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.

Disclaimer: The PVWatts® Model ("Model") is provided by the National Renewable Energy Laboratory ("NREL"), which is operated by the Alliance for Sustainable Energy, LLC ("Alliance") for the U.S. Department Of Energy ("DOE") and may be used for any purpose whatsoever.

The names DOE/NREL/ALLIANCE shall not be used in any representation, advertising, publicity or other manner whatsoever to endorse or promote any entity that adopts or uses the Model. DOE/NREL/ALLIANCE shall not provide any support, consulting, training or assistance of any kind with regard to the use of the Model or any updates, revisions or new versions of the Model.

YOU AGREE TO INDEMNIFY DOE/NREL/ALLIANCE, AND ITS AFFILIATES, OFFICERS, AGENTS, AND EMPLOYEES AGAINST ANY CLAIM OR DEMAND, INCLUDING REASONABLE ATTORNEYS' FEES, RELATED TO YOUR USE, RELIANCE, OR ADOPTION OF THE MODEL FOR ANY PURPOSE WHATSOEVER. THE MODEL IS PROVIDED BY DOE/NREL/ALLIANCE 'AS IS' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. IN NO EVENT SHALL DOE/NREL/ALLIANCE BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OR ANY DAMAGES WHATSOEVER, INCLUDING BUT NOT LIMITED TO CLAIMS ASSOCIATED WITH THE LOSS OF DATA OR PROFITS, WHICH MAY RESULT FROM ANY ACTION IN CONTRACT, NEGLIGENCE OR OTHER TORTIOUS CLAIM THAT ARISES OUT OF OR IN CONNECTION WITH THE USE OR PERFORMANCE OF THE MODEL.

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

5,241 kWh/Year*

System output may range from 5,001 to 5,418 kWh per year near this location.

Month	Solar Radiation (kWh / m^2 / day)	AC Energy (kWh)
January	1.07	139
February	1.83	223
March	2.80	376
April	4.48	569
May	5.05	657
June	5.71	697
July	6.18	773
August	5.58	705
September	4.06	503
October	2.30	304
November	1.28	163
December	1.02	132
Annual	3.45	5,241

Location and Station Identification

Requested Location	6520 82nd Ave SE, Mercer Island, WA 98040
Weather Data Source	Lat, Lng: 47.53, -122.22 1.1 mi
Latitude	47.53° N
Longitude	122.22° W

PV System Specifications

DC System Size	5.46 kW
Module Type	Standard
Array Type	Fixed (open rack)
System Losses	14.08%
Array Tilt	4°
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	11.0%