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Day 1: Wednesday, August 4, 2004: Ponnequin Wind Farm

Western Resource Advocates

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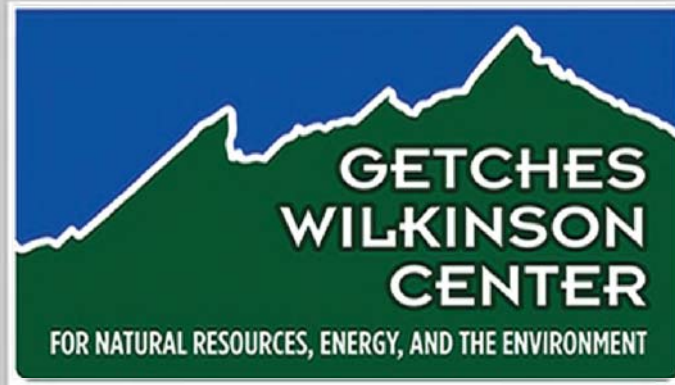
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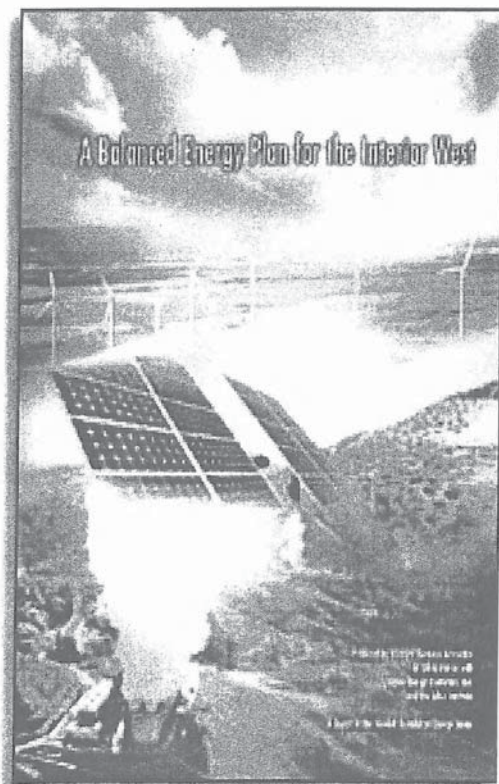
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Balanced Energy Plan

Welcome to the Balanced Energy Plan.

Select the chapter you wish to view by clicking on the link below. Each chapter is a PDF; the size of each is noted after the chapter name. Use your "back" button to return to this page.



[Foreword and Executive Summary \(1 mb\)](#)



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[Chapter 4 - Moving the Interior West toward a More Balanced Energy Future \(294 kb\)](#)

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Ponnequin Wind Farm Tour

Xcel Energy owns Colorado's first commercial wind farm in the state. The wind farm currently has 44 turbines that can generate up to 30 megawatts of electricity. One megawatt of wind power can serve the entire electricity needs of more than 300 customers. The power produced at Ponnequin is sold through Xcel Energy's Windsource® program.

The first 29 wind turbines installed at Ponnequin generate up to 700 kilowatts of electricity each. They were manufactured by NEG Micon USA, Inc. The NEG Micon turbines weigh 98 tons each (the tower weighs 57 tons, the turbine body weighs 26 tons and the rotor weighs 15 tons). The distance from the ground to the nacelle is 55 meters or 181 feet. The rotor blades have a diameter of 48.2 meters or 159 feet. It takes a wind speed of 7 miles per hour (mph) to operate the turbines, so they spin most of the time. When the wind blows faster than 56 mph, the turbines stop spinning to protect them from damage.

The Ponnequin Wind Facility was expanded with the installation of 15 additional turbines that became operational in the summer of 2001. These turbines were manufactured by Vestas American Wind Technology, Inc., a subsidiary of Vestas Wind Systems A/S. The Vestas turbines are each capable of generating up to 660 kilowatts of electricity. Their rotors are 47 meters or 154 feet in diameter, with a height of 65 meters or 213 feet from the ground to the hub. They begin generating electricity with wind speeds of 9 mph, achieve maximum output at 33 mph and stop spinning at 56 mph to protect them from damage.

All of the nacelles automatically rotate the turbine blades into the wind to maximize electricity output. The peak wind-generating season at Ponnequin is from October through March, when the strongest northwesterly winds blow across Colorado.

Location: Northern Colorado, just south of the Wyoming border and east of I-25.

Plant Description: 44 turbines

Power Production Capabilities: Up to 30 megawatts (MW)

