Photovoltaic Geographical Information System

European Commission Joint Research Centre Ispra, Italy

Performance of Grid-connected PV



PVGIS estimates of solar electricity generation

Location: 51°30'0" North, 0°7'34" West, Elevation: 16 m a.s.l.,

Nominal power of the PV system: 1.0 kW (crystalline silicon)

Estimated losses due to temperature: 6.7% (using local ambient temperature)

Estimated loss due to angular reflectance effects: 4.4%

Other losses (cables, inverter etc.): 14.0% Combined PV system losses: 23.3%

Month	Fixed system: inclination=0 deg., orientation=0 deg.			
	Ed	Em	Hd	Hm
Jan	0.53	16.6	0.73	22.8
Feb	1.05	29.3	1.35	37.8
Mar	1.76	54.4	2.21	68.4
Apr	2.88	86.3	3.65	110
May	3.57	111	4.63	144
Jun	3.65	109	4.80	144
Jul	3.65	113	4.84	150
Aug	3.13	97.1	4.15	129
Sep	2.14	64.3	2.79	83.8
Oct	1.29	40.1	1.69	52.5
Nov	0.66	19.7	0.90	26.9
Dec	0.37	11.4	0.52	16.2
Year	2.06	62.7	2.70	82.0
Total for year		752		984

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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Le Cordon Bleu - Green Roof

07.11.11

Please find below a list of sedum, herbaceous perennials & bulbous species that will be used to increase biodiversity on the roof space.

Herbaceous perennials:

Taraxacum officinale Plantago lanceolata Plantago media Anthyllis vulneraria Geranium robertianum

Sedum sp.:

Sedum acre
Sedum anglicum
Sedum foresterianum
Sedum album
Bulbous sp.
Allium flavum
Allium schoenoprasum



Variation in installed substrate depth: between 120 – 150mm of planting medium with fibre terram filter layer at base. Refer to attached technical specification.

Variation in system depth will affect diurnal temperature within the substrate profile and water content. This diversity of substrate conditions will encourage localised variation in species across the roof.

Shelter stones:

Large flat locally sourced stones will be placed on the roof to provide shelter points for invertebrate species.

Please note that the type of substrate used and the variation in its depth will encourage insect habitat creation which in turn will provide a food source for the birds.

Irrigation:

The roof will be irrigated via rain water. This will reduce surface water runoff as let water will be entering the guttering. A tap will be provided at roof level for any additional watering requirements. Irrigation and maintenance will be managed by Le Cordon Bleu in line with the manufacturer's guidelines.

Maintenance:

Full maintenance of the green roof will be carried out in accordance with the suppliers recommendations. This will involve at least 2 maintenance visits per year for weeding, feeding vegitation and ensuring all drainage is clear from blockages.

Example roof images:



