

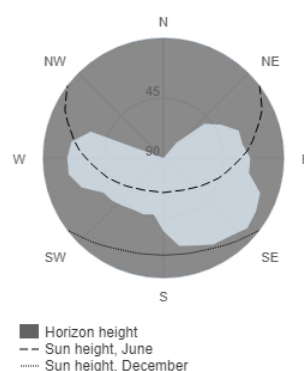
# Performance of off-grid PV systems

## PVGIS-5 estimates of solar electricity generation

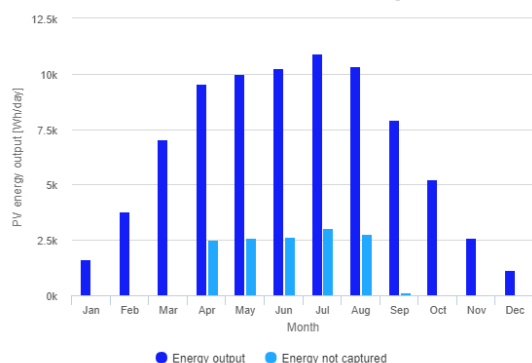
### Provided inputs

Latitude/Longitude:	49.266, 13.197	Slope angle:	40 °
Horizon:	User defined	Azimuth angle:	0 °
Database used:	PVGIS-CMSAF	<b>Simulation outputs</b>	
PV installed:	4033 Wp	Percentage days with full battery:	23.38 %
Battery capacity:	13800 Wh	Percentage days with empty battery:	73.22 %
Cutoff limit:	20 %	Average energy not captured:	4902.88 Wh
Consumption per day:	11500 Wh	Average energy missing:	6531.28 Wh

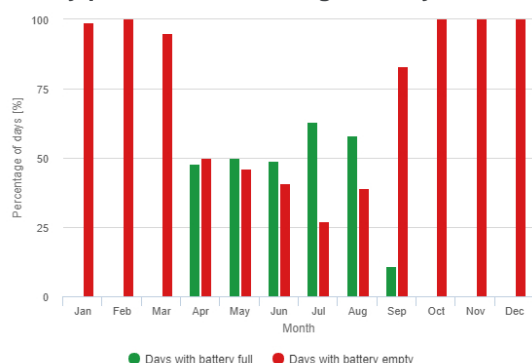
### Outline of horizon at chosen location:



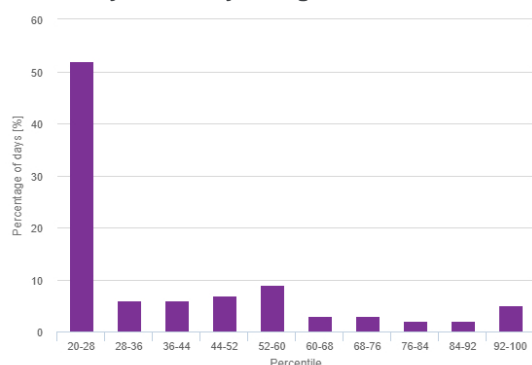
### Power production estimate for off-grid PV:



### Battery performance for off-grid PV system:



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



### Monthly average performance

Month	Ed	EI	Ff	Fe
January	1629.1	0	0	99
February	3794.02	0	0	100
March	7022.86	0	0	95
April	9560.73	2527.9	48	50
May	10004.05	2608.3	50	46
June	10256.74	2624.4	49	41
July	10900.28	3019.9	63	27
August	10336.82	2763.2	58	39
September	7939.89	133.4	11	83
October	5228.5	0	0	100
November	2575.72	0	0	100
December	1155.09	0	0	100

Ed: Average energy production per day [Wh/day].

EI: Average energy not captured per day [Wh/day].

Ff: percentage of days when battery became full [%].

Fe: percentage of days when battery became empty [%].

Cs	Cb
20-28	52
28-36	6
36-44	6
44-52	7
52-60	9
60-68	3
68-76	3
76-84	2
84-92	2
92-100	5

Cs: Charge state at the end of each day [%].

Cb: percentage of days with this charge state [%].