

Photovoltaic Geographical Information System

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 47°29'52" North, 19°2'24" East, Elevation: 150 m a.s.l.,

Solar radiation database used: PVGIS-CMSAF

Nominal power of the PV system: 1.0 kW (crystalline silicon)

Estimated losses due to temperature and low irradiance: 8.4% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 2.9%

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

	Fixed system: inclination=35 deg.,			
	orientation=0 deg.			
Month	Ed	Em	Hd	Hm
Jan	1.33	41.1	1.56	48.5
Feb	2.21	61.8	2.66	74.4
Mar	3.14	97.5	3.95	122
Apr	4.00	120	5.22	157
May	4.24	131	5.74	178
Jun	4.14	124	5.67	170
Jul	4.16	129	5.75	178
Aug	4.02	125	5.51	171
Sep	3.31	99.2	4.37	131
Oct	2.62	81.2	3.33	103
Nov	1.61	48.2	1.96	58.9
Dec	1.20	37.0	1.41	43.8
Year	3.00	91.3	3.93	120
Total for		1100		1440
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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