

**UNITED STATES DEPARTMENT OF ENERGY
BEFORE THE
BONNEVILLE POWER ADMINISTRATION**

)
)
2010 WHOLESALE POWER) **BPA Docket BPA-10**
AND TRANSMISSION RATE) **WP-10**
ADJUSTMENT PROCEEDING) **TR-10**
)

**DIRECT TESTIMONY
OF
NORTHWEST REQUIREMENTS UTILITIES**

WITNESSES:

GEOFFREY H. CARR

MEGAN E. STRATMAN

SUBJECT:

**GENERATION INPUTS, SLICE/NON-SLICE ISSUES, ENVIRONMENTALLY
PREFERRED POWER AND DSI SERVICE**

March 20, 2009

1 Q. *Please identify yourselves.*

2 A. We are Geoff Carr and Megan Stratman. We represent Northwest Requirements Utilities
3 (“NRU”) and its members in this case. Our qualifications appear in Exhibits WP-10-Q-
4 NR-1, TR-10-Q-NR-1 and WP-10-Q-NR-2, TR-10-Q-NR-2 respectively.

5 Q. *What is the purpose of your testimony?*

6 A. There are five purposes. First, we support BPA’s proposal regarding generation inputs
7 and a wind integration rate as well as PPC’s testimony on this issue. Second, we ask
8 BPA to assure load following customers that its decisions regarding generation inputs,
9 costs and revenues create no costs shifts between Slice and Non-Slice customers of BPA.
10 Third, we ask BPA to assure load following customers that they are not exposed to a
11 cost-shift as a result of the timing of the Slice true-up. Fourth, we address how BPA
12 intends to price Green Energy Premiums, and what measure it will use to assess the value
13 of those GEPs. Last, we address BPA’s proposal regarding service to the DSIs in this
14 proceeding.

15 Q. *Please describe NRU’s interests in this case.*

16 A. NRU’s membership consists of 54 load following utility customers of BPA. These
17 utilities depend on BPA to meet their energy loads and peak loads, and they pay for the
18 cost of meeting this load in their rates. NRU utilities’ rates are directly affected by
19 BPA’s pricing for generation inputs. If BPA charges too little for this service, then
20 Priority Firm rates are higher than they would otherwise be. In addition, NRU’s load
21 following utilities depend upon the sale of secondary energy and the revenues from these
22 sales as a credit to the BPA power rates. NRU utilities are not Slice customers – Slice is
23 unaffected by BPA’s secondary energy sales. Regarding generation inputs for wind

1 generation, NRU notes that most of this wind generation is exported to other Balancing
2 Authorities; BPA must nevertheless follow wind generation in order to keep its own
3 system operating. BPA needs to properly price the cost of generation input service so
4 that wind pays for its fair share of integration costs. BPA must insure that its Slice and
5 Non-Slice customers are treated equitably both with regard to the generation input pricing
6 issue and the cost shift issue identified in BPA's direct case. NRU's customers are
7 directly affected through their rates by actions taken by BPA to assist the Direct Service
8 Industries.

9 **1. Generation Inputs and Wind Integration**

10 *Q. What differences do you see between load variability and wind variability, and how does*
11 *that influence NRU's thinking about generation inputs?*

12 *A. Attached as Exhibit 1 is a graph that demonstrates the differences between wind and load*
13 *in terms of variability. This graph was found on BPA's website, and is updated every 5*
14 *minutes. It represents the wind generation in BPA's control area compared to the load*
15 *for the past five days. See:*

16 <http://www.transmission.bpa.gov/business/operations/wind/baltwg.aspx>

17 As NRU looks at this graph, the following findings stand out. BPA needs to have
18 sufficient generating resources available to follow the vagaries of wind and load. Load is
19 fairly predictable in and of itself. Over the course of the day and within hour, the factors
20 that affect load variability and the degree of load variability, such as temperature, are well
21 understood, well documented and therefore make BPA load forecasting reasonably
22 accurate. By comparison, wind generation doesn't have a daily shape and is highly
23 variable within the hour. Wind generation is available sometimes during peak load and

1 sometimes not (see March 5th at 9:00 a.m. versus March 6th at 9:00 a.m.) Wind can go
2 from zero to 1000 MW in a matter of minutes. In contrast, load moves predictably to
3 peak and then falls off predictably over a matter of hours (see 6 p.m. March 3rd). See
4 Exhibit 1.

5 *Q. How well does forecast wind generation in BPA's Balancing Authority compare with*
6 *actual wind generation?*

7 A. Attached as Exhibit 2 is another BPA graph that compares the forecasts of wind
8 generation with actual wind generation. This graph is also from BPA's website, and can
9 be found at: <http://www.transmission.bpa.gov/business/operations/wind/twndbspt.aspx>
10 In this chart, the red line is the combined forecast of the wind generators in BPA's
11 Balancing Authority; the blue line is the actual wind generation. What NRU finds when it
12 examines this chart is that the combined forecast of wind generation in BPA's Balancing
13 Authority lags generation as it actually occurs by about two hours. This is the basis of
14 two-hour persistence. See testimony of Elliot E. Mainzer, Lawrence E. Kitchen, Kieran
15 P. Connolly, Raymond D. Bliven, and Sarah K. Bermejo, WP-10-E-BPA-22, Page 18.
16 Also, the forecasts are sometimes materially inaccurate. See for example March 3rd at
17 9:00 a.m. or March 5th at 1 a.m. See Exhibit 2.

18 *Q. What are the practical consequences of wind forecasting inaccuracies?*

19 A. The practical consequences are that reliability on the BPA system may be more difficult
20 and thus more costly to manage with the addition of wind generation as more generation
21 would need to be held in reserve to protect against material wind forecasting
22 inaccuracies. On the other hand, more accurate wind forecasts would give BPA better

1 information on how much balancing reserves to set aside to regulate and follow wind
2 generation.

3 *Q. Is the difficulty of forecasting wind a problem only for BPA's Balancing Authority?*

4 A. Apparently not. The need for better forecasting of wind and the effect that rapid wind
5 ramp rates have on power systems have been widely discussed in the industry. For
6 example, a recent article in Public Utilities Fortnightly reported on a serious problem that
7 was averted in ERCOT:

8 On a macro level we forecast load pretty close to what it turned out to be ... but there
9 was a substantial difference between what we were getting from wind generators and
10 what was reported to us in our look ahead studies. [...] The primary factor is the
11 need to accurately forecast wind [...] NYISO proposes to require wind generation to
12 finance the costs of forecasting and also to penalize wind generators who repeatedly
13 fail to provide required meteorological data. In return, it would increase the amount
14 of wind generation eligible for exemption from under-generation penalties and full
15 compensation for over generation.

16
17 Gary Moland, *Windpower's Warning*, Public Utility Fortnightly, May 2008, at pages 61
18 to 62. The February edition of the same magazine stated the following: "Wind is an
19 uncontrollable resource. [...] It's a piece of the supply that can push thousands of
20 megawatts onto the grid and then can drop off to almost nothing." Steven Anderson,
21 *Trial and Error in Texas*, Public Utility Fortnightly, February 2009, at pages 29 to 30.

22 *Q. Are BPA's problems similar to those identified in the Public Utility Fortnightly articles?*

23 A. It appears so. In numerous places in BPA's testimony, BPA states that it is attempting to
24 avert such a future through its rates and rate design for generation inputs:

25 As of the end of calendar year 2008, there is approximately 1,800 MW of wind
26 generation operating in the BPA BAA. By the end of calendar year 2009, it is
27 expected that BPA will have integrated 3,155 MW of wind generation. Study, WP-
28 10-E-BPA-08, Table 2.1. Substantially more than 50 percent of the wind generation
29 in the PNW is being located in the BPA BAA, and developers are building the new
30 wind generators much faster than the plan forecast.

31

1 Testimony of Elliot E. Mainzer, Lawrence E. Kitchen, Kieran P. Connolly, Raymond D.
2 Bliven, and Sarah K. Bermejo, WP-10-E-BPA-22, page 13.

3 Although the majority of new wind generation is locating within the BPA BAA, most
4 of that wind generation is exported out of the BAA to other utilities for their load
5 service.

6
7 *Id.*, at p. 14.

8
9 Because most of the wind generation in the BPA BAA is located within a
10 geographically confined area, BPA can experience swings in generation of hundreds
11 of megawatts within a single hour. To manage these tremendous swings in wind
12 generation (and accompanying increased variability and uncertainty) and to maintain
13 load and resource balance, BPA must carry an increasing amount of reserve
14 generation. In addition, the need to retain flexibility to respond to over- and under-
15 generation shifts hydro system fuel supply and generation from HLH into LLH to
16 allow the system to carry the additional *inc* and *dec* reserves.

17
18 *Id.*, at p. 14.

19
20 The scheduling accuracy of wind generators in BPA's BAA is a critical assumption in
21 the Generation Reserves Forecast. McManus et al., WP-10-E-BPA-23, section 4.4.
22 If scheduling accuracy for wind generation is low, BPA must increase the reserve
23 requirement to provide Wind Balancing Services, which results in greater cost.
24 Conversely, the higher the scheduling accuracy, the lower the resulting reserves
25 requirement, which results in lower costs. The Generation Reserve Forecast shows
26 that the historical scheduling behavior of the existing wind generators in BPA's BAA
27 is consistent with the use of a two-hour persistence forecasting model.

28
29 *Id.*, at p. 17-18.

30
31 *Q.* How does this BPA testimony influence NRU's thinking on generation inputs?

32 A. It influences NRU's thinking in two ways. First, wind generation is an important
33 resource to NRU's utilities, particularly those utilities that are or will be subject to
34 renewable resource portfolio standards. Therefore, NRU wants to see wind generation
35 successfully and reliably integrated into the BPA system. Second, NRU is convinced that
36 it is important to get the pricing of wind integration correct for all of BPA's customers.
37 Given the considerations described by BPA in the testimony cited above, and further

1 given the experience of wind generation nationally and on BPA's system as wind
2 resources rapidly expand, NRU supports BPA's proposal to get the pricing of generation
3 inputs correct in this rate case. Wind integration costs should not be understated.
4 Understating wind integration costs may tend to result in more investment in wind
5 generation than is economically desirable, or may tend to favor one type of renewable
6 generation over another that may be less variable in its output. As well, correctly stating
7 the costs of wind integration should provide an incentive to wind generators and the
8 purchasers of wind output to improve the reliability of wind forecasting, such that wind
9 integration costs can be reduced over time. As the region's wind fleet improves its
10 forecasting and scheduling abilities, the costs of wind integration should come down,
11 which will benefit all customers.

12 *Q. Have you read the testimony of the Public Power Council (PPC) on the issue of*
13 *generation inputs?*

14 *A. Yes. NRU supports the Joint Party's testimony regarding generation inputs. In*
15 *particular, NRU supports the approach to WI-10 rate design described in the Joint Party's*
16 *testimony. BPA should adopt a base rate using 45-minutes persistence scheduling*
17 *accuracy but place on wind plants the financial risk created by inadequate or imprecise*
18 *scheduling or failure of operational mechanisms to curb excessive use of BPA balancing*
19 *reserves compared to what others can achieve. See, TR-10-E-JP6-01 and WP-10-E-JP6-*
20 *01, Testimony of Nancy Baker, Geoff Carr, Linda Finley, and Lincoln Wolverton.*

21 **2. Effect of Generation Inputs on Slice and Non-Slice Rates**

22 *Q. What other concerns does NRU have with the BPA generation inputs testimony?*

1 A. NRU is also concerned about the potential for cost shifts across the Slice and Non-Slice
2 products with regard to the pricing and treatment of generation inputs. As BPA notes in
3 its testimony:

4 If BPA were not required to provide the within-hour balancing reserves, BPA would
5 not incur the variable costs of these generation inputs. Rather, power production
6 would be optimized, and BPA's revenues would be increased by selling the additional
7 amounts of power into the market. In addition, BPA would sell the portion of its
8 power that is shifted from HLH to LLH as a result of the provision of within-hour
9 balancing reserves during the higher-value HLH period.

10
11 Id., at 13. The question for NRU is how the recognition of these costs and revenue
12 credits can be dealt with equitably between Slice and Non-Slice customers.

13 *Q. Does NRU have a recommendation on this issue?*

14 A. Yes. BPA reduces the Slice system capability through the deduction of off-the-top
15 obligations to reflect the operations that BPA must undertake to integrate wind within its
16 Balancing Authority. NRU requests a clear demonstration in this rate case that this
17 approach treats Slice and Non-Slice customers equitably regarding the costs and revenue
18 credits associated with generation inputs.

19 **3. Averting the Potential Slice – Non-Slice Cost Shift**

20 *Q. Has BPA identified another Slice/Non-Slice potential cost shift in this proceeding?*

21 A. Yes. As identified in the testimony of Bliven and Lefler: "Late in the ratemaking
22 process, BPA staff discovered a problem resulting from the implementation of the Slice
23 Settlement that creates a rate increase for Non-Slice customers. The problem arises from
24 a forecast of the Slice True-Up Adjustment Charge. A fundamental tenet of the Slice rate
25 is that offering the Slice product will not create cost shifts between Slice and Non-Slice
26 customers. It appeared to us that an increase in Non-Slice rates solely attributable to the

1 Slice Settlement could be viewed as a cost shift.” WP-10-E-BPA-10, page 21, lines 18 to
2 23.

3 *Q. What is the cause of this cost shift?*

4 A. As indentified in the testimony of Bliven and Lefler: “Collecting payments for the Slice
5 True-Up Adjustment Charge from Slice customers outside of the FY 2010-2011 rate
6 period is problematic in that the cash lag results in more cash required from other
7 customers in FY 2011.” WP-10-E-BPA-10, page 22, lines 12 to 14.

8 *Q. How much could this potential cost shift cost BPA’s Non-Slice customers?*

9 A. In response to a data request BPA identified the need for an estimated additional \$14
10 million in planned net revenues for risk that would have to be collected from Non-Slice
11 customers in order to address this cash lag due to the timing of the Slice True-Up
12 adjustment. See BPA Response to PN-BPA-22 (attached, Exhibit 3).

13 *Q. How does BPA propose to alleviate this potential cost shift?*

14 A. In response to a data request BPA stated that in order to alleviate this cost shift \$50
15 million in principal payments in the Slice Revenue Requirement were moved from FY
16 2011 to FY 2010. In addition, \$53 million of net augmentation costs were moved From
17 FY 2011 to FY 2010 in the Slice Revenue Requirement. See BPA Response to NR-BPA-
18 10 (attached, Exhibit 4).

19 *Q. Has amortization movement been used in the past by BPA?*

20 A. As BPA states in testimony: “As one of the measures to address the impacts of this cost
21 shift, \$50 million of planned amortization was moved from FY 2011 to FY 2010.
22 Reshaping amortization within a rate period is a longstanding practice in the development
23 of rate proposals and is accomplished without changing the total amount scheduled by

1 repayment studies in the rate period. *See, for example*, WP-07 Revenue Requirement
2 Study, WP-07-FS-BPA-02, Chapter 1. [...] Typically, such amortization shifts are
3 performed to accommodate cash flows from revenues at proposed rates [...]” WP-10-E-
4 BPA-12, Witnesses: Alexander Lennox, Ronald J. Homenick, and Dana M. Jensen, page
5 4, lines 14 to 25.

6 *Q. What are NRU’s concerns regarding this proposal?*

7 A. NRU appreciates BPA’s identification of this cost shift and the agency’s prompt action in
8 addressing it. We are concerned however that in attempting to alleviate a Slice Cost
9 shift, BPA may have taken off the table a tool that may assist in reducing the overall size
10 of the rate increase. The information contained in and supporting BPA’s Initial Proposal
11 has been surpassed by more recent events. Therefore the Initial Proposal is no longer
12 representative of a likely final rate case outcome. BPA will need to take significant
13 further actions to both update its information and mitigate the size of the rate increase.
14 While the movement of costs from year to year to alleviate a cost shift between Slice and
15 Non-Slice rates may have done what was needed for the Initial Proposal, it is unclear
16 whether these types of tools will be available for the Final Proposal. For example, we
17 expect augmentation costs to be reduced significantly in the Final Proposal. This may
18 require BPA to rely more heavily on the movement of amortization expense from 2011 to
19 2010 to alleviate the Slice/Non-Slice cost shift.

20 *Q. What are your recommendations concerning this issue?*

21 A. BPA needs to provide assurance to load following customers that there is not a cost-shift
22 to load following customers from Slice customers as a result of this and future wholesale
23 power and transmission rate adjustment proceedings. Historically BPA has moved

1 amortization payments as a way of mitigating rate increases. While NRU supports BPA
2 having the full range of tools available to the Agency to mitigate the overall size of a rate
3 increase to all customers, there must be an equitable result between customer groups.
4 Given the revised financial circumstances the Agency faces, the range of risk mitigation
5 tools available, and the resulting rate impacts on Slice and load following customers,
6 BPA, working in conjunction with customers in a public process, should craft solutions
7 that are responsive simultaneously to the need to mitigate the overall rate increase and the
8 need to achieve equity. The Agency should also provide sufficient information for
9 customer groups to understand the financial tradeoffs between alternative approaches.

10 **4. Pricing Green Energy Premiums**

11 *Q. How does BPA propose to price Green Energy Premiums (“GEP”)?*

12 A: BPA proposed that it would price GEPs at “the value of the associated environmental
13 attributes expected to be produced by resources included in the EPP and ARE portfolio.”
14 *See*, WP-10-E-BPA-17, Testimony of Ingram, Rose, Warner, Malin, and Pynch, at p. 11.
15 The GRSP language on GEPs is similar. *See*, WP-10-E-BPA-07, section K.1 (“GEP will
16 recover the forecast value of the environmental attributes associated with renewable
17 resources included in the EPP and ARE portfolio”).

18 *Q. What are NRU’s concerns about BPA’s proposal?*

19 A. NRU’s concern is that BPA has not stated where it will look to determine “the value of
20 the associated environmental attributes.” When BPA determines the forecast value of the
21 environmental attributes associated with the renewable resources included in the EPP and
22 ARE portfolio, NRU strongly recommends that BPA use a forecast of GEP market prices
23 in the Pacific Northwest market, as opposed to a WECC-wide or California market

1 forecast of GEP market prices. As BPA's environmental attributes will be purchased by
2 utilities located in the Pacific Northwest for retirement within the Pacific Northwest, the
3 forecast value of the environmental attributes should be based on market conditions
4 prevailing in this region for such attributes.

5 **5. Service to the DSIs**

6 *Q. How is BPA proposing to serve the DSIs in this proceeding?*

7 A. As stated in the testimony of Bliven and Lefler, "We directed staff to assume for
8 ratesetting purposes an actual power sale at the IP rate to all three DSIs."

9 *Q. What are NRU's concerns about BPA's proposal to serve the DSIs in 2010 and 2011?*

10 A. As NRU has stated previously, the DSIs as a customer class have no statutory right to
11 continued BPA service of any kind following the expiration of their contracts in
12 September of 2006. The Ninth Circuit (in *PNGC v. BPA*) recently confirmed that view
13 and further admonished BPA that any offer of service to the DSIs would be a
14 discretionary one that must be made consistent with BPA's other statutory obligations,
15 including the obligation to establish rates at the lowest possible cost consistent with
16 sound business principles. *See, e.g.*, January 6, 2009 email from NRU to Allen L. Burns,
17 Vice President, Bulk Marketing Bonneville Power Administration regarding Draft
18 Amendment to Alcoa Power Block Sales Agreement (December 31, 2008).
19 NRU has reviewed the testimony of the Joint Party's regarding BPA's assumptions
20 regarding potential service to the DSIs during the rate period in consideration here, FY
21 2010-11. *See*, TR-10-E-JP7-01 and WP-10-E-JP7-01. The Joint Party's testimony
22 addresses a number of infirmities in BPA's proposals in this case regarding service to the
23 DSIs, and NRU supports that testimony. NRU does not believe that any service benefits

1 for the DSIs are warranted in FY 2010-11. However if the Administrator determines to
2 proceed with an offer to the DSIs, the costs BPA assumes for such service in this case
3 should be based on legitimate load forecasts and valid contracts.

4 *Q. Does this conclude your testimony?*

5 A. Yes.

6

Exhibit 1

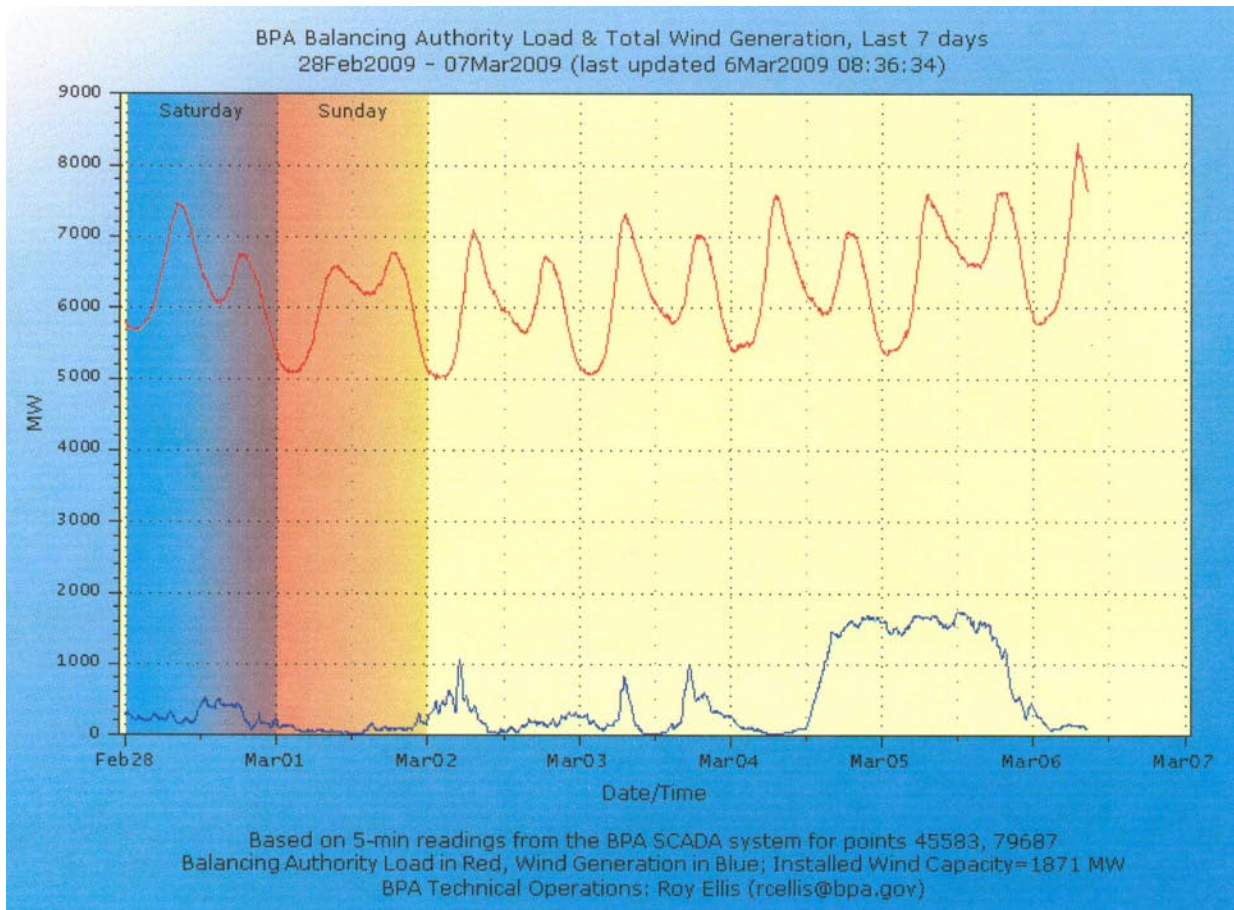


Exhibit 2

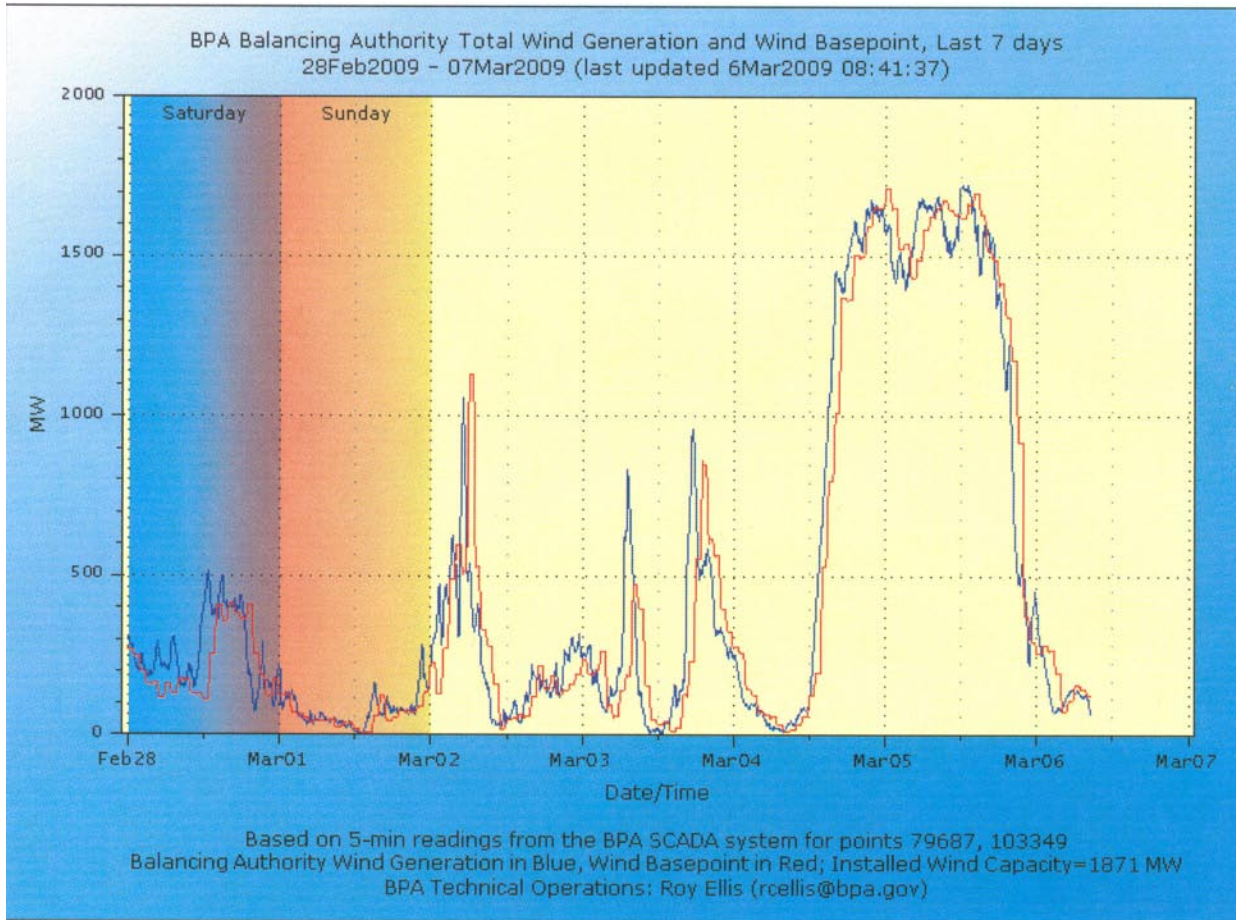


Exhibit 3

2010 Power and Transmission Rate Case Data Request Form

DATA REQUEST NUMBER: PN-BPA-22

DATE: March 3, 2009

DIRECTED TO: WP-10-E-BPA-21

UTILITY: BPA

REQUESTOR'S NAME: Erick Johnson

AGENCY: PNGC

EXHIBIT: BPA-21

PAGE(S): 7, lines 10-19, 22-26; 8, lines 2-5

DATA REQUEST:

Please provide the analysis and explain the tracking of the forecast \$20 million Slice True-Up Adjustment Charge's effect on PNRR, the 95 percent TPP and BPA's reserves. Include an explanation of how much higher the PNRR is due to the forecast \$20 million True-Up.

RESPONSE:

[This is a response to Data Requests PN-BPA-22 and NR-BPA-09.]

Preliminary work on BPA's initial proposal materials incorporated a forecast true-up payment by Slice customers to BPA for expenses in FY 2011 of about \$24 million. In preparation of the ATC adjustment, this payment was forecast to be made to BPA in 2012 according to the rules governing the timing of the Slice true-up. The effect of this delay in payment was that BPA would not have that \$24 million at the time BPA needed to make the FY 2011 year-end Treasury payment. The ToolKit calculated the amount of PNRR needed to meet the 95% TPP standard on the basis of all of the ToolKit inputs, including the detail about the FY 2011 Slice true-up. As BPA staff looked for ways to reduce the average Non-Slice rate, the staff looked closely at PNRR calculations, and realized that the delay in receiving the payment for the forecast Slice true-up for FY 2011 could be increasing the PNRR. Staff tested this by running a ToolKit scenario in which the \$24 million for the true-up was received before the end of FY 2011. In this scenario, the PNRR needed to meet the 95% TPP standard was reduced by \$12 million in each of the rate period's two years. As is the case with many preliminary analyses, this analysis was not saved, but it could be easily approximated by entering -\$24 into cell I16 in the ToolKit to model the impact of \$24 million of cash moving outside the rate period. With the Initial Proposal version of the ToolKit, this produces a \$14 million increase in the PNRR required per year (miscellaneous changes in data between the preliminary analysis and the initial proposal led to the minor change in the PNRR impact).

Please address technical questions about this response to:

Byrne Lovell

Exhibit 3

2010 Power and Transmission Rate Case Data Request Form

belovell@bpa.gov

503-230-3930

Please address legal questions about this response to:

Peter Burger

pjburger@bpa.gov

503-230-4148

Exhibit 4

2010 Power and Transmission Rate Case
Data Request Form

DATA REQUEST NUMBER: NR-BPA-10

DATE: March 3, 2009

DIRECTED TO:

Bonneville Power Administration

REQUESTOR'S NAME: Susan Ackerman

AGENCY: Northwest Requirements Utilities

EXHIBIT: Slice Revenue Requirement and Rate Testimony, Lee *et al.*, WP-10-E-BPA-21

PAGE(S): 9

LINE(S): 14-17

DATA REQUEST:

Here it is stated: “Staff propose to shift, from FY 2011 to FY 2010, amounts of net augmentation expenses and a portion of BPA’s planned principal payment for Power Services’ Federal debt, which is an element in the calculation of the Minimum Required Net Revenue (MRNR) component of the Slice Revenue Requirement.”

How much of net augmentation expense and how much of BPA’s planned principal payment for Power Services’ Federal debt was shifted from FY 2011 to FY 2010? Please provide cites to where this was performed in the rate case studies.

RESPONSE:

The generation revenue requirement study included a \$50 million shift of BPA’s planned principal payment for Power Services’ Federal debt from FY 2011 to FY 2010, which is documented and explained in the Revenue Requirement Study, WP-10-E-BPA-02, at 3 and Lennox *et al.*, WP-10-E-BPA-12 at 4. The Slice Revenue Requirement includes this shift of BPA’s planned principal payment for Power Services’ Federal debt. Lee *et al.*, WP-10-E-BPA-21, at 19, Table 1, Slice Product Costing and True-Up Table, table row 150. Also see Table 3.1, table row 150, Slice True-Up Adjustment Charge Forecast Prior to Shift in Expenses, Wholesale Power Rate Development Study Documentation, Vol. 1, WP-10-E-BPA-05A, at 54, and Table 3.2, table row 150, Slice True-Up Adjustment Charge Forecast After the Shift in Expenses, Wholesale Power Rate Development Study Documentation, Vol. 1, WP-10-E-BPA-05A, at 56.

Exhibit 4

2010 Power and Transmission Rate Case Data Request Form

The Slice Revenue Requirement also includes a shift of \$53.124M of net augmentation costs from FY 2011 to FY 2010. For documentation on this shift of net augmentation costs in the Slice Revenue Requirement, see Table 3.2, table rows 146 through 148, Slice True-Up Adjustment Charge Forecast After the Shift in Expenses, Wholesale Power Rate Development Study Documentation, Vol. 1, WP-10-E-BPA-05A, at 56. Also see Table 3.1, table row 146, Slice True-Up Adjustment Charge Forecast Prior to Shift in Expenses, Wholesale Power Rate Development Study Documentation, Vol. 1, WP-10-E-BPA-05A, at 54.

For legal questions about this response, please contact Peter Burger by phone (503)230-4148 and/or email at pjburger@bpa.gov.

For technical questions about this response, please contact Carie Lee by phone (503)230-3660 and/or e-mail at celee@bpa.gov.