

**BPA Responses to “Managing Imbalance Accumulations and Patterns” Workshop
Comments**

BPA appreciates parties’ efforts in providing comments to our January 19 workshop presentations regarding generation imbalance accumulation and schedule error bias. BPA committed to holding this workshop in the Final Record of Decision (Final ROD) approving the Partial Transmission Settlement Agreement. In the Final ROD BPA stated “[d]uring the Rate Period, BPA will hold discussions with interested parties and accept and respond to written comments regarding ways that generators can operate to prevent or mitigate cumulative imbalances and patterns of under-delivery or over-use of energy. These discussions will not include discussions of the Persistent Deviation charge or the criteria for Persistent Deviation.”

During the workshop, BPA noted that the balancing service established in the rate case made assumptions that parties would schedule with a level of accuracy and lack of bias consistent with 30/60 persistence scheduling. Data suggests that parties are incurring imbalance accumulations inconsistent with those assumptions. BPA has requested suggestions as to how they would reduce accumulations of imbalance associated with scheduling wind resources or alter forecast assumptions.

COMMENT

Powerex states that there are many reasons why an entity might be incented to intentionally over or under schedule, including: (1) the current difficulties associated with marketing an energy-only product in some hours; (2) the true cost of self-supplying sufficient balancing reserves; (3) the substantial production-based incentives paid to VERS (i.e., Renewable Energy Credits and Production Tax Credits) that may encourage some generators to continue to generate even if its output has not been sold and scheduled; and (4) the lack of rules preventing the intentional arbitrage of market prices vs. the rate schedules (i.e., generation imbalance and persistent deviation penalties). Powerex recommends that BPA use a T-45 persistency forecasting method to determine each hour, the maximum quantity that a wind customer may schedule as firm each hour. It suggests that the maximum quantity may be reduced during periods where BPA has insufficient *inc* balancing reserves to support this level of firm wind schedules and that the method can be used to calculate BPA’s balancing reserve requirement for each hour, without curtailment to those objectively determined firm VER schedules.

Powerex also states that using this method would result in the following: (1) provide the customers with the T-45 persistency output (the T-45 Forecast Output), as the forecast for the upcoming scheduling hour; (2) customers would be required to submit energy schedules for the next scheduling hour that are no greater than the T-45 Forecast Output or some lower amount posted by BPA during certain periods); (3) any energy that a wind generator schedules in excess of the T-45 Forecast Output must be scheduled as Non-Firm (E-tag generation product code G-NF) and those schedules will be subject to curtailment as per DSO 216, in the event that the total amount scheduled exceeds the generation output of the wind project, and BPA has insufficient *inc* balancing reserves,

and; (4) when the total schedules from a wind plant are less than the T-45 forecasted output, the wind project will be subject to generation curtailment in the event that BPA has insufficient *dec* reserves.

BPA RESPONSE

BPA appreciates the comments and suggestions related to managing imbalances. BPA agrees that if schedules are submitted consistent with persistence or an unbiased forecast, it results in a reduction in accumulated imbalances and prevents intentional schedule error bias. BPA provides a rate discount for 30-minute scheduling consistent with 30-minute persistence or a forecast that results in less than or equal imbalance over time. BPA would like to note that even with schedules submitted consistent with a persistence or other unbiased forecast, the possibility still exists that available reserves can be depleted and some way to limit further deployment of those reserves within a scheduling period is still needed. In future workshops BPA plans to discuss a variety of use-based billing factors that may also provide rate incentives and should result in less imbalance accumulation.

With regard to Energy Product Codes, BPA believes that there are still significant differences of opinion among members of the Northwest Power Pool regarding appropriate Energy Product Codes for wind generation. BPA is reticent to bring that uncertainty into the rate-making process. When there is regional agreement and clear rules for the use of those codes BPA may be better positioned to further consider Powerex's suggestions for establishing a finite limit on the amount of Firm Energy a wind facility can schedule.

COMMENT

Both PSE and RNP suggested that BPA provide additional analysis and transparency regarding aggregate and/or detailed (plant specific) imbalance accumulation, and that BPA reach out to customers to better understand the causes of biased schedule error. BPA will provide further analysis of aggregate imbalance accumulation in its generation input studies for the rate case. BPA will also directly contact plant operators and load schedulers regarding the causes of schedule error and potential preventive measures to avoid schedule error that is inconsistent with the behavior of schedule error anticipated in balancing service. In the context of those meetings BPA will provide individual plant information to each plant regarding their schedule error and imbalance accumulations, and seek information on whether generators are likely to continue the practices that lead to persistent or significant schedule error. However, BPA cannot make plant specific information on imbalance accumulation available to a broad audience due to data confidentiality. For aggregate data, BPA provides a display of the aggregate wind basepoint versus wind generation at:

<http://transmission.bpa.gov/Business/Operations/Wind/twndbspt.aspx>

Total balancing reserves deployed are displayed at:

<http://transmission.bpa.gov/Business/Operations/Wind/reserves.aspx>

COMMENT

PSE asked whether the data in Slide 8 represented a net of over-and under-schedules.

BPA RESPONSE

The information provided on Slide 8 was the aggregate imbalance accumulation for the month of October 2011. Within the month, significant variation can occur, forcing multiple purchases and sales as wind generators over- and under-schedule. Currently, wind generators that are participating in Committed Intra-Hour scheduling, and those that frequently update their schedules mid-hour, are contributing very little to imbalance accumulation.

COMMENT

PSE commented that BPA should clearly demonstrate to customers that BPA is incurring unrecovered costs associated with accumulated imbalance before considering any change in policy or rates.

BPA RESPONSE

BPA is not proposing changes in its policy or rates; rather it is requesting that parties use the balancing service BPA provides in a manner consistent with rate case assumptions. The purpose of the workshop was not to propose rate changes but to hear from customers on any ideas about how they could prevent biased schedule error. BPA agrees with PSE's comment that the principle of cost causation should apply to any potential changes in rates, and also believes that the most beneficial solution for all parties is to reduce schedule error and ensure that the assumptions used in the rate case align well with actual scheduling behavior.

COMMENT

PSE commented that BPA should explain why energy and generator imbalance service charges fail to compensate BPA for accumulated imbalances.

BPA RESPONSE

BPA's rate structures assume that only unavoidable, unbiased schedule errors occur. BPA has not assessed balancing capacity requirements based on any assumption of deliberate over- or under-scheduling. If BPA were to do so, it could potentially increase the balancing capacity requirement. Any attempt to quantify the amount that customers might purposefully over- or under-schedule would be speculative. Therefore, as noted above, BPA prefers to work with customers to ensure that their schedule errors are unbiased, random, and represent unavoidable error due to variability in wind generation or loads.

COMMENT

RNP and Iberdrola both commented that an important next step is to analyze the net total system accumulated imbalance from both energy and generator imbalance, and suggested that understanding the size, patterns, and characteristics of the system issue will form the basis for policy discussions going forward.

BPA RESPONSE

While it is true that BPA ultimately responds to the net impact of energy and generator imbalance, the fact that individual entities appear to be biasing their schedule error creates evidence of flawed assumptions that BPA relies on in establishing capacity requirements for balancing service, and also creates the possibility of risk transfer from parties that use poor scheduling practices to parties that use good scheduling practices.

COMMENT

RNP suggested that BPA should clearly articulate where it believes the gap is between existing rates and policies, and the costs associated with the forced marketing of accumulated imbalances.

BPA RESPONSE

BPA has several concerns: (1) the gap between BPA's assumptions for scheduling error and the actual patterns of schedule error result in establishment of incorrect capacity requirement for balancing; (2) significant differences in scheduling accuracy among customers results in redistribution of risk (through DSO 216) from customers that schedule less accurately to customers that schedule within the assumed level of accuracy; (3) at times there may be no available market from which to resolve imbalance accumulations, which causes risk of violating operating constraints, and (4) BPA can be forced to buy or sell many times within a month to maintain operations and river levels as planned. BPA is not currently anticipating any proposal in the FY 2014-2015 rate proceeding for recovery of forced marketing costs, but it does anticipate further conversation with customers regarding use-based charges for VERBS capacity.

COMMENT

RNP suggests that when considering policy remedies for wind generator imbalance, it is important to recognize that the same challenges are introduced through load forecast error.

BPA RESPONSE

BPA agrees that parallel structure between energy imbalance and generation imbalance is desirable, but also recognizes there may be justifiable reasons for treating load imbalance differently. For example, persistent deviation exemptions may be available to generators

that choose specific scheduling practices, where such exemptions don't make sense for loads.

COMMENT

RNP comments that the interaction between BPA's DSO 216 policy and scheduling practices to avoid accumulated imbalances has always been an important part of this policy discussion. RNP further suggests that the desire to avoid DSO 216 events can exacerbate accumulated imbalances, and the desire to avoid Persistent Deviation Penalties can trigger DSO 216 events. RNP also suggests that it is possible that the use of DSO 216 is preventing generator imbalances from netting to zero.

BPA RESPONSE

BPA believes that both DSO 216 and Persistent Deviation are best avoided by reducing schedule error toward zero, which also reduces imbalance energy accumulation. BPA has repeatedly expressed to customers that it prefers that they do not deliberately bias their schedule error, and that BPA views this as a misuse of the balancing service.

COMMENT

RNP suggests that more incremental scheduling practices and improving variable energy forecasting practices will mitigate this issue. In addition, RNP supports BPA's exemption of the Committed Intra-Hour Scheduling Pilot participants from the Persistent Deviation Penalty.

BPA RESPONSE

As illustrated in Slides 9 and 10 of BPA's presentation at the January 19 workshop, both persistence-based scheduling and use of forecasts can significantly reduce imbalance accumulation. BPA agrees that the use of Committed Intra-Hour (CIH) Scheduling significantly reduces (nearly eliminates) issues of imbalance accumulation. BPA hopes to encourage more participation in CIH, or at minimum either persistence- or forecast-based scheduling.

BPA appreciates the parties' efforts in providing their comments to the January 19 workshop, and hopes the parties find these responses helpful. As mentioned above, BPA will begin to reach out to plant operators and load schedulers regarding the causes of their schedule error and potential preventive measures to avoid schedule error that is inconsistent with the behavior of schedule error anticipated in balancing service. In addition, BPA plans to hold future workshops to discuss a variety of use-based billing factors that may also provide rate incentives and should result in less imbalance accumulation.