

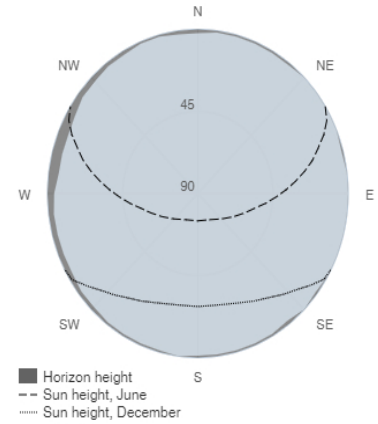
Performance of off-grid PV system

PVGIS-5 estimates of solar electricity generation

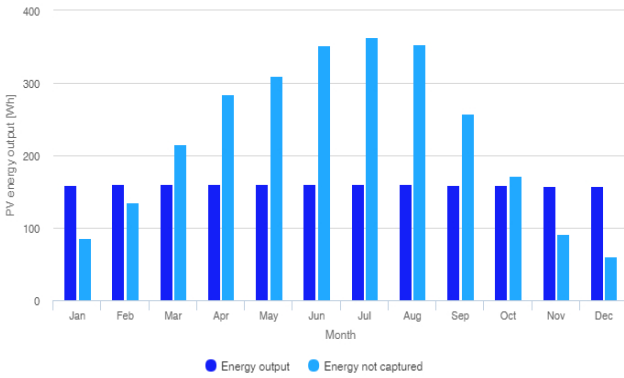
Provided inputs

Latitude/Longitude:	37.933,23.898	Slope angle:	25 °
Horizon:	Calculated	Azimuth angle:	0 °
Database used:	PVGIS-SARAH2	Simulation outputs	
PV installed:	100 Wp	Percentage days with full battery:	86.69 %
Battery capacity:	420 Wh	Percentage days with empty battery:	1.13 %
Cutoff limit:	20 %	Average energy not captured:	258.53 Wh
Consumption per day:	160 Wh	Average energy missing:	44.46 Wh

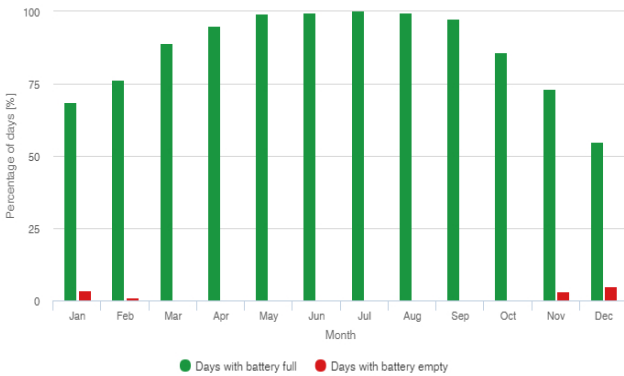
Outline of horizon at chosen location:



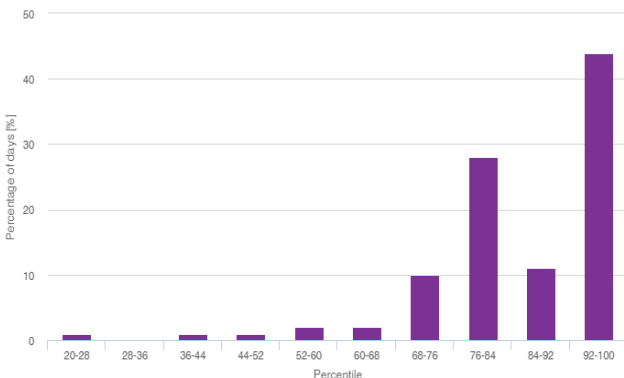
Power production estimate for off-grid PV:



Battery performance for off-grid PV system:



Probability of battery charge state at the end of the day:



Monthly average performance

Month	E_d	E_l	f_f	f_e
January	158.5	86.5	68.5	3.4
February	159.9	134.8	76.6	0.9
March	160.1	215.8	88.9	0.0
April	160.1	284.7	95.2	0.0
May	160.2	309.6	99.2	0.0
June	160.0	351.6	99.8	0.0
July	159.9	363.9	100.0	0.0
August	159.9	352.9	99.8	0.0
September	159.8	257.9	97.5	0.4
October	159.2	172.0	85.9	0.4
November	158.4	91.8	73.3	3.3
December	157.6	60.7	54.9	5.1

E_d: Average energy production per day [Wh/day].
 E_l: Average energy not captured per day [Wh/day].
 f_f: Percentage of days when battery became full [%].
 f_e: Percentage of days when battery became empty [%].

Cs	Cb
20-28	1.0
28-36	0.0
36-44	1.0
44-52	1.0
52-60	2.0
60-68	2.0
68-76	10.0
76-84	28.0
84-92	11.0
92-100	44.0

Cs: Charge state at the end of each day [%].
 Cb: Percentage of days with this charge state [%].

The European Commission maintains this website to enhance public access to information about its initiatives and European Union policies in general. Our goal is to keep this information timely and accurate. If errors are brought to our attention, we will try to correct them. However, the Commission accepts no responsibility or liability whatsoever with regard to the information on this site.

It is our goal to minimise disruption caused by technical errors. However, some data or information on this site may have been created or structured in files or formats that are not error-free and we cannot guarantee that our service will not be interrupted or otherwise affected by such problems. The Commission accepts no responsibility with regard to such problems incurred as a result of using this site or any linked external sites.

For more information, please visit https://ec.europa.eu/info/legal-notice_en