

# Performance of tracking PV

## PVGIS-5 estimates of solar electricity generation

### Provided inputs:

Latitude/Longitude: 34.760,8.630

Horizon: Calculated

Database used: PVGIS-SARAH2

PV technology: Crystalline silicon

PV installed: 22660 kWp

System loss: 14 %

### Simulation outputs

Slope angle [°]: 45

Yearly PV energy production [kWh]: 53164406.03

Yearly in-plane irradiation [kWh/m<sup>2</sup>]: 2976.87

Year-to-year variability [kWh]: 877242.1

Changes in output due to:

Angle of incidence [%]: -1.4

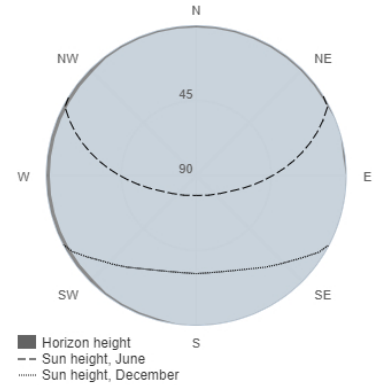
Spectral effects [%]: 0.4

Temp. and low irradiance [%]: -7.42

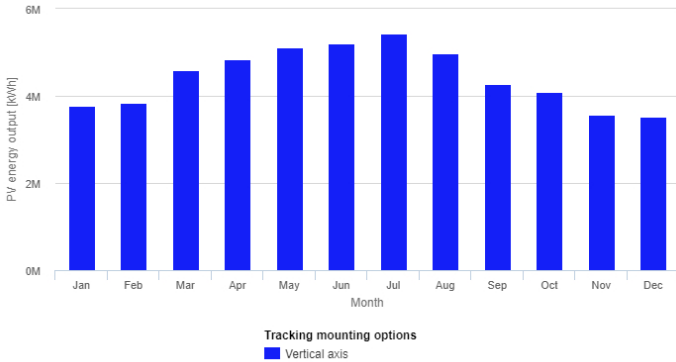
Total loss [%]: -21.19

\* VA: Vertical axis

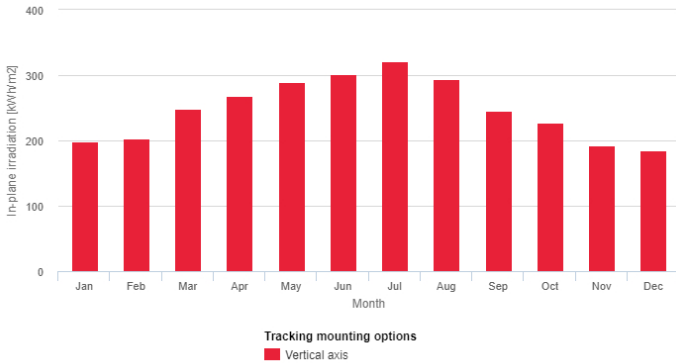
### Outline of horizon at chosen location:



### Monthly energy output from tracking PV system:



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



Month	E_m	H(i)_m	SD_m
January	3767414.98.3	4198.3	428585.9
February	3833942.08.7	4208.7	283318.7
March	4580232.48.3	4248.3	273831.6
April	4830032.67.9	4367.9	329621.5
May	5104462.89.4	4489.4	354845.6
June	5202753.02.2	4502.2	218910.5
July	5425573.21.8	4521.8	172346.9
August	4966292.93.7	4293.7	212922.7
September	4278612.45.8	4124.8	192626.6
October	4084172.27.9	4027.9	258497.9
November	3568172.92.3	3992.3	199399.4
December	3522722.98.6	3986.6	308227.6

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].