2010 Wholesale Power Rate Case Initial Proposal

REBUTTAL TESTIMONY

RATES AND ASSUMPTIONS FOR DIRECT SERVICE INDUSTRIES

April 2009

WP-10-E-BPA-45

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INDEX

REBUTTAL TESTIMONY of

ALLEN L. BURNS, RAYMOND D. BLIVEN,

HARRY W. CLARK and MARK C. SYMONDS

Witnesses for Bonneville Power Administration

SUBJECT: RATES AND ASSUMPTIONS FOR DIRECT SERVICE INDUSTRIES

Page

Section 1: Introduction and Purpose of Testimony 1

Section 2: Service Assumptions for DSIs.....1

Section 3: DSI Rate Directives in Section 7(c) 7

Section 4: Risk Related to DSI Service 20

Section 5: Variable Industrial Rate.....30

Section 6: Summary of BPA's DSI Proposal 46

Attachment 1 51

Attachment 2 55

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SUBJECT: RATES AND ASSUMPTIONS FOR DIRECT SERVICE INDUSTRIES

Section 1: Introduction and Purpose of Testimony

Q. Please state your names and qualifications.

A. My name is Allen L. Burns, and my qualifications are contained in WP-10-Q-BPA-66.

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

A. My name is Harry W. Clark, and my qualifications are contained in WP-10-Q-BPA-67.

A. My name is Mark C. Symonds, and my qualifications are contained in WP-10-Q-BPA-68.

Q. What is the purpose of your testimony?

A. The purpose of this testimony is to rebut testimony on DSI issues.

Q. How is your testimony organized?

A. Section 1 is this introduction. Section 2 discusses assumptions regarding service to DSIs. Section 3 presents our implementation of section 7(c)(2) of the Northwest Power Act. Section 4 discusses risk issues related to DSI service and proposes a new rate adjustment mechanism to allow rates to reflect actual operations of aluminum smelters and IP rate levels. Section 5 discusses Alcoa's proposal for a variable IP rate and our counter-proposal. Section 6 summarizes BPA's DSI proposal.

Section 2: Service Assumptions for DSIs

Q. NRU states that the DSIs as a customer class have no statutory right to continued BPA service of any kind following the expiration of their contracts in September of 2006. Carr and Stratman, WP-10-E-NR-01, at 12. NRU contends that the Court of Appeals for the

Ninth Circuit (in PNGC v. BPA*) recently confirmed that view and further admonished BPA that any offer of service to the DSIs would be a discretionary one that must be made consistent with BPA's other statutory obligations, including the obligation to establish rates at the lowest possible cost consistent with sound business principles. Id. Please respond to NRU's statements.*

A. The statements NRU makes in testimony are legal conclusions regarding its interpretation of the *PNGC* opinion. Further, its testimony is in regard to whether BPA should offer service to the DSIs. We made it clear in the Initial Proposal that BPA's decision to offer or not to offer service to the DSIs is not a rate case issue. As described later in Section 4 of our testimony, we propose a rate adjustment clause to deal with the uncertainty of the smelter operating level and rate level. Therefore, we do not believe it is necessary to decide this issue to be able to set rates for such service. If it is necessary for BPA to respond to NRU's interpretation of *PNGC* in the context of setting rates, such response will be set forth in the Record of Decision after NRU's legal brief is submitted.

Q. WPAG and PNGC note that the contracts offered to the smelter DSIs were not executed, so there is currently no contract with them for a power sale for the coming rate period. Saleba et al., WP-10-E-WA-01, at 19; Prescott et al., WP-10-E-PN-01, at 3. PNGC states that the prior contracts were invalidated by the PNGC *opinion. Prescott et al., WP-10-E-PN-01, at 3. PNGC argues that the lack of contracts means that there is no basis for an assumption of a power sale to either aluminum DSI. Id. Do you agree with WPAG and PNGC?*

A. No. As stated in the Initial Proposal, BPA has not yet made a decision regarding service to DSIs for the rate period. While we have described benefits to continuing at some level of service to the DSIs later in section 5 of our testimony, the final decision will be made in a process outside this rate proceeding. While it is our understanding that the *PNGC* opinion did not invalidate the prior contracts, this is a legal issue that will be dealt with in

the Record of Decision. However, such decision is not necessary to determine rates. In section 4, we propose a rate adjustment mechanism to deal with the uncertainty regarding the DSI contract.

Q. *PNGC offers five reasons for its conclusion that there is an insufficient basis for assuming that there will be aluminum DSI load, whether or not contract amendments will be executed. Id. at 3-4. First, PNGC states that the overall economy, both nationally and in the Pacific Northwest region, has taken a serious downturn and that the demand for all sorts of goods is reduced, including those that require aluminum. Id. Second, PNGC notes that commodity prices are down and that aluminum prices are 50 percent lower than a year ago. Id. Third, PNGC cites statements by both Alcoa and CFAC that they have curtailed or shut down operations, or are likely to do so. Id. Fourth, PNGC sees no basis on which to assume what service may be requested by either aluminum DSI. Id. Fifth, PNGC questions the lawfulness of continued service to DSIs. Id. Do you agree with PNGC's arguments and conclusion?*

A. We do not believe that it is necessary to reach definitive conclusions on the issues presented by PNGC before calculating an IP rate. We are proposing in the rate adjustment mechanism in section 4 to deal with this uncertainty. Therefore, appropriate risk mitigation strategies should be included along with the rates. We address risk mitigation strategies in section 4. While BPA is not making a final decision regarding how much smelter load to serve, we do see benefits in maintaining some level of DSI load as described in section 5. Therefore, we are now proposing a FY 2010 variable IP rate, described in section 5 to improve the chances that the smelters will operate one potline each, which would be 230 aMW.

Q. *WPAG argues that providing benefits to DSIs at the expense of preference customers in the current economic climate is not good public policy. Saleba et al., WP-10-E-WA-01, at 21. WPAG notes that throughout the region, industrial customers are experiencing*

unprecedented challenges to their continued viability, and jobs throughout the region are at risk. Id. WPAG states that jobs at DSIs have no higher value than jobs anywhere else in the region, and subsidizing these jobs while others are being lost is not a fair or practical approach. Id. Please respond.

A. This testimony is in regard to whether BPA should offer service to the DSIs. We made it clear in the Initial Proposal that BPA's decision to offer or not to offer service to the DSIs is not a rate case issue. As stated above, we do not find it necessary to decide this issue to be able to set rates for such service, should it come to pass. We do see the benefits in continuing to serve the DSIs as described in section 5 and, therefore, are proposing a FY 2010 variable IP rate to improve the chances that at least one potline could operate at each smelter, if BPA decides to offer service.

Q. NRU states that no service benefits for the DSIs are warranted in FY 2010-2011. Carr and Stratman, WP-10-E-NR-01, at 12-13. However, NRU believes that if BPA determines to proceed with an offer to the DSIs, the costs BPA assumes for such service in this case should be based on legitimate load forecasts and valid contracts. Id. at 13. Please respond.

A. According to statute, BPA must set its rates at a level to recover its costs. If BPA forecasts that it will incur costs as a result of serving DSIs, then we will include such costs in BPA's rates. It is not likely a final decision to serve will be made prior to setting final rates. Our concern is whether such contracts will be finalized in time to allow us to accurately forecast DSI loads and costs. Therefore, as described later in section 4 of our testimony, we propose a rate adjustment mechanism to deal with this uncertainty.

Q. PPC, ICNU, and Tacoma, referred to here as the PPC group, have jointly filed testimony stating that BPA should forecast DSI loads using normal load forecasting methods aimed at accurately estimating actual amounts of expected load. O'Meara et al., WP-10-E-JP7-01, at 2. The PPC group says there are several reasons and proceed to

outline one of the reasons. Id. at 2-3. The PPC group then states that BPA has not provided a reasonable basis for its assumptions about the likely magnitude of DSI load. Id. How do you respond?

A. As was stated in the Initial Proposal, we did not have sufficient time to develop a forecast of DSI load because of the timing of the *PNGC* opinion. Rather, we chose a shortcut that allowed rates to be computed with minimal change from our pre-*PNGC* assumption of a monetized power sale. By setting the DSI load at a level that produced a net cost equivalent to the cost of the monetized power sale, we minimized the disruption to the rate determination process that resulted from *PNGC*. However, we realize that such method of estimating DSI load for FY 2010-2011 may not be adequate, so we committed to revising the DSI load estimate when more information became available. Because it is not likely a decision will be made prior to finalizing rates, we are now proposing a rate adjustment mechanism in section 4. As described in section 5 below, we are now proposing a FY 2010 variable IP rate that could facilitate at least one potline each, or 230 aMW total, of smelter load the prospect of operating, even if low aluminum prices persist. Given current LME 27-month price for aluminum futures, we expect 230 aMW is the most likely level of smelter operation, however a final decision to serve has not been made.

Q. The PPC group states that if BPA chooses to serve the DSIs, it could make a reasonable determination to serve them only up to an amount that would correspond with a certain cost. Id. at 3. However, the PPC group argues that you are unreasonably assuming that the DSIs will operate at a level that will correspond with the amount of service that BPA may provide. Id. Please respond.

A. As stated above, we are not necessarily assuming that the DSIs will operate at the level assumed in the Initial Proposal. We used the assumption of 385 aMW for aluminum

smelter loads as a placeholder until better information becomes available and are now proposing a rate adjustment mechanism to deal with this uncertainty.

Q. *The PPC group argues that because BPA has not executed new contracts and economic conditions may preclude the DSIs from operating, it would be unreasonable to assume a continuation of the current financial benefits into the next rate period. Id. Please respond.*

A. As stated previously, we did not assume whether a continuation of the current financial benefit would continue into the next rate period.

Q. *The PPC group argues there are errors in the proposed costs of serving the loads. Id. at 4. First, the PPC group questions the assumption that the net cost to serve DSIs will be $59 million per year. Id. Please respond.*

A. The level of service provided to the DSIs is a decision that will be made in a process outside the WP-10 rate proceeding. Once the level of service is decided, the net cost to serve the DSIs will be better known. Whether the $59 million per year assumption is too high or too low cannot be assessed at this time. However, to address this uncertainty, in section 4 we propose a rate adjustment mechanism to assure that the costs in rate are closely correlated to those BPA will incur.

Q. *The PPC group argues that the Initial Proposal current market price forecast is out of date and should be revised downward based on current market conditions. Id. The PPC group notes that lower market prices mean that BPA will be able to acquire any needed power at a lower cost than currently projected in the Initial Proposal. Id. Do you agree?*

A. Yes. The Initial Proposal indicated that the market price forecast will be updated for the Final Proposal. Current indications are that the prices assumed in the Initial Proposal are too high, and if so, the net cost of DSI service assumed in the Initial Proposal would be too high. As the market price is adjusted for the Final Proposal, and when the level of

service to the DSIs becomes better defined, the net cost of service to the DSIs will be redetermined accordingly.

Q. Alcoa argues that BPA starts with the assumption that the level of service should be derived based on an assessment of what BPA believes its customers can afford and then backs into an amount of power it will provide, as opposed to a determination of the amount of power it determines it has available to serve the DSI load. Please respond.

A. Alcoa's argument suffers the same flaws as the other parties' arguments. Alcoa assumes that DSI service levels are tied to rate case assumptions. Alcoa also makes an inappropriate inference that the Initial Proposal assumption of $59 million constituted an amount other customers could afford. We meant no such implication in that assumption. The $59 million was chosen as a placeholder until more definition is available regarding the amount of DSI service and the terms of such service.

Section 3: DSI Rate Directives in Section 7(c)

Q. PNGC states that section 7(c)(2) of the Northwest Power Act provides guidance for BPA in setting the rate for service to the DSIs. Prescott et al., WP-10-E-PN-01, at 7-17. PNGC holds that this section contains several congressional directives regarding DSI rates and that in 1985 BPA first interpreted this language to mean that the IP rate would be based on the charges in the PF rate, plus a typical industrial margin, minus a value-of-reserves credit, but not below the DSI floor rate. Id. at 8, Do you agree?

A. Yes, with two modifications. First, the IP rate includes the cost of section 7(b)(2) rate protection to the PF rate that is allocated to the IP rate pursuant to section 7(b)(3), as PNGC so states later in its testimony. Second, pursuant to section 7(c)(2), the IP rate is based on the applicable wholesale rate, which can be broader than the PF rate that PNGC has cited. The applicable wholesale rate also includes any sales to new large single loads of public agencies under the New Resource Firm Power (NR) rate. This is a minor

distinction because we have forecast no sales to new large single loads. With these two modifications, PNGC's summary of the IP rate methodology is accurate.

Q. *PNGC points out that the general methodology for calculating the IP rate has not changed. Id, at 8-9. PNGC then notes that BPA has not sold power at a posted IP rate for several years, but has calculated and posted the IP rate by adopting an amount of nominal DSI load in the calculation of posted rates. Id. Is this a fair characterization?*

A. Yes. Beginning in the WP-07 rate proceeding, BPA set the IP rate based on a one-tenth of one average kilowatt of DSI load (the "nominal" load) so that an appropriate IP rate could be determined.

Q. *PNGC claims that this approach bypassed the allocation of costs entirely, because costs are allocated to rate classes based on projected loads. Id. at 9. PNGC argues that this method facially adhered to the section 7(c)(2) rate directives, but that the use of the nominal load called into question the validity of the results. Id. PNGC characterizes the IP rate as based on a ratio of (A) a nominal amount of allocated costs to (B) projected revenues from the nominal load at marginal-cost rates. Id. Do you agree?*

A. No. While PNGC is correct that costs are allocated based on projected loads, the IP rate determined in the WP-07 rate proceeding did not bypass this allocation. Costs were allocated to the nominal load proportionate to the size of that load. This can be illustrated with a simple example. Assume it costs $30 to serve 1 unit of load. Also assume PF loads are 100 units. Assuming the DSI load is operating would result in 10 units of load; assuming the DSI load is not operating actually results in 0 units of load, but for ratemaking, we use 0.001 units of load. The rates if the DSI is operating would be $3000 ÷ 100, or $30/unit for PF, and $300 ÷ 10, or $30/unit for IP. The rates if the DSI is not operating would be $3000 ÷ 100, or $30/unit for PF, and 0.3 ÷ 0.01, or $30/unit for IP. Granted, this is a simplistic assumption, but because 7(c)(2) links the IP rate to the PF

rate, differentiated by a typical margin which would be constant between the two examples, the results of our methodology are similar to this example.

In WP-07, BPA used only a nominal amount of load because it did not expect to sell power to the DSIs, but rather to monetize the sale, which did not place load on BPA. However, the methodology we use to determine the IP rate is independent of the assumption to sell physical power or to monetize the power sale. In fact, the IP rate methodology produces the same PF and IP rates (within a rounding difference) under either assumption if the net cost to serve 385 aMW of physical power and the monetized power sale payments are equal.

PNGC's characterization that this only facially adhered to the rate directives is misplaced. Actually, the methodology adheres to the rate directives. PNGC misses the point that the size of the DSI load determines BPA's total costs to serve load, but the allocation of those costs is unaffected by the relative size of the load. Finally, PNGC misstates the determination of the IP rate as the ratio between allocated costs and marginal rate revenues. Such ratio is used to determine the demand and energy rate components of the IP rate. However, the level of the IP rate is determined in accordance with section 7(c)(2), and it is the level of the IP rate that PNGC is questioning, not the rate design issue of how costs are allocated to the demand charge and the energy charge.

Q. PNGC goes on to argue that because of the allocation of only nominal costs, it appears that BPA may decide to subsidize the DSIs via a monetization of a power sale at the IP-10 rate. Prescott et al., WP-10-E-PN-01, at 9. PNGC thus believes that it is important to ensure that the IP-10 rate is set correctly. Id. Please respond.

A. We also believe that it is important to set the IP rate correctly. However, PNGC's criticisms miss the mark. First, the Initial Proposal was not based on an allocation of only nominal costs to the IP rate. The Initial Proposal assumed 385 aMW of DSI load,

resulting in a final allocation of $256.5 million to the IP rate. Second, as pointed out above, the methodology produces the same PF and IP rates.

Q. *PNGC argues that notwithstanding the assumption of a power sale or monetization, the IP-10 rate must be "equitable" relative to retail industrial rates charged by public agencies in the region, but also must take into account relative costs of electric capacity, energy, transmission, and related delivery facilities provided. Id. PNGC believes that both the equitability and relative cost standards should be reviewed. Id. at 9-10. Do you agree?*

A. Yes. We agree that the IP rate is to be set at a level that is equitable to retail industrial rates charged by public agencies in the region, but section 7(c)(2) specifies that the equity is measured against the relative costs of electric capacity, energy, transmission, and related delivery facilities paid by the retail industrial customers of public agencies, not the relative costs as measured by BPA's allocation as PNGC suggests. The equity established by section 7(c)(2) is achieved through the addition of the typical margin to the PF rate. We believe the Initial Proposal meets the equitable standard.

Q. *PNGC contends that when the original post-1985 IP rate methodology was established, very different factual conditions existed. Id. at 10. PNGC states that, at that time, BPA expressed concern about the stability of revenues from the DSIs. Id. PNGC cites the volatility of both aluminum market conditions and BPA's understanding of those markets via a series of market analyses leading to concern about the potential that the loss of DSI load would increase the rates of BPA's preference customers. Id. Please respond.*

A. PNGC has recounted the conditions existing in 1984 when BPA was establishing the IP rate methodology under section 7(c)(2) for the post-1985 rates. It was a time of great volatility in aluminum markets. BPA had a large amount of surplus power and the loss of DSI load would have resulted in a net loss of revenues when compared to the alternative of selling the surplus power into the market. Because the IP rate determined pursuant to

application of section 7(c)(2) was too high for the smelters to operate, BPA offered several alternatives. First, an incentive rate was offered beginning in 1985. Afterwards, a variable IP rate was developed beginning in 1986. Both of these rates were successful in keeping aluminum smelters operating and keeping all of BPA's rates lower than they would have been had the IP rate been the only choice available to the DSIs.

Q. *PNGC states that various rate methodologies have changed several times since 1980. PNGC cites the example of the establishment of the 1985 IP-PF Link methodology as a substitute for the typical margin and VOR credit. Id. PNGC characterizes the IP-PF Link as a formula used to implement the directives of section 7(c)(2) instead of separate calculation of the components of the IP rate. Id. PNGC further cites 2008 section 7(b)(2) rate test methodology and the three Average System Cost (ASC) methodologies as changes. Id. at 10-11. PNGC concludes that BPA's basic ratesetting and rate-related methodologies can change and, depending on circumstances, should or must change. Id. at 11. Please respond.*

A. PNGC is correct that various ratesetting methodologies have changed since the passage of the Northwest Power Act. Some of BPA's ratesetting methodologies are within its discretion and can be changed by BPA through the appropriate administrative processes, including rate proceedings. For example, in WP-96, BPA stopped classifying costs between energy and demand, choosing instead to use a marginal cost-based demand rate. PNGC set forth some examples of such changes. However, there are no explicit statutory instructions for such discretionary items and, as a result, there is broader discretion than in the case of ratesetting methodologies, like the one for establishing the IP rate, which are explicitly governed by provisions of the Northwest Power Act. Within limits, of course, even a statute is subject to legal interpretation, and from time to time, BPA has reviewed its interpretations of the Northwest Power Act. Similarly, rate case parties are free to raise any issue of concern regarding whether the ratesetting methodologies

conform to the governing statute or statutes, but these are typical legal issues which are appropriate for the briefing stage of the rate proceeding.

Q. *PNGC states that in 1985 BPA decided to continue the option of offering an incentive rate, which was essentially a discretionary discount determined by BPA to increase BPA's revenues relative to those revenues otherwise expected at the posted IP rate charges. Id. Do you agree?*

A. Yes. At that time, the IP rate established pursuant to section 7(c)(2) was believed to be too high for smelters to continue operations. A rate discount provided increased smelter load and increased revenue to BPA.

Q. *PNGC contends that BPA's decisions in 1985 regarding the IP rate, both the incentive rate and the implementation of section 7(c)(2), must be understood in the context of the mid-1980s and the objective to retain DSI load. Id. However, PNGC believes that circumstances have changed since that decision. Id. PNGC argues that the impact of retaining DSI load now has the opposite effect on preference customer rates, compared with 1985. Id. Therefore, PNGC believes that under such changed circumstances, the IP rate methodology should be reviewed and revised. Id. at 11-12. Please respond.*

A. The IP rate methodology was established based on BPA's interpretation of section 7(c)(2). The 7(c)(2) directive explicitly identifies the considerations applicable to the IP rate. In 1985, however, it was clear that the IP rate established consistent with section 7(c)(2) was too high to ensure continuous smelter operations, a fact that had adverse consequences to BPA, both economically and operationally. BPA's response was to offer the incentive rate, not to revise its IP rate methodology. Thus, PNGC's argument that changed circumstances dictate a change in the IP rate methodology is not persuasive.

Q. *PNGC believes if BPA assumes it will continue to provide service to DSIs during the rate period, the equity and relative cost standards in section 7(c)(2) must be re-examined, and*

the IP rate adjusted accordingly to recover the embedded costs of those resources that BPA has allocated to the Industrial Firm Power Class of Service. Id. Do you agree?

A. If PNGC raises credible reasons to re-examine the IP rate methodology, we are willing to consider such a review. In our view, PNGC's current testimony does not raise a credible reason at this time.

Q. PNGC states that there are four cost components allocated to the IP rate: New Resources, Exchange Resources, Conservation Costs, and BPA Programs. Id. Is this correct?

A. Yes, in the Cost of Service step of the ratesetting process, those are the four resource pool costs allocated to the IP rate.

Q. PNGC argues that the IP rate should be set based on the costs allocated to the IP rate pool. Id. at 12. PNGC first argues that, in 1985, the section 7(c)(2) equity standard led BPA to tie the IP rate very closely to the PF rate. Id. at 13. PNGC contends that this was understandable at the time, but that the equity standard needs to be reconsidered now because the application of the IP rate methodology under the current circumstances leads to an inequitable result. Id. PNGC argues that there should be no increase to the PF rate due to the application of section 7(c)(2) and that BPA has no proper business interest in allocating the costs of DSI customers to the PF rate. Id. Do you agree?

A. No. As we stated before, the IP rate methodology was established based on BPA's interpretation of section 7(c)(2) and was not based on economic circumstances at that time. Such decisions were not based on whether the resulting IP rate lowered or raised the PF rate; they were based on the statute. We do not understand how PNGC comes to the conclusion that the application of section 7(c)(2) should not increase the PF rate. Even in 1985, the application of section 7(c)(2) increased the PF rate; that is, the PF rate before the linkage with the IP rate was lower than after the linkage. This is the natural result of how the IP rate methodology works when the PF and IP rates are melded

together. PNGC includes the impacts of other factors in its assessment of the IP rate methodology, such as the costs and credits of buying and selling other power. Just because the 1985 alternative to selling to DSIs was to sell at a lower price to the market should not be confused with the application of section 7(c)(2) in setting the IP rate.

Q. Please explain how you have implemented section 7(c) in setting the IP rate.

A. To begin, section 7(c)(1) states the premise for the IP rate:

> for the period beginning July 1, 1985, at a level which the Administrator determines to be equitable in relation to the retail rates charged by the public body and cooperative customers to their industrial consumers in the region.

16 U.S.C. § 839e(c)(1). This section establishes the concept of an equitable relationship between BPA's rates for DSIs with the rates for industrial customers of public agencies.

The IP rate is set in a series of distinguishable steps. Section 7(c)(2) states:

> The determination under paragraph (1)(B) of this subsection shall be based upon the Administrator's applicable wholesale rates to such public body and cooperative customers and the typical margins included by such public body and cooperative customers in their retail industrial rates but shall take into account—(A) the comparative size and character of the loads served, (B) the relative costs of electric capacity, energy, transmission, and related delivery facilities provided and other service provisions, and (C) direct and indirect overhead costs,—all as related to the delivery of power to industrial customers, except that the Administrator's rates during such period shall in no event be less than the rates in effect for the contract year ending on June 30, 1985.

16 U.S.C. § 839e(c)(2).

We first calculate the applicable wholesale rate which is a melded rate consisting of the projected sales to public agencies at the PF rate and to the new large single loads of public agencies at the NR rate. In the Initial Proposal, no sales for new large single loads were forecast, resulting in the applicable wholesale rate being set equal to the PF Preference rate.

The next step is to calculate and add the typical industrial margin pursuant to section 7(c)(2). Such typical margin is to take into account the character of service of the

DSIs compared to the industrial customers of the public agencies and the relative costs incurred by the public agencies to serve their industrial customers, including power, transmission, delivery facility, and direct and indirect overhead costs. The typical industrial margin used for the Initial Proposal is documented in the WP-07 Wholesale Power Rate Development Study (WPRDS) Documentation, WP-07-FS-BPA-13A, Appendix A, 7(c)(2) Industrial Margin Study.

Q. *PNGC argues that if BPA continues to apply the IP rate methodology, a surcharge to the IP rate should be calculated that shifts all those embedded costs that are allocated away from the IP rate, due to the application of any rate calculations, back to the IP rate. Id. at 13. PNGC says that the objective of the surcharge should be to ensure that the IP rate is based on the costs that are properly allocable to this class of service. Id. Alternatively, and more simply, PNGC argues that the IP rate could be set based on properly allocated embedded costs without all the iterations of the IP-PF Link. Id. at 13-14. Do you agree?*

A. No. Section 7(c) is very specific about how we are to determine the IP rate. There is no instruction that such rate is based upon costs allocated to the IP rate pool and PNGC points to nothing in section 7(c) that would lead us to such a conclusion. So again, PNGC's arguments regarding the proper methodology for determining the IP rate are unpersuasive.

Q. *PNGC argues that in 1985, BPA explicitly decided that the relative cost standard of section 7(c)(2)(B) would be implemented by using the PF rate charges and the DSI billing determinants. Id. at 14. However, under the current circumstances, PNGC believes this leads to an IP rate that is too low, because it ignores the relative cost of serving the DSIs defined by properly allocated embedded costs, under conditions in which the loss of revenues from the DSIs will not only not increase non-DSI rates, but will lower them, in contrast to 1985-era circumstances. Id. Thus, PNGC argues that the*

relative cost standard of section 7(c)(2)(B) should focus on properly allocated embedded costs. Id. Do you agree?

A. No. PNGC misapplies the relative cost standard of section 7(c)(2)(B). PNGC applies the relative cost standard as if it measured the difference in cost to BPA between costs allocated to the IP rate pool and the revenues received through the IP rate. This is incorrect. Section 7(c)(2)(A) is clearly referring to the relative power costs of the public agencies that are to be included in the typical margins. Public agencies purchase power from BPA at the PF rate, not the IP rate. Therefore, it not appropriate to compare costs allocated to the IP rate pool when considering the cost of power for the public agencies.

Q. PNGC argues that you have used the incorrect determination of the net cost to serve DSIs by comparing the cost of augmentation with revenue from the IP rate. Id. PNGC states that there is no definition of cost in section 7(c)(2)(B) and that using allocated cost instead of augmentation cost makes more sense. Id. Please respond.

A. The position set forward by PNGC exposes its misunderstanding of section 7(c)(2). As we stated above, section 7(c)(2)(B) refers to the relative power costs of the public agencies that are to be included in the typical margins. It is not referring to costs that BPA has or has not allocated to the IP rate pool, whether it be augmentation costs or allocated costs. In fact, there are no instructions in section 7 of the Northwest Power Act that instruct BPA to allocate any costs to the IP rate pool after July 1, 1985. That BPA chose to allocate costs to the IP rate pool is the manner by which BPA chose to sequence the construction of rates. Such sequencing allows for all resource pool costs to be allocated to all rate pools prior to the application of the rate directives contained in section 7.

Q. Were there other methods that could have been considered to calculate the IP rate pursuant to section 7(c)?

A. A methodology could have been established that did not allocate any costs to the IP rate pool and relied totally on the post-July 1, 1985, directives of section 7(c). It is important to note that nowhere in section 7 does the Northwest Power Act direct BPA to allocate costs to the IP rate pool after July 1, 1985. Therefore, a reasonable decision could have been to not allocate costs. Under this methodology, the IP rate would continue to be set as under the methodology that BPA did choose, that is, to begin with the applicable wholesale rate and add the typical margin and the costs of 7(b)(2) rate protection and subtract the value of reserves.

Q. Why wasn't such a method chosen by BPA?

A. Such a method would have resulted in an unreasonable NR rate.

Q. Why is that?

A. Section 7(b)(1) directs how costs are to be allocated to the PF rate pool:

> The Administrator shall establish a rate or rates of general application for electric power sold to meet the general requirements of public body, cooperative, and Federal agency customers within the Pacific Northwest, and loads of electric utilities under section 839c(c) of this title. Such rate or rates shall recover the costs of that portion of the Federal base system resources needed to supply such loads until such sales exceed the Federal base system resources. Thereafter, such rate or rates shall recover the cost of additional electric power as needed to supply such loads, first from the electric power acquired by the Administrator under section 839c(c) of this title and then from other resources.

16 U.S.C. § 839e(c)(2). Specifically, section 7(b)(1) directs that costs are allocated to the PF rate pool as follows: first FBS costs, then exchange resource costs, and finally new resource costs to the extent such resources in excess of the FBS are required to serve PF loads.

In addition, Section 7(f) directs how costs are to be allocated to the NR and surplus rate pools:

> Rates for all other firm power sold by the Administrator for use in the Pacific Northwest shall be based upon the cost of the portions of Federal base system resources, purchases of power under section 839c(c) of this title and additional resources which, in the determination of the Administrator, are applicable to such sales.

16 U.S.C. § 839e(f). Here, we must determine which resources are applicable to such other firm power sales. The other firm power sales referred to in section 7(f) exclude sales included in sections 7(b) (PF rate sales) and 7(c) (IP rate sales). Because section 7(b) was clear on which resource costs are allocated to the PF rate, and if the IP rate was not allocated any costs, then all other resource pool costs not allocated to the PF rate would be allocated to the NR rate and cost-based surplus sales. Even if all revenues recovered through the IP rate were to be credited to offset the costs allocated to the NR rate pool, the remaining NR rate would be unreasonably high and result in an undercollection of BPA's costs. Such a result would thus lead to invoking section 7(a) to recover the undercollected costs, in which case, both the PF and IP rates would be increased by the underrecovery. The end result would leave the PF and IP rates at the same level as under BPA's chosen methodology, but with an undefined basis for setting the NR rate.

Therefore, BPA's chosen methodology of allocating resource pool costs to the IP rate pool in conjunction with the NR rate pool properly establishes an NR rate, leaving the IP rate to be established based on section 7(c).

Q. PNGC argues that the term "relative costs" in section 7(c)(2)(B) clearly invites reference to some benchmark, which should be used in setting the IP rate. Id. at 14-15. PNGC thinks that you have used the wrong benchmark. Id. PNGC states that the equitability and the relative cost standards in sections 7(c)(1)(B) and 7(c)(2)(B) must take into account the allocated embedded costs of service to the DSIs pursuant to the rate and resource pools. Id. at 15. Please respond.

A. While the use of the term "relative costs" in section 7(c)(2)(B) does require a benchmark, the PNGC proposed benchmark of costs allocated to the DSIs is clearly not indicated by section 7(c). Once again, PNGC is confusing the costs that we are to consider in constructing the typical margins that public agencies include in their rates to their industrial customers with the costs that BPA allocates to the IP rate pool to establish an appropriate NR rate. Section 7(c) clearly does not refer to the costs allocated to the IP rate pool, because nowhere does it instruct BPA to allocate any costs to the IP rate pool.

Q. PNGC claims that BPA has not addressed the relative cost standard since 1985, when it was essentially wrapped into the size and character of load standard of section 7(c)(2)(A). Id. PNGC believes that after 24 years, and under dramatically changed circumstances, rote reapplication of the relative cost standard of the 1985 era produces inequitable results. Id. Do you agree?

A. No. Still again, PNGC is confusing the construct of the character of load and relative cost standards to determine the typical margin with the construct of the IP rate. The instructions in section 7(c) are independent of circumstances, whether in 1985 or today. We do not see any compelling reason advanced by PNGC to revisit the IP rate methodology at this time.

Q. PNGC presents a comparison of the costs allocated to the IP rate and the revenues recovered under the IP rate to argue that what it calls an effective annual subsidy to the DSIs is about $87 million, or about 1.5 times the publicly stated amount. Id at 15-16. Do you agree?

A. No. PNGC's claim presupposes that the costs allocated to the IP rate pool are an appropriate measure of the costs that the IP rate should recover. As we have stated above, there is no measure in section 7 regarding what the IP rate should recover other than the applicable wholesale rate plus the typical margin plus the section 7(b)(2) rate protection allocated to the IP rate pool less the value of reserves. PNGC's reliance on the

costs shown in the WPRDS Documentation as being allocated to the IP rate pool are misplaced when examined in the light of section 7(c).

Section 4: Risk Related to DSI Service

Q. *WPAG states that there is no assurance that the cost to preference customers of subsidizing the power costs of these DSIs will be limited to the $59 million forecast in the Initial Proposal, or at or near zero based on more recent power market prices. Saleba et al., WP-10-E-WA-01, at 19. Please respond.*

A. WPAG is correct that the net cost of service to DSIs is uncertain at this time. Until decisions are made that better define what level of service, if any, will be provided to DSIs, and what terms are attendant to the service to DSIs, the cost of service will remain uncertain.

Q. *WPAG further notes that if market power prices go up during the rate period, the cost to serve DSIs could escalate. Id. at 20. WPAG cited historical conditions resulted in increased costs when market prices increased and that the same risk exists with the smelter DSI service commitment. Id. Do you agree?*

A. Absent any risk mitigation, yes. WPAG presents a condition that could result in increased costs to BPA.

Q. *WPAG states that forward purchases could mitigate the market price risk, but if a DSI receiving service ceases operations during the rate period, BPA would also face revenue recovery risk if it remarketed the power that DSI was not taking. Id. Do you agree?*

A. Yes. The risk that WPAG cites is credible and could occur. However, if forward market purchases are made and then remarketed, revenues will be greater as long as market prices exceed the rate charged the DSIs.

Q. *WPAG recommends BPA assume zero cost to serve DSIs for purposes of setting rates in this rate period. Id. at 21-22. WPAG notes that the smelter DSIs have declined to*

execute previously offered contracts; that if service can be provided to the DSIs at zero net cost by purchasing power on the market, the DSIs are not likely to need or want service from BPA; and that it is neither fair nor practical to ask preference customers to subsidize jobs outside their service territories while jobs are being lost within their service territories. Id. Please respond.

A. WPAG presents one approach to assume in setting rates. However, as WPAG has stated, there is considerable risk attendant with any fixed assumption about DSI service. Setting the assumed cost of DSI service at zero does nothing to mitigate risk, and lacking a risk mitigation strategy, would keep power rates low at the cost of enhancing BPA's financial risk. This does not strike us as an appropriate balance between the ratesetting goals of keeping rates low and assurance of cost recovery.

Q. PNGC claims that the Initial Proposal analysis has provided no analysis of the risks associated with the decision to subsidize aluminum DSI service. Prescott et al., WP-10-E-PN-01, at 17. Do you agree?

A. Yes. As was stated in the Initial Proposal, the *PNGC* opinion came too late to incorporate DSI service assumptions into the risk analysis.

Q. PNGC claims that the Initial Proposal suggested modeling an unknown risk in the final studies for this proceeding, without the basis of any evidence on the record. Id. Do you agree?

A. No. The Initial Proposal simply stated that we were not able to incorporate such risk studies at that time. It made no claim that such risk would be established without the basis of any evidence on the record. The issues raised by PNGC and others, including this rebuttal testimony, have provided input that we have used to develop a risk mitigation strategy, that we describe later in this section.

Q. PNGC proceeds to lay out some possible risks relative to service to the DSIs. Id. at 17-19. For example, PNGC states that BPA might decide to buy power on the wholesale

market on a long-term or short-term basis, or some combination of the two, and then sell the power to the DSIs at the IP-10 rate. Id. Alternatively, PNGC offers that BPA might decide to pay cash subsidies to the aluminum DSIs to offset the cost of power that they have actually purchased. Id. Please respond.

A. PNGC lays out two possibilities among several of what may occur.

Q. PNGC claims that by ignoring these risks in setting the IP-10 rate, BPA would not collect from the DSIs the properly allocated costs of service. Id. 19. PNGC states that unless these risks are addressed explicitly, they will be borne by other BPA ratepayers. Id. PNGC claims this is inequitable. Id. Do you agree?

A. We object to the characterization that we are ignoring the risks. The lack of a risk mitigation strategy due to the tight timeframes between the *PNGC* opinion and the release of the Initial Proposal should not be construed as ignoring the problem. Rather, the lack of a risk mitigation strategy was acknowledged and needs to be dealt with.

Q. PNGC concludes that because the DSI contract terms that will prevail are not known, it cannot make specific recommendations on the appropriate rate treatment of these risks. Id. PNGC further points out that for the same reason, neither can BPA. Id. Please respond.

A. We agree. Until the contract terms are known, a complete risk analysis cannot be performed. However, we may not be afforded the luxury of knowing the contract terms before the final risk analysis must be completed. Therefore, alternative risk mitigation strategies may need to be developed without knowing the final contract terms.

Q. Do you believe that there are risks related to DSI service?

A. Yes. In consultation with our risk experts, we have identified three categories of risk: 1) the operating levels of the smelters; 2) the cost of augmentation; and 3) if a variable IP rate is adopted by the Administrator, the variable IP rate risk.

Q. What are the risks related to the operating levels of the smelters?

A. In the Initial Proposal, we assumed that DSI smelter loads placed on BPA was 385 aMW. This assumption was a placeholder that was chosen to not disrupt the ratemaking process given the timing of *PNGC* opinion. It is unlikely that smelter loads on BPA will be exactly 385 aMW. The aluminum DSIs have asked for more than 385 aMW; two potlines of service to each aluminum DSI would equal 460 aMW. However, we are concerned that the likelihood is low that the smelters would continue to operate with aluminum prices around $1500/mt and an IP rate in the mid- to high-$30s. Alcoa has stated that in this range of IP rates and aluminum prices, the Intalco smelter would be forced by economics to vary its output. Speer, WP-10-E-AL-01 at 15. If we were to assume 385-460 aMW of aluminum smelter load in ratesetting, only to find the load dropping considerably below such levels, even to zero load, BPA's rates to other customers would be set higher than necessary. Given the concerns about the level of the rate increase during the current economic conditions, this would be an undesirable outcome.

Q. What are the risks related to the cost of augmentation?

A. The risks related to augmentation are two-fold. First, market prices will vary from those assumed in the ratesetting process. *See* Risk Analysis and Mitigation Study, Section 2.4.7, WP-10-E-BPA-04 at 18-20. Second, the amount of needed augmentation will vary with the operating level of the smelters.

Q. What are the risks related to the variable IP rate?

A. If a variable IP rate is adopted by the Administrator, then the rate paid by aluminum DSIs would be tied to the price of aluminum. The price of aluminum changes continually, resulting in times when the variable IP rate would be greater than the standard IP rate and times when the variable IP rate would be less than the standard IP rate. These variations in the IP rate would create revenue risk for BPA.

Q. Are the combinations of these risks large?

A. The risks presented by DSI service are not as large as the risks presented by hydro variations, but they are significant. We do not believe that they can be ignored in the ratesetting process. Therefore, a risk mitigation strategy should be employed.

Q. What risk mitigation strategy do you propose?

A. PNGC's concerns, when coupled with NRU's, the joint public's, and WPAG's, raise the question of how to set the appropriate level of rates when both the cost to serve the DSIs and the DSI level of operations are unknown.

We propose a multi-faceted approach to mitigate the risks that arise due to service to the aluminum DSI. First, we believe that it is prudent to assume in the ratemaking process that certain conditions will be incorporated into power sales contracts with the aluminum DSIs. Such contractual conditions would include caps on service levels, such as a maximum amount of service from BPA. These service level caps may vary if a variable IP rate is adopted; for example, service might be at one level if the variable IP rate was on the plateau (equivalent to the standard IP rate), and lower if the variable IP rate was below the plateau.

Second, the augmentation market price is already included in the risk analysis. Therefore, if an assumed level of DSI service is included in the Load Resource Study, then the augmentation price risk will be evaluated and will be adequately mitigated with the other risks included in the risk analysis.

Finally, we propose an adjustment clause to deal with the remaining two risks, the smelter operating levels and the variable IP rate.

Q. What is this adjustment clause you propose?

A. The Industrial Cost Adjustment Clause (ICAC) would adjust rates each month based on smelter operations and the IP rate. It would incorporate then-current knowledge or expectations about DSI service conditions before the beginning of each month and adjust

the power rates for that month based on the differences in the financial effects of the smelter operating level and the IP rate level.

Q. How would the ICAC operate?

A. There are two inputs into the ICAC, the level of the IP rate and the expected (or committed) smelter operating level. If a variable IP rate is adopted by the Administrator, then the variable IP rate for the upcoming month would be computed; if a variable IP rate is not adopted, then the standard IP rate for the month would be used. In addition, the current smelter operating level would be noted, together with any knowledge of expected changes which may be known or expected, such as the level of the variable IP rate, to form an expected smelter operating level for the upcoming month. It may be possible to include notice and commitments in contracts with the aluminum DSIs such that when they know the level of the IP rate (whether variable or standard), they would commit to a service level for the upcoming month.

Once these inputs are determined, BPA would compute the resulting revenues from the aluminum DSIs and the cost of augmentation for the service level for the upcoming month. This result would be compared to the comparable amount assumed in the ratesetting process, and the difference would be used as a rate adjuster for the upcoming month.

Q. What rates would be subject to this adjuster?

A. We propose that the HLH and LLH energy rates of the PF Preference rate, REP benefits, the IP rate, and the NR rate be subject to the adjuster. Furthermore, we propose that the PF Slice rate be subject to the adjuster, although the Slice True-Up Adjustment process could also be used rather than the month-to-month adjuster.

Q. Will this result in the rates changing each month?

A. Most likely. It is improbable that the difference between the ICAC computation and the ratesetting amount would be equal in consecutive months.

Q. Could this present a problem for BPA's customers?

A. Yes, it could. We understand that the rate variability may raise some cash flow concerns for customers. However, if the alternative is that BPA takes all of the risk, then we believe this would lead us to propose that rates be set at a higher level to cover the risk. In such a situation, customers may be paying more than necessary with the consequence that funds that are not actually needed go into BPA's financial reserves. Customers may see some benefits in future periods, either through a Dividend Distribution or through lower rates, but neither of these reduces rates now.

Q. Is there some mitigation you can propose?

A. Yes, some. We are willing to modify our proposal based on input from rate case parties. We are willing to make our proposed ICAC either a one-way, downward, adjustment or a two-way, upward and downward, adjustment. If parties prefer a one-way adjustment, we would set rates based on the maximum net cost of DSI service and then make the ICAC a downward-only adjustment. Otherwise, if parties prefer a two-way adjustment, we would set rates based on the an expected net cost of DSI service and then make the ICAC both an upward and downward adjustment.

Q. How much notice would customers have of the ICAC adjustment for the upcoming month?

A. The notice of the ICAC adjustment would depend on how much in advance the DSI service level is either known or estimated and how much in advance the variable IP rate, if adopted, is known. For example, under the VI-86 rate, the VI rate was lagged three months from the LME aluminum price. With advancements in technology, the LME price can be obtained and a variable IP rate can be computed much faster than in the 1980s. A reasonable assumption is that the necessary inputs could be known within a couple of weeks. Therefore, if a variable IP rate was lagged two months from the LME price, we would know the ICAC adjustment around the middle of the month prior to the

upcoming month. If a variable IP rate was lagged three months from the LME price, the ICAC notice could be around six weeks prior to the month.

Q. *Returning to the Slice rate, why do you propose to make the Slice rate subject to the ICAC adjuster?*

A. The net costs of DSI service are included in the Slice rate, but changes in IP revenue and augmentation costs do not change the Slice True-Up Adjustment. As a result, the only way to get the Slice rate set correctly is to forecast the costs of DSI service perfectly. Because it is not possible to forecast such costs perfectly, and the major components are not subject to the Slice True-Up process, we believe it is quite likely that the Slice purchasers will pay more net costs of DSI service than is actually incurred, especially if customers prefer the one-way adjuster. So that the preference between a one-way adjuster and a two-way adjuster is not influenced by product choice, and to allow the Slice rate to be determined with the appropriate amount of net cost to serve DSIs, subjecting the Slice rate to the ICAC seems appropriate.

Q. *Would the Slice rate be adjusted for all of the DSI service risks you identified above?*

A. No. The ICAC does not adjust for augmentation price risk and, therefore, the Slice rate would not be adjusted for this risk. But the ICAC would adjust the Slice rate for changes in the net cost of augmentation due to different DSI service levels and the difference between the IP rate and the market price of augmentation assumed in the ratesetting process. In this way, the Slice purchasers would see lower rates if we forecast too much augmentation for DSI service.

Q. *How would REP benefits change with the ICAC?*

A. A reduction of net costs of DSI service as measured by the ICAC should increase REP benefits. Likewise an increase in the net costs of DSI service as measured by the ICAC should decrease REP benefits. We propose to apply the same proportionate sharing of ICAC amounts between non-Slice rates and REP benefits that is included in the Cost

Recovery Adjustment Clause (CRAC) and the Dividend Distribution Clause (DDC), after adjusting the ICAC amount for the Slice share. In the Initial Proposal, this proportionate share was 80.5 percent for non-Slice rates and 27 percent for REP benefits.

Q. Why do the proportionate shares add to more than 100 percent?

A. As with the CRAC and DDC, a change in REP benefits results in a Slice True-Up Adjustment. The amount in excess of 100 percent recognizes the amount of REP benefits that will be adjusted in the Slice True-Up process.

Q. Have you calculated how the proposed ICAC would work?

A. Yes. Attached to this testimony are a draft of the General Rate Schedule Provision (GRSP) that specifies how the ICAC would be implemented and the numerical analysis that would be used to implement the GRSP.

Q. Please step through the implementation of the ICAC.

A. As specified in the draft GRSP, the ICAC compares the DSI smelter revenue for the upcoming month to the DSI smelter revenue assumed in setting rates. (A possible alternative would be to lag the rate adjustment a month or two if the smelters do not provide a forward commitment.) The numerical analysis is set to perform these calculations for each month of the rate period. The first page of the numerical analysis computes the DSI smelter revenue assumed in setting rates. It multiplies the assumed DSI smelter load by the IP rate components for each month, and uses the assumed power purchase price to compute the Base Rate Amount, the net cost of DSI smelter service assumed in setting rates. The second page of the numerical analysis allows the substitution of the estimated or committed DSI service level and the IP rate (including the variable IP rate, if adopted). The same power purchase prices are used here as on page one to compute the Upcoming Month Amount.

Page three of the numerical analysis computes the ICAC amount, the difference between the Upcoming Month Amount and the Base Rate Amount. It then calculates the

shares of the ICAC Amount attributable to the rates and REP benefits. Page four computes the Distributed ICAC Amounts used to adjust the Slice rate, the PF Preference rate, the IP rate, the NR rate, and the REP benefits for the upcoming month.

Q. *How do you propose to adjust the Slice rate?*

A. Because the Slice rate is already stated as a monthly rate of one percent of BPA's total costs, the ICAC Slice Amount is the total ICAC Amount divided by 100. The ICAC Slice Amount would be added to the Slice rate each month. It is important to recognize that if the net cost of DSI service is lower than assumed in setting rates, the ICAC Amount will be negative, so the addition of the ICAC Slice Amount would lower the Slice rate.

Q. *How do you propose to adjust the REP benefits?*

A. The REP Share of the ICAC Amount is 27 percent (this number will be changed for the Final Proposal using the value computed for the CRAC and DDC adjustments) of the non-Slice share of the ICAC Amount. The REP Share is multiplied by –24 to compute the equivalent two-year rate period REP benefit change, which is the ICAC REP Amount. The negative amount is used to recognize that a cost decrease will increase REP benefits and a cost increase will decrease REP benefits. The ICAC REP Amount is added to the total REP benefits used in the 7(b)(3) Supplemental Rate Charge Adjustment, Section II.O.1 of the GRSPs. REP benefits would be adjusted by application of the ASC Adjustment mechanism of the 7(b)(3) Supplemental Rate Charge Adjustment.

Q. *How do you propose to adjust the non-Slice rates?*

A. The PF/IP/NR Share of the ICAC Amount is 80.5 percent (again, this number will be changed in the Final Proposal) of the non-Slice share of the ICAC Amount. The ICAC PF/IP/NR Amount is set equal the PF/IP/NR Share, which is divided by the Allocated Monthly Revenue Requirement to calculate the PF/IP/NR Percentage. Each HLH and LLH rate for the upcoming month in the PF Preference, IP, and NR rate schedules will be

adjusted by this percentage. We are not proposing to adjust the Load Variance rate because we expect the ICAC adjustments to be rather small and the adjustment to the Load Variance rate would be at most a penny or two.

Q. What is the Allocated Monthly Revenue Requirement?

A. It is the revenue requirement not recovered through Demand and Load Variance rates allocated to the PF Preference rate, the IP rate, and the NR rate, separated into the 24 months of the rate period. It is computed by multiplying the HLH and LLH energy rates by the billing determinants used in the ratesetting process. Using these monthly amounts allows a proper comparison between the costs recovered by each rate and the change in costs as measured by the ICAC.

Section 5: Variable Industrial Rate

Q. Alcoa states that BPA established a variable IP rate for the period 1986 through 1996. Speer, WP-10-E-AL-01 at 12. Please outline BPA's development of that variable IP rate.

A. During the first half of the 1980s, the amount of electric power demanded by the DSI aluminum smelter customers was unstable and unpredictable due to fluctuating aluminum market conditions. Many of the region's smelters operated at reduced levels or shut down during that time. The unpredictable demand for power caused uncertainty about BPA's resource planning, financial strength, and rate stability. The issue of the DSIs' long-term viability was raised in BPA's 1985 wholesale power rate proceeding. The DSIs claimed that they needed predictable and stable rates to help them make long-term investment decisions. In June of 1985, BPA issued the DSI Options Study, which examined mid- to long-term DSI policy, service, and rate options. Based on the results of the study and public comment, BPA decided to pursue the development of a variable IP rate linked to the price of aluminum.

The variable IP rate adopted by BPA in 1986 was the result of nearly two years of extensive investigation of regional aluminum smelter issues, which included the DSI Options Study public involvement process. Informal discussions with customers and other interested parties were held in the Fall of 1984. BPA hired Resource Strategies, Inc. (RSI) to explore options to resolve the complex marketing issues. The final RSI Report for BPA recommended that BPA establish a variable IP rate and fund plant modernization. A BPA options process began with the formation of a Technical Review Committee. This group worked with BPA staff on defining questions, options, and analytical tools to be used when formulating alternatives for consideration. Members of the group were: Northwest Power Planning Council, Public Power Council, Pacific Northwest Generating Company, Western Public Agencies Group, Direct Service Industries, Industrial Customers of Northwest Utilities, Washington State Energy Office, Idaho Public Utility Commission staff, and environmental groups. A 241-page Draft Report on the DSI Options Study was published in April 1985. Thirteen regional public meetings were held by BPA in the Spring of 1985, with a total attendance of 5,000 people. Over 1,100 comments were received by mail during the public involvement process. A 271-page Final Report on the DSI Options Study, published by BPA in June 1985, indicated that a variable IP rate would be beneficial both to the smelters and to BPA, and should be pursued. Between June and November 1985, formal and informal meetings were conducted by BPA and customer groups to develop a proposal. The initial proposal for the variable IP rate was published in the Federal Register (50 FR 51577, December 1985).

BPA's actions were prompted by the fact that the Northwest aluminum smelting industry, which represented 25 percent of BPA's total sales, had become highly volatile power purchasers due to fluctuating aluminum market conditions. The Martin Marietta smelter at The Dalles, Oregon, had closed, and another smelter at Columbia Falls,

Montana, was at risk. Many other smelters began operating only as "swing" plants, reducing production when aluminum prices fell. In the five years prior to 1986, Northwest aluminum smelters operated at levels as low as 58 percent of production capacity. When smelter loads dropped, BPA's revenues declined and, as a result, BPA was less likely to meet its planned payments to the U.S. Treasury. Further, large variations in smelter loads aggravated the uncertainty in BPA's resource planning. As a short-term solution to these problems, BPA offered a series of three so-called "incentive rates" (or a rate discounted off the standard IP rate) to the DSIs. The effective periods for the incentive rate offerings were: September 1, 1984, through February 28, 1985; March l, 1985, through June 30, 1985; and September 1, 1985, through June 30, 1986. BPA developed the variable IP rate because it had the potential to address the problems described above in a uniform and longer-term manner, and in a way that provided some balancing up-side revenue potential for BPA and its other customers.

In June 1986, after a six-month rate proceeding, the Administrator signed the 1986 VI ROD, adopting the variable IP rate structure. The rate was designed to be in effect for 10 years, through June of 1996. All DSI aluminum smelters elected to take service under this rate schedule and entered into the 10-year contracts with BPA to implement the rate. The Federal Energy Regulatory Commission (Commission) granted final approval of the rate for only seven years, through July of 1993. *United States Dep't of Energy–Bonneville Power Admin.*, 36 FERC ¶ 61,078 (1987).

Q. What were the goals of the 1986 variable IP rate?

A. The goals adopted for the variable IP rate were: 1) to discourage aluminum plant closure during the short run; i.e., 1 to 3 years (the variable IP rate was not intended to forestall closure of those plants that are not economic over the medium to long term at the standard IP rate); 2) to encourage high aluminum plant operating rates and discourage swing operations during BPA's surplus period; and 3) to increase BPA's total revenues

over the revenues anticipated if the standard IP rate to the DSIs were to remain in effect. In addition, if possible, the average rate paid under the variable IP rate option, over the 10-year time period the rate was to be in effect, should equal the standard IP rate over the same time period.

Q. Is 1986 the only time BPA established a rate for the aluminum smelters tied to the price of aluminum?

A. No. The Cost-Based Indexed IP rate established in the WP-02 rate proceeding was similar in concept to the VI-86 rate, but had some differences. The WP-02 variable IP rate was restricted to a narrower range between the floor and the ceiling (approximately $5/MWh, and 6 cents/lb., up or down from the standard IP rate) from the mid-point (established based on which targeted adjustment rate the DSI would pay under the standard IP rate, including an up to 2 cents/lb aluminum risk premium) rather than a plateau.

Q. Please elaborate on the significance of these differences between the 1986 and 2002 variable IP rates.

A. Essentially, the WP-02 variable IP rate was designed to reduce BPA's risk of not recovering standard IP-equivalent revenues over the rate period inherent in the 1986 variable IP rate. This reduced risk was important, because the term of the WP-02 rates was five years, rather than ten years under the VI-86 rate, allowing less time for aluminum price cycles to occur. Also, adjusting the mid-point, BPA would have been able to hedge most of the risk associated with low aluminum prices. No DSI elected the WP-02 variable IP rate option.

Q. What were the major issues that had to be addressed prior to the adoption of the 1986 variable IP rate?

A. The major issues in the 1986 variable IP rate proceeding included:

1) Whether the variable IP rate was consistent with various legal requirements of the Northwest Power Act.
2) Whether BPA should have offered the aluminum smelters a variable IP rate tied to the price of aluminum.
3) What the goals of the variable IP rate should have been.
4) What aluminum price forecasts should have been used in the development and analysis of the variable IP rate.
5) Whether the variable IP rate design should take into account the possibility that the pattern of aluminum prices would affect the results of the load analysis.
6) How the smelter production cost estimates should have been made and how they would vary over time.
7) How the modeling of BPA's available surplus firm power would be done.
8) How to estimate the opportunity cost of serving additional aluminum smelter loads.
9) Whether the demonstration of the expected ability to meet payments to the U.S. Treasury was sound and whether the variable IP rate jeopardized BPA's ability to make its payments.
10) What the variable IP rate parameters (lower pivot point, upper pivot point, lower slope, upper slope, lower rate limit, upper rate limit) would be.
11) Whether the variable IP rate would include a Historical Aluminum Price Adjustment to reduce the risks to BPA of offering a 10-year rate and "true up" BPA's forecasts of aluminum prices and smelter costs.
12) Whether the variable IP rate should contain a balancing account provision.
13) Whether the variable IP rate should contain a take-or-pay provision and a termination or "loser out" provision.
14) Whether the variable IP rate would be subject to rate adjustment clauses.

15) How the variable IP rate would be adjusted to reflect corresponding adjustments in the underlying IP rate made during BPA wholesale power rate filings.

16) How the upper and lower rate limits would shift when the plateau changed.

17) What the appropriate mechanism would be for adjusting the pivot points for cost escalation and whether periodic adjustments would be made to the pivot points to provide incentives to the smelters to modernize or to reflect the cost reductions and efficiency improvements at the regional smelters.

18) Whether the variable IP rate would include an adjustment to the plateau for section 7(b)(2) and 7(b)(3) surcharges.

19) For how long a period the variable IP rate would be offered.

Q. *Have the issues identified and addressed as part of the development and adoption of the variable IP rate in 1986, in particular the rationale for the proposed variable IP rate parameters, been addressed in Alcoa's proposal in this proceeding?*

A. No. Alcoa has presented the outline of how a variable IP rate could be structured. However, it has not presented any evidence to support any of its proposed rate parameters.

Q. *Please elaborate.*

A. The rate parameters consist of the plateau, the lower pivot point, the upper pivot point, the lower slope, the upper slope, the lower rate limit, and the upper rate limit. When the variable IP rate is at the plateau, it is equal to the standard IP rate. The variable IP rate is on the plateau when the price of aluminum is between the lower pivot point and the upper pivot point. If the aluminum price falls below the lower pivot point, the variable IP rate decreases with the price of aluminum on the lower slope until the lower rate limit is reached. Once the variable IP rate is at the lower rate limit, it does not decrease any further, even if the price of aluminum decreases further. Likewise, if the aluminum price rises above the upper pivot point, the variable IP rate increases with the price of

aluminum on the upper slope until the upper rate limit is reached. Once the variable IP rate is at the upper rate limit, it does not increase any further, even if the price of aluminum increases further.

Among the issues that must be addressed with respect to these parameters is how low the lower rate limit needs to be set in order to permit smelter operations. To know this, a cost analysis of smelter operations must be available. An aluminum price analysis and forecast must be established to be used as the basis for 1) establishing a mid-range (the range at which smelters would pay the plateau, or standard IP, rate), 2) forecasting smelter operating levels, and 3) and forecasting BPA variable IP rate revenues to be compared to standard IP rate revenues.

Q. *Alcoa states that it needs a variable IP rate to avoid varying the output of its Intalco smelter, which is expensive and disruptive to its workforce. Speer, WP-10-E-AL-01, at 15-16. How do you respond?*

A. While we do not believe Alcoa is misrepresenting its view that economic conditions and low aluminum prices will continue to adversely affect its ability to operate its smelter in the FY 2010-2011 rate period, Alcoa's testimony does not present enough evidence to support the establishment of the variable IP rate parameters. In addition, Alcoa is not the only smelter that must be considered. Columbia Falls Aluminum (CFAC) operates a smelter in Montana, and we would need to determine whether CFAC would also participate in the variable IP rate.

Q. *Alcoa states that it expects that BPA will recover the same level of revenues under the proposed variable IP rate over the term of a new long-term power sales contract as it would under the standard IP rate. Speer, WP-10-E-AL-01, at 16. Do you agree?*

A. There is no way to know at this time, because Alcoa has not presented any evidence that would substantiate its view that the long-run marginal cost of producing aluminum would support a plateau of the variable IP rate in the price range of 90 cents/lb to 113 cents/lb of

aluminum. Also, Alcoa's proposal does not provide for a variable IP rate that would extend beyond the FY 2010-2011 rate period.

Q. *Alcoa states, based on 1) the March 13, 2009, London Metals Exchange (LME) 27-month aluminum price of $1500/MT (68 cents/lb.), and 2) an assumption that the Intalco smelter would operate at approximately 288 aMW, that variable IP rate revenue from Alcoa would be approximately $54 million below equivalent standard IP revenues over the rate period. Speer, WP-10-E-AL-01, at 19-20. Do you concur?*

A. The 27-month LME seller price represents a price that a seller could obtain now (in the case of Alcoa's proposal, as of March 13, 2009) for the sale of one metric tonne of aluminum 27 months in the future. Over the past 27 months, the price of aluminum has averaged $2443/mt (110 cents/lb.), with a high of $3291/mt (149 cents/lb) and a low of $1253/mt(56 cents/lb). Since the March 13 price used in Alcoa's testimony, the LME cash price of aluminum has risen by $148/mt (7 cents/lb.); a similar movement in the 27-month LME price would result in $1650/mt (75 cents/lb.). This bounce of the lows since Alcoa's testimony demonstrates some of the volatility in aluminum prices and the concern of using a forward-looking single point estimate of aluminum prices to establish the variable IP rate parameters.

Therefore, it is not readily apparent based solely on Alcoa's testimony at what price BPA can reasonably expect aluminum will be selling for during the entirety of the next rate period. Alcoa presents a single-day forward spot aluminum price as a price forecast for a two-year period, and we infer from this that Alcoa is attempting to propose this estimate as what will happen. While Alcoa's aluminum price (and its smelter operating projections) may be reasonable assumptions, BPA cannot evaluate them absent additional evidence, including obtaining or developing aluminum price forecasts not only for the FY 2010-2011 rate period, but for one or more rate periods beyond. Such forecasts are needed to allow BPA to evaluate whether future variable IP rate revenues

could reasonably recoup the IP rate underrecovery arising from Alcoa's proposed variable IP rate parameters if they were applied to aluminum prices during FY 2010-2011 that Alcoa presents.

Q. *Why has BPA not performed that analysis?*

A. Compared with the time and effort it took for BPA to develop prior variable IP rates, a major undertaking, Alcoa's proposal has come late in the ratemaking process. We have concerns about the adequacy of Alcoa's proposed parameters, the lack of opportunity for other parties to the proceeding to properly respond to Alco's proposal, and that Alcoa's proposal is for only two years.

Q. *Alcoa proposes that the variable IP rate would apply only to the rate period FY 2010-2011, and that if a DSI smelter elected to purchase under the variable IP rate it would be bound to do so only for the rate term. Speer, WP-10-E-AL-01, at 13-14. Is this consistent with prior variable IP rates?*

A. No. Alcoa is proposing a variable IP rate that would apply to only the FY 2010-2011 rate period. Alcoa is seeking a new or amended power sales contract that would be for a term well beyond this rate period, but under Alcoa's proposal, it would be bound to purchase under a variable IP rate for only one rate period. This would appear to provide smelters with a free option to purchase under the variable IP rate when it benefitted them, but to turn to the standard IP rate when the variable IP rate was higher. A variable IP rate with such limited term would make it impossible to reasonably forecast that BPA would recover revenues under the variable IP rate equal to or greater than revenues it would recover under the standard IP rate.

Q. *Alcoa has proposed to true up the difference between standard IP rate revenues and variable IP rate revenues, stating that the true-up would "guarantee" that BPA would not lose revenue under its proposed variable IP rate as compared to the standard IP rate. Speer, WP-10-E-AL-01, at 16-17. Does this proposal address your concern?*

A. While the idea of a true-up has merit as a risk mitigation tool, the true-up proposed by Alcoa does not provide substantial assurance that BPA will recover standard IP-rate equivalent revenues. Alcoa's proposal relies on a true-up to "assure" BPA's revenues during the FY 2010-2011 rate period; however, Alcoa's true-up relies on drawing from a disputed lookback amount arising out of Alcoa's claim of overpayments between October 2006 and December 2008. In addition, Alcoa's proposed true-up would occur only at the termination of its contract, and Alcoa indicates in its testimony that it hopes to reach agreement with BPA on a new "long-term contract" to become effective October 1, 2009. A true-up that occurs only at the termination of such a long-term contract, which we take to mean a term of 5 to 20 years, would likely leave BPA with too much revenue recovery risk from the smelter customers, both in terms of rate period recovery and in absolute terms.

Q. Please elaborate.

A. First, under Alcoa's proposal, if aluminum prices remain low over several rate periods, BPA would find itself chronically underrecovering revenues compared to standard IP rate revenues. This accumulation of revenue underrecovery would have to be recovered through other rates without prospect of any near-term benefit, and we would be unwilling to recommend such a proposal to the Administrator. Second, Alcoa's true-up proposal would present BPA with a potentially large payment default risk. While there may be ways to mitigate this default risk through the power sales contract under which variable IP rate power would be purchased, such as through credit assurance requirements, it is not clear at this time that the smelters would be willing to accept those conditions.

Q. Isn't the risk you identify largely mitigated by Alcoa's proposal with respect to the amounts it claims it is owed by BPA in connection with the 2007-2011 Block Contract?

A. We do not believe so. First, BPA has stated that it will undertake a separate public process, in connection with the Ninth Circuit Court's remand to BPA in the *PNGC* case,

concerning amounts, if any, that may be owing to or from each of the DSIs as a consequence of the *PNGC* opinion. Second, a variable IP rate should stand on its own. The prospects of recovering revenue under a variable IP rate should be equal to or greater than revenues under a standard IP rate without consideration of funds from settlement of claims.

Q. Are there other issues that have not been addressed by Alcoa's proposal?

A. Yes. Alcoa's proposal does not address the fact that in 1986 BPA concluded that it was in BPA's business interest to establish a variable IP rate in order to retain as much industrial load as possible. The 1986 variable IP rate was expected to provide revenues over what BPA expected to receive under just the standard 1986 IP rate. When the 1986 variable IP rate was modeled in the DSI Options Study the rate consistently provided revenues above that would have been provided by the standard 1986 variable IP rate.

Q. Do you think it could be beneficial to BPA to improve the probability that the DSIs will operate through an appropriately designed DSI variable IP rate?

A. Yes. We believe that with some enhancements to these facilities they can provide an additional source of balancing and regulation services to help with the challenges of integrating intermittent renewable generation such as wind. These would be services that go beyond the standard operating reserve product that BPA is including in the standard IP rate and service. The specifics of such services would still need to be worked out as part of contract negotiations.

Also, the DSI smelters provide an important load during off-peak hours during the spring hydro runoff. During good water years when flows are high BPA needs loads to enable it to fully load hydro turbines and thereby help to minimize the level of dissolved gas that can potentially be harmful to fish. With the addition of a sizeable wind fleet that is expected to grow to over 4,000 MW in this rate period the problem becomes even more

acute since displacement of wind projects is more problematic than traditional thermal generation.

The forecast of secondary revenues is a key driver of the overall rate and the financial health of the agency. An expected recovery in energy prices is forecast, but it is largely dependant on economic recovery and increases in power demand in the U.S. and the region. Loss of two large industrial loads and the likely ripple effect of even further load loss from other sectors that will be impacted by such plant closures, coupled with the high risk of other commercial and industrial load loss in the region, creates a high risk to BPA's financial health. Maintaining electric loads in the next couple of years will help to ensure the financial health of BPA and thereby benefit all customers.

Q. *Would you propose that the Administrator completely reject Alcoa's variable IP rate proposal?*

A. Not necessarily. While we have presented a number of concerns with Alcoa's proposal, it does not necessarily follow that Alcoa has insufficiently justified the need for a variable IP rate. We believe the parameters for a variable IP rate should be based on evidence sufficient to support a conclusion that BPA would recover, over the term of the applicable contract or contracts, revenues equal to or greater under a variable IP rate than revenues under a standard IP rate. It will take more time than allowed in this rate proceeding, given its tight time constraints, to develop and fully examine such needed evidence. We are willing to propose to the Administrator that he commence a separate proceeding to establish a long-term variable IP rate, based on certain pre-defined principles, and using as a starting point the parameters of the variable IP rate that we propose for adoption for FY 2010, as described later.

Q. *What principles or goals do you propose to guide the establishment of the long-term variable IP rate?*

A. One of the principles or goals we are proposing for a long-term variable IP rate is that forecasted revenues over the term of the variable IP rate must be greater than under the standard IP rate, providing a benefit to other power rates and customers. Our proposal that the revenues be greater than, rather than simply equal to, the revenues that would be produced by the standard IP rate is based upon the additional risk to BPA that a variable IP rate presents. Additionally, the variable IP rate will only be available to the aluminum smelters and will be subject to the same rate adjustments as the PF rate. Other design features of the long-term variable IP rate would be:

1) The rate would include a true-up for any revenue variation between the FY 2010 variable IP rate and long-term variable IP rate. Such true-up would ensure the revenues collected over the FY 2010 variable IP rate timeframe would be the same as if the long-term variable IP rate had been in place during the entire rate period.
2) The rate would ensure recovery of any revenue shortfall relative to standard IP rate revenues if a DSI terminates service early.
3) To be eligible for the variable IP rate, a letter of credit acceptable to BPA must be posted to cover any revenue shortfall relative to standard IP rate revenues and would allow BPA to draw on the letter of credit to repay such revenue shortfall if a DSI terminates service early, the contract is terminated, or a DSI switches service to the standard IP rate.
4) The rate would include a mid-point review and revision mechanism to allow for changes, including the option for BPA to terminate, if BPA determines the long-term variable IP rate is no longer forecast to provide revenues that are at least equal to the standard IP rate over the term of the long-term variable IP rate.
5) The rate would limit service to no more than one potline during periods the long-term variable IP rate is lower then the plateau.

Q. How long do you think it will take to establish appropriate parameters for a long-term variable IP rate?

A. We believe the 7(i) rate process for a long-term variable IP rate can be completed during spring 2010 after an initial proposal by the end of September 2009.

Q. Do you believe that Alcoa can operate the Intalco smelter until the long-term variable IP rate parameters can be established?

A. Alcoa has represented to BPA that its situation is dire and that unless it can be reasonably certain now that a variable IP rate -will be available at the beginning of FY 2010, it will likely close the Intalco plant immediately.

Q. When did Alcoa tell BPA this?

A. Alcoa made these representations at the DSI workshop held on April 9, which was a noticed public meeting open to all rate case parties. In addition, Alcoa sent BPA a letter to that same effect dated April 13, 2009. This letter has been placed in the *ex parte* file in this proceeding.

Q. What about CFAC?

A. The FY 2010 variable IP rate will also be available to CFAC. We have no knowledge of CFAC's intentions or interest in a variable IP rate.

Q. How do you propose to reconcile Alcoa's need for an earlier decision on a variable IP rate and the length of time it will take to establish parameters for a long-term variable IP rate?

A. We propose a variable IP rate that would be effective beginning in FY 2010, and that BPA commence a follow-on proceeding to establish a long-term variable IP rate.

Q. What parameters do you propose for the FY 2010 variable IP rate?

A. We propose that the FY 2010 variable IP rate be based on the variable IP rate submitted by Alcoa, but with a few parameters modified; including the plateau being set equal to the IP-10 rate. We propose, as Alcoa does, a lower pivot point $2,000/mt (90 cents/lb)

and a lower rate limit of $1,300/mt (58 cents/lb), but we propose the lower rate limit would be set $8/MWh less than the plateau instead of $15/MWh less proposed by Alcoa. We propose an upper pivot point of $2,300/mt (104 cents/lb) instead of Alcoa's $2,500/mt (113 cents/lb), the upper rate limit would be set $8/MWh greater than the plateau instead of Alcoa's $15/MWh, and we would start at $2,700/mt (122 cents/lb) instead of Alcoa's $3,300/mt (149 cents/lb). Our proposed FY 2010 variable IP rate would limit service to no more than one potline during periods variable IP rate is lower then the plateau. This rate design poses less risk to BPA than the design proposed by Alcoa and the impact on other power rates would be approximately equal to service to 385 aMW of aluminum smelter load at the IP rate, the amount used in the Initial Proposal.

The FY 2010 variable IP rate would be in effect until the earlier of September 30, 2011, or the date a long-term variable IP rate proposed above is granted interim approval by the Commission. The design of the FY 2010 variable IP rate must ensure recovery of any revenue shortfall relative to standard IP rate revenues if the DSI terminates service early. Any revenue shortfall relative to standard IP rate revenues must be covered by a letter of credit acceptable to BPA that allows BPA to draw on to recover such revenue shortfall.

Q. *You testified earlier that BPA was not making final decisions in this rate proceeding regarding service to the DSIs in FYs 20102011. Is your proposal with respect to establishing a FY 2010 variable IP rate consistent with that position?*

A. Yes. BPA will conduct a separate process regarding DSI service, but it must establish rates for at least FY 2010 in this proceeding. We are not proposing that BPA necessarily serve DSI smelter load, but rather we are proposing rates (the IP-10 rate and the FY 2010 variable IP rate) that could be used in FY 2010 (and in the case of IP-10 in 2011 as well) to serve such load if BPA decides in the separate proceeding that it will do so.

Q. You testified earlier that Alcoa has not presented sufficient evidence for BPA to adopt Alcoa's variable IP rate proposal. If that is the case, what is BPA's justification for adopting an FY 2010 variable IP rate, even if as you testify it is not as generous as the variable IP rate proposed by Alcoa?

A. The parameters are less important because BPA is implementing a true-up previously described and require the smelters to post a letter of credit in an amount equal to the revenue shortfall relative to standard IP rate revenues as the smelter purchases industrial firm power from BPA. If BPA doesn't offer a long-term rate, meaning there would be a revenue shortfall, BPA would move to collect on the letter of credit. If BPA does offer a long-term rate, the shortfall will be incorporated into the design of that rate such that, including the letter of credit, mechanisms will be in place to assure proper revenue recovery.

Q. Other than threatening that it will close the Intalco smelter if BPA fails to adopt a variable IP rate is this rate proceeding, what evidence has Alcoa presented that it needs a variable IP rate to keep the Intalco smelter operating?

A. Alcoa Inc. has made public announcements that it is cutting costs and reducing its production around the world. This is the result of worldwide reduction in demand for aluminum and the drop in aluminum prices. Some of these reductions have occurred in the U.S.

Q. At this point in the rate proceeding what is BPA projecting the IP-10 rate will be on a flat annual basis?

A. The most recent forecast, consistent with PF rates presented in the rate level testimony, Bliven *et al.*, WP-10-E-BPA-33, is that the IP-10 rate will be around $35-36/MWh.

Q. Does BPA project that it will recover revenues under the FY 2010 variable IP rate equal to or greater than it would recover from sales under the standard IP rate?

A. No.

Q. Doesn't that violate a fundamental prerequisite for prior variable IP rates adopted by BPA?

A. Not necessarily. The letter of credit will ensure full cost recovery in the event that BPA recovers less revenues from a smelter under the FY 2010 variable IP rate than it would have from the same amount of sales under the standard IP-10 rate, and either 1) a smelter terminates service from BPA without taking service under the long-term variable IP rate, or 2) BPA does not adopt a long-term variable IP rate.

Q. Please elaborate on the letter of credit, including the proposed amount and how it was calculated.

A. We propose that any smelter purchasing under the FY 2010 variable IP rate have a letter of credit posted in a form and by a bank acceptable to BPA, available for BPA to draw on to recover any revenue shortfall compared to revenues that BPA would have received from the sale of an equal amount of power to the DSI at the standard IP-rate. BPA would draw on the letter of credit under the circumstances described in the immediately preceding answer. The amount of letter of credit would be updated monthly.

Section 6: Summary of BPA's DSI Proposal

Q. Please summarize BPA's revised proposal regarding setting a rate for DSI service?

A. While BPA will not be making a final decision on whether to offer the DSIs a contract for service as part of this rate proceeding, we believe there are significant benefits to continuing DSI service and are proposing a multi-faceted rate construct to facilitate that potential outcome. Benefits of continued DSI operations include possibly using DSIs loads to help provide regulation and balancing services needed to support wind power, increased loads during periods of high hydro runoff to enable fully loading hydro turbines to reduce dissolved gas levels that can be dangerous to fish, and to help mitigate the

potential for continued poor financial performance driven by low secondary revenues due to continued significant declines in power loads during these tough economic times.

Given the current low aluminum prices, we believe there is a significant risk that the DSIs will not operate at the current proposed IP rate. BPA's previous experience with a variable IP rate to address this type of circumstance was successful but that rate was developed after a year long rigorous study, followed by a six month rate case. While we understand Alcoa's desire to obtain certainty quickly regarding their variable IP rate proposal, they have not presented enough evidence to support the establishment of the variable IP rate parameters they propose.

To address the conflicting needs to act quickly but also to take the time for adequate analysis and public input, we are now proposing a four pronged approach: 1) an Industrial Cost Adjustment Clause (ICAC) that will be used to adjust cost-based rates based on actual DSI service levels and resultant costs; 2) adopting a more conservative FY 2010 variable DSI rate to improve the chances of the two remaining DSI smelters operating at least one potline during this time of low aluminum prices; 3) agree to quickly commence a separate rate proceeding regarding establishment of a long-term variable IP rate to enable sufficient time for needed analysis and adequate review and input by interested rate case parties; and 4) the ability to true-up any differences between the FY 2010 and long-term variable IP rate.

Service under the FY 2010 variable IP rate would be limited to one potline when the variable IP rate is below the standard IP rate to minimize revenue deficiencies and a letter of credit will be required to cover such deficiencies and ensure recovery if service is terminated. The long-term variable IP rate would need to meet a number of stated goals including recovery of revenues that are greater than the revenues from the standard IP rate over the term of the long term variable IP rate.

Q. Does this conclude your testimony?

A. Yes.

Attachments 1 & 2

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SECTION II. ADJUSTMENTS, CHARGES, AND SPECIAL RATE PROVISIONS

S. Industrial Cost Adjustment Clause (ICAC)

The ICAC is a downward adjustment to REP benefits and an upward adjustment to HLH and LLH Energy rates for sales under these Firm Power rate schedules:

- Priority Firm Preference (PF-10), including the PF Slice Product
- Industrial Firm Power (IP-10)
- New Resource Firm Power (NR-10)
- BPA's contractual obligations for Irrigation Rate Mitigation Product sales

The ICAC does not apply to:

- power sales under Pre-Subscription contracts to the extent prohibited by such contracts
- REP settlement benefits

1. Calculations for the Industrial Cost Adjustment Clause

Prior to the beginning of each month of the rate period, BPA will compute the net cost of aluminum smelter service for the upcoming month. The difference between the computed cost of aluminum smelter for the upcoming month and the corresponding amount included in rates will constitute the ICAC amount. Any change in rates and REP benefits will go into effect beginning on the first of the upcoming month.

(a) Calculating the ICAC Amount

The ICAC Amount is the difference between:

Aluminum smelter net cost for the upcoming month times the Industrial Firm rate for the upcoming month

and

Aluminum smelter net cost used in the ratesetting process for the upcoming month times the Industrial Firm rate used in the ratesetting process for the upcoming month, as shown in Table X.

Table X: ICAC Monthly Smelter Loads and Allocated sMonthly Revenue Requirement

	A	B	D	F	G
1	**Month**	**Smelter HLH Energy Sales (MWh)**	**Smelter LLH Energy Sales (MWh)**	**Smelter Demand Sales (kW)**	**Allocated Monthly Revenue Requirement (dollars)**
2	Oct-2009	160,160	126,665	385,000	118,363,581
3	Nov-2009	154,000	123,200	385,000	141,675,328
4	Dec-2009	154,000	132,440	385,000	167,831,215
5	Jan-2010	160,160	126,280	385,000	143,449,273
6	Feb-2010	147,840	110,880	385,000	129,810,821
7	Mar-2010	166,320	119,735	385,000	121,350,310
8	Apr-2010	154,000	123,200	385,000	99,990,621
9	May-2010	160,160	126,280	385,000	83,093,025
10	Jun-2010	160,160	117,040	385,000	67,843,731
11	Jul-2010	154,000	132,440	385,000	98,036,445
12	Aug-2010	166,320	120,120	385,000	114,781,138
13	Sep-2010	147,840	129,360	385,000	114,635,002
14	Oct-2010	160,160	126,665	385,000	119,378,840
15	Nov-2010	154,000	123,200	385,000	143,869,308
16	Dec-2010	154,000	132,440	385,000	169,746,936
17	Jan-2011	160,160	126,280	385,000	145,121,019
18	Feb-2011	147,840	110,880	385,000	131,859,079
19	Mar-2011	166,320	119,735	385,000	122,667,982
20	Apr-2011	154,000	123,200	385,000	101,196,629
21	May-2011	160,160	126,280	385,000	84,049,260
22	Jun-2011	160,160	117,040	385,000	68,628,877
23	Jul-2011	154,000	132,440	385,000	99,288,197
24	Aug-2011	166,320	120,120	385,000	116,373,573
25	Sep-2011	147,840	129,360	385,000	115,944,060

The *Base Rate Amount* is, from Table X, the Smelter HLH Energy Sales times the Industrial Firm HLH Rate plus the Smelter LLH Energy Sales times the Industrial Firm LLH Rate plus the Smelter Demand Sales times the Industrial Firm Demand Rate.

The *Upcoming Month Amount* is the committed Smelter HLH Energy Sales times the Industrial Firm HLH Rate (or Variable Industrial Rate applicable in HLH) plus the committed Smelter LLH Energy Sales times the Industrial Firm LLH Rate (or Variable Industrial Rate applicable in LLH) plus the committed Smelter Demand Sales times the Industrial Firm Demand Rate (or Variable Industrial Demand Rate, if applicable).

The monthly *ICAC Amount* for the is the Upcoming Month Amount minus Base Rate Amount.

(b) Calculating the Distributed ICAC Amounts

The Slice ICAC Amount is the monthly ICAC Amount divided by 100.

The PF/IP/NR ICAC Amount is the monthly ICAC Amount multiplied by 0.805 multiplied by 0.7737.

The REP ICAC Amount is the monthly ICAC Amount multiplied by 0.27 multiplied by 0.7737 multiplied by –24.

(c) Applying the Distributed ICAC Amounts to the Rates

Once the distributed ICAC Amounts are determined, the applied ICAC Amounts will adjust each rate or REP Benefits:

(1) The Slice Rate is calculated by adding the Slice ICAC Amount to the Slice rate shown in Section II.D.2 of the PF-10 rate schedule.

(2) The PF/IP/NR ICAC Percentage will be calculated by dividing the PF/IP/NR Amount by the Allocated Monthly Revenue Requirement. The energy rates for the upcoming month will be calculated by multiplying applicable energy rates by 1.0 plus the PF/IP/NR ICAC Percentage.

(3) Total REP benefits in Section II.O.1 of these GRSPs will be reduced by the REP ICAC Amount. The 7(b)(3) Supplemental Rate Charges will then be recalculated using the REP benefits as revised by application of the ICAC..

2. ICAC Adjustment Notification

Prior to the beginning of each month, BPA shall post the calculation of the ICAC Amount, the adjustments to rates and REP Benefits pursuant to Section S.1, and the resulting rates for the upcoming month.

Base Rate Amount

1	Month	Smelter HLH Energy Sales (MWh)	Industrial Firm HLH Rate ($/MWh)	Smelter LLH Energy Sales (MWh)	Industrial Firm LLH Rate ($/MWh)	Smelter Demand Sales (kW)	Industrial Firm Demand Rate ($/kW)	Industrial Firm Revenues (dollars)	Power Purchase Price ($/MWh)	Base Rate Amount (dollars)
2	Oct-09	160,160	35.67	126,665	30.82	385,000	$2.11	$10,428,212	49.71	$4,232,899
3	Nov-09	154,000	42.16	123,200	34.79	385,000	$2.25	$11,644,186	49.71	$2,524,941
4	Dec-09	154,000	44.23	132,440	36.65	385,000	$2.36	$12,573,087	49.71	$2,068,345
5	Jan-10	160,160	39.55	126,280	33.45	385,000	$2.00	$11,327,535	49.71	$3,313,897
6	Feb-10	147,840	39.64	110,880	35.04	385,000	$2.04	$10,530,237	49.71	$2,694,282
7	Mar-10	166,320	38.02	119,735	33.58	385,000	$1.90	$11,074,830	49.71	$3,546,922
8	Apr-10	154,000	31.54	123,200	27.13	385,000	$1.78	$8,884,044	49.71	$5,285,083
9	May-10	160,160	27.93	126,280	23.78	385,000	$1.48	$8,045,148	49.71	$6,596,283
10	Jun-10	160,160	27.54	117,040	20.91	385,000	$1.35	$7,377,031	49.71	$6,792,096
11	Jul-10	154,000	33.11	132,440	27.47	385,000	$1.66	$9,375,307	49.71	$5,266,124
12	Aug-10	166,320	36.54	120,120	31.35	385,000	$1.94	$10,589,135	49.71	$4,052,296
13	Sep-10	147,840	38.01	129,360	33.96	385,000	$2.00	$10,781,632	49.71	$3,387,495
14	Oct-10	160,160	35.67	126,665	30.82	385,000	$2.11	$10,428,212	54.86	$5,750,741
15	Nov-10	154,000	42.16	123,200	34.79	385,000	$2.25	$11,644,186	54.86	$3,991,848
16	Dec-10	154,000	44.23	132,440	36.65	385,000	$2.36	$12,573,087	54.86	$3,584,149
17	Jan-11	160,160	39.55	126,280	33.45	385,000	$2.00	$11,327,535	54.86	$4,829,701
18	Feb-11	147,840	39.64	110,880	35.04	385,000	$2.04	$10,530,237	54.86	$4,063,396
19	Mar-11	166,320	38.02	119,735	33.58	385,000	$1.90	$11,074,830	54.86	$5,060,690
20	Apr-11	154,000	31.54	123,200	27.13	385,000	$1.78	$8,884,044	54.86	$6,751,990
21	May-11	160,160	27.93	126,280	23.78	385,000	$1.48	$8,045,148	54.86	$8,112,088
22	Jun-11	160,160	27.54	117,040	20.91	385,000	$1.35	$7,377,031	54.86	$8,259,004
23	Jul-11	154,000	33.11	132,440	27.47	385,000	$1.66	$9,375,307	54.86	$6,781,928
24	Aug-11	166,320	36.54	120,120	31.35	385,000	$1.94	$10,589,135	54.86	$5,568,100
25	Sep-11	147,840	38.01	129,360	33.96	385,000	$2.00	$10,781,632	54.86	$4,854,402

Upcoming Month Amount

(for illustrative purposes only, the values shown assume 1 potline per smelter at $10/MWh below standard IP rate for all months)

1	Month	Smelter HLH Energy Sales (MWh)	Industrial Firm HLH Rate ($/MWh)	Smelter LLH Energy Sales (MWh)	Industrial Firm LLH Rate ($/MWh)	Smelter Demand Sales (kW)	Industrial Firm Demand Rate ($/kW)	Industrial Firm Revenues (dollars)	Power Purchase Price ($/MWh)	Upcoming Month Amount (dollars)
2	Oct-09	96,096	25.67	75,999	20.82	230,000	$2.11	$4,533,867	49.71	$4,262,799
3	Nov-09	92,400	32.16	73,920	24.79	230,000	$2.25	$5,321,062	49.71	$3,180,414
4	Dec-09	92,400	34.23	79,464	26.65	230,000	$2.36	$5,822,852	49.71	$2,962,007
5	Jan-10	96,096	29.55	75,768	23.45	230,000	$2.00	$5,075,881	49.71	$3,708,978
6	Feb-10	88,704	29.64	66,528	25.04	230,000	$2.04	$4,763,782	49.71	$3,170,929
7	Mar-10	99,792	28.02	71,841	23.58	230,000	$1.90	$4,926,668	49.71	$3,846,383
8	Apr-10	92,400	21.54	73,920	17.13	230,000	$1.78	$3,665,447	49.71	$4,836,030
9	May-10	96,096	17.93	75,768	13.78	230,000	$1.48	$3,106,969	49.71	$5,677,890
10	Jun-10	96,096	17.54	70,224	10.91	230,000	$1.35	$2,761,669	49.71	$5,739,808
11	Jul-10	92,400	23.11	79,464	17.47	230,000	$1.66	$3,904,884	49.71	$4,879,974
12	Aug-10	99,792	26.54	72,072	21.35	230,000	$1.94	$4,632,901	49.71	$4,151,957
13	Sep-10	88,704	28.01	77,616	23.96	230,000	$2.00	$4,803,779	49.71	$3,697,697
14	Oct-10	96,096	25.67	75,999	20.82	230,000	$2.11	$4,533,867	54.86	$5,173,504
15	Nov-10	92,400	32.16	73,920	24.79	230,000	$2.25	$5,321,062	54.86	$4,060,559
16	Dec-10	92,400	34.23	79,464	26.65	230,000	$2.36	$5,822,852	54.86	$3,871,490
17	Jan-11	96,096	29.55	75,768	23.45	230,000	$2.00	$5,075,881	54.86	$4,618,461
18	Feb-11	88,704	29.64	66,528	25.04	230,000	$2.04	$4,763,782	54.86	$3,992,398
19	Mar-11	99,792	28.02	71,841	23.58	230,000	$1.90	$4,926,668	54.86	$4,754,644
20	Apr-11	92,400	21.54	73,920	17.13	230,000	$1.78	$3,665,447	54.86	$5,716,174
21	May-11	96,096	17.93	75,768	13.78	230,000	$1.48	$3,106,969	54.86	$6,587,373
22	Jun-11	96,096	17.54	70,224	10.91	230,000	$1.35	$2,761,669	54.86	$6,619,952
23	Jul-11	92,400	23.11	79,464	17.47	230,000	$1.66	$3,904,884	54.86	$5,789,457
24	Aug-11	99,792	26.54	72,072	21.35	230,000	$1.94	$4,632,901	54.86	$5,061,440
25	Sep-11	88,704	28.01	77,616	23.96	230,000	$2.00	$4,803,779	54.86	$4,577,841

ICAC Amount

1	Month	Upcoming Month Amount (dollars)	Base Rate Amount (dollars)	ICAC Amount (dollars)	Slice Share (dollars)	PF/IP/NR Share (dollars)	REP Share (dollars)
2	Oct-09	$4,262,799	$4,232,899	$29,901	$5,352	$18,623	$6,246
3	Nov-09	$3,180,414	$2,524,941	$655,474	$117,336	$408,248	$136,928
4	Dec-09	$2,962,007	$2,068,345	$893,662	$159,973	$556,598	$186,685
5	Jan-10	$3,708,978	$3,313,897	$395,081	$70,723	$246,068	$82,532
6	Feb-10	$3,170,929	$2,694,282	$476,647	$85,324	$296,869	$99,571
7	Mar-10	$3,846,383	$3,546,922	$299,461	$53,606	$186,513	$62,557
8	Apr-10	$4,836,030	$5,285,083	($449,053)	($80,384)	($279,683)	($93,807)
9	May-10	$5,677,890	$6,596,283	($918,393)	($164,400)	($572,002)	($191,851)
10	Jun-10	$5,739,808	$6,792,096	($1,052,288)	($188,369)	($655,395)	($219,822)
11	Jul-10	$4,879,974	$5,266,124	($386,150)	($69,124)	($240,505)	($80,666)
12	Aug-10	$4,151,957	$4,052,296	$99,662	$17,840	$62,072	$20,819
13	Sep-10	$3,697,697	$3,387,495	$310,202	$55,529	$193,203	$64,801
14	Oct-10	$5,173,504	$5,750,741	($577,236)	($103,330)	($359,519)	($120,584)
15	Nov-10	$4,060,559	$3,991,848	$68,711	$12,300	$42,795	$14,354
16	Dec-10	$3,871,490	$3,584,149	$287,340	$51,436	$178,964	$60,025
17	Jan-11	$4,618,461	$4,829,701	($211,241)	($37,814)	($131,567)	($44,128)
18	Feb-11	$3,992,398	$4,063,396	($70,998)	($12,709)	($44,220)	($14,831)
19	Mar-11	$4,754,644	$5,060,690	($306,046)	($54,785)	($190,614)	($63,933)
20	Apr-11	$5,716,174	$6,751,990	($1,035,816)	($185,420)	($645,136)	($216,381)
21	May-11	$6,587,373	$8,112,088	($1,524,715)	($272,937)	($949,636)	($318,511)
22	Jun-11	$6,619,952	$8,259,004	($1,639,051)	($293,405)	($1,020,848)	($342,396)
23	Jul-11	$5,789,457	$6,781,928	($992,471)	($177,661)	($618,139)	($207,326)
24	Aug-11	$5,061,440	$5,568,100	($506,660)	($90,697)	($315,562)	($105,841)
25	Sep-11	$4,577,841	$4,854,402	($276,561)	($49,507)	($172,250)	($57,773)

Distributed ICAC Amounts

1	Month	Slice ICAC Amount (dollars)	REP ICAC Amount (dollars)	PF/IP/NR ICAC Amount (dollars)	Allocated Monthly Revenue Requirement (dollars)	PF/IP/NR Percentage %
2	Oct-09	$299	($149,909)	$18,623	$118,363,581	0.02%
3	Nov-09	$6,555	($3,286,267)	$408,248	$141,675,328	0.29%
4	Dec-09	$8,937	($4,480,443)	$556,598	$167,831,215	0.33%
5	Jan-10	$3,951	($1,980,770)	$246,068	$143,449,273	0.17%
6	Feb-10	$4,766	($2,389,707)	$296,869	$129,810,821	0.23%
7	Mar-10	$2,995	($1,501,371)	$186,513	$121,350,310	0.15%
8	Apr-10	($4,491)	$2,251,362	($279,683)	$99,990,621	-0.28%
9	May-10	($9,184)	$4,604,435	($572,002)	$83,093,025	-0.69%
10	Jun-10	($10,523)	$5,275,728	($655,395)	$67,843,731	-0.97%
11	Jul-10	($3,861)	$1,935,990	($240,505)	$98,036,445	-0.25%
12	Aug-10	$997	($499,661)	$62,072	$114,781,138	0.05%
13	Sep-10	$3,102	($1,555,222)	$193,203	$114,635,002	0.17%
14	Oct-10	($5,772)	$2,894,018	($359,519)	$119,378,840	-0.30%
15	Nov-10	$687	($344,486)	$42,795	$143,869,308	0.03%
16	Dec-10	$2,873	($1,440,602)	$178,964	$169,746,936	0.11%
17	Jan-11	($2,112)	$1,059,070	($131,567)	$145,121,019	-0.09%
18	Feb-11	($710)	$355,956	($44,220)	$131,859,079	-0.03%
19	Mar-11	($3,060)	$1,534,384	($190,614)	$122,667,982	-0.16%
20	Apr-11	($10,358)	$5,193,143	($645,136)	$101,196,629	-0.64%
21	May-11	($15,247)	$7,644,276	($949,636)	$84,049,260	-1.13%
22	Jun-11	($16,391)	$8,217,509	($1,020,848)	$68,628,877	-1.49%
23	Jul-11	($9,925)	$4,975,831	($618,139)	$99,288,197	-0.62%
24	Aug-11	($5,067)	$2,540,179	($315,562)	$116,373,573	-0.27%
25	Sep-11	($2,766)	$1,386,559	($172,250)	$115,944,060	-0.15%