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## **Tecogen Supplies Three Ultra-Clean CHP Modules to Sacramento Electric Utility for Microgrid Demonstration Project**

WALTHAM, Mass., March 1, 2011 /PRNewswire/ -- Tecogen Inc., the leading manufacturer of advanced modular Combined Heat and Power (CHP) systems, today announced that it has supplied to the Sacramento Municipal Utility District (SMUD) three advanced CHP modules for installation at its corporate headquarters. These modules, each rated at 100 kW electrical output, will be utilized year-round at the facility for supplying a significant portion of its electrical, cooling, and hot water requirements. Most significantly, these modules are equipped with two important, advanced features that will be demonstrated for the first time in a commercial application at the SMUD headquarters.

Specifically, the modules are equipped with sophisticated control algorithms that enable the units to be operated as a Microgrid in the electric circuit configuration being prepared at the site (see also <http://www.tecogen.com/release/pr10-0921SMUD.htm>). Per the Department of Energy (DOE) definition of a Microgrid, the units will have the ability to operate normally in conjunction with the utility's grid, but then in the event of a utility outage be able to seamlessly continue to power a selected portion of the utility site. The reverse process of reconnecting to the utility grid is likewise seamless. The second ground-breaking feature incorporated into these modules is a newly developed emissions reduction system that will enable the units to operate at extremely low levels of "criteria" (regulated) pollutants. While not required to do so in the Sacramento location, these units will be used to validate long term emissions levels that meet or exceed those required under the California Air Resources Board's (CARB) distributed generation emissions standards for 2007, a heretofore unattainable goal for engine-based equipment. Notes Mark Rawson, SMUD's research manager for the microgrid project, "We pride ourselves on promoting technologies that enable SMUD and SMUD's customers to be good stewards of the environment; highly efficient CHP systems such as these that have very low emissions play well into SMUD's environmental strategies," Rawson added.

Both the Microgrid and Ultra-low emissions features are the culmination of multi-year research programs sponsored by the California Energy Commission, the Southern California Gas Company, and DOE. The Microgrid technology is used by Tecogen under exclusive license from the Wisconsin Alumni Research Foundation, the intellectual property management affiliate of the University of Wisconsin-Madison and was developed and refined in a collaborative effort involving researchers from the University of Wisconsin, American Electric Power, Tecogen and with oversight and management by the Lawrence Berkeley Laboratory, Sandia National Laboratory and the Consortium of Electric Power Reliability (CERTS). The advanced emissions system was developed by internal Tecogen research staff with program management by DE Solutions Inc. (see also

<http://www.tecogen.com/release/pr09-0617Emission.htm>).

"The capabilities of the INV-100 modules shipped to Sacramento for the SMUD programs are exceptional", commented Bob Panora. "Through state-of-the art technology developed in these programs, we are able to bring to the market a cost-competitive, modular CHP module, but with UPS/Outage capability, and emissions on par with the best technology available to much larger, multi-megawatt power plants."

The SMUD microgrid/CHP plant is expected to be operational by mid-2011.

### **About Tecogen**

Tecogen is a leading manufacturer of Combined Heat and Power products including natural gas engine-driven cogeneration and air conditioning systems. Tecogen systems supply electric power or cooling while heat from the engine is recovered and used at the facility.

Benefits are reductions in energy costs and greenhouse gas emissions. Tecogen has an installed base of more than 2,000 units in the field supported by a network of engineering, sales and service personnel across the United States. Please visit [www.tecogen.com](http://www.tecogen.com).

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