



**L I N C O L N   E L E C T R I C   S Y S T E M**

December 21, 2009

Dr. Jerry L. Hudgins  
Associate Director, Nebraska Center for Energy Sciences Research  
Chairperson and Professor, Department of Electrical Engineering  
209N Scott Engineering Center  
Lincoln, NE 68588-0511

Dear Dr. Hudgins:

I am writing to express the Lincoln Electric System's support for the Mega-Turbine Research project at the University of Nebraska - Lincoln. We feel this project will move Nebraska renewable wind energy generation to the next level of efficiency, reliability, and economic viability.

The Lincoln Electric System (LES) believes the research is critical to the optimum development of Nebraska's substantial wind resources. The proposed research project will provide the following benefits to LES and the other Nebraska utilities by:

- 1) Reducing the initial capital investment costs
- 2) Increasing the productivity of wind based generating resources
- 3) Lowering the cost of ownership and improving overall operating economics

The Mega-Turbine Research project will help Nebraska develop a unique "niche" in wind power expertise, which will increase the likelihood of investment in Nebraska by industry and federal research agencies. The project will also help us and others of Nebraska's customer-owned electrical utilities to meet our goals for renewable, zero-carbon electrical generation. Finally, the Mega-Turbine Research project meets the needs identified by the U.S. Department of Energy to increase electrical generation from wind turbines by using turbines at greater heights where the wind is 60% more available than at lower height, improve the materials used for wind turbines, and improve the reliability of wind turbines through improved power electronics.

We have worked with faculty who are a part of the Nebraska Center for Energy Sciences Research at UNL. These UNL faculty members will make the Mega-Turbine Research project highly successful because of their unique expertise in electric machine design, advanced materials design and development, power electronics, diagnostics and control of electro-mechanical systems, and support structure design.

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If you have any questions about our interest in this project, please contact me at 402-473-3378 or bmerrill@les.com.

Sincerely,

A handwritten signature in cursive script that reads "Bruce Merrill".

Bruce Merrill, P.E.  
Vice President, Power Supply

BEM/mt

c: Doug Bantam, LES  
Tom Davlin, LES