

25°

-78°

35403.92 kWh

1818.03 kWh

1133.06 kWh/m²

Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

Provided inputs:

System loss:

Latitude/Longitude: 52.314,13.215
Horizon: Calculated
Database used: PVGIS-SARAH2
PV technology: Crystalline silicon
PV installed: 40.7 kWp

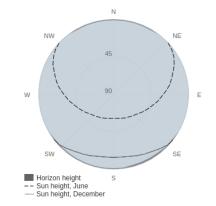
14 %

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: -3.75 %
Spectral effects: 1.65 %
Temperature and low irradiance: -8.76 %
Total loss: -23.23 %

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_n
January	767.5	24.4	130.9
February	1446.4	43.4	363.2
March	2672.8	81.1	345.3
April	4280.3	133.9	525.3
May	4950.8	158.4	745.2
June	5104.4	167.3	420.8
July	4943.2	163.6	606.3
August	4420.2	144.4	390.2
September	3310.2	105.1	346.6
October	1975.5	61.8	323.3
November	928.4	29.7	151.4
December	604.2	100	08 U

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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