

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 45°18'10" North, 3°0'59" East, Elevation: 1195 m a.s.l.,
Nearest city: Issoire, France (32 km away)

Nominal power of the PV system: 15.8 kW (crystalline silicon)

Estimated losses due to temperature: 12.5% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 2.8%

Other losses (cables, inverter etc.): 5.0%

Combined PV system losses: 19.2%

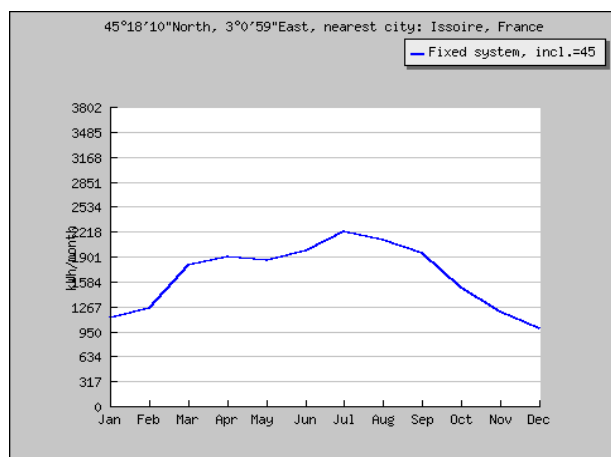
Fixed system: inclination=45 deg., orientation=0 deg.				
Month	Ed	Em	Hd	Hm
Jan	36.20	1120	2.64	81.8
Feb	44.50	1250	3.30	92.4
Mar	58.00	1800	4.45	138
Apr	63.50	1900	4.95	149
May	60.00	1860	4.78	148
Jun	65.70	1970	5.36	161
Jul	71.70	2220	5.86	182
Aug	68.40	2120	5.61	174
Sep	65.00	1950	5.20	156
Oct	48.40	1500	3.75	116
Nov	40.00	1200	2.98	89.5
Dec	32.00	993	2.35	72.7
Year	54.50	1660	4.27	130
Total for year		19900		1560

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

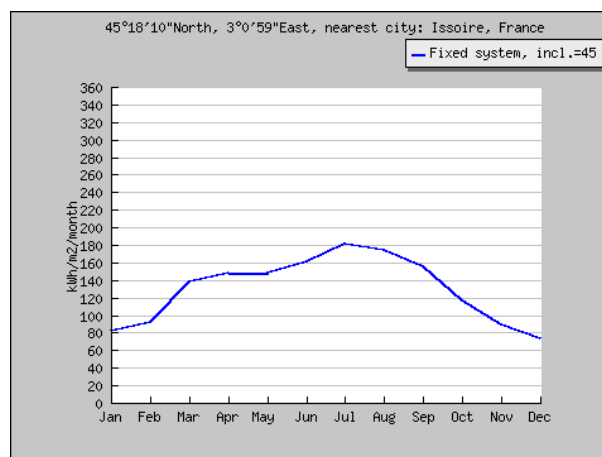
Em: Average monthly electricity production from the given system (kWh)

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

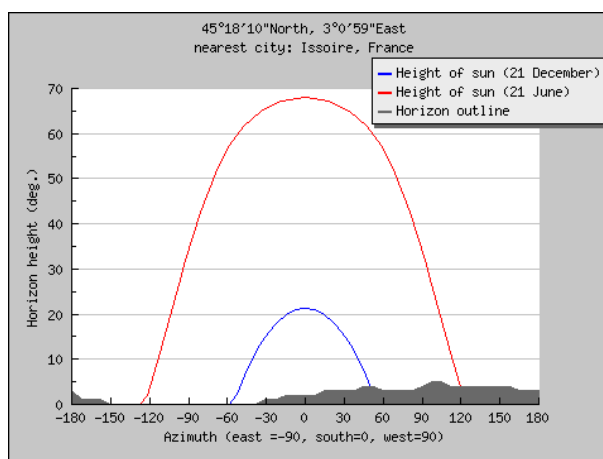
Hm: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m²)



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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