Ispra, Italy



# **Photovoltaic Geographical Information System**

## Performance of Grid-connected PV

## PVGIS estimates of solar electricity generation

Location: 47°53'46" North, 17°34'43" East, Elevation: 113 m a.s.l.,

Nominal power of the PV system: 0.1 kW (crystalline silicon)

Estimated losses due to temperature: 8.6% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 2.8%

Other losses (cables, inverter etc.): 14.0% Combined PV system losses: 23.5%

	Fixed system: inclination=40 deg.,			
	orientation=0 deg.			
Month	Ed	Em	Hd	Hm
Jan	0.17	5.23	1.53	47.3
Feb	0.26	7.27	2.42	67.6
Mar	0.37	11.4	3.56	110
Apr	0.48	14.3	4.80	144
May	0.51	15.7	5.24	162
Jun	0.52	15.6	5.46	164
Jul	0.55	16.9	5.75	178
Aug	0.50	15.6	5.27	163
Sep	0.45	13.6	4.61	138
Oct	0.34	10.5	3.33	103
Nov	0.19	5.57	1.74	52.2
Dec	0.12	3.78	1.11	34.4
Year	0.37	11.3	3.74	114
Total for		135		1370
year				

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

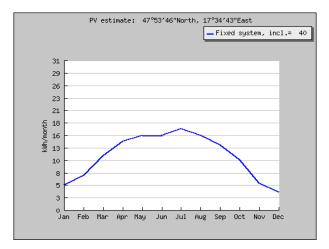
Em: Average monthly electricity production from the given system (kWh)

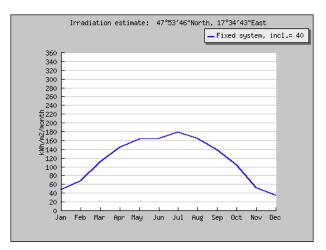
Hd: Average daily sum of global irradiation per square meter received by the modules of the given system (kWh/m2)

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



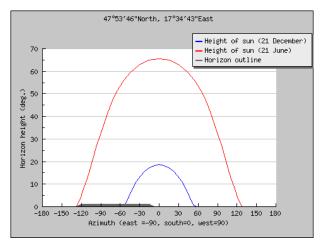
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Monthly energy output from fixed-angle PV system

Monthly in-plane irradiation for fixed angle



Outline of horizon with sun path for winter and summer solstice

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