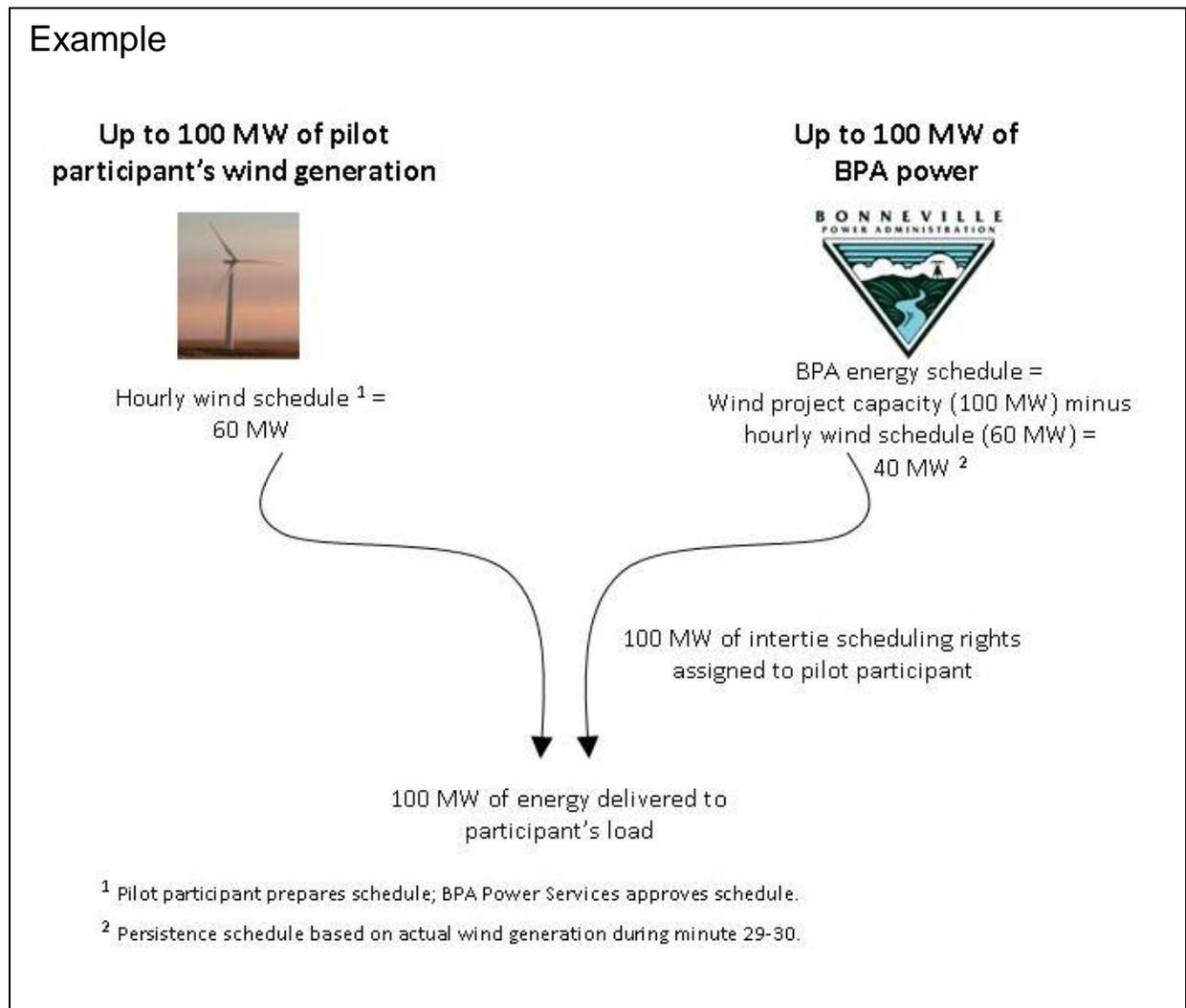


BPA offers pilot service to aid wind generation

July 2013

The Bonneville Power Administration is seeking participants to test a product that the agency believes could improve the value and marketability of wind power generated in its balancing area. At the same time, it will offer BPA a new way to market its power. The new Wind Smoothing and Intertie Service could help Northwest wind generators access California power markets and qualify their wind energy as a California Category 1 renewable resource, making their resources more marketable to California utilities.

The Wind Smoothing and Intertie Service is a combination of hourly BPA power and one year of BPA Power Services' firm north-to-south intertie scheduling rights. BPA's low-carbon power, coupled with a wind generator's hourly wind schedule, will smooth the wind generation into a flat block of scheduled energy nearly every hour of the year.



The pilot product will be limited to 100 MW for one year. Assuming a generator purchases the full amount, the BPA energy scheduled each hour will make up the difference between the wind schedule, based on metered generation, and 100 MW.

Maximizing the value of renewable resources

Much of the wind generation in BPA's balancing area is sold to purchasers in California, where energy is often priced higher than in the Northwest. The price difference is due in part to Renewable Portfolio Standards requirements and the carbon benefit of the California cap-and-trade system.

But, due to the variability of wind generation, wind generators must bid into the California Independent System Operator's market on an hourly basis. If a bid is denied, the generator must find another buyer – typically in the lower-priced Mid-Columbia market.

The Wind Smoothing and Intertie Service will provide wind generators with the ability to schedule a flat block of energy every hour, and prevent the need to purchase hourly firm or non-firm transmission.

In addition, BPA is certified as an “Asset Controlling Supplier” by the California Air Resources Board. The board has assigned BPA power an extremely low emissions rate. This makes BPA power valuable to purchasers in California, and BPA can offer it for a premium price.

To ensure that the energy can be provided to complement the wind schedule, BPA will rely on a small portion of federal system flexibility set aside for operational and load uncertainty, as well as short-term energy purchases. The energy associated with federal system flexibility set aside for operational and load uncertainty is separate from the capacity BPA maintains for balancing reserves, so it will not affect the agency's ability to provide the within-hour variable energy balancing service described below.

Above and beyond balancing

BPA is offering this service above and beyond the existing Variable Energy Resource Balancing Service. VERBS is capacity that BPA holds in reserve year-round and deploys *within* the hour to make up for the difference between the expected (scheduled) and actual wind generation. It includes the ability to increase hydro generation if there is less wind than forecast and decrease hydro generation if there is more wind than forecast.

The Wind Smoothing and Intertie Service, on the other hand, is an hourly sale of energy from Power Services' inventory, and it is scheduled prior to the hour. The pilot participant will still have to purchase VERBS to ensure the scheduled wind generation and actual wind generation match within the hour.

BPA's operating procedures associated with VERBS still apply to pilot participants. In other words, the Wind Smoothing and Intertie Service does not protect the participant from Dispatcher's Standing Order 216, which BPA issues when it has exhausted its balancing reserve

capacity. In a DSO 216 event, BPA would still provide the full federal energy schedule, but the agency would not be able to make up any difference between the scheduled and actual wind generation.

Committed to mitigating oversupply

When there is high runoff in the Columbia River Basin and an oversupply of power, BPA attempts to reduce spill and the related amount of total dissolved gas in the Columbia River and its tributaries by maximizing federal hydropower generation and sales to the south. Therefore, the agency typically uses all of its north-to-south intertie capacity during oversupply.

If BPA were to implement the Oversupply Management Protocol, under which it would displace wind generation in its balancing area with federal hydropower, the pilot includes terms that allow BPA to substitute the wind energy on the intertie with federal energy for a maximum of 200 light load hours – about 2 percent of hours in a year. This would allow BPA to maximize hydropower exports in order to mitigate oversupply. In this case, the California purchaser would continue to receive a flat block of energy, but it would originate from the federal hydropower system. The wind generator would be free to sell its energy elsewhere.

Next steps

BPA will hold a public meeting on Aug. 7 to answer questions about the pilot. Power Services will accept offers for two months. BPA expects energy will begin to flow under the pilot between October 2013 and Jan. 1, 2014.