## **Photovoltaic Geographical Information System**

European Commission Joint Research Centre Ispra, Italy

### Performance of Grid-connected PV

### PVGIS estimates of solar electricity generation

Location: 47°41'14" North, 17°39'1" East, Elevation: 112 m a.s.l.,

Solar radiation database used: PVGIS-CMSAF

Nominal power of the PV system: 6.0 kW (crystalline silicon)

Estimated losses due to temperature and low irradiance: 8.8% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 2.9%

Other losses (cables, inverter etc.): 14.0% Combined PV system losses: 23.8%

	Fixed system: inclination=35 deg.,			
	orientation=0 deg.			
Month	Ed	Em	Hd	Hm
Jan	7.64	237	1.51	46.8
Feb	12.70	357	2.56	71.8
Mar	19.20	597	4.05	125
Apr	25.50	765	5.58	167
May	26.00	805	5.84	181
Jun	25.70	771	5.86	176
Jul	25.90	803	5.96	185
Aug	25.10	778	5.73	178
Sep	20.50	616	4.55	136
Oct	15.90	493	3.39	105
Nov	8.97	269	1.84	55.2
Dec	6.25	194	1.24	38.6
Year	18.30	557	4.02	122
Total for		6680		1470
year				

Ed: Average daily electricity production from the given system (kWh)

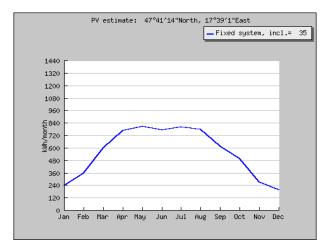
Em: Average monthly electricity production from the given system (kWh)

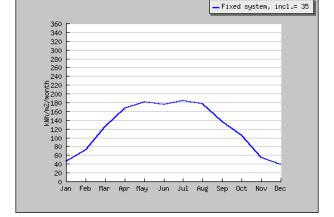
Hd: Average daily sum of global irradiation per square meter received by the modules of the given system (kWh/m2)

Hm: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m2)



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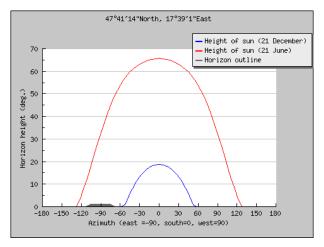




Irradiation estimate: 47°41′14"North, 17°39′1"East

Monthly energy output from fixed-angle PV system

Monthly in-plane irradiation for fixed angle



Outline of horizon with sun path for winter and summer solstice

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