

GLOBAL SOLAR ATLAS

BY WORLD BANK GROUP

Khmelnyskiy Oblast

49.51693°, 027.115813°

O-231705, Khmelnytskyi Oblast, Ukraine

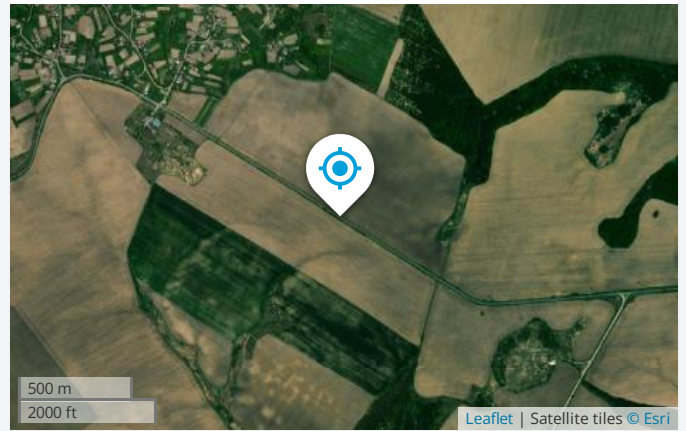
Time zone: UTC+03, Europe/Kyiv [EEST]

🕒 Report generated: 3 Apr 2026

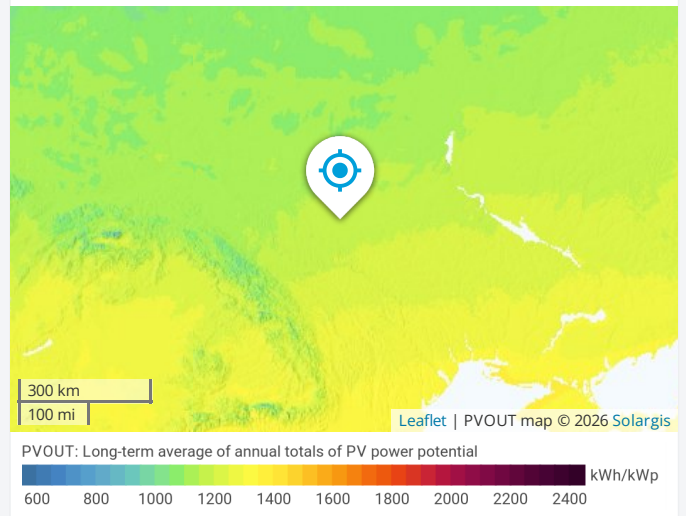
SITE INFO

Map data		Per year	
Specific photovoltaic power output	PVOUT specific	1166.7	kWh/kWp
Direct normal irradiation	DNI	1102.1	kWh/m ²
Global horizontal irradiation	GHI	1186.4	kWh/m ²
Diffuse horizontal irradiation	DIF	579.8	kWh/m ²
Global tilted irradiation at optimum angle	GTI _{opta}	1391.3	kWh/m ²
Optimum tilt of PV modules	OPTA	36 / 180	°
Air temperature	TEMP	8.3	°C
Terrain elevation	ELE	381	m

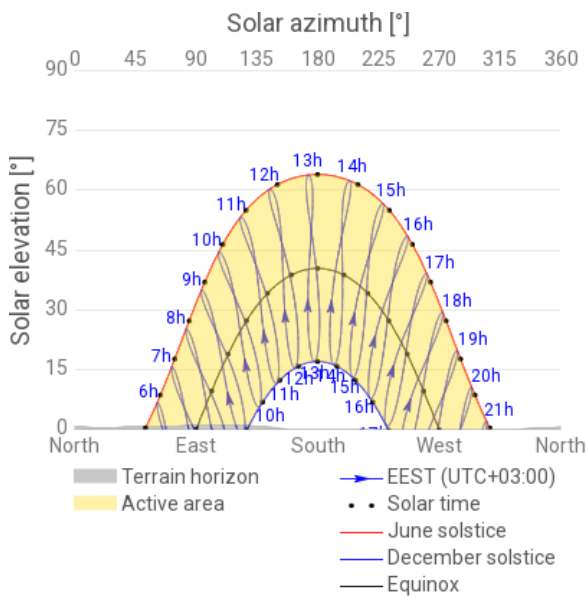
Map



PVOUT map



Horizon and sunpath



GLOBAL SOLAR ATLAS

BY WORLD BANK GROUP

PV ELECTRICITY AND SOLAR RADIATION

Annual averages

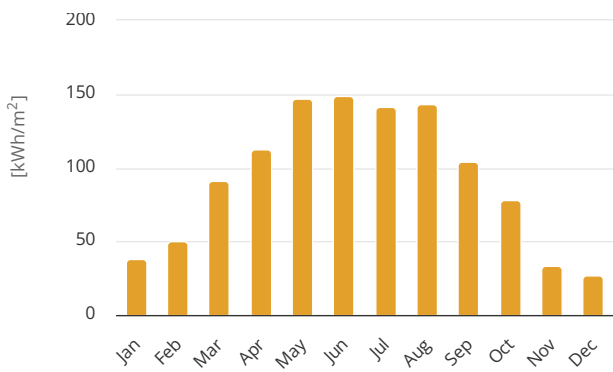
Direct normal irradiation

1115.4

kWh/m² per year

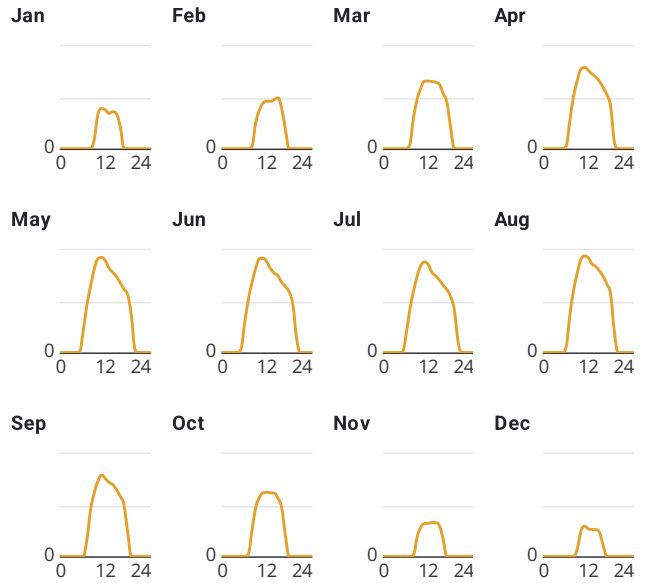
Monthly averages

Direct normal irradiation



Average hourly profiles

Direct normal irradiation [Wh/m²]



UTC+03

Average hourly profiles

Direct normal irradiation [Wh/m²]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 - 1												
1 - 2												
2 - 3												
3 - 4												
4 - 5												
5 - 6					2	16	1					
6 - 7				12	103	142	87	28				
7 - 8			19	136	231	257	209	181	79	11		
8 - 9		12	151	255	323	342	298	303	226	127	7	
9 - 10	46	127	242	332	408	412	374	388	311	239	96	37
10 - 11	169	189	297	388	459	459	424	455	368	288	144	123
11 - 12	195	223	330	397	465	460	442	472	397	311	161	147
12 - 13	189	231	330	383	447	443	429	462	380	313	162	135
13 - 14	172	231	328	364	411	410	391	432	361	310	165	131
14 - 15	180	239	324	351	392	388	374	420	351	309	164	131
15 - 16	169	249	314	328	371	376	353	399	326	283	149	117
16 - 17	106	195	269	297	341	343	328	371	293	237	84	53
17 - 18	4	92	226	263	309	323	307	332	252	102		
18 - 19			104	206	282	296	273	283	118			
19 - 20				34	180	234	209	101				
20 - 21					13	72	55					
21 - 22												
22 - 23												
23 - 24												
Sum	1,231	1,789	2,934	3,745	4,736	4,971	4,555	4,626	3,461	2,530	1,131	873

GLOBAL SOLAR ATLAS

BY WORLD BANK GROUP

GLOSSARY

Acronym	Full name	Unit	Type of use
DIF	Diffuse horizontal irradiation	kWh/m ² , MJ/m ²	Average yearly, monthly or daily sum of diffuse horizontal irradiation (© 2025 Solargis)
DNI	Direct normal irradiation	kWh/m ² , MJ/m ²	Average yearly, monthly or daily sum of direct normal irradiation (© 2025 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 - 2025, CGIAR-CSI)
GHI	Global horizontal irradiation	kWh/m ² , MJ/m ²	Average annual, monthly or daily sum of global horizontal irradiation (© 2025 Solargis)
GTI	Global tilted irradiation	kWh/m ² , MJ/m ²	Average annual, monthly or daily sum of global tilted irradiation (© 2025 Solargis)
GTI_opta	Global tilted irradiation at optimum angle	kWh/m ² , MJ/m ²	Average annual, monthly or daily sum of global tilted irradiation for PV modules fix-mounted at optimum angle (© 2025 Solargis)
OPTA	Optimum tilt of PV modules	°	Optimum tilt of fix-mounted PV modules facing towards Equator set for maximizing GTI input (© 2025 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 (© 2025 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 (© 2025 Solargis)
TEMP	Air temperature	°C, °F	Average yearly, monthly and daily air temperature at 2 m above ground. Calculated from outputs of ERA5 model (© 2025 ECMWF, post-processed by Solargis)

ABOUT

This pdf report (the "Work") is automatically generated from the Global Solar Atlas online app (<https://globalsolaratlas.info/>), prepared by Solargis under contract to The World Bank, based on a solar resource database that Solargis owns and maintains. It provides the estimated solar resource, air temperature data and potential solar power output for the selected location and input parameters of a photovoltaic (PV) power system.

Copyright © 2025 The World Bank
1818 H Street NW, Washington DC 20433, USA

The World Bank, comprising the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA), is the commissioning agent and copyright holder for this Work, acting on behalf of The World Bank Group. The Work is licensed by The World Bank under a Creative Commons Attribution license (CC BY 4.0 IGO) with a mandatory and binding addition (please refer to the GSA website for full terms and conditions of use <https://globalsolaratlas.info/support/terms-of-use>).

The World Bank Group disclaims all warranties of any kind related to the provision of the Work.

The Work is made available solely for general information purposes. Neither the World Bank, Solargis nor any of its partners and affiliates hold the responsibility for the accuracy and/or completeness of the data and shall not be liable for any errors, or omissions. It is strongly advised that the Work be limited to use in informing policy discussions on the subject, and/or in creating services that better educate relevant persons on the viability of solar development in areas of interest. As such, neither the World Bank nor any of its partners on the Global Solar Atlas project will be liable for any damages relating to the use of the Work for financial commitments or any similar use cases. Solargis has done its utmost to make an assessment of solar climate conditions based on the best available data, software, and knowledge.

Sources: Solar database and PV software © 2025 Solargis