34 07:54-08:03/9	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:23	19:36	18:48	17:11	17:02
16	07:44	07:18	06:37 06:55-07:08/13	06:48	06:11	05:57	06:11	06:38	07:07	07:35 07:55-08:02/7	07:10	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:03
17	07:44	07:16	06:35 06:56-07:07/11	06:47	06:10	05:58	06:11	06:39	07:07	07:36 07:56-08:01/5	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34 06:59-07:03/4	06:45	06:10	05:58	06:12	06:40	07:08	07:37 07:58-08:01/3	07:12	07:40
	17:28	18:04	18:34	20:05	20:35	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:39	07:13	07:41
	17:29	18:06	18:36	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:31	06:42	06:08	05:58	06:14	06:42	07:10	07:40	07:14	07:41
	17:31	18:07	18:37	20:07	20:36	20:56	20:49	20:16	19:27	18:41	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:43	07:11	07:41	07:15	07:42
	17:32	18:08	18:38	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:40	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:39	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08 07:27-07:28/1	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:40	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:05
24	07:40	07:07 07:26-07:29/3	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:41	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06 07:24-07:30/6	06:23	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:42	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:05	17:07
26	07:39	07:04 07:23-07:31/8	06:21	06:34	06:04	05:59	06:19	06:47	07:16 07:38-07:48/10	06:46	07:21	07:44
	17:37	18:13	18:43	20:13	20:41	20:57	20:45	20:07	19:18	17:32	17:04	17:07
27	07:38	07:03 07:21-07:30/9	06:19	06:33	06:03	06:00	06:20	06:48	07:17 07:36-07:49/13	06:47	07:22	07:44
	17:39	18:15	18:44	20:14	20:42	20:57	20:44	20:06	19:16	17:31	17:04	17:08
28	07:37	07:01 07:20-07:31/11	06:18	06:31	06:02	06:00	06:20	06:49	07:18 07:37-07:50/13	06:48	07:23	07:45
	17:40	18:16	18:45	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19 07:38-07:51/13	06:49	07:24	07:45
	17:41		19:46	20:16	20:44	20:57	20:42	20:03	19:13	17:29	17:03	17:09
30	07:36		07:15	06:29	06:01	06:01	06:22	06:51	07:20 07:39-07:51/12	06:50	07:25	07:45
	17:42		19:46	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:46
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	38	146	0	0	0	0	0	61	127	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (62)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00 17:34-17:55/21	07:11	06:28	06:00	06:01	06:24	06:53	07:20	06:53 07:14-07:26/12	07:26
	17:12	17:44	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58 17:35-17:57/22	07:10	06:26	06:00	06:02	06:25	06:54	07:21	06:54 07:15-07:26/11	07:27
	17:12	17:46	18:18	19:49	20:19	20:47	20:57	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57 17:34-17:56/22	07:08	06:25	06:00	06:02	06:26	06:54	07:22	06:55 07:16-07:25/9	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55 17:35-17:56/21	07:07	06:24	05:59	06:03	06:27	06:55	07:23	06:56 07:17-07:24/7	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:22	17:02
5	07:46	07:30 07:49-07:52/3	06:54 17:35-17:54/19	07:05	06:23	05:59	06:03	06:28	06:56	07:24	06:57 07:18-07:23/5	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:02
6	07:46	07:29 07:48-07:53/5	06:52 17:37-17:53/16	07:03	06:22	05:59	06:04	06:28	06:57	07:25 18:16-18:26/10	06:58 07:20-07:22/2	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:34	19:50	19:01	17:19	17:01
7	07:46	07:28 07:47-07:54/7	06:51 17:38-17:51/13	07:02	06:20	05:58	06:04	06:29	06:58	07:26 18:13-18:28/15	06:59	07:31
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27 07:46-07:55/9	06:49 17:42-17:48/6	07:00	06:19	05:58	06:05	06:30	06:59	07:27 18:12-18:29/17	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26 07:45-07:56/11	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28 18:10-18:30/20	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25 07:44-07:57/13	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29 18:09-18:30/21	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24 07:43-07:57/14	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30 18:08-18:30/22	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:01
12	07:45	07:22 07:41-07:56/15	06:43	06:54	06:15	05:58	06:08	06:34	07:03	07:31 18:08-18:30/22	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:02
13	07:45	07:21 07:40-07:56/16	06:42	06:53	06:14	05:57	06:08	06:35	07:04	07:32 18:08-18:28/20	07:06	07:36
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20 07:39-07:56/17	06:40	06:51	06:13	05:57	06:09	06:36	07:05	07:33 18:08-18:27/19	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:45	07:19 07:39-07:55/16	06:38	06:50	06:12	05:57	06:10	06:37	07:06	07:34 18:08-18:25/17	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:18 07:40-07:55/15	06:37	06:48	06:11	05:57	06:10	06:38	07:06	07:35 18:08-18:23/15	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16 07:41-07:52/11	06:35	06:47	06:10	05:57	06:11	06:39	07:07	07:36 18:09-18:22/13	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15 07:44-07:49/5	06:34	06:45	06:10	05:58	06:12	06:40	07:08	07:37 18:10-18:20/10	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:38 18:11-18:19/8	07:13	07:41
	17:29	18:06	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:04
20	07:42	07:12	06:30	06:42	06:08	05:58	06:14	06:42	07:10	07:40 18:16-18:18/2	07:14	07:41
	17:30	18:07	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:41	07:15	07:42
	17:32	18:08	18:37	20:08	20:37	20:56	20:49	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10 17:43-17:47/4	06:27	06:40	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08 17:40-17:49/9	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:06	17:05
24	07:40	07:07 17:39-17:50/11	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44 08:13-08:20/7	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:06 17:37-17:51/14	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45 07:10-07:22/12	07:19	07:44
	17:36	18:12	18:41	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:04	17:06
26	07:39	07:04 17:36-17:52/16	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46 07:09-07:24/15	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:45	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03 17:35-17:53/18	06:19	06:33	06:03	06:00	06:19	06:48	07:17	06:47 07:08-07:25/17	07:22	07:44
	17:39	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:04	17:08
28	07:37	07:01 17:35-17:55/20	06:18	06:31	06:02	06:00	06:20	06:49	07:18	06:48 07:09-07:26/17	07:23	07:45
	17:40	18:16	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49 07:10-07:26/16	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:29	17:03	17:09
30	07:36		07:14	06:29	06:01	06:01	06:22	06:51	07:20	06:50 07:11-07:26/15	07:25	07:45
	17:42		19:46	20:17	20:45	20:57	20:41	20:01	19:11	17:27	17:03	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51 07:12-07:26/14		07:46
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	249	140	0	0	0	0	0	0	344	46	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (63)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June
1	07:46 08:08-08:36/28	07:34 08:23-08:38/15	07:00	07:11	06:28	06:00
	17:12	17:44	18:17	19:48	20:18	20:46
2	07:46 08:08-08:37/29	07:33 08:26-08:35/9	06:58	07:10	06:26	06:00
	17:12	17:46	18:18	19:49	20:19	20:47
3	07:46 08:08-08:37/29	07:32	06:57	07:08	06:25	06:00
	17:13	17:47	18:19	19:50	20:20	20:47
4	07:46 08:08-08:38/30	07:31	06:55	07:07	06:24	05:59
	17:14	17:48	18:20	19:51	20:21	20:48
5	07:46 08:08-08:39/31	07:30	06:54	07:05 19:25-19:31/6	06:23	05:59
	17:15	17:49	18:21	19:52	20:22	20:49
6	07:46 08:08-08:40/32	07:29	06:52	07:03 19:23-19:32/9	06:22	05:59
	17:16	17:50	18:22	19:53	20:23	20:49
7	07:46 08:07-08:39/32	07:28	06:51	07:02 19:22-19:33/11	06:20	05:58
	17:17	17:52	18:23	19:54	20:24	20:50
8	07:46 08:07-08:40/33	07:27	06:49	07:00 19:20-19:34/14	06:19	05:58
	17:18	17:53	18:24	19:55	20:25	20:51
9	07:46 08:08-08:41/33	07:26	06:48	06:59 19:20-19:35/15	06:18	05:58
	17:19	17:54	18:25	19:56	20:26	20:51
10	07:46 08:08-08:42/34	07:25	06:46	06:57 19:18-19:36/18	06:17	05:58
	17:20	17:55	18:26	19:57	20:27	20:52
11	07:46 08:09-08:43/34	07:24	06:45	06:56 19:19-19:37/18	06:16	05:58
	17:21	17:56	18:27	19:58	20:28	20:52
12	07:45 08:08-08:42/34	07:22	06:43	06:54 19:18-19:38/20	06:15	05:58
	17:22	17:57	18:28	19:59	20:29	20:53
13	07:45 08:09-08:43/34	07:21	06:42	06:53 19:18-19:39/21	06:14	05:57
	17:23	17:59	18:29	20:00	20:30	20:53
14	07:45 08:09-08:44/35	07:20	06:40	06:51 19:18-19:38/20	06:13	05:57
	17:24	18:00	18:30	20:01	20:31	20:54
15	07:45 08:09-08:44/35	07:19	06:38 06:57-07:02/5	06:50 19:19-19:37/18	06:12	05:57
	17:25	18:01	18:31	20:02	20:32	20:54
16	07:44 08:10-08:45/35	07:18	06:37 06:55-07:03/8	06:48 19:19-19:35/16	06:11	05:57
	17:26	18:02	18:32	20:03	20:33	20:54
17	07:44 08:10-08:45/35	07:16	06:35 06:54-07:04/10	06:47 19:21-19:34/13	06:10	05:57
	17:27	18:03	18:33	20:04	20:34	20:55
18	07:43 08:10-08:45/35	07:15	06:34 06:52-07:05/13	06:45 19:23-19:31/8	06:10	05:58
	17:28	18:04	18:34	20:05	20:34	20:55
19	07:43 08:10-08:45/35	07:14	06:32 06:50-07:05/15	06:44	06:09	05:58
	17:29	18:06	18:35	20:06	20:35	20:55
20	07:42 08:11-08:46/35	07:12	06:30 06:49-07:05/16	06:42	06:08	05:58
	17:30	18:07	18:36	20:07	20:36	20:56
21	07:42 08:11-08:46/35	07:11	06:29 06:47-07:05/18	06:41	06:07	05:58
	17:32	18:08	18:37	20:08	20:37	20:56
22	07:41 08:12-08:45/33	07:10	06:27 06:45-07:04/19	06:40	06:06	05:58
	17:33	18:09	18:38	20:09	20:38	20:56
23	07:41 08:13-08:46/33	07:08	06:26 06:44-07:04/20	06:38	06:06	05:58
	17:34	18:10	18:39	20:10	20:39	20:56
24	07:40 08:13-08:45/32	07:07	06:24 06:43-07:02/19	06:37	06:05	05:59
	17:35	18:11	18:40	20:11	20:40	20:56
25	07:39 08:14-08:45/31	07:06	06:22 06:44-07:01/17	06:35	06:04	05:59
	17:36	18:12	18:41	20:12	20:41	20:57
26	07:39 08:15-08:45/30	07:04	06:21 06:45-06:59/14	06:34	06:04	05:59
	17:37	18:13	18:42	20:13	20:41	20:57
27	07:38 08:16-08:45/29	07:03	06:19 06:46-06:56/10	06:33	06:03	06:00
	17:39	18:14	18:43	20:14	20:42	20:57
28	07:37 08:17-08:44/27	07:01	06:18	06:31	06:02	06:00
	17:40	18:16	18:44	20:15	20:43	20:57
29	07:36 08:18-08:43/25		07:16	06:30	06:02	06:00
	17:41		19:45	20:16	20:44	20:57
30	07:36 08:19-08:42/23		07:14	06:29	06:01	06:01
	17:42		19:46	20:17	20:45	20:57
31	07:35 08:21-08:40/19		07:13		06:01	
	17:43		19:47		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	975	24	184	207	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (63)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01	06:24	06:53 19:17-19:36/19	07:21	06:53	07:26 07:51-08:25/34
	20:57	20:39	19:58	19:09	17:25	17:02
2	06:02	06:25	06:54 19:17-19:35/18	07:21	06:54	07:27 07:51-08:25/34
	20:57	20:38	19:56	19:08	17:24	17:02
3	06:02	06:26	06:54 19:18-19:33/15	07:22	06:55	07:28 07:52-08:25/33
	20:56	20:37	19:55	19:06	17:23	17:02
4	06:03	06:27	06:55 19:17-19:31/14	07:23	06:56	07:29 07:52-08:25/33
	20:56	20:36	19:53	19:05	17:22	17:02
5	06:03	06:28	06:56 19:18-19:29/11	07:24	06:57	07:30 07:53-08:25/32
	20:56	20:35	19:52	19:03	17:20	17:02
6	06:04	06:28	06:57 19:19-19:28/9	07:25	06:58	07:31 07:54-08:26/32
	20:56	20:34	19:50	19:01	17:19	17:01
7	06:04	06:29	06:58 19:20-19:27/7	07:26	06:59	07:31 07:54-08:25/31
	20:56	20:32	19:48	19:00	17:18	17:01
8	06:05	06:30	06:59 19:24-19:25/1	07:27	07:00	07:32 07:55-08:25/30
	20:55	20:31	19:47	18:58	17:17	17:01
9	06:06	06:31	07:00	07:28	07:02 07:57-08:06/9	07:33 07:56-08:25/29
	20:55	20:30	19:45	18:57	17:16	17:01
10	06:06	06:32	07:01	07:29	07:03 07:54-08:09/15	07:34 07:57-08:26/29
	20:55	20:29	19:44	18:55	17:15	17:01
11	06:07	06:33	07:02	07:30	07:04 07:53-08:12/19	07:35 07:58-08:26/28
	20:54	20:28	19:42	18:54	17:14	17:01
12	06:08	06:34	07:03	07:31	07:05 07:51-08:14/23	07:36 07:59-08:27/28
	20:54	20:26	19:40	18:52	17:13	17:02
13	06:08	06:35	07:04	07:32	07:06 07:50-08:15/25	07:36 07:59-08:26/27
	20:53	20:25	19:39	18:51	17:13	17:02
14	06:09	06:36	07:05	07:33	07:07 07:49-08:16/27	07:37 08:00-08:27/27
	20:53	20:24	19:37	18:49	17:12	17:02
15	06:10	06:37	07:06	07:34	07:08 07:48-08:17/29	07:38 08:01-08:27/26
	20:52	20:22	19:35	18:48	17:11	17:02
16	06:10	06:38	07:06 07:36-07:45/9	07:35	07:09 07:48-08:18/30	07:39 08:01-08:27/26
	20:52	20:21	19:34	18:46	17:10	17:02
17	06:11	06:39	07:07 07:34-07:47/13	07:36	07:11 07:48-08:19/31	07:39 08:02-08:27/25
	20:51	20:20	19:32	18:45	17:09	17:03
18	06:12	06:40	07:08 07:32-07:48/16	07:37	07:12 07:47-08:19/32	07:40 08:03-08:28/25
	20:51	20:18	19:31	18:43	17:09	17:03
19	06:13	06:41	07:09 07:30-07:49/19	07:38	07:13 07:47-08:20/33	07:41 08:03-08:28/25
	20:50	20:17	19:29	18:42	17:08	17:04
20	06:14	06:41	07:10 07:30-07:50/20	07:40	07:14 07:47-08:20/33	07:41 08:04-08:29/25
	20:49	20:16	19:27	18:40	17:07	17:04
21	06:14	06:42	07:11 07:31-07:50/19	07:41	07:15 07:47-08:22/35	07:42 08:04-08:29/25
	20:49	20:14	19:26	18:39	17:07	17:04
22	06:15	06:43	07:12 07:32-07:50/18	07:42	07:16 07:47-08:22/35	07:42 08:05-08:30/25
	20:48	20:13	19:24	18:38	17:06	17:05
23	06:16	06:44	07:13 07:33-07:50/17	07:43	07:17 07:47-08:22/35	07:43 08:05-08:30/25
	20:47	20:11	19:22	18:36	17:05	17:05
24	06:17	06:45	07:14 07:33-07:48/15	07:44	07:18 07:47-08:22/35	07:43 08:06-08:31/25
	20:46	20:10	19:21	18:35	17:05	17:06
25	06:18	06:46 19:26-19:35/9	07:15 07:34-07:47/13	06:45	07:19 07:48-08:23/35	07:44 08:06-08:31/25
	20:45	20:08	19:19	17:34	17:04	17:06
26	06:19	06:47 19:24-19:37/13	07:16 07:35-07:46/11	06:46	07:21 07:48-08:23/35	07:44 08:06-08:31/25
	20:45	20:07	19:18	17:32	17:04	17:07
27	06:19	06:48 19:21-19:38/17	07:17 07:36-07:45/9	06:47	07:22 07:48-08:23/35	07:44 08:07-08:33/26
	20:44	20:05	19:16	17:31	17:04	17:08
28	06:20	06:49 19:20-19:38/18	07:18 07:37-07:43/6	06:48	07:23 07:48-08:23/35	07:45 08:07-08:33/26
	20:43	20:04	19:14	17:30	17:03	17:08
29	06:21	06:50 19:19-19:39/20	07:19 07:38-07:40/2	06:49	07:24 07:50-08:24/34	07:45 08:07-08:33/26
	20:42	20:02	19:13	17:29	17:03	17:09
30	06:22	06:51 19:18-19:39/21	07:20	06:50	07:25 07:50-08:24/34	07:45 08:07-08:34/27
	20:41	20:01	19:11	17:27	17:03	17:10
31	06:23	06:52 19:18-19:38/20		06:51		07:46 08:07-08:34/27
	20:40	19:59		17:26		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	0	118	281	0	654	861

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (64)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January		February	March		April	May	June
1	07:46		07:34	07:00		07:11	06:28	06:00
	17:12		17:44	18:17		19:48	20:18	20:46
2	07:46	08:08-08:09/1	07:33	06:58		07:10	06:26	06:00
	17:12		17:46	18:18		19:49	20:19	20:47
3	07:46	08:08-08:10/2	07:32	06:57		07:08	06:25	06:00
	17:13		17:47	18:19		19:50	20:20	20:47
4	07:46	08:08-08:11/3	07:31	06:55		07:06	06:24	05:59
	17:14		17:48	18:20		19:51	20:21	20:48
5	07:46	08:08-08:12/4	07:30	06:54		07:05	06:23	05:59
	17:15		17:49	18:21		19:52	20:22	20:49
6	07:46	08:08-08:13/5	07:29	06:52		07:03	06:22	05:59
	17:16		17:50	18:22		19:53	20:23	20:49
7	07:46	08:07-08:13/6	07:28	06:51		07:02	06:20	05:58
	17:17		17:52	18:23		19:54	20:24	20:50
8	07:46	08:07-08:14/7	07:27	06:49	07:08-07:12/4	07:00	06:19	05:58
	17:18		17:53	18:24		19:55	20:25	20:51
9	07:46	08:07-08:15/8	07:26	06:48	07:06-07:13/7	06:59	06:18	05:58
	17:19		17:54	18:25		19:56	20:26	20:51
10	07:46	08:07-08:16/9	07:25	06:46	07:05-07:14/9	06:57	06:17	05:58
	17:20		17:55	18:26		19:57	20:27	20:52
11	07:46	08:07-08:17/10	07:24	06:45	07:03-07:14/11	06:56	06:16	05:58
	17:21		17:56	18:27		19:58	20:28	20:52
12	07:45	08:06-08:17/11	07:22	06:43	07:01-07:14/13	06:54	06:15	05:57
	17:22		17:57	18:28		19:59	20:29	20:53
13	07:45	08:06-08:18/12	07:21	06:42	07:00-07:14/14	06:53	06:14	05:57
	17:23		17:59	18:29		20:00	20:30	20:53
14	07:45	08:06-08:18/12	07:20	06:40	06:58-07:13/15	06:51	06:13	05:57
	17:24		18:00	18:30		20:01	20:31	20:54
15	07:44	08:05-08:18/13	07:19	06:38	06:57-07:13/16	06:50	06:12	05:57
	17:25		18:01	18:31		20:02	20:32	20:54
16	07:44	08:05-08:19/14	07:18	06:37	06:56-07:11/15	06:48	06:11	05:57
	17:26		18:02	18:32		20:03	20:33	20:54
17	07:44	08:04-08:19/15	07:16	06:35	06:56-07:09/13	06:47	06:10	05:57
	17:27		18:03	18:33		20:04	20:34	20:55
18	07:43	08:04-08:19/15	07:15	06:34	06:59-07:07/8	06:45	06:09	05:58
	17:28		18:04	18:34		20:05	20:34	20:55
19	07:43	08:03-08:19/16	07:14	06:32		06:44	06:09	05:58
	17:29		18:05	18:35		20:06	20:35	20:55
20	07:42	08:03-08:20/17	07:12	06:30		06:42	06:08	05:58
	17:30		18:07	18:36		20:07	20:36	20:56
21	07:42	08:03-08:19/16	07:11	06:29		06:41	06:07	05:58
	17:32		18:08	18:37		20:08	20:37	20:56
22	07:41	08:03-08:18/15	07:10	06:27		06:39	06:06	05:58
	17:33		18:09	18:38		20:09	20:38	20:56
23	07:41	08:05-08:18/13	07:08	06:26		06:38	06:06	05:58
	17:34		18:10	18:39		20:10	20:39	20:56
24	07:40	08:07-08:17/10	07:07	06:24		06:37	06:05	05:59
	17:35		18:11	18:40		20:11	20:40	20:56
25	07:39	08:09-08:15/6	07:05	06:22		06:35	06:04	05:59
	17:36		18:12	18:41		20:12	20:41	20:57
26	07:39		07:04	06:21		06:34	06:04	05:59
	17:37		18:13	18:42		20:13	20:41	20:57
27	07:38		07:03	06:19		06:33	06:03	06:00
	17:39		18:14	18:43		20:14	20:42	20:57
28	07:37		07:01	06:18		06:31	06:02	06:00
	17:40		18:15	18:44		20:15	20:43	20:57
29	07:36			07:16		06:30	06:02	06:00
	17:41			19:45		20:16	20:44	20:57
30	07:36			07:14		06:29	06:01	06:01
	17:42			19:46		20:17	20:44	20:57
31	07:35			07:13			06:01	
	17:43			19:47			20:45	
Potential sun hours	302		299	370		397	444	447
Sum of minutes with flicker		240	0		125	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (64)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01	06:24	06:53	07:20 07:40-07:53/13	06:53	07:26 07:49-07:59/10
	20:57	20:39	19:58	19:09	17:25	17:02
2	06:02	06:25	06:54	07:21 07:41-07:53/12	06:54	07:27 07:50-07:59/9
	20:57	20:38	19:56	19:08	17:24	17:02
3	06:02	06:26	06:54	07:22 07:42-07:52/10	06:55	07:28 07:51-07:59/8
	20:56	20:37	19:55	19:06	17:23	17:02
4	06:03	06:27	06:55	07:23 07:43-07:51/8	06:56	07:29 07:52-07:59/7
	20:56	20:36	19:53	19:05	17:21	17:02
5	06:03	06:28	06:56	07:24 07:44-07:50/6	06:57	07:30 07:53-07:59/6
	20:56	20:35	19:52	19:03	17:20	17:01
6	06:04	06:28	06:57	07:25 07:45-07:47/2	06:58	07:31 07:54-07:59/5
	20:56	20:34	19:50	19:01	17:19	17:01
7	06:04	06:29	06:58	07:26	06:59	07:31 07:54-07:58/4
	20:56	20:32	19:48	19:00	17:18	17:01
8	06:05	06:30	06:59	07:27	07:00	07:32 07:55-07:58/3
	20:55	20:31	19:47	18:58	17:17	17:01
9	06:06	06:31	07:00	07:28	07:02	07:33 07:56-07:58/2
	20:55	20:30	19:45	18:57	17:16	17:01
10	06:06	06:32	07:01	07:29	07:03	07:34 07:57-07:58/1
	20:55	20:29	19:44	18:55	17:15	17:01
11	06:07	06:33	07:02	07:30	07:04	07:35
	20:54	20:28	19:42	18:54	17:14	17:01
12	06:08	06:34	07:03	07:31	07:05	07:36
	20:54	20:26	19:40	18:52	17:13	17:02
13	06:08	06:35	07:04	07:32	07:06	07:36
	20:53	20:25	19:39	18:51	17:13	17:02
14	06:09	06:36	07:05	07:33	07:07	07:37
	20:53	20:24	19:37	18:49	17:12	17:02
15	06:10	06:37	07:05	07:34	07:08	07:38
	20:52	20:22	19:35	18:48	17:11	17:02
16	06:10	06:38	07:06	07:35	07:09	07:39
	20:52	20:21	19:34	18:46	17:10	17:02
17	06:11	06:39	07:07	07:36	07:11 07:42-07:49/7	07:39
	20:51	20:20	19:32	18:45	17:09	17:03
18	06:12	06:40	07:08	07:37	07:12 07:40-07:51/11	07:40
	20:51	20:18	19:31	18:43	17:09	17:03
19	06:13	06:41	07:09	07:38	07:13 07:39-07:52/13	07:41
	20:50	20:17	19:29	18:42	17:08	17:03
20	06:14	06:41	07:10	07:39	07:14 07:38-07:53/15	07:41
	20:49	20:16	19:27	18:40	17:07	17:04
21	06:14	06:42	07:11	07:41	07:15 07:39-07:55/16	07:42
	20:48	20:14	19:26	18:39	17:07	17:04
22	06:15	06:43	07:12	07:42	07:16 07:39-07:56/17	07:42
	20:48	20:13	19:24	18:38	17:06	17:05
23	06:16	06:44	07:13	07:43	07:17 07:40-07:56/16	07:43
	20:47	20:11	19:22	18:36	17:05	17:05
24	06:17	06:45	07:14	07:44	07:18 07:41-07:56/15	07:43
	20:46	20:10	19:21	18:35	17:05	17:06
25	06:18	06:46	07:15 07:43-07:49/6	06:45	07:19 07:42-07:57/15	07:44
	20:45	20:08	19:19	17:34	17:04	17:06
26	06:19	06:47	07:16 07:39-07:51/12	06:46	07:20 07:43-07:57/14	07:44
	20:45	20:07	19:17	17:32	17:04	17:07
27	06:19	06:48	07:17 07:38-07:52/14	06:47	07:22 07:44-07:57/13	07:44
	20:44	20:05	19:16	17:31	17:04	17:08
28	06:20	06:49	07:18 07:37-07:53/16	06:48	07:23 07:45-07:58/13	07:45
	20:43	20:04	19:14	17:30	17:03	17:08
29	06:21	06:50	07:19 07:38-07:54/16	06:49	07:24 07:47-07:59/12	07:45
	20:42	20:02	19:13	17:29	17:03	17:09
30	06:22	06:51	07:20 07:39-07:54/15	06:50	07:25 07:48-07:59/11	07:45
	20:41	20:01	19:11	17:27	17:02	17:10
31	06:23	06:52		06:51		07:46
	20:40	19:59		17:26		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	0	0	79	51	188	55

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (65)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	January	February	March	April	May	June	July	August	September	October	November	December
1	07:46	07:34	07:00	07:11	06:28	06:00	06:01	06:24	06:53	07:20	06:53	07:26
	17:12	17:44	18:17	19:48	20:18	20:46	20:57	20:39	19:58	19:09	17:25	17:02
2	07:46	07:33	06:58	07:10	06:26	06:00	06:02	06:25	06:54	07:21	06:54	07:27
	17:12	17:46	18:18	19:49	20:19	20:47	20:56	20:38	19:56	19:08	17:24	17:02
3	07:46	07:32	06:57	07:08	06:25	06:00	06:02	06:26	06:54	07:22	06:55	07:28
	17:13	17:47	18:19	19:50	20:20	20:47	20:56	20:37	19:55	19:06	17:23	17:02
4	07:46	07:31	06:55	07:06	06:24	05:59	06:03	06:27	06:55	07:23	06:56	07:29
	17:14	17:48	18:20	19:51	20:21	20:48	20:56	20:36	19:53	19:05	17:21	17:02
5	07:46	07:30	06:54	07:05	06:23	05:59	06:03	06:27	06:56	07:24	06:57	07:30
	17:15	17:49	18:21	19:52	20:22	20:49	20:56	20:35	19:52	19:03	17:20	17:01
6	07:46	07:29	06:52	07:03	06:22	05:59	06:04	06:28	06:57	07:25	06:58	07:31
	17:16	17:50	18:22	19:53	20:23	20:49	20:56	20:33	19:50	19:01	17:19	17:01
7	07:46	07:28	06:51	07:02	06:20	05:58	06:04	06:29	06:58	07:26	06:59	07:31
	17:17	17:52	18:23	19:54	20:24	20:50	20:56	20:32	19:48	19:00	17:18	17:01
8	07:46	07:27	06:49	07:00	06:19	05:58	06:05	06:30	06:59	07:27	07:00	07:32
	17:18	17:53	18:24	19:55	20:25	20:51	20:55	20:31	19:47	18:58	17:17	17:01
9	07:46	07:26	06:48	06:59	06:18	05:58	06:06	06:31	07:00	07:28	07:02	07:33
	17:19	17:54	18:25	19:56	20:26	20:51	20:55	20:30	19:45	18:57	17:16	17:01
10	07:46	07:25	06:46	06:57	06:17	05:58	06:06	06:32	07:01	07:29	07:03	07:34
	17:20	17:55	18:26	19:57	20:27	20:52	20:55	20:29	19:44	18:55	17:15	17:01
11	07:46	07:24	06:45	06:56	06:16	05:58	06:07	06:33	07:02	07:30	07:04	07:35
	17:21	17:56	18:27	19:58	20:28	20:52	20:54	20:28	19:42	18:54	17:14	17:01
12	07:45	07:22	06:43	06:54	06:15	05:57	06:08	06:34	07:03	07:31	07:05	07:36
	17:22	17:57	18:28	19:59	20:29	20:53	20:54	20:26	19:40	18:52	17:13	17:02
13	07:45	07:21	06:41	06:53	06:14	05:57	06:08	06:35	07:04	07:32	07:06	07:36
	17:23	17:59	18:29	20:00	20:30	20:53	20:53	20:25	19:39	18:51	17:13	17:02
14	07:45	07:20	06:40	06:51	06:13	05:57	06:09	06:36	07:05	07:33	07:07	07:37
	17:24	18:00	18:30	20:01	20:31	20:54	20:53	20:24	19:37	18:49	17:12	17:02
15	07:44	07:19	06:38	06:50	06:12	05:57	06:10	06:37	07:05	07:34	07:08	07:38
	17:25	18:01	18:31	20:02	20:32	20:54	20:52	20:22	19:35	18:48	17:11	17:02
16	07:44	07:18	06:37	06:48	06:11	05:57	06:10	06:38	07:06	07:35	07:09	07:39
	17:26	18:02	18:32	20:03	20:33	20:54	20:52	20:21	19:34	18:46	17:10	17:02
17	07:44	07:16	06:35	06:47	06:10	05:57	06:11	06:39	07:07	07:36	07:11	07:39
	17:27	18:03	18:33	20:04	20:34	20:55	20:51	20:20	19:32	18:45	17:09	17:03
18	07:43	07:15	06:34	06:45	06:09	05:57	06:12	06:40	07:08	07:37	07:12	07:40
	17:28	18:04	18:34	20:05	20:34	20:55	20:51	20:18	19:31	18:43	17:09	17:03
19	07:43	07:14	06:32	06:44	06:09	05:58	06:13	06:41	07:09	07:38	07:13	07:41
	17:29	18:05	18:35	20:06	20:35	20:55	20:50	20:17	19:29	18:42	17:08	17:03
20	07:42	07:12	06:30	06:42	06:08	05:58	06:14	06:41	07:10	07:39	07:14	07:41
	17:30	18:07	18:36	20:07	20:36	20:56	20:49	20:16	19:27	18:40	17:07	17:04
21	07:42	07:11	06:29	06:41	06:07	05:58	06:14	06:42	07:11	07:41	07:15	07:42
	17:32	18:08	18:37	20:08	20:37	20:56	20:48	20:14	19:26	18:39	17:07	17:04
22	07:41	07:10	06:27	06:39	06:06	05:58	06:15	06:43	07:12	07:42	07:16	07:42
	17:33	18:09	18:38	20:09	20:38	20:56	20:48	20:13	19:24	18:38	17:06	17:05
23	07:41	07:08	06:26	06:38	06:06	05:58	06:16	06:44	07:13	07:43	07:17	07:43
	17:34	18:10	18:39	20:10	20:39	20:56	20:47	20:11	19:22	18:36	17:05	17:05
24	07:40	07:07	06:24	06:37	06:05	05:59	06:17	06:45	07:14	07:44	07:18	07:43
	17:35	18:11	18:40	20:11	20:40	20:56	20:46	20:10	19:21	18:35	17:05	17:06
25	07:39	07:05	06:22	06:35	06:04	05:59	06:18	06:46	07:15	06:45	07:19	07:44
	17:36	18:12	18:41	20:12	20:41	20:57	20:45	20:08	19:19	17:34	17:04	17:06
26	07:39	07:04	06:21	06:34	06:04	05:59	06:19	06:47	07:16	06:46	07:20	07:44
	17:37	18:13	18:42	20:13	20:41	20:57	20:45	20:07	19:17	17:32	17:04	17:07
27	07:38	07:03	06:19	06:33	06:03	06:00	06:19	06:48	07:17	06:47	07:22	07:44
	17:38	18:14	18:43	20:14	20:42	20:57	20:44	20:05	19:16	17:31	17:04	17:08
28	07:37	07:01	06:18	06:31	06:02	06:00	06:20	06:49	07:18	06:48	07:23	07:45
	17:40	18:15	18:44	20:15	20:43	20:57	20:43	20:04	19:14	17:30	17:03	17:08
29	07:36		07:16	06:30	06:02	06:00	06:21	06:50	07:19	06:49	07:24	07:45
	17:41		19:45	20:16	20:44	20:57	20:42	20:02	19:13	17:29	17:03	17:09
30	07:35		07:14	06:29	06:01	06:01	06:22	06:51	07:19	06:50	07:25	07:45
	17:42		19:46	20:17	20:44	20:57	20:41	20:01	19:11	17:27	17:02	17:10
31	07:35		07:13		06:01		06:23	06:52		06:51		07:45
	17:43		19:47		20:45		20:40	19:59		17:26		17:11
Potential sun hours	302	299	370	397	444	447	454	425	374	347	301	293
Sum of minutes with flicker	0	0	0	0	0	0	0	0	0	0	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (66)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:
- The sun is shining all the day, from sunrise to sunset
- The rotor plane is always perpendicular to the line from the WTG to the sun
- The WTG is always operating

	January	February	March	April	May	June
1	07:46	07:34 07:53-08:00/7	07:00	07:11 07:38-08:08/30	06:28	06:00
	17:12	17:44	18:17	19:48	20:18	20:46
2	07:46	07:33 07:52-08:01/9	06:58	07:10 07:38-08:08/30	06:26	06:00
	17:12	17:46	18:18	19:49	20:19	20:47
3	07:46	07:32 07:51-08:01/10	06:57	07:08 07:39-08:06/27	06:25	06:00
	17:13	17:47	18:19	19:50	20:20	20:47
4	07:46	07:31 07:50-08:02/12	06:55	07:06 07:40-08:06/26	06:24	05:59
	17:14	17:48	18:20	19:51	20:21	20:48
5	07:46	07:30 07:49-08:02/13	06:54	07:05 07:41-08:03/22	06:23	05:59
	17:15	17:49 17:24-17:26/2	18:21	19:52	20:22	20:49
6	07:46	07:29 07:48-08:02/14	06:52	07:03 07:42-08:01/19	06:22	05:59
	17:16	17:50 17:22-17:27/5	18:22	19:53	20:23	20:49
7	07:46	07:28 07:47-08:02/15	06:51	07:02 07:44-07:59/15	06:20	05:58
	17:17	17:52 17:21-17:29/8	18:23	19:54	20:24	20:50
8	07:46	07:27 07:46-08:01/15	06:49	07:00 07:48-07:53/5	06:19	05:58
	17:18	17:53 17:20-17:30/10	18:24	19:55	20:25	20:51
9	07:46	07:26 07:47-08:00/13	06:48	06:59	06:18	05:58
	17:19	17:54 17:19-17:31/12	18:25	19:56	20:26	20:51
10	07:46	07:25 07:48-07:59/11	06:46	06:57	06:17	05:58
	17:20	17:55 17:19-17:33/14	18:26	19:57	20:27	20:52
11	07:46	07:24 07:51-07:57/6	06:45	06:56	06:16	05:58
	17:21	17:56 17:19-17:34/15	18:27	19:58	20:28	20:52
12	07:45	07:22 17:18-17:35/17	06:43 18:02-18:07/5	06:54	06:15	05:57
	17:22	17:57	18:28	19:59	20:29	20:53
13	07:45	07:21 17:18-17:36/18	06:42 18:00-18:09/9	06:53	06:14	05:57
	17:23	17:59	18:29	20:00	20:30	20:53
14	07:45	07:20 17:19-17:38/19	06:40 17:58-18:09/11	06:51	06:13	05:57
	17:24	18:00	18:30	20:01	20:31	20:54
15	07:45	07:19 17:19-17:39/20	06:38 17:58-18:11/13	06:50	06:12	05:57
	17:25	18:01	18:31	20:02	20:32	20:54
16	07:44	07:18 17:19-17:38/19	06:37 17:56-18:12/16	06:48	06:11	05:57
	17:26	18:02	18:32	20:03	20:33	20:54
17	07:44	07:16 17:20-17:37/17	06:35 17:55-18:12/17	06:47	06:10	05:57
	17:27	18:03	18:33	20:04	20:34	20:55
18	07:43	07:15 17:22-17:36/14	06:34 06:57-06:59/2	06:45	06:09	05:58
	17:28	18:04	18:34 17:55-18:14/19	20:05	20:34	20:55
19	07:43	07:14 17:23-17:33/10	06:32 06:50-07:04/14	06:44	06:09	05:58
	17:29	18:05	18:35 17:55-18:15/20	20:06	20:35	20:55
20	07:42	07:12	06:30 06:49-07:07/18	06:42	06:08	05:58
	17:30	18:07	18:36 17:56-18:16/20	20:07	20:36	20:56
21	07:42	07:11	06:29 06:47-07:08/21	06:41	06:07	05:58
	17:32	18:08	18:37 17:56-18:15/19	20:08	20:37	20:56
22	07:41	07:10	06:27 06:45-07:09/24	06:39	06:06	05:58
	17:33	18:09	18:38 17:56-18:13/17	20:09	20:38	20:56
23	07:41	07:08	06:26 06:44-07:11/27	06:38	06:06	05:58
	17:34	18:10	18:39 17:58-18:12/14	20:10	20:39	20:56
24	07:40	07:07	06:24 06:42-07:11/29	06:37	06:05	05:59
	17:35	18:11	18:40 17:59-18:09/10	20:11	20:40	20:56
25	07:39	07:06	06:22 06:41-07:12/31	06:35	06:04	05:59
	17:36	18:12	18:41	20:12	20:41	20:57
26	07:39	07:04	06:21 06:39-07:11/32	06:34	06:04	05:59
	17:37	18:13	18:42	20:13	20:41	20:57
27	07:38	07:03	06:19 06:38-07:11/33	06:33	06:03	06:00
	17:39	18:14	18:43	20:14	20:42	20:57
28	07:37	07:01	06:18 06:38-07:11/33	06:31	06:02	06:00
	17:40	18:16	18:44	20:15	20:43	20:57
29	07:36		07:16 07:38-08:11/33	06:30	06:02	06:00
	17:41		19:45	20:16	20:44	20:57
30	07:36 07:55-07:58/3		07:14 07:38-08:11/33	06:29	06:01	06:01
	17:42		19:46	20:17	20:45	20:57
31	07:35 07:54-07:59/5		07:13 07:38-08:10/32		06:01	
	17:43		19:47		20:45	
Potential sun hours	302	299	370	397	444	447
Sum of minutes with flicker	8	325	552	174	0	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

SHADOW - Calendar per WTG

Calculation: Cumulativo_20240129WTG: Medio Campidano - VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 150,0 m) (66)

Assumptions for shadow calculations

The calculated times are "worst case" given by the following assumptions:

The sun is shining all the day, from sunrise to sunset
The rotor plane is always perpendicular to the line from the WTG to the sun
The WTG is always operating

	July	August	September	October	November	December
1	06:01	06:24	06:53	07:20 18:41-18:47/6	06:53 07:18-07:29/11	07:26
	20:57	20:39	19:58	19:09	17:25 16:48-17:01/13	17:02
2	06:02	06:25	06:54	07:21 18:43-18:46/3	06:54 07:16-07:30/14	07:27
	20:57	20:38	19:56	19:08	17:24 16:49-17:01/12	17:02
3	06:02	06:26	06:54	07:22	06:55 07:16-07:31/15	07:28
	20:56	20:37	19:55	19:06	17:23 16:50-17:00/10	17:02
4	06:03	06:27	06:55 07:46-07:51/5	07:23	06:56 07:17-07:31/14	07:29
	20:56	20:36	19:53	19:05	17:21 16:51-16:58/7	17:02
5	06:03	06:28	06:56 07:40-07:55/15	07:24	06:57 07:18-07:32/14	07:30
	20:56	20:35	19:52	19:03	17:20 16:52-16:57/5	17:01
6	06:04	06:28	06:57 07:38-07:57/19	07:25	06:58 07:20-07:33/13	07:31
	20:56	20:34	19:50	19:01	17:19 16:54-16:56/2	17:01
7	06:04	06:29	06:58 07:36-07:58/22	07:26	06:59 07:21-07:32/11	07:31
	20:56	20:32	19:48	19:00	17:18	17:01
8	06:05	06:30	06:59 07:34-08:00/26	07:27	07:00 07:22-07:32/10	07:32
	20:55	20:31	19:47	18:58	17:17	17:01
9	06:06	06:31	07:00 07:33-08:00/27	07:28	07:02 07:23-07:32/9	07:33
	20:55	20:30	19:45	18:57	17:16	17:01
10	06:06	06:32	07:01 07:32-08:01/29	07:29	07:03 07:24-07:31/7	07:34
	20:55	20:29	19:44	18:55	17:15	17:01
11	06:07	06:33	07:02 07:31-08:01/30	07:30	07:04 07:26-07:31/5	07:35
	20:54	20:28	19:42	18:54	17:14	17:01
12	06:08	06:34	07:03 07:30-08:02/32	07:31	07:05 07:27-07:30/3	07:36
	20:54	20:26	19:40	18:52	17:13	17:02
13	06:08	06:35	07:04 07:29-08:02/33	07:32	07:06	07:36
	20:53	20:25	19:39	18:51	17:13	17:02
14	06:09	06:36	07:05 07:28-08:01/33	07:33	07:07	07:37
	20:53	20:24	19:37	18:49	17:12	17:02
15	06:10	06:37	07:06 07:28-08:01/33	07:34	07:08	07:38
	20:52	20:22	19:35	18:48	17:11	17:02
16	06:10	06:38	07:06 07:28-08:00/32	07:35	07:09	07:39
	20:52	20:21	19:34	18:46	17:10	17:02
17	06:11	06:39	07:07 07:28-08:00/32	07:36	07:11	07:39
	20:51	20:20	19:32	18:45	17:09	17:03
18	06:12	06:40	07:08 07:28-07:59/31	07:37	07:12	07:40
	20:51	20:18	19:31	18:43	17:09	17:03
19	06:13	06:41	07:09 07:29-07:58/29	07:38	07:13	07:41
	20:50	20:17	19:29 18:47-18:56/9	18:42	17:08	17:03
20	06:14	06:41	07:10 07:30-07:57/27	07:40	07:14	07:41
	20:49	20:16	19:27 18:44-18:58/14	18:40	17:07	17:04
21	06:14	06:42	07:11 07:31-07:56/25	07:41	07:15	07:42
	20:49	20:14	19:26 18:43-18:59/16	18:39	17:07	17:04
22	06:15	06:43	07:12 07:32-07:54/22	07:42 17:57-18:02/5	07:16	07:42
	20:48	20:13	19:24 18:41-19:00/19	18:38	17:06	17:05
23	06:16	06:44	07:13 07:33-07:52/19	07:43 17:53-18:05/12	07:17	07:43
	20:47	20:11	19:22 18:39-18:59/20	18:36	17:05	17:05
24	06:17	06:45	07:14 07:33-07:49/16	07:44 17:51-18:06/15	07:18	07:43
	20:46	20:10	19:21 18:38-18:58/20	18:35	17:05	17:06
25	06:18	06:46	07:15 07:36-07:45/9	06:45 16:50-17:07/17	07:19	07:44
	20:45	20:08	19:19 18:38-18:57/19	17:34	17:04	17:06
26	06:19	06:47	07:16 18:38-18:55/17	06:46 16:49-17:08/19	07:21	07:44
	20:45	20:07	19:17	17:32	17:04	17:07
27	06:19	06:48	07:17 18:38-18:54/16	06:47 16:49-17:09/20	07:22	07:44
	20:44	20:05	19:16	17:31	17:04	17:08
28	06:20	06:49	07:18 18:38-18:52/14	06:48 16:48-17:07/19	07:23	07:45
	20:43	20:04	19:14	17:30	17:03	17:08
29	06:21	06:50	07:19 18:38-18:50/12	06:49 16:48-17:06/18	07:24	07:45
	20:42	20:02	19:13	17:29	17:03	17:09
30	06:22	06:51	07:20 18:39-18:49/10	06:50 16:48-17:04/16	07:25	07:45
	20:41	20:01	19:11	17:27	17:03	17:10
31	06:23	06:52		06:51 07:19-07:27/8		07:46
	20:40	19:59		17:26 16:48-17:03/15		17:11
Potential sun hours	454	425	374	347	301	293
Sum of minutes with flicker	0	0	732	173	175	0

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

Day in month	Sun rise (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker
	Sun set (hh:mm)	First time (hh:mm) with flicker-Last time (hh:mm) with flicker/Minutes with flicker

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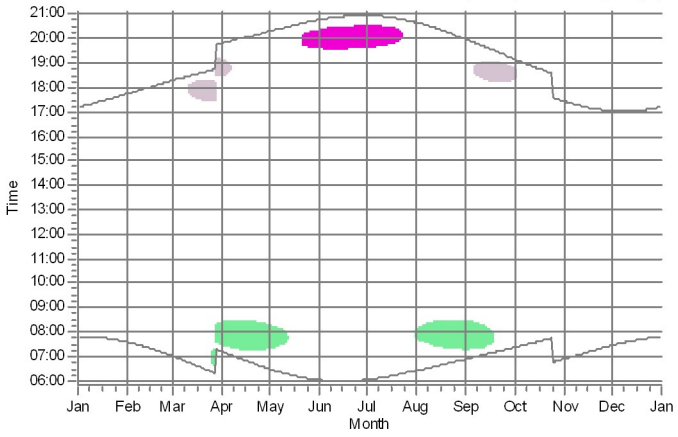
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
Calculated:
07/05/2024 15:42/3.4.415

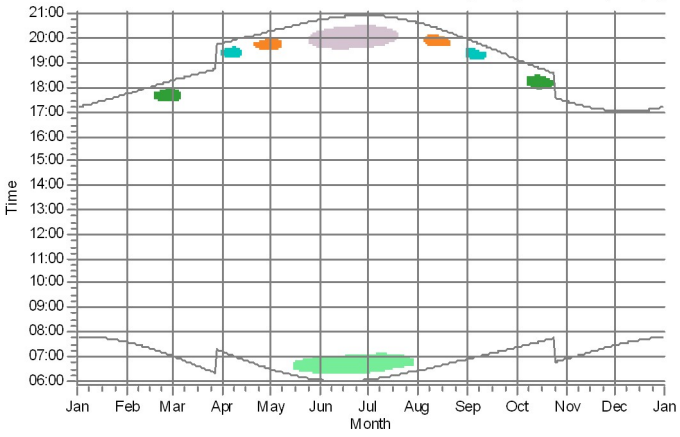
SHADOW - Calendar per WTG, graphical

Calculation: Cumulativo_20240129

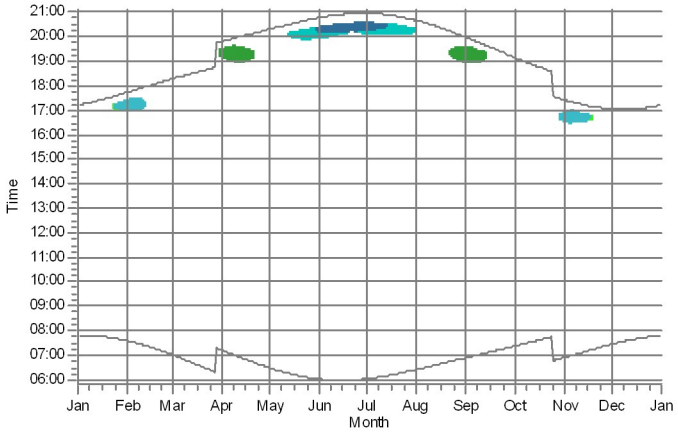
AG01: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (11



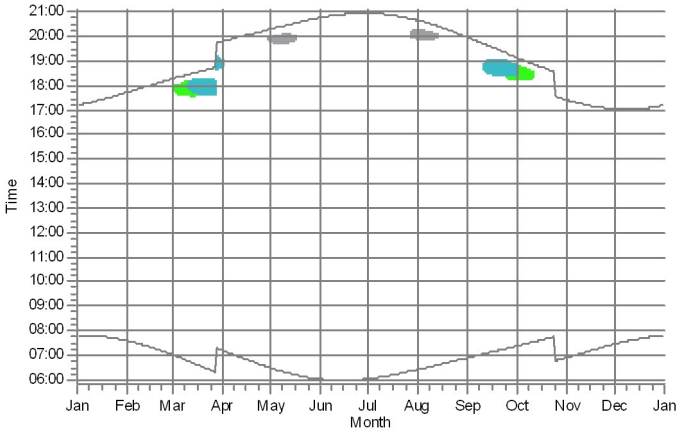
AG02: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (12



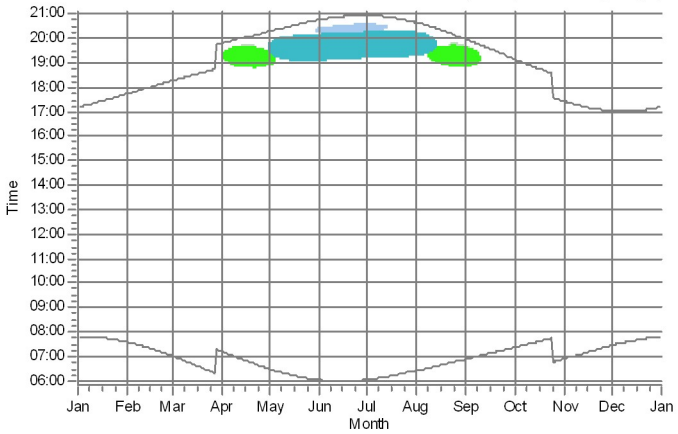
AG03: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (13



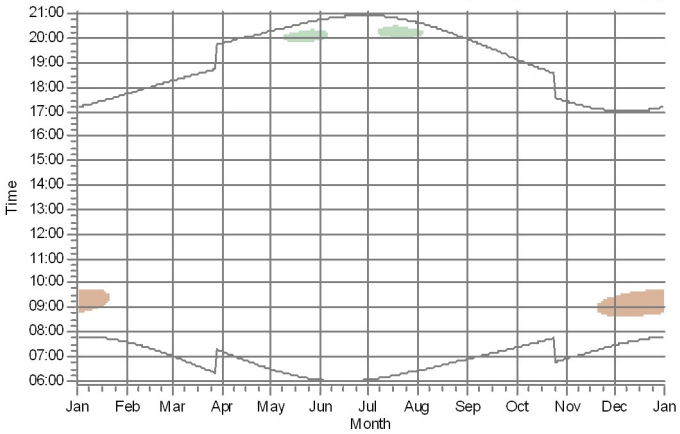
AG04: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (14



AG05: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (15



AG06: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (16



Shadow receptors

- F029: A4
- F032: C2
- F033: A4
- F039: A3
- F047: Pascolo cespugliato
- F048: A2 - F3
- F057: A2
- F060: A2 - D10
- F061: A3
- F063: A2
- F071: D10
- F073: C2
- F077: Seminativo - Pascolo cespugliato

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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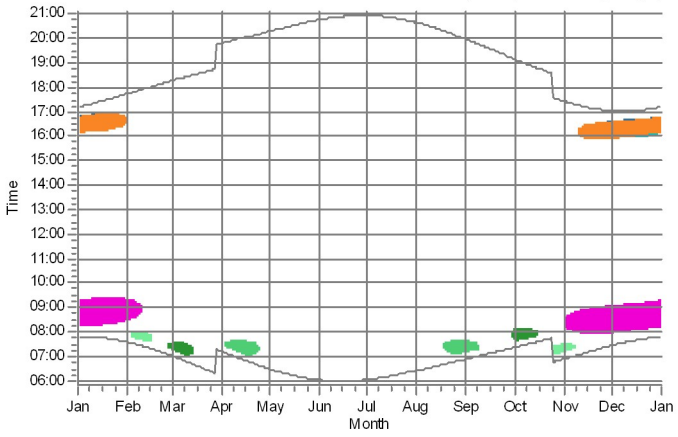
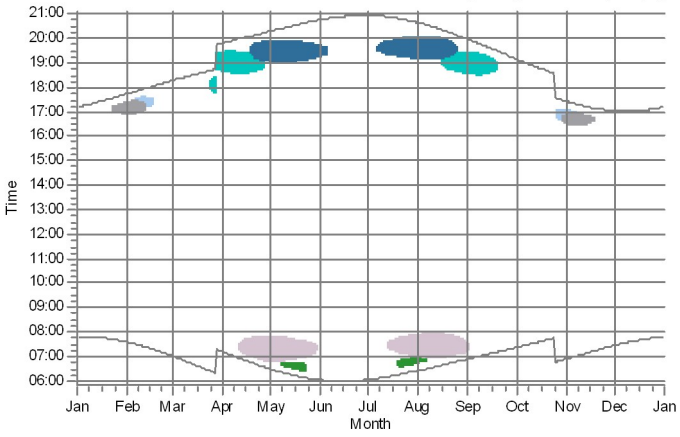
SHADOW - Calendar per WTG, graphical

Calculation: Cumulativo_20240129

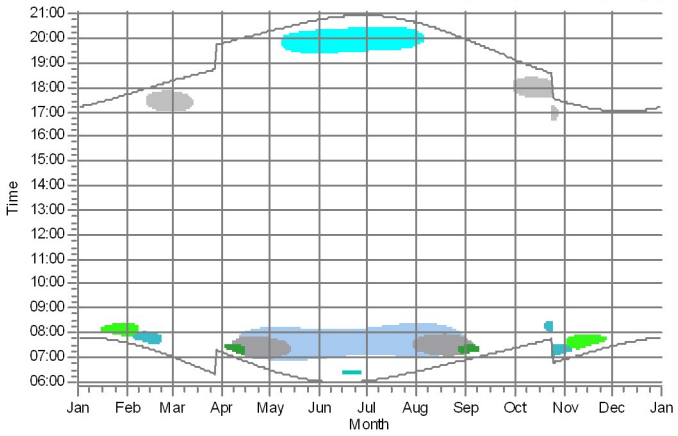
AG07: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (17



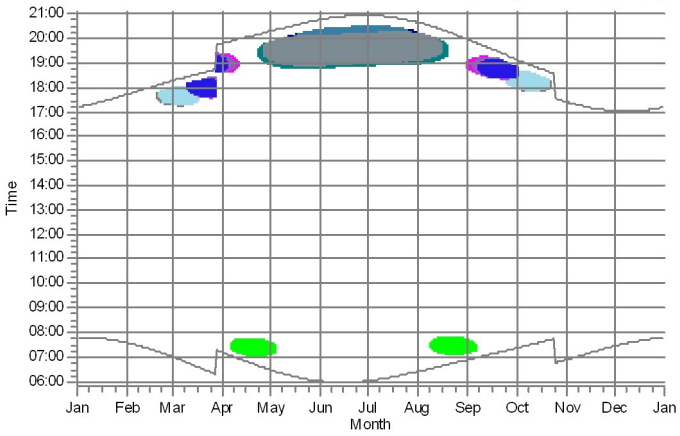
AG08: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (18



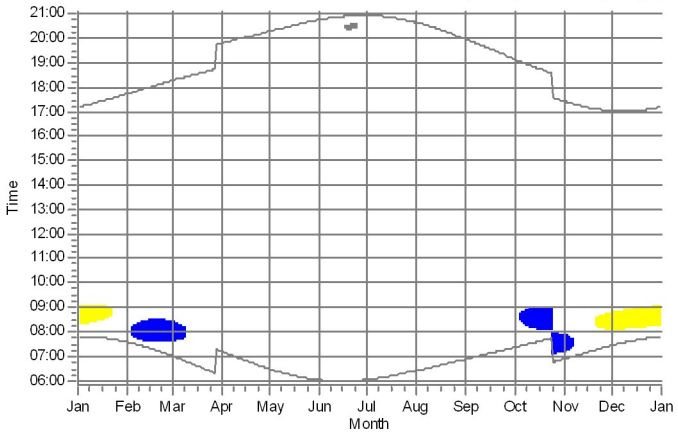
AG09: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (19



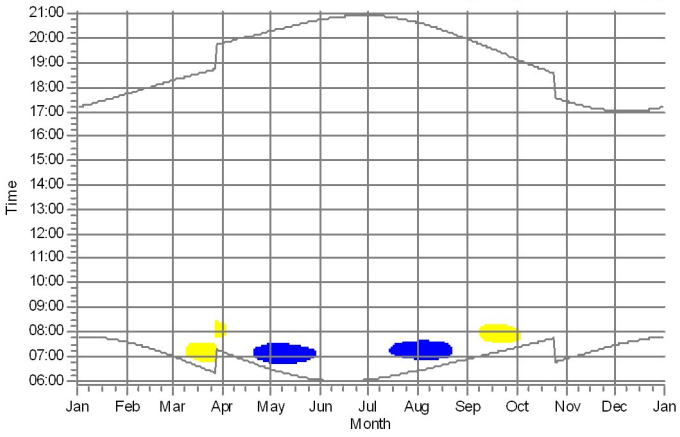
AG10: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (20



AG11: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (21



AG12: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (22



Shadow receptors

- F004: A3
- F005: D7
- F010: A3
- F011: A3 - F4
- F012: A2 - D10
- F013: A2 - D10
- F015: D10
- F024: D10 - A4
- F028: A2 - D10
- F032: C2
- F033: A4
- F047: Pascolo cespugliato
- F048: A2 - F3
- F057: A2
- F060: A2 - D10
- F061: A3
- F063: A2
- F071: D10
- F073: C2
- F077: Seminativo - Pascolo cespugliato
- F079: Ente urbano
- F080: Uliveto - Pascolo cespugliato
- F109: A3
- F115: A3 - F4
- F116: A3
- F117: A3 - F4
- F118: A2 - D10
- F321: A2

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it
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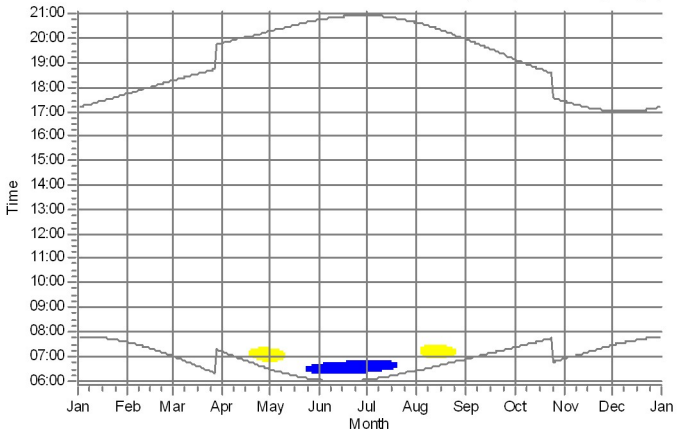
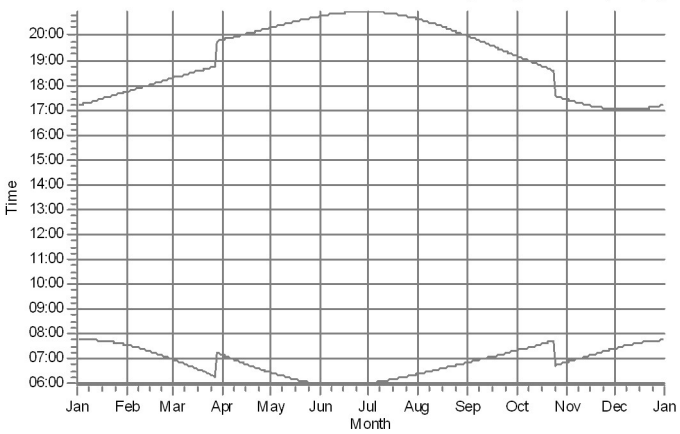
SHADOW - Calendar per WTG, graphical

Calculation: Cumulativo_20240129

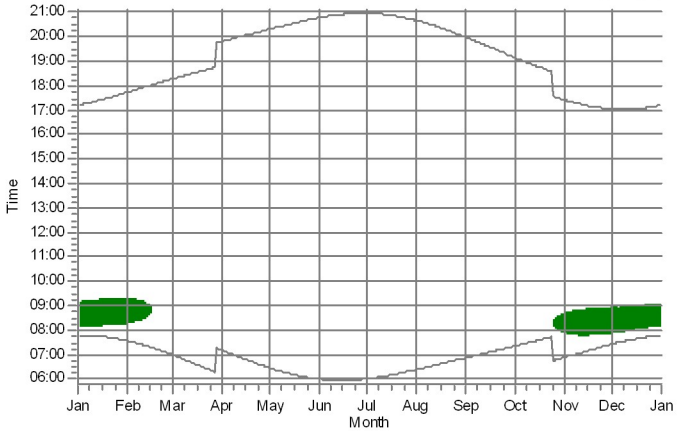
AG13: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (23



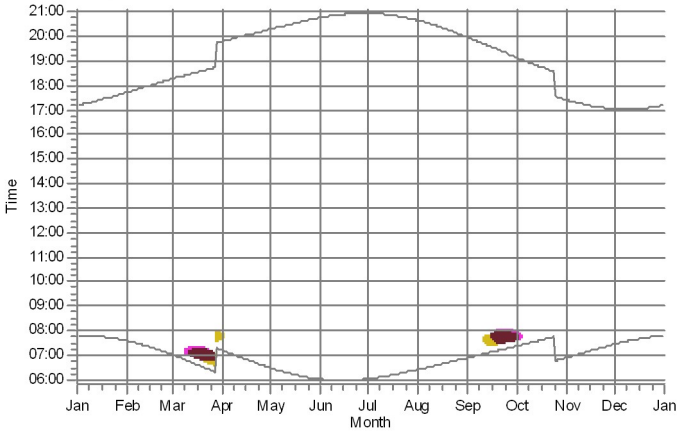
AG14: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (24



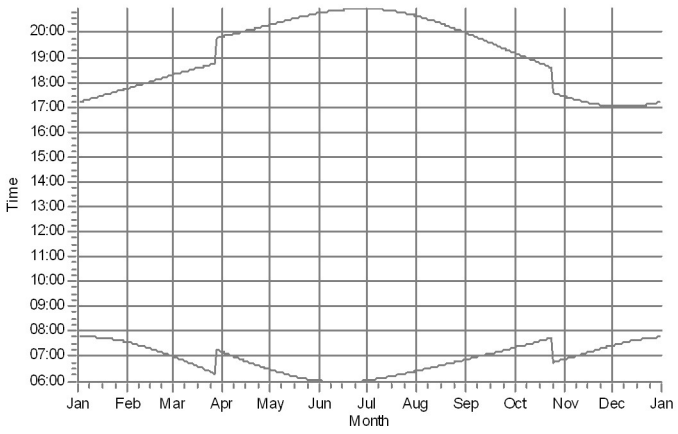
AG15: VESTAS V162-6.0 6000 162.0 !O! hub: 125,0 m (TOT: 206,0 m) (25



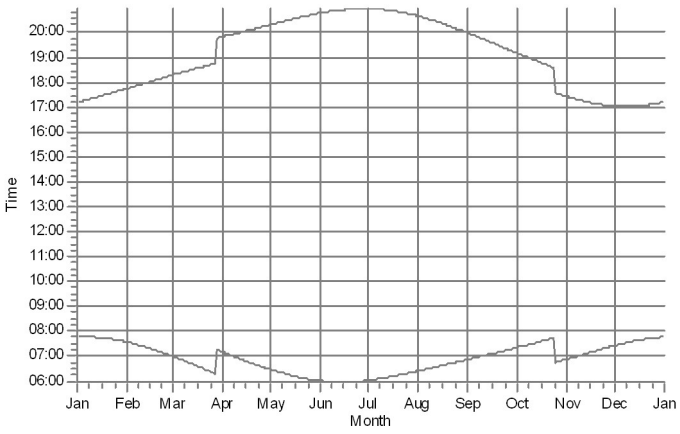
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Shadow receptors

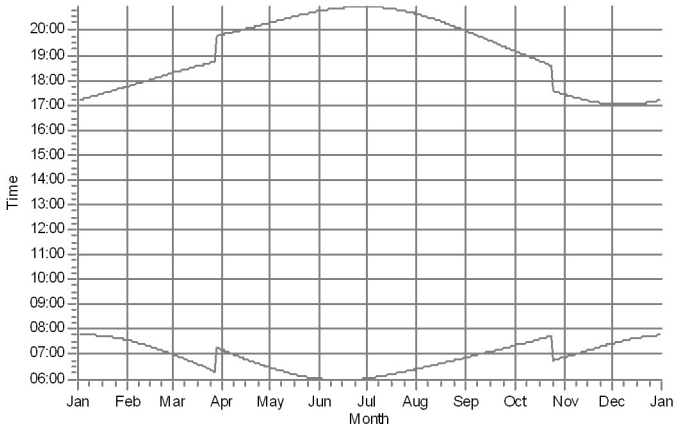
- F001: D10
- F004: A3
- F005: D7
- F091: Ente urbano
- F092: Ente urbano
- F093: Ente urbano

Licensed user:
I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
+39 070 658297
Giuseppe Frongia / direttore@iatprogetti.it

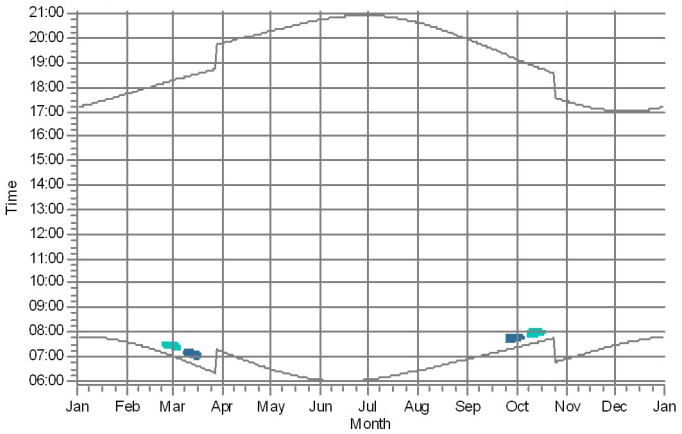
SHADOW - Calendar per WTG, graphical

Calculation: Cumulativo_20240129

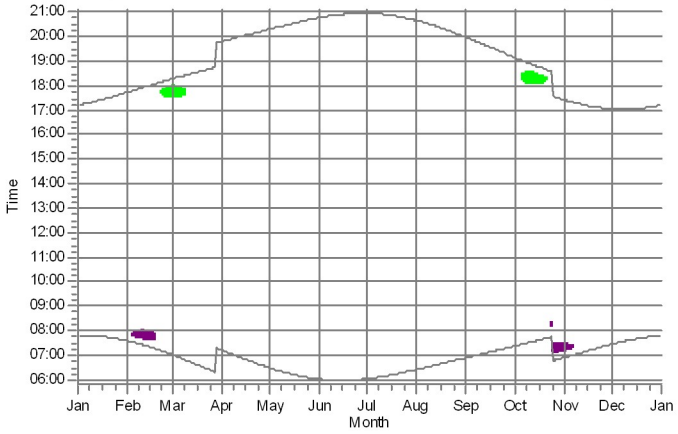
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



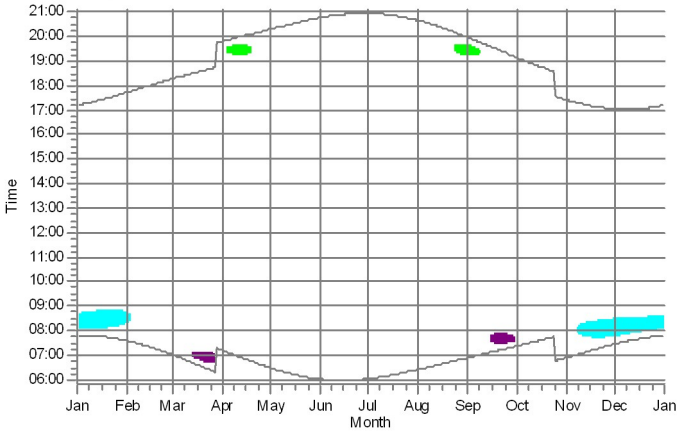
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



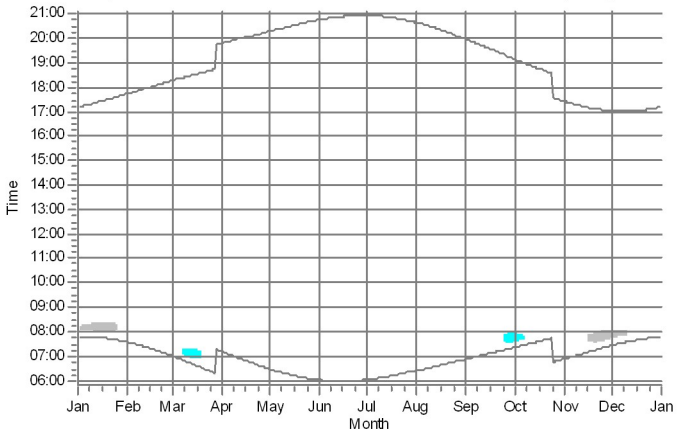
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



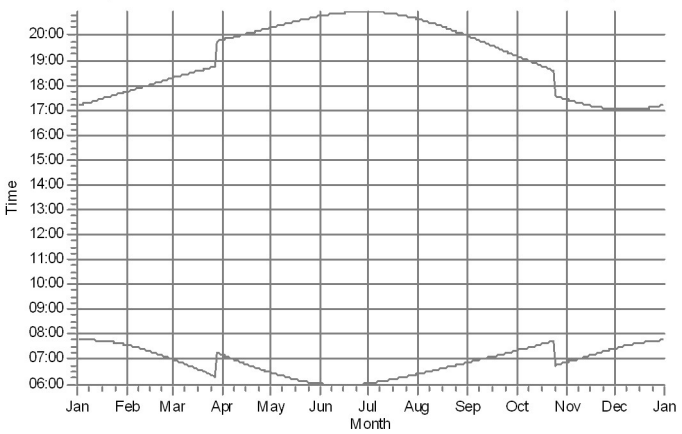
Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Medio Campidano: VESTAS V110-2.0 2000 110.0 !O! hub: 95,0 m (TOT: 15



Shadow receptors

- F015: D10
- F020: D10
- F024: D10 - A4
- F028: A2 - D10
- F060: A2 - D10
- F061: A3

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I.A.T. Consulenza e progetti S.r.l.
Via Santa Margherita 4
IT-09124 Cagliari
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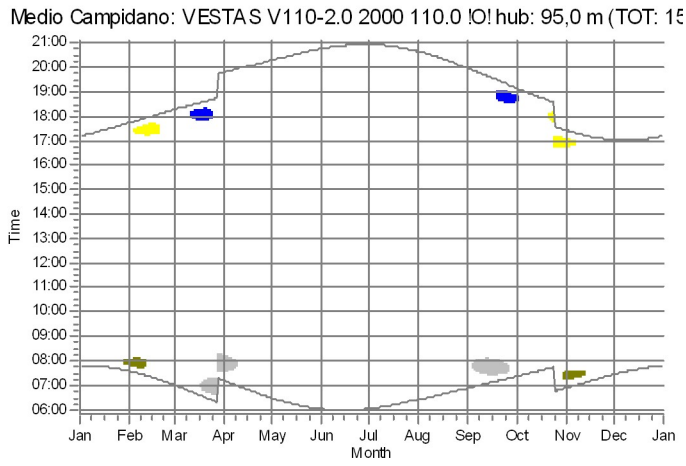
SHADOW - Calendar per WTG, graphical

Calculation: Cumulativo_20240129



Shadow receptors

F004: A3 | F005: D7 | F018: A2 | F024: D10 - A4