

EXCELSIOR ENERGY'S

# MESABA MESSENGER

NOVEMBER 2006

## UPCOMING PUBLIC MEETINGS:

- **Itasca County Rail Authority Meeting, November 14, Grand Rapids**
- **Public Hearings in Power Contract Case, December 18-20, Grand Rapids, Hoyt Lakes, and St. Paul**

Excelsior Energy Inc. is the developer of the Mesaba Energy Project, which will provide environmentally friendly energy to the state of Minnesota through the use of IGCC technology.

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## Judges Issue Orders Favorable to Mesaba

On October 25th, the Mesaba Energy Project received favorable rulings in the proceeding to approve the contract for the sale of electricity to Xcel Energy. The judges denied motions to dismiss the case or make legal conclusions against the Mesaba Project.

Instead of issuing a simple denial of the motions, the judges issued an order making several legal findings – all consistent with Excelsior's view of the law. While several hurdles remain before the contract is approved, the October 25th rulings were a big step forward in the process.

Approval of the contract with Xcel Energy will confirm the direction of the Legislature in 2003. Under Minnesota law, Mesaba is entitled to sell its electricity to Xcel as long as it meets certain criteria. The purpose of the current proceeding is to verify that Mesaba satisfies those criteria. To that end, Excelsior has filed thousands of pages of testimony, reports, and responses to questions that confirm that Mesaba Project is in the public interest. A final decision in this case is expected in the spring of 2007.

## Excelsior Submits Plan to Help Address Global Warming

On October 10, Excelsior submitted its *Plan for Carbon Capture and Sequestration*. The report is the first of its kind for Minnesota, representing the only plan for a proposed or existing fossil fuel power plant in Minnesota to address likely future greenhouse gas regulations in an economical manner. Mesaba's IGCC technology provides the least expensive method of capturing carbon dioxide, which can be transported to permanent, underground storage locations. When carbon dioxide is stored underground (rather than emitted into the atmosphere), it does not contribute to global warming. Consequently, leading scientists view IGCC as an essential part of any plan to address global warming, especially since electric generation is a major source of carbon dioxide emissions.

The plan examines various arrangements in which carbon dioxide from the Mesaba Project would be captured, piped to oil fields or saline aquifers in North Dakota, and then permanently stored underground to help address global warming concerns. Sales of carbon dioxide to oil companies and possible revenue through carbon regulatory programs could significantly offset the cost of this program.

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

# The Mesaba Energy Project Will Bring Jobs to the Region

The Mesaba Energy Project will bring a significant number of new jobs to the Iron Range. As with any power plant project, the number and type of jobs depend on the stage of the project. The construction phase will generate the largest number of new jobs while the plant is being built. Then, once the plant begins to generate electricity, the permanent jobs will begin and continue for the life of the plant.

## Construction Phase

At the peak of employment, the Mesaba Project will need the equivalent of 1000 full-time construction workers. Although

associated with the construction workers will create an additional 1966 new full-time, part-time, and temporary jobs across the Arrowhead Region.

## Plant Operations Phase

As construction of the Mesaba Project completes and the plant begins to produce electricity, permanent jobs associated with running the facility will begin. These jobs will require a variety of skill sets. The table on the next page describes the job types and associated educational backgrounds.

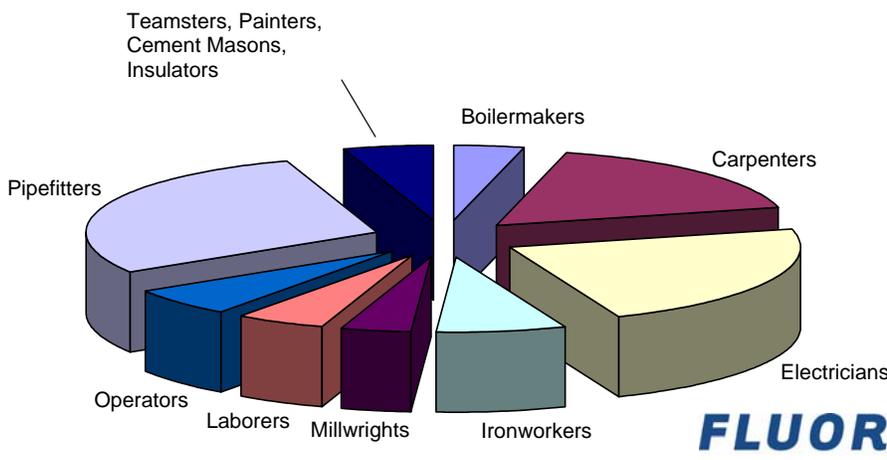
These permanent jobs will also create a boost to the regional economy. UMD researchers have estimated the economic activity associated with operating the plant will create an additional 143 permanent jobs.

While specific recruitment plans are not yet in place, it is likely that the Mesaba Project's permanent jobs will be filled by current area residents and people new to the area.

## Further Job Growth

The discussion of jobs so far in this article refers only to Unit 1 of the Mesaba Project, which will provide enough electricity for 600,000 typical homes. However, work is underway for Unit 2, which will be the same size as Unit 1. Because of the opportunity to share facilities and administrative functions, the employment numbers for the construction and operational phases will be slightly less for Unit 2 than for Unit 1: construction employment will peak at an estimated 945 full-time equivalent jobs and there will be an estimated 78 permanent jobs associated with running the plant once it is constructed.

**Mesaba Energy Project Phase I - Approximate Craft Breakdown (Within Plant Footprint)**



Mesaba's construction consortium consists of non-local businesses, their first stop to fill most of the jobs will be local union halls. Range construction workers are highly skilled, so the construction companies will prefer to hire locally whenever possible. The above pie chart gives an indication of the different crafts that construction of the plant will require and the relative numbers needed in each craft.

These 1000 full-time construction jobs only tell part of the story. Researchers at the University of Minnesota-Duluth (UMD) have estimated that the economic activity

# Jobs, continued

## Jobs Associated with Plant Operations

Job Type	Number of Positions	Education
Professional/Technical/ Supervisory	15–20	Journeyman Program, Vocational/Technical, College Degree
Administrative Support	10–12	High School, Vocational/ Technical, College Degree
Operating/Maintenance	80–90	High School, Journeyman
<b>Total Jobs Associated with Plant Operations</b>	<b>105–122</b>	

### Wabash River IGCC Plant Serves as a Successful Model for Mesaba Project

The basis of the design for the Mesaba Energy Project Integrated Gasification Combined Cycle (IGCC) Power Plant is the Wabash River IGCC Plant, which uses ConocoPhillips' IGCC technology. The Wabash Plant, which is located in Indiana, has earned a number of industry accolades, including being named the "Power Plant of the Year 1996" and being inducted into the Power Plant Hall of Fame in 2000.

The Wabash Plant is rated at 262 megawatts (large enough to supply electricity to roughly 260,000 typical homes), which is about half as large as Unit 1 of the

Mesaba Project. Mesaba will draw on the successful experience of the Wabash Plant and make improvements to achieve even better performance. One major change that Mesaba will make is to install a spare gasifier train, which Wabash does not have. This modification will enable Mesaba to build off from Wabash's already-high 80% reliability rating to achieve a rating of more than 90%.

Wabash's demonstrated IGCC technology provides assurance that the superior environmental profile and operational reliability that the Mesaba Project promises will become a reality.

### Did You Know...

Minnesota will need a large number of new power plants within the next 15 years. When considering just "base load" plants, which typically generate electricity 75% of the time, Minnesota utilities have identified between 3000 and 6000 megawatts of new capacity needed by the year 2020. That is the

equivalent of building between 5 and 10 Mesaba power plants. This need for new power plants exists even after maximizing conservation and renewable energy sources. The Mesaba Project is part of a strategy to ensure reliable, environmentally friendly, affordable power in Minnesota.

## Mesaba Energy Project Myths and Facts

**Myth:** The Mesaba Project will force wind energy off from the grid.

**Fact:** Mesaba will make upgrades to the transmission grid so that the electricity from the Mesaba Project does not interfere with any existing or planned wind energy. The source of this myth appears to be a misinterpretation of a recent transmission study.

**Myth:** The Mesaba Project is an experimental project.

**Fact:** The IGCC technology that Mesaba will use has been successfully used in the Wabash River IGCC Plant in Indiana for several years (see the article on page 3). By partnering with the operators of the Wabash plant, Mesaba will draw on over 1,600 documented improvements at Wabash and make other significant improvements to advance IGCC technology. Other IGCC plants have successfully operated in the U.S. and in Europe. Drawing on this operational experience, the Mesaba Project will have reliability rates as high as conventional coal plants.

**Myth:** Energy from the Mesaba Project will be much more expensive than conventional technologies.

**Fact:** Thanks to Mesaba's high efficiency, flexibility to use different fuels, clean environmental profile, federal incentives, and other advantages, the cost of energy from the Mesaba Project will be equivalent to the cost of energy from conventional coal plants currently on the drawing board.

**Myth:** The environmental advantages of Mesaba's IGCC technology over conventional coal plants may not be significant.

**Fact:** The Mesaba Energy Project will reduce criteria pollutants by 2/3 compared to recently permitted, state-of-the-art conventional coal plants. Further, IGCC plants can economically capture carbon dioxide for permanent storage underground, which is something that conventional coal plants cannot do economically. Because of these and other environmental benefits, numerous environmental advocacy groups have supported IGCC technology over conventional coal plants. Such groups include the Natural Resources Defense Council, Clean Air Task Force, and various chapters of the Sierra Club.

## Regulatory Approval Process Continues

Progress continues on the approvals necessary to construct and operate the Mesaba Project. Excelsior is currently engaged in two major approval processes. A proceeding is underway to select and approve the location of the plant and the associated utility corridors, which should conclude next fall. A separate proceeding to approve the contract for the sale of electricity to Xcel Energy is also progressing.

## Visit Us Online!

Our webpage contains more information about Excelsior Energy, the Mesaba Energy Project, and IGCC technology. The address is [www.excelsiorenergy.com](http://www.excelsiorenergy.com).