



ISSUE 33, JULY 2011

JULY 7, 2011

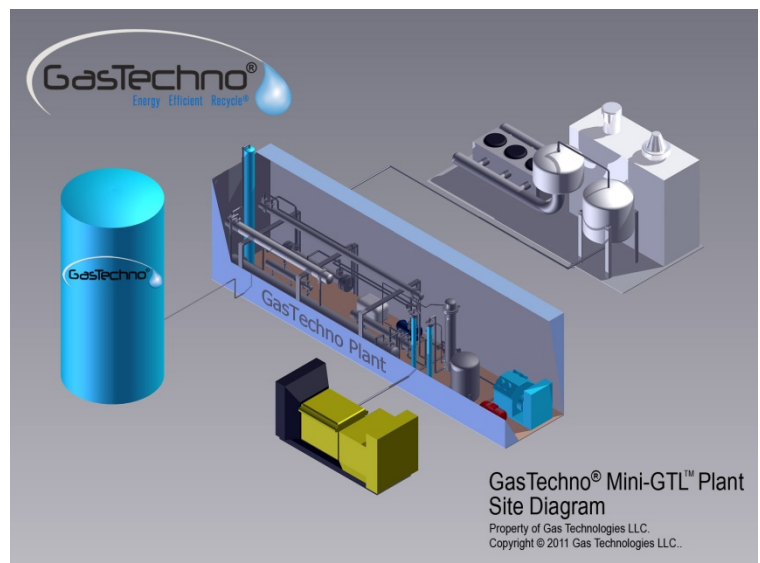
## **Gas Technologies Announces New Mini-GTL™ Advanced Alcohol, Biofuels And Chemical Plant**

PETOSKEY, MI - (July 7, 2011). Gas Technologies LLC (<http://www.gastechno.com>) has streamlined its GasTechno® advanced alcohol, biofuels and chemical plant that profitably converts natural gas to liquids and chemical products at an unprecedented capital cost (CAPEX) of under \$2 million USD. The company announced its new GasTechno® Mini-GTL™ gas-to-liquids plant packages will range in cost from \$1.5 to \$2.0 million per installation.

Equipped with its core process technology, and compressor system the plant converts up to 300,000 standard cubic feet of gas per day (scfd) and fits inside a conventional 40-foot shipping container. With further commercialization, the process scales up to 30 million scfd according to an independent third-party study.

Walter Breidenstein, CEO, said, "We have been working on this new design since completing our field demonstration and testing in March of this year. The value-engineering process has taken hundreds of research hours and identified several improvements to our existing GasTechno platform. We worked with many vendors and equipment manufacturers to realize these improvements and believe the result will far exceed our competition in capital and operational cost savings."

While the company headquarters is based in Michigan, they have reached out to equipment suppliers from across the United States and the world, seeking the most capable manufacturers. The competition is fierce for the development of small and mini-scale natural gas, biogas, and biomass based alcohol and chemical technologies and Michigan is supporting several innovations.



For example, the State of Michigan and the US DOE recently granted Cobalt Technologies, a California based company developing biomass to ethanol and butanol technologies, \$22 million in grants for an advanced biorefinery complex to be located in Alpena, Michigan. Cobalt and American Process will contribute an additional \$10 million for the facility. In total, \$32 million will be spent to demonstrate the production of 470,000 gallons of bio-butanol and determine commercialization potential.

Gas Technologies compared its GasTechno Mini-GTL commercial plant to the Cobalt demonstration plant funded by government and industry. According to Evan Visser, CTO, "One thing Gas Technologies and Cobalt have in common is prioritizing the chemical production in order to scale to advanced biofuels. We just use a different building block. Our process yields methanol as our primary alcohol. Methanol is used in literally dozens of chemical products resulting from primary, secondary and tertiary conversions. The GasTechno alcohol blend easily integrates with fuel blending and fuel production processes like biodiesel. This is the kind of flexibility you need to deliver value in the increasingly competitive green industry."

With all the recent IPO's hitting Wall Street promoting advanced biofuel technologies, and raising hundreds of millions of dollars, the company decided it was time for a side-by-side comparison.

#### **Gas Technologies Process**

##### *Capital Cost:*

\$2.0 million per commercial installation  
(commercial ready)

##### *Production volumes:*

597,000 gallons of methanol, ethanol and  
higher value oxygenates

#### **Cobalt Technologies Process**

##### *Capital and R&D Cost:*

\$32 million demonstration plant  
(research stage with grant funding)

##### *Production volumes:*

470,000 gallons of bio-butanol

Breidenstein commented on the current flurry of funding activity: "Venture Capital funded companies are receiving lots of publicity and government support to develop advanced biofuels, but I don't expect this level of funding to continue forever. At some point these technologies will be valued based on their merits, not on what VC firm is involved or how much grant money they have received. Smart money will start to examine the hard numbers in CAPEX, OPEX and cost of production and we're ready for that challenge."

On July 5, 2011, the United Nations stated that over the next 40 years, \$1.9 trillion dollars will be needed annually for incremental investments in green energy technologies (<http://www.un.org/en/development/desa/news/policy/wess-2011.html>). Gas Technologies is positioning itself worldwide as the most competitive gas-to-fuels and chemicals process, and anticipates accessing a portion of this investment.

To provide early adopters of the GasTechno platform the lowest cost of entry, the company has announced a \$250,000 basic engineering package (BES) to customers interested in monetizing flared or stranded gas assets. The BES is similar to a front end engineering design (FEED) package, but is less expensive and provides a basic economic study with recommendations for GasTechno "bolt-on" processing modules to ensure that the final product slate, whether it is chemicals, fuels or even fertilizer, provides the highest return on investment for the local market.

The company has been evaluating and developing processes for methanol-to-diesel (MTD), methanol-to-gasoline (MTG), methanol-to-jet fuel, methanol-to-olefins (MTO), glycols, amines, fertilizers and other bolt-on processes that provide a quick payout of invested capital, exceptional ROI's and high profit margins.

For more information: [www.gastechno.com](http://www.gastechno.com)

### **About Gas Technologies LLC**

Gas Technologies LLC (GTL) is an alternative energy company and world leader in the single step conversion of methane to methanol. The GasTechno<sup>®</sup> platform converts methane into valuable commodity fuels, high-end intermediates and specialty chemicals via the GasTechno<sup>®</sup> family of technologies. GasTechno<sup>®</sup> plants are scalable, transportable and profitable at small volumes, monetizing even modest sources of CO<sub>2</sub>, methane, landfill gas, biogas and bio-methane. Our latest designs include a food and fuels production system that processes CO<sub>2</sub> and methane, the greenhouse gases primarily responsible for global warming. The GasTechno<sup>®</sup> platform offers unique design and engineering services for patent licensing of technologies involving natural gas processes and chemical processing plants.

For more information contact:

Walter Breidenstein

Gas Technologies LLC

Tel: +1-231-535-2914

Email: [walterb@gastechno.com](mailto:walterb@gastechno.com)

[www.gastechno.com](http://www.gastechno.com)