Testimony

Implementation of EPACT 2005 Loan Guarantee Programs by the Department of Energy

Subcommittee on Energy and Air Quality

U.S. House of Representatives

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INTRODUCTION

Good afternoon Chairman Boucher, Congressman Hastert, and members of the subcommittee, and thank you for the invitation to appear before you today. My name is Julie Jorgensen and I am the Co-President and CEO of Excelsior Energy. Excelsior is an independent power company based in Minnesota. We are the developers of the Mesaba Energy Project, a 600MW Integrated Gasification Combined Cycle (IGCC) plant to be located in northeastern Minnesota.

BACKGROUND

While I am sure the subcommittee is familiar with IGGC technology, let me briefly describe the process. The plant we are developing will combine a gasification process with a combined cycle power plant to produce electricity from coal with less air pollution. In an IGCC plant, coal, petroleum coke, or blends of coal and petroleum coke are crushed and then slurried with water. The slurry is pumped into a pressurized vessel (the gasifier) along with sub-stoichiometric amounts of purified

oxygen. In the gasifier, controlled reactions take place, thermally converting the feedstock materials into a gaseous fuel known as synthesis gas, or syngas. The syngas is cooled and cleaned of contaminants prior to combustion. Cleaning the fuel, rather than scrubbing stack emissions, is inherently more efficient because the fuel is at high pressure and temperature, and requires treatment of 1/130 of the volume of gases that require scrubbing in conventional coal plants. Carbon dioxide can also be captured efficiently at this pre-combustion stage. IGCC results in-highly efficient power generation with lower levels of air emissions through the operation of a combustion turbine and a steam turbine generator in tandem.

The plant will be fuel flexible and will run on fuel blends including 100% Powder River Basin sub-bituminous coal, Illinois 6 bituminous coal and coal/petcoke blends. I have attached a more extensive description of the Mesaba Energy Project for the record.

Excelsior is appreciative of the strong local, State and Federal support we have received. In 2003, Minnesota passed groundbreaking enabling legislation for the Mesaba Project that created a market for its output and removed the barriers to entry for the IGCC technology that were in the State's control. Several state agencies also provided important early funding for the Mesaba Project.

In 2004, the U.S. Department of Energy (DOE) selected the Project for funding as part of Round II of the Clean Coal Power Initiative. The Project will use ConocoPhillips' E-Gas™ Technology, and has the ConocoPhillips Wabash River IGCC facility as its design starting point. The Project will have two gasification trains rather than the single train at Wabash, with a third gasification train for back-up

and reliability, and incorporates over 1600 lessons learned in 12 years of operation at the Wabash plant and a DOE optimization study of that facility. The Mesaba Project will pave the way for the use of Western fuel in IGCC applications, a key impediment to widespread IGCC market adoption.

We appreciate the leadership of the Congress in authorizing DOE loan guarantees for advanced technologies like IGCC. In the Energy Policy Act of 2005 (EPAct), Congress recognized the strong public policy interest in advancing the commercial deployment of clean energy technologies, technologies that will enhance our energy security, reduce local air pollution, and provide tools to help reduce our emissions of greenhouse gases.

We are particularly appreciative of the specific authorization for a loan guarantee for the Mesaba Project in EPAct Title 17. EPAct also specifically provides that the Project's Clean Coal Power Initiative award can be used as budget authority for the loan guarantee.

The project is in the advanced development phase, with all permits filed and the joint state/federal environmental impact statement expected to be published in the next few months. All transmission planning is underway. Because of the detailed technical work that has been completed by Excelsior, ConocoPhillips and Fluor on the Project, and its fuel flexible, multi-train design, the Electric Power Research Institute recently selected the Mesaba Energy Project as the pioneering sub-bituminous coal IGCC template in its CoalFleet program, which is developing IGCC reference designs for the utility industry. ConocoPhillips is working on the first stage of front end

engineering design (FEED), a preparatory step to ordering long lead equipment items and completing the engineering design required before construction starts.

The Project's power purchase agreement (PPA) is pending before the Minnesota PUC. The tariff structure assumes the debt is guaranteed as authorized under EPAct. As a result, the tariff, or cost of energy, under the PPA is comparable to that of a new utility-owned super-critical pulverized coal plant. This price parity demonstrates that the loan guarantee program will achieve the stated goal of reducing the cost of energy from the first commercial fleet of IGCC facilities in order to ensure rapid market penetration of the technology. This is achieved by reducing the cost of capital by both reducing the interest rate on the debt and ensuring that adequate leverage levels are achieved. Both are critical to the goal.

In addition to bringing down the cost of capital for the first mover IGCC plants, the guarantee serves as an essential catalyst to the financing of these facilities. The Mesaba Energy Project is structured to meet all of the credit quality requirements for an investment grade financing. The Project output will be sold under a long-term offtake agreement, removing the largest default risk. The Project will have an engineering, procurement and construction turnkey contract with a world-class engineering firm that will guarantee plant performance, the other principal default risk. Nonetheless, the rating agencies indicate that an investment grade rating will not be possible for the first fleet of IGCC plants. Utility owned, rate-based plants will face similar constraints due to the $2 billion size of these facilities, and their material impact on utility balance sheets. Without the guarantee, there may simply not be debt capacity in the markets for these first mover projects. Every day the first movers are

delayed spells delay for the market shift to carbon capture ready IGCC and further lock-in of conventional technologies that tie our hands in efforts to craft meaningful climate policy that does not adversely affect economic activity.

By late summer, we expect to move to the financing phase of the Project. Implementation of the loan guarantee authorized by the Energy Policy Act for the Project is now directly on the Project's critical path schedule. We have worked with major financial institutions, law firms and turnkey contractors to identify the optimal financing structure to implement the guarantee. We believe that the proposed guidance to limit the guarantee to less than 80% of total project costs, and to require lenders to hold both guaranteed and non-guaranteed debt, creates problems and adds complexity that work against Congress' goals in enacting EPAct. Instead, we believe the best approach is to guarantee debt representing 80% of total project costs, with the DOE obtaining the same type of input and advice that commercial underwriters receive from rating agencies and independent engineers in order to ensure that default risk is adequately addressed.

IGCC has moved front and center as a national energy security and climate change policy priority because of its flexibility to capture carbon dioxide emissions. The Project is participating in the DOE's Plains CO_2 Reduction Partnership which is spearheaded by the Energy and Environment Research Center at the University of North Dakota. The Project has filed a carbon capture and sequestration plan with the Minnesota Public Utilities Commission (PUC) that is the first of its kind anywhere in the United States. The plan contemplates 30% capture and sequestration of CO_2 when the Minnesota PUC determines that it is in the ratepayers' interests. Excelsior

and Fluor have identified a means to achieve 30% capture using currently commercially available technology, by removing CO_2 that is present in the syngas. This capability provides an early source of a large CO_2 stream for one of the demonstrations of carbon capture and sequestration that are essential to the DOE's roadmap to low carbon impact coal utilization. The DOE programs to demonstrate large scale CO_2 sequestration could be accelerated by years by the Mesaba Project. The Project can then undertake 90% sequestration when the research and development path identified by the DOE for the technology is completed and ready for implementation.

The Mesaba Project therefore offers an opportunity to jump start the carbon capture and sequestration demonstrations that are critical to any meaningful climate change policy. The Clean Air Task Force has calculated that moving up the date of commercialization of IGCC with carbon capture and sequestration by six months, in China alone, will do more to stabilize atmospheric carbon dioxide concentrations than all the wind capacity installed in the world.

The guarantee program and the specific guarantee authorized by the Energy Policy Act for the Mesaba Energy Project are essential to remove the final barriers to the timely implementation of the Project and the handful of others that are close behind it, a successful culmination of the U.S. government's thirty year program to develop and implement the IGCC technology.

Again, I thank you for the opportunity to appear before you today and look forward to answering any questions you may have.