



M&M Energy LLC

Environmentally conscious energy
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Partnered with:



Great Lakes Energy & Research Park

Alma, Michigan



The proposed Great Lakes Energy & Research Park (GLERP) is a multi-billion-dollar development centered around an Integrated Gasification Combined Cycle (IGCC) power plant, to be built on and around the site of the former Total Petroleum Refinery in Alma, Michigan. Utilizing ConocoPhillips' e-Gas technology, the GLERP will blend the latest advancements in energy production and emissions control into one symbiotic system that will:

- **Create tremendous amounts of clean energy**
- **Provide thousands of new jobs and significant tax base**
- **Capture toxic emissions and sequester greenhouse gases**
- **Recover up to 1 billion barrels of domestic oil through the use of CO₂, while reworking existing and currently abandoned oil wells**

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Great Lakes Energy & Research Park

Who are the companies involved with GLERP?



M&M Energy, LLC, established in 2002, is a partnership between developers Mike Sawruk and Mike Muckleroy, both of whom have enjoyed successful careers in the energy industry. Achievements include the successful development of the multibillion dollar Central Florida Research Park, a specialized park similar in nature to the proposed Great Lakes Energy & Research Park (GLERP).

ConocoPhillips is the third-largest integrated energy company in the United States. Known worldwide for its technological expertise, ConocoPhillips' e-Gas technology is regarded as the cleanest, most efficient process for converting coal or petroleum coke into a hydrogen rich synthetic gas.

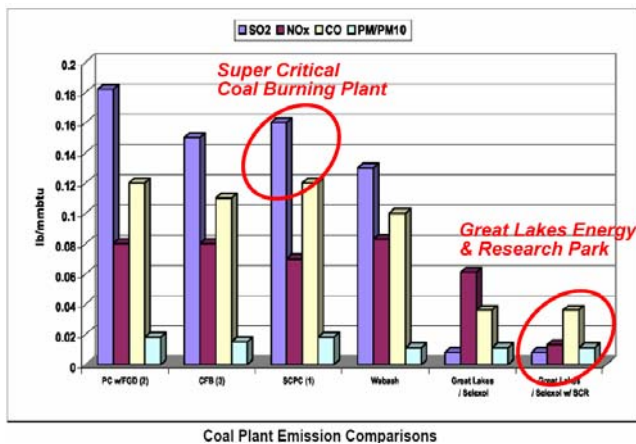


SemGroup is the fifth-largest privately held company in the United States. SemGroup has partnered with M&M Energy, LLC to utilize the carbon dioxide (CO₂) generated by GLERP for enhanced oil recovery.



What is IGCC technology?

IGCC (Integrated Gasification Combined Cycle) is a process whereby coal is separated molecularly, producing a clean-burning synthetic gas. By utilizing IGCC, pollutants such as mercury and sulfur can be substantially reduced compared to traditional coal-burning methods. In addition, carbon dioxide (CO₂) - a greenhouse gas, can be captured and sequestered using IGCC. (CO₂ emissions not shown on graph)



IGCC is a proven, reliable, clean technology that is currently in use throughout the United States and around the world, and **it will work in Michigan!** Michigan is an ideal location for an IGCC facility, due to its growing demand for energy, its environmentally fragile waterways, and its carbon sequestration-and oil recovery-friendly geology.

How much oil is recoverable — how does enhanced oil recovery work?

The **U.S. Department of Energy** conducted the Basin Oriented Strategies for CO₂ Enhanced Oil Recovery study in 2006, which estimates up to a billion barrels or more of oil which could be recovered utilizing Enhanced Oil Recovery to rework existing wells throughout the state of Michigan.



Enhanced oil recovery utilizes highly-pressurized CO₂, which is injected into oil wells, working as a solvent to free stranded oil otherwise trapped within crevasses of rock and sediment, breaking the bond between the oil and rock. Most of the injected CO₂ replaces the oil, remaining underground for thousands of years.

How many IGCC plants are needed in Michigan?

To best utilize Michigan's oil & gas assets, there is a need for up to five additional IGCC plants around the state. Additionally, IGCC has the potential to drive other alternative energy industries, including biofuel, solar, etc, and has the ability to generate large amounts of hydrogen. IGCC has the capacity to become the primary bridge technology for America's energy future.

What's next—how you can help!

FEDERAL SUPPORT

Contact your United States Senators

Senator Debbie Stabenow 133 Hart Senate Office Bldg. Washington, D.C. 20510 Ph: (202) 224-4822 Fax: (202) 224-0325 E-mail: senator@stabenow.senate.gov	Senator Carl Levin 269 Russell Senate Office Bldg. Washington, D.C. 20510 Ph: (202) 224-6221 Fax: (202) 224-1338 E-mail: senator@levin.senate.gov
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- Tell Senators Stabenow and Levin how important it is for the Senate to reconfigure the existing tax credit program so that the Great Lakes Energy & Research Park project is eligible.
- Urge Senators Stabenow and Levin to support legislation for the creation of a pilot program supporting IGCC clean coal projects, which utilize captured greenhouse gases and sequester CO₂ for the recovery of stranded American oil.

STATE SUPPORT

Support Michigan Dept. of Environmental Quality (MDEQ) proposal to consider IGCC as Best Available Control Technology (BACT) for permitting new coal-based power plants

- Go to <http://www.deq.state.mi.us/aps/cwerp.shtml>.
- Submit comments to MDEQ before Sept. 14, 2007.

Support State Rep. Paul Opsommer's Bills: HB 5121 & 5120

- Encourage bi-partisan support for these measures to drive alternative energy production in Michigan.