BPA Wind Integration Team Initiatives
Update to WIT email list
November 2011

This is the monthly update on BPA's Wind Integration Team initiatives for November 2011. If you have questions, contact WIT Program Manager Eric King at 503-230-5236.

New trading platform goes live

Real-time power traders have a new, high-tech tool that allows them to see the energy market and find the best deals at a glance. Traders in the real-time market have relied on the phone for decades, but now they can consult an electronic trading platform called WebExchange.

WebExchange, which was developed by members of the Joint Initiative, went live Nov. 14. So far, participants include BPA, 16 other utilities and a renewable energy generator.

WebExchange will help the wholesale electricity market pick up the pace as it moves toward scheduling power in shorter, 30-minute increments, accelerating the region's progress toward smoothly integrating wind energy on the grid.

WebExchange participants post offers when they want to sell energy and bids when they want to buy. The bids and offers are visible to every user at once. It's a step toward visibility and automation in the real-time market, which is more important than ever now that there are shorter scheduling time frames.

Most WebExchange subscribers allow 30-minute transactions, but some are allowing even shorter transactions across their transmission systems. WebExchange can handle power transactions as brief as one minute.

Elliot Mainzer, BPA executive vice president of Corporate Strategy, says WebExchange could eventually evolve into a regional balancing capacity market. "It could give our transmission customers access to non-federal balancing resources and potentially complement a regional energy imbalance market," Mainzer says.

Here are some other advantages of the new tool.

- Bids and offers are anonymous
- Traders can communicate with other users anonymously through an instant message feature
- Traders can negotiate terms
- It can create e-tags automatically
- It can help traders can find the cheapest available transmission path

BPA's participation in developing WebExchange was one of several commitments it made in the Wind Integration Team 2.0 work plan. The work plan called for development of an "intra-hour transaction accelerator platform," or ITAP, which resulted in WebExchange.

Customer eligible for committed intra-hour scheduling rate reduction

One customer has met the scheduling accuracy performance test and is eligible to participate in BPA's new committed intra-hour scheduling program.

Under this program, wind generators that commit to submitting schedules every 30 minutes and meet scheduling accuracy metrics are eligible for a 34 percent reduction in the rate for variable energy resource balancing. This customer will be eligible for the discount when it acknowledges its participation in writing.

One other customer began qualifying for the pilot in December. If this customer also qualifies, participation would total nearly 550 MW. The pilot is limited to 1,200 MW.

BPA has revised and is accepting comments on its committed intra-hour scheduling business practice. The revisions include performance metric clarifications. For more information on the business practice revisions or to comment, go to: http://transmission.bpa.gov/ts_business_practices/Content/3_Comments_and_Redline/Comments_and_Redline.htm. BPA will accept comments through Dec. 16.

DSO 216 modifications improve balancing reserves management

BPA implemented software changes to enable wind generation limit orders and schedule curtailments under Dispatcher Standing Order 216 during the first 10 minutes of each hour.

BPA established DSO 216 in 2009 to manage balancing reserves. When balancing reserves are exhausted, DSO 216 allows BPA dispatchers to order an over-generating wind facility to reduce generation back to its schedule, or dispatchers can curtail schedules when a plant is under-generating.

When BPA implemented the protocol, the agency said it would not take corrective action during the hourly ramp (from 10 minutes before the hour until ten minutes after the hour). During the ramp, wind plant operators can modify their schedules to minimize scheduling error in the upcoming hour, thus reducing the amount of reserves BPA must deploy and avoiding the need for DSO 216.

But BPA found that during some hours, wind generation changed significantly outside of the scheduling windows and reserves deployed exceeded 100 percent during the hourly ramp. Applying DSO 216 during the last 10 minutes of the ramp will help BPA better manage balancing reserves within the quantities provided for in the rate case. If reserves are deployed in

excess of the approved thresholds, the dispatcher no longer has to wait until the ramp is complete to take action.

BPA informed customers about this change at the Transmission Customer Forum in October and held a technical conference call Nov. 15. The change went into effect Nov. 30.

For details on the DSO 216 modifications, go to http://transmission.bpa.gov/wind/op_controls/.

BPA collects wind data from four new locations

BPA is collecting and sharing meteorological data from four new sites, bringing the total number of meteorological towers to 18. The agency expects to hook up two more sites in the coming months.

The four additional sites are not actually new, but part of an older BPA anemometer network that in some cases predated wind development in the BPA balancing authority area. The agency's oldest meteorological station was installed in 1976 and has been reliably collecting data for more than 35 years.

BPA installed 14 new anemometers in 2010 to help give a regional picture of wind speeds at any given moment. The agency then developed an innovative data visualization known as the wind sock display.

Because the older network has such a rich history of data collection, BPA updated the communications from the sites so the data could be posted in the same format as the 14 newer sites. The wind sock display now includes data from these new meteorological sites.

The addition of these sites will hopefully aid in wind power forecasting efforts like those internal to BPA.

Data from the meteorological sites is available at http://transmission.bpa.gov/Business/operations/Wind/MetData.aspx.