

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 25°16'16" North, 55°18'26" East, Elevation: 0 m a.s.l.,
Nearest city: Dubai, United Arab Emirates (1 km away)

Nominal power of the PV system: 1.0 kW (thin film)

Estimated losses due to temperature: 8% (generic value for areas without temperature information or for PV modules

Estimated loss due to angular reflectance effects: 6.4%

Other losses (cables, inverter etc.): 0.0%

Combined PV system losses: 13.9%

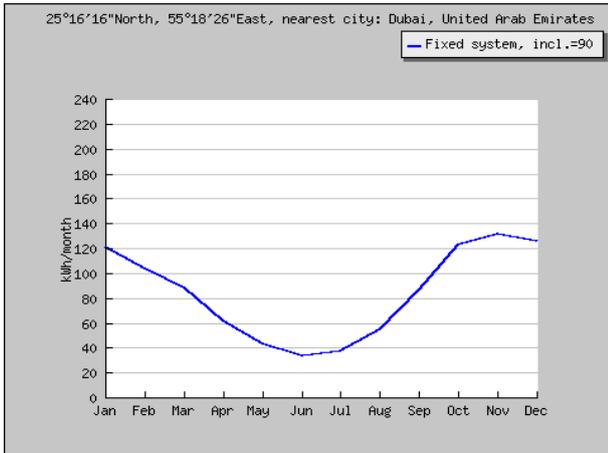
Fixed system: inclination=90 deg., orientation=0 deg.				
Month	Ed	Em	Hd	Hm
Jan	3.89	121	4.34	134
Feb	3.72	104	4.20	118
Mar	2.86	88.6	3.35	104
Apr	2.05	61.6	2.55	76.5
May	1.38	42.8	1.74	53.8
Jun	1.13	33.8	1.33	40.0
Jul	1.21	37.6	1.48	46.0
Aug	1.78	55.1	2.26	70.1
Sep	2.88	86.4	3.46	104
Oct	3.95	122	4.51	140
Nov	4.40	132	4.92	148
Dec	4.05	126	4.51	140
Year	2.77	84.2	3.21	97.8
Total for year		1010		1170

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

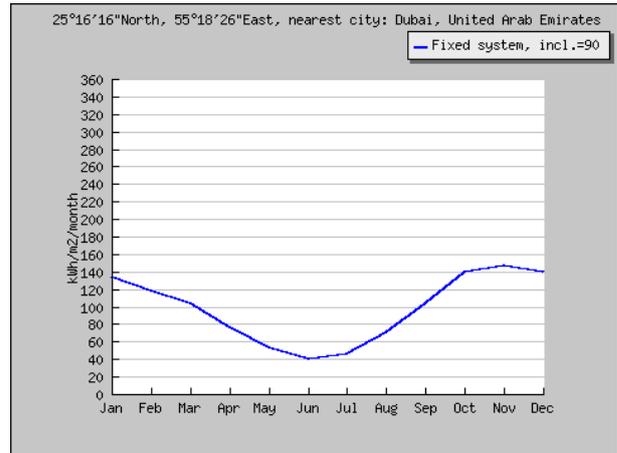
Em: Average monthly electricity production from the given system (kWh)

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

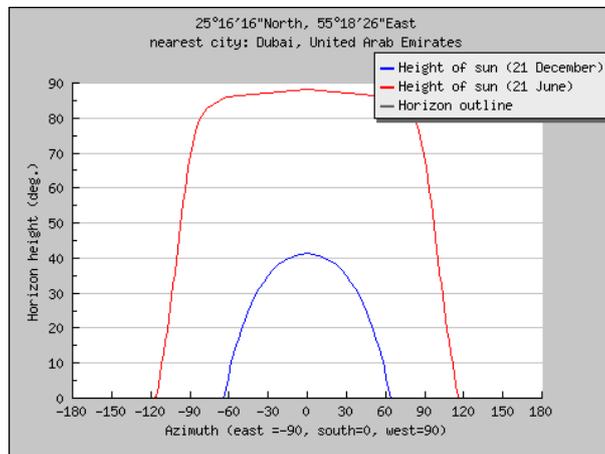
Hm: Average sum of global irradiation per square meter received by the modules of the given system (kWh/m²)



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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