

Performance of Grid-connected PV

PVGIS estimates of solar electricity generation

Location: 47°29'17" North, 19°9'8" East, Elevation: 133 m a.s.l.,
Solar radiation database used: PVGIS-CMSAF

Nominal power of the PV system: 43.4 kW (crystalline silicon)

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

Estimated loss due to angular reflectance effects: 4.5%

Other losses (cables, inverter etc.): 14.0%

Combined PV system losses: 24.4%

| Fixed system: inclination=10 deg., orientation=-134 deg. | | | | |
|---|--------|-------|------|------|
| Month | Ed | Em | Hd | Hm |
| Jan | 27.20 | 843 | 0.86 | 26.7 |
| Feb | 53.50 | 1500 | 1.58 | 44.2 |
| Mar | 105.00 | 3250 | 3.05 | 94.5 |
| Apr | 155.00 | 4640 | 4.59 | 138 |
| May | 184.00 | 5690 | 5.61 | 174 |
| Jun | 193.00 | 5800 | 5.99 | 180 |
| Jul | 192.00 | 5940 | 5.99 | 186 |
| Aug | 163.00 | 5050 | 5.07 | 157 |
| Sep | 114.00 | 3420 | 3.47 | 104 |
| Oct | 72.20 | 2240 | 2.20 | 68.3 |
| Nov | 32.90 | 987 | 1.05 | 31.6 |
| Dec | 20.40 | 632 | 0.67 | 20.7 |
| Year | 110.00 | 3330 | 3.35 | 102 |
| Total for year | | 40000 | | 1220 |

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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