

# COLORADO GREEN

## Wind Power Project



### Project Overview

The Colorado Green Wind Power Project, a 162 megawatt (MW) wind energy development, was established in 2003 and is among Colorado's largest wind power projects. Jointly owned by Iberdrola Renewables and Shell WindEnergy Inc., the project is located near the town of Lamar in Prowers County, Southeastern Colorado, and is expected to generate in excess of 500 MW annually. The project was developed, constructed, and is being operated by GE Energy.

Power generated by Colorado Green's 108 GE Energy 1.5 MW turbines is delivered under a 15-year purchase agreement to Xcel Energy, a company that offers a comprehensive portfolio of energy-related products and services to 3.3 million electricity customers through operations in eight Western and Midwestern states. According to American Wind Energy Association calculations, the project provides enough renewable electricity to serve approximately 52,000 average homes each year.

The Colorado Green project was born through a competitive bidding process initiated by Public Service of Colorado, an affiliate of Xcel Energy, in which it competed with other forms of electricity generation, including natural gas and coal, and was found to be the lowest-cost alternative. While the project spans approximately 11,840 acres of land, the actual footprint is less than two percent of the total area. Landowners continue using the remainder of the land for ranching, grazing and other traditional activities.

### Project Details

**Project Capacity:** 162 MW

**Number of Wind Turbines:** 108 GE Energy 1.5 MW turbines

**Project Location:** About 23 miles south of the town of Lamar in Prowers County, Southeastern Colorado

### Technology

**Turbine Height:** 389 ft. (118.5 meters) from the bottom of the tower to the tip of the highest blade, or about as high as a 30-story building

**Turbine Weight:** Approximately 235 tons (470,600 lbs.)  
Amount of Concrete for Foundations: About 22 truckloads

### Project Owners

Iberdrola Renewables and Shell WindEnergy Inc.

### Project Developer, Builder, Technology

**Supplier and Operator:** GE Energy

**Customer:** Xcel Energy





## Project Benefits

In addition to producing emission-free, renewable power, the project generates tens of thousands of dollars annually in direct economic benefit to the local economy through a combination of job creation, taxes, easement payments and landowner revenue participation payments.

## Wind Energy

In 2008, U.S. wind power sailed past the 20,000 megawatt (MW) landmark, achieving in two years what had previously taken two decades – installing 10,000 MW of wind power capacity in the United States. Wind power now generates 20,152 MW, enough electricity to serve 5.3 million American homes. That's enough to generate as much electricity every year as 28.7 million tons of coal or 90 million barrels of oil. Wind generation currently displaces 34 million tons of carbon dioxide annually, equivalent to taking 5.8 million vehicles off the road. A U.S. Department of Energy study released in May found that wind could provide 20 percent 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.



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