

**BPA Wind Integration Team Response to Comments**  
Received Jan. 9-14, 2009 on  
**Connecting Variable Generating Resources to the  
Federal Columbia River Transmission System**  
Jan. 22, 2009

At a Jan. 9, 2009, public Wind Integration Team working session, BPA requested comments by Jan. 14 on “Connecting variable generating resources to the Federal Columbia River Transmission System.” We received comments from 10 parties. These comments are posted at: [www.bpa.gov/corporate/About\\_BPA/wind/index.cfm](http://www.bpa.gov/corporate/About_BPA/wind/index.cfm)

We would like to thank all the parties who sent in formal written comments, as well as those who have participated throughout these informal discussions and working sessions.

We have released this set of responses in an attempt to be responsive to commenters and to initiate the discussion at tomorrow’s meeting. However, BPA may have additional comments over the next several business days as we finalize the process of responding to the extensive comments.

Most parties, though not all, appear generally satisfied with the overall approach we have laid out. We have provided responses to the major concerns expressed by several of the parties. We also received a number of comments that suggest we were not as clear as we hoped in some portions of our proposal, a situation we hope to remedy below and in changes to the next draft of the document.

The comments fall into eight general categories.

- 1. BPA Authority**
- 2. ESA and Clean Water Act**
- 3. Recommended LGIA revisions, generally**
- 4. Rate case issues**
- 5. Proposed LGIA language regarding operational control**
- 6. Notification procedures**
- 7. Attachment B equations**
- 8. Miscellaneous**

Below we offer our responses to comments in each of the eight general categories.

**1. BPA Authority**

Commenters questioned BPA’s authority to implement the proposal and BPA’s authority to change existing Large Generator Interconnection Agreements.

Under Article 9.4 of the LGIA, BPA has the unilateral right to modify the reliability requirements in Appendix C to the LGIA. *See also United States Dept. of Energy, Bonneville Power Administration*, 112 FERC ¶ 61,195, P 19 (2005). The language BPA has proposed for Appendix C reflects BPA's adoption of a reliability requirement.

Commenters suggested our approach to undergeneration through e-tag curtailment is inappropriate. We respectfully disagree. When multiple facilities are undergenerating and causing BPA to deploy almost all of its regulating reserve, it is appropriate to take steps to maintain system reliability. That said, we recognize that there are impacts to other balancing authorities from e-tag curtailments, and we are prepared to work with other parties to help minimize such impacts, including development of early-warning mechanisms and exploration of revisions to existing policies for contingency reserves for variable generating resources through the Northwest Power Pool and Western Electricity Coordinating Council.

Although our approach may not be the preferred long-term solution to the challenge of renewable resource integration, we believe it will allow BPA to manage extreme swings in variable generation in a way that can be implemented in a timely manner and allow for the signature of additional LGIAs. It assures BPA can operate its system reliably and in compliance with law.

This approach also has the potential to reduce the cost of wind integration services while allowing reliable system operation. But we believe it is essential that all wind projects in BPA's balancing authority follow the same rules.

## **2. ESA and the Clean Water Act**

One issue raised in the comments is whether or not BPA is acting to maintain transmission system reliability, particularly when BPA specifies that it will take actions to comply with the Endangered Species Act and Clean Water Act.

Compliance with ESA and the Clean Water Act does raise reliability issues. Limitations on total dissolved gas and other spill requirements can effectively limit the amount of regulating flexibility on the federal hydro system which, as a legally binding constraint, effectively translates into a reliability issue. BPA does not believe in any case that it is compelled to allow generators to operate in a way that would cause BPA to violate these statutes. In 2008, BPA issued dispatch orders to several wind projects requiring them to reduce their output back to schedule for the specific reason that additional wind generation above schedule would have resulted in a violation of the ESA.

## **3. Recommended LGIA Revisions**

Several commenters suggested revisions to BPA's proposed LGIA language (e.g., stranded costs and operational control, among other things). We believe many of the suggested revisions have merit and will revise the LGIA language based on customer feedback. BPA will post another draft of the LGIA language in Appendix C as soon as

possible. BPA will continue to work with its customers to address legal issues or concerns related to the LGIA language in Appendix C.

#### **4. Rate Case Issues**

A number of comments fall under the scope of the upcoming Fiscal Year 2010-2011 Transmission Rate Case. We have noted these comments and have referred them to BPA's rate staff for use in that process.

Since these issues are directly related to BPA rates, they need to be discussed in the rate case process rather than the WIT forum. We flipped the order of the rate case workshop and WIT working session on Jan. 23 specifically so that parties could discuss and clarify rate questions in the rate forum before discussing LGIA issues. We hope this approach will help narrow the range of issues to be resolved in the WIT and will allow the rate issues to be focused in the rate case workshops. This will become particularly important when the 2010-2011 Rate Case Initial Proposal is filed and *ex parte* rules go into effect, now scheduled for Feb. 3.

Comments we have referred to the rate case include several concerns, such as:

- a. Ensuring that the Integration Rate that BPA sets for variable generators is sufficient to fully recover any costs associated with variable generation.
- b. Ensuring that reserve costs fully reflect the methodology used in the rate process, and reflect reserves required to serve additional wind generation as it is added to the system during the rate period, and
- c. Ensuring that the methodology used in the rate case to estimate the amount of reserves needed fully captures the level of reserves needed.

#### **5. Proposed LGIA language regarding operational control**

A number of commenters asked why BPA would take operational control of a variable resource and raised liability concerns. Our language was broader than necessary and we are revising it to make clear that BPA is asserting only the right to send an electronic signal to the generator when BPA must implement a reduction in output under the LGIA.

#### **6. Notification procedures**

Based on earlier comments, the current proposal includes early warning notification once BPA has reached 85 percent of reserves deployed. In addition, project operators will be able to see the level of reserves being used. These conditions will be visible to all via a web page as well as real-time data for those with ICCP.

BPA will not be making phone notification for limitations to wind output or curtailment of tags. It is not physically possible for dispatchers to telephone 20 wind projects in a

single minute or few minutes while conducting other operational requirements and running out of reserves. Early warning and notification of possible limitation or curtailment will be made when 85 percent of reserve has been deployed. Also, the amount of reserve deployed will be continuously available on the BPA website.

We believe this should provide sufficient notification to all parties in real-time operation.

## **7. Attachment B equations**

BPA is adding language to attachment B to clarify equation 1, and to define all terms in equations 3 and 4.

Equation 5 responds to concerns raised in earlier WIT public workshops. It accounts for the potential need for reserves later in the hour, thus reducing the amount of reserves to be used early in the hour. From the discussion, it appears that most parties do not support this concept, and BPA proposes removing Equation 5 from attachment B.

## **8. Miscellaneous**

A. Testing procedures: BPA will develop the testing procedures in a public process. BPA does not agree, however, that there should be no penalty for failure to fully respond during those tests that take place after the initial installation and testing period. When BPA tests the response of the wind facilities to a limiting signal, the wind facility operator does not have an indication that it is a test, therefore, if they fail to comply it is equivalent to failing to meet a limitation when reserve is depleted. This is consistent with the penalties for non-compliance with a test for self-suppliers of contingency reserve.

B. Limiting generation may force average output below scheduled value: BPA does not agree that if this unlikely scenario unfolds, it shows that this is not an issue of poor forecasts and/or scheduling of wind facilities. BPA has shown in multiple workshops how the scheduling has occurred to this point for the facilities in BPA's Balancing Authority Area. When BPA limits the output of wind facilities, it is due to multiple facilities generating over their scheduled value.

C. Ability for operator to call on contingency reserve prior to tag curtailment: BPA does not agree with this. The sink BA is the entity that needs to deploy contingency reserve when there is an event that has caused BPA to deploy a majority of its regulating reserve. BPA is working with the North American Electric Reliability Corporation, Western Electricity Coordinating Council, and Northwest Power Pool to allow contingency reserves to be called on when a tag is cut due to over-forecast of wind generation. However, BPA will not deploy its contingency reserves for wind that sinks in a different BAA. The BAA in which the wind power is used should deploy its contingency reserves.

D. Curtailment of nonfirm prior to firm when curtailing tags: Under this proposal, BPA will be curtailing e-tags for the purpose of managing a reliability condition driven by a lack of additional *regulating reserve capability*, not due to a transmission constraint

driven by a limit of Available Transfer Capability. BPA will curtail tags on wind facilities that are under-generating. For each facility, BPA will curtail nonfirm prior to firm, but this is only on a per-facility basis. BPA will not first curtail nonfirm on other schedules. That process applies during a transmission constraint, which is a different situation from the one addressed in the LGIA.

E. Curtailment of tags for wind serving load in the BPA BAA: BPA will deploy contingency reserve when tags are curtailed to load inside BPA's BAA.

F. Clarification of what occurs when BPA runs out of reserve: Currently, if BPA runs out of reserves, BPA declares an emergency, stage 1, 2 or 3 depending on the severity of the event. At that point BPA is able to take any action necessary in order to preserve the reliability of the interconnection.

G. DSO 216: DSO 216 is available to all plant managers that sign a nondisclosure agreement with BPA.

H. Columbia Energy Partners comments not covered in other responses: BPA took into account the diversity of the wind with a high likelihood of being built in the BPA BAA when performing the studies. BPA feels that 24 months is an acceptable period for a wind facility to modify its procedures, processes and/or software to insure that it will be fully compliant with dispatch directives. BPA does not agree that compensation should be made when these directives are issued. The reason for the directives is that the wind is off-schedule and BPA is simply causing the wind output to be closer to the schedule submitted. Lastly, in the public process customers decided that factors unique to each facility should not be taken into account when issuing directives.