

35°

4°

21325.49 kWh

1109.19 kWh

1357.49 kWh/m<sup>2</sup>

# Performance of grid-connected PV

# PVGIS-5 estimates of solar electricity generation:

# Provided inputs:

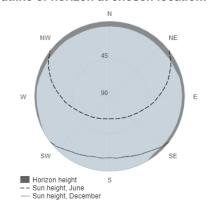
Latitude/Longitude: 50.413,14.538
Horizon: Calculated
Database used: PVGIS-SARAH2
PV technology: Crystalline silicon
PV installed: 19.6 kWp
System loss: 10 %

#### 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: -3.03 %
Spectral effects: 1.58 %
Temperature and low irradiance: -9.58 %
Total loss: -19.85 %

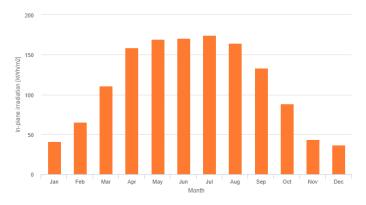
#### Outline of horizon at chosen location:



# 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	713.6	41.4	156.5
February	1123.2	65.7	292.6
March	1817.0	110.7	292.2
April	2512.3	159.2	358.1
May	2636.2	169.5	319.6
June	2587.4	170.6	244.6
July	2605.7	174.4	257.9
August	2472.6	164.3	224.5
September	2078.1	133.1	261.8
October	1427.7	88.2	321.2
November	729.7	43.9	145.1
December	622.1	36.5	120.4

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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