FOUR RENEWABLE ENERGY PROJECTS EXPLORE NEW TECHNOLOGIES

BISMARCK, N.D. – The North Dakota Industrial Commission announced today the completion of four renewable energy projects funded with grants from the North Dakota Renewable Energy Program. The projects involve research and development of renewable energy technologies and processes that have strong growth potential in North Dakota.

The Legislature established the program in 2007 to provide funding for research, development, marketing and other activities to foster growth of renewable energy including wind, biofuels, biomass, solar, hydroelectric, geothermal and hydrogen. The program, which is under the control of the Industrial Commission, also provides incentives for multi-feed facilities to process ethanol and biodiesel; incentives for scaleable technologies; and incentives to improve co-product utilization technologies.

A total of 21 projects have been funded since 2007 for a total of $5.5 million. Seven of them have been completed including, most recently, the following four projects:

**Corn Oil Extraction**
Awardee: Blue Flint Ethanol, Underwood, N.D.
Amount Awarded: $500,000
Total Project Costs: $1,800,000

Funds for this project were used to install a corn oil extraction system in the Blue Flint Ethanol plant. The plant is now able to extract oil without negatively affecting the quality of the dried distiller's grains and solubles.

"Without the funding it would have been difficult to get this project implemented," Jeff Zueger, general manager at Blue Flint Ethanol, said. "This project will produce over one million gallons of corn oil annually. This helps protect the renewable energy jobs at our facility while producing an additional feedstock to the production of another renewable fuel, biodiesel."

**Fischer Tropsch Fuels Development**
Awardee: Energy & Environmental Research Center (EERC), Grand Forks
Amount Awarded: $189,034
Total Project Costs: $899,820

This project was designed to take biomass materials such as North Dakota grown switchgrass and turn this into liquid transportation fuels through gasification followed by a conversion process known as Fischer–Tropsch. The project capitalized on the EERC's experience and expertise in renewable energy technologies.
complex fuel conversion technologies.

“Projects like this are key in enabling North Dakota to become not only a top producer of fossil fuels but to lead the nation in renewable fuels as well,” Bruce Folkedahl, Ph.D., senior research manager at the EERC, said. “The successful completion of this project has led to great interest from commercial industry and has brought additional projects to the EERC funded by industry to develop the technology further. The North Dakota Renewable Energy Council is a key component in developing new sustainable industries in the state through partnerships such as this project.”

**Renewable Electrolytic Nitrogen Fertilizer Project**
*Awardee:* EERC, Grand Forks  
*Amount Awarded:* $200,000  
*Total Project Costs:* $404,255

This project demonstrated the technical and commercial viability of the integrated electrochemical-thermal (IET) ammonia production process. Commercialization of the IET ammonia process will enable market-competitive production of renewable ammonia at smaller scales and more widely distributed production facilities. Wide-scale implementation of the process in distributed production facilities will enable development of new regional-based fertilizer production and distribution industries.

**Phase I: Biomass Enhanced Refined Lignite Demonstration Project**
*Awardee:* Federal Machine, Fargo  
*Amount Awarded:* $249,938  
*Total Project Costs:* $528,522

This project resulted in the creation of a compacting machine that produces a blended fuel from biomass and lignite. The ComPAKer is mobile and compaction rates can be varied to meet the desired product applications. The targeted market for the lignite/biomass Paks is rural institutions and homes that use propane, oil and natural gas for heating.

For more information on these projects or the program, contact Karlene Fine (701-328-3722) or Andrea Holl Pfennig (701-328-2687) or visit: [www.nd.gov/ndic/renew-infopage.htm](http://www.nd.gov/ndic/renew-infopage.htm).

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