

Climate Based PV System Performance & Reliability

ARENA: \$268,320
In kind: \$311,000

Sept 2012 to September 2015

Participants:

University of NSW,
CAT Projects,
Clean Energy Council,
Murdoch University,
U.S. National Renewable Energy Laboratories (NREL).

Project Summary

Context:

- Large range of PV modules and systems
- Wide variety of climate conditions
- Large numbers of modules have been in the field for >5 years

Aim:

Provide a publically available, high quality PV performance database containing location-specific technical, operational and performance data. Data will be collated from a variety of representative locations across Australia.

Method & Outcomes:

- Contribution to IEA PVPS Task 13: Performance and Reliability of PV Systems
 - Contribution to PV QA (International PV Module Quality Assurance Task Force)
 - Support for IEC TC82 activities
 - PV Monitoring guidelines
 - PV Climatologies
 - Performance data analysis
 - Analysis of large numbers of PV system data from PVOOutput.org, Solar Schools, large PV systems and public datasets
 - Long term analysis of climate, technology -related factors influencing performance and degradation
 - Nowcasting and short term forecasting for electricity system operation
 - Web-based Reliability Survey
 - Installers and system owners invited to report failures of components and systems.
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Climatologies

