

# 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 Plat 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.

- Research Support Facility 1
  - 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 Plat 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
      - 2011 and 2012 AC Current
        - AC Current at each inverter for all of 2011 and 2012.
      - 2011 and 2012 DC Voltage
        - DC Voltage at each inverter for all of 2011 and 2012.

- 2011 and 2012 Inverter Energy Production
    - Energy Production at each inverter for all of 2011 and 2012.
  - Full Dataset – 201101
    - Full Dataset for 01/2011 for all “diagnostic” metrics available via SunEdison’s client connect system
  - Full Dataset – 201210
    - Full Dataset for 10/2012 for all “diagnostic” metrics available via SunEdison’s client connect system
- Aggregated Power Production
  - 15-min data
    - 15-minute data for all years obtained.
  - Hourly
    - The aggregated hourly data for all years obtained (2011 and 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/](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/](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.