

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 51°43'43" North, 5°32'7" East, Elevation: 11 m a.s.l.,

Solar radiation database used: PVGIS-classic

Nominal power of the PV system: 3.0 kW (crystalline silicon)

Estimated losses due to temperature and low irradiance: 8.0% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 3.5%

Other losses (cables, inverter etc.): 7.0%

Combined PV system losses: 17.4%

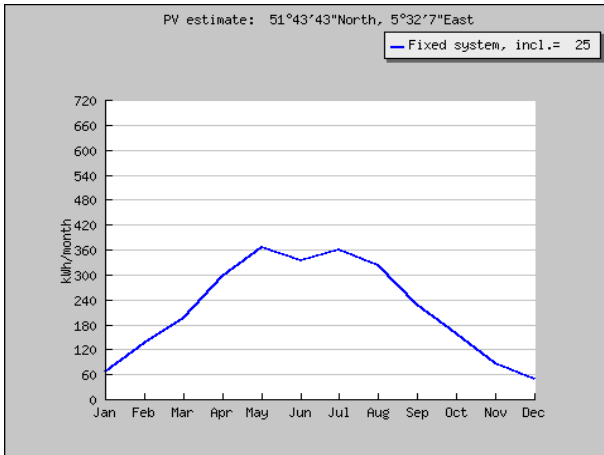
Fixed system: inclination=25 deg., orientation=40 deg.				
Month	Ed	Em	Hd	Hm
Jan	2.16	66.8	0.82	25.3
Feb	4.85	136	1.85	51.8
Mar	6.35	197	2.46	76.4
Apr	9.85	295	3.95	119
May	11.80	366	4.86	151
Jun	11.10	334	4.64	139
Jul	11.60	360	4.86	151
Aug	10.40	322	4.30	133
Sep	7.57	227	3.07	92.0
Oct	5.15	160	2.03	63.0
Nov	2.88	86.3	1.11	33.3
Dec	1.62	50.2	0.61	19.1
Year	7.12	217	2.88	87.8
Total for year		2600		1050

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

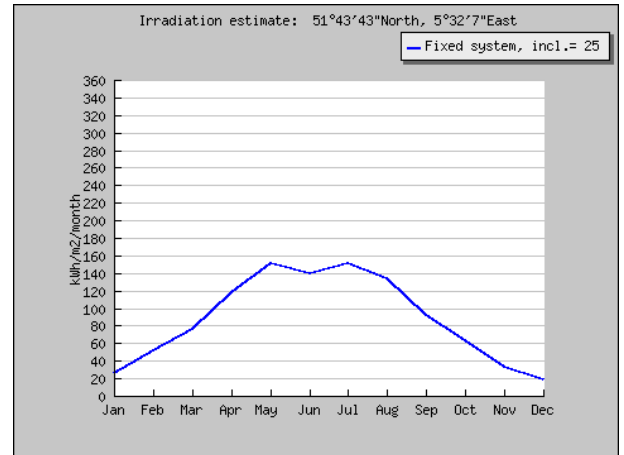
Em: Average monthly electricity production from the given system (kWh)

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

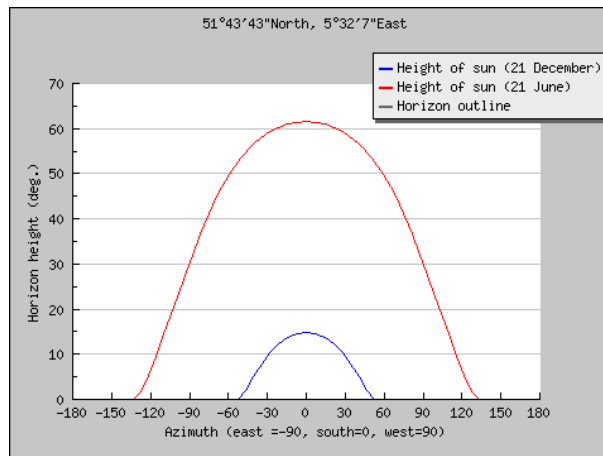
Hm: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m²)



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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<http://re.jrc.ec.europa.eu/pvgis/>

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