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Tecogen Launches First CHP Product to Run Seamlessly On and Off the Utility Grid, Using an Advanced Control System

Premium Power Module CM-100 Delivers Energy Cost Savings, High-Quality Power and Hot Water

WALTHAM, MA -- (MARKET WIRE) -- 03/28/07 -- Tecogen Inc., the leading manufacturer of small natural gas-driven cogeneration modules, today announced the launch of the Premium Power Module CM-100, an inverter-based, 100-kilowatt, combined heat and power (CHP) module. This is the first engine-driven product that will carry full UL Certification for "utility-safe" interconnection, while also providing seamless power transfer to stand-alone operation in the event of a power outage. The product features the proprietary "TecoLink" control software, incorporated under exclusive license from the Wisconsin Alumni Research Foundation, enabling multiple machines to load-share on an isolated bus, without any interconnecting or supervisory controls.

The Premium Power Module features a low-emissions natural gas engine, which drives a water-cooled permanent magnetic generator (PMG). The engine is operated over a wide speed range, depending on the load requirement, while the power electronics convert the variable frequency output from the PMG to high quality 60-Hertz power. Variable speed operation in grid-tie maximizes fuel efficiency under part load conditions, while also allowing operation in a "peaking" mode of 125-kilowatt for several hundred hours per year to offset high utility demand tariffs or to obtain extra savings from utility demand reduction programs.

The engine-drive system is highly responsive and can generally operate through large step load changes in standby mode without the need for energy storage devices such as batteries.

"The inverter interface is a major technological breakthrough for engine-driven CHP systems," said Bob Panora, president of Tecogen. "We have made the engine independent of the grid, freeing it to operate at the best RPM for fuel economy and cost saving."

The product will also be UL 1547 certified, which is an essential requirement for all pre-packaged modules to qualify for simple, fast-track interconnection permits with host utilities. Moreover, the inverter simplifies management of the otherwise complex control problem associated with multiple power sources operating together on an isolated circuit.

"Looking to the future, the platform can be easily modified for 50-Hertz power and can integrate power from alternative energy sources like photovoltaics," added Panora.

The company is taking orders for the products now, with the first units scheduled for shipment in the next few months. Tecogen began the development of its Premium Power Module CM-100 in 2004 with support from the California Energy Commission's Public Interest Energy Research (PIER) program and Sempra Utilities (Southern California Gas/San Diego Gas & Electric).

"The California Energy Commission is a strong supporter of combined heat & power because of its efficiency, reliability and environmental attributes," said CEC Commissioner John Geesman. "We are pleased to support innovative concepts such as Tecogen's Premium Power Module that enhance the value of combined heat and power to end users and California."

The product's new back-up capability addresses a key demand from the commercial and institutional communities, which have grown increasingly concerned about utility grid blackouts and brownouts, natural disasters, security threats and antiquated utility infrastructure. Meanwhile, businesses continue to worry about the ever-increasing costs of system downtime.

Tecogen's CHP technology is clearly beneficial to the environment. Modules meet the strictest international emission standards and, with the on-site thermal recovery (for heating water and indoor spaces), operate at two to three times the efficiency of conventional power plants. Greenhouse gas emissions are likewise reduced by over 50%. That's why CHP technology has already been endorsed by environmental organizations such as the Sierra Club and by the U.S. and state governments.

The product's advanced control system was developed at the University of Wisconsin, funded through the U.S. Department of Energy CERTS Microgrid Project and directed by the Lawrence Berkeley National Laboratory. The Consortium for Electric Reliability Technology Solutions (CERTS) was created to research, develop and disseminate new technologies that protect and enhance the reliability of the U.S. electric power system and functionality of new competitive electricity markets. Other project participants include American Electric Power (AEP), Northern Power Systems and Sandia National Laboratories.

About Tecogen

Tecogen Inc. operates in the distributed generation market and is a leading manufacturer of natural gas fueled commercial and industrial cooling and cogeneration systems. Tecogen has an installed base of more than 1,800 units, which it supports through an established network of engineering, sales, and service support. Tecogen is based in Waltham, Massachusetts with service centers located in seven regions of the United States. For more information, please visit www.tecogen.com.

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