

Tecogen

& Affiliated Companies

- An Overview



Corporate Background

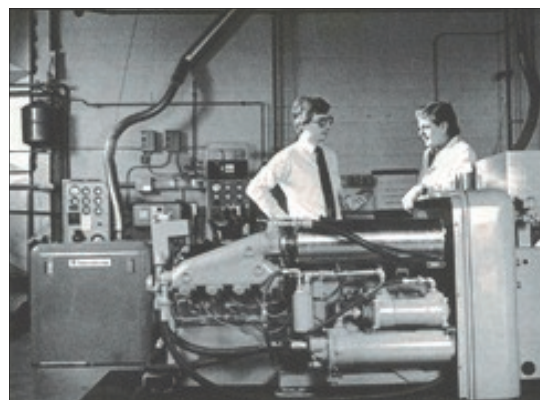
Tecogen Inc. (Waltham, MA, USA) is America's leading manufacturer of modular natural gas engine-driven industrial energy solutions for commercial and industrial use. Tecogen's products include combined heat and power (CHP) modules, chillers, and high-efficiency hot water heaters. With an installed base of more than 2,100 units, Tecogen systems are supported by an established network of engineering, sales, and service personnel across the United States. Tecogen researches, develops, manufactures, sells, installs and services its technology and systems globally with single point accountability. Systems are designed to deliver efficiency, reduce energy costs, nearly eliminate greenhouse gas emissions, and alleviate congestion on the national power grid.



George Hatsopolous discusses advanced engine development during a 1970 visit to Thermo Electron with Henry Ford II and Laurance Rockefeller.

Formed in the 1960's as the Research and Development New Business Center of Thermo

Electron Corporation, Tecogen continues the tradition of not only ground breaking research but successful technology application and product advancement. Tecogen's products feature a simple, standard design with a reliable engine in a modular, packaged unit. The package integrates as much factory-assembled equipment as possible, avoiding costly custom design and



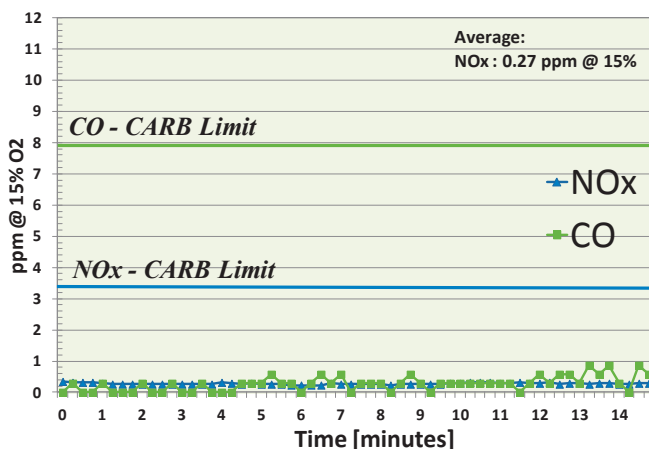
Engine related development continues at Thermo circa 1982 with the prototype Tecogen CM-60 combined heat and power system.

installation. These products produce electricity, or mechanical power, while capturing the waste heat that is normally lost during the energy conversion into power. This waste heat is used on-site for heating water or building spaces at no additional cost to the customer or environment. The result is significant energy and cost savings, as well as proportional decreases in carbon footprint and greenhouse gas emissions.

Tecogen markets and sells directly to engineering firms, its base of factory representatives and even to the general public. This diversified sales and marketing regime allows for great flexibility in an ever changing market where environmental concerns, economic viability, policy initiatives, and social responsibility are all factors driving the need for increased use of reliable, clean, and efficient energy systems. Tecogen has been helping customers integrate distributed energy resources into their facilities for over 30 years.

Products

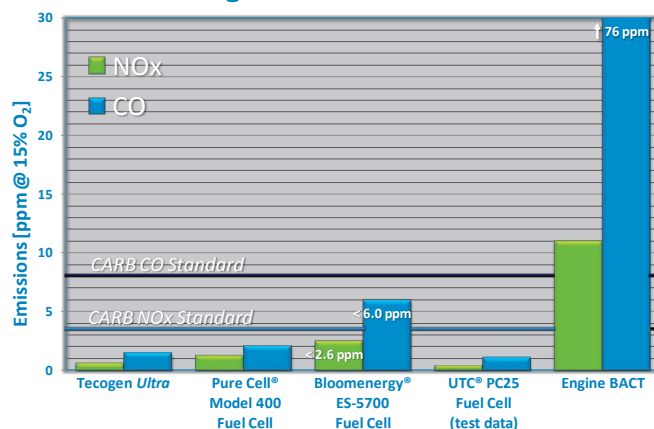
All Tecogen product lines are eligible for installation in the most stringent air quality districts in the United States such as those of Southern California and the American North East. With the implementation of Tecogen's proprietary ultra low emissions system, this revolutionary patent pending system reduces criteria pollutant (contributors to smog) to levels on par with fuel cells.



A factory run test of a typical Ultra equipped CHP unit (InVerde) verifies that Tecogen Ultra Emissions levels are well below the California Air Resource Board (CARB) standards adopted in 2007.

All Tecogen products have customized microprocessor-based controls for fully automatic operation, networking capability, and remote monitoring by either phone or internet.

Tecogen Ultra vs. Fuel Cells



A comparison of Tecogen Ultra emissions to manufacturer's published fuel cell data, independently published field test cell data and EPA standard BACT (Best Available Control Technology) limits.

Combined Heat and Power (CHP)

Tecogen's CHP modules produce electricity and hot water. Powered by natural gas-fueled engines the CHP systems can significantly reduce electrical demand, shielding customers against soaring electric rates while cutting energy costs and global emissions by 40%. Meanwhile, free "waste" heat is recovered from the system and used to offset fuel that would otherwise be needed for water heaters and boilers, creating additional savings in the facility's energy bills. Tecogen modules achieve this production of electricity and hot water with 90% overall efficiency. Traditional applications include hospitals, universities, health clubs, office buildings, multi-unit residential buildings, factories, municipal buildings, and military installations. The CHP product line includes two models: InVerde® and TECOGEN®.

Tecogen's premier CHP product is the InVerde module, a 100-kW inverter-based system that meets the growing customer demand for black-start capability, simplified interconnection with the electric utilities, premium power quality, and higher part-load efficiencies. The InVerde is fully compliant and utility certified which allows for a

much simpler permitting process and standardized utility interconnection. The InVerde can also be easily programmed for alternative voltages and frequencies to accommodate worldwide power grids without penalty or de-rating.



Located on Pier 7 in the heart of Brooklyn, this 600 kW CHP plant provides all the electricity, heating and cooling for the warehouse and offices owned and operated by Phoenix Beverages. This microgrid operates completely independent of the utility grid

Multiple InVerde units can operate as a standalone microgrid, equipped with licensed software that will allow a cluster of units to effortlessly and seamlessly align themselves to share a load without complex controls. InVerde systems can run seamlessly in parallel with the grid or independently whether by design or incidental utility outage.



CEC Chair Dr. Robert Weisenmiller, Robert Panora, Pres. of Tecogen and Jeff Reed, Dir. of Emerging Technologies at SoCalGas gather to unveil Tecogen's InVerde Ultra 100

Widespread deployment of these units will result in reductions in carbon emissions, fuel consumption, and peak power demand on the utility grid, as well as electricity cost savings, deferred central station and transmission costs, and improved energy security.



This is the Tecogen CM-75, a CHP system capable of producing 75 kW of electricity while capturing up to half a millions BTU's of free waste heat.

TECOGEN® cogeneration modules, available in sizes of 60 and 75 kW, are induction-based modules meant only for grid-connected operation. Solid, dependable technology and modular design make this work horse a favorite in applications where interconnection with the local power grid is not as regulated and where standby power is not a priority.

Engine-Driven Chillers

Tecogen's TECOCHILL® natural gas engine-driven chillers displace electrical demand associated with providing cooling for a building thereby

considerably reducing energy and “on-peak” electrical demand charges. These benefits are particularly significant in the summertime when electricity rates are at their highest, and natural gas is “off-peak” and especially affordable.



Tecogen Tecochill plant featuring three 400 ton DTx chillers provide cooling and hot water for the capital building of California in Sacramento.

The chillers can provide both cooling and heat for a building. Free “waste” heat can be recovered from the system and used to offset fuel that would otherwise be needed for water heaters and boilers, resulting in additional savings on energy bills and added energy efficiency.

TECOCHILL® products are available in capacities ranging from 25 to 400 tons, with the smaller units air-cooled and the larger ones water-cooled.

High Efficiency Water Heater

The Ilios High Efficiency Water Heater combines traditional boiler technology with the power of an engine driven heat pump to cut fuel consumption and carbon emissions in half. Free waste heat from the engine is captured and repurposed which adds to the unit's capacity and efficiency. The synergy of advanced heat pump and engine technology results in twice the efficiency of a gas fired boiler.



Now providing hot water with twice the efficiency a traditional boiler for the Sidney Albert Albany JCC, this unit was the first Ilios High Efficiency Water Heater to leave the factory Tecogen factory in Waltham, Massachusetts.

With a nominal heating capacity of 500,000 BTU/hour, Ilios units are modular and scalable to serve larger thermal loads. The Ilios High Efficiency Water Heater is ideal for locations with a gas demand of at least 4000 Therms/month, such as water parks, swimming pools, hotels, hospitals, apartment buildings and recreation centers. Learn more about Tecogen at www.tecogen.com.

Affiliated Companies



American DG Energy, an on-site utility, founded by Drs. John and George Hatsopoulos, the founders of Thermo Electron, supplies low-cost energy to its customers through distrib-

uted power generating systems. The Company is committed to providing institutional, commercial and small industrial facilities with clean, reliable power, cooling, heat and hot water at lower costs than charged by local utilities without any capital or start-up costs to the energy user. American DG Energy offers customers a “no cost, no

responsibility, no risk, just savings" approach for making savings from on-site energy solutions like Tecogen. On-site utility customers only pay for the energy produced by the systems and receive a guaranteed discount rate on the price of the energy. All system capital, installation and operating expenses are paid by American DG Energy.

By outsourcing the ownership, management and financing of their energy systems to American DG Energy, customers enjoy significant economic benefits without requiring capital investment, specialized in-house technical skills and manpower, operational responsibility, or ownership of equipment. They handle all elements of a project from start to finish including site evaluation, financing, engineering, project management, installation, communications, start-up, service, operation performance optimization, fuel purchasing, utility relations and any other project and system requirements. Visit American DG Energy online at www.americandg.com.



EuroSite Power is a majority-owned subsidiary of American DG Energy Inc. and has been

established to expand its successful on-site utility business into the United Kingdom and Europe. Based in West London, EuroSite Power sells the energy produced on-site by highly efficient low carbon technologies as a risk free alternative to the outright purchase and operation of the equipment.

EuroSite Power provides, finances, installs, owns, operates and maintains complete CHP and cooling systems tailored to a customer's specific site requirements. The result is lower energy costs for customers from the first day of operation. Customers can be found in the healthcare sector (assisted living, long-term care and hospitals), multi-tenant housing, hotels, schools, colleges, leisure centres, food processing, industrial and other types of properties. Find EuroSite Power online at www.eurositepower.co.uk.



Ilios, a majority owned subsidiary of Tecogen Inc., was formed in April 2009 to develop and distribute a line of

ultra high-efficiency heating products for commercial and industrial applications. Utilizing advanced thermodynamic principles, Ilios products incorporate mechanical work to extract heat from the environment and supplement energy from natural gas or propane fuels. The result is a significant boost in efficiency and reduced carbon emissions relative to conventional heating systems.

Ilios is now introducing its first commercial product, the Ilios High Efficiency Water Heater. For locations with a gas demand of at least 4000 Therms/month, such as water parks, swimming pools, hotels, hospitals, apartment buildings & recreation centers, the Ilios High Efficiency Water Heater is a tremendous alternative to conventional systems. With a nominal heating capacity of 500,000 BTU/hour, it employs a combination of technologies designed to boost efficiency, save money, and reduce impact on the environment. For more information, please visit www.iliosdynamics.com.

**Energy efficiency
re-imagined
for tomorrow's heating,
cooling and power**