



IOWA POWER FUND

University of Iowa: Project IAWIND

Connecting Researchers and Students with the Iowa Wind Industry

A project to support the intellectual infrastructure needed to support the growing Iowa wind energy industry .

Advancing Iowa’s Leadership Role in Wind Energy

The Iowa Power Fund was created to support Iowa’s energy independence goals by providing financial assistance to entities conducting business, research, or programs in Iowa to:

- (1) Accelerate research and development, knowledge transfer, technology innovation and improve the economic competitiveness of efforts.
- (2) Increase the demand for and educate the public about technologies and approaches.

Funds are appropriated by the Iowa Power Fund Board. Technical and implementation assistance is provided through the Iowa Office of Energy Independence.

“IAWIND provides the mechanism to connect talented faculty and Iowa’s universities and community colleges with the Iowa wind industry,” said Dr. P. Barry Butler, IAWIND principal investigator, professor, Interim Executive Vice President and Provost of University of Iowa.

The Iowa wind industry plays an important role in Iowa’s plan of becoming energy independent. Iowa ranks second in the nation for wind energy production with over 2,534 wind turbines producing approximately 20 percent of the electricity generated in the state. Over 200 manufacturers that make component parts for wind turbines and over 2,300 jobs are committed to wind manufacturing. Some experts believe that one trained technician is needed for every ten wind turbines.

To support the Iowa wind industry’s research and training needs, five of Iowa’s community colleges and the three Regents institutions have formed the Iowa Alliance for Wind Innovation and Novel Development (IAWIND). This alliance, which also includes representatives from the industry and state government, are working to ensure that as the Iowa wind industry grows, the Iowa infrastructure is in place to meet their needs.

The Iowa Power Fund awarded a \$3 million, three-year overall grant to IAWIND. The grant enable the collaborative project, begun in 2008, to continue helping the state attract wind energy companies and related industries in an effort to enhance Iowa’s already high position as U.S. leader in wind-generated energy. The State investment leverages \$1.95 million in matching funds from other sources. The IAWIND project will serve to further stimulate wind industry development in Iowa by implementing research, training and education, and evaluation of testing needs expressed by numerous wind energy companies.



Teaming together to catalyze the growth of wind energy

Accelerate the Growth of Wind Energy Research

A funding element of \$1.4 million in total is considered by IAWIND to support wind energy researches conducted at Iowa’s three Regent universities. IAWIND intends to invest two types of research: industry-matched research and develop and long-term basic research. The Iowa Power Fund will grant final approval and funding of the projects. The goal is to accelerate the growth of wind energy research conducted at Iowa’s research universities.

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Economic Impact Highlights of UI Project IAWIND:

- Operations impact is estimated at \$4,546,500.
- Peak permanent employment of 15 in new and retained jobs.
- Payroll projections are \$2,395,070 for permanent employees.
- Total state tax revenues during this period are projected at \$163,881 and local tax revenues of \$90,467.
- Over the next 20 years, a conservative estimate of increase in direct, indirect and induced economic activities in Iowa is estimated at \$3,394,233, potentially creating 1,350 jobs and offering \$176,432,638 in worker earnings.

Grow Current Wind Energy Educational Programs Capacity

At the completion of this project, IAWIND will give out a total of \$1.5 million funds to education institutes, both Regents institutions and community colleges, to grow the capacity of their current programs and add depth to existing curricula through enhanced laboratory experiences.

Technical advances are certain to be a hallmark of the rapidly growing wind industry. The IAWIND project is expected to help prepare students for this trend. Funds are available for Regent institutions to purchase state-of-the-art laboratory equipment to expand enrollment in existing wind energy programs. To train student specific to the Iowa wind industry, funds are available for community colleges in terms of program expansion and new program development in the area of Advanced Manufacturing and Operations and Maintenance.

Connect Students with Wind Industry

In response to the need for a growing wind energy workforce in Iowa and the need to introduce students to the wind energy business through work experiences, IAWIND has allocated a \$0.15 million grant to support a summer internship program. Undergraduate and graduate students interested in pursuing wind energy careers and enrolled at any of Iowa's community colleges, four-year private colleges and Regent universities are eligible for application. The participating wind energy businesses must be Iowa-based. IAWIND supports 50 percent of the wages of an 8-15 week student internship while the sponsor company pays the other half. Last summer, approximately 12-15 students were involved in this internship program.

Advance Iowa's Wind Energy Leadership Role

Iowa plays a key role in satisfying the nation's need for renewable wind energy largely because of its strong infrastructure: manufacturers, education and training institutions, renewable energy policies, and supply chain efficiencies. The IAWIND project coordinates, supports, and facilitates research and training that meets the Iowa wind industries needs, as well as coordinates federal, state, local and private industry efforts to spur the growth of wind energy in Iowa. The information gained from this project will influence economic growth, support a trained wind industry workforce, and further advance Iowa's leadership role in wind energy.

Wind Energy in Iowa

Iowa ranks second nationally in current wind generation output with 3,670 megawatts installed with 2,534 turbines across the state (American Wind Energy Association 2010), producing approximately 20 percent of the electricity generated in the state (Iowa Utilities Board 2010). Over 200 manufacturers that make component parts for wind turbines and over 2,300 jobs are committed to wind manufacturing (Iowa Department of Economic Development 2009).

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