Press Release

Clean Power Research® Breaks New Ground on PV Variability

NAPA, Calif., Sept. 13 – Clean Power Research® announces the publication of a novel approach to quantifying power output variability in "fleets" of photovoltaic (PV) systems. The paper, published in Solar Energy – the official journal of the International Solar Energy Society® – shows that the relative power output variability for a fleet of PV systems can be quantified by specifying the number of PV systems and a quantity referred to as the dispersion factor. This method can be used to assess the variability of an existing fleet of distributed or central station plants or to provide valuable design input for the construction of a new fleet.

The research encompassed in the paper complements the PV grid integration work Clean Power Research has undertaken as a grant awardee of the California Solar Initiative (CSI) Research, Development, Demonstration and Deployment program. For that project, Clean Power Research is focused on several issues in the Planning & Modeling for High-Penetration PV target area, including:

(1) Enhancing the spatial and temporal resolution of SolarAnywhere® to 1 km and 1 minute, respectively
(2) Extending the capabilities of PVSimulator™ to include output variability
(3) Integrating PV modeling capabilities with distribution engineering and analysis tools
(4) and (4) creating a PV value assessment tool to identify optimal sites for PV systems

SolarAnywhere – the online solar irradiance data service created in partnership with the lab of Dr. Richard Perez of the University at Albany, SUNY – is used today by utilities, PV and concentrating solar manufacturers, solar prospectors, state agencies and the federal government to provide accurate historical, real-time and forecast solar irradiance data throughout the continental United States and Hawaii. The model and algorithms in SolarAnywhere are the evolution of those used to construct key elements of the National Solar Resource Database (NSRDB) and Typical Meteorological Year (TMY) irradiance datasets. Clean Power Research makes a large quantity of historical irradiance data available at no charge to the public at www.solaranywhere.com.

Industry-leading forecast capabilities were incorporated into a major release of SolarAnywhere earlier in the year. Those innovations, combined with the research work on PV variability, validation, integration and location optimization, allow Clean Power Research to deliver independent system operators, utility planners and utility-scale solar operators with the data and analytics to make informed design decisions and operate large-scale systems effectively.

About Clean Power Research
Clean Power Research provides software, consulting and research for making intelligent energy decisions. The company's online software services include solar feasibility calculators, quoting tools, incentive management systems, utility bill calculation and system performance monitoring solutions. Utilities, agencies and manufacturers also license the company's databases of electricity rates, incentives and solar irradiance data. Founded in 1998, the company has offices in Napa, Calif., and Kirkland, Wash. For more information visit: www.cleanpower.com.