Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

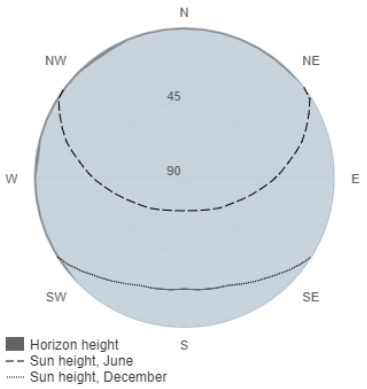
Provided inputs:

Latitude/Longitude:	43.834, 4.358
Horizon:	Calculated
Database used:	PVGIS-SARAH
PV technology:	Crystalline silicon
PV installed:	3 kWp
System loss:	2 %

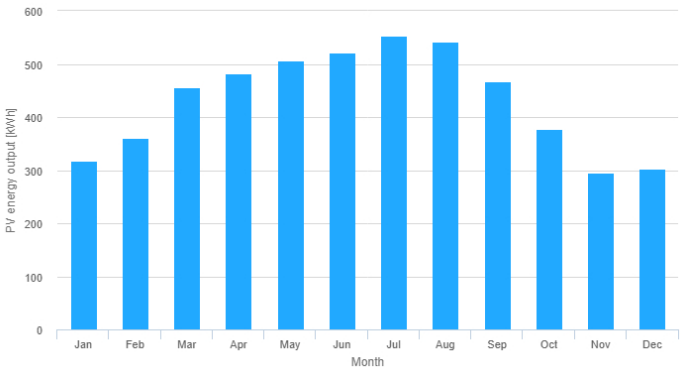
Simulation outputs

Slope angle:	39 (opt) °
Azimuth angle:	-1 (opt) °
Yearly PV energy production:	5180 kWh
Yearly in-plane irradiation:	1900 kWh/m²
Year to year variability:	313.00 %
Changes in output due to:	
Angle of incidence:	-2.6 %
Spectral effects:	1 %
Temperature and low irradiance:	-5.8 %
Total loss:	-9.2 %

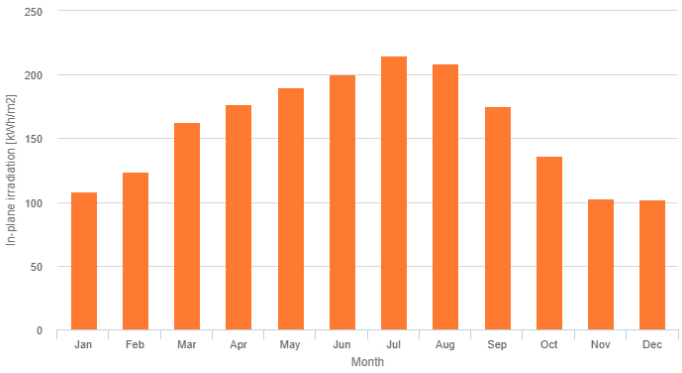
Outline of horizon at chosen location:



Monthly energy output from fix-angle PV system:



Monthly in-plane irradiation for fixed-angle:



Monthly PV energy and solar irradiation

Month	Em	Hm	SDm
January	317	108	61.7
February	361	124	72.6
March	457	163	62.1
April	482	177	53.9
May	507	190	50.3
June	521	200	40.7
July	553	215	31.6
August	542	209	19.5
September	467	175	32.2
October	377	136	51
November	296	103	62.4
December	302	102	49.5

Em: Average monthly electricity production from the given system [kWh].

Hm: Average monthly sum of global irradiation per square meter received by the modules of the given system [kWh/m²].

SDm: Standard deviation of the monthly electricity production due to year-to-year variation [kWh].

Report generated on 2018/06/26