

HOT TOPICS IN COGENERATION

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InVerde e+ Enables Energy Storage and Demand Response

Tecogen's InVerde e+ is setting a new standard for Combined Heat and Power (CHP), delivering robust building resiliency while saving customers money.

Among several innovations available with this state-of-the-art CHP system are direct inputs for battery storage or renewable integration.

Energy storage is a vital part of any building's energy-savings strategy and the InVerde e+ addresses it with this unique integration feature.

"We have seen more and more facility managers and owners starting to incorporate demand management programs into their energy plan," said Dale Desmarais, Director of Business Development for Tecogen. "The savings are significant and these DM initiatives directly support the time of use approach that the utilities control with variable pricing schemes. When you understand these programs, you can take advantage of technology like the InVerde e+ and battery storage systems to maximize your savings."

The DC input option on the InVerde e+ allows for seamless integration with battery back-up or renewable power arrays. The battery input capability enables uninterrupted transfer during an outage via micro-grid capability. Along with battery connectivity, solar PV arrays or other renewable energy sources may directly connect to the unit, providing power conditioning for the array and eliminating the need for an additional inverter.

With Tecogen's proprietary integrated micro-grid, the InVerde e+ can function as a true



building energy management system. By transferring loads as demand requires and optimizing the power sourcing, the InVerde e+ and its proprietary CERTS microgrid work to ensure maximum efficiency and savings are achieved for the building.

Follow this link for a [Product Overview of the InVerde e+](#). [Click here](#) for a free site assessment to determine if Tecogen's cutting-edge clean energy technology is right for your building.

INFINITE POTENTIAL TTcogen

World's Most Efficient Micro CHP Unit now Available in the USA TTcogen Introduces Micro 35kW

TTcogen LLC (a joint venture affiliate company of Tecogen® Inc. NASDAQ: TGEN) is pleased to announce the availability of the TEDOM Micro



35 KW combined heat and power unit (CHP) in the U.S.

As the most efficient packaged solution in its size range on the market today, the TEDOM unit gives facilities that may have been deemed too small for a cutting-edge cogeneration solution in the past, a second chance at CHP.

The Micro 35 kW unit offers a compact 'plug and play' design that allows easy installation and delivers electricity and heat to a building in an ultra-efficient way.

By recycling the waste heat from the constant speed Kubota industrial engine for useful applications, **the Micro 35 achieves total effi-**

ciency of more than 95% - well in excess of the 30-40% efficiency range of traditional electric solutions.

For customers, this translates into direct savings on utility bills from day 1 and an average equipment payback period of 2-5 years. Powered by affordable natural gas, propane, or biofuel (renewable natural gas or RNG) the system's flexibility opens up the market for cogeneration to new operators.

Appropriate for hotels, condos, co-ops, apartment buildings, hospitals, nursing homes and other dormitory-style buildings, the super silent operation allows the small units to be located in noise sensitive situations inside of the building. With dimensions of 76.8" L x 33.1" W x 72.3" H the TEDOM Micro 35 kW unit lends itself to easy retrofitting of existing buildings and space-restricted areas. Advanced expert engineering design ensures extremely low emissions so that air quality is never compromised. Similarly, remote monitoring and rapid maintenance response by Tecogen's expert nationwide service team guarantees optimum equipment performance and a hassle-free ownership experience for facilities managers - the long service life of the unit compounds this benefit.

For a free site assessment to see if the Tedom Micro 35 kW CHP unit is appropriate for your building please visit: <http://www.tecogen.com/products-request-a-free-economic-analysis.htm>

SETTING THE PACE FOR CLEAN POWER FINANCING

When it comes to converting to a sustainable clean energy solution for their property, even the most energy-conscious building owners and facility managers need to consider one question; what will it cost and how will I pay for it?

In many cases customers can take capital investment out of the equation by utilizing programs like the property-assessed clean energy (PACE) model. PACE is an innovative program that makes it possible for owners of commercial and industrial properties to obtain low-cost, long-term financing for energy-efficiency, water conservation and renewable energy projects.

PACE statutes authorize municipalities and counties to work with private sector lenders to provide upfront financing to property owners for qualified projects, and to collect the repayment through annual assessments on the property's real estate tax bill. PACE financing terms may extend up to 20 years with projects offering utility and other cost savings that are well in excess of the amount of the assessment payment.

PACE programs are available for hotels, office buildings, industrial and agricultural buildings, retail and multi-family residential units. PACE funds 100 percent of the hard and soft development costs and the program transfers upon sale like any other real estate tax or water bill. **Unlike a lease or PPA model, with PACE financing the building owner owns the installed equipment right from the beginning. Because the repayment is via an incremental property tax assessment, payments are hassle free and responsibility for payments transfers seamlessly.**

A good example of how the PACE program works is Tecogen's most recent PACE project - completed last year at the Meriden YMCA in Meriden, CT.

Connecticut Green Bank's C-PACE program (Commercial Property Assessed Clean Energy) financed \$372,466 for the facility upgrades, including installation of an ultra-efficient Tecogen CM-60 kW cogeneration unit and some LED lighting. These upgrades are expected to save over \$34,000 annually in energy costs and nearly \$700,000 over the full financing term; savings the Meriden YMCA will use to provide additional funding for scholarships for their kids camp and memberships for families in need.

Although packed with potential, the growth curve for the Combined Heat and Power (CHP) installations has lagged behind other green energy expenditures partially because of a struggling economy where building owners may lack the upfront capital to invest in energy-saving technology. **By utilizing programs like PACE, a lack of financing should never be a hurdle to installing efficient clean power equipment like CHP, and delivering widespread energy savings for buildings.**

PACE programs are available in CA, CO, CT, FL, GA, IL, KY, MI, MN, MD/D.C., MO, NH, NJ, NY, OH, OR, RI, TX, UT, VA and WI. For more information on how to capitalize on programs like PACE, speak with a Tecogen expert today at 800-678-0550.

