

20°

0 °

721379.66 kWh

1868.53 kWh/m²

15685.71 kWh

Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

Provided inputs:

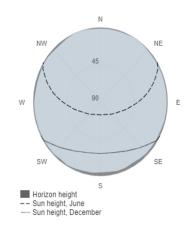
Latitude/Longitude: 38.966, 23.103
Horizon: Calculated
Database used: PVGIS-SARAH
PV technology: Crystalline silicon
PV installed: 499.79 kWp
System loss: 14 %

Simulation outputs

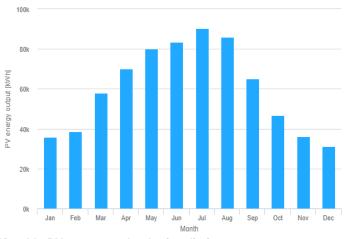
Slope angle:
Azimuth angle:
Yearly PV energy production:
Yearly in-plane irradiation:
Year-to-year variability:
Changes in output due to:
Angle of incidence:

Angle of incidence: -2.8 %
Spectral effects: 0.6 %
Temperature and low irradiance: -8.15 %
Total loss: -22.75 %

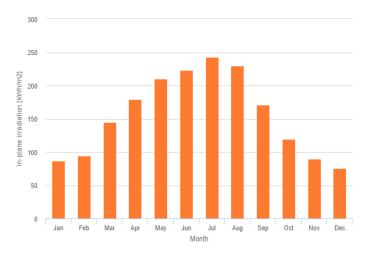
Outline of horizon at chosen location:



Monthly energy output from fix-angle PV system:



Monthly in-plane irradiation for fixed-angle:



Monthly PV energy and solar irradiation

| - | | | |
|-----------|---------|--------|--------|
| Month | E_m | H(i)_m | SD_m |
| January | 35840.3 | 387.0 | 7019.8 |
| February | 38543.4 | 194.6 | 5676.1 |
| March | 58018.8 | 3144.7 | 6474.0 |
| April | 69980.0 | 0179.4 | 6159.9 |
| May | 80054. | 1210.4 | 4338.6 |
| June | 83531.6 | 5223.7 | 3845.2 |
| July | 90410.7 | 7242.6 | 1951.2 |
| August | 86073.6 | 5230.2 | 1376.7 |
| September | 64973.3 | 3170.7 | 5646.8 |
| October | 46840.4 | 4119.9 | 6848.1 |
| November | 36095.6 | 689.5 | 6708.2 |
| December | 31017.8 | 375.7 | 4607.1 |
| | | | |

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

 $H(i)_m$: 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].

The European Commission maintains this website to enhance public access to information about its initiatives and European Union policies in general. Our goal is to keep this information timely and accurate. If errors are brought to our attention, we w try to correct them.

However, the Commission accepts no responsibility or liability whatsoever with regard to the information on this site

This information

i) of a general nature only and is not intended to address the specific circumstances of any particular individual or entity
ii) not necessarily comorehensive, complete, accurate or up to date.

iii) sometimes linked to external sites over which the Commission services have no control and for which the Commission

F

PVGIS ©European Union, 2001-2021.
Reproduction is authorised, provided the source is acknowledged, save where otherwise stated.