

Grid system presizing

Geographical Site
Juiz de Fora - IF
Country
Brazil

Situation
Time defined as
Latitude
21.8°S
Longitude
43.4°W
Altitude
688 m

Collector Plane Orientation
Tilt
30°
Azimuth
0°

PV-field installation main features

Module type

Technology

Mounting method

Back ventilation properties

Standard

Polycrystalline cells

Flat roof

No ventilation

System characteristics and pre-sizing evaluation

PV-field nominal power (STC)

Collector area

Annual energy yield

Economic gross evaluation

Pnom

Acoll

Eyear

Investment

10.0 kWp

67 m²

13.0 MWh

81902 Real

Specific yield

Energy price

1298 kWh/kWp

0.65 Real/kWh

Meteo and incident energy

Month	Global horizontal (kWh/m².day)	Global on tilted plane (kWh/m².day)
Jan.	4.50	3.94
Feb.	4.06	3.83
Mar.	3.66	3.80
Apr.	4.00	4.72
May	3.79	5.00
June	4.05	5.77
July	3.93	5.44
Aug.	4.25	5.33
Sep.	3.68	4.04
Oct.	3.76	3.66
Nov.	3.75	3.36
Dec.	3.40	2.95
Year	3.90	4.32

System output

Month	System output energy (kWh/day)
Jan.	32.44
Feb.	31.55
Mar.	31.25
Apr.	38.79
May	41.10
Jun.	47.50
Jul.	44.78
Aug.	43.89
Sep.	33.24
Oct.	30.11
Nov.	27.68
Dec.	24.25
Year	35.57

	Gl. horiz. kWh/m².day	Coll. Plane kWh/m².day	System output kWh/day	System output kWh
Jan.	4.50	3.94	32.44	1006
Feb.	4.06	3.83	31.55	883
Mar.	3.66	3.80	31.25	969
Apr.	4.00	4.72	38.79	1164
May	3.79	5.00	41.10	1274
June	4.05	5.77	47.50	1425
July	3.93	5.44	44.78	1388
Aug.	4.25	5.33	43.89	1361
Sep.	3.68	4.04	33.24	997
Oct.	3.76	3.66	30.11	933
Nov.	3.75	3.36	27.68	830
Dec.	3.40	2.95	24.25	752
Year	3.90	4.32	35.57	12982