

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 51°9'12" North, 5°45'4" East, Elevation: 29 m a.s.l.,
Nearest city: Maaseik, Belgium (7 km away)

Nominal power of the PV system: 1.2 kW (crystalline silicon)

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

Estimated loss due to angular reflectance effects: 3.2%

Other losses (cables, inverter etc.): 8.0%

Combined PV system losses: 18.5%

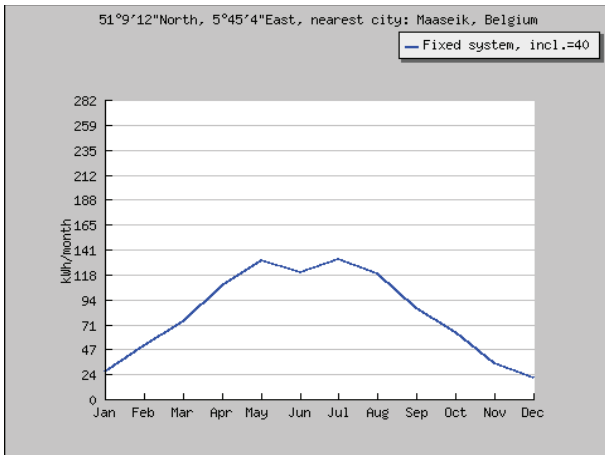
Fixed system: inclination=40 deg., orientation=50 deg.				
Month	Ed	Em	Hd	Hm
Jan	0.84	26.0	0.82	25.4
Feb	1.83	51.3	1.81	50.6
Mar	2.36	73.3	2.38	73.7
Apr	3.58	107	3.70	111
May	4.21	131	4.47	138
Jun	3.99	120	4.30	129
Jul	4.26	132	4.61	143
Aug	3.82	119	4.12	128
Sep	2.85	85.6	3.01	90.3
Oct	2.04	63.2	2.09	64.8
Nov	1.13	33.8	1.12	33.6
Dec	0.65	20.2	0.64	19.9
Year	2.63	80.1	2.76	84.0
Total for year		962		1010

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

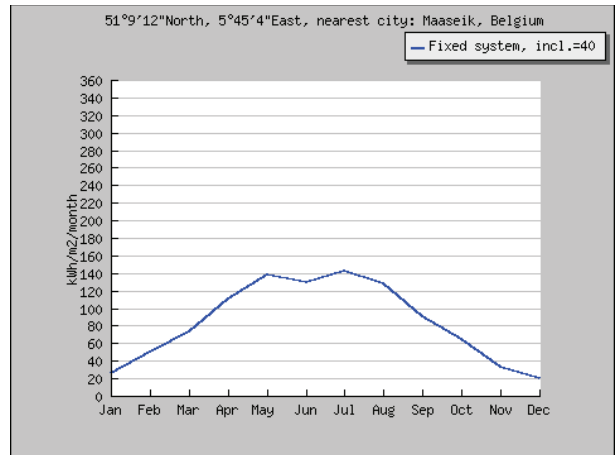
Em: Average monthly electricity production from the given system (kWh)

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

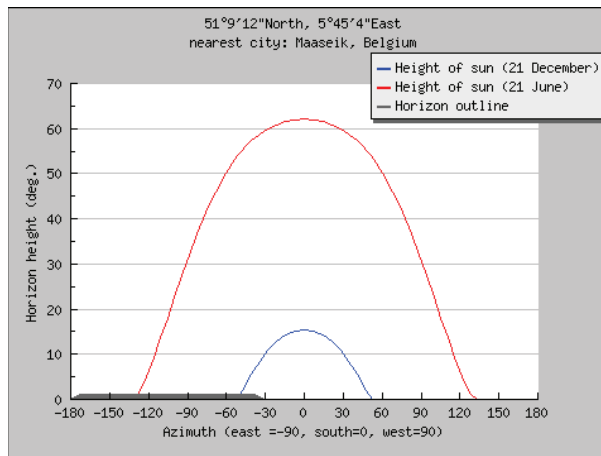
Hm: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m²)



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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