Wind Power Reaches Milestone for Bonneville Power Administration

Local News

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Portland, Ore. - Wind has arrived. In early August, for the first time, the Bonneville Power Administration’s transmission grid reached a milestone, carrying more than 2,000 megawatts of wind power for more than an hour. On Aug. 6, after flirting with the 2,000-megawatt threshold for weeks, total wind generation on BPA’s system blew right past that level at 5:15 p.m., reaching a new all-time peak of 2,089 megawatts at 6:19 p.m. This doubles the peak of 1,000 megawatts recorded in January 2008.

To put that in context, wind turbines in eastern Oregon and Washington produced enough electricity to light all of Seattle and Portland for that hour.

“Wind power is growing rapidly in the Northwest,” said Brian Silverstein, BPA acting senior vice president for Transmission Services. “It’s the largest source of new power in our system. Within just a few years, we've seen more wind projects come on line, and BPA has been working quickly to connect the new projects into the regional power grid.”

“It's great to see wind power mature, along with BPA's ability to integrate it into the system,” said Rachel Shimshak, executive director of Renewable Northwest Project.

“Renewable energy growth has resulted in thousands of new jobs, millions of dollars of investment in local communities, and provided a boost to creating a clean energy economy,” she concluded.

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Of the 22 wind farms that contributed to this record, six have come on line this year. Most of the wind power in the Northwest, although largely owned by private developers, is connected to BPA’s transmission grid, primarily east of the Columbia River Gorge. BPA has built five substations and six taplines to tie wind farms into its transmission grid with more in progress. BPA also has just begun constructing the first of 14 new meteorological stations that will facilitate wind forecasting.

As wind development increases, new transmission will be needed to carry the energy to population centers, which are some distance from the wind farms. This summer, BPA broke ground on a major new project, the John Day-McNary 500-kilovolt transmission line in eastern Oregon and Washington. When energized in late 2012, the transmission line will deliver more than 575 megawatts of additional wind energy across BPA’s transmission system. Nearly two-thirds of the wind power in the region goes over BPA’s system.

“The Northwest has clearly distinguished itself as a leader in the effort to add wind to the mix

of resources that helps power the nation," Silverstein said. “States are calling for adding more clean, renewable sources of energy to the region's power supply and reducing greenhouse gas emissions. This is clear evidence that power providers are responding and taking action to address the region's changing needs.”

Wind power that enters BPA’s transmission system serves consumers throughout the Northwest and in California, including customers of Puget Sound Energy, PacifiCorp, Avista and Portland General Electric, as well as the region’s publicly owned utilities, Silverstein said.
In addition to adding substations and transmission lines, BPA is supporting wind power by working to overcome significant challenges to integrating large amounts of a variable resource, such as wind, into its grid. This is critical to the advancement of wind because the amount of generation entering the grid must equal the amount consumed.
BPA is instituting new operational procedures and developing new technologies to deal with the variability of wind on the system. “Wind presents a unique set of challenges, but we are working aggressively to solve them,” BPA Administrator Steve Wright said. “It’s exciting to be figuring out in real time how to make this all work, and we are confident we’re making real progress.”
“Two years ago, we thought we might see 6,000 megawatts of wind power in the Northwest by 2023. We now expect to see more than 6,000 megawatts of wind power in the BPA grid alone in the next five years,” Wright said. “We’re working closely with utilities and the wind community to develop the new transmission management tools we’ll need to do it well.”

The more than 2,000 megawatts of wind power in BPA’s Northwest transmission system are expected to triple in the next five years.
The chart above can be accessed at: http://www.transmission.bpa.gov/Busin ... alledCapacity_current.xls

BPA is a not-for-profit federal electric utility that operates a high-voltage transmission grid comprising more than 15,000 miles of lines and associated substations in Washington, Oregon, Idaho and Montana. It also markets more than a third of the electricity consumed in the Pacific Northwest. The power is produced at 31 federal dams operated by the U.S. Corps of Engineers and Bureau of Reclamation and one nuclear plant in the Northwest and is sold to more than 140 Northwest utilities. BPA purchases power from seven wind projects and has more than 2,200 megawatts of wind interconnected to its transmission system.

