NREL
NATIONAL RENEWABLE ENERGY LABORATORY

Caution: Photovoltaic system performance predictions calculated by PVWatts® include many inherent assumptions and uncertainties and do not reflect variations between PV technologies nor site-specific characteristics except as represented by PVWatts® inputs. For example, PV modules with better performance are not differentiated within PVWatts® from lesser performing modules. Both NREL and private companies provide more sophisticated PV modeling tools (such as the System Advisor Model at //sam.nrel.gov) that allow for more precise and complex modeling of PV systems.

The expected range is based on 30 years of actual weather data at the given location and is intended to provide an indication of the variation you might see. For more information, please refer to this NREL report: The Error Report.

The energy output range is based on analysis of 30 years of historical weather data, and is intended to provide an indication of the possible interannual variability in generation for a Fixed (open rack) PV system at this location.

RESULTS

180,214 kWh/Year*

System output may range from 169,744 to 186,918 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)
January	2.99	10,439
February	3.86	11,914
March	4.45	14,610
April	5.29	16,306
May	5.75	17,719
June	6.30	18,477
July	6.18	18,518
August	6.21	18,676
September	5.75	17,264
October	4.58	14,637
November	3.54	11,651
December	2.93	10,004
Annual	4.82	180,215

Location and Station Identification

Requested Location	500 east peabody chaampign il
Weather Data Source	Lat, Lng: 40.09, -88.22 1.0 mi
Latitude	40.09° N
Longitude	88.22° W

PV System Specifications

DC System Size	129.5 kW
Module Type	Standard
Array Type	Fixed (open rack)
System Losses	14.08%
Array Tilt	27°
Array Azimuth	180°
DC to AC Size Ratio	1.2
Inverter Efficiency	96%
Ground Coverage Ratio	0.4
Albedo	*From weather file*
Bifacial	No (0)
Monthly Irradiance Loss	Jan 0% Feb 0% Mar 0% Apr 0% May 0% June 0% July 0% Aug 0% Sept 0% Oct 0% Nov 0% Dec 0%

Performance Metrics

DC Capacity Factor	**15.9%**