

20°

0 °

1347303.24 kWh

1722.64 kWh/m²

54994.95 kWh

Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

Provided inputs: Latitude/Longitude: 41.324,23.810

Horizon: Calculated
Database used: PVGIS-SARAH2
PV technology: Crystalline silicon
PV installed: 1000 kWp

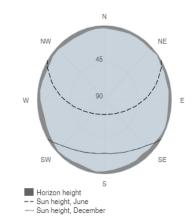
PV installed: 1000 l System loss: 14 % Simulation outputs

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

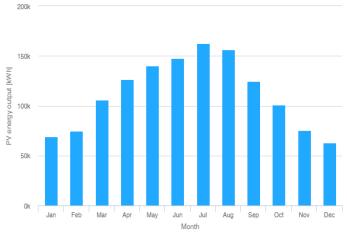
Angle of incidence: -2.93 % Spectral effects: 0.89 % Temperature and low irradiance: -7.14 %

Temperature and low irradiance: -7.14 %
Total loss: -21.79 %

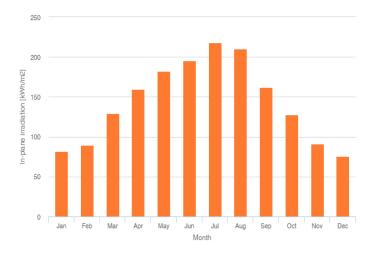
Outline of horizon at chosen location:



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	69313	682.0	17485.3
February	74900	889.5	15526.6
March	10569	1. 6 29.5	14712.4
April	12631	9. 3 59.6	14503.2
May	14039	3.582.3	11031.5
June	14784	4. 6 95.3	11610.8
July	16251	5. £ 18.0	8090.5
August	15646	3. 2 10.1	8801.4
September	12445	7.962.2	10253.2
October	10121	2. 0 27.5	15507.8
November	75269	591.3	13002.2
December	62921	075.4	15830.2

E_m: Average monthly electricity production from the defined 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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