

DILLON Wind Power Project



Project Overview

The Dillon Wind Power Project is located in the County of Riverside and City of Palm Springs, north of Interstate 10, east of Highway 62 and west of Indian Avenue within the County and City Wind Energy Policy Area in the San Gorgonio Pass. Home to one of the most wind-rich areas of the West Coast and where more than 2,700 turbines produce energy today, the wind farm has 45-wind turbines on three sites, two of which formerly housed turbines.

The new turbines produce more energy and are more efficient than earlier-model turbines. They also generate zero emissions and make very little noise. The Dillon Wind Power Project reduces carbon dioxide emissions equivalent to removing 10,819 cars off the road and produces enough energy to power approximately 13,500 homes. The Dillon Wind Power Project, over its project life, will contribute more than \$12 million in property tax payments for much-needed Riverside County services.



Project Details

Project Capacity:	45 MW
# of Wind Turbines:	45 Mitsubishi 1 MW wind turbines
Project Location:	North Palm Springs in Riverside County, California
Approximate Acreage:	1,500 acres with approximately 2% of the land actually impacted
Jobs:	Average of 60 construction jobs; 5 – 10 on-going operation and maintenance jobs.

IBERDROLA RENEWABLES Commitment to the Community

IBERDROLA RENEWABLES is committed to working with the community to build local support for their projects as was demonstrated by their on-the-ground approach to informing the Dillon neighbors and at-large community about their plans. In addition, IBERDROLA RENEWABLES committed to bringing greater awareness of wind energy by participating in the City of Palm Springs' VillageFest event, and hosting a community open house that provided many long-time residents with their first opportunity to visit a working wind farm. IBERDROLA RENEWABLES' most powerful commitment was the partnership established with the great students and teachers from Cahuilla Elementary School to bring wind energy lessons to the classroom, and the classroom to wind energy farms. As a result, PPM Energy (now IBERDROLA RENEWABLES) was recognized with the Shiny Apple Award from the Palm Springs Unified School District.



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page 2

Dillon Customer: Southern California Edison

Southern California Edison, Edison International's regulated business unit, is the nation's leading purchaser of renewable energy. In 2007, SCE delivered 12.5 billion kilowatt-hours of renewable energy, more than any U.S. utility – 16.5 percent of its total power deliveries under California's renewable portfolio standard guidelines.

Engineering & Construction

Engineers: Three (3) professional engineering consultants designed roads, foundations, and electrical systems.

Project Site Workforce: Average of 60 workers on site, with a peak of 120 for a total of about 80,000 work hours.



Plant Infrastructure

Turbine Access: 47,250 linear feet (8.9 miles) of gravel surfaced roads

Transmission Interconnection: Interconnect to Southern California Edison Tiffany switch station via a .25-mile 115 kilovolt (kV) transmission line.

Collector Substation: 115 kV – 35 kV substation with 50mva power transformers and high-voltage circuit breakers on the high side and a metal-clad switchgear enclosing multiple 35 kV circuit breakers on the low side.

Collection System: 34.5 KV Underground collector feeder system

Wind Energy

The American Wind Energy Association (AWEA) has announced that the industry installed more than 5,244 MW in 2007, shattering all previous records and expanding the nation's total wind power generating capacity by 45 percent in a single year. Wind farms in the United States will generate about 48 billion kilowatt-hours (kWh) in 2008, enough electricity to power the equivalent of nearly 4.5 million average homes (Source: AWEA Market Report, Jan. 2008).



Technology

Turbine Type: Mitsubishi 1 MW wind turbine

Turbine Height: 336 feet (78 meters) to the tip of blade

Total Turbine Weight: Approximately 50 ton tons (100,000 lbs.)

Tower: Three-section, tubular steel

Height: 224 feet (69 meters)

Turbine Foundation: Each wind turbine foundation consists of a concrete octagonal spread footing 50 feet in diameter, with a tower pier 16 feet in diameter and 3-feet-6 inches deep.

Footprint: Turbines are spaced from 370 to 450 feet apart. Rows of turbines are spaced 1,762 feet apart.

Concrete: 248 cubic yards per turbine (33 truckloads)



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