

DRY LAKE Wind Power Project



Project Overview

The Dry Lake Wind Power Project, located in Navajo County, Arizona, is the state's first commercial-scale wind farm. The project is situated on a combination of private, state and Bureau of Land Management (BLM) public lands.

The 30 turbines at this wind power project generate 63 megawatts (MW) of clean, renewable energy and contribute jobs and tax revenue to the local community. Typically, a 63-MW wind power project can generate power for more than 15,000 average homes, according to the American Wind Energy Association's calculation. The power from Dry Lake benefits customers of the Salt River Project in the Phoenix metropolitan area.



Project Details and Benefits

Project Location: Between Holbrook and Heber along SR-377

Landowners: Rocking Chair Ranch (private) = 11 turbines, BLM = 10 turbines, Arizona State Land Department = 9 turbines

Approximate Acreage: 6,000 – The footprint of the turbines covers less than two percent of the project's total acreage.

CO₂ Emissions Offset: The project is expected to annually offset approximately 170 million pounds of carbon dioxide, which is the estimated equivalent of removing almost 15,000 cars from the road each year.

Property Tax Impact: The project will generate thousands of dollars in property tax revenue for Navajo County.

Electricity Output: 63 megawatts, enough electricity to meet the annual needs of 15,000 average Arizona homes.

Project Developer/Owner: Iberdrola Renewables, Inc.

With about 13,000 MW of renewable energy in operation globally, and more than 4,700 MW of that wind power located in the U.S., Iberdrola Renewables is part of the world's leading provider of wind power. Iberdrola Renewables Inc. is an American company headquartered in Portland, Ore., with offices and wind farms in numerous states. Iberdrola Renewables employs more than 850 people in the U.S. Learn more at www.iberdrolarenewables.us

Customer: Salt River Project

Salt River Project (SRP) has signed an agreement to purchase 100 percent of the power generated by the Dry Lake Wind Power Project. SRP is the third-largest public power utility in the nation, serving more than 930,000 electric customers in the greater Phoenix metropolitan area. In 2009, six percent of the energy generated for SRP customers came from renewable and sustainable sources.



Technology

Wind Turbine Type: Suzlon S88

Rated Output: 2.1 MW

Turbine Height: 396 feet (120 meters) – taller than the length of a football field!

Nacelle Weight: Approximately 79 tons (158,000 lbs.)

Tower Facts: Four-section, tubular steel

Tower Height: 257 feet (78 meters)

Tower Weight: 204 tons (408,390 lbs.)

Blade Facts:

Swept Area: 65,466 sq. feet (6,082 sq. meters)

Blade Length: 142 feet (43.25 meters)

Rotor Diameter: 289 feet (88 meters)

Revolutions per Minute:

One revolution every three seconds





Technology (continued)

Foundations: Each individual wind turbine foundation consists of an octagonal spread footing of 58 feet, eight feet deep. Concrete volume is 386 cubic yards per turbine or 11,580 total cubic yards – that’s 1,158 truckloads.



Wind Energy

The U.S. wind industry had 40,181 MW of wind power capacity installed at the end of 2010, with 5,116 MW installed in 2010 alone. The U.S. wind industry has added over 35% of all new generating capacity over the past 4 years. Wind power now generates enough electricity to serve more than 10 million American homes. Today, U.S. wind power capacity represents more than 20% of the world’s installed wind power. A U.S. Department of Energy study released in 2008 found that wind could provide 20% of U.S. electricity by 2030. At that level, wind power would support 500,000 jobs and reduce greenhouse gas emissions as much as taking 140 million vehicles off the road.



Job Creation

Ongoing O&M Jobs: 5-10
Construction Jobs:
peak of 200
Construction Labor Hours:
103,422

Job Creation (continued)

Roads and Foundations:

Contractor: Blattner Energy
Subcontractors: Western Grade, Dynamic Rock Solutions, Great Western Erectors, Brundage Bone, Catalyst Paper, Westwood Professional Services, Western Technologies
Suppliers: Brimhall Sand & Gravel, Quality Redi-Mix, Empire Cat

Tower and Turbine Installation:

Contractor: Blattner Energy
Subcontractors: ELM Electric, Sioux Falls Tower
Suppliers: Buckner Companies, Mardian Equipment, Bigge Crane, Coast Crane

Electrical Collection and Substation:

Contractor: PAR Electric Constructors, Inc.
Subcontractors: RealTime Engineers, Dashiell Corp., HL Chapman, ELM Electric, Great Plains Fiber, Manuel Brothers, Inc., WESCO

Turbine Delivery and Commissioning:

Contractor: Suzlon Wind Energy Corp.
Subcontractors: Badger Transport, Inc.

Operations and Maintenance Building:

Contractor: Blattner Energy
Subcontractors: E-7 Enterprises, Liberty Fence, Western Grade, Quality Redi-Mix
Security: Corder Community Services

Other:

Bradco, HDR, Knight & Carver, United Rentals, SWCA Environmental Consultants, Waste Management, Williams Scotsman, WindFinders



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