

20°

0 °

1357948.83 kWh

1767.05 kWh/m²

49396.04 kWh

Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

Provided inputs:

System loss:

Latitude/Longitude: 40.276, 21.906 Horizon: Calculated Database used: **PVGIS-SARAH** PV technology: Crystalline silicon PV installed: 1000 kWp

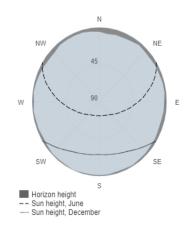
14 %

Simulation outputs

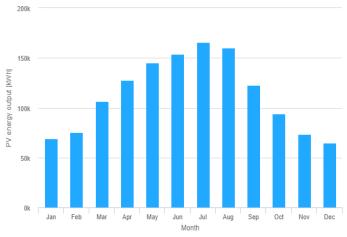
Slope angle: Azimuth angle: Yearly PV energy production: Yearly in-plane irradiation: Year-to-year variability: Changes in output due to:

Angle of incidence: -2.84 % Spectral effects: 0.68 % Temperature and low irradiance: -8.65 % Total loss: -23.15 %

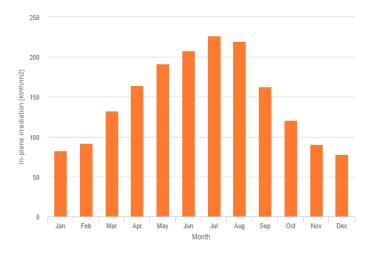
Outline of horizon at chosen location:



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	68888	.782.5	12251.5
February	75451	.991.6	11345.3
March	10626	1.932.4	12691.6
April	12760	2.063.9	12923.1
May	14495	8. 1 91.4	9591.9
June	15404	3.2407.9	8522.1
July	16550	5. 2 26.7	9027.8
August	16036	8. £ 19.3	7363.9
September	12258	7.862.6	10589.8
October	94233	.9120.5	12574.0
November	73521	.090.5	12199.5
December	64526	077.7	10820 /

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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