

2010 Wholesale Power Rate Case Initial Proposal

REBUTTAL TESTIMONY

RATE DESIGN

April 2009

WP-10-E-BPA-36



This page intentionally left blank.

INDEX

REBUTTAL TESTIMONY of
DANIEL H. FISHER, GERARD C. BOLDEN, GREG C. GUSTAFSON,
SCOTT W. WINNER, and RAYMOND D. BLIVEN
Witnesses for Bonneville Power Administration

SUBJECT: RATE DESIGN

	Page
Section 1: Introduction and Purpose of Testimony.....	1
Section 2: Rate Case Process	2
Section 3: Customer Charge Proposal	5
Section 4: Value Of Reserves—IP Rate	9
Section 5: Industrial Margin Study	24
Exhibit 1: 2010 Power Rate Case (WP-10) Data Request Form Data Request Number: BPA-AL-01	
Exhibit 2: Contingency Reserve Analysis	

This page intentionally left blank.

1 REBUTTAL TESTIMONY of
2

3 DANIEL H. FISHER, GERARD C. BOLDEN, GREG C. GUSTAFSON,

4 SCOTT W. WINNER, and RAYMOND D. BLIVEN

5 Witnesses for Bonneville Power Administration
6

7 **SUBJECT: RATE DESIGN**

8 **Section 1: Introduction and Purpose of Testimony**

9 *Q. Please state your names and qualifications.*

10 A. My name is Daniel H. Fisher, and my qualifications are contained in WP-10-Q-BPA-18.

11 A. My name is Gerard C. Bolden, and my qualifications are contained in WP-10-Q-BPA-08.

12 A. My name is Greg C. Gustafson, and my qualifications are contained in
13 WP-10-Q-BPA-24.

14 A. My name is Scott W. Winner, and my qualifications are contained in WP-10-Q-BPA-61.

15 A. My name is Raymond D. Bliven, and my qualifications are contained in
16 WP-10-Q-BPA-06.

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

18 A. The purpose of our rebuttal testimony is to address issues raised in the direct testimony of
19 Snohomish County PUD (Snohomish), PNGC, the Pacific Northwest Investor-Owned
20 Utilities (JP1), and PPC/ICNU/Tacoma (JP7) regarding rate design.

21 *Q. How is your testimony organized?*

22 A. Section 1 is this introduction. Section 2 discusses the parties' comments on the rate case
23 process. Section 3 discusses a party's customer charge proposal. Section 4 discusses the
24 Value of Reserves calculation for the IP rate. Section 5 discusses the Industrial Margin
25 Study.
26

1 **Section 2: Rate Case Process**

2 *Q. Snohomish argues that the deadlines inherent in the rate case schedule set by the*
3 *Hearing Officer did not allow enough time for adequate understanding or meaningful*
4 *review of BPA's direct case. Toulson, WP-10-E-SN-01, at 1. Snohomish also states that*
5 *for customers who have not participated in past proceedings, the inputs, calculations,*
6 *and rationale for the choices made in the BPA analysis are, at best, difficult to*
7 *comprehend. Id. at 2. Please respond.*

8 A. We understand that BPA rate proposals are complex and that the analyses BPA staff
9 perform in preparing a rate proposal can be challenging to understand, particularly for
10 those who have not participated in previous rate proceedings. The rate directives in
11 section 7 of the Northwest Power Act require a complex set of rate calculations that BPA
12 must follow in order to implement those rate directives appropriately. In consultation
13 with rate case parties through the years, BPA has been setting rates under section 7 of the
14 Northwest Power Act since 1981.

15 One of the subparts of section 7 of the Northwest Power Act, section 7(i),
16 describes the public involvement process BPA must conduct when it establishes its rates.
17 To implement section 7(i), in 1986 BPA set procedures for conducting rate proceedings;
18 BPA's procedures augment the requirements in the Act. One of BPA's procedural
19 requirements is to publish a Federal Register notice, which for this case occurred on
20 February 10, 2009. The Federal Register notice included BPA's proposed schedule for
21 the proceeding and stated that the schedule would be set by the Hearing Officer at the
22 prehearing conference. Between that publication and the prehearing conference, BPA
23 held a scheduling conference. All potential parties were invited to attend both the
24 scheduling conference and the prehearing conference and provide input, and the schedule
25 was revised based on that input.

1 Snohomish also argues that the schedule set by the Hearing Officer for the rate
2 case process did not allow for sufficient time for customers to understand BPA's
3 approach or contribute constructively to cost allocation and rate design issues. *Id.* at 2.
4 Snohomish adds that under the current process, there are limited opportunities for
5 customers to seek explanations. *Id.* at 3-4. While we recognize that reviewing this
6 proposal is a large undertaking and are sympathetic to Snohomish's difficulty, we do not
7 agree with Snohomish's assessment that the amount of time provided is unreasonable. It
8 is the schedule allowed by the circumstances all parties, including BPA, were forced into
9 as a result of other forces, and it is the schedule ultimately adopted by the Hearing
10 Officer after no objections were raised. WP-10-HOO-01.

11 This proceeding's schedule is exceptionally tight for a general rate case. Under
12 normal circumstances, BPA would have released the Initial Proposal in November or
13 December, allowing a full two months more time in the procedural schedule. Further,
14 prior to the release of the Initial Proposal, BPA would have held a series of workshops to
15 discuss with potential rate case parties issues that BPA knew would concern parties and
16 to seek issues from workshop participants. Often at these workshops, staff would
17 preview key inputs into the ratesetting process to give parties more opportunity to ask
18 questions and understand significant changes that would be included in the Initial
19 Proposal. These workshops would allow newcomers to BPA's rate proceedings an
20 opportunity to gain a better understanding of the ratesetting process.

21 The earlier release of the Initial Proposal and the pre-release workshops did not
22 occur in this proceeding because of conflicts with the WP-07 Supplemental rate
23 proceeding, which ended in September 2008. Because of that prior proceeding, many of
24 BPA's rates team were not available to prepare the Initial Proposal, including to conduct
25 the pre-release workshops. Staff had about four months to turn from finishing the WP-07

1 Supplemental Final Proposal to releasing the WP-10 Initial Proposal, a process that
2 usually takes at least six months. The procedural schedule was one of the casualties in
3 this shortened timeframe.

4 *Q. Did Snohomish raise any other concerns with the rate case process?*

5 *A. Yes. It raised concerns with BPA's Rate Allocation Model, known as RAM2010.*

6 Snohomish's concern is that the RAM documentation is inadequate. Snohomish claims
7 that there is no documentation and, as was explained during clarification meetings, 42 of
8 the model's 95 worksheets serve no purpose for this rate case. Toulson, WP-10-E-
9 SN-01, at 5. In addition, Snohomish notes that BPA staff told Snohomish that it hopes to
10 re-write the RAM model before the next rate case and will do so if time allows.

11 Snohomish urges the Administrator to make this task a high priority. *Id.*

12 Regrettably, another victim of the WP-07 Supplemental proceeding was planned
13 upgrades to the RAM. BPA staff had to accomplish a turnover from RAM2007 to
14 RAM2010 in an extremely short period of time. Staff will continue to work on the rate
15 modeling after this proceeding concludes, with their primary task to add new Tiered Rate
16 Methodology (TRM)-based provisions to the model. We can offer some hope to
17 Snohomish and other rate case parties who have been frustrated in attempting to
18 understand the RAM, however. We reiterate to parties our focus on this concern. We
19 already have been able to begin documentation of RAM in preparation for the TRM-
20 based changes. We believe this will assist Snohomish and others in understanding the
21 model better. This documentation should be available with the release to parties of the
22 preliminary RAM2012, as specified in the TRM Record of Decision. In addition, steps to
23 hire a new staff member are proceeding, with the initial primary duty of this new person
24 to be the re-writing of the RAM in a clearer, more understandable format. It continues to

1 be our goal to produce a more transparent model that will assist parties in understanding a
2 very complex process.

3
4 **Section 3: Customer Charge Proposal**

5 *Q. Snohomish points out that unlike electric rates adopted by most retail utilities, BPA's rate*
6 *structure does not contain a fixed dollar-per-month customer charge. Toulson, WP-10-*
7 *E-SN-01, at 7. Snohomish maintains that monthly customer charges are commonly used*
8 *to recover costs, such as billing and meter reading expenses, that are causally related to*
9 *the number of customers served by a utility as opposed to the volume of electricity sold.*
10 *Id. at 7-8. Snohomish argues that the lack of a customer charge raises two issues. Id.*
11 *at 8. First, Snohomish contends that recovery of customer-related costs through energy*
12 *and demand rates results in cross-subsidies among customers. Id. Second, Snohomish*
13 *claims, given the current rate structure, BPA service will appear more attractive than*
14 *would be the case if rates contained no cross-subsidies. Id. Is there a reason why BPA's*
15 *wholesale power rates are unlike electric rates adopted by most retail utilities?*

16 *A. Yes. The most obvious difference is that BPA is a wholesale energy provider that sells*
17 *relatively large quantities of energy and capacity throughout a large geographic region*
18 *and primarily to a utility customer base of fewer than 150 utilities. This is in stark*
19 *contrast to its retail utility customers, which distribute electricity to consumers through*
20 *electric distribution systems with often thousands of meters within defined, and*
21 *comparatively small, geographic boundaries. When compared to many utilities serving at*
22 *a retail level, BPA's small customer base and large purchase volume create a much*
23 *different ratio of volume-related costs (energy and demand) to customer-related costs.*
24 *This ratio, in conjunction with BPA's customers being utilities, has resulted in BPA's*

1 rate design focusing on volume-related costs that are more complex and granular than the
2 retail rates adopted by most retail utilities.

3 Furthermore, while cost causation is a primary consideration of BPA's
4 ratemaking, it must also be balanced with other considerations, such as statutory
5 requirements and customers' continuing desire for simplicity in rate design. With regard
6 to simplicity, BPA's proposed rate design is already considered quite complex (12 heavy
7 load hour (HLH) energy rates, 12 light load hour (LLH) energy rates, 12 demand rates, a
8 load variance rate, and the Slice rate), as Snohomish recognizes and has expressed
9 frustration about. *Id.* at 1-2. The addition of another rate component would certainly add
10 to the complexity. We also believe that a customer charge, such as the one described by
11 Snohomish, would require BPA to consider other customer equity issues. We agree that
12 BPA incurs some customer-related costs, but to address such costs without regard to the
13 full spectrum of the causes for such costs, as suggested by Snohomish, *id.* at 8, would
14 mean adopting a whole new level of granularity. We believe that could lead to more
15 cost-targeted rates, which would makes for more complexity and less simplicity.

16 Another consideration is that the majority of BPA's systems and personnel are
17 used by all BPA customers for the benefit of all customers. That leaves benefits received
18 by way of usage fees (energy and demand) as the appropriate vehicle for recovering these
19 shared infrastructure costs. The single best measure of benefits received from an electric
20 utility is energy consumption. If the shared infrastructure costs are not recovered through
21 a combination of energy and demand costs, there would be a failure to fully connect
22 revenues with benefits received. BPA also recognizes that the sharing of costs distributes
23 the benefits of the FCRPS widely across the region. This sharing of benefits is
24 demonstrated through, for example, BPA's Low Density Discount and the Irrigation Rate
25 Mitigation Product. Another example recently examined was the exclusion of BPA's

1 trading floor costs from the Slice rate. In an analysis comparing BPA’s costs of the
2 trading floor with costs incurred on behalf of Slice purchasers, it was discovered that
3 after applying the Slice percentage to trading floor costs and Slice Implementation Costs,
4 the amount of costs paid by Slice customers for these two items would be roughly equal
5 if segregated and paid in common with non-Slice customers. Therefore, it is not always
6 clear that the segregation of costs will produce results that follow cost causation.

7 *Q. Snohomish notes that there are certain activities that BPA must carry out on behalf of*
8 *each individual customer, regardless of the amount of megawatthours or megawatts*
9 *used. Id. Snohomish cites meter maintenance, meter reading, bill processing, public*
10 *relations, rate case work, and Account Executive staffing as examples of such activities.*
11 *Id. Snohomish claims that if BPA were to recover these expenses on a pro rata basis,*
12 *each customer would be responsible for roughly 1/135th of the total cost, given that BPA*
13 *serves 135 customers. Id. Instead, Snohomish argues, because these costs are recovered*
14 *through energy and demand rates, BPA customers that purchase large volumes of power*
15 *pay a disproportionate share. Id. Snohomish states that as BPA's largest energy*
16 *purchaser, Snohomish currently pays about 10 percent of BPA's customer-related costs.*
17 *Id. Do you agree with this concern?*

18 *A. No. We do not share this concern; nor do we find any merit in Snohomish’s proposal.*
19 *Indeed, we think such a customer charge can lead customers to cherry pick the “cross-*
20 *subsidy” of customer-related costs without consideration of all possible cross-subsidies.*
21 *For example, under Snohomish’s proposition, it would be just as reasonable to propose a*
22 *complexity charge, a number of resources charge, a contentiousness charge, or a number*
23 *of meters charge. Moreover, it should be noted that many of Snohomish’s examples of*
24 *equivalent customer-related costs are not soundly based and hence, in our opinion,*
25 *erroneous examples. For example, costs incurred by billing or Account Executive*

1 staffing are incurred proportionate to the complexity (which generally relates to size) of
2 the customer at hand: BPA has Account Executives assigned to as few as four customers
3 (high-complexity customers, such as Snohomish) or as many as 18 (low-complexity
4 customers). The same example would also apply for billing. Meter maintenance costs
5 are also a poor example of a cost that should be divided by the number of customers BPA
6 has, because the cost generally is tied to the number of meters (often related to customer
7 size), and not to the number of BPA customers.

8 Further, we do not believe that a customer charge would be a significant signal to
9 the overall cost of service to a new utility. Barring a significant or insignificant customer
10 charge cost, Snohomish's argument assumes a small size of the new consumer-owned
11 utility, which assumption erroneously forms their conclusion.

12 *Q. Snohomish expects "these types of customer-related costs" would likely be relatively*
13 *small in the "grand scheme of things." Id. at 9. Nevertheless, Snohomish argues that*
14 *does not negate the ratemaking principle of cost causation or the value of showing*
15 *customer-related expenses as a separate line item so that customers can judge BPA's*
16 *performance. Id. Snohomish states that its staff does not have the necessary*
17 *understanding of BPA's cost allocation process or RAM model to be able to develop*
18 *specific customer charges to offer in this proceeding. Id. Instead, Snohomish asks the*
19 *Administrator to direct BPA staff to perform the analysis and incorporate the results into*
20 *the final Record of Decision. Do you agree with this recommendation?*

21 *A. No. It is not enough to assert a principle of economics to justify a particular rate design.*
22 *Economic efficiency is an important consideration when structuring rates, but it is by no*
23 *means the only one, or even the foremost. In addition to the considerations we discussed*
24 *above, other factors include rate stability, practicality, revenue stability, cost and ability*
25 *to administer, non-discrimination, environmental protection, and statutory requirements.*

1 Q. *Snohomish argues that if the Administrator does not adopt its customer-related rate*
2 *design proposal, BPA should carry out a quantitative and policy study for the FY 2012-*
3 *2013 rate case, so that the pros and cons of instituting monthly customer-related charges*
4 *can be fully debated and understood. Id. at 10. Do you agree?*

5 A. No. For the reasons stated above, we do not believe the concept of a customer charge as
6 described by Snohomish is developed enough to warrant the use of resources to conduct a
7 quantitative and policy study. We do, however, encourage more vigorous debate about
8 the concept. If those debates prove fruitful, then the decision to conduct a quantitative
9 and policy study can be revisited.

10
11 **Section 4: Value Of Reserves—IP Rate**

12 Q. *Did any party raise any concerns with your proposed Value of Reserves calculation?*

13 A. Yes. The Pacific Northwest Investor-Owned Utilities (IOUs) assert that BPA's Initial
14 Proposal fails to properly value DSI reserves. LaBolle *et al.*, WP-10-E-JP1-01, at 5-9.
15 PPC *et al.* (JP7) state that establishing any value for the value of reserves is problematic.
16 O'Meara *et al.*, WP-10-E-JP7-01, at 7. Alcoa proposes that BPA construct four rates for
17 four different reserve products. Speer, WP-10-E-AL-01, at 8-11. NRU suggests BPA
18 should base its DSI service assumptions on valid contracts. Carr and Stratman, WP-10-
19 E-NR-01, at 12-13.

20 Q. *The IOUs state that the Initial Proposal's projected value of reserves of \$17,946 is*
21 *unreasonably low. LaBolle et al., WP-10-E-JP1-01, at 8. The IOUs argue that this*
22 *projected value is based on 1) an erroneous assumption by BPA of interruption rights*
23 *that are far too small in quantity and limited in scope and 2) a flawed methodology that*
24 *grossly undervalues even those limited rights. Id. How do you respond to the statement*
25 *that the value of reserves of \$17,946 is unreasonable low?*

1 A. The value of reserves is not unreasonably low, given the availability and quantity of
2 reserve service described in the Initial Proposal. The IOUs' rationale for and calculation
3 of a larger value is based on a reserve service provided by DSIs that would be completely
4 different from the one described in the Initial Proposal.

5 *Q. The IOUs state that, because of BPA's concerns about a looming capacity deficit, the DSI*
6 *interruption rights should be greater than they were during the 1981-2001 period.*
7 *LaBolle et al., WP-10-E-JP1-01, at 13. The IOUs state that BPA's assumption regarding*
8 *the interruption rights is unreasonable and arbitrarily low. Id. at 10. They propose that*
9 *BPA include Port Townsend load in the Value of Reserve calculation. Id. at 9. They*
10 *state that BPA should not assume that the interruption rights for any DSI contract would*
11 *be limited to 10 percent of the DSI load (net of wheel-turning load) or that any DSI*
12 *reserves would be limited to 60 minutes per use and a maximum of four uses per month.*
13 *Id. at 11. They also question BPA's reference to the WECC 105-minute availability*
14 *criteria. Id. at 19-20. The IOUs suggest the use of a share-the-savings methodology to*
15 *credit the DSIs for the value of the reserves they supply. Id. at 16. How do you respond*
16 *to the criticisms identified in the IOUs' testimony of your assumptions?*

17 A. When we prepared the Initial Proposal, very little information was available to us. Fisher
18 *et al.*, WP-10-E-BPA-30, at 9. As a result, we recognized that the reserve level we used
19 in the Initial Proposal could be less than what a DSI would actually be able to provide.
20 That is why we explicitly solicited suggestions from parties in the Initial Proposal that
21 would assist in making a more complete assessment of reserves that could be made
22 available to BPA and the limitations those reserve rights might have. *Id.* at 12. Other
23 BPA staff testimony stated that the Final Proposal will reflect information that becomes
24 available during the rate proceeding. *Lee et al.*, WP-10-E-BPA-21, at 12. We have,
25 since the release of the Initial Proposal, received more information that will be used to

1 better establish the value received by BPA for the reserve service that will be offered by
2 the DSIs.

3 *Q. Please identify these new sources of information.*

4 A. This information has come in three forms. The first form is the quantity (relative to the
5 assumed size of an IP power sale) and limitations of the reserves, which were provided
6 by Alcoa in a response to a data request. *See* Exhibit 1 to this testimony. The second
7 form is methodological suggestions offered by Alcoa, Speer, WP-10-E-AL-01, at 8-11,
8 and the IOUs, LaBolle *et al.*, WP-10-E-JP1-01, at 5-20. The third form is our research
9 into actual deployment of reserves. *See* Exhibit 2 to this testimony.

10 *Q. What information did the response from Alcoa give you about the ability to provide
11 reserves through a power sale to DSIs?*

12 A. As stated in Response to Data Request No. BPA-AL-01 (Exhibit 1), Alcoa can provide
13 up to 10 percent of its net load for up to 105 minutes one time each day. This means the
14 capacity reserves provided by Alcoa are consistent with BPA's definition of
15 Supplemental Operating Reserve and defines the maximum quantity of reserve available
16 to BPA. This also means that the limitations on use of reserves are significantly smaller
17 than assumed in the Initial Proposal.

18 *Q. What information did the new study on deployment of reserves provide?*

19 A. The study (*see* Exhibit 2) showed that during one year of sample data, the contingency
20 reserve obligation always exceeds the contingency reserve deployment by more than the
21 expected level of reserves provided through a power sale to the DSIs.

22 *Q. What conclusion do you draw from this information?*

23 A. We conclude that the reserve provided through the power sale to the DSIs could be of
24 value to BPA without the derating, because that reserve could be treated as the last-
25 utilized reserve. This is consistent with prudent utility practice at this time: the reserve

1 deployed first will be capacity associated with resources that provide generation inputs to
2 the Balancing Authority Area; the reserve deployed last will be the expected use of this
3 reserve provided out of the power sale to the DSIs.

4 *Q. Do the IOUs suggest any specific methodology changes to the value of reserves*
5 *calculation?*

6 A. Yes, the IOUs suggest several specific changes. They suggest a change to the assumed
7 quantity of reserves as well as a change to the assumed limitations of use.

8 *Q. What changes do the IOUs suggest you make for the assumed quantity of reserves?*

9 A. The IOUs suggest BPA make two changes. First, the IOUs recommend that BPA include
10 the Port Townsend load of 17 aMW as part of the total DSI load capable of providing
11 reserves. LaBolle *et al.*, WP-10-E-JP1-08, at 10. Second, the IOUs suggest that BPA
12 assume that one-half the total DSI load (excluding wheel turning load) is capable of
13 providing reserve. *Id.* at 12.

14 *Q. Do you agree with the IOUs' suggested inclusion of Port Townsend?*

15 A. Yes. We agree that the Port Townsend DSI load could provide reserves. The calculation
16 of Value of Reserve in the Initial Proposal is a unit-cost calculation, and it could be
17 applied to the Port Townsend load.

18 *Q. Do you agree with the IOUs' suggested methodology of one-half of total load as the*
19 *quantity of reserve provided by DSI loads?*

20 A. No. We agree that historical data may show that one-half of the load was available to
21 provide reserves. That is not the case at present; Alcoa's data response specifically states
22 they may provide up to 10 percent of net load as reserve.

23 *Q. Have you taken steps to achieve a more complete understanding of the reserve situation*
24 *as it relates to current smelter operations?*

1 A. Yes. To better define the available reserve from a smelter, we requested information
2 from Alcoa through a data request asking them to define what they could provide as a
3 quantity of reserve and the maximum scope of interruptibility of such reserve service.
4 The Response to Data Request No. BPA-AL-01 suggests that the IOUs' expectation of
5 one-half of total load (excluding wheel-turning load) is clearly unreasonable.

6 *Q. What suggestion do the IOUs make with respect to BPA's assumed limitations of use?*

7 A. The IOUs state:

8 BPA should not assume that use of these operating reserves is limited to 4
9 hours per month. Again, DSIs and BPA operated for many years with
10 interruption rights that were not limited to 4 hours per month. BPA has
11 offered no rationale as to why the interruption rights should be lower in
12 the FY 2010-2011 period. If anything, given BPA's concerns about a
13 looming capacity deficit, the interruption rights should be greater than
14 they were during the 1981-2001 period.

15 LaBolle *et al.*, WP-10-E-JP1-08, at 13.

16 *Q. How do you respond to the IOUs' suggestion that BPA change the limitations of use
17 assumed in the Initial Proposal to reflect limitations used in the 1981-2001 period or to
18 provide even greater interruption rights?*

19 A. BPA gathered better information through the Response to Data Request No. BPA-AL-01
20 on the likely limitations Alcoa would put on its reserve service. This data response
21 shows that the IOUs' testimony grossly overestimates the amount of load that BPA can
22 realistically expect to be subject to interruption. *See* Exhibit 1. Alcoa has stated that
23 10 percent of total load, less wheel-turning load, is a reasonable measure of the quantity
24 of reserve available from a DSI power sale and further clarifies that those reserves could
25 be made available for up to 105 minutes for one time each day. Alcoa further explains
26 that it would prefer the valuation be resolved in contract negotiations.

27 *Q. Do the IOUs suggest any changes to the method BPA used to derate the value based on
28 limitations of use?*

1 A. Yes. The IOUs state:

2 Even assuming *arguendo* that the DSI interruption rights are limited to 4
3 hours per month, the value of reserves should not be derated using a
4 fraction of 4 hours / 730 hours based on an assumed limitation on
5 interruption rights of 4 hours per month. It is our understanding that
6 operating reserves are not deployed every hour in a month and that much
7 of the value of reserves consists of ‘standing ready’ to provide the
8 reserves, even when they are not deployed. Thus, the DSI interruption
9 rights would provide value each month until the four-hour limit were
10 reached. BPA should develop a methodology that recognizes that the DSI
11 reserves provide value when they are standing ready. For example, BPA
12 could estimate how many hours per month it would use Supplemental
13 Operating Reserves, assuming no limitations. Then, the value of reserves
14 could be derated based on the ratio of the hourly limit on interruptions to
15 the expected hours of interruption assuming no limitation.

16 LaBolle *et al.*, WP-10-E-JP1-08, at 15.

17 *Q. Do you agree with this method of derating for limited availability?*

18 A. In part, yes. We agree that reserves provide some value when they are standing ready, as
19 the IOUs suggest. We caution against the direct application of the IOUs’ methodology,
20 however. The IOUs’ suggested methodology could tend to overvalue reserves with
21 limitations, due to its probabilistic approach to limitations (risk of depletion) and the
22 direct comparison to a reserve that has no limitations (no risk of depletion). This risk of
23 depletion goes up as the probabilistic calculation of need moves closer to the limitations
24 of the reserve. This risk also goes beyond that of BPA’s embedded cost of providing
25 Supplemental Operating Reserve, because if the reserves are limited, BPA would need to
26 purchase or self-provide capacity to replace the now-depleted reserve capacity from the
27 DSI power sale. This short-term capacity may or may not be available at a price reduced
28 by the ratio of hours needed to the hours of reserve provided by the DSI power sale.

29 Furthermore, BPA must also consider limitations on use after a single event.

30 Based on the information in BPA-AL-01 (Exhibit 1), the limitations between events

1 (24 hours) may require derating in the future from a reserve value that has no such
2 limitation if BPA's pattern of reserve deployment warrants.

3 We have not fully analyzed all these limitations and considerations, but due to the
4 IOUs' point that standing ready has value, the new information provided through BPA-
5 AL-01 (see Exhibit 1), the Contingency Reserve Analysis (see Exhibit 2), and the
6 assumption that load-based reserves would be deployed last, we believe that the stand
7 ready value of the reserve provided by a power sale to a DSI gives BPA roughly full
8 value. This is because BPA-AL-01 states that DSIs can provide operating reserves up to
9 30 times per month and up to 105 minutes per event, and on average we use only the last
10 40 MW of reserves once per month. Therefore, at this time and in these market and load
11 conditions, we believe the DSIs can provide some level of Supplemental Operating
12 Reserve out of a DSI power sale. It can displace operational capacity that would have
13 otherwise been utilized as Supplemental Operating Reserve. Therefore we propose not to
14 derate the value of reserves in this rate case.

15 *Q. The IOUs state that DSI reserves should not necessarily be derated by virtue of WECC*
16 *criteria if those DSI reserves are not available for 105 minutes. LaBolle et al., WP-10-E-*
17 *JP1-01, at 19. They maintain that the 105-minute criterion applies to only the maximum*
18 *amount of time the reserve must be available. Id. at 20. Furthermore, the IOUs claim*
19 *BPA did not use the 105 minutes in any of its calculations in the Initial Proposal method*
20 *of derating the DSI reserve. Id. at 19. Do you agree with this argument? Why did you*
21 *not use the 105 minutes in the derating calculations?*

22 *A.* We do not agree that any reserve that cannot meet the maximum level of deployment
23 should be valued the same as a reserve that can meet the maximum level of deployment.
24 To the extent a contingency occurs that requires the full 105-minute deployment, and
25 BPA has some reserve that cannot sustain that level of service, additional reserve will

1 need to be deployed at additional cost during real time to cover such an outage and ensure
2 reliable operation of the system. As the IOUs point out, we did not use the 105-minute
3 criterion in the calculations; rather, we used that criterion to inform the decision to derate
4 the reserve as defined in the Initial Proposal. However, this is likely a moot point,
5 because Alcoa states in BPA-AL-01 that it is physically possible to provide reserves for
6 105 minutes without long-term equipment damage.

7 *Q. The IOUs state that proposed WECC Standard BAL-002- WECC-1 – Contingency*
8 *Reserves refers to maintaining Contingency Reserve levels except within the first*
9 *105 minutes following an event requiring the activation of Contingency Reserves.*
10 *LaBolle et al., WP-10-E-JP1-01, at 20. They also state that the Initial Proposal makes a*
11 *vague reference to “WECC criteria” but fails to address the specific language of WECC*
12 *reliability criteria, such as that quoted above. Id. The IOUs claim that you fail to*
13 *demonstrate that the WECC criteria indeed require that reserves be available for at least*
14 *105 minutes. Id. They also state that the Initial Proposal language quoted above itself*
15 *refers to reserves being available for a maximum of 105 minutes. Why did you assume*
16 *reserves must be available for 105 minutes if it is only a maximum limit, according to the*
17 *WECC criteria?*

18 *A. In the event of a contingency, reserves are deployed to replace capacity and energy that*
19 *was lost due to an outage. The reserve replacement is required to be in place until a*
20 *replacement schedule can be implemented for the resource that failed. Generally, it*
21 *cannot be predicted how long it will take to identify a resource to replace the reserves.*
22 *Moreover, due to scheduling limitations, the schedule for the reserve replacement must*
23 *be in place prior to 30 minutes in advance of the hour when the reserve replacement will*
24 *be deployed. Due to these practical limitations, the duration of the deployment of*
25 *reserves cannot be known in advance, and it can readily be seen that a reserve*

1 deployment approaching 105 minutes would not be out of the ordinary. Therefore, any
2 reserve that cannot cover the maximum time frame will not be as valuable as a reserve
3 that can cover the maximum time frame.

4 *Q. In connection with these proposed methodological changes, do the IOUs actually apply*
5 *their suggestions to calculate a value of reserves that be credited to DSIs?*

6 *A. Yes, they do.*

7 *Q. Do you agree with their computed value?*

8 *A. No. The IOUs compute the value of reserve based on the Initial Proposal using the*
9 *following method.*

10 BPA should assume interruption rights at a minimum equal to half of the
11 DSI load exclusive of wheel-turning load – 198 MW – and should assume
12 that use of such interruption rights is not limited to 4 hours per month.
13 Instead, BPA should assume that the interruption rights on 198 MW are
14 similar to those contained in BPA's 1981 or 1996 Power Sales Contracts
15 with the DSIs. At that level of availability, it should not be necessary to
16 derate interruption rights.

17 Using the unit rate of \$7.19 per kW per month for Supplemental Operating
18 Reserves proposed in the Initial Proposal to value these DSI load
19 interruption rights, the annual value of reserves provided by the DSIs
20 would be forecasted to be, at a minimum, equal to \$17,083,440:
21 $\$7.19/\text{kW-month} \times 198 \text{ MW} \times 1,000 \text{ kW/MW} \times 12 \text{ months} =$
22 $\$17,083,440.$

23 LaBolle *et al.*, WP-10-E-JP1-01, at 14. Based on the Response to Data Request No.
24 BPA-AL-01, the assumptions of the level of service and limitations within that service
25 are overstated. While Alcoa's response is informative, we will not rely solely on that
26 information but will continue to evaluate any further information that may become
27 available that bears on the quantity and quality of that reserve service that may be
28 provided through a DSI sale.

29 *Q. Do the IOUs comment on whether they believe a "share-the-savings" approach should*
30 *be used for calculating the value of reserves? If so, what did they suggest?*

1 A. Yes. The IOUs suggest that BPA should adopt the “share-the-savings” approach and
2 credit DSIs with one-half the benefit. LaBolle *et al.*, WP-10-E-JP1-01, at 16.

3 Q *The IOUs state that BPA's rationale for the abandonment in the WP-96 Power rate*
4 *proceeding of the "share-the-savings" approach is not persuasive for the FY 2010-2011*
5 *rate period. LaBolle et al., WP-10-E-JP1-01, at 17. Do you agree that the rationale is*
6 *not applicable for the FY 2010-2011 rate period?*

7 A. No, we do not agree. The IOUs are correct that competitive forces are less now than they
8 were when the WP-96 ROD was issued, and BPA has less reason to fear losing the DSI
9 load to competitors. *Id.* at 17. However, the IOUs overlook the fact that the DSI load
10 still is in danger of disappearing, albeit for a different reason than 15 years ago. The
11 competitiveness of BPA’s IP rate is still an important factor that BPA wishes to address
12 in its ratesetting. *See Burns et al.*, WP-10-E-BPA-45. We believe the intent is the same
13 today as it was in the WP-96 ROD and propose to provide the DSIs with the full value of
14 the provided reserve.

15 Q *Do the IOUs make any other suggestions?*

16 A. Yes. The IOUs suggest that BPA value long-term interruption rights in addition to the
17 short-term reserves as proposed in the Initial Proposal. LaBolle *et al.*, WP-10-E-JP1-01,
18 at 11. The IOUs state that the Initial Proposal is inconsistent with the June 30, 2005, DSI
19 ROD. *Id.*

20 Q *How do you reconcile the long-term interruption rights advocated by the IOUs and the*
21 *fact that the Initial Proposal did not contemplate a term of interruption longer than*
22 *60 minutes?*

23 A. The assumptions on the character of reserve in the Initial Proposal were based on a draft
24 contract that was never signed by either BPA or Alcoa. Therefore, we stated in testimony
25 that we would be open to suggested changes in the quantification of reserves and the

1 methodology to value reserves. Fisher *et al.*, WP-10-E-BPA-30, at 10. Although long-
2 term interruption was contemplated in the referenced DSI ROD, the fact that DSI loads
3 have declined in the last two decades may preclude the long-term interruption of those
4 loads at current expected levels of service. If the level of service is such that long-term
5 interruption of load is feasible, we will consider the value of that right at an appropriate
6 time. In the present economic climate, however, we do not believe it would be
7 reasonable to include such long-term interruptibility rights in the Value of Reserves.

8 *Q. The PPC et al. (JP7) argues that although the proposed credit is small, establishing a*
9 *value is problematic. O'Meara et al., WP-10-E-JP7-01, at 7. JP7 cites the lack of a*
10 *contractual definition of what reserves would be provided and the lack of contracts in*
11 *place for the rate period. Id. JP7 also cites the limitations on usage of those reserves in*
12 *terms of length of interruption and the number of times per month such interruptions can*
13 *take place. Id. JP7 claims that there are differences in terms between the unsigned*
14 *contractual proposal and BPA's testimony. Id. JP7 also states that if the DSIs are last-*
15 *off-first-on in any interruption, some reduction in value needs to be assessed for the lack*
16 *of flexibility in being able to use those reserves. Id. JP7 advocates BPA offering DSI*
17 *interruption rights to third parties to see what value the market places on those rights.*
18 *Id. Please respond.*

19 *A. The PPC et al. (JP7) testimony characterizes the Initial Proposal erroneously. The Initial*
20 *Proposal calculated that the value of reserves is a dollar per MWh credit equal to*
21 *\$0.01/MWh. WPRDS, WP-10-E-BPA-05, at 6. With that clarification, we agree with*
22 *JP7 that the value proposed in the Initial Proposal is relatively small compared to the*
23 *VOR calculation in 1996. As described above, however, circumstances have changed*
24 *dramatically with respect to the flexibilities available at that time, requiring revision of*

1 assumptions regarding quantity of reserves available and the duration for which they
2 could be deployed.

3 *Q. JP7 points out that there is no contractual definition of the reserves to be provided. How*
4 *do you respond?*

5 A. We propose to address this issue by means of the information provided by Alcoa in
6 Response to Data Request No. BPA-AL-01, *see* Exhibit 1, which helped us gain more
7 information as to what the Alcoa smelter could actually provide as a reserve service.
8 While there is no signed contract that BPA can use to inform its estimate of the value of
9 reserves provided by the DSIs, the information provided through the unsigned contract as
10 well as the information provided through the data response are enough to support a
11 valuation that will establish a minimum requirement for any future contract negotiations.

12 *Q. JP7 points out the differences between the unsigned contractual proposal BPA used to*
13 *inform its Initial Proposal and BPA's testimony. O'Meara et al., WP-10-E-JP7-1, at 7.*
14 *How do you propose to address this issue?*

15 A. We do not agree that there are differences in terms between the unsigned contractual
16 proposal and our Initial Proposal testimony. JP7 was not specific as to what those
17 differences might be, and without that specificity, we cannot respond to their concern.
18 Regardless, BPA has gained additional information on the type of reserve service Alcoa
19 can provide through the response BPA-AL-01. The response also includes limitations on
20 usage, and we expect these slightly different limitations will be considered in the value of
21 reserve calculation for the Final Proposal.

22 *Q. How do you respond to JP7's concern that because the DSIs are last-off-first-on in any*
23 *interruption, some reduction in value needs to be assessed for the lack of flexibility in*
24 *being able to use those reserves? O'Meara et al., WP-10-E-JP7-01, at 7.*

1 A. We agree that we must consider any lack of flexibility when we value the reserve service
2 provided by the DSIs. The fact that the DSIs may provide a last-off-first-on reserve and
3 the fact that this reserve can be deployed a maximum of once a day may result in a
4 smaller value for these reserves as compared to the Initial Proposal value of
5 Supplemental Operating Reserve. We have not fully analyzed all these limitations and
6 considerations, but due to the IOUs' point that standing ready has value; the new
7 information provided through BPA-AL-01, Exhibit 1; and the assumption that load-based
8 reserves would be deployed last, the stand ready value of the reserve provided by a power
9 sale to a DSI gives BPA roughly full value in that it can displace operational capacity that
10 would have otherwise been utilized as Supplemental Operating Reserve. Therefore, we
11 propose not to derate the value of reserve in this rate case.

12 *Q. Does JP7 suggest a methodology for calculating the value of reserves?*

13 A. In a manner of speaking. JP7 states that if BPA thinks that DSI reserves are valuable, it
14 should offer those DSI interruption rights to third parties, and see what value the market
15 places on those rights. O'Meara *et al.*, WP-10-E-JP7-01, at 7.

16 *Q. What is your response to this approach?*

17 A. The reserve parameters are fundamentally established by the Administrator's statutory
18 obligation to ensure that his contractual relationships with the DSIs provide a portion of
19 his power reserves for firm power loads in the region. As such, we do not understand
20 how it could be proper to use that recommendation as the basis for a rate adjustment that
21 is designed to be part of the ratemaking process for the explicit purpose of determining
22 "the value of power system reserves made available to the Administrator through his
23 rights to interrupt or curtail service." 16 U.S.C. § 839e(c)(3). It does not appear to us
24 that this provision contemplates making such rights available to third parties or that such

1 a methodology would provide an accurate basis for determining the value of reserves
2 available to the Administrator.

3 *Q. What particular concerns does Alcoa express in its testimony?*

4 A. Alcoa suggested BPA develop four rate credits for four different reserve services that can
5 be provided out of a power sale to DSIs. Alcoa also suggests a methodology for
6 calculating the four rate credits.

7 *Q. What are the four reserve products proposed by Alcoa? Do you plan to compute a value
8 for those four reserve products?*

9 A. Alcoa proposed Regulation, Capacity, Moderate Energy, and Large Energy Reserve
10 products. For purposes of the rate case, we propose to value only the Capacity reserve
11 product. We do not plan to assign value to the Regulation, Moderate Energy, and Large
12 Energy reserve products in this rate proceeding, but this proposal does not preclude the
13 DSIs and BPA from finding a mutually beneficial valuation for the other three reserve
14 services in future contract negotiations or future rate proceedings.

15 *Q. Why do you not plan to value a DSI Regulation Reserve product at this time?*

16 A. We propose to postpone consideration of the Regulation Reserve product because it
17 requires the load to be controlled by the AGC computer system, and the DSI loads are not
18 currently connected to the AGC computer system. Our conclusion is that the DSI loads
19 cannot provide this service at this time. If in the future these loads are connected to the
20 AGC system, BPA could value Regulation Reserve. The value could be assigned as a
21 reduction in the energy rate for a BPA power sale to a DSI; or if individual DSI contracts
22 provide for such service, a credit could be computed and assigned pursuant to contract
23 terms.

24 *Q. Why do you not plan to value Alcoa's proposed Moderate Energy and Large Energy
25 Reserve products at this time?*

1 A. We propose to postpone a valuation for Moderate Energy and Large Energy reserve
2 because these are not standard reserve products, and neither the value to BPA nor BPA's
3 level of interest in these services is known at this time.

4 Q. *Because you are proposing to value the Capacity Reserve product, how do you respond*
5 *to Alcoa's proposed method of calculating the value of this product?*

6 A. For purposes of this rate case, we disagree with Alcoa's method of using the Long Run
7 Marginal Cost of Capacity (LRMCC) to value reserves. We believe the valuation should
8 be consistent with BPA's Generation Inputs Study, WP-10-E-BPA-08, which proposes an
9 embedded cost valuation.

10 Q. *What particular concerns does NRU express in its testimony?*

11 A. In addition to supporting PPC *et al.* (JP7), NRU states that no service benefits for the
12 DSIs are warranted in FY 2010-2011. Carr and Stratman, WP-10-E-NR-01, at 12-13.
13 NRU also states that the costs BPA assumes for such service in this case should be based
14 on legitimate load forecasts and valid contracts. *Id.* at 13.

15 Q. *How do you respond to NRU's concerns?*

16 A. We agree with NRU that the best method for calculating the value of reserves would be
17 to use the information provided in executed contracts. However, executed contracts do
18 not exist. The best information we have to date is the information provided by Alcoa in
19 Response to Data Request No. BPA-AL-01 (Exhibit 1 to this testimony). In that
20 response, we gained more information from Alcoa as to what its smelter could actually
21 provide as a reserve service. While we have no executed contract to inform our estimate
22 of the value of reserves provided by the DSIs, we believe that the information provided
23 through the negotiated (although unsigned) contract as well as the information provided
24 through the response are enough to support a valuation that will establish a minimum
25 requirement for any future contract negotiations.

1 Q. Does NRU suggest a method to quantify the reserves provided from a power sale to
2 DSIs?

3 A. No, they do not.

4 Q. Given all the suggestions provided by parties and the new information available from
5 Alcoa's response and the contingency reserve analysis, what will be the approximate
6 magnitude of change in the Value of Reserves calculation from the Initial Proposal?

7 A. Based on the \$7.19/kW/month embedded cost of operating reserves as described in the
8 Generation Inputs Study, WP-10-E-BPA-08, at 117, 10 percent of net load of
9 approximately 400 aMW, we expect the value of reserves provided by the DSIs to be
10 equal to roughly \$3 million or \$1/MWh. This is compared to an Initial Proposal of
11 \$17,946 or \$0.01/MWh.

12
13 **Section 5: Industrial Margin Study**

14 Q. Both PNGC and PPC et al. (JP7) state that the 2007 Industrial Margin used in this rate
15 case is outdated and understates the size of the typical margin. Prescott et al., WP-10-E-
16 PN-01, at 5-7; O'Meara et al., WP-10-E-JP7-1, at 5. These parties recommend that BPA
17 should have either re-performed the Margin Study or adjusted the 2007 margin by an
18 inflation factor. Prescott et al., WP-10-E-PN-01, at 5-7; O'Meara et al., WP-10-E-
19 JP7-1, at 5. Do you agree?

20 A. No. In preparation for this proceeding, we considered that it takes about six months to
21 gather and analyze the data needed to conduct a proper margin study. After having just
22 completed the WP-07 Supplemental rate proceeding in late September, 2008, and given
23 the expedited schedule for initiating the WP-10 proceeding, we concluded that
24 completing a new margin study in time for the WP-10 Initial Proposal would be
25 impossible. We also were concerned that PPC, which plays a significant role in all of

1 BPA's public processes, might find burdensome a request from BPA for significant PPC
2 involvement in compiling Industrial Margin data through a confidential survey of all
3 public utilities in the Northwest given the many processes being initiated during this
4 period.

5 *Q. Did either PNGC or PPC et al. present compelling evidence that the 2007 Industrial*
6 *Margin understates the size of the typical margin?*

7 *A. No. PPC et al. (JP7) merely speculates that because four years have passed since the last*
8 *survey was performed and many utility costs have risen during that time, leaving the*
9 *margin unchanged understates the size of the typical margin. O'Meara et al., WP-10-E-*
10 *JP7-1, at 5. PNGC states that BPA should consult the Handy-Whitman Index of Public*
11 *Utility Construction Costs, which PNGC states shows dramatic cost increases since 2004.*
12 *Prescott et al., WP-10-E-PN-01, at 7. PNGC states that to the extent that these cost*
13 *increases have been experienced by consumer-owned utilities in the Northwest, one*
14 *would reasonably conclude that typical Industrial Margins have changed since the last*
15 *typical margin study, and may well have increased along with costs. Id. PNGC*
16 *concludes that an updated margin study is required. Id.*

17 We do not agree that BPA is required to update its margin study. PNGC provides
18 no evidence correlating the construction costs paid by public utilities in general with the
19 costs included in the typical Industrial Margin calculation derived pursuant to section 7(c)
20 of the Northwest Power Act. The parties only suggest that costs may have increased.
21 They fail to point to any evidence concerning the level of the typical margins included in
22 their own retail industrial rates that would cause BPA concern over the Industrial Margin
23 used in this case. BPA does not agree with PNGC's suggestion that the Handy-Whitman
24 Index of Public Utility Constructions Costs should be consulted. That Index pertains to

1 utility construction costs, which mostly affect items not included in the margin, and is not
2 reflective of the retail industrial rates.

3 *Q. Were there other factors that influenced BPA's decision not to adjust the 2007 margin for*
4 *inflation?*

5 *A. Yes. BPA is aware that increases in the margin over the period since 1996 have been*
6 *rather small and the overall impact on rates de minimus. The Industrial Margin was 0.57*
7 *mills/kWh in the 2007 rate case, 0.42 mills/kWh in the 2002 rate case, and 0.44*
8 *mills/kWh in the 1996 rate case. We would expect any changes in the margin, up or*
9 *down, since 2005 (the year in which the data was collected for the most recent margin*
10 *study) to be similarly small.*

11 Moreover, we question whether this would be an appropriate time to conduct a
12 margin study. From the margin study, BPA tries to derive a "typical" margin. Today's
13 economic times are anything but "typical." We frequently hear about customers who are
14 doing everything they can to contain costs in an attempt to keep rates as low as possible
15 for consumers in response to the essentially unprecedented economic conditions existing
16 today. Hence, it could be argued that an equally reasonable assumption might be that
17 margins may be lower than would be "typical" in normal economic times. This is
18 another reason that we have elected not to simply inflate the margin pursuant to an index
19 or other formula. Today's economic conditions make it difficult to make an informed
20 decision on the proper level of the section 7(c) margin.

21 Considering the limited costs included in the margin, we also question whether, in
22 today's economic climate, there is an index that would provide an accurate representation
23 of the level of the Industrial Margin. Such an adjustment, in today's climate, and whether
24 the margin should be inflated or deflated, would amount to little more than a guess.

1 Q. *JP7 argues that state revenue taxes should be included in the Industrial Margin.*
2 *O'Meara, et al., WP-10-E-JP7-1 at 5-6. Do you agree?*

3 A. No. Since 1996, BPA has concluded that revenue taxes are not typical, as intended by
4 the statutory directive that requires that the BPA rate applicable to DSI sales “shall be
5 based upon the Administrator's applicable wholesale rates to such public body and
6 cooperative customers and the typical margins included by such public body and
7 cooperative customers in their retail industrial rates.” 16 U.S.C. § 839e(c)(2); and 1996
8 Final Rate Proposal, Administrator's Record of Decision (ROD), WP-96-A-02, at 180.

9 Q. *Please explain.*

10 A. During the 2002 rate case, BPA focused on the issue of whether revenue taxes were or
11 were not “typical.” Rate case parties introduced tax statutes from Oregon and Idaho,
12 arguing that such taxes were the equivalent of revenue taxes; therefore, they concluded,
13 revenue taxes were indeed typical with respect to utilities serving industrial load in
14 BPA's service territory. In the 2002 rate case ROD, BPA responded by doing a
15 comprehensive analysis of the statutory provisions, concluding that the taxes identified
16 by the parties were not revenue taxes, and Washington was the only state in the region
17 that levied a revenue tax. WP-02 Final ROD, WP-02-A-02, at 15-3 – 15-15.

18 Q. *What is your response to PPC's recommendation that revenue taxes should be included*
19 *because all of the DSI load is located in the State of Washington?*

20 A. That recommendation uses a definition of the word “typical” that has no bearing on the
21 margin calculation, which is based solely on the rates paid, not by the DSIs, but by the
22 industrial customers of BPA's public body and cooperative customers. This issue was
23 decided in BPA's 2002 rate case. *See* WP-02 Final ROD, WP-02-A-02, Section 15.2.1.
24 The Administrator found that because a minority of BPA's public body and cooperative
25 customers serving industrial load operate in the state of Washington, revenue taxes are

1 not “typical” and should be excluded from the calculation. *Id.* at 15-15. This approach
2 was retained in the WP-07 rate proceeding. No evidence has been provided in this case
3 that would persuade us to change our view on the treatment of revenue taxes.

4 *Q. JP7 states that BPA should not exclude local utilities’ distribution costs from the*
5 *calculation of the Industrial Margin. O’Meara et al., WP-10-E-JP7-1, at 6. Do you*
6 *agree?*

7 *A. No. At least not in the manner proposed by JP7.*

8 *Q. Did JP7 address the record from prior BPA rate cases regarding the treatment of*
9 *distribution costs?*

10 *A. No, it did not.*

11 *Q. Please explain the methodology that has been established regarding the treatment of*
12 *distribution costs.*

13 *A. In calculating the Industrial Margin in the 2007 rate case, BPA maintained the same*
14 *approach that was adopted in 2002. As explained in BPA’s Direct Testimony at that*
15 *time:*

16 BPA is using the same cost categories used in the 1996 rate case. When
17 BPA calculated the margin originally, it made a size of load adjustment,
18 substituting BPA’s DSI delivery facility costs for the distribution costs
19 calculated from the utility sample. This substitution was made in order to
20 account for the lesser costs of serving large industrial customers like the
21 DSIs. Failure to make this substitution would have caused the distribution
22 costs component of the margin to be overstated. To the IP-02 base rate,
23 BPA has again substituted its delivery facility costs for the distribution
24 costs contained in the margin study. In applying this methodology, we are
25 skipping the step of including distribution costs in the margin only to
26 substitute another cost later. Therefore, this change does not affect the
27 DSI rate. It is simply a more straightforward application of the
28 methodology, and makes the size of load adjustment unnecessary.”

29 Ebberts, WP-02-E-BPA-22, at 6-7. We believe this approach is consistent with the
30 statutory directive, which states that, in determining the level of the margin, BPA “shall

1 take into account ... the relative costs of electric capacity, energy, transmission, and
2 related delivery facilities provided and other service provisions” 16 U.S.C.
3 § 839e(c)(2).

4 *Q. Does this conclude your testimony?*

5 A. Yes.

6

This page intentionally left blank.

1 **Exhibit 1**

2
3 **2010 Power Rate Case (WP-10)**
4 **Data Request Form**
5 **DATA REQUEST NUMBER: BPA-AL-01**
6

7 **DATE:** March 31, 2009

8 **PARTY:** Alcoa Inc.

9 **DIRECTED TO:** WP-10-E-AL-01

10 **PAGE(S):** Exhibit 2

11 **LINES (S):**

12 **REQUESTOR:** Bonneville Power Agency

13
14 For technical questions about this request please contact Gery Bolden by phone 503.230.5267
15 and/or email gcbolden@bpa.gov. For non-technical questions about this request, please contact
16 Jon Wright by phone 7596 and/or email jdwright@bpa.gov.
17

18 **DATA REQUEST:**

- 19
20 1) Assuming the Pacific Northwest Investor-Owned Utilities' (PNW IOU) position on
21 "share-the-savings" which effectively reduces the \$7.19 per kW-month unit rate for
22 Supplemental Operating Reserves by dividing by 2 (see WP-10-E-JP1-01, line 7, page
23 16), can Alcoa's Intalco plant make available a portion of its load equal to at least 10% of
24 its Net Load, where Net Load is equal to the total Intalco plant load minus the wheel
25 turning load at the Intalco plant, to be curtailed within 10-minute notice from BPA and
26 remain curtailed for a duration of up to 105 minutes following such notice?
27
28 a. If yes, how many MW could be available to be curtailed (as necessary, assume
29 Intalco's existing operating level of 288 aMW per Alcoa testimony, WP-10-E-
30 AL-01, line 1, page 20)?
31 b. How frequently, as measured by number of events per week, could such amount
32 of MW be available to be curtailed?
33 c. Is there a limit on the number of events and/or the number of hours per year
34 would this amount of MW could be available to be curtailed?
35 d. What proportion of the Curtailed Energy, where Curtailed Energy equals amount
36 of MW deployed multiplied by length of duration of deployment in hours or
37 fractions thereof, does Alcoa need returned, if any?
38 e. With in what time frame does Alcoa need such Curtailed Energy returned?
39
40 2) If the value used by BPA to determine "share-the-savings" caused BPA to divide by 1,
41 can Alcoa's Intalco plant make available a portion of its load equal to at least 10% of its
42 Net Load, where Net Load is equal to the total Intalco plant load minus the wheel turning

1 load at the Intalco plant, to be curtailed within 10-minute notice from BPA and remain
2 curtailed for a duration of up to 105 minutes following such notice?

3 **2010 Power Rate Case (WP-10)**

4 **Data Request Form**

- 5
- 6 a. If yes, how many MW could be available to be curtailed (as necessary, assume
7 Intalco plant's existing operating level of 288 aMW per Alcoa testimony, WP-10-
8 E-AL-01, line 1, page 20)?
- 9 b. How frequently, as measured by number of events per week, could such amount
10 of MW be available to be curtailed?
- 11 c. Is there a limit on the number of events and/or the number of hours per year
12 would this amount of MW could be available to be curtailed?
- 13 d. What proportion of the Curtailed Energy, where Curtailed Energy equals amount
14 of MW deployed multiplied by length of duration of deployment in hours or
15 fractions thereof, does Alcoa need returned, if any?
- 16 e. With in what time frame does Alcoa need such Curtailed Energy returned?
- 17
- 18 3) If Alcoa cannot provide at least 10% of the Net Load at the Intalco Plant, then how many
19 MW could be available for a specified portion of the 105 minute duration?
- 20
- 21 a. What is the specified duration used to answer the MW available in the previous
22 question?
- 23 b. How frequently, as measured by number of events per week, could such amount
24 of MW be available to be curtailed?
- 25 c. Is there a limit on the number of events and/or the number of hours per year
26 would this amount of MW could be available to be curtailed?
- 27 d. What proportion of the Curtailed Energy, where Curtailed Energy equals amount
28 of MW deployed multiplied by length of duration of deployment in hours or
29 fractions thereof, does Alcoa need returned, if any?
- 30 e. With in what time frame does Alcoa need such Curtailed Energy returned?

Response Detail

Date Response Filed: 4/7/2009 1:27:00 PM

Contact Name: Michael Dotten

Contact Phone: 503.882.4937

Contact Email: mcdotten@msn.com

Response Text:

- 31 (1) It is physically possible for Alcoa to make 10% of Intalco's Net Load available upon 10
32 minutes notice for 105 minutes without long-term equipment damage if the plant is
33 operating at the assumed 288 MW operating level. Whether or not it is economical to
34 provide such a reserve at half of the \$7.19 per KW-month rate, or even at the full rate;
35 and whether that reserve should be included in a new Alcoa contract is a matter for
36 contract negotiations, and is outside the scope of this proceeding. Part of the answer on

1 economics will depend on how frequently the interruption occurs and the time between
2 interruptions so the plant can return to stable operations between events. It is illogical
3 from a broad economic perspective, for Intalco to provide reserves at a cost that is higher
4 than the value to BPA. (1)(a) 28 MW. (1)(b) One event every 24 hours will allow
5 adequate time for the plant to recover between events. This means it can be done up to 7
6 times per week, however the more often interruption occur, the more production is lost,
7 and the more costly it becomes to provide this reserve. (1)(c) There is no physical limit to
8 how many events could be available in this pattern, but again the number of interruptions
9 per year will impact the economics of providing this reserve. (1)(d) Alcoa will need to
10 increase its load immediately after the interruption to return the plant to normal
11 conditions. We are limited by rectifier capacity to taking no more than 5% above full
12 potline operating levels if we are operating at full line increments, but since the assumed
13 operation is less than full potline operation for each of the 2 potlines now energized, this
14 should not be a problem in the instant case. Returning the interrupted energy to Alcoa at a
15 rate of 20% for the 5 hours immediately following the interruption will allow for an
16 orderly recovery, but other combinations are possible. (1)(e) See “(1)(d)” above. (2)
17 Alcoa can physically make 10% of its net load available, but economics are uncertain,
18 and need to be resolved in contract negotiations. For responses to (2)(a) through (2)(e),
19 please see the responses to (1)(a) through (1)(e) above. (3) Alcoa can physically provide
20 10% of the Net Load; it is just the economics of doing so that are questionable.
21
22

1 **Exhibit 2**

2 **Contingency Reserve Analysis**

3
4 BPA analyzed our contingency reserve obligation and contingency reserve deployment for
5 FY 2008 to determine how frequently the capacity was fully used. To capture the capacity
6 component, the contingency reserve obligation and deployment were analyzed within hour on a
7 one minute time interval. On a minute by minute basis, the observed peak contingency reserve
8 obligation was 752 MW and observed peak contingency reserve deployment was 599 MW
9 during the study period. Analysis showed that the contingency reserves deployed were within
10 40 MW of the contingency reserve obligation nine times during the study period. The full
11 amount of the contingency reserve obligation was deployed five times. The contingency reserve
12 deployments that were within 40 MW of full requirements did not occur more than once a month
13 and the duration of deployment ranged from seventeen (17) to seventy-five (75) minutes.

14
15
16