



Hawaiian Electric Company

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IMMEDIATE RELEASE

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Hawaiian Electric & Sacramento Municipal Utility share grant to research adding solar power to utility grids

(Honolulu, Hawaii) The Hawaiian Electric companies, in partnership with the Sacramento Municipal Utility District (SMUD), have won a research grant totaling up to \$2.9 million from the California Solar Initiative Research, Development, Deployment and Demonstration Program to study ways to increase and effectively manage more photovoltaic (PV) generation while maintaining reliability on utility grids. The utilities are working to finalize the budget and project details.

The grant will be matched by up to \$1.3 million of in-kind support from SMUD and Hawaiian Electric and will include industry partnerships with BEW Engineering, Sun Power Corporation and NEO Virtus Engineering, Inc. The SMUD-HECO proposal received the highest evaluation score among 21 applications for the first phase of research funds appropriated by the California Legislature for dispersal by the California Public Utilities Commission (CPUC).

The SMUD-HECO partnership is timely as both utilities are experiencing rapid growth of PV installations on their systems that will require new tools to predict and monitor high levels of PV generation on the grid while maintaining reliability.

To do this, the research effort will integrate new solar monitoring hardware and develop forecasting software. It will provide tools for utilities around the country to better manage high penetration of PV generation using technologies such as advanced metering infrastructure (AMI). The effort will also test inverter controls on PV systems. (An inverter changes solar electric direct current to household alternating current and helps manage the export of PV-generated electricity to the utility grid.)

“This project is one among many that demonstrate Hawaiian Electric’s commitment to finding solutions to the challenges of adding intermittent, distributed electric generation such as photovoltaic to our grids using the best and most innovative technology available,” said Robbie Alm, Hawaiian Electric executive vice president. “Solar electricity, both utility-scale and customer-sited, must play a significant role if we are to reach Hawaii’s clean energy goals.

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Hawaii utilities – particularly Maui Electric and Hawaii Electric Light Company with small, isolated grids and a lot of photovoltaic installations on homes and businesses – are recognized as natural laboratories and leaders in addressing grid integration challenges that will ultimately be experienced by many utilities across the nation. The research project aims to provide utilities and the industry with practical tools to reliably integrate increasing levels of PV on utility grids.

The new systems will be tested and validated at residential, commercial, and utility-scale deployments in California and Hawaii. The research will develop graphical displays that overlay PV location and output information on top of the transmission and distribution system information. Operators and system planners can then visually identify high value locations for distributed PV and readily locate areas requiring grid modifications to enable higher PV penetration.

"The California Solar Initiative is one of the greatest focused efforts to promote solar photovoltaics ever seen and is designed to help build a sustainable solar industry. Integrating substantial amounts of PV into the grid is part of that vision," said CPUC President Michael R. Peevey. "The research projects approved today will remove barriers and provide key insights into how we can efficiently use the energy from PV being produced on a million solar roofs."

In all, the CSI RD&D program may invest up to \$50 million to fund solar research and demonstration projects with the goal of measurably reducing the cost and accelerating installation of solar and other distributed renewable technologies, as well as improve electricity storage to reduce the use of natural gas in California. In Hawaii, the addition of more solar electric generation will help reduce the use of imported oil and help meet the state's aggressive renewable energy goals.

More information is available at:

http://docs.cpuc.ca.gov/PUBLISHED/NEWS_RELEASE/114798.htm

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