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The Farmers City Wind Farm in Missouri features 73 Gamesa wind turbines that have a total capacity to generate enough energy to power 33,000 homes annually.

## **PROJECT PROFILE:** Farmers City

The northwest corner of Missouri is known for having the "corner on the good life." Today, it's also known as the home of the Farmers City Wind Power Project, which was named for a historic farmers market that was located within the wind farm's boundaries. Situated among the sprawling, wind-rich farmlands of Atchison County, the 146 megawatt (MW) wind farm will be the largest in the "Show-Me" state upon completion, and is Iberdrola Renewables' first project in Missouri. The location also brings to 20 the number of U.S. states where the company currently has projects or offices.

The new project spans more than 14,000 acres, or roughly 35 square miles, yet its actual footprint – turbines, access roads, and the operations building – uses less than one percent of the land, leaving plenty of productive farmland in operation. Of the 115 counties in the state, Atchison is one of the top 10 soybean producers, and the number one corn producing county.

Iberdrola Renewables developed, built and operates the project on privately owned land leased from 44 different landowners. The project's 73 Gamesa wind turbines generate enough clean, emission-free electricity each year to power nearly 33,000 average Missouri homes, and offset the carbon dioxide emissions equivalent to taking more than 76,000 cars off the road each year. Farmers City also directly supports the local economy by contributing substantial amounts to the community through payments to Atchison County and to the landowners, and by the economic boost provided during construction. During the peak of Farmers City's construction, up to 150 jobs were created.

"We have six wind turbines that we farm around, and they take up less than six acres so that's less than an acre per turbine. The payment that we receive per year is several times greater than we could make farming that amount of ground," said Bobby Vette, one of the project landowners. The project's lease payments to landowners total approximately \$365,000 annually. In addition, the project pays local taxes which range from \$600,000 to \$1 million annually.

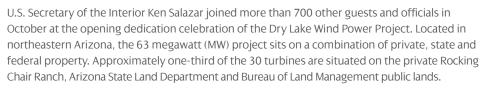
Farmers City has been a great fit in a county that now features three wind farms which produce almost 10 times as much clean, renewable energy as the entire county consumes each year. Making that fit even better was the opportunity to hire locally to fill the project operations and maintenance staff.



"I consider myself very fortunate to have local folks working on the staff," explains John Ward, the plant manager. "They've proven to have invaluable professional skills as well as personal relationships in the community. They grew up here, they went to school here, and they have roots here, which make it easier for us to get involved in what goes on in the community."

## LANDOWNER news

## White House Official Dedicates Dry Lake Wind Farm



"The successful completion of this vital project reflects the concerns we all share – nationally, regionally and locally – about the critical energy challenges facing communities across the United States," said Salazar. "The partnership that built Arizona's first commercial-scale wind energy project demonstrates a common desire to reduce our dangerous dependence on foreign oil by using our domestic renewable resources to meet a larger share of our energy needs. This strategy will also help us reduce greenhouse gas emissions to address climate change, while creating 'green jobs' around the nation."



The project brings a new source of clean, renewable energy to the region while supporting the local economy through property tax payments to Navajo County and job creation. During the peak of Dry Lake's construction, 200 direct jobs were created as well as hundreds of indirect jobs through the supply chain and support functions.

"Wind Powering America gives an award for the first wind farm in each state because it's a big deal. It represents working through all of the issues and barriers that first-of–a-kind activities must deal with," said Marguerite Kelly, Group Manager, Sustainable Electricity and Buildings Wind Powering America Program National Renewable Energy Laboratory, part of the U.S. Department of Energy.

One of the biggest issues was the notion that Arizona lacked enough wind to support largescale wind power. Bill Elkins, owner of the Rocking Chair Ranch, put his own money into collecting wind data and even began efforts to get into the transmission queue before bringing in Iberdrola Renewables to build and own the wind farm.

"My family has been ranching for more than 100 years and I always believed that this site had the wind to support a commercial-scale wind project," said Elkins. "Now, Dry Lake is helping to keep my family tradition going while providing jobs for the next generation. My son works as a technician for Iberdrola Renewables and he loves his job."

The dedication event welcomed guests from Spain, Israel, Scotland and India to the remote site three hours north of Phoenix. Among the honored visitors was Tulsi Tonti, who founded the Suzlon turbine manufacturing company and traveled from India to attend the event. From closer to home, 66 students from the Holbrook Indian School sang at the ribbon-cutting ceremony and displayed the turbines they designed and built in the classroom.

"This project is another example of the incredible potential that clean, renewable energy has for Arizona and our country," said Congresswoman Ann Kirkpatrick, who serves Navajo County in the House of Representatives. "The Dry Lake Wind Farm will deliver jobs, help us diversify our energy sources and lower our utility bills. In these tough times, it is a shot in the arm."



More than 700 guests joined U.S. Secretary of the Interior Ken Salazar in October at the opening dedication celebration of the Dry Lake Wind Power Project in Arizona. The 63 MW project is unique because its home is a combination of private, state and federal property.

## Wind Power Harnesses Strong Support in Ohio

Ohio holds tremendous wind power possibilities. That's why Iberdrola Renewables recently attended the Van Wert County Fair in Van Wert, Ohio, and answered questions about the company's new Blue Creek project and adjacent Dog Creek and Prairie Creek projects. Hundreds of fairgoers stopped by the Iberdrola Renewables booth to share their support for the wind initiatives, and to pick up free mini turbines, Frisbees, pens, and buttons. Overall, feedback showed the community is strongly in favor of moving forward with the wind farms, and the most common question asked at the fair was, "when are you starting?" Currently, Ohio Power Siting Board permits are necessary, but strong community support is a key part of the project. Iberdrola Renewables also donated \$375 to the Van Wert County Junior Fair Board by participating in the livestock auction.



Iberdrola Renewables project developer Dan Litchfield holds his own future wind technician at the Van Wert County Fair in Van Wert, Ohio. The community gave strong support to the company's Blue Creek project and adjacent Dog Creek and Prairie Creek projects.



### Stimulus Funds Help Generate Jobs, Clean Energy

With federal stimulus bill grants from eight projects recently placed in service, Iberdrola Renewables is pumping money back into communities in these tough economic times. The grants, for projects totaling nearly 980 megawatts (MW) and representing more than \$1.8 billion of investment by Iberdrola Renewables, brought in almost \$550 million to finance shovel-ready, U.S. construction activity in 2009 and 2010, as well as development of future projects.



Grants from the American Recovery and Reinvestment Act have allowed Iberdrola Renewables to invest money back into local communities, increase construction activity and support thousands of jobs across the country. The American Wind Energy Association estimates that 980 MW of new wind construction supports between 11,800 and 14,000 jobs in a single year, counting both direct and indirect jobs. The grants were authorized under the American Recovery and Reinvestment Act in lieu of renewable energy production tax credits (PTC) typically provided to wind generation facilities. The financial crisis of last fall took away the ability of many renewable companies to use the PTC, jeopardizing investment in renewable projects across the country.

Iberdrola Renewables immediately put the stimulus funds into construction and development of additional renewable energy projects. Currently, the company has wind projects under construction in Illinois, North Dakota, Oregon, and Texas. Recently, Iberdrola Renewables announced plans to invest an additional \$6 billion in renewable energy facilities through 2012.

"The stimulus grant program allowed Iberdrola Renewables to resume its aggressive investment in wind farms all over the US — projects that are creating new, family-wage jobs in communities under economic strain," said Ralph Currey, president and chief executive officer. "The grant program is providing real economic benefits, and enables us and others to continue making renewable energy investments that otherwise would not happen."

Currently, Iberdrola Renewables employs more than 800 workers in the US and has a similar number of contractors and subcontractors working at construction sites around the country. The company spent more than \$2 billion on wind development in 2008 alone. With more than 3,000 MW installed in the US at 37 wind projects, Iberdrola Renewables' projects have brought economic development, landowner lease payments, construction and permanent jobs, and expanded tax bases to communities in 20 states.

Here's a list of the number of construction, supply chain (indirect and direct) and long-term jobs created at each grant project, according to statistics from the American Wind Energy Association.

**Barton (lowa)** – Approximately 2,000 construction & supply chain jobs and roughly 50 long-term jobs. **Barton Chapel (Texas)** – Approximately 1,300 construction & supply chain jobs and about 40 long-term jobs.

Hay Canyon and Pebble Springs (Oregon) – Approximately 2,260 construction & supply chain jobs. Farmers City (Missouri) – Approximately 2,000 construction & supply chain jobs and nearly 50 long-term jobs.

Locust Ridge II (Pennsylvania) – Approximately 1,670 construction & supply chain jobs. Moraine II (Minnesota) – Approximately 610 construction & supply chain jobs.



## Five Questions with Meteorologist Jerry Crescenti

Ever wonder how wind farm locations are selected and designed? Before we make multihundred-million-dollar investments in new wind farms, we have to understand what the wind resource is at each site and thus what revenue we might expect once the turbines are constructed. Because having good wind data is so vitally important to the financial success of our projects, we employ our own in-house team of meteorologists to analyze and interpret the data from our met towers and SODAR units. Landowner News recently caught up with Iberdrola Renewables' Director of Meteorology Jerry Crescenti and found out more about the role his department plays in the success of the company's wind farm locations, and how his team helps harness the wind for the most efficient production possible.

## Landowner News: What are the main roles of the meteorology department?

**Crescenti:** Our job is to perform energy analyses and support the development efforts of new wind power locations. We use meteorological equipment to monitor a potential site for between one and three years or more, during which time we gather data, analyze the information and plan the sites for the correct number of turbines. We take the raw data and turn it into an energy prediction for hourly, monthly and annual output. We try to use best practices and sound methodologies to apply to the data we gather, and always try to be as objective as possible.

# LANDOWNER news



## **Hunt Carefully**

If you allow hunting on your property, le
hunters know that they may encounter
avian (bird) technicians and wind turbine
technicians conducting various tasks on
the property. These technicians will be
wearing hard hats and may be wearing
orange vests. Hunters should be aware
of their presence.

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### FIVE QUESTIONS...(CONTINUED FROM PG. 3)

#### LN: How do you monitor all the data coming in from potential sites?

**Crescenti:** We can monitor the data from all the sites from our department here in Portland. Every few days, the cell modems on the monitoring equipment communicate via satellite and send the information into a server. As needed, we'll download and analyze, but for the most part the development cycle is a constant iteration of always looking at the data and updating statistics.

### LN: How many people work in your department?

**Crescenti:** We have about 12 meteorologists and data analysts on our team. I manage the group, but rely a great deal on fellow team members like Bob Baker, who has been doing wind energy analysis for more than 30 years and is one of the leaders in the industry. As meteorologists, we try to physically understand what the atmosphere is doing and what is driving the wind. If we have a good understanding of the wind we can lay out a better wind farm.

### LN: What are some challenges that you face?

**Crescenti:** One of the challenges is understanding the site suitability process. Turbines do not like turbulence. We supply our data to turbine manufacturers and they run it through their mechanical models to see how much stress and load a turbine can take. One of the things we've been proactive on is trying to understand what manufacturers' tendencies are and what gets them concerned. We try to provide interpretation when we hand over the data, engage manufacturers to explain the wind data and work with them to learn more about what they do. I think we've come a long way and there's still a lot to do.

### LN: What makes your job so interesting?

**Crescenti:** We always try to dig deeper. There are times where I'm trying to understand a potential location and am amazed at the complexity of certain sites. When we find data that takes us by surprise, we can better decide where to or where not to put turbines. We're constantly learning and seeing how we can do it better.

Questions or comments relating to Landowner News? Have a story to tell? Would you rather receive an electronic copy to save paper? We'd like to hear!

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