

Performance of tracking PV

PVGIS-5 estimates of solar electricity generation

Provided inputs:

Latitude/Longitude: 43.600,1.439

Horizon: Calculated

Database used: PVGIS-SARAH2

PV technology: Crystalline silicon

PV installed: 1 kWp

System loss: 14 %

Simulation outputs

Slope angle [°]: 2A*

Yearly PV energy production [kWh]: 1630.42

Yearly in-plane irradiation [kWh/m²]: 2064.64

Year-to-year variability [kWh]: 58.5

Changes in output due to:

Angle of incidence [%]: -1.57

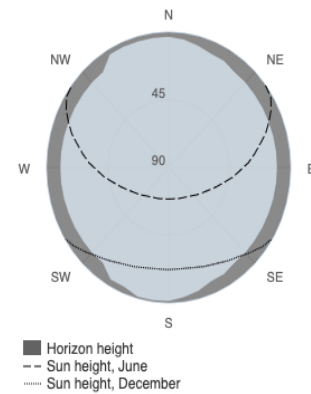
Spectral effects [%]: 1.19

Temp. and low irradiance [%]: -7.81

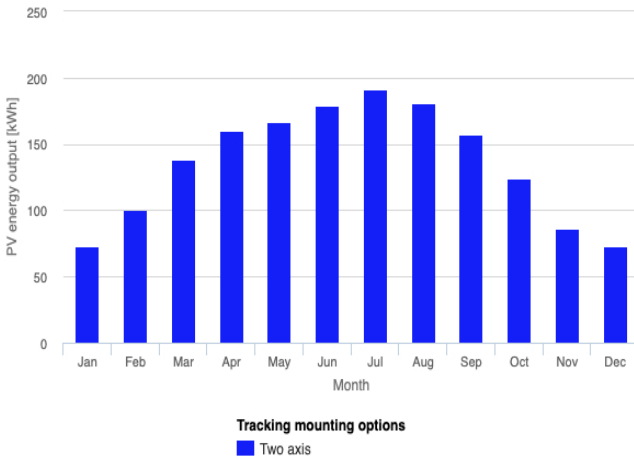
Total loss [%]: -21.03

* 2A: Two axis

Outline of horizon at chosen location:

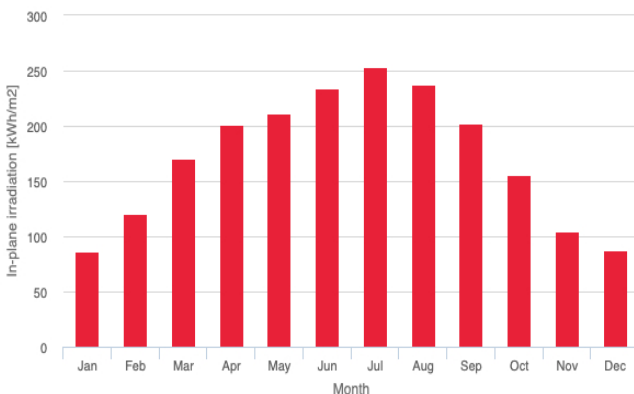


Monthly energy output from tracking PV system:



Month	Two axis		
	E_m	H(i)_m	SD_m
January	73.0	86.9	10.6
February	99.9	120.7	18.7
March	138.2	170.2	20.0
April	160.2	200.7	25.9
May	166.2	211.5	20.3
June	179.3	233.6	16.4
July	191.8	253.7	15.3
August	181.0	238.0	10.4
September	156.9	202.3	11.8
October	124.2	155.2	17.3
November	86.5	104.2	17.9
December	73.3	87.7	17.2

Monthly in-plane irradiation for tracking PV system:



E_m: Average monthly electricity production from the defined system [kWh].
H_m: Average monthly sum of global irradiation per square meter received by the modules of the given system [kWh/m²].
SD_m: Standard deviation of the monthly electricity production due to year-to-year variation [kWh].

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