



*Building Upon 40 Years of Excellence
in Wind Science and Engineering*

THE FOCUS

To resolve the key scientific and technology issues facing the wind power industry through a self-sustaining collaboration with industrial, academic, state and federal partners in a way that creates incremental jobs and prepares the workforce for this rapidly growing sector.

THE BACKGROUND

The Department of Energy (DOE) has a vision for wind energy to provide 20 percent of the nation's installed electric capacity by 2030. Federal and corporate investments in research and development are necessary to fulfill this vision.

Currently, no commercial scale research wind farms exist where significant education, workforce development and research can be conducted. This limits the workforce and technology advancements required to expand the sector to meet the national goals.

THE STRUCTURE

The National Wind Resource Center (NWRC), led by Texas Tech University, is a national consortium of universities and laboratories that are leaders in wind energy research and development.

Formed in 2009, the National Institute for Renewable Energy (NIRE) is a non-profit, public-private partnership focused on building and operating research wind farms, developing other renewable energy research facilities, creating an industry-wide renewable energy consortium and providing commercial services to industry partners.

THE SUPPORTERS

Key partners who currently support this effort include: AWEA, The Innovate Texas Foundation, The Wind Alliance, The Wind Coalition, University of Iowa, New Mexico State University, Southwest Research Institute, University of North Dakota, Alstom, Vestas, Pattern Energy, Postensa and many more.



www.depts.ttu.edu/weweb/



www.windcenter.com



www.thenire.org

TEXAS TECH WIND SCIENCE AND ENGINEERING

- Texas Tech University has been a leader in wind science engineering for 40 years.
- Currently, the only Ph.D. program in wind science and engineering available in the U.S. is offered by Texas Tech.
- The Wind Science and Engineering (WISE) researchers developed the Enhanced Fujita scale utilized by the National Weather Service.
- Texas Tech maintains an array of state-of-the-art atmospheric observing technologies including a 200 m instrumented tower, a 59 station West Texas Mesonet and two high-resolution mobile research radars.
- Texas Tech has partnered to create one of the most robust workforce development and education programs in the nation.

THE NATIONAL WIND RESOURCE CENTER

Serving as an independent, non-profit research facility under the Texas Tech umbrella, the primary goals of the [NWRC](#) include:

- Developing and educating the workforce for the budding wind energy sector;
- Resolving key scientific issues, including such topics as the impact of wake dynamics and turbulence;
- Developing new technologies to enhance the American wind energy industry; and
- Leading the industry in renewable energy research and development.

THE NATIONAL INSTITUTE FOR RENEWABLE ENERGY

Formed through a collaboration between the Texas Tech University System and the Innovate Texas Foundation, the [NIRE](#) is committed to:

- Developing and operating renewable energy research facilities;
- Building and operating wind research farms;
- Creating an industry-wide renewable energy consortium in partnership with The Wind Alliance;
- Providing technology prototyping and certification services; and
- Providing commercial services to industry partners.

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