

# GLOBAL SOLAR ATLAS

BY WORLD BANK GROUP

## Tambopata

-12.837912°,-069.290771°

Tambopata, Madre de Dios, Peru

Time zone: UTC-05, America/Lima [PET]

🕒 Report generated: 24 May 2022

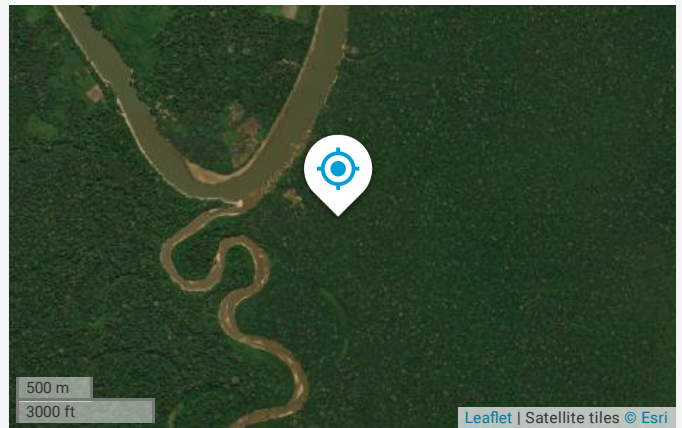
### SITE INFO

#### Map data

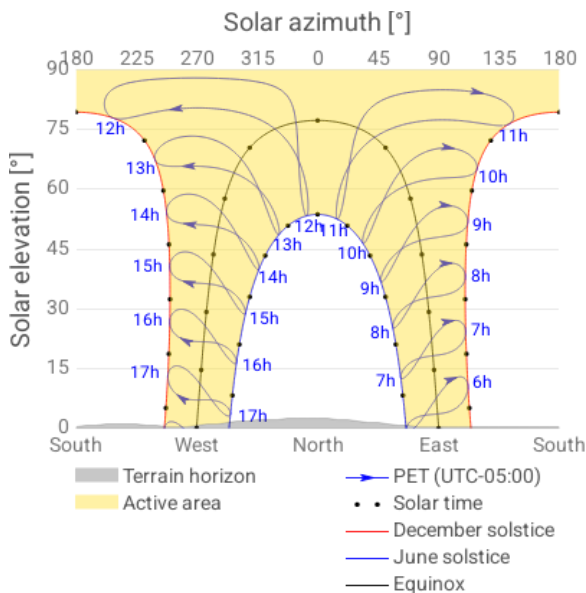
Per year

Direct normal irradiation	DNI	<b>1352.6</b>	kWh/m <sup>2</sup>
Global horizontal irradiation	GHI	<b>1800.2</b>	kWh/m <sup>2</sup>
Diffuse horizontal irradiation	DIF	<b>851.5</b>	kWh/m <sup>2</sup>
Global tilted irradiation at optimum angle	GTI opta	<b>1849.5</b>	kWh/m <sup>2</sup>
Optimum tilt of PV modules	OPTA	<b>15 / 0</b>	°
Air temperature	TEMP	<b>25.1</b>	°C
Terrain elevation	ELE	<b>211</b>	m

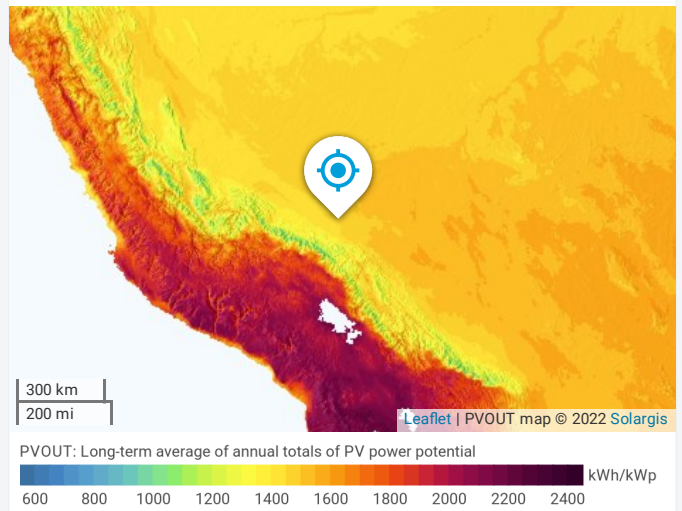
#### Map



### Horizon and sunpath



### PVOUT map



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## PV ELECTRICITY AND SOLAR RADIATION

### PV system configuration



PV system: **Small residential**  
 Azimuth of PV panels: **Default (0°)**  
 Tilt of PV panels: **90°**  
 Installed capacity: **0.4 kWp**

### Annual averages

Total photovoltaic power output and Global tilted irradiation

**246.982**

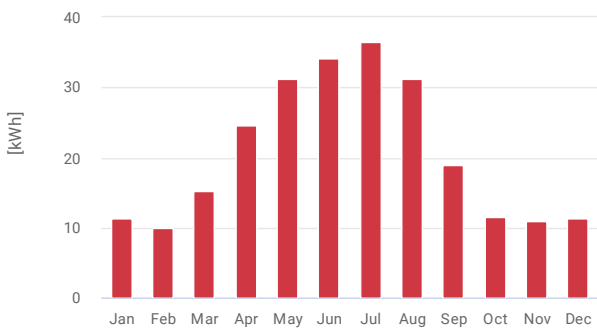
kWh per year

**843.6**

kWh/m<sup>2</sup> per year

### Monthly averages

Total photovoltaic power output



### Average hourly profiles

Total photovoltaic power output [Wh]



UTC-05

### Average hourly profiles

Total photovoltaic power output [Wh]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 - 1												
1 - 2												
2 - 3												
3 - 4												
4 - 5												
5 - 6	0			0	0				0	2	3	2
6 - 7	11	8	7	19	30	28	25	21	14	16	16	14
7 - 8	24	21	24	49	67	74	74	59	36	28	28	26
8 - 9	33	31	40	74	94	104	108	90	57	36	35	35
9 - 10	38	38	54	90	110	124	129	114	74	40	39	39
10 - 11	41	40	63	103	122	136	142	128	84	45	43	42
11 - 12	44	44	69	109	128	143	147	133	89	47	44	44
12 - 13	42	42	67	107	124	142	145	130	86	44	42	40
13 - 14	39	40	60	97	114	130	135	119	76	40	39	39
14 - 15	37	37	49	81	99	114	118	100	60	34	34	35
15 - 16	30	30	34	58	77	91	94	74	39	26	26	28
16 - 17	19	19	18	31	43	50	57	39	16	13	14	17
17 - 18	5	5	3	3	1	1	3	3	0	1	1	3
18 - 19												
19 - 20												
20 - 21												
21 - 22												
22 - 23												
23 - 24												
Sum	365	355	489	821	1,009	1,139	1,175	1,009	633	370	367	364

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## PV ELECTRICITY AND SOLAR RADIATION

### Annual averages

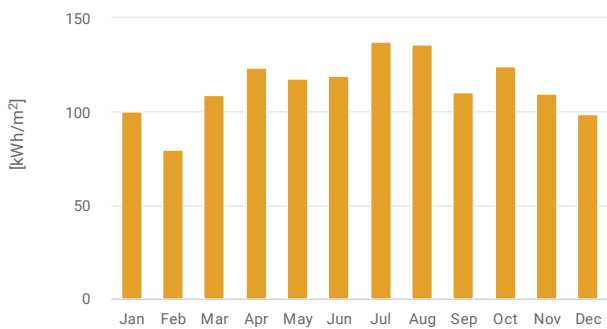
Direct normal irradiation

# 1367.2

kWh/m<sup>2</sup> per year

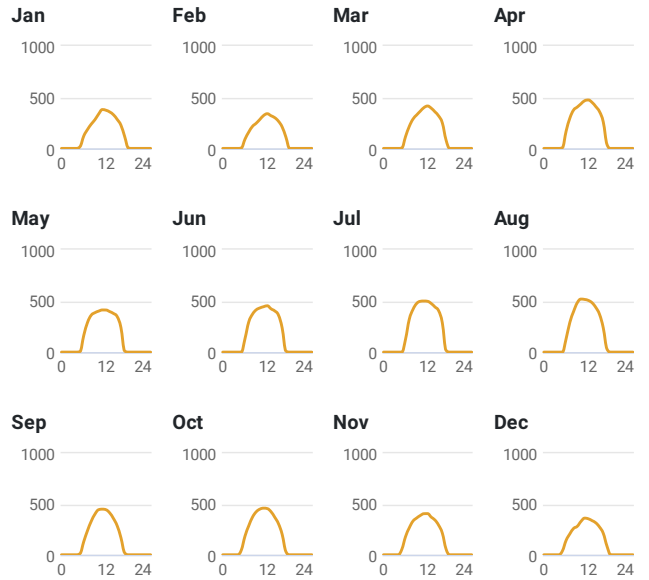
### Monthly averages

Direct normal irradiation



### Average hourly profiles

Direct normal irradiation [Wh/m<sup>2</sup>]



UTC-05

### Average hourly profiles

Direct normal irradiation [Wh/m<sup>2</sup>]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 - 1												
1 - 2												
2 - 3												
3 - 4												
4 - 5												
5 - 6	17	4	4	7	6				12	46	54	38
6 - 7	121	91	116	169	163	133	127	131	130	185	179	142
7 - 8	184	159	214	295	289	294	319	290	237	285	265	206
8 - 9	236	215	285	374	360	370	415	396	329	370	331	259
9 - 10	280	245	326	404	385	412	474	482	400	423	362	280
10 - 11	335	283	363	435	400	431	496	518	444	450	387	329
11 - 12	379	321	398	466	411	443	498	514	449	459	405	361
12 - 13	372	338	414	472	411	452	496	504	443	455	405	354
13 - 14	355	319	392	448	395	423	474	481	412	424	370	336
14 - 15	328	300	357	407	377	402	441	435	357	370	342	314
15 - 16	283	265	317	358	346	361	403	368	285	306	291	273
16 - 17	227	209	249	258	240	235	285	236	169	200	213	211
17 - 18	117	110	83	38	11	10	18	30	19	31	58	84
18 - 19	5											
19 - 20												
20 - 21												
21 - 22												
22 - 23												
23 - 24												
Sum	3240	2859	3517	4131	3795	3966	4445	4384	3687	4004	3662	3188

## GLOSSARY

Acronym	Full name	Unit	Type of use
DIF	Diffuse horizontal irradiation	kWh/m <sup>2</sup> , MJ/m <sup>2</sup>	Average yearly, monthly or daily sum of diffuse horizontal irradiation (© 2021 Solargis)
DNI	Direct normal irradiation	kWh/m <sup>2</sup> , MJ/m <sup>2</sup>	Average yearly, monthly or daily sum of direct normal irradiation (© 2021 Solargis)
ELE	Terrain elevation	m, ft	Elevation of terrain surface above/below sea level, processed and integrated from SRTM-3 data and related data products (SRTM v4.1 © 2004 - 2021, CGIAR-CS)
GHI	Global horizontal irradiation	kWh/m <sup>2</sup> , MJ/m <sup>2</sup>	Average annual, monthly or daily sum of global horizontal irradiation (© 2021 Solargis)
GTI	Global tilted irradiation	kWh/m <sup>2</sup> , MJ/m <sup>2</sup>	Average annual, monthly or daily sum of global tilted irradiation (© 2021 Solargis)
GTI_opta	Global tilted irradiation at optimum angle	kWh/m <sup>2</sup> , MJ/m <sup>2</sup>	Average annual, monthly or daily sum of global tilted irradiation for PV modules fix-mounted at optimum angle (© 2021 Solargis)
OPTA	Optimum tilt of PV modules	°	Optimum tilt of fix-mounted PV modules facing towards Equator set for maximizing GTI input (© 2021 Solargis)
PVOUT_total	Total photovoltaic power output	kWh, MWh, GWh	Yearly and monthly average values of photovoltaic electricity (AC) delivered by the total installed capacity of a PV system (© 2021 Solargis)
PVOUT_specific	Specific photovoltaic power output	kWh/kWp	Yearly and monthly average values of photovoltaic electricity (AC) delivered by a PV system and normalized to 1 kWp of installed capacity (© 2021 Solargis)
TEMP	Air temperature	°C, °F	Average yearly, monthly and daily air temperature at 2 m above ground. Calculated from outputs of ERA5 model (© 2021 ECMWF, post-processed by Solargis)

## ABOUT

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