

# HOZAMSZÁMÍTÁS

Polgármesteri Hivatal és Gondozási központ

H-8105 Pétfürdő, Berhidai út 6/c.

D-i tető: 19,92 kWp méretű fotovoltaikus erőmű



## Performance of grid-connected PV

PVGIS-5 estimates of solar electricity generation:

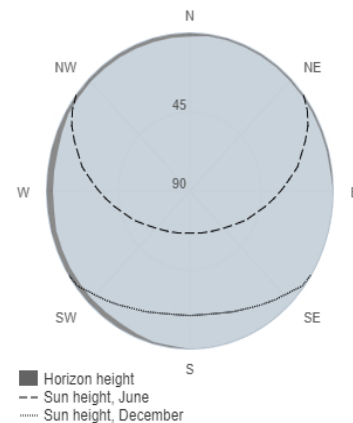
### Provided inputs:

Latitude/Longitude: 47.165, 18.124  
 Horizon: Calculated  
 Database used: PVGIS-SARAH  
 PV technology: Crystalline silicon  
**PV installed: 19.92 kWp**  
 System loss: 11 %

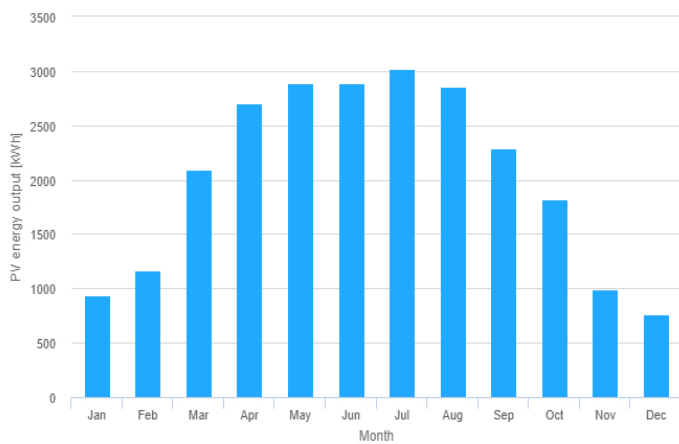
### Simulation outputs

Slope angle: 30 °  
 Azimuth angle: 27 °  
**Yearly PV energy production: 24406.74 kWh**  
 Yearly in-plane irradiation: 1494.91 kWh/m<sup>2</sup>  
 Year-to-year variability: 1213.31 kWh  
 Changes in output due to:  
 Angle of incidence: -2.96 %  
 Spectral effects: 1.31 %  
 Temperature and low irradiance: -6.33 %  
 Total loss: -18.04 %

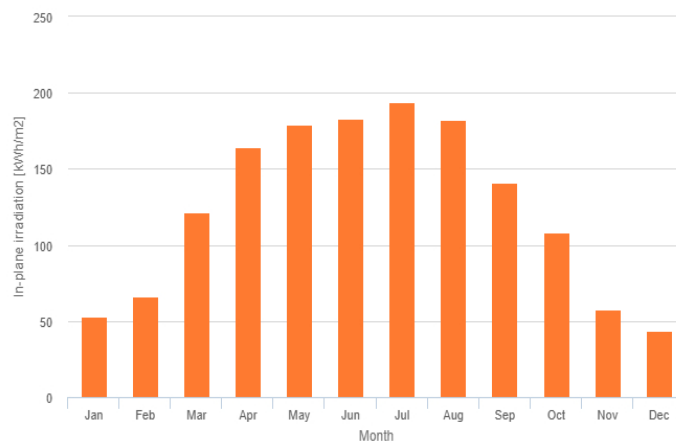
### Outline of horizon at chosen location:



### Monthly energy output from fix-angle PV system:



### Monthly in-plane irradiation for fixed-angle:



### Monthly PV energy and solar irradiation

Month	E <sub>m</sub>	H(i) <sub>m</sub>	SD <sub>m</sub>
January	937.0	52.7	232.4
February	1169.9	66.5	290.0
March	2088.5	121.8	359.2
April	2700.2	164.3	330.2
May	2890.8	179.4	280.6
June	2887.0	182.9	157.7
July	3018.6	194.3	225.1
August	2857.8	182.2	289.9
September	2286.6	141.1	322.8
October	1815.9	108.3	292.4
November	993.9	57.7	200.1
December	760.6	43.8	189.9

E<sub>m</sub>: Average monthly electricity production from the given system [kWh].

H(i)<sub>m</sub>: Average monthly sum of global irradiation per square meter received by the modules of the given system [kWh/m<sup>2</sup>].

SD<sub>m</sub>: Standard deviation of the monthly electricity production due to year-to-year variation [kWh].

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