

21 °

63°

11917.53 kWh

482.23 kWh

1236.05 kWh/m<sup>2</sup>

# Performance of grid-connected PV

## PVGIS-5 estimates of solar electricity generation:

Provided inputs: Latitude/Longitude: 49.247,16.672

Horizon: Calculated
Database used: PVGIS-SARAH2
PV technology: Crystalline silicon
PV installed: 12.24 kWp

System loss:

14 %

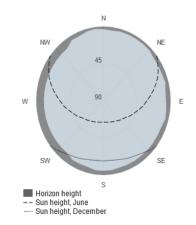
Simulation outputs

Slope angle:
Azimuth angle:
Yearly PV energy production:
Yearly in-plane irradiation:

Year-to-year variability: Changes in output due to:

Angle of incidence: -3.56 %
Spectral effects: 1.44 %
Temperature and low irradiance: -6.38 %
Total loss: -21.23 %

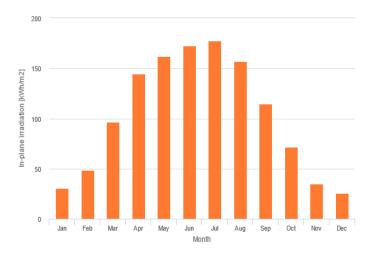
#### Outline of horizon at chosen location:



# 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	300.6	30.3	52.8
February	500.5	48.9	109.4
March	977.8	96.5	160.4
April	1420.1	144.7	182.1
May	1564.0	161.7	225.1
June	1636.2	172.6	150.4
July	1650.4	177.3	156.7
August	1470.3	157.1	117.3
September	1109.0	114.9	130.1
October	700.5	71.4	126.2
November	340.8	35.1	51.8
December	247 3	25.7	36.4

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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