

MEMO

Date: Monday, March 10, 2014
To: PV modeling community
From: Jonathan Whitmore and Nate Blair
Subject: NREL Photovoltaic System Datasets

In an effort to allow other modeling teams to validate their own PV performance models, NREL/DOE and related parties are sharing the performance data, coincident weather data and system metadata publicly. This data has been used in the validation of the NREL System Advisor Model. The data continues to be collected but currently is available generally during 2010, 2011 and 2012. For more information on the contents of the files please see the technical report “System Advisor Model: Flat Plate Photovoltaic Performance Modeling Validation Report” which is a detailed examination of this data in comparison to results from the SAM model.

The following is a description of the files available in this folder. The bullets indicate folder depth.

- Mesa Top
 - Clean Data (QCed)
 - Contains one file for each year of data available at the site. QC measures have been applied to this data and all measurements taken during hours which have been removed are marked with a “-999” for measured power. See “System Advisor Model: Flat Plate Photovoltaic Performance Modeling Validation Report” and the forthcoming “Validation of Multiple Flat Plate Photovoltaic Modeling Tools Against Measured Data”
 - Misc
 - Contains documentation used to create a SAM file for the system, as well as a SAM file for the system for each year of interest.
 - Raw Data (not QCed)
 - AC Production – by Inverter
 - The original files (unaggregated) specifying inverter production for each inverter.
 - Aggregated Power Production
 - 15-min data

- 15-minute data for all years obtained.
- Hourly
 - The aggregated hourly data for all three years obtained (2010 through 2012).
- SRRL
 - Snow Data
 - Contains snow files which were downloaded for the SRRL and indicate snow depth and quality at the NREL sites. For more information on the contents of these files, see http://www.nrel.gov/midc/srrl_bms/.
 - Weather Data
 - SRRL weather data for all NREL sites downloaded at http://www.nrel.gov/midc/srrl_bms/. The digits following “SRRL” in the naming scheme indicate what date range each file covers. Some monthly data is available as well as annual data for 2010, 2011 and 2012. More years and files can be downloaded at the link included above.