

*Cycle 2 – Energy Research Grants (FY07/08)*

---

*The Viability of Distributed Wind Generation for Farm and Rural Communities*

Principal Investigator:

Jerry L. Hudgins

Electrical Engineering

<http://engineering.unl.edu/academicunits/ElectricalEngineering/faculty-staff/hudgins.shtml>

[jhudgins2@unl.edu](mailto:jhudgins2@unl.edu)

402-472-5177



Co-Investigators: Terrance Sebor, Center. For Entrepreneurship  
Ronald Yoder, Biological Systems Engineering

ABSTRACT.

Deregulation of the electric utility industry has allowed installation of small power generating units (< 100 MW) near consumers and load centers. Because of the low population density in the mid-west and western areas of the United States, the availability of transmission lines, and in some cases distribution networks, is limited. Thus, remote generating capability for small groups of consumers (i.e. farmers, ranchers, rural small communities) encourages introduction of small distributed generating systems. This project will lead to an increase in the number of entrepreneurs who start new businesses based on small-scale wind systems applications. In particular, the project targets small wind system start-ups in rural areas of Nebraska. Data will be gathered on needs that can be satisfied by small-scale wind systems, communication of the parameters for the opportunity to potential entrepreneurs will occur, relevant information that can be used by entrepreneurs to evaluate the feasibility of small-scale wind system opportunities, and facilitate their exploitation, will be provided. Cooperation with faculty and students from Europe will augment this program to identify transferable policy and economic issues between Nebraska and the European Union.