GLOBAL SOLAR ATLAS
BY WORLD BANK GROUP

캔자스

38.427774°, -097.119141°
Nighthawk Road, Kansas, United States
Time zone: UTC-06, America/Chicago [CST]

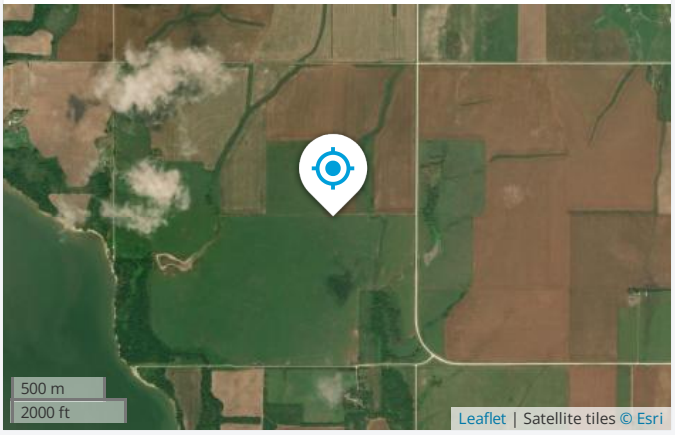
Report generated: 13 Dec 2024

SITE INFO

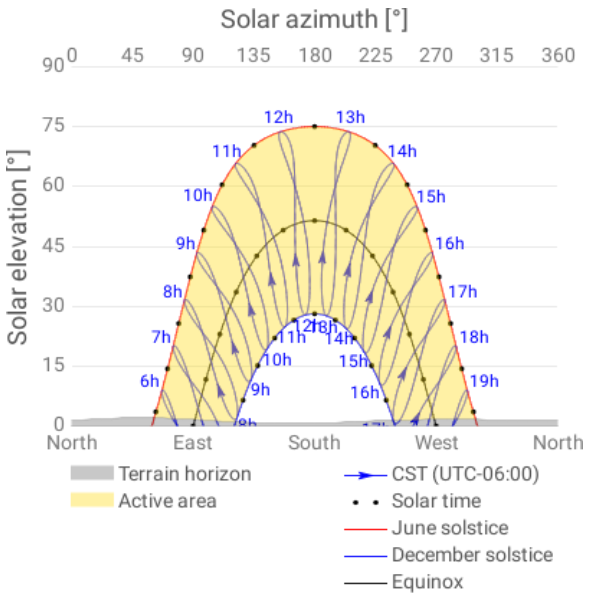
Map data

		Per year	
Specific photovoltaic power output	PVOUT specific	**1586.2**	kWh/kWp
Direct normal irradiation	DNI	**1845.5**	kWh/m²
Global horizontal irradiation	GHI	**1645.1**	kWh/m²
Diffuse horizontal irradiation	DIF	**577.1**	kWh/m²
Global tilted irradiation at optimum angle	GTI opta	**1930.5**	kWh/m²
Optimum tilt of PV modules	OPTA	**35 / 180**	°
Air temperature	TEMP	**13.8**	°C
Terrain elevation	ELE	**N/A**	

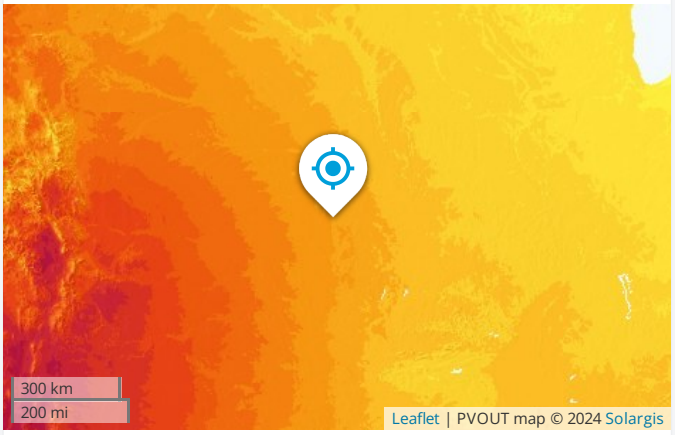
Map



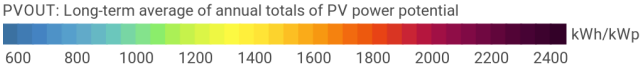
Horizon and sunpath



PVOUT map



PVOUT: Long-term average of annual totals of PV power potential



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PV ELECTRICITY AND SOLAR RADIATION

Annual averages

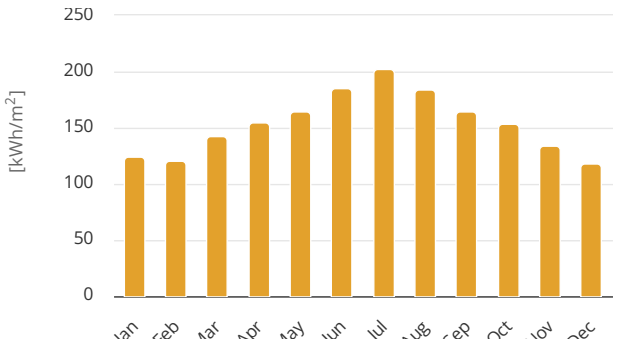
Direct normal irradiation

1847.6

kWh/m^2 per year

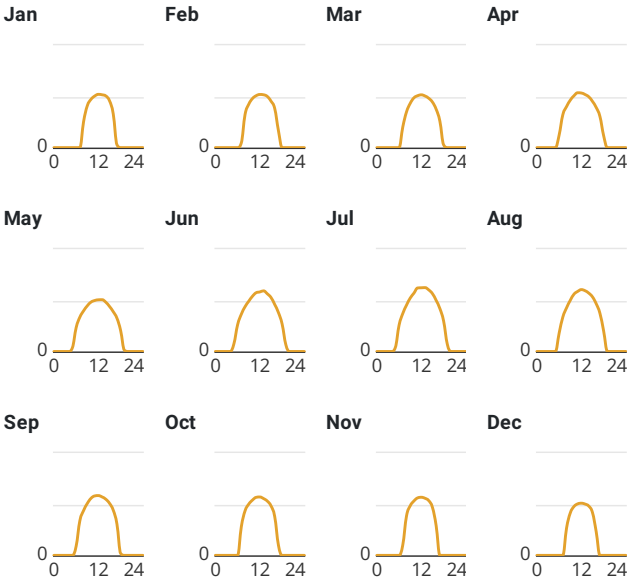
Monthly averages

Direct normal irradiation



Average hourly profiles

Direct normal irradiation [Wh/m^2]



UTC-06

Average hourly profiles

Direct normal irradiation [Wh/m^2]

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
0 - 1												
1 - 2												
2 - 3												
3 - 4												
4 - 5												
5 - 6					38	75	40					
6 - 7				122	233	262	257	178	90			
7 - 8		46	201	322	336	364	371	336	339	280	101	
8 - 9	253	323	349	401	397	437	453	426	438	434	384	266
9 - 10	409	424	432	463	446	491	522	500	507	501	484	414
10 - 11	472	480	486	507	483	540	570	560	557	540	531	477
11 - 12	504	507	507	536	498	574	621	587	581	567	562	503
12 - 13	521	519	516	534	505	582	623	605	584	570	568	510
13 - 14	516	516	505	519	506	592	624	594	571	555	558	501
14 - 15	505	500	482	497	481	564	602	570	548	530	535	481
15 - 16	457	454	445	452	440	528	565	533	508	484	468	417
16 - 17	329	383	375	392	389	460	499	466	441	379	288	230
17 - 18	28	167	258	305	325	380	419	373	305	100		
18 - 19			28	117	203	268	298	200	18			
19 - 20					13	66	71	2				
20 - 21												
21 - 22												
22 - 23												
23 - 24												
Sum	3,994	4,319	4,584	5,164	5,293	6,183	6,535	5,930	5,487	4,940	4,478	3,798

GLOSSARY

Acronym	Full name	Unit	Type of use
DIF	Diffuse horizontal irradiation	kWh/m², MJ/m²	Average yearly, monthly or daily sum of diffuse horizontal irradiation (© 2024 Solargis)
DNI	Direct normal irradiation	kWh/m², MJ/m²	Average yearly, monthly or daily sum of direct normal irradiation (© 2024 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 - 2024, CGIAR-CSI)
GHI	Global horizontal irradiation	kWh/m², MJ/m²	Average annual, monthly or daily sum of global horizontal irradiation (© 2024 Solargis)
GTI	Global tilted irradiation	kWh/m², MJ/m²	Average annual, monthly or daily sum of global tilted irradiation (© 2024 Solargis)
GTI_opta	Global tilted irradiation at optimum angle	kWh/m², MJ/m²	Average annual, monthly or daily sum of global tilted irradiation for PV modules fix-mounted at optimum angle (© 2024 Solargis)
OPTA	Optimum tilt of PV modules	°	Optimum tilt of fix-mounted PV modules facing towards Equator set for maximizing GTI input (© 2024 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 (© 2024 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 (© 2024 Solargis)
TEMP	Air temperature	°C, °F	Average yearly, monthly and daily air temperature at 2 m above ground. Calculated from outputs of ERA5 model (© 2024 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.

Sources: Solar database and PV software © 2024 Solargis