

# Performance of tracking PV

## PVGIS-5 estimates of solar electricity generation

### Provided inputs:

Latitude/Longitude: 42.409,11.597

Horizon: Calculated

Database used: PVGIS-SARAH2

PV technology: Crystalline silicon

PV installed: 1 kWp

System loss: 9 %

### Simulation outputs

Slope angle [°]: 0

Yearly PV energy production [kWh]: 1956.19

Yearly in-plane irradiation [kWh/m<sup>2</sup>]: 2325.39

Year-to-year variability [kWh]: 61.1

Changes in output due to:

Angle of incidence [%]: -1.72

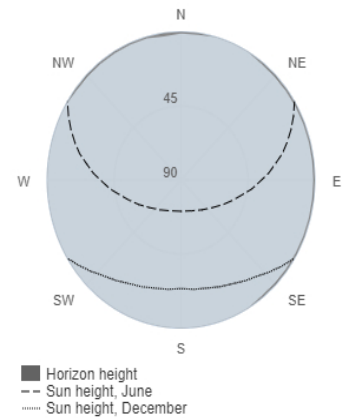
Spectral effects [%]: 0.73

Temp. and low irradiance [%]: -6.62

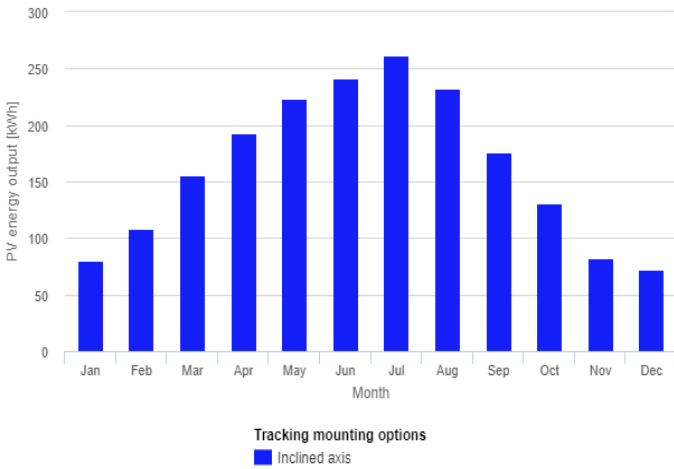
Total loss [%]: -15.88

\* IA: Inclined axis

### Outline of horizon at chosen location:



### Monthly energy output from tracking PV system:



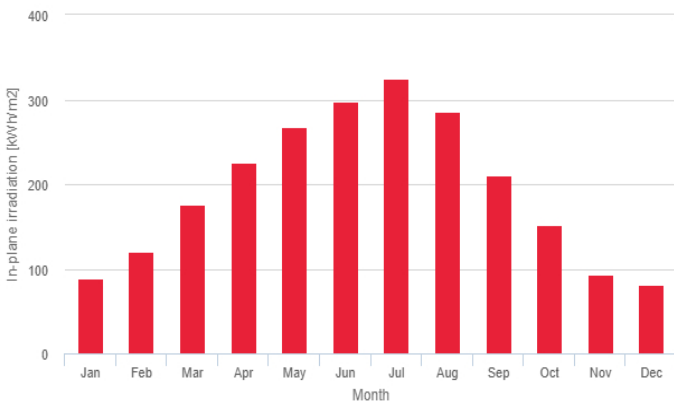
Month	Inclined axis		
	E_m	H(i)_m	SD_m
January	79.9	88.8	12.0
February	107.9	120.0	15.0
March	155.3	176.4	19.2
April	192.7	226.1	14.0
May	223.7	267.8	24.0
June	241.6	297.1	13.4
July	261.6	325.2	11.3
August	231.8	286.1	11.0
September	175.6	210.8	11.8
October	131.3	152.2	12.9
November	82.1	93.2	11.5
December	72.7	81.7	7.4

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/m<sup>2</sup>].

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

### Monthly in-plane irradiation for tracking PV system:



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