Maverick Oasis™ Gas-to-Liquid Methanol Plant Offers New Revenue Stream for Biogas and Landfill Gas Producers

Small-scale, factory-built GTL platform taps into smaller gas reserves using an efficient, compact and modular configuration...

RESEARCH TRIANGLE PARK, N.C. (February 25, 2015) — Maverick Synfuels, a leader in alternative chemicals and fuels production technology, today announced the availability of the Maverick Oasis™ BG Gas-to-Liquid methanol plant product line. These plants convert biogas from sources such as anaerobic digesters and landfills into higher value methanol, one of the world's most widely used industrial chemicals. When paired with anaerobic digesters that produce renewable biogas from organic waste, **the Maverick Oasis™ BG product line is the first small-scale, economically viable solution that simultaneously reduces greenhouse gas emissions while helping to solve environmental problems associated with dairy and swine waste as well as other organic waste**. The Maverick Oasis system offers a new revenue stream for producers of biogas and an alternative to generating electricity or venting destructive greenhouse gases into the atmosphere.

Methane-rich biogas originates from numerous sources, including landfills and anaerobic digesters associated with wastewater treatment plants, dairy farms and other organic waste treatment facilities. Anaerobic digesters process animal, food, and other organic waste into biogas, a combination of methane and carbon dioxide. **There are 1000s of potential biogas and landfill gas producers in the U.S. alone that could derive improved economic benefit by converting methane-rich gas into methanol.**

According to the American Biogas Council (ABC), the U.S. has over 2,000 sites producing biogas today. However, there is a tremendous growth opportunity for more renewable biogas generation.

In a recent report, the ABC counts nearly 11,000 sites ripe for development today: 8,002 dairy and swine farms and 2,440 wastewater treatment plants (including 381 who are making biogas but not using it) which could support a digester and 450 untapped landfill gas projects. Growth is being constrained due to the lack of economically viable alternatives for monetizing the biogas.

Producing methanol with the Maverick Oasis plant could significantly change this paradigm for current and future biogas producers. At sites equipped with anaerobic digesters, the primary use of biogas has been to generate electricity. In addition, small amounts of biogas are purified and converted into transportation fuel (compressed natural gas), pipeline quality natural gas, or combusted directly to produce heat.

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Many of these programs require government support in the form of subsidies, tax credits, or other incentive programs to be economically viable. However, even those programs that promote renewable electricity from biogas are failing because of the limited size of these biogas-to-electricity projects when compared to significantly larger renewable solar or wind projects.

Several existing anaerobic digester projects in the U.S. either have already shut down, or are seriously contemplating shutting down due to the declining revenues from renewable electricity. When electricity rates drop below $0.06/kWh, anaerobic digester projects for producing electricity are not economically viable. Other difficulties arise when producing electricity because of the very limited number of potential buyers of the electricity, which are generally utilities, and occasionally, large electricity consumers. Despite government subsidies, the economics of electricity production at these locations is challenging.

"The current economics associated with producing and distributing electricity at waste sites limits the growth of biogas conversion systems," said Sam Yenne, Maverick's CEO. "The potential for another, more profitable revenue stream can significantly increase this market. Biogas producers need to have a financially attractive alternative to flaring or generating electricity."

The Maverick Oasis methanol plant uses proprietary technology to convert biogas into thousands of gallons per day of ultra-clean, AA grade methanol that meets ASTM D1152 specifications. The Oasis plant is modular, so it can be rapidly deployed to an operational location, assembled by Maverick's engineers, and integrated into the local infrastructure. The Maverick Oasis BG25 methanol plant is the first plant in Maverick's product line, and has a capacity of 8,300 gallons per day (25 metric tons/day) of methanol. The methanol can be consumed onsite, or easily transported to other markets. With a footprint of 50 feet x 100 feet, the Oasis BG25 plant requires approximately one acre to accommodate storage and tanker truck access. Click to download an overview of the Oasis BG25 technical specifications.

By using standard assembly line manufacturing processes and replicated design, the Maverick Oasis™ system significantly reduces the capital requirements and delivery time (typically 10 to 15 months) compared to larger plants that are field constructed. Each Oasis plant comes equipped with performance guarantees based on the designed methanol output rating. The factory-built plants are designed to be low-cost, efficient and reliable facilities, optimized to generate an attractive project rate of return.

Methanol is a versatile commodity with multiple uses. In the specialty chemical market, methanol is an important intermediate for producing high-value products, including olefins, acetic acid, formaldehyde, plastics, resins, and other chemical products. In the fuel market, it is used to produce biodiesel, blended with gasoline (M15, M85) or used directly as fuel (M100), converted into dimethyl ether (a diesel and LPG substitute), or converted to gasoline, diesel or jet fuel. Methanol blends make environmentally superior fuels that improve combustion, burn cleanly, and reduce emissions. In the oil industry, methanol is used to prevent hydrate formation, and in the waste-water industry, to denitrify waste water. Methanol can also be used in fuel cells to generate electricity.

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Maverick is pursuing opportunities to build and operate the Maverick Oasis platform, and is interested in having discussions with potential biogas producers and methanol consumers. More information can be found by visiting www.mavericksynfuels.com/oasis; via email at info@mavericksynfuels.com; or by calling +1 919-749-8717.

About Maverick Synfuels

Maverick Synfuels commercializes Gas-to-Liquid (GTL) technology for converting low-value feedstocks, such as methane-rich gas streams, biomass, and municipal solid waste (MSW), into high-value, petroleum-replacing chemicals and transportation fuels. The company's modular GTL platform and unique spoke-and-hub distributed production model creates opportunities for low-cost feedstock resources, reduces capital requirements, and minimizes technical and financial risk. Maverick pursues opportunities to build and operate production facilities with strategic partners. The company is based in Research Triangle Park, North Carolina. For more information, call 919-749-8717; e-mail info@mavericksynfuels.com; or visit www.mavericksynfuels.com | Twitter | LinkedIn.

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Business Unit: Maverick Synfuels
Region: North America
Keywords: maverick oasis, methane-to-methanol, alternative chemicals, alternative fuels, energy, oil and gas exploration, joint ventures, gas-to-liquids (GTL), modular plant, syngas, synthetic chemicals, synthetic fuel, natural gas, flare gas, associated gas, stranded gas, coal bed methane, biogas, landfill gas

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