



# CENERGY®

Advanced Clean Energy Technologies



Biogas CHP



Landfill Gas CHP



Sewage Gas CHP



Coalmine Gas CHP



Natural Gas CHP



Specialty Gas CHP

## COMBINED HEAT & POWER

Cogeneration CHP Systems built to last for continuous heavy-duty applications, and to meet the demanding performance requirements of today's energy market. Our reliable combined heat & power modules are hard at work in many of the world's most challenging applications, delivering peak performance around the clock.



Quality is Everything we do. Legendary Reliability, and Proven Performance.



**2G OFFERS THE BROADEST RANGE OF  
CHP COGENERATION SOLUTIONS  
AND ENERGY CONVERSION SYSTEMS**



**BIOGAS APPLICATIONS AG & W2E**



**WWTP BIOGAS APPLICATIONS**



**COAL MINE GAS APPLICATIONS**



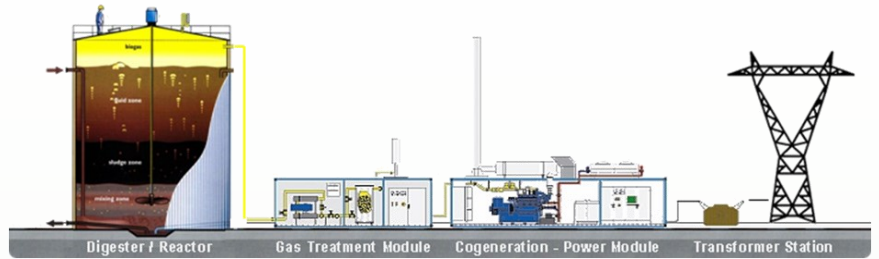
**LANDFILL GAS - LFG - APPLICATIONS**



**NATURAL GAS CHP APPLICATIONS**

**2G**

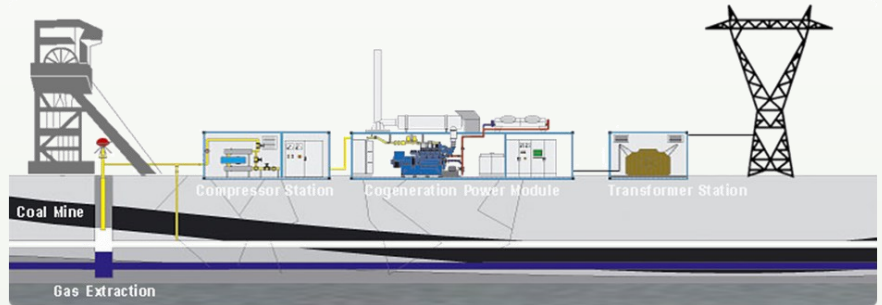
**TECHNOLOGY**



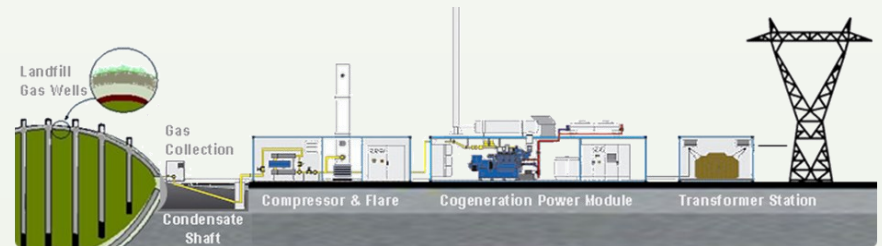
**BIOGAS CHP MODULES FOR AGRICULTURAL & DAIRY FARMS, AND ORGANIC WASTE DIGESTERS**



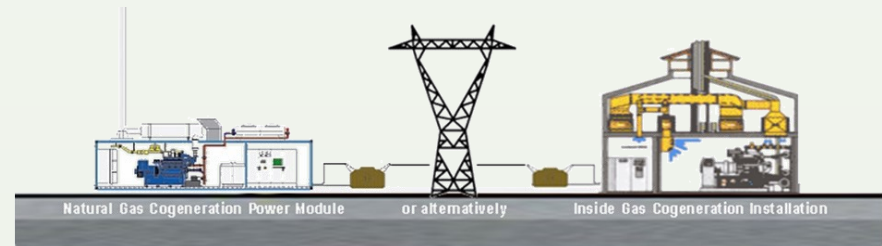
**SEWAGE GAS CHP MODULES FOR WWTP FACILITIES (WASTE WATER TREATMENT PLANTS)**



**COAL MINE GAS (CMM) CHP MODULES FOR UNDERGROUND COAL MINE OPERATIONS**



**LANDFILL GAS (LFG) CHP MODULES & ELECTRICAL POWER GENERATION PLANTS**



**NATURAL GAS CHP COGENERATION SYSTEMS, AND SPECIALTY GAS CHP SOLUTIONS**

## BEST IN CLASS TECHNOLOGY

Traditionally cogeneration plants in North America have been sized between 1 and 10MW because smaller engines could not provide the same high efficiencies. 2G's thermodynamically optimized energy conversion systems with MAN®, MWM® and GE-JEN® gas engines, and a variety of models with 2G-Drive® technology are ideal for combined heat and power (CHP) installations. Now customers can also effectively utilize CHP's <500ekW for on-site power generation, heat production, cooling, and for agricultural or industrial heat recovery applications in decentralized locations. The technology behind 2G® gas engines and their controls makes them highly reliable, offering superior efficiency with low lifecycle costs. The added benefits of 2G® systems over conventional standard gas engines in a similar size range, include up to 25% higher electrical efficiency, up to 35% lower maintenance cost, and a longer life cycle. We offer more value than our competition by focusing on advanced technology improvements "superior by design", and "system efficiency", rather than just packaging a genset.

## 50 - 75% LESS FUEL CONSUMPTION

2G® CHP cogeneration modules consume up to 75% less fuel than ultra-low efficient micro-turbines, and are specifically developed for CHP applications. A compact CHP design with integrated control and switchgear, thermal energy distribution system and advanced enclosure options. As leading manufacturer of CHP cogeneration power modules, 2G® is a trusted equipment provider for many CHP project developers all over the world. Cogeneration plants are only as good and reliable as the overall design, and the quality of the CHP module converting gaseous fuel into valuable electric and thermal energy.

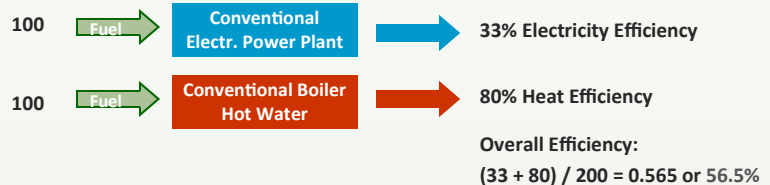


## CHP COGENERATION SYSTEMS - NATURAL GAS - BIOGAS - LFG - CMM - WELLHEAD, AND SPECIALTY GAS - SUPERIOR BY DESIGN

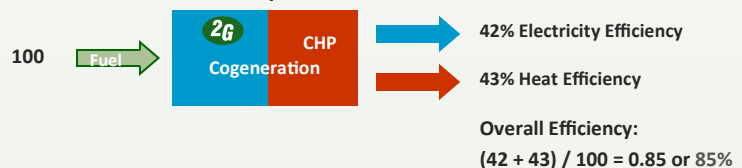
Because 2G® CHP systems are thermodynamically optimized, electrical efficiencies are higher compared to conventional engines / gensets, and significantly more efficient than micro turbines. In addition, extensive use of the heat produced during the electricity generation process, 2G® advanced systems <500ekW can achieve overall efficiencies in excess of 90%, and in the range 600 - 3500ekW up to 88.6%. Installing CHP technology is a way of achieving significant savings when compared to traditional systems. Due to the high fuel efficiency of our CHP plants, the carbon dioxide emissions per kWh of electricity or heat generated are relatively low. Our well-designed CHP systems will therefore improve energy efficiency and considerably reduce carbon dioxide emissions.

## APPLYING CHP TECHNOLOGY MAKES A LOT OF SENSE

### Separate Production of Electricity and Heat



### Combined Production of Electricity and Heat



## THE ULTIMATE CHP TECHNOLOGY FOR ALL GASES (NATURAL & BIO)

We realize that anybody can claim to use only highest quality components, promising reliable and efficient systems. The difference can be found in the details. Innovative technologies combined with unmatched experience result in unique, superior, incomparable CHP solutions and longevity.

- 25% higher electrical Efficiency in Comparison with Competitors
- 35% less Maintenance Cost in Comparison with Competitors
- 50% to 75% higher Efficiency in Comparison with Micro Turbines
- 4% - 10% higher System Availability in Comparison with Competitors
- More than 3000 CHP Modules installed and in Operation
- 24/7 - 365 Days Product Support, Parts & Service Availability



## MORE THAN JUST A CHP SYSTEM

2G<sup>®</sup> was the first CHP company to offer single source manufacturing and “all-in-one” cogeneration system packaging including efficiency optimization for advanced cogeneration modules. And today, we continue to lead the way. Our systems are a careful integration of superior components manufactured and specifically engineered to work together. And they’re ready to perform - guaranteed. Before leaving the factory, every CHP system is thoroughly tested. 2G<sup>®</sup> cogeneration modules are performance optimized, and components are matched exactly to the optimum level of quality and durability. Our CHP’s deliver highest availability, a long life, fuel economy and minimized emissions.

## SUPPORT BEFORE THE SALE

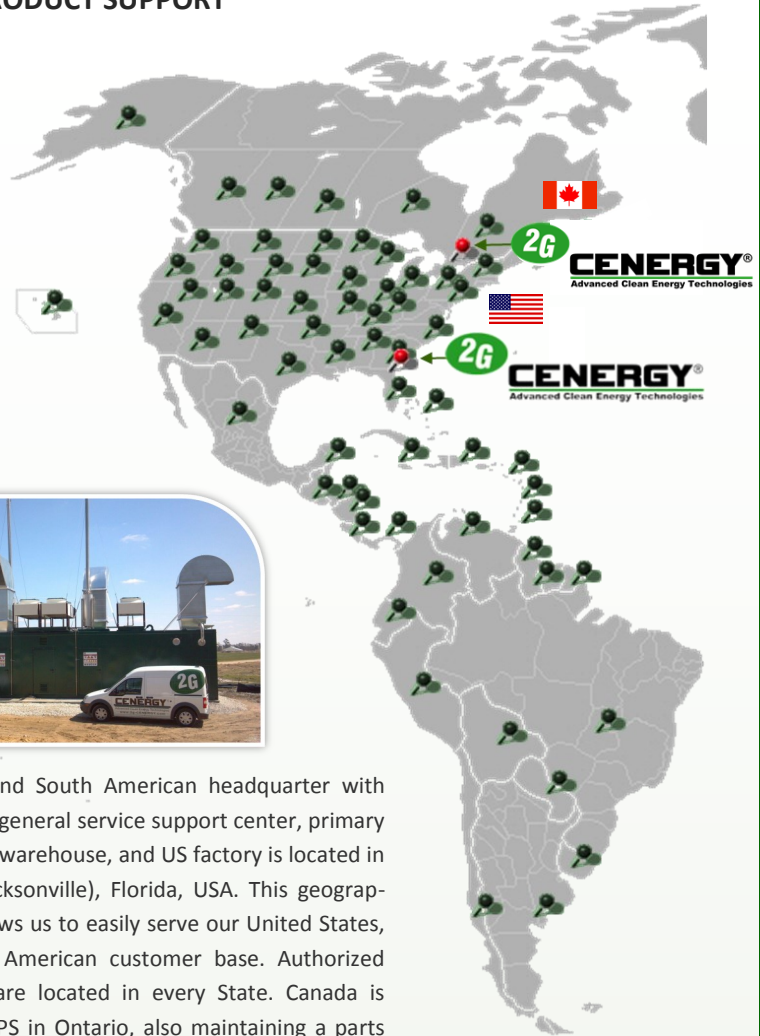
At 2G<sup>®</sup>, support starts before you buy equipment - and never stops. You can depend on the expertise of our engineers and technical teams at every step - from initial project analysis, CHP proposal, logistics, to installation, commissioning, and training. The foundation of every product solution are the 2G<sup>®</sup> trademarks “Innovation and unmatched Quality”.

## SIMPLY THE BEST CHP AVAILABLE

2G<sup>®</sup> is always a step ahead raising industry standards. CHP cogeneration technology with higher efficiency, and an overall design leading to significantly reduced operating cost. Helping to grow your bottom line with world-class technology and state-of-the-art equipment.



## SERVICE & PRODUCT SUPPORT



Our 2G<sup>®</sup> North-and South American headquarter with main sales office, general service support center, primary parts distribution warehouse, and US factory is located in St. Augustine (Jacksonville), Florida, USA. This geographical location allows us to easily serve our United States, Central & South American customer base. Authorized Service stations are located in every State. Canada is served through EPS in Ontario, also maintaining a parts distribution center.

## SERVICE SUPPORT YOU CAN TRUST

Whatever you need, wherever and whenever you need it. Scheduled maintenance programs to emergency response, a network of more than 90 specialized 2G<sup>®</sup> and MAN<sup>®</sup> authorized service stations in the US and South America are ready with the expertise, regular training, technology, and parts to keep you up and running at peak efficiency. All of our service technicians are certified and receive ongoing training. We all know that the main purpose of regular maintenance is to ensure your equipment is operating at 100% efficiency at all times. Designing CHP’s with this goal in mind helps to reduce service & maintenance requirements, and keeps availability rates higher than the typical industry standard.

## MORE THAN 4000 CHP INSTALLED AND IN OPERATION

2G<sup>®</sup> CHP systems are hard at work at more than 4000 locations. Our systems have an excellent track record, extreme high availability rates, and repeat purchases by highly satisfied customers are the norm. Dependability, reliability, and durability by design are keeping service cost at low levels.



Quality is Everything we do. Legendary Reliability, and Proven Performance.



MAIN FACTORY HEADQUARTER



FACTORY 1



FACTORY 2



FACTORY 3



Research & Development



FACTORY 4 - 60,000 sq/ft U.S. FACTORY in St. Augustine, Florida



Hundreds of highly educated and experienced Associates are ready to assist.

### MORE THAN 4000 CHP's INSTALLED AND IN OPERATION

2G® can be best described by following characteristics:

- Manufacturing the highest Quality Products (build to last)
- Leading Market Position "Best-In-Class" & "Advanced Technology"
- Managed by highly motivated and responsive Executives
- Governed by the highest Ethics and Corporate Values

## A LEADING MANUFACTURER

2G® is a renowned manufacturer dedicated to the production of decentralized power generation systems, providing customers with advanced, highly efficient, and dependable CHP cogeneration modules. The company maintains a "Best-In-Class" product portfolio. 2G® is a solid and financially strong corporation publicly traded at the Frankfurt Stock Exchange (Deutsche Börse) in Germany. In addition to being one of the largest MAN® MWM® and GE-JEN® OEM manufacturers specialized in CHP systems, 2G® occupies a leading market position, continuously developing and innovating new technologies. Manufacturing natural gas, biogas, and specialty gas CHP systems requires more know-how than just packaging a conventional standard engine. 2G® continues to lead the way with an unparalleled team of gas engine experts and significant R&D investments, focusing on reliability and "system efficiency", rather than just packaging CHP modules. Not all manufacturers of CHP technologies are the same. Neither are the solutions to your individual project challenges. 2G® will continue to provide customers with "Added Value" and "Unique Advantages" over and above a standard core CHP system.



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