

20°

0 °

1368621.98 kWh

1783.72 kWh/m²

52988.60 kWh

Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

Provided inputs:

System loss:

Latitude/Longitude: 40.252, 21.887
Horizon: Calculated
Database used: PVGIS-SARAH
PV technology: Crystalline silicon
PV installed: 1000 kWp

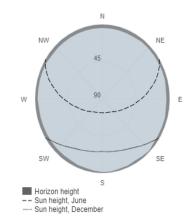
1000 k

Simulation outputs

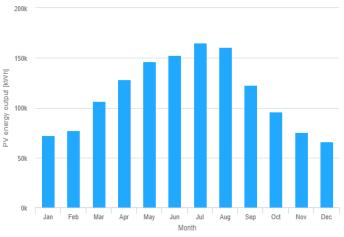
Slope angle:
Azimuth angle:
Yearly PV energy production:
Yearly in-plane irradiation:
Year-to-year variability:
Changes in output due to:

Angle of incidence: -2.84 %
Spectral effects: 0.69 %
Temperature and low irradiance: -8.8 %
Total loss: -23.27 %

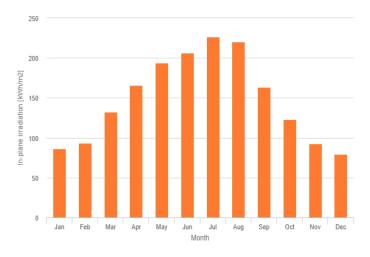
Outline of horizon at chosen location:



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	72082.	886.3	12792.0
February	77037.	193.7	11400.5
March	106258	3. 6 32.6	12014.1
April	128539	9. \$ 65.5	12245.5
May	146589	9. 9 94.1	9097.6
June	152417	7. 2 06.3	9104.1
July	164877	7.2426.5	9139.9
August	160473	3. 2 320.1	7550.4
September	123006	6. 3 63.5	11175.4
October	95864.	5122.8	13435.2
November	75406.	192.8	12559.9
December	66069.	179.6	11899.4

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].

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Joint

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