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PRESS RELEASE

# CSI RD&D Grant Awarded to Clean Power Research Brightens Future of PV Grid Integration

Three CSI RD&D projects to use SolarAnywhere forecast irradiance data

NAPA, Calif., March 12, 2012 – In a third round of funding from the California Public Utilities Commission (CPUC), Clean Power Research (<a href="www.cleanpower.com">www.cleanpower.com</a>) will receive a grant of approximately \$850,000 from the California Solar Initiative Research, Development, Deployment and Demonstration (CSI RD&D) Program. As a result of the grant, Clean Power Research will implement new photovoltaic (PV) fleet simulation tools to cost-effectively predict the variability of solar power caused by cloud cover.

"Accurate solar forecasting is critical for integrating ever-larger PV fleets into the grid, yet the expense and difficulty of obtaining this information can be very high," said Tom Hoff, president of Research and Consulting at Clean Power Research. "This grant builds on our previous CSI RD&D research, allowing us to validate our PV simulation models and make them widely available through easy-to-use software tools. We're honored that the CPUC selected Clean Power Research to complete the next phase of this research."

Participants in the Clean Power Research project include: California Independent System Operator Corporation (<u>California ISO</u>); Pacific Gas and Electric Company (<u>PG&E</u>); Sacramento Municipal Utility District (<u>SMUD</u>); <u>University at Albany, SUNY</u>; Electric Power Research Institute, Inc. (<u>EPRI</u>); Solar Electric Power Association (<u>SEPA</u>); and <u>University of California, San Diego</u>.

#### Maximizing Solar Value with PV Fleet Simulation

With the grant, Clean Power Research will validate its PV fleet simulation methodologies that enable the accurate estimation of power output and variability of a fleet of PV systems without the cost and complexity involved with direct monitoring. Given the intermittent nature of PV, this data is vital for utilities and ISOs who are integrating PV into their planning, scheduling and operating strategies to maintain grid reliability.



Clean Power Research will also produce industry-leading 1-minute, 1 km SolarAnywhere data for California, a requirement for calculating variability at the short time intervals typical for dispatching energy reserves. These new PV fleet simulation capabilities will be made available via software to support projects in distribution planning, smart grid operation, utility load scheduling, and balance area planning and operation.

## Solar Anywhere Supports Three CSI RD&D Grants

In addition to the Clean Power Research project, SolarAnywhere data will be used in the following projects:

- **Screening Distribution Feeders: Alternatives to the 15% Rule** by Electric Power Research Institute, Inc.
- High-Fidelity Solar Forecasting Demonstration for Grid Integration by University of California, San Diego

"Our analysis has shown that SolarAnywhere is one of the most accurate and highly spatially resolved solar resource datasets available," said Jan Kleissl, assistant professor of Environmental Engineering, University of California, San Diego. "Clouds cannot hide from a satellite."

Launched in 2008, SolarAnywhere is the leading source of downloadable historical, real-time and forecast satellite-derived solar irradiance data for the continental U.S. and Hawaii. The lab of Dr. Richard Perez at the University at Albany, SUNY provides models and research innovations for SolarAnywhere, which are an evolution of Perez's work as encompassed in the "SUNY gridded data" of the National Solar Resource Database (NSRDB). Interested users can get started by accessing nocost data at <a href="https://www.solaranywhere.com">www.solaranywhere.com</a>.

## The California Solar Initiative RD&D Program

The CPUC California Solar Initiative has a goal to create 3,000 megawatts of distributed solar by 2016, moving the state toward a cleaner energy future and helping to lower the cost of solar systems for consumers. The CSI RD&D program (<a href="www.calsolarresearch.org/">www.calsolarresearch.org/</a>) funds solar research and demonstration projects that will measurably reduce the cost and accelerate the installation of solar and other distributed technologies that could employ solar for generation or storage, or reduce the use of natural gas.

Read about the new grants at <a href="http://docs.cpuc.ca.gov/PUBLISHED/NEWS">http://docs.cpuc.ca.gov/PUBLISHED/NEWS</a> RELEASE/161190.htm.

#### **About Clean Power Research**

Clean Power Research provides software, research and consulting services to power intelligent energy decisions. Solar prediction, economic valuation and program optimization products make it simple for customers to get fast, accurate, location-specific information about the energy, economic and environmental impact of their renewable energy projects. Utilities, government, state energy offices, engineers, developers, manufacturers, installers and financiers rely on Clean Power Research for project siting, planning and operations, incentive program management, and renewable energy sales tools. Founded in 1998, the company has offices in Napa, Calif., and Kirkland, Wash. For more information, visit www.cleanpower.com.

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