

**2G****CENERGY®**  
Advanced Clean Energy Technologies**COGEN FOCUS**

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**Latest News****Headlines:**

- 2010 has been a very successful year for 2G®. Group results will be published in May 2011.
- In February 2011 2G® announced a very positive Development of incoming Orders, including new international Projects in Eastern Europe, Italy, Spain, and North America.
- International Sales increased more than 70% in 2010, and the Company is on Track with its anticipated Business Targets for 2011.

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**1.8MWh Ultra Low Emission CHP Cogeneration System saving 150 Jobs in Massachusetts****2G - CENERGY® selected to supply a 1.8 MWh High Efficiency Cogeneration Plant to be installed in Fitchburg, MA, significantly reducing Energy Cost by 25 to 30%**

Simonds International, a leading cutting tool manufacturer with 179 years of history, decided to purchase a modern CHP (combined heat and power) cogeneration plant. Instead of the conventional design-build, or site-build process, the company decided for a 100% modular "all-in-one" and "connection-ready" cogeneration system to save cost and to reduce technical risk.

The cogeneration process results in overall electrical and thermal efficiencies close to 90%, compared to most utility power plants operating in the 33% percent efficiency range. The plant is an integrated package, fully containerized and will be supplied as a unique "all-in-one" and "connection-ready" module. Benefits over conventional gas engine gensets include much higher overall system efficiency, reliability, durability, extended life, fast installation, and less maintenance cost.

Simonds International, headquartered in Fitchburg, MA, is making the move toward clean energy to help combat high energy costs with the implementation of a \$5.5 million cogeneration system that will save 150 jobs. This cogeneration power station will produce enough energy to run, heat and cool the Fitchburg plant.

*The investment will dramatically lower energy costs for the company, and protect jobs"... said Ray J. Martino, President of Simonds. "This is our biggest plant and corporate headquarters"... Mr. Martino added. "We employ over 500 people worldwide and 25 percent of our work force is working at the Fitchburg plant. Simonds also has plants in Michigan, Oregon, Kentucky, Alabama, Germany, Honduras and Brazil. Fitchburg's electric rates are the highest, spending \$2 million annually on energy costs just at this plant",... he said.*

*"North Central Massachusetts is the highest for energy rates,"... Mr. Martino said. "There are several disadvantages to operating a business in Massachusetts, including energy costs, and also in the U.S. with the corporate income tax rates higher than in Germany and other indus-*

**The 2G® Biogas CHP Module**

*trialized states. We're trying to overcome some of those cost obstacles, so we can stay in Massachusetts, continuing to utilize the strong, skilled work force at this location,"... Mr. Martino explains.*

The modular 2G® gas fueled cogeneration system to be installed is rated 1,800 kWh (1.8 MWh) consisting of three 600 kWh 2G® avus® series CHP modules with MWM engines fully integrated into the unique and modular 2G® cogeneration technology package. The plant is expected to produce enough electricity to operate the entire manufacturing plant. The annual output is 14,940 MWh and 62.5 billion BTU's of thermal energy.

The CHP cogeneration system, to be supplied by 2G-CENERGY, comes fully factory tested and does not require any civil construction or site engineering. The installation will be completed within a few days, just connecting gas and water pipes, and power cables. The fully integrated emissions control system guarantees ultra low NOx and CO emissions well below the stringent Massachusetts State and local regulations

*"This order shows again that 2G is a first choice manufacturer and supplier of modular CHP systems, providing the most proven, reliable, and cost-effective solution",... says Michael Turwitt, President & CEO of 2G-CENERGY Power Systems Technologies Inc.*

# 2G<sup>®</sup> attending GLOBALCON

March 30th - 31st 2011, Philadelphia - Pennsylvania Convention Center



2G<sup>®</sup> is pleased to welcome you at various Expo's on both Sides of the Atlantic.

2G - CENERGY<sup>®</sup> is participating at this years GLOBALCON and will exhibit during the convention. Decision makers from business, industry and government are seeking integrated energy solutions — solutions which assure both a secure and affordable power supply, and effective management of both energy and overall operational costs. Globalcon 2011, presented by the Association of Energy Engineers, is de-

signed specifically to facilitate those who need to get up to speed on the latest developments in the energy field, explore promising new technologies, compare energy supply options, and learn about innovative and cost-conscious project implementation strategies.



2G<sup>®</sup> is exhibiting



## DARITECH Biogas CHP Project

This new High Efficiency Biogas Plant in Washington State is nearing final Completion

The DARITECH biogas project is making great progress. 2G-CENERGY<sup>®</sup> supplied the *agenitor*<sup>®</sup> 212 biogas CHP, rated 400kWh, to be installed inside the customers power house next to the anaerobic digester. Due to heavy snowfall and extreme cold weather, the project experienced a delay dictated by Mother Nature. Everything is now back on track, and the VanDyk Dairy Farm is expecting to pro-



The DARITECH Anaerobic Digester at the VanDyk Dairy Farm in Lynden, WA (above). 2G's *agenitor*<sup>®</sup> 212 has been placed inside the Customers Power House (left).

*"We can create a more sustainable, cleaner and safer world by making wiser energy choices. CHP cogeneration utilizing natural & bio gases is an intelligent solution, saving both money and energy resources."*

The *agenitor*<sup>®</sup> is built like nothing else. Unmatched in quality, durability, and provides long-term reliability.



duce biogas very soon. In addition to the CHP cogeneration unit, 2G-CENERGY<sup>®</sup> also supplied the complete gas treatment, including cooler, dryer / dehumidification, and the H<sub>2</sub>S removal system. The controls and switchgear, including utility interconnection have also been part of 2G's scope of supply. The highly advanced *agenitor*<sup>®</sup> is a thermodynamically output-optimized CHP (combined

heat and power) module, increasing the degree of electrical and thermal efficiency, leading to higher revenues for the plant operator.

Because its specifically designed and manufactured for biogas,... higher durability, unmatched reliability, and lower service & maintenance cost, contribute positively and significantly towards the operators bottom line.

# 2G<sup>®</sup> heading towards 2100 CHP Units

The latest Addition to 2G<sup>®</sup>'s Manufacturing Capacity will boost annual Production Output and further decrease Lead Times

2G<sup>®</sup>'s 13,000m<sup>2</sup> (140,000ft<sup>2</sup>) factory extension was completed ahead of schedule. The additional production capacity will boost annual output to 2G<sup>®</sup>'s market position as a global CHP cogeneration leader. As per December 31st 2010 more than 1500 CHP cogeneration systems were manufactured and installed. The extended production capacity will enable 2G<sup>®</sup> to manufacture, and to supply more than 600 CHP cogeneration units in 2011.



## Operating in Sub-Zero Conditions

2G<sup>®</sup> Biogas CHP Modules are operating in Sub-Zero Temperatures - 25° Celsius (- 13° Fahrenheit)



A customer in Northern Europe provided us with a photo showing his 2G<sup>®</sup> biogas CHP module completely packed and covered in thick ice. The unit was operating at - 25° Celsius (-13°Fahrenheit) without any problems whatsoever. In fact, 2G<sup>®</sup>'s systems can be configured to operate at much lower temperatures sustaining the most severe winter conditions. This requires a deep understanding into the most effective design and materials necessary to operate in such cold conditions. 2G<sup>®</sup> offers practical "cold pack" solutions.

*"2G<sup>®</sup>, ... a proven technology, very reliable, successfully operating millions of hours in many markets around the world."*

## Easy Service & Maintenance Access

2G<sup>®</sup> Containerized "All-in-One" and "Plug & Play" CHP Modules are designed for easy Service & Maintenance

Customers who experienced in the past to service an engine or genset installed inside a modified standard shipping container know exactly what we are talking about. Technicians have no room to work, access is very restricted, and this automatically results in higher service & maintenance cost. It takes much longer to get a simple job done. Already several years ago, 2G<sup>®</sup> moved away

from standard shipping containers. 2G<sup>®</sup>'s engineers listened to customers, and a complete new CHP module concept was born. All 2G<sup>®</sup> CHP cogeneration modules are 10' wide and 10' high. Road transportation is still possible within the legal DOT limits. Service & Maintenance is easy, technicians love it, and customers / operators save money.



# 2G Biogas CHP for WWTP

A Clean Solution with 2 Year Warranty and a Lifetime Performance & Service Guarantee

2G<sup>®</sup> supplied and installed a biogas CHP cogeneration system at the Waste Water Treatment Plant facility Schuettorf. The modular system will provide annually 581 MWh of electricity plus thermal energy, saving the WWTP up to



**Biogas CHP Module for WWTP's Inside Installation Option**

30% in energy cost. 2G<sup>®</sup> offers a wide range of biogas CHP solutions specifically designed for WWTP's. The equipment comes with a performance guarantee, as well as an overall 2 year CHP package warranty. Operators also enjoy a lifetime service guarantee with 24/7 support.



## West Coast Service Station

2G<sup>®</sup> appoints RDI Energy as authorized West Coast Service Center

RDI has been an authorized MAN service facility for more than 20 years. The company, headquartered in Seattle, WA, operates branches in California and Oregon. A network of 70 highly qualified technicians and local service partners all over the West Coast region incl. Montana, Idaho, and Nevada guarantee a professional and extreme fast service support.



**RDI Headquarter in Seattle, WA**

RDI has been factory trained by 2G<sup>®</sup>, is fully authorized, and also maintains regional parts warehouses in WA and CA.



**Michael J. Turwitt  
President & CEO**



**Dominic Frodeno  
2G<sup>®</sup> Manager  
Northern Region**

### Personnel Notes 2G<sup>®</sup> Team News

**Michael J. Turwitt** has been invited to speak at the German American Bioenergy Conference in Atlanta (March 7th 2011), organized by the Federal Ministry of Economics and Technology (German Government), and the German American Chamber of Commerce. This Bioenergy Conference will provide an overview of advanced and proven technologies for the Biogas and Biomass Industry.

**Dominic Frodeno**, Dipl. MBA, joined 2G<sup>®</sup> as Manager for the Northern Region. In this position he is responsible for all sales and service business, and market development. He is a business graduate, MBA, with experience in a wide variety of previous business management, sales, marketing and project management functions.



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2G - CENERGY<sup>®</sup> is a manufacturer dedicated to the production of decentralized power generation systems, providing customers with advanced and highly efficient CHP (combined heat & power) cogeneration technologies driven by natural gas, biogas and other special gases (syngas). CENERGY Power Systems Technologies Inc. is the US and South American headquarter of 2G Bio-Energy Technology Corporation (2G Bio-Energietechnik AG), a leading German manufacturer of decentralized CHP power generation equipment and modular cogeneration power plants. All plants are designed and manufactured "connection-ready"