

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

<b>In the Matter of the Application of Ormet</b>	)	
<b>Primary Aluminum Corporation for</b>	)	
<b>Approval of a Unique Arrangement with</b>	)	<b>Case No. 09-119-EL-AEC</b>
<b>Ohio Power Company</b>	)	

**MOTION TO AMEND THE 2009 UNIQUE ARRANGEMENT BETWEEN OHIO  
POWER COMPANY AND ORMET PRIMARY ALUMINUM CORPORATION  
AND REQUEST FOR EMERGENCY RELIEF**

**Introduction**

Pursuant to Sections 4905.31 and 4909.16 of the Ohio Revised Code and Sections 4901-1-12 and 4901:1-38-05 of the Ohio Administrative Code, Ormet Primary Aluminum Corporation (“Ormet”) respectfully moves this Commission to amend its Unique Arrangement<sup>1</sup> with the Ohio Power Company (“Ohio Power”) approved on July 15, 2009. The motion asks for both emergency and non-emergency relief. Ormet, the largest employer in Monroe County, requests the Commission to find an emergency exists pursuant to Section 4909.16, Revised Code due to the need for the Commission to amend the Opinion and Orders in the matter at bar in order to permit Ormet to come out of bankruptcy as a going concern, and to do so within the time allotted by the purchase agreement approved by the Bankruptcy Court. Failure to meet the conditions of the bankruptcy court<sup>2</sup> approved purchase agreement will result in the shut down of the Ormet facility, including its Ohio operation.

Ormet seeks four amendments to the Commission approved Unique Arrangement in the form of emergency relief. The first amendment requests that the duration of the Unique

---

<sup>1</sup> Issued pursuant to Section 4905.31, Revised Code in the matter at bar

<sup>2</sup> In re: Ormet Corporation et. al., pending in the United States Bankruptcy Court for the District of Delaware, jointly administered Case No. 13-10334 (MFW)

Arrangement be shortened by three years so that the Unique Arrangement would terminate in December of 2015 instead of December of 2018. The second requested amendment is to advance by three years the payment of the remaining \$92.5 million dollars<sup>3</sup> in economic development discounts<sup>4</sup>. Thus, while the amount of the total discount would remain the same as currently authorized, the last monthly installments would be fully received by December 2014 instead of December 2017. The third requested emergency amendment complements existing policy and the transition to choice by removing the prohibition for Ormet to purchase power from a third party contained in the Unique Arrangement commencing with the January 2014 billing cycle. Finally, as part of its emergency relief, Ormet requests that the price per MWh for the generation component of the standard service electricity purchased by Ormet during 2013 be fixed at \$45.89 per MWh<sup>5</sup>. The \$45.89, plus additional riders per MWh tariff rate (for a total rate of approximately \$58.00 per MWh) was the weighted average price billed to Ormet by Ohio Power during the first quarter of 2013. In the emergency order, Ormet requests that the Commission affirm the assignment by Ormet of its interest in the Amended Unique Arrangement to Smelter Acquisition LLC under Section 13.04 of the current arrangement.

On a non-emergency basis, Ormet petitions the Commission to make certain other modifications to the Unique Arrangement intended to ensure sustainable expanded and continued long-term operations at the Ormet Hannibal, Ohio facility. These requested non-emergency amendments will provide a competitive, stable power supply cost and complement the significant restructuring actions supporting long-term sustainable operations and positioning Ormet to increase the number of full time employees during the transition period while Ormet is

---

<sup>3</sup> Amount calculated as of the close of the May billing cycle.

<sup>4</sup> The discounts would continue to be applied monthly averaging \$5.5 million per month in 2013 and \$4.5 million per month in 2014

<sup>5</sup> Rate including FAC and AER, but excluding all other riders and before discounts are applied.

constructing an onsite gas-fired generating plant scheduled for completion in 2015 – assuming Ormet emerges from bankruptcy.

Since the approval of the Unique Arrangement by the Commission, the combination of rising tariff rates and falling world market aluminum prices forced Ormet to file for bankruptcy under Chapter 11 of the Bankruptcy Code on February 25, 2013. Ormet has worked aggressively to develop and implement a plan to emerge from bankruptcy and to support continued and long-term operation of the Hannibal, Ohio Smelter. The Hannibal Facility has reduced its operating costs by approximately \$30 million per year by improving power consumption, cell life and carbon usage. In addition, agreements reached with the United Steel Workers Union and Wayzata Investment Partners, LLC (“Wayzata”), the term debt holder, will substantially reduce cash costs by approximately \$278 million over the next five to seven years related to the elimination of contributions to defined benefit pensions, a reduction in contributions to the Voluntary Employee Benefit (VEBA) Trust which supports retiree health care costs and a reduction in long-term debt. Equally important, Ormet’s major lender, Wayzata has made significant additional investments in Ormet to keep it a going concern including providing the liquidity during bankruptcy and having a Wayzata controlled acquisition company execute an asset purchase agreement (“APA”) which would exchange a significant amount of debt for equity. The APA which was approved by the bankruptcy court on June 4, 2013, keeps Ormet a going concern. Closing of the APA and Ormet’s emergence from bankruptcy, however, is conditioned on approval by the Public Utilities Commission of Ohio of modifications to the Unique Arrangement which provide for affordable power rates. The APA can be terminated by the Buyer if the closing has not occurred by July 31, 2013<sup>6</sup>. If the emergency relief is not

---

<sup>6</sup> Extensions may be requested of the July 31, 2013 deadline, but there is no requirement that an extension be granted, or granted for an amount of time beyond July 31, 2013 sufficient to conclude Commission proceedings.

approved and the transactions are not consummated, Wayzata is under no obligation to continue to provide the required liquidity to maintain operation. Thus, continued employment of in excess of 750 direct employees, thousands of indirect employees and millions of dollars paid to local and state government will be lost if Ormet does not come out bankruptcy by July 31, 2013.

As of the time of this motion, the primary gating issue that would prevent Ormet from coming out of bankruptcy is the modification to the Unique Arrangement needed to provide Ormet with purchased power at regionally competitive power prices. Approval of the request specified in this motion are essential in completing the successful restructuring of the Ormet business.

Attached as Exhibit A is the economic study conducted by Professor Paul Coomes as to the financial impact of Ormet on the local economy. Attached as Exhibit B is an Affidavit by James Burns Riley, Ormet Corp.'s Chief Financial Officer, verifying the facts presented in this motion. Attached as Exhibit C is the New York Power Authority Agreement for the Sale of Firm and Interruptible Power and Energy to Alcoa Inc. and the December 6, 2012 Administrator's record of decision regarding the Bonneville Power Administration Power Sales Agreement offer to Alcoa Inc.

### **Ormet Background**

1. Ormet owns and operates an aluminum reduction facility (the "Hannibal Facility"), which encompasses 256 acres and is located on the Ohio River in Hannibal, Ohio. The Hannibal Facility consists of six pot lines. The Hannibal Facility is the second largest aluminum smelter in

---

Further, the Buyer is not required to fund any additional monies until after the closing has occurred in the APA. So even if the deadline date was extended, Ormet's need for credit and liquidity to conduct business without additional funding from the Buyer would result in a closing of the Hannibal, Ohio facility in a matter of months.

the United States, with the capability of producing approximately 271,000 metric tons of molten aluminum annually. (*See* Affidavit of James Burns Riley (hereinafter Exhibit B at ¶ 2).

2. Currently, the Ormet facility is running only four pot lines due to the combination of lower world prices for aluminum and the increase in the GS-4 Tariff rate. (*See* Affidavit of James Burns Riley (hereinafter Exhibit B at ¶ 21).

3. When the Hannibal Facility is operating at capacity, Ormet employs approximately 1,000 people with wages and salaries totaling approximately \$66 million per year. Ormet provides health care benefits for its Hannibal employees and families which contribute another \$15 million annually into the region. Ormet also pays approximately \$1.6 million annually in local taxes and state taxes and supports approximately 2,000 jobs indirectly. (*See* Exhibit B at ¶ 4).

4. The total impact of Ormet on the local community is approximately \$238 million per year. This figure of economic impact comes from the 2011 economic study prepared by Professor Paul Coomes and is attached as Exhibit A. (*See also* Exhibit B, ¶ 4).

5. Monroe County, Ohio, the location of the Hannibal Facility, where Ormet's contribution as an employer, taxpayer, and purchaser of goods and services is most directly felt, is an economically depressed area with an unemployment rate of 9.7 percent as of April 2013, substantially higher than the 6.7 percent average for Ohio. Should Ormet close the Hannibal Facility, the Monroe County unemployment rate would be expected to rise significantly. (*See* Exhibit B, ¶ 3).

6. Ormet is the largest customer on the Ohio Power Company system. (*See* Exhibit B at ¶ 6). When fully operational, the Hannibal Facility utilizes up to 540 MW of electricity 24 hours per day, 365 days per year.

7. Electricity is a raw material in the aluminum industry. When reasonably priced electricity is available, the cost represents approximately 30 to 35 percent of the cost of producing aluminum. (See Exhibit B at ¶ 5).

8. Working in a collaborative manner, Ormet has successfully restructured significant legacy costs that will complement the financial viability of the ongoing operations. For example, the Hannibal Facility has reduced its non-energy operation costs by approximately \$30 million a year over its historical best performance by improving power consumption, cell life carbon usage and other noncapital improvements. Further, agreements reached with the United Steel Workers union and debt holders will reduce cash costs by approximately \$278 million over the next five to seven years related to the elimination of contributions to defined benefit pensions an 82% reduction in contributions to the VEBA Trust which supports retiree health care costs and a 54% reduction in long term debt (See Exhibit B at ¶ 8).

### **The Unique Arrangement**

9. In its July 15, 2009 Opinion and Order and its September 15, 2009 Entry on Rehearing, the Commission approved the Unique Arrangement. The Unique Arrangement was designed to help keep Ormet's Hannibal Facility operational. (See Exhibit B. at ¶ 9).

10. Pursuant to the Unique Arrangement, Ormet received discounts off the Ohio Power Tariff Rate for its purchased electricity. The discounts were calculated off of the Ohio Power Tariff Rate GS-4.<sup>7</sup> Thus, if the Tariff Rate increased, while Ormet would still receive a discount, its rate would increase dollar-for-dollar with any Ohio Power Tariff Rate increase. Moreover, the maximum discount has declined from \$60 million per year in calendar years 2010 and 2011, to

---

<sup>7</sup> One half of the Ormet load was in the Ohio Power zone and one half in the Columbus Southern zone.

\$54 million in calendar year 2012, and is scheduled to decline by \$10 million per year thereafter (See Exhibit B at ¶ 10-11).

11. Under the existing Unique Arrangement, Ormet may take discounts for each of the calendar years 2013-18 of some \$44 million, \$34 million, \$24 million, \$14 million, \$4 million and \$0, respectively. As of the close of the May billing cycle some \$92.5 million in discounts remained. (See Exhibit B at ¶ 14-15).

12. Aluminum smelters are not ordinary electricity customers. An aluminum smelter's consumption of power does not change with the seasons such as space heating and cooling load, nor is it tied to normal business hours. Aluminum smelters consume power more or less uniformly twenty four hours a day, seven days a week, and 365 days a year. Thus, even industrial tariff rates such as Ohio Power's GS-4 do not match the load factors of aluminum smelters and thus overstate the true cost of service for such constant load facilities. The unique load factor was part of the basis for the Unique Arrangement which designed rates pursuant to Ohio Administrative Code Section 4901:1-38-05. Similarly, other state commissions have provided special rates for aluminum smelters. For example, the New York Power Authority Trustees approved a thirty-year power supply contract with Alcoa, an aluminum smelter, to ensure the maintenance of New York jobs. In addition, the Bonneville Power Administration has signed a power sales agreement with Alcoa, Inc. to provide power service to Alcoa's Intalco Plant in Ferndale, Washington, as noted by the attached December 6, 2012 Administrator's Record of Decision. See Exhibit C (See Exhibit B at ¶ 16).

13. It is the policy of the State of Ohio to, among other things, enhance Ohio companies' ability to compete globally. Section 4928.02 of the Revised Code states, *inter alia*, that it is the policy of the State to (1) "ensure the availability to consumers of adequate, reliable, safe,

efficient, nondiscriminatory, and reasonably priced retail electric service”; (2) “ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs”; and (3) “facilitate the state’s effectiveness in the global economy.”<sup>8</sup>

14. Providing Ormet access to reasonably priced electricity accomplishes all of these State policies by ensuring Ormet’s access to reasonably priced retail electric service, strengthening Ormet’s ability to compete in a global economy, providing access to good jobs, wages and benefits to Ohio citizens, strengthening the local economy in Monroe County and the State-wide economy of Ohio, attracting businesses to Ohio by demonstrating to them that the State will support their unique business needs, and attracting out-of-state money into the Ohio economy (as most of Ormet’s customers are located out of state and out of the country). All of these impacts help Ohio businesses and citizens to compete in a global economy.

### **Ormet Bankruptcy**

15. The GS-4 tariff rate to Ormet including all riders and before the discounts were applied was \$39.66 per MWh in 2009. That same rate increased to an average of \$57.99 per MWh by first quarter of 2013. That is an increase of approximately forty-six percent (46%) in just a four year period. At full operating levels, this increase in the GS-4 rate over just four years amounts to an increase of approximately \$79 million per year for the Hannibal Facility. (See Exhibit B at ¶ 19).

16. Based upon the information received from Wayzata, the market price of electricity is now substantially below that of Ormet’s price under the Ohio Power GS-4 standard service offer

---

<sup>8</sup> Ohio Rev. Code § 4928.02 (A), (B), and (N).



and the future effective cost of the standard service rate is not quantifiable. (See Exhibit B at ¶ 12).

17. In a Section 363 bankruptcy sale, the assets of the applicant are sold to the highest and otherwise best bidder. The APA represents the only offer for Ormet as a going concern. The Bankruptcy Court approved the sale on June 4, 2013 and found that the only buyer who made an offer after Ormet exposed the assets to the market was Smelter Acquisition LLC, a Wayzata controlled entity, and the only alternative to the sale is a shut down. If the sale of the assets as contemplated in the APA is not completed, Ormet will not be a going concern and the facility will be shut down. Therefore, it is necessary to modify the existing Unique Arrangement to permit the emerging company to be economically viable. If the Ormet facility is shut down the effect would be to nullify the existing Unique Arrangement, including the payback of the deferrals, loss of the Collective Bargaining Agreement and elimination of all employment at Ormet.

18. The APA provides that the Buyer will assume the collective bargaining agreement. When both the emergency and non-emergency relief is granted the Buyer will not only be able to maintain the current minimum employment obligation of 650 full time employees, but also the two incremental pot lines are returned to service employment would expand to 1,000 full time employees.

### **Proposed Amendments**

19. In order to achieve the goals of permitting Ormet to emerge from bankruptcy, to obtain affordable power until Ormet can complete construction of its gas-fired generating plant scheduled for operation in 2015, and to expand operations back to full capacity which supports

more than 1,000 direct jobs, the proposed modifications to the existing Unique Arrangement consists of the following provisions:

**20. Emergency Relief**

**a. Amendment to the Term of the Unique Arrangement:**

Shorten the term of the Unique Arrangement from December 31, 2018 to December 31, 2015.

**b. Amendment to the rate charged Ormet for power to support its current four line operation for the year 2013:**

Commencing with approval of this motion, Ormet, in lieu of paying the AEP Ohio rate GS-4 (all riders including the Fuel Adjustment clause) minus discounts, shall pay a fixed rate per MWh for the balance of calendar year 2013 that will result in an average fixed fee of \$45.89/per MWh for the entire calendar year 2013 plus payment of Riders PIRR, RSR, TURR, TCRR, ESRR, USF, DIR, EE/PDR, EDR, GridSMART, DARR and the tariff distribution fees minus the discounts. In order to achieve an average fixed fee of \$45.89 per MWh for the entire calendar year of 2013, the fixed rate per MWh paid during the second portion of 2013 may be less than \$45.89 per MWh to offset higher payments earlier in the year.

**c. Amendment to permit Ormet to purchase power at market rates to support its current four line operations as of January 1, 2014:**

Effective January 1, 2014, in accordance with existing policy, Ormet shall be permitted to transition to choice and purchase up to its full power requirement for the four pot lines from a competitive retail electric service provider at market rates pursuant to the Commission's rules governing retail power purchases.

**d. Amendment to the discount applicable to Ormet to support its current four line operation:**

Maintain the current monthly average discount of five million five hundred thousand per month in calendar year 2013 including if necessary adjustments so that for calendar year 2013 the monthly discounts do not exceed or fall below sixty six million dollars for the calendar year. For the period of calendar year 2014, Ormet's monthly discount shall be reduced to four million five hundred

thousand dollars per month.

**e. The affirmation of the assignment of the Unique Arrangement:**

The Commission is requested to affirm the assignment by Ormet of its interest in the Amended Unique Arrangement to Smelter Acquisition LLC under Section 13.04 of the current arrangement.

**21. Non-Emergency Relief**

**a. Amendment to the discount applicable to Ormet to support its current four line operation:**

For the first five months of 2015, Ormet shall continue to receive a monthly discount of four million five hundred thousand dollars.

**b. Amendment to provide for incremental power purchases by Ormet:**

Permit Ormet to reopen the remaining two pot lines, which is anticipated to be no earlier than July 1, 2014 and not to exceed 160 MW of capacity. Should Ormet elect to reopen one or both of the idled pot lines, Ormet shall be permitted to purchase up to its full power requirement for the incremental pot lines from a competitive retail electric service provider at market rates. To support the operations of the incremental lines, Ormet will increase its minimum employment to 1,000 once the two incremental pot lines are fully restarted. Ormet shall receive a shopping credit of \$9/MWh through May 31, 2015 on the additional 160 MW.

**c. Amendment clarifying repayment of the deferral:**

Ormet shall repay the amount billed to Ormet for October and November 2012 which was deferred starting January 2014 and continuing through December 2015. Payment shall be in equal monthly installments equal to  $1/24^{\text{th}}$  (or 4.1667%) of the cumulative amount of those two deferred invoices.

**d. Amendment to the target price for the payment of premiums by Ormet:**

The target price for aluminum based on the London Metals Exchange which would trigger a premium payment by Ormet shall be lowered to the target prices of \$2650/metric ton for 2013 and \$2490/metric ton for 2014 and the first five months of 2015, from the current 2013 target price of \$2805/metric ton.

**e. Amendment to provide that Ormet will demonstrate sustainable power pricing after 2015:**

Ormet shall submit to the Commission a business plan which demonstrates a sustainable energy price post 2015 from a newly constructed on site power plant which achieves power prices per MWh which will support the ongoing operation of Hannibal Facility. The plan will be submitted under seal to the Commission no later than 30 days following the filing of the Application.

**f. Amendment to provide for Ormet to submit a detailed construction plan:**

As soon as practical following the filing of the business plan, Ormet shall provide the Commission with more detailed information, including specific milestones, for construction of the power plant including pricing projections which confirm that Ormet's power prices will be sustainable without further incentives.

**g. Amendment to provide for backup power for up to a seven month delay in the construction of an Ormet power plant:**

Due to weather, regulatory, financial or other factors outside the control of Ormet, the proposed power plant may not be in full operation on May 31, 2015. If construction of the power plant extends past June 1, 2015, Ormet shall be permitted to purchase up to its full 540 MW power requirement from a competitive retail electric service provider at market rates. To bridge the gap between June 1, 2015 and December 31, 2015, Ormet shall receive a shopping credit of \$6/MWh. Such shopping credit shall terminate the earlier of when the Ormet generation plant is placed into full service or December 31, 2015.

**Need and Cost of The Requested Relief**

22. The benefit to the community of Ormet receiving the Emergency Relief is that it will permit Ormet to emerge from bankruptcy as a going concern. As a going concern, Ormet will maintain the current employment, maintain the payment of property and other local taxes, and

preserve the economic multiplier effect of Ormet on the local economy as documented in Exhibit A.

23. The increase in the economic development rider payments by AEP Ohio customers for Ormet's requested emergency relief should be a modest \$3.5 million. Four of five of the requested emergency relief items: 1) terminating the Unique Arrangement three years early; 2) advancement of the previously authorized economic development discounts by three years; 3) lifting of the prohibition of shopping; and 4) the requested affirmation by the Commission of the assignment by Ormet of its interest in the Amended Unique Arrangement to Smelter Acquisition LLC under Section 13.04 of the current arrangement should have no effect on the economic development rider obligation of retail customers of AEP Ohio. The fifth item, rate certainty during the remainder of 2013 for Ormet by freezing the generation cost per MWh of power to Ormet throughout 2013 at a rate equal to the first quarter price of \$45.89 per MWh is estimated to add an additional \$3.5 million in discounts to Ormet (*See Exhibit B at ¶ 17*).

24. The Commission is not necessarily required to hold a prior hearing in order to determine if an emergency exists and/or grant emergency relief. Given the deadline of July 31 to close on the APA and the need for additional capital shortly thereafter, a hearing prior to the grant of relief could lead to a substantial delay, causing the exact injury which Section 4909.16, Revised Code seeks to avoid. Duff v. Pub. Util. Comm. (1978), 56 Ohio St. 2d 367, 10 Ohio Op. 3d 493, 384 N.E. 2d 264.

25. Ormet has requested seven non-emergency amendments (see paragraph 21 above). The benefits of these seven items are that they will make Ormet viable for the long run by permitting Ormet reopen pot lines 5 and 6 which had been shut down due to the combination of high power prices under the Unique Arrangement and low world metal prices. That would

increase full time employment at the Hannibal facility up to 1,000 employees. In addition, the non-emergency amendments are needed to permit Ormet to transition to an onsite gas fired power plant. The plant would be constructed during the remaining term of the Unique Arrangement and create additional construction jobs to build the plant as well full time employment to maintenance and operate the power plant.

26. If the Commission grants the non-emergency relief, Ormet agrees that as soon as both incremental pot lines come on line it shall increase the minimum employment level required by the Unique Arrangement from 650 to 1,000 full time employees.

27. If the Commission grants the non-emergency relief, Ormet agrees that it will actively pursue the construction of an on-site gas fired power plant sufficient to meet its long-term capacity and energy needs including application for construction, siting and transmission permits and determination of sources of financing. Also, Ormet will document to the Commission the major actions taken to complete a power plant on site by 2015 including permit filings, financing status, equipment purchases and retention of necessary environmental and engineering consultants.

28. An additional benefit of the non-emergency relief is Ormet's reduction in the trigger for the payment of premiums now called for in the Unique Arrangement. The triggers are being reduced on a dollar per ton basis (see paragraph 22 above). While it is not certain that metal prices will cross the lower trigger prices, a reduction in the trigger will increase the probability that premium payments from Ormet may one day be available to reduce the economic development rider obligation of retail customers. (*See Exhibit B at ¶ 26*).

29. The cost of the non-emergency relief for transition year 2015 shall consist of an estimated \$28.1 million dollars if the power plant is built on time and an estimated \$2.2 million


per month for each month the power plant is delayed after June 1, 2015. Ormet would be at full risk if the power plant was delayed more than 7 months. (*See* Exhibit B at ¶ 27).

30. The earliest Ormet could reopen pot lines 5 and 6 is July 2014. In order to open the pot lines a power shopping credit of \$9/MWh would be required, which is estimated to be \$12.4 million for the period July 2014 through May 2015. The reopening of pot lines 5 and 6 would permit Ormet to increase its pledged minimum Ohio employment to 1,000 full time employees. *See* Exhibit B at ¶ 28).

31. Ormet requests that the non-emergency relief be heard on an expedited basis to provide certainty to Ormet as to the ability to reopen the pot lines 5 and 6 by July of 2014 and proceed with construction of the power plant.

**WHEREFORE**, Ormet respectfully request the Commission to grant both the emergency and the non-emergency relief requested in this motion.

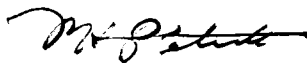
Respectfully submitted,

  
\_\_\_\_\_  
M. Howard Petricoff  
Stephen M. Howard  
Vorys, Sater, Seymour and Pease LLP  
52 E. Gay Street  
Columbus, OH 43215  
614-464-5414  
mhpetricoff@vorys.com  
smhoward@vorys.com

*Attorneys for Ormet Primary Aluminum Corporation*

### CERTIFICATE OF SERVICE

The undersigned certifies that a copy of the foregoing document has been served upon the persons below via electronic mail this 14<sup>th</sup> day of June, 2013.



---

M. Howard Petricoff

Thomas.McNamee@puc.state.oh.us  
stnourse@aep.com  
myurick@taftlaw.com  
mwhite@taftlaw.com  
dboehm@bkllawfirm.com  
mkurtz@bkllawfirm.com  
grady@occ.state.oh.us  
cvince@sonnenschein.com  
ehand@sonnenschein.com  
dbonner@sonnenschein.com  
dbarnowski@sonnenschein.com  
sam@mwncmh.com  
tiswo@bricker.com  
Gregory.price@puc.state.oh.us



## **EXHIBIT A**

**The Estimated Economic and Fiscal Impacts  
of the Ormet Aluminum Smelter Operation in Hannibal, Ohio**

by  
Paul A. Coomes, Ph.D.  
Consulting Economist

a research report for  
The Ormet Corporation

July 30, 2011

**EXECUTIVE SUMMARY**

Ormet Corporation, headquartered in Hannibal Ohio, is a major producer of primary aluminum in the United States. The operation is on the Ohio River at the southeastern edge of the state, across the border from West Virginia. It currently employs around 1,000 people and pays wages and salaries annually of about \$63 million. Employees live in eighteen counties in three states, of which sixty percent reside in Ohio. Activity at Hannibal has ebbed and flowed over the past decade, reflecting changing conditions in the international market for aluminum.

The Ormet Corporation is interested in learning about and documenting the regional economic importance of its operations, so they can better communicate the ramifications of rising electricity costs should prices reach a threshold such that the smelting operations were financially threatened. The purpose of this report is to document and communicate the regional economic and fiscal importance of this aluminum plant.

I have used regional data and industry-specific multipliers to estimate the economic and fiscal impacts of the operation. These estimates can be used to quantify the likely impact were the plant closed due to low aluminum prices or high electricity prices. I estimate that the total net annual impact in the region is 3,117 jobs and \$238 million in total employee compensation. State and local governments in Ohio would lose about \$9 million annually in tax revenues. These estimates are for the economic and fiscal categories most easily quantified. There are other impacts, though they are harder to measure with any precision. Local real estate and retail markets are linked to the payrolls at the smelter. Social indicators, like unemployment and crime, also are related to the plant's employment levels, as are public costs for unemployment benefits, retraining, and social services.

## BACKGROUND

Aluminum is made from alumina, or aluminum oxide, essentially by passing enormous electric current through steel 'pots' containing a cryolite-alumina mixture. This process is often called reduction, because the electrolysis process separates alumina into its elements, one of which is the aluminum metal. The process is also called smelting. The molten aluminum is siphoned off the pots and formed into crucibles, which when cooled become the familiar ingots traded on the international metals market<sup>1</sup>. Alumina is made from bauxite, most of which is obtained from Australia, Brazil, Guinea, and Jamaica. Ormet has an alumina production facility in Louisiana. Because of the extremely large electricity requirements, most aluminum smelting is done near sources of inexpensive electricity, such as hydroelectric plants. Moreover, since the least cost method of shipping alumina and aluminum is by barge, smelters are often located on major rivers such as the Ohio.

The Ormet smelter is among the largest private sector employers in the regional economy, and clearly the largest industrial employer in Monroe County. The Ohio Department of Development produces statistical profiles for each county<sup>2</sup>. It shows the top employers in Monroe County to be:

Monroe County Government  
Ormet Corporation  
Riesbeck Food Markets  
Safe Auto Insurance Group  
Slay Transportation Company  
Switzerland of Ohio Local Board of Education  
Extendicare/Woodsfield Nursing Center

The government, grocery, insurance, school and nursing home organizations exist to serve the local market, and hence do not bring in new dollars to the regional economy. Ormet and Slay Transportation are apparently the only two major employers in the County that generate dollars there, through their sales of goods and services to the rest of the world.

Moreover, federal data reveal that \$52.1 million of the County's \$118.0 million in total wages and salaries for 2010 are attributed to the manufacturing industry, of which Ormet is essentially the only firm<sup>3</sup>. With the average pay of \$61,000, no other place of work in the County comes close to this employment opportunity. Moreover, employee benefits are very lucrative. The company reports that its contributions to the social

---

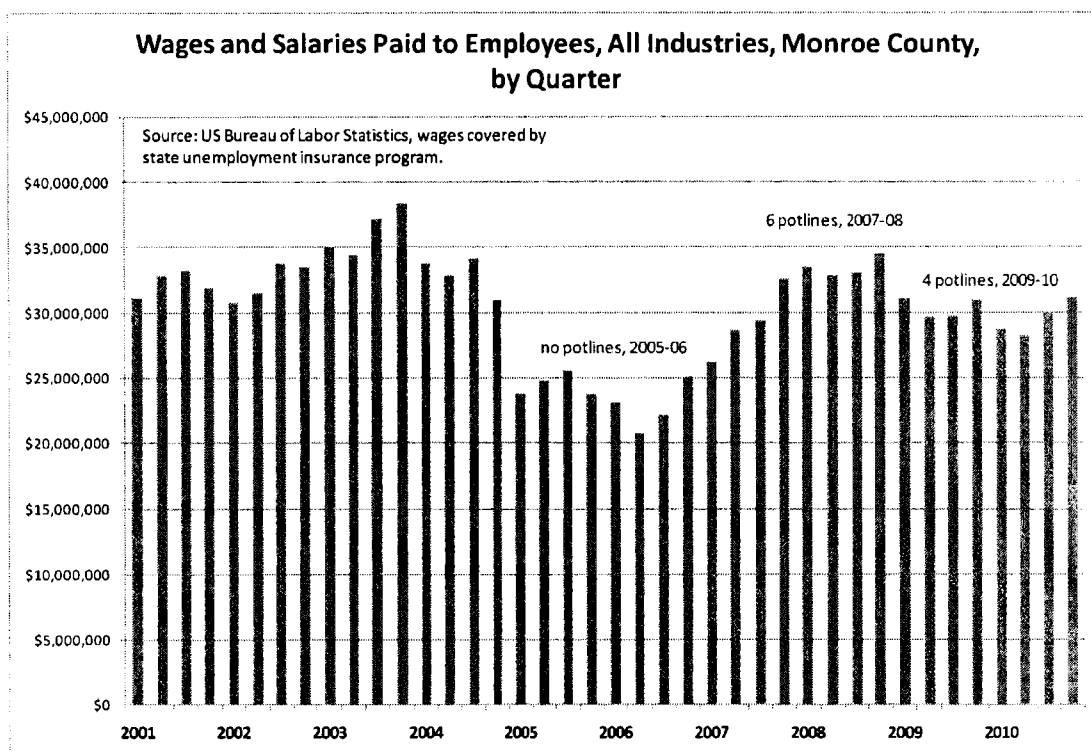
<sup>1</sup> See <http://mii.org/Minerals/photoal.html> for a simple explanation of the production process.

<sup>2</sup> See [www.monroecountyohio.net/Cost%20of%20Business.html](http://www.monroecountyohio.net/Cost%20of%20Business.html).

<sup>3</sup> See US Bureau of Labor Statistics, Quarterly Census of Employment and Wages program [www.bls.gov/data/](http://www.bls.gov/data/).

security and Medicare programs for its employees, plus the value of retirement, health insurance, and other fringe benefits is almost as large as the base wages and salaries.

We can also now discern in published county-level economic data the effects of activity at the Ormet facility over the last decade. Indeed the total payroll in the County seems to ebb and flow with activity at the smelter. See chart below. The company emerged from bankruptcy in April 2005, but the Hannibal smelter lines had been operating well below capacity for two years prior. The facility was essentially idle from 2005 until late 2006, when it was restarted to take advantage of rising aluminum prices. BLS data show that wage and salary payments by all employers in Monroe County fell about 9 percent in 2004, another 26 percent in 2005, and a further 7 percent in 2006. County payrolls bounced back in 2007 after the smelter was brought back into full production. The smelter operated at full capacity in 2007 and 2008, and at partial capacity in 2009 and 2010, and the pattern carries over to the Monroe County payroll totals shown in the chart. All six potlines were back in production beginning in February 2011, so publicly available data on County payroll will show an uptick when it is released over the next year. Clearly, the local economy is very sensitive to production activity at Ormet.

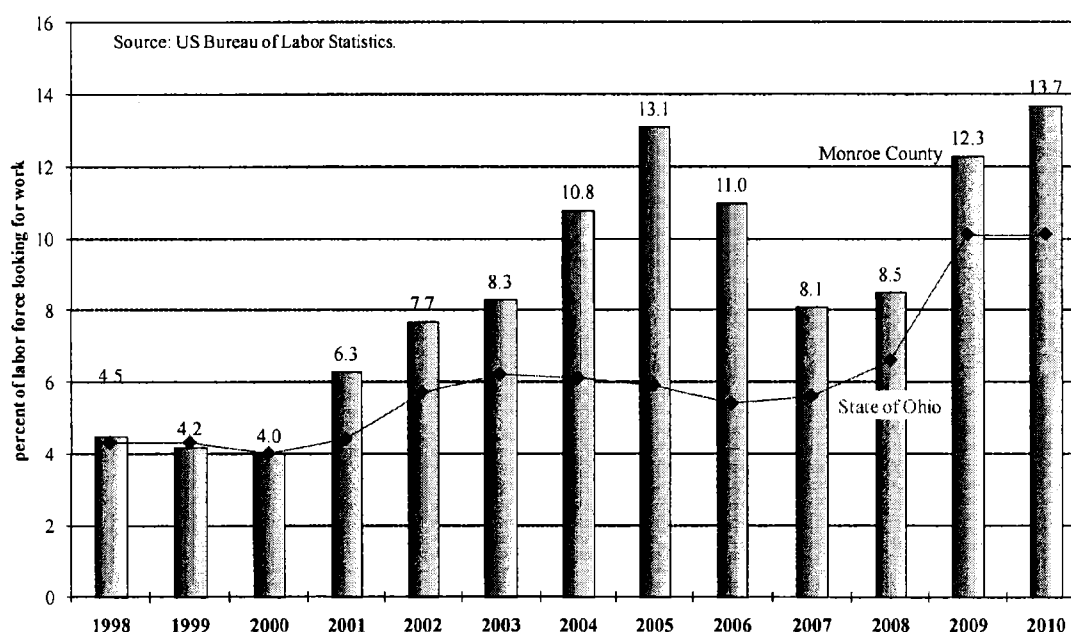


The effect of losing a large employer, particularly in a lightly populated county, goes far beyond the loss of payrolls. Often the company is the primary force in the local housing market, the largest contributor of property taxes to the local school system, the largest contributor of health care benefits and therefore the largest indirect customer of the

local hospital, and the largest contributor of dollars and time to local charities. Moreover, when a large plant closes, not only do public revenues fall but public costs go up. Other statewide employers and employees must contribute to pay for the unemployment benefits to laid off workers, increased Medicaid costs as families lose income and health insurance coverage, and overall increased social services costs. Crime rates tend to rise with unemployment, as do alcohol and drug addiction. Local community and technical colleges see enrollments surge as laid off workers try to retrain. And major community investments must be made in economic development efforts to replace the lost engines.

The linkage between smelter closures and local unemployment is clear from the public data on Monroe County. In the next chart I provide the official estimates of unemployment rates in Monroe and for the state of Ohio as a whole. The state of Ohio tracks the national unemployment rate fairly closely, and one can see the effects of the 2001-02 recession, with Ohio's unemployment rate rising from four to six percent, before falling in 2005. The 2007-09 recession was more severe in Ohio, with the unemployment rate jumping above 10 percent the last two years. Monroe County's rate has been consistently higher than the state average over the last decade. However, the pattern of unemployment in the County tends to follow activity at the aluminum smelter, rising when the smelter was idled during the 2004-06 period, falling in 2007-08 after the plant was back in full production, then rising again when production was limited to four potlines in 2009-10. Monroe's rate is likely to fall in 2011, now that the smelter is fully operating again. Preliminary monthly data for 2011 show a decline in the County unemployment rate of 3-4 percent compared to 2010.

**Estimated Unemployment Rates  
Monroe County and State of Ohio**



## METHODOLOGY

Because the aluminum and related manufacturing operations serve primarily national and international markets, they bring new dollars into the regional economy. In this sense, a shut-down of the smelter would have large and predictable negative economic and fiscal impacts in these Ohio and West Virginia counties. The activity supports thousands of jobs and millions of dollars in payrolls, and ultimately large tax revenues for Ohio and West Virginia state and local governments. In this section, I explain how I defined the regional economic footprint for purposes of this impact study, and discuss in some detail the input-output model and tax rate calculations used to measure the regional impacts.

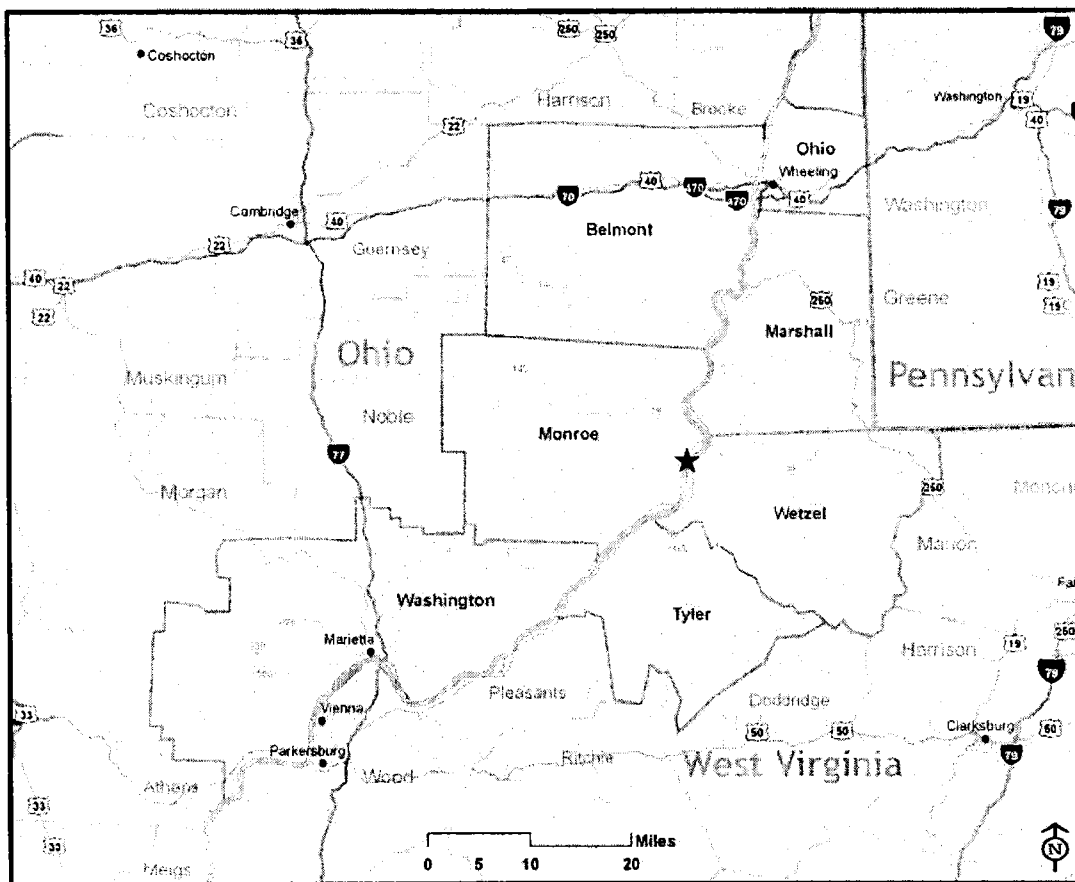
### The Regional Economy

While Monroe County is the site for the aluminum plant, the economic and fiscal impacts permeate a much larger region. I define the impact region based on the geographic footprint of the workforce. Workers commute in to the aluminum plant, and take their paychecks to their home county, where they pay for housing and many retail and personal services. Ormet provided a breakdown of employment by county of residence for a pay period, as shown in the accompanying table. Workers reside in eighteen counties in three states. Note however that 96 percent of employees reside in the top seven counties, those nearest to Monroe County. Three of these counties are in Ohio and four are in West Virginia. Interestingly, almost as many workers live in West Virginia (427) as in Ohio (598).

The map on the next page shows the regional counties, major cities, road and water features in the economic impact area. The counties shaded yellow are the top places of residence for Ormet employees, and these are the ones we use to investigate impacts. The red star denotes the approximate location of the Ormet plant and Hannibal, Ohio.

The 2010 Census reveals that that region has been losing population. All counties in the region except Belmont lost residents the last decade, while the states of Ohio and West Virginia added residents. Overall, the seven-county region lost 8,700 people, a decline of 3.4 percent. Monroe County, site of the Ormet aluminum smelter and home

Ormet Hannibal Reduction Plant County of Residence of Employees			
County	State	Number	
Monroe	OH	337	
Wetzel	WV	226	
Belmont	OH	162	
Washington	OH	87	
Marshall	WV	75	
Tyler	WV	68	
Ohio	WV	33	
Pleasants	WV	10	
Wood	WV	8	
Guernsey	OH	6	
Jefferson	OH	3	
Harrison	OH	2	
Brooke	WV	2	
Jackson	WV	2	
Ritchie	WV	2	
Washington	PA	2	
Noble	OH	1	
Harrison	WV	1	
Total		1,027	



to one-third of the Ormet employees, has about 500 less residents now than at the beginning of the decade, a decline of 3.5 percent.

I have also organized some aggregate economic indicators on the counties in the region. Estimates for the last five year period available are shown in the next table. Clearly, the idling of the Ormet facility during part of the decade had a major effect on jobs and payroll in the region. Note that Monroe County suffered by far the greatest job loss, and was the only county to have less wages and salaries in 2009 than in 2001. Moreover, Monroe County had almost no growth in average pay per job during this period. Presumably all these indicators will improve now that the smelter is back to full production. However, it will be a year or two before there is sufficient data to measure the regional economic improvements.

**Summary Economic Indicators for 7-County Region**

	2001	2009	Growth	Growth Rate
<b>Jobs, wage and salary (excl. self-employed)</b>				
Belmont, OH	25,447	24,292	-1,155	-4.5%
Monroe, OH	4,885	3,795	-1,090	-22.3%
Washington, OH	26,242	25,493	-749	-2.9%
Marshall, WV	11,686	11,379	-307	-2.6%
Ohio, WV	30,236	31,960	1,724	5.7%
Tyler, WV	2,551	2,322	-229	-9.0%
Wetzel, WV	4,910	4,546	-364	-7.4%
Total, 7-County Region	105,957	103,787	-2,170	-2.0%
<b>Jobs, manufacturing industries</b>				
Belmont, OH	1,641	1,112	-529	-32.2%
Monroe, OH	2,104	1,154	-950	-45.2%
Washington, OH	5,130	3,652	-1,478	-28.8%
Marshall, WV	2,297	1,423	-874	-38.0%
Ohio, WV	1,419	1,453	34	2.4%
Tyler, WV	875	631	-244	-27.9%
Wetzel, WV	130	109	-21	-16.2%
Total, 7-County Region	13,596	9,534	-4,062	-29.9%
<b>Total wages and salaries paid</b>				
Belmont, OH	\$593,018,000	\$770,843,000	177,825,000	30.0%
Monroe, OH	\$142,513,000	\$132,754,000	-9,759,000	-6.8%
Washington, OH	\$777,097,000	\$940,769,000	163,672,000	21.1%
Marshall, WV	\$392,524,000	\$476,473,000	83,949,000	21.4%
Ohio, WV	\$770,353,000	\$1,027,995,000	257,642,000	33.4%
Tyler, WV	\$76,531,000	\$86,396,000	9,865,000	12.9%
Wetzel, WV	\$104,732,000	\$119,413,000	14,681,000	14.0%
Total, 7-County Region	\$2,856,768,000	\$3,554,643,000	697,875,000	24.4%
<b>Average wages and salaries per job</b>				
Belmont, OH	\$23,304	\$31,732	\$4,703	20.2%
Monroe, OH	\$29,174	\$34,981	\$1,413	4.8%
Washington, OH	\$29,613	\$36,903	\$3,367	11.4%
Marshall, WV	\$33,589	\$41,873	\$3,581	10.7%
Ohio, WV	\$25,478	\$32,165	\$4,715	18.5%
Tyler, WV	\$30,000	\$37,208	\$4,674	15.6%
Wetzel, WV	\$21,330	\$26,268	\$2,587	12.1%
Total, 7-County Region	\$26,962	\$34,249	\$3,988	14.8%

Source: US Bureau of Economic Analysis; estimate for Monroe County manufacturing employment not disclosed for 2009, and value shown is for 2008.



### Input-output model of the region

I use standard regional economic impact methods to evaluate the economic and fiscal impacts of the aluminum plant. I purchased detailed economic data for the seven counties most impacted, and used them to build an IMPLAN input-output model of the region. The model is able to simulate the effects of changes in economic activity for any of 440 regional industries. It also can predict detailed inter-industry purchases and household spending related to industrial changes.

In IMPLAN the sector of interest for this study is number 172, Primary Aluminum Production. This industry is defined according to the North American Industrial Classification System (NAICS) code 331312. The official definition is as follows:

This U.S. industry comprises establishments primarily engaged in (1) making aluminum from alumina and/or (2) making aluminum from alumina and rolling, drawing, extruding, or casting the aluminum they make into primary forms (e.g., bar, billet, ingot, plate, rod, sheet, strip). Establishments in this industry may make primary aluminum or aluminum-based alloys from alumina.

[www.census.gov/epcd/naics02/def/ND331312.HTM#N331312](http://www.census.gov/epcd/naics02/def/ND331312.HTM#N331312)

Input-output models are all based on a table of estimated transactions among industries. An industry like aluminum must purchase many goods and services

#### Production Function, Primary Aluminum, Top 24 Intermediate Commodities Purchased

Commodities purchased	per million dollars of aluminum output
Aluminum products	\$232,708
Electricity, and distribution services	\$168,429
Gold, silver, and other metal ore	\$70,122
Carbon and graphite products	\$43,224
Natural gas, and distribution services	\$40,521
Truck transportation services	\$36,752
Wholesale trade distribution services	\$22,772
Nonferrous metals (except copper and aluminum)	\$17,931
Management of companies and enterprises	\$15,309
Semiconductor and related devices	\$13,572
Other industrial machinery	\$10,722
Iron and steel and ferroalloy products	\$9,742
Aluminum products from purchased aluminum	\$9,356
Rail transportation services	\$6,540
Printed circuit assemblies (electronic assemblies)	\$6,258
Machined products	\$5,255
Coated, engraved, heat treated products	\$4,682
Used and secondhand goods	\$4,626
Refined petroleum products	\$4,404
Alkalies and chlorine	\$3,525
Services to buildings and dwellings	\$3,419
Paperboard containers	\$3,308
Management, scientific, and technical consulting services	\$3,056
Specialized design services	\$2,935
subtotal	\$739,168
plus other commodities not shown	\$69,251
total intermediate purchases	\$808,419
value added by industry	\$191,581
Total value of output	\$1,000,000

Source: IMPLAN, version 3

from other industries to produce its finished product. Economists call the relationship between an output and its inputs a production function. IMPLAN's production function for primary aluminum is shown in the accompanying table, ranked by most important. The first entry, aluminum products, refers to purchased alumina. The model predicts that \$232,708 of alumina must be purchased for every \$1 million of aluminum produced. Next most important is electricity, at \$168,429, and so on. This is the foundation for the input-output model I have constructed for the Ormet seven county region. The model has information about the local availability of industrial supplies and retail spending opportunities, and makes adjustments to account for what must be imported into the region to produce aluminum and provide goods and services to the impacted households. The regional economic impact of the aluminum industry is derived from those linkages, often summarized by 'multipliers' showing the predicted change in total regional activity per change in industry activity.

The IMPLAN model provides estimates of indirect (inter-industry purchases) and induced (household spending) effects on sales, jobs, and payrolls for export-based expansions or contractions of any of 440 local industries. For example, the job multiplier for the primary aluminum production industry in the Hannibal region economic area is 3.026, meaning that for every job at the aluminum smelter, another 2.026 jobs are created elsewhere in the regional economy. Similarly, the employee compensation multiplier for the industry there is 2.329, meaning that for every dollar of payroll created at the aluminum smelter another \$1.329 in payrolls are created in other sectors around the region.

Regional economists often make the distinction between the indirect and induced components of a multiplier, and in some cases make separate estimates for each. The indirect effects refer to the linkages between the exporting industry (aluminum) and their industrial vendors (transportation, electricity, barges, tools, computers, insurance). When the directly impacted industry expands, it raises its purchases from its vendors, thus lifting their employment and payrolls. The induced effects refer to the impact of the new export-based sales on the local economy through the rounds of re-spending of the additional household income caused by the expansion. Regional sales of cars, groceries, building supplies, banking services, and so on are all sensitive to growth in disposable income. In the next table, I show the top 24 regional industries linked to primary aluminum activity, as predicted by the IMPLAN model. I simulated the impact of 1,030 aluminum jobs on the 7-county region, and investigated the decomposition of the impacts in terms of interindustry linkages and household purchases. One can see the largest inter-industry impacts are in power supply, trucking, and wholesale trade industries. Aluminum employees spend much of their paychecks in the region and this creates other jobs, primarily in retail and personal service industries. The greatest impact is on restaurants, followed by three health care industries.

**Top 24 Regional Industries Linked to Primary Aluminum Industry**

Linked through interindustry purchases		Linked through household spending	
	Jobs		Jobs
Electric power generation, transmission, and distribution	247.5	Food services and drinking places	116.0
Transport by truck	180.1	Private hospitals	63.3
Alumina refining and primary aluminum production	113.5	Offices of physicians, dentists, and other health practitioners	53.4
Wholesale trade businesses	81.3	Nursing and residential care facilities	43.9
Food services and drinking places	51.5	Retail Stores - Food and beverage	36.6
Business support services	50.5	Retail Stores - General merchandise	34.3
Maintenance and repair construction of nonresidential structures	39.0	Civic, social, professional, and similar organizations	26.4
Services to buildings and dwellings	33.0	Private household operations	25.5
Management of companies and enterprises	28.0	Retail Stores - Motor vehicle and parts	24.6
Automotive repair and maintenance, except car washes	23.8	Individual and family services	22.0
Mining coal	21.9	Real estate establishments	21.6
Employment services	21.8	Wholesale trade businesses	19.3
Legal services	20.6	Monetary authorities and depository credit intermediation activities	19.1
Accounting, tax preparation, bookkeeping, and payroll services	20.4	Retail Stores - Miscellaneous	19.0
Extraction of oil and natural gas	20.1	Medical and diagnostic labs and outpatient and other ambulatory care services	15.8
Monetary authorities and depository credit intermediation activities	19.3	Retail Stores - Building material and garden supply	15.5
Commercial and industrial machinery and equipment repair and maintenance	16.3	Retail Nonstores - Direct and electronic sales	15.0
Architectural, engineering, and related services	15.3	Home health care services	14.5
Other support services	15.3	Personal care services	13.1
Other state and local government enterprises	13.2	Retail Stores - Health and personal care	12.7
Investigation and security services	11.6	Retail Stores - Clothing and clothing accessories	12.4
Waste management and remediation services	11.1	Insurance carriers	12.2
Natural gas distribution	10.9	Private junior colleges, colleges, universities, and professional schools	12.0
Civic, social, professional, and similar organizations	10.1	Retail Stores - Gasoline stations	9.8
Subtotal	1,076.2	Subtotal	657.9
Total	1,231.5	Total	855.2

Source: IMPLAN, version 3, Sector 172 Primary Aluminum Production, Seven County Region, using 2009 county-level economic data.

### Taxes and fiscal linkages

There are no good national sources of data on which to make estimates of the fiscal impacts of an industrial expansion or contraction in a region. The company has provided detailed records on direct tax payments to local and state governments, including property taxes, sales taxes, and electricity taxes. We aggregate these in our fiscal impact statement in the next section. However, the impacts on governments are much greater than these direct payments. Employees pay sales taxes when they spend their wages in the local economy, and are liable for income taxes in Ohio and West Virginia, depending on their county of residence. We can estimate these payments using published data on tax receipts from Ohio and West Virginia state governments, as well as tax information from city and county governments in the region. By comparing the growth in tax receipts to the growth in payrolls historically, I calculate 'effective' tax rates and use those to estimate the amount of income and sales taxes linked to the aluminum industry payrolls.

The calculations are shown in the table on the last page of this report. Good county-level detail is available for Ohio, and in West Virginia I rely on state totals only. Note, for example, that residents of the three Ohio counties paid an average of \$68.3 million in state individual income taxes the last five years for which data are published. This amounts to 3.9 percent of all wages and salaries paid in those counties. I use this as the

effective state income tax rate of Ohio County government, and apply it to the Ormet-related wages and salaries flowing to Ohio residents to estimate income tax payments. A similar calculation was made for Ohio state and local sales taxes generated. County level tax collections were not available for West Virginia, so we use the statewide average of income and sales tax collections as a share of wages and salaries paid there. We apply the resulting effective tax rates to the portion of Ormet-related wages and salaries predicted to flow to West Virginia residents.

Additional tax impacts are also likely, though much harder to quantify. For example, proprietors and corporations around the region are liable for state individual and corporate income taxes. Gasoline taxes, unemployment insurance taxes, insurance premiums taxes, building permit fees, motor vehicle sales taxes, and many other business tax categories would see some decline if the smelter were to shut-down. Employees would also pay less in the way of gasoline taxes, motor vehicle sales taxes, and there would be a dampening effect on the regional real estate market. These categories are much harder to measure than the income and general sales taxes, but fortunately are not as important dollar-wise as the main taxes I do measure in this report.

## IMPACTS

In this section, I display and explain my estimates of the economic and fiscal impacts of the aluminum smelter. I am essentially simulating what would happen if the operation was removed from the region. The plant employs over 1,000 persons with an annual payroll of about \$63 million, plus \$39 million in employee benefits. Direct tax payments by the company plus tax withholdings for employees are over \$4 million.

### Estimated Annual Economic and Fiscal Impacts of the Ormet Aluminum Facility in Hannibal, Ohio

1	Jobs	1,030
2	Wages and salaries	\$62,907,823
3	Other employee compensation, labor costs	\$39,229,120
4	Taxes withheld or paid to Ohio state government	\$3,950,855
5	Taxes paid to local governments	\$415,991
6	Jobs - total	3,026
7	Employee compensation - total	2,329
8	Jobs in region	3,117
9	Employee compensation in region	\$237,900,709
10	Income, sales, property and other taxes to Ohio state government	\$8,703,004
11	Income and sales taxes to West Virginia state government	\$6,086,803
12	Income, sales, and property taxes to local governments	\$415,991
13	Total tax revenues, all state and local governments	\$15,205,798

On lines 8 and 9, I provide estimates of the total effects – direct plus spinoff. Here I use economic multipliers to estimate the job and employee compensation impacts regionally. I estimate the total job impact in the 7-county region to be over 3,100 jobs, and the employee compensation impact to be about \$238 million annually. Employee compensation includes many company provided fringe benefits, most of which are not taxable. So, I estimate the share (62 percent) of the total employee compensation that is taxable wages and salaries, and use that to estimate fiscal impacts.

The company does not know the amount of Ohio and West Virginia state income taxes actually paid by their employees, since employees file income tax returns from their place of residence. The company does withhold state income taxes from workers paychecks, but have no way of knowing how much additional tax employees ultimately end up paying, or how big of a tax refund they receive each year. To estimate the state income taxes paid, I applied effective income tax rates, as described in the previous

section. These estimates are shown in lines 10 and 11. I estimate that Ohio state government is receiving about \$8.7 million annually in individual income taxes, sales taxes, and electricity taxes from Ormet-related activity<sup>4</sup>. West Virginia state government receives about \$6.1 million. And local governments receive over \$400,000 in tax revenues.

---

<sup>4</sup> The full fiscal impact would be more than the tax receipts lost, since the state would have to incur tens of millions of dollars in costs for unemployment compensation and increased Medicaid expenditures in the region if the plant shut down and the employees lost their jobs.

**Effective Tax Rate Calculations**

	2004	2005	2006	2007	2008	2009	Average, 2004 - 2009
<b>Ohio state income taxes received from</b>							
Belmont	\$29,443,682	\$30,132,266	\$30,851,757	\$32,715,522	\$33,220,505	\$30,326,621	\$31,115,059
Monroe	\$5,026,975	\$4,874,912	\$5,135,252	\$5,545,471	\$5,654,454	\$5,420,558	\$5,276,270
Washington	\$32,047,893	\$31,518,872	\$33,014,350	\$35,586,746	\$31,259,303	\$28,149,400	\$31,929,427
subtotal	\$66,518,550	\$66,526,050	\$69,001,359	\$73,847,739	\$70,134,262	\$63,896,578	\$68,320,756
<b>Ohio state sales taxes received from</b>							
Belmont	\$43,523,697	\$44,248,981	\$42,373,952	\$42,479,599	\$39,778,548	\$39,527,820	\$41,988,766
Monroe	\$4,244,878	\$4,419,030	\$4,424,459	\$4,980,664	\$5,540,973	\$5,270,437	\$4,813,407
Washington	\$32,924,951	\$32,839,308	\$34,507,745	\$35,936,595	\$35,430,960	\$33,100,653	\$34,123,369
subtotal	\$80,693,525	\$81,507,319	\$81,306,156	\$83,396,858	\$80,750,481	\$77,898,910	\$80,925,542
<b>Ohio County sales taxes received</b>							
Belmont	\$11,870,099	\$12,067,904	\$11,556,532	\$11,585,345	\$10,848,695	\$10,780,315	\$11,451,482
Monroe	\$1,157,694	\$1,205,190	\$1,206,671	\$1,358,363	\$1,511,174	\$1,437,392	\$1,312,747
Washington	\$8,979,532	\$8,956,175	\$9,411,203	\$9,800,889	\$9,662,989	\$9,027,451	\$9,306,373
subtotal	\$22,007,325	\$22,229,269	\$22,174,406	\$22,744,598	\$22,022,858	\$21,245,157	\$22,070,602
<b>Wages and salaries paid</b>							
Belmont	\$682,957,000	\$710,658,000	\$727,781,000	\$745,058,000	\$776,099,000	\$770,843,000	\$735,566,000
Monroe	\$142,061,000	\$98,454,000	\$101,760,000	\$124,241,000	\$141,309,000	\$132,754,000	\$123,429,833
Washington	\$808,574,000	\$827,113,000	\$875,083,000	\$953,548,000	\$994,755,000	\$940,769,000	\$899,973,667
subtotal	\$1,633,592,000	\$1,636,225,000	\$1,704,624,000	\$1,822,847,000	\$1,912,163,000	\$1,844,366,000	\$1,758,969,500
Effective income tax rate, Ohio	4.1%	4.1%	4.0%	4.1%	3.7%	3.5%	3.9%
Effective sales tax rate, Ohio	4.9%	5.0%	4.8%	4.6%	4.2%	4.2%	4.6%
Effective sales tax rate, three Ohio counties	1.3%	1.4%	1.3%	1.2%	1.2%	1.2%	1.3%
<b>West Virginia State Totals</b>							
State income tax receipts (FY)	\$1,074,912,080	\$1,171,987,478	\$1,344,720,394	\$1,318,250,000	\$1,408,600,000	\$1,489,900,000	\$1,197,206,651
State sales and use tax receipts (FY)	\$1,051,461,638	\$1,095,339,835	\$1,157,982,670	\$1,018,000,000	\$1,026,900,000	\$1,180,983,000	\$1,101,594,714
Wages and salaries paid	\$21,902,972,000	\$22,862,225,000	\$24,185,698,000	\$25,281,832,000	\$26,806,002,000	\$26,815,530,000	\$22,983,631,667
Effective income tax rate, WV	4.9%	5.1%	5.6%	5.2%	5.3%	5.6%	5.2%
Effective sales tax rate, WV	4.8%	4.8%	4.8%	4.0%	3.8%	4.4%	4.8%

Sources for tax receipt data: Ohio Department of Taxation ([http://tax.ohio.gov/channels/research/other\\_tax\\_statistics.stm](http://tax.ohio.gov/channels/research/other_tax_statistics.stm)),  
with state sales tax collections by county estimated from county sales tax, using ratio of tax rates (state 5.5%/county 1.5%);  
and West Virginia State Budget Office ([www.budget.wv.gov/reportsandcharts/revenue/reports/Pages/default.aspx](http://www.budget.wv.gov/reportsandcharts/revenue/reports/Pages/default.aspx)).  
Wage and salary data from the US Bureau of Economic Analysis.

## **EXHIBIT B**



**BEFORE THE  
PUBLIC UTILITIES COMMISSION OF OHIO**

<b>In the Matter of the Application of Ormet</b>	)	
<b>Primary Aluminum Corporation for</b>	)	
<b>Approval of a Unique Arrangement with</b>	)	<b>Case No. 09-119-EL-AEC</b>
<b>Ohio Power Company</b>	)	

**AFFIDAVIT OF JAMES BURNS RILEY**

State of Ohio : ss  
County of Monroe :

James Burns Riley, being duly sworn, deposes and states:

1. I am the Chief Financial Officer of Ormet Corporation ("Ormet Corp."), which is the parent corporation of Ormet Primary Aluminum Corporation ("Ormet"). I have held this position with Ormet Corp. since July 1, 2007. My responsibilities include the oversight of all financial and information technology ("IT") functions. My business address is 43840 State Route 7, P.O. Box 176, Hannibal, OH 43931.

2. Ormet owns and operates an aluminum reduction facility encompassing 256 acres, which is located on the Ohio River in Hannibal, Ohio (the "Hannibal Facility"). It consists of six pot lines and is the second largest aluminum smelter in the United States, with the capability of producing approximately 271,000 metric tons of molten aluminum annually.

3. According to the Ohio Department of Jobs and Family Services in April of 2013 (the latest month available) the unemployment rate in Monroe County, Ohio where the Hannibal Facility is located was 9.7 percent compared to the statewide average of 6.7 percent. Monroe County is an economically depressed area. As a major employer in Monroe County, should Ormet close the Hannibal Facility, the unemployment rate would be expected to rise significantly.

4. When Ormet's aluminum reduction facility is operating at capacity, Ormet employs approximately 1,000 employees in Hannibal Ohio, with wages totaling approximately \$66 million per year. Ormet provides health care benefits for its Hannibal employees and families which contribute another \$15 million annually into the region. Ormet also pays approximately \$1.6 million annually in local taxes and state taxes. According to a report written by Professor Paul Coomes, Ormet's total impact on the regional economy is approximately \$238 million per year and indirect employment attributed to Ormet is 2,000 jobs.

5. When fully operational, the aluminum reduction facility utilizes up to 540 MW of electricity 24 hours per day, 365 days per year. Electricity is a raw material in the aluminum industry. When reasonably priced electricity is available, it constitutes approximately 30-35 percent of the cost of producing aluminum. However, when electric rates are higher, the cost of electricity can exceed 35 percent of the cost of producing aluminum, at which point aluminum reduction facilities cannot be economically operated and may be forced to shut down.

6. Ormet is the largest and most energy-intensive customer on the Ohio Power Company system.

7. Ormet cannot simply shut down the electricity to its pot lines and then turn the electricity back on, if and when the modifications are approved. That is because the pot lines must be kept energized at all times to keep the metal in them molten. If electricity to a pot line is interrupted or reduced sufficiently so that the metal solidifies, it can take several months and millions of dollars to bring the pot line back into operation. Any reduction of electricity to a pot line can only be undertaken after a significant amount of planning and economic analysis, and would only be cost-effective under extreme circumstances.

8. The Hannibal Facility has reduced its non-energy operating costs by approximately \$30 million a year over its historical best performance by improving power consumption, cell life carbon usage and other non-capital improvements. Further, agreements reached with the United Steel Workers union and debt holders will reduce cash costs by approximately \$278 million over the next five to seven years related to the elimination of contributions to the two largest defined benefit pensions an 82% reduction in contributions to the VEBA Trust which supports retiree health care costs and a 54% reduction in long term debt.

9. To help keep its Hannibal Facility operational, on July 15, 2009 the Public Utilities Commission of Ohio (the "Commission") approved a unique arrangement between Ohio Power and Ormet. In accordance with that unique arrangement, on or around September 16, 2009, Ormet and AEP Ohio executed written terms and conditions to implement the unique arrangement which were filed with the Public Utilities Commission of Ohio. Pursuant to the Unique Arrangement, AEP Ohio agreed to supply Ormet, and Ormet agreed to purchase from AEP, the electricity necessary to meet Ormet's needs. The Unique Arrangement was designed to help keep Ormet's Hannibal Facility operational.

10. Pursuant to the Unique Arrangement, Ormet received discounts off the Ohio Power Tariff Rate for the electricity it purchased. The discounts were calculated off of the Ohio Power Tariff Rate GS-4.<sup>1</sup> Thus, if the Tariff Rate increased, while Ormet would still receive a discount, its rate would increase dollar-for-dollar with all Ohio Power Tariff Rate increase.

11. The maximum discount has declined from \$60 million in calendar years 2010 and 2011, to \$54 million in calendar year 2012, and is scheduled to decline by \$10 million per year thereafter.

---

<sup>1</sup> A 50/50 blend of Ohio Power Columbus Southern zone and Ohio Power zone rates.

12. Based upon the information we have received from Wayzata, the market price of electricity is now substantially below that of Ormet's price under the Ohio Power GS-4 standard service offer and the future effective cost of the standard service rate is not quantifiable.

13. The Unique Arrangement is scheduled to expire by its own terms on December 31, 2018 in accordance with the terms of the Commission's Opinion and Order.

14. Under the existing Unique Arrangement, Ormet may take discounts for each of the calendar years 2013 to 2018 of some \$44 million, \$34 million, \$24 million, \$14 million, \$4 million and \$0, respectively.

15. As of the close of the May billing cycle \$92.5 million in discounts remained.

16. Aluminum smelters are not ordinary electricity customers. An aluminum smelter's consumption of power does not change with the seasons such as space heating and cooling load, nor is it tied to normal business hours. Aluminum smelters consume power more or less uniformly twenty four hours a day, seven days a week, and 365 days a year. Thus, even industrial tariff rates such as Ohio Power's GS-4 do not match the load factors of aluminum smelters and thus do not capture the true cost of service for such constant load facilities. The unique load factor of the Hannibal, Ohio facility was part of the basis for the Unique Arrangement which designed rates pursuant to Ohio Administrative Code Section 4901:1-38-05. Similarly, other state commissions have provided special rates for aluminum smelters. For example, the New York Power Authority Trustees approved a thirty-year power supply contract with Alcoa, an aluminum smelter, to ensure the maintenance of New York jobs. In addition, the Bonneville Power Administration has signed a power sales agreement with Alcoa, Inc. to provide power service to Alcoa's Intalco Plant in Ferndale, Washington.

17. The increase in the economic development rider payments by AEP Ohio customers for Ormet's requested emergency relief has been estimated by AEP to be only \$3.5 million. That estimate is based upon freezing the generation cost per MWh of power to Ormet throughout 2013 at the first quarter price of \$45.89 per MWh. The other four requested emergency relief items: 1) terminating the Unique Arrangement three years early; 2) advancement of the previously authorized economic development discounts by three years; 3) lifting of the prohibition of shopping and 4) the requested affirmation by the Commission of the assignment by Ormet of its interest in the Amended Unique Arrangement to Smelter Acquisition, LLC under Section 13.04 of the current arrangement should have no effect on the economic development rider obligation of retail customers of AEP Ohio.

18. Other state commissions have provided special rates for aluminum smelters due to their unique load factor. For example, the New York Power Authority Trustees approved a thirty-year power supply contract with Alcoa, an aluminum smelter, because of its use pattern and to ensure the maintenance of New York jobs.

19. In 2009 the GS-4 Tariff Rate for power to Ormet including all riders and before the discounts were applied was \$39.66 per MWh. That same rate increased to an average of \$57.99 per MWh by the first quarter of 2013, an increase of approximately forty-six percent (46%) in just a four year period. At full operating levels, this increase in the GS-4 rate over just four years amounts to an increase of approximately \$79 million per year for the Hannibal Facility.

20. In order to emerge from bankruptcy and continue its operation of the Hannibal Facility, Ormet requires modification of the Unique Arrangement.

21. Currently, the Ormet facility is running only four pot lines due to the combination of lower world prices for aluminum and the increase in the GS-4 Tariff rate.

22. If the Commission grants non-emergency relief, Ormet agrees that as soon as both of the incremental pot lines come on line it shall increase the minimum employment level to 1,000 full time employees.

23. If the Commission grants non-emergency relief, Ormet agrees that it will actively pursue the construction of an on-site gas fired power plant sufficient to meet its long-term capacity and energy needs including application for construction, siting and transmission permits and determination of sources of financing. Also, Ormet will document to the Commission the major actions taken to complete a power plant on site by 2015 including permit filings, financing status, equipment purchases and retention of necessary environmental and engineering consultants.

24. The current Unique Arrangement as per the Commission Opinion and Order provides that if the target price of aluminum of the London Metal Exchange exceeds the trigger amount that Ormet will pay a premium of 4% of the applicable GS-4 rate in addition to the rates established in the Unique Arrangement. Further, if the price of aluminum on the London Metal Exchange exceeds the trigger price by \$300 a metric ton, then the premium Ormet will pay shall be 8% of the applicable GS-4 rate. All premiums are paid to AEP Ohio, who in accordance with the Commission's Opinion and Order apply them to the economic development accounts and thus reduce the amount retail customers pay under the economic development rider. As part of the amendments to the Unique Arrangement which Ormet seeks, Ormet is willing to reduce the trigger price for the payment of premiums to \$2650/metric ton for 2013 and \$2490/metric ton for 2014 and the first five months of 2015, from the current 2013 target price of \$2805/metric ton. While Ormet cannot guarantee that these lower trigger prices will result in the payment of

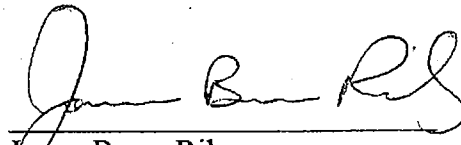
premiums, Ormet can state that the lower trigger prices will increase the likelihood that premiums will be assessed against Ormet and paid back to the economic development funds.

25. Since Ormet would be purchasing power from a CRES provider in 2014 and 2015 if the proposed amendments are approved, for simplicity, Ormet agrees to make the following payments to AEP Ohio, based on the GS-4 rate in effect during the first quarter of 2013: If the LME Price is between \$2490 and \$2789/metric ton, Ormet shall pay \$2.32/MWh for the energy it consumed for the month; if the LME exceeds \$2789/metric ton, Ormet shall pay \$4.64/MWh for the energy it consumed for the month.

26. Based on data provided by AEP Ohio, the estimated shortfall created by fixing the generation rate at \$45.89 for 2013 is \$3.5 million. An additional benefit of the non-emergency relief is Ormet's reduction in the trigger for the payment of premiums now called for in the Unique Arrangement. The triggers are being reduced on a dollar per ton basis. While it is not certain that metal prices will cross the lower trigger prices, a reduction in the trigger will increase the probability that premium payments from Ormet may one day be available to reduce the economic development rider obligation of retail customers.

27. The cost of the non-emergency relief for transition year 2015 shall consist of an estimated \$28.1 million dollars if the power plant is built on time and an estimated \$2.2 million per month for each month the power plant is delayed after June 1, 2015. Ormet would be at full risk if the power plant was delayed more than 7 months.

28. The earliest Ormet could reopen pot lines 5 and 6 is July 2014. In order to open the pot lines a power shopping credit of \$9/MWh would be required, which is estimated to be \$12.4 million for the period July 2014 through May 2015. The reopening of pot lines 5 and 6 would permit Ormet to increase its pledged minimum Ohio employment to 1,000 full time employees.

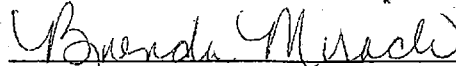


James Burns Riley  
Chief Financial Officer  
43840 State Route 7  
P.O. Box 176  
Hannibal, OH 43931

Sworn to and subscribed

Before me

This 14 day of JUNE, 2013



Notary Public, BRENDA MIRACLE

My Commission Expires: July 12, 2016



BRENDA MIRACLE  
NOTARY PUBLIC, STATE OF OHIO  
MY COMMISSION EXPIRES July 12, 2016  
2011-RE-378248



---

## **Exhibit C**

December 16, 2008  
Exhibit "1e-A"

---

NEW YORK POWER AUTHORITY

30 South Pearl Street  
10<sup>th</sup> Floor  
Albany, New York 12207-3425

AGREEMENT FOR THE SALE  
OF FIRM AND INTERRUPTIBLE HYDROELECTRIC POWER AND ENERGY FROM  
THE ST. LAWRENCE-FDR POWER PROJECT  
TO ALCOA INC.

Service Tariff No. 22 - Schedule of Rates for Sale of Firm and Interruptible  
Hydroelectric Power Service

---

**NEW YORK POWER AUTHORITY**

**30 South Pearl Street, 10<sup>th</sup> Floor  
Albany, New York 12207-3425**

**AGREEMENT FOR THE SALE OF FIRM AND INTERRUPTIBLE  
POWER AND ENERGY TO ALCOA INC.**

Alcoa Inc. ("Alcoa" or "Customer") hereby enters into this Agreement with the New York Power Authority ("Authority" or "NYPA," and collectively with Customer, the "Parties") for the sale of firm and interruptible power and energy for its facilities at 194 County Route 45 ("East Plant") and at Park Avenue East ("West Plant"), Massena, New York 13662 as follows:

**WHEREAS**, the existing contracts (1) between Customer, f/k/a Aluminum Company of America, and Authority for the sale of 174,000 kilowatts ("kW") of firm power and energy and 65,000 kW of interruptible power and energy by Authority to Customer, and (2) between Customer's Reynolds Metals Company subsidiary ("Reynolds") and Authority for the sale of 200,000 kW of firm power and energy and 39,000 kW of interruptible power and energy by Authority to Reynolds are both set to expire on June 30, 2013; and

**WHEREAS**, the Parties seek to replace the existing contracts with a single contract that will provide to Customer from the Authority's St. Lawrence-FDR Project 374,000 kW of firm power and energy and 104,000 kW of interruptible power and energy to be used by Customer at both its own facility and its Reynolds facility as it sees fit; and

**WHEREAS**, such Allocations shall be sold by the Authority to Customer under this Agreement for the Sale of Firm and Interruptible Power and Energy ("Agreement"); and

**WHEREAS**, such Allocations are subject to the tariffs of the New York Independent System Operator, Inc. ("NYISO");

**NOW THEREFORE**, the Parties hereto agree as follows:

**I. Definitions**

- A. Agreement** means this Agreement.
- B. Allocation(s)** means the allocation(s) of Firm and Interruptible Power and Energy to Customer on the terms set forth herein.
- C. Authority** is the New York Power Authority.

- D. Contract Demand** will be the amount set forth in Article II or such other amount as may be determined in accordance with the provisions of this Agreement.
- E. Customer** is Alcoa.
- F. Electric Service** is Power and Energy sold to Customer in accordance with this Agreement and applicable Service Tariffs and Rules.
- G. Firm and Interruptible Power and Energy** is power and associated energy from the Project as provided in Service Tariff No. 22, and allocated by Authority for business use as Preservation Power pursuant to Section 1005 (13) of the New York Public Authorities Law ("NY PAL").
- H. FERC** means the Federal Energy Regulatory Commission (or any successor organization).
- I. FERC License** means the license issued by FERC to Authority for the continued operation and maintenance of the Project, pursuant to Section 15 of the Federal Power Act.
- J. Hydro Projects** is a collective reference to the Project (defined below) and Authority's Niagara Project, FERC Project No. 2216.
- K. NYISO** means the New York Independent System Operator or any successor organization responsible for the transmission and the reliable supply of electricity in the State of New York.
- L. Project** means Authority's St. Lawrence-FDR Project, FERC Project No. 2000.
- M. Rate Year** means a twelve (12) month period starting July 1 and ending June 30 for which Electric Service is provided under this Agreement.
- N. Rebuilding of the East Plant** means the decommissioning of the existing Soderberg smelting technology and facilities at the East Plant, the construction of new prebake smelting technology and facilities at the East Plant, and the addition of new supporting facilities at the West Plant.
- O. Rules** are the applicable provisions of Authority's Rules and Regulations for Power Service (Part 454 of Chapter X of Title 21 of the Official Compilation of Codes, Rules and Regulations of the State of New York) as they are modified from time to time.
- P. Service Tariffs** are schedules or tariffs of Authority establishing rates and other conditions for sale of Electric Service to Customer, including Service Tariff No. 22 as it may be modified from time to time, except as noted herein.

- Q. Unforced Capacity** shall have the same meaning as set forth in the NYISO Market Services Tariff, as it may be modified from time to time.

**II. Electric Service to be Provided**

- A. Contract Demands.** Authority shall provide Electric Service pursuant to Service Tariff No. 22 ("ST-22") for Power and/or Energy to enable the Customer to receive its Allocation of Firm and Interruptible Power from the Project, in the amounts set forth below:

**374,000 Kilowatts of Firm Power**

**104,000 Kilowatts of Interruptible Power**

Which amounts shall be the Contract Demands.

As part of the Allocation, Authority shall provide Unforced Capacity in amounts necessary to meet Customer's NYISO Unforced Capacity obligations associated with the foregoing allocations of Firm and Interruptible Power and Energy in accordance with the rules and tariffs of the NYISO. Neither Ancillary Services (as defined in the rules and tariffs of the NYISO), nor "green" attributes or renewable energy credits (collectively referred to herein as "RECs," as may be hereinafter defined and as modified from time to time by the New York State Public Service Commission or other agency having jurisdiction over such matters) are included in such Allocation. Authority retains for its own use and benefit any such RECs associated with that portion of the Project that supports the Allocation; provided, however, that: (1) should Customer be required by federal or state law, rule or regulation to secure RECs in connection with the operation of the East and/or West Plants; and (2) such RECs are deemed transferable under applicable federal or state law, rule or regulation, then Authority shall make available such RECs to Customer on a basis consistent with the policies adopted by Authority's Trustees for all similarly situated customers.

- B. Delivery Points.** At 115,000 Volts at the points of interconnection of Customer's transmission lines to the Barnhart Island Switchyard of Authority at the West Plant, Massena, New York and at 13,800 Volts at the low side of Authority's stepdown substation at the East Plant and/or at 115,000 Volts at the East Plant, Massena, New York, or at such other points and voltages as agreed between Customer and Authority.
- C. Reduction of Contract Demands.** The foregoing Contract Demands may be reduced by Authority (i) in accordance with Schedule A for failure to meet Capital Investment, Employment or Power Utilization Commitments, or (ii) if the amount of Firm and/or Interruptible Power and Energy available for sale from the Project is reduced as required to comply with any unstayed ruling, order or decision of any

regulatory or judicial body of competent jurisdiction. Any such reduction in the Contract Demand shall be in proportion to the overall reduction in the aggregate contract demands of hydroelectric customers sold by Authority from the Project; provided, however, that in the case of (ii), Customer's Employment Commitment shall be revised in a proportionate manner for the duration of the reduction to reflect the reduction in Contract Demand.

- D. Authority and Customer shall cooperate in any relocation or installation of transformers or other related facilities servicing Customer's plants that either Party reasonably deems necessary or desirable. The costs of any such relocation or installation shall be the responsibility of Customer, except in cases where Authority seeks the relocation or installation; provided however, that Authority will, if requested by Customer, consider in good faith whether its other customers receive any substantial benefit from such relocation or installation. If NYPA determines that such substantial benefits exist, it shall negotiate in good faith with Customer regarding an alternative funding arrangement. In any event, NYPA shall not be obligated to agree upon an alternative funding arrangement.
- E. In the event that Customer is unable to use a portion of its Contract Demand, Authority will if requested use commercially reasonable efforts to resell the Unforced Capacity associated with the unused portion of the Allocation into the NYISO-administered markets to the extent permitted under the NYISO's tariffs and rules. Such proceeds to Authority (if any) exclusive of any energy-related proceeds associated therewith shall be credited against Customer's Billing Demand obligation.

### **III. Firm and Interruptible Power Commitments**

Schedule A to this Agreement entitled "Capital Investment, Employment, Power Utilization Commitments and North Country Economic Development Fund" is attached to and made a part of this Agreement ("Schedule A").

### **IV. Rules, Regulations and Service Tariffs**

The Rules and the Service Tariffs are hereby incorporated into this Agreement with the same force and effect as if herein set forth at length. In the event of any inconsistencies, conflicts or differences between the provisions of the Service Tariffs and the Rules, the provisions of the Service Tariffs shall govern. In the event of any inconsistencies, conflicts or differences between the provisions of this Agreement and the Service Tariffs, the provisions of this Agreement shall govern. Except as may be provided under Section V.G., below, Authority shall provide at least sixty (60) days prior written notice to Customer of any proposed change in the Rules or Service Tariffs, but in no event shall Authority provide less notice than that provided to similarly affected customers within New York State.

**V. Power and Energy Rates, Pricing Adjustments, Other Charges and Bond Covenant**

- A. Base Rates and Annual Adjustment Factor:** Power and energy associated with the Allocation shall be sold to Customer hereunder at base rates determined in accordance with ST-22 attached hereto, subject to the following provisions:
1. For the first Rate Year under this Agreement (July 1, 2013 through June 30, 2014), the base rates shall be the base production charge for demand and energy made effective in ST-22, and except as may be provided in Section V.G. below, shall not be changed on or before July 1, 2013.
  2. Effective on the Rate Year commencing July 1, 2014 and on the start of each succeeding Rate Year through the end of this Agreement, the base rates shall be adjusted by applying an Annual Adjustment Factor to the base rates for the current Rate Year. In each case, the base rates, as so adjusted, will be applicable for the succeeding twelve (12) months ("Contract Year").
  3. The Annual Adjustment Factor will be based upon a weighted average of three indices described below. For each Contract Year, the index value for the latest available calendar year ("Index Value for the Measuring Year") will be compared to the index value for the calendar year immediately preceding the latest available calendar year (the Index Value for the Measuring Year - 1"). The change for each index will then be multiplied by the indicated weights. As described in detail below, these products are then summed, producing the Annual Adjustment Factor. The Annual Adjustment Factor will be multiplied by the base rate for the current Rate Year to produce the base rates for the Contract Year, subject to a maximum adjustment of +/-2.2%.

Index 1, "BLS Industrial Power Price" (35% weight): The average of the monthly Producer Price Index ("PPI") for Industrial Electric Power, Bureau of Labor Statistics ("BLS") Series ID WPU0543, not seasonally adjusted, as reported by the U.S. Department of Labor, BLS electronically on its internet site and consistent with its printed publication, "Producer Price Index Detailed Report". For Index 1, the Index Value for the Measuring Year will be the index for the calendar year immediately preceding July 1 of the Contract Year.

Index 2, "EIA Average Industrial Power Price" (40% weight): The average weighted annual revenue per kWh for electric sales to the industrial sector in the ten states of CT, MA, ME, NH, NJ, NY, OH, PA, RI and VT ("Selected States") as reported by Coal and Electric Data and Renewables Division; Office of Coal, Nuclear, Electric and Alternate Fuels; Energy Information Administration ("EIA"); U.S. Department of Energy Form EIA-861 Final Data File. For Index 2, the Index Value for the Measuring Year

will be the index for the calendar year two years preceding July 1 of the Contract Year.

Index 3, "BLS Industrial Commodities Price Less Fuel" (25% weight): The monthly average of the PPI for Industrial Commodities less fuel, BLS Series ID WPU03T15M05, not seasonally adjusted, as reported by the U.S. Department of Labor, BLS electronically on its internet site and consistent with its printed publication, "Producer Price Index Detailed Report". For Index 3, the Index Value for the Measuring Year will be the index for the calendar year immediately preceding July 1 of the Contract Year.

Annual Adjustment Computation Guide and Sample Computation:

- Step 1: For each of the three Indices, divide the Index Value for Measuring Year by the Index Value for the Measuring Year-1.
- Step 2: Multiply the ratios determined in Step 1 by percentage weights for each Index. Sum the results to determine the weighted average. This is the Annual Adjustment Factor.
- Step 3: Multiply the current Rate Year base rate by the Annual Adjustment Factor calculated in Step 2 to determine the adjusted base rate.
- Step 4: Determine if the adjusted base rate is within +/- 2.2% of the current Rate Year base rate. Apply the maximum adjustment as appropriate to determine the Contract Year base rate.

The foregoing calculation shall be performed by Authority consistent with the sample presented in Appendix A to this Agreement.

Authority shall provide Customer with notice of any adjustment to the current base rate per the above and with all data and calculations necessary to compute such adjustment by June 15<sup>th</sup> of each year to be effective on July 1 of such year, commencing in 2014. The values of the latest officially published (electronically or otherwise) versions of the indices and data provided by the BLS and EIA as of June 1 shall be used notwithstanding any subsequent revisions to the indices.

If during the term of the Agreement any of the three above indices ceases to be available or ceases to be reflective of the relevant factors or of changes which the indices were intended by the Parties to reflect, Customer and Authority shall mutually select a substitute Index. The Parties agree to mutually select substitute indices within 90 days, once notified by the other party that the indices are no longer available or no



longer reflect the relevant factors or changes with the indices were intended by the Parties to reflect. Should the 90-day period cover a planned July 1 rate change, the current base rates will remain in effect until substitute indices are selected and the adjusted rates based on the substitute indices will be retroactive to the previous July 1. If unable to reach agreement on substitute indices within the 90-day period, the Parties agree to substitute the mathematic average of the PPI--Intermediate Materials, Supplies and Components (BLS Series ID WPUSOP2000) and the PPI--Finished Goods (BLS Series ID WPUSOP3000) indices for one or more indices that have ceased to be available and shall assume the percentage weighting(s) of the one or more discontinued indices as indicated in this Section V.A.3.

4. No subsequent amendment to ST-22 shall affect the determination of the base rates, including all annual adjustments, as described herein.

**B. London Metals Exchange ("LME") Adjustment:** Based on the quarterly average "cash buyer" price for aluminum on the London Metals Exchange ("LME Reference Price"), Customer may be subject to a quarterly adjustment ("LME Adjustment Rate"). For each \$100 increment, including any fraction thereof, above the LME Reference Price of \$2000, a LME Adjustment Rate will be applied to the Customer's quarterly energy consumption. The LME Adjustment Rate will be determined using the schedule of rates described below (all ranges expressed in 2008 dollars):

1. From \$2000 to and including \$2200, the adjustment rate will be \$1.25 per MWh.
2. From \$2201 to and including \$2500, the adjustment rate will be \$1.50 per MWh.
3. From \$2501 to and including \$2800, the adjustment rate will be \$2.00 per MWh.
4. From \$2801 and above, the adjustment rate will be \$3.00 per MWh.

The rates in the above categories are additive so that, for example, if the LME Reference Price is in category 2 for a given quarter, the Customer's LME Adjustment Rate will be sum of (a) \$1.25/MWh times the portion of the LME Reference Price in category 1, and (b) \$1.50/MWh times the portion of the LME Reference Price in category 2.

The price ranges noted above will be adjusted each quarter beginning in the third quarter of 2008 based on the following combination of indices noted below, subject to a maximum adjustment of (a) 0.625% per quarter; and (b) 2.5% for each rolling 12 month period measured each quarter:

- Basket of indices used to determine the Annual Adjustment Factor as described herein used determine the base rates for the Contract Year (50% weight; for 2013, NYPA will calculate an Annual Adjustment Factor in the same manner as that which will apply July 1, 2014 and each year thereafter);
- PPI--Finished Goods (BLS Series ID WPUSOP3000), as reported by U.S. Department of Labor, BLS (50% weight).

The first calculation to determine if an LME Adjustment Rate applies will be performed following the first quarter of Electric Service under the Agreement (September 30, 2013) and will reflect previous adjustments, beginning with the third quarter of 2008. A sample calculation illustrating the LME Adjustment is shown in Appendix B to this Agreement.

The LME Adjustment (if any) will be billed on or about the first day of the second month following the end of the quarter for which the LME Adjustment is calculated, and payable in equal increments over three billing periods.

- C. At all times the applicable rates for power and energy associated with this Allocation determined in accordance with Sections V.A. and V.B. above (the "Adjusted Rates"), shall be no lower than the rates charged by Authority for the sale of hydroelectricity for the benefit of rural and domestic customers receiving service in accordance with the Niagara Redevelopment Act, 16 U.S.C. § 836(b)(1) and NY PAL § 1005(5) (the "Rural/Domestic Rate"). This provision shall be implemented as follows: if the rates determined in accordance with Section V.A. above only, i.e., exclusive of the LME Adjustments under Section V.B. above, are lower than the Rural/Domestic Rate on an average \$/MWh basis, then the base rates determined under Section V.A. above will be revised to make them equal to the Rural/Domestic Rate on an average \$/MWh basis; provided, however, the base rates as so revised will have no effect until such time as the Adjusted Rates are lower than the Rural/Domestic Rate.
- D. Customer agrees to compensate Authority for all transmission costs incurred as set forth in ST-22. Such charges or costs shall be in addition to the charges for power and energy.
- E. Customer understands that delivery of the Allocation will be made over transmission facilities under the control of the NYISO, including those owned by Customer. Unless Customer provides Authority sixty (60) days written notice otherwise, Authority will act as the Load Serving Entity ("LSE") with respect to the NYISO, or arrange for another entity to do so on its behalf. Customer agrees and understands that it shall be responsible to Authority for all costs incurred by Authority with respect to the Allocation for the services established in the NYISO's applicable tariffs, as set forth in ST-22, whether or not such charges are

transmission-related. Such charges or costs shall be in addition to the charges for power and energy.

- F. To the extent Authority incurs any taxes, assessments or other charges imposed by third parties associated with or attributable to the Allocation, Customer agrees to compensate Authority for all such costs incurred as set forth in ST-22. Such charges or costs shall be in addition to the charges for power and energy.
- G. Notwithstanding any provision of this Agreement to the contrary, the power and energy charges shall be subject to increase by Authority at any time upon 30 days prior written notice to Customer if, after consideration by Authority of its legal obligations, the marketability of the output or use of the Project and Authority's competitive position with respect to other suppliers, Authority determines in its discretion that increases in rates obtainable from any other Authority customers will not provide revenues, together with other available Authority funds not needed for operation and maintenance expenses, capital expenses, and reserves, sufficient to meet all requirements specified in Authority's bond and note resolutions and covenants with the holders of its financial obligations. Authority shall use its best efforts to inform Customer at the earliest practicable date of its intent to increase the power and energy charges pursuant to this provision. Any rate increase to Customer under this subsection shall be on a non-discriminatory basis as compared to other Authority customers after giving consideration to the factors set forth in the first sentence of this subsection. With respect to any such increase, Authority shall forward to Customer with the notice of increase, an explanation of all reasons for the increase, and shall also identify the sources from which Authority will obtain the total of increased revenues and the bases upon which Authority will allocate the increased revenue requirements among its customers. Any such increase in rates shall remain in effect only so long as Authority determines such increase is necessary to provide revenues for the purposes stated in the preceding sentences.
- H. Notwithstanding any provision of this Agreement to the contrary, to the extent that capital expenditures exceeding \$75 million in 2008 dollars for a single capital project not reasonably foreseen at the time this Agreement is executed and which are not sustaining capital are required at the Project and which project will be completed during the term of this Agreement, Authority may on sixty (60) days' notice to Customer increase the rates established under this Agreement by allocating to Customer a pro rata share on the basis of Customer's Contract Demand and the Contract Demand of all customers supplied from the Project of the costs associated with such capital expenditures. For avoidance of doubt, this provision is not applicable to capital expenditures not reasonably foreseen and made during the term of this Agreement to sustain Authority's operations by installing or upgrading equipment using mostly incrementally improved technology, including repair and maintenance, and replacement items such as spare parts. Within thirty (30) days of the imposition of any such rate increase,

Authority shall provide Customer a report and necessary workpapers documenting the required capital expenditures.

## **VI. Curtailments, Interruptible Power and Substitute Energy**

- A. Firm Power and Energy.** If hydraulic or hydrological conditions affecting the Hydro Projects require Authority to curtail the amount of Firm Power and Energy provided to Customer under this Agreement to an amount below such normal level, reductions shall be applied to all the firm power customers served from the Hydro Projects, including Customer, in proportion to their relative allocations of Firm Power and Energy from the Hydro Projects. Reductions as a percentage of the otherwise required Power and Energy deliveries will be the same for all firm Authority hydropower customers served from the Hydro Projects. Customer will receive appropriate bill credits as provided under the Rules.

If, on the basis of reports received from Authority on hydrological conditions, Customer anticipates a curtailment of Firm Power and Energy lasting six (6) months or longer and reasonably believes that both plants cannot be economically operated, Customer shall have the option of reducing Contract Demand to as low as 239,000 kW of Firm Power and Energy for up to two (2) years, or until operations at the second plant are restarted, if sooner. Terms and conditions of such restart, including the ramping up of Contract Demand, will be subject to mutual agreement between the Parties. The Parties agree that the operation of both Customer plants is desirable, and will work together towards that end.

- B. Interruptible Power and Energy.** Interruptions will be based on the daily measurement of the 7-day rolling average net generation at the Hydro Projects. The threshold value for interruption will be average hourly net generation below 2250 megawatt-hours per hour. Authority will provide Customer with two (2) business days' notice of interruptions, including a list of NYPA holidays. With respect to the notice discussed in this subsection and for other notices related to generation levels at the Hydro Projects, the document "NIA & STL Generation and DAM Scheduling for Alcoa and Reynolds, Hydro Notification Procedures ("Notification Procedures"), as it may be modified from time to time by agreement between the Parties, shall apply.
- C. Upon written request by the Customer, Authority will provide Substitute Energy to the Customer to replace the hydroelectricity that would otherwise have been supplied.**
- 1. Billing for Substitute Energy.** For each kilowatt-hour of Substitute Energy so supplied by Authority, the Customer will pay Authority directly the difference between the average wholesale cost (including any transmission costs) incurred by Authority for supplying the Substitute Energy to the Customer during the

billing month and the energy charge in ST-22 (the Difference). Billing and payment for Substitute Energy shall be governed by the Billing and Payments provision of Section 454.6 of the Rules and shall apply directly to the Substitute Energy service supplied to the Customer.

2. Substitute Energy Provision Effect on Contract. All other provisions of the Agreement shall continue in effect with Substitute Energy being delivered in the same manner as would have otherwise been the case. The provision of Substitute Energy may be terminated by Authority or the Customer on fifteen (15) days' prior written notice.

## **VII. Billing**

Authority shall render bills for power and energy and any other costs incurred by Authority on behalf of Customer by the 10<sup>th</sup> business day of the month for charges due for the previous month. Such bills shall include the NYISO Charges (as defined in Authority's ST-22) associated with the Allocation, subject to later adjustment consistent with any later NYISO re-billings to Authority.

## **VIII. Term, Termination of Service and Early Termination**

Service under the Agreement shall commence on July 1, 2013 and continue until the earliest of (a) termination by Authority pursuant to Part 454 of the Rules upon required notice, or (b) June 30, 2043. Authority may cancel service hereunder or modify the quantities of power and energy associated with the Allocation only (a) if such cancellation or modification is required to comply with any unstayed ruling, order or decision of any regulatory or judicial body of competent jurisdiction (including any licensing or re-licensing order or orders of the FERC or its successor agency), or (b) as otherwise provided herein or in the Rules.

Notwithstanding the foregoing, if Customer (a) fails to complete a detailed engineering study of its proposed Rebuilding of the East Plant by January 29, 2010, (b) fails to approve the expenditure of at least \$600 million for the Rebuilding of the East Plant, or (c) if having completed such detailed engineering study and approved the expenditure of at least \$600 million for the Rebuilding of the East Plant, then fails to invest such funds, Authority may terminate this Agreement immediately upon ninety (90) days' written notice. Provided it has approved the expenditure of at least \$600 million for the Rebuilding of the East Plant as discussed in this paragraph, Customer agrees to diligently and in good faith complete the capital investments in a timely manner and on the schedule to be provided to Authority upon completion of the detailed engineering study, all in compliance with Schedule A of this Agreement.

Notwithstanding the foregoing, and in the event the Agreement is not otherwise terminated and Customer is not in default, the Customer will have the option to extend the Agreement, upon the same terms, for an additional ten (10) years

commencing July 1, 2043 and ending on June 30, 2053, if the difference between the annual LME "cash buyer" price (defined using a 12-month rolling average) and the numbers of curtailed days, as calculated on Appendix C to this Agreement for the period July 1, 2013 through June 30, 2039, is less than zero. Alcoa shall exercise such option in writing no later than December 31, 2040. The escalator used to adjust nominal LME prices back to 2008 dollars will be PPI—Finished Goods (U.S. Department of Labor, BLS Series ID WPUSOP3000). The LME Variable defined and used in Appendix C will be a function of the total capital expenditures that Customer makes in both the East Plant and West Plant as part of the modernization of East Plant ("Modernization Capital Expenditures"). Customer agrees to maintain all documentation that supports the Modernization Capital Expenditures that Customer invests in these facilities, including both the planned investment and the actual investment, and to provide Authority such documentation upon request. When calculating the total Modernization Capital Expenditures for the purposes of determining the LME Variable (2008\$) to be used in Appendix C, Customer and Authority will use the planned capital expenditures and not the actual capital expenditure; planned capital expenditures are defined as the authorized capital expenditure that Customer management approves using its standard approval policies when a project is released for construction and will not include project cost over-runs.

Notwithstanding any other provision of this Agreement to the contrary, Customer may, for any reason, permanently reduce or terminate service at any time on written notice given to Authority no less than one year in advance.

#### **IX. Notification**

Correspondence involving the administration of this Agreement shall be addressed as follows:

To: Authority

Director -- Marketing Analysis and Administration  
New York Power Authority  
123 Main Street  
White Plains, NY 10601

To: Customer

Alcoa Inc.  
Attention: Vice President -- Energy  
390 Park Avenue  
New York, NY 10022-4608

#### **X. Applicable Law**

This Agreement shall be governed by and construed in accordance with the laws of the State of New York to the extent that such laws are not inconsistent with the FERC License.

#### **XI. Successors and Assigns, No Resale of Allocation**

This Agreement shall be binding upon, shall inure to the benefit of, and may be performed by, the legal successors and assigns of either Party hereto; provided, however, that no assignment by either Party or any successor or assignee of such Party of its rights and obligations hereunder shall be made or become effective without the prior written consent of the other Party, which the other Party shall grant or refuse in writing within ninety (90) days of a written request for assignment by the first Party. Subject to approval by Authority, and acceptance of all provisions of this Agreement by any assignee, any assignment of this Agreement by Customer shall only be to another entity that will utilize the Allocations for the same purposes and same location as such Allocations are utilized by Customer. If Customer is unable to or does not use any portion of its Allocations for any period of time, in addition to any remedies available to Authority under Schedule A (Capital Investment, Employment, Power Utilization Commitments and North Country Economic Development Fund) any such unused Power and/or Energy (and all rights attendant thereto) shall revert to Authority for its exclusive use until utilized by Customer and Customer shall have no right to sell, transfer, assign, monetize or otherwise use such unutilized power and energy.

#### **XII. Supplementary Provision**

Section 454.2(c) of the Rules is inapplicable to this Agreement.

#### **XIII. Previous Agreements and Communications**

This Agreement shall constitute the sole and complete agreement of the Parties hereto with respect to the sale, transmission and delivery of the Allocation and supersedes all previous communications between the Parties hereto, either oral or written, with reference to said Allocation. No modifications of this Agreement shall be binding upon the Parties hereto or either of them unless such modification is in writing and is signed by a duly authorized officer of each of them.

#### **XIV. Severability and Voidability**

If any term or provision of this Agreement shall be invalidated, declared unlawful or ineffective in whole or in part by an order of the FERC or a court of competent

jurisdiction, such order shall not be deemed to invalidate the remaining terms or provisions hereof.

Notwithstanding the preceding paragraph, if any provision of this Agreement is rendered void or unenforceable or otherwise modified by a court or agency of competent jurisdiction, the entire Agreement shall, at the option of either Party and only in such circumstances in which such Party's interests are materially and adversely impacted by any such action, be rendered void and unenforceable by such affected Party.

#### **XV. Effectiveness of Agreement**

This Agreement shall become effective upon execution by both Parties.

AGREED:

**ALCOA INC. (CUSTOMER)**

BY: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

(Seal)

Attest by: \_\_\_\_\_

AGREED:

**NEW YORK POWER AUTHORITY**

BY: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

(Seal)

Attest by: \_\_\_\_\_



## Schedule A

### **CAPITAL INVESTMENT, EMPLOYMENT, POWER UTILIZATION COMMITMENTS AND NORTH COUNTRY ECONOMIC DEVELOPMENT FUND**

#### **I. Capital Investment**

Customer's Board of Directors shall take action on the investment of at least \$600 million in the Rebuilding of the East Plant by January 29, 2010. Customer shall provide Authority with the construction schedule (which shall include a projected "completion date") within 10 days of the issuance of such notice to proceed, and construction shall begin prior to June 30, 2011. Customer shall be required to provide Authority with detailed reports of the construction process on a monthly basis, or as otherwise mutually agreed.

If:

- A. The completion date of the Rebuilding of the East Plant is delayed by more than six (6) months for reasons reasonably within the control of Customer and assurances reasonably acceptable to Authority are not provided; or
- B. If at any time, construction activity at the site of the East Plant is not active and continuous and there is no reasonable prospect of completion of the Rebuilding of the East Plant; or
- C. Customer publicly announces its intention to abandon the Rebuilding of the East Plant or otherwise informs Authority that it plans to permanently discontinue construction activities,

then this Agreement may be terminated immediately by Authority upon ninety (90) days written notice.

#### **II. Employment Commitment**

##### **A. Employment Levels.**

The provision of Firm and Interruptible Power to Customer hereunder is in consideration of Customer's creation and/or maintenance of the employment level set forth in Appendix 1 of this Schedule (the "Base Employment Level"). Such Base Employment Level shall be the number of full-time positions held by employees of the Customer at the facilities identified in such Appendix 1, and shall not include part-time employees (less than 35 hours per week); provided, however, that two part-time

## Schedule A

employees each working 20 hours per week or more shall be counted as one full-time employee.

The Base Employment Level shall not be created or maintained by transfers of employees from previously held and then eliminated positions with the Customer or its affiliates within the State of New York, except that the Base Employment Level may be filled by employees of the Customer laid off from other Customer facilities for bona fide economic or management reasons.

### B. Employment Records and Reports.

A record shall be kept monthly by the Customer, and provided on a calendar year basis to Authority, of the total number of employees at Customer's facilities identified in Appendix 1, as reported to the United States Department of Labor (or as reported in such other record as agreed upon by Authority and the Customer). Such report shall be certified to be correct by the plant manager or such other person authorized by the Customer to prepare and file such report and shall be provided to Authority on or before the last day of February following the end of the most recent calendar year. Authority shall have the right to examine and audit on reasonable advance written notice all non-confidential written and electronic records and data concerning employment levels including, but not limited to, personnel records and summaries held by the Customer and its affiliates relating to employment in New York State.

## III. Reductions of Contract Demand

### A. Employment Levels.

If the year-end monthly average number of employees is less than 95% of the Base Employment Level set forth in this Schedule A, for the subject calendar year and is not temporary in nature and being actively addressed by Customer, the Contract Demand may be reduced by Authority subject to Paragraph III.C of this Schedule. The maximum amount of reduction will be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average monthly employment during the subject calendar year divided by the Base Employment. Temporary decreases in employment resulting from production curtailment due to prolonged firm and/or interruptible power curtailment by Authority shall not be counted for the purpose of this provision. Any such reduction shall be rounded to the nearest fifty (50) kW. In the event of a reduction of the

#### Schedule A

Contract Demand to zero, this Agreement shall automatically terminate.

Customer shall provide Authority with 3 months notice of any anticipated, significant reduction in employment at either its East Plant or West Plant of at least 6 months duration.

B. Power Utilization Levels.

A record shall be kept monthly by the Customer, and provided on a calendar year basis to Authority on or before the last day of February following the end of the most recent calendar year, of the maximum demand utilized each month in the facilities receiving the power covered by this Agreement. If the average of the Customer's six (6) highest Billing Demands is less than 95% of Customer's Contract Demand in such calendar year, adjusted for prolonged firm and/or interruptible power curtailment by Authority, Authority may reduce the Contract Demand. The maximum amount by which Authority may reduce the Contract Demand shall be determined by multiplying the Contract Demand by the quantity one minus the quotient of the average of the six (6) highest Billing Demands in such calendar year divided by the Contract Demand. Any such reduction shall be rounded to the nearest megawatt. If the Contract Demand is reduced to zero, this Agreement shall automatically terminate.

C. Notice of Intent to Reduce Contract Demand.

In the event that Authority determines that the Contract Demand will be wholly or partially reduced as provided above, at least ninety (90) days prior written notice of such reduction shall be given to the Customer, specifying the amount of the reduction of Contract Demand and the reason therefore provided, however, that before making the reduction, Authority may consider Customer's scheduled or unscheduled maintenance or facilities upgrading periods when such events temporarily reduce plant employment levels or electrical demand as well as business cycle.

IV. North Country Economic Development Fund

Customer shall capitalize a \$10 million North Country Economic Development Fund ("NCEDF") within ninety (90) days of the date upon which its Board of Directors approves the Rebuilding of the East Plant. The NCEDF will be exclusively used for economic development purpose in St. Lawrence County, Franklin County, Essex County, Jefferson County, Lewis County, Hamilton County, Herkimer County and the

---

Schedule A

Akwasasne Mohawk Reservation. Disbursements from this fund will be made public on a quarterly basis or more frequently as may be required by law then in effect. The NCEDF will be jointly administered by NYPA and an entity of or specified by the State of New York.

APPENDIX 1  
of SCHEDULE A

Base Employment Level

In accordance with Article II of this Schedule A and as shown in the table below, the Customer agrees to a job commitment of 1,065 jobs beginning in 2008, to be no less than 900 over the term of the Agreement, located at the existing West Plant and the re-built East Plant, each in Massena, New York or otherwise located in St. Lawrence County, New York and shall include annual job reporting by Customer to Authority.

<u>Years</u>	<u>Labor Commitment</u>
2008-13	1,065
2014-20	1,050
2021-25	1,000
2026-36	950
2037-42	900

**AUTHENTICATED**

**ADMINISTRATOR'S  
RECORD OF DECISION**

**POWER SALES AGREEMENT  
OFFER TO ALCOA, INC.**

---

December 6, 2012

---



## TABLE OF CONTENTS

I.	INTRODUCTION .....	1
II.	BACKGROUND .....	2
	a. 2009 Agreement.....	2
	b. <i>Alcoa v. BPA</i> .....	2
III.	POLICY DISCUSSION.....	5
	1. Sales to Alcoa will have a downward impact on rates for future rate periods.....	5
	2. The Agreement will guarantee a revenue stream based on the IP rate, the statutorily defined rate for DSI sales. ....	5
	3. A shorter term contract was not possible given Alcoa’s access to more attractive alternative power supplies for a shorter term.....	5
IV.	THE EQUIVALENT BENEFITS DETERMINATION FOR THE PERIOD BEGINNING JANUARY 1, 2013, THROUGH SEPTEMBER 30, 2022 .....	6
	a. Models and Data Used in EBT for the Agreement .....	6
	b. IP Rate Forecast Used in EBT for the Agreement.....	7
	c. BPA expects to be surplus during the Agreement Period.....	7
	d. Economic benefits to BPA will equal or exceed costs for the period of the Agreement.....	9
	e. Forecast of revenues that would be obtained by selling an equivalent amount of surplus power.....	11
	f. Calculation of the net financial value of tangible economic benefits of selling power to Alcoa which would not be obtained by selling an equivalent amount of power on the market.....	11
	g. Conclusion of Equivalent Benefits Test .....	14
V.	RESPONSE TO COMMENTS: SPECIFIC CONTRACT ISSUES .....	14
	a. Whether the ten year term of the Agreement is reasonable and consistent with sound business principles.....	14
	b. Whether the termination and curtailment provisions of the Agreement are appropriate. ....	22
	c. Whether section 15.2, Uncontrollable Forces, should be adjusted in response to comments received. ....	24
	d. Whether section 5.5, No Purchases from Third Parties During Curtailment, should be changed in response to comments received.....	25
	e. Whether section 19.2, BPA’s Right to Terminate, should be changed in response to comments received. ....	26
	f. Whether clarification of the effect of a court ruling that partially invalidates the Agreement is needed.....	27
	g. Whether Section 18.11, Waiver of Damages, should be included in the Agreement.....	28
	h. Whether Section 11, Employment Levels, should be included in the Agreement.....	30
	i. Whether BPA should include the capital investment requirement in the Agreement.....	32

VI.	RESPONSE TO COMMENTS: GENERAL POLICY COMMENTS.....	34
a.	Whether the EBT should be revised to measure actual benefits.....	34
b.	Whether continued service to Alcoa will exacerbate PSANI transmission congestion. ....	35
c.	Whether the Agreement should be BPA’s last contract for service to Alcoa. ....	37
d.	Whether BPA is offering the Agreement “solely because Alcoa sued the agency on the Residential Exchange Settlement Agreement.” .....	39
XI.	ENVIRONMENTAL EFFECTS .....	41
X.	CONCLUSION.....	42



**POWER SALES AGREEMENT OFFER TO  
ALCOA, INC.  
ADMINISTRATOR'S RECORD OF DECISION**

**December 6, 2012**

**I. INTRODUCTION**

On December 7, 2012, the Bonneville Power Administration (BPA) will sign a Power Sales Agreement, BPA Contract Number 13PM-10978 (Agreement), with Alcoa, Inc. (Alcoa), for power service to Alcoa's Intalco Plant in Ferndale, Washington. This Agreement provides 300 aMW of electric power to Alcoa's Intalco Plant for a term of nine years and nine months<sup>1</sup>, from January 1, 2013, until September 30, 2022, at BPA's industrial firm power rate (IP rate).

Prior to making its final determination to enter into the Agreement, BPA provided an opportunity for public review and comment on the draft Agreement and BPA's evaluation of the economic benefits and costs of serving Alcoa ("Equivalent Benefits Test" or "EBT"). The methodology and results of the EBT analysis are fully discussed in section IV. The public review and comment period began on October 9, 2012, and continued through November 7, 2012. BPA received 73 comments during this public comment period including comments from individuals, public power interest groups, and Alcoa.

This Record of Decision (ROD) documents BPA's conclusion that offering a tenyear contract for the sale of power to Alcoa at the IP rate is consistent with BPA's legal authorities and sound business principles. First, the EBT analysis forecasts that BPA will derive significant financial benefit from the contract. Second, due to BPA's rate-making requirements, a sale at the IP rate will assure that BPA recovers its costs for the entire term of the contract. Third, the ten-year term of the contract is within the parameters established by Congress for service to Direct Service Industry (DSI) customers pursuant to the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) and consistent with standard industry practices. Finally, Alcoa was clear during negotiations that, due to the company's ability to obtain power at a lower price than IP for several years, any offer of a shorter term contract would be rejected, and BPA would be deprived of the significant margin by which the IP rate exceeds forecasted market prices for the next several years. For these reasons, the Administrator determined that the Agreement is consistent with sound business principles, consistent with BPA's statutory authority, and a win-win proposition for BPA, Alcoa, and BPA's customers.

---

<sup>1</sup> The nine year nine month contract term will be rounded up to and referred to as ten years within this document for ease of reference.

## **II. BACKGROUND**

### **a. 2009 Agreement**

This Agreement will replace Alcoa's previous Power Sales Agreement, Contract No. 10PB-12175 (2009 Agreement). Under the 2009 Agreement, BPA agreed to sell Alcoa up to 320 aMW of firm power. The term of the 2009 Agreement was divided into four potential "periods": the Initial Period, the Extended Initial Period, the Transition Period, and the Second Period. The Initial Period began December 22, 2009, and ran through May 26, 2011. The 2009 Agreement contained an option for Alcoa to request an Extended Initial Period. BPA determined that it would be consistent with sound business principles to offer Alcoa an Extended Initial Period of twelve months, from May 27, 2011, to May 26, 2012, and documented that option in an accompanying Record of Decision. *See Administrator's Record of Decision Granting Alcoa's Request to Extend the Initial Period of Alcoa's Power Sales Agreement, Contract No. 10PB-12175, Oct. 29, 2010 [hereinafter Alcoa Extension ROD].*

The occurrence of the Transition and Second periods of the 2009 Agreement depended on the United States Court of Appeals for the Ninth Circuit (Court) issuing an opinion, prior to May 26, 2012, holding that the EBT standard does not apply to power sales under the 2009 Agreement. As the May 26 deadline approached and the Court had not issued an opinion, it appeared that the 2009 Agreement was likely to expire by its own terms. Therefore, Alcoa and BPA agreed to begin negotiations on a new power sales agreement. To provide the parties with adequate time to negotiate, Alcoa and BPA entered into a series of short-term extensions to the 2009 Agreement, based upon new EBT determinations by BPA. Because the new agreement would replace the 2009 Agreement, the parties also agreed to amend the 2009 Agreement to remove the contingent Transition and Second periods.

### **b. *Alcoa v. BPA***

On January 22, 2010, Alcoa filed a petition for review in the Ninth Circuit challenging (a) the 2009 Agreement, and (b) BPA's Record of Decision in support of the 2009 Agreement, dated December 21, 2009. *See Power Sale to Alcoa Inc. Commencing December 22, 2009 Administrator's Record of Decision, Dec. 21, 2009 [hereinafter 2009 Alcoa ROD].* Petitions for review challenging the same actions were filed by the Pacific Northwest Generating Cooperative, the Public Power Council, Northwest Requirements Utilities, the Industrial Customers of Northwest Utilities, and Canby Utility Board (collectively, the preference customers). Avista Corporation, Portland General Electric, PacifiCorp, Idaho Power Company, Oregon Public Utilities Commission, and Puget Sound Energy intervened. All petitioners challenged BPA's interpretation of *PNGC I* and *PNGC II*, in particular BPA's development and application of the Equivalent

Benefits Test for purposes of determining whether the economics of the transaction are favorable to providing service to a DSI.

On October 16, 2012, the Ninth Circuit issued its decision in *Alcoa, Inc. v. Bonneville Power Administration (Alcoa)*, 698 F.3d 774 (9th Cir. 2012). The Court unanimously held that the Initial Period of the 2009 Agreement was consistent with BPA's statutory authorities and that BPA's rationale for entering into the 2009 Agreement was not arbitrary or capricious. *Id.* at 789. The Court addressed the numerous issues raised by the petitioners and held that "[a]ll these arguments are wrong." *Id.* at 785.

In particular, the Court stated that it would grant deference to BPA in making its business decisions when, as in this case, these decisions are supported in the administrative record. *Id.* at 789. The Court repeatedly stated that it would not second guess the wisdom of BPA's decisions, especially when BPA is making technical determinations within its particular area of expertise. *Id.* at 790.

With regard to the Second Period, the majority found that the Second Period was not reviewable, while the dissent determined that it should have been considered and set aside.

On November 30, 2012, Alcoa and the preference customers each filed a petition for rehearing.

### **1. The Initial Period**

As noted above, with respect to service during the Initial Period, the Court unanimously upheld BPA's determinations and rejected every challenge.

The preference customers argued that: (1) service to Alcoa at the IP rate during the Initial Period violated BPA's obligations to act in accordance with sound business principles by foregoing profits that could be made by selling surplus power on the market; (2) BPA's analysis was flawed and did not support a finding that BPA would make a modest profit; and (3) the damage waiver provision of the contract violated BPA's statutory and constitutional authorities. *Alcoa* at 788. Alcoa argued that BPA's decision to adopt the EBT was arbitrary and capricious because the EBT is too restrictive and imposes a rigid test that is not required by case law or statute. *Id.*

In response to the preference customers' arguments that BPA violated sound business principles by selling power to Alcoa at the IP rate rather than into the market at market rates, the Court held that "[w]e disagree that BPA is required to maximize its profits . . . . As we have previously noted, BPA's governing statutes 'do not dictate that BPA always charge the lowest possible rates.'" *Id.* at 789. The Court further noted:

In light of the deference we are to give BPA, we cannot say that BPA's decision to enter into the [2009 Agreement] was so arbitrary and capricious as to violate its statutory obligation.

*Id.* The Court found that BPA was selling power at the IP rate as required by statute, it anticipated earning a modest profit, and there was no evidence to support the claim that BPA was subsidizing Alcoa. *Id.*

Next, the Court turned to the arguments that BPA's EBT was flawed. The Court noted that "[w]e again approach these methodological challenges with deference to BPA's decision making." *Id.* at 790. The Court reviewed the petitioners' multiple challenges to virtually every facet of BPA's analysis and determined that BPA responded to all of these issues in the administrative record and fully explained its rationale:

In sum, BPA's analysis of these issues was thorough. No factor or argument identified by the petitioners went unaddressed in the ROD, and all of BPA's explanations are plausible and rationally connected to the facts that were before it at the time.

*Id.* Similarly, the Court addressed and rejected PNGC's arguments that the 2009 Agreement was an effort by BPA to provide jobs: "The ROD expressly disclaimed reliance on job impacts as a factor in its decision and declined to include such impacts in its Equivalent Benefits Test. PNGC's speculation is an insufficient basis for upsetting the agency's contracting decision." *Id.* at 789.

Most notably, the Court declined to rule on whether the EBT "as an abstract proposition, is wholly in accord with BPA's governing statutes." *Id.* at 792. Rather, the Court explained that "we must evaluate whether BPA has violated its statutory obligation to adhere to sound business principles on a case-by-case basis." *Id.* In the case of the 2009 Agreement, based on the accompanying record, the Court found that BPA did not. *Id.*

The Court also addressed petitioners' challenges to the damage waiver provision of the 2009 Agreement, holding that the damage waiver provision does not violate either statutory or constitutional provisions. *Alcoa* at 791–92; *see infra* Part V.g. With respect to the former, the Court referred specifically to the Administrator's broad contracting and settlement authority.

## **2. Second Period**

The majority dismissed all challenges to service during the Second Period for lack of jurisdiction based on a confluence of jurisdictional defects involving standing, ripeness, and mootness. *Alcoa* at 793–94. The Court found that service during the Second Period was strictly contingent on events that may never happen, and after the May 2012 amendment to the contract, would never happen. *Id.* Therefore, the Court held that any potential injury to petitioners was too remote and speculative to justify invoking the jurisdiction of the Court to review this portion of the contract. *Id.* The dissenting judge rejected the majority's perspective and would have set aside the Second Period, even though it had already been cancelled by agreement of the parties.

### **3. NEPA Claims**

The Court rejected arguments that BPA violated NEPA by preparing a categorical exclusion rather than an Environmental Impact Statement (EIS) on the power sale. *Alcoa* at 794–96. The Court held that BPA correctly invoked the relevant categorical exclusion in the 2009 Alcoa ROD as well as explaining the reasons for its reliance on the categorical exclusion and BPA’s decision to satisfy NEPA through a categorical exclusion was not arbitrary and capricious. *Id.*

### **III. POLICY DISCUSSION**

The Agreement will provide numerous benefits, as more fully described in the next sections. At the outset, however, understanding the reasonableness of the Administrator’s decision requires consideration of two key economic factors and a practical assessment of two businesses conducting arm’s length negotiations with the goal of reaching a final agreement that provides value to both parties:

#### **1. Sales to Alcoa will have a downward impact on rates for future rate periods.**

Given expected economic conditions in the power market for the next several years, the IP rate is likely to remain well above the market price of power for quite some time. *See infra* section IV.b. During this time, BPA will earn greater revenues from selling 300 aMW of power to Alcoa than it would from selling that power on the market. The economic advantage of making this sale will keep BPA’s rates lower than they would have been otherwise for the next several rate periods and better enable BPA to recover its costs. Therefore, even though BPA is not statutorily obligated to maximize profit, BPA’s decision to offer this Agreement will promote BPA’s ability to achieve the “lowest rates possible consistent with sound business principles” and meet its cost-recovery responsibilities. Federal Columbia River Transmission System Act of 1974, 16 U.S.C. §§ 838–838h, 838g; Northwest Power Act, 16 U.S.C. § 893e(a)(1).

#### **2. The Agreement will guarantee a revenue stream based on the IP rate, the statutorily defined rate for DSI sales.**

Assuming the Agreement is performed for its entire term, BPA will receive a guaranteed revenue stream based on the IP rate. The IP rate is established pursuant to BPA’s statutory rate-making authority and is currently adjusted every two years. BPA’s ability to adjust the rate in this manner will mitigate any market uncertainties in the longer term and support BPA’s Treasury payment obligation and statutory obligation to recover its costs. BPA’s statutory authority to adjust the IP rate for power service provided under the Agreement is unaffected by the Agreement.

#### **3. A shorter term contract was not possible given Alcoa’s access to more attractive alternative power supplies for a shorter term.**

Because market prices for energy are currently below the IP rate, Alcoa has access to other power suppliers that are willing to offer prices and terms that are more favorable to Alcoa than those offered by BPA. In negotiations, Alcoa maintained that it could make a market purchase for seven years that would be preferable to purchasing from BPA. BPA staff found that assertion to be credible. Thus, negotiations quickly turned to the possibility of a ten year contract—even though Alcoa would have preferred a still longer term—which would allow BPA to earn greater revenues during the first two to five years of the contract and provide a predictable revenue stream during the later years.

Ultimately, the Administrator determined that the ten-year term of the Agreement serves BPA's business interests and the interest of BPA's preference customers.

#### **IV. THE EQUIVALENT BENEFITS DETERMINATION FOR THE PERIOD BEGINNING JANUARY 1, 2013, THROUGH SEPTEMBER 30, 2022**

BPA developed the Equivalent Benefits Test in response to *Pacific Northwest Generating Cooperative v. Department of Energy (PNGC I)*, 550 F.3d 846 (9th Cir. 2008), *amended on denial of reh'g*, 580 F.3d 792 (9th Cir. 2009), and *Pacific Northwest Generating Cooperative v. Bonneville Power Administration (PNGC II)*, 580 F.3d 828 (9th Cir. 2009), *amended on denial of reh'g*, 596 F.3d 1065 (9th Cir. 2010), to determine whether a power sale to serve a DSI customer is consistent with sound business principles. The EBT is a tool used by the Administrator to determine whether the economic benefits to BPA of serving the DSI load are forecast to equal or exceed BPA's cost of serving the load during the period of service. *See* Alcoa ROD at 8–9; *see also* 20.5 aMW Power Sale to Port Townsend Paper Company for the Period November 15, 2009 through December 31, 2009, Administrator's Record of Decision, released November 13, 2009 [hereinafter Port Townsend ROD].

BPA's EBT evaluation shows that BPA can supply firm power to Alcoa for the proposed term under most water conditions. In determining its forecast of positive net benefits from providing service to Alcoa for the full term of the contract, BPA followed the steps described below. As in prior EBT analyses, BPA's methodology for making this determination is based, to the extent possible, on modeling tools used in BPA's rate cases. The rate case process includes discovery, testimony, rebuttal testimony, and cross examination prior to a final determination by the Administrator. BPA believes this process enhances the reliability of the modeling tools.

##### **a. Models and Data Used in EBT for the Agreement**

In prior analyses of equivalent benefits, BPA employed rate case models and data from the most current BPA rate proceeding. This was possible because prior EBTs resulted in relatively short contract terms. Due to current market conditions, which have been particularly impacted by low natural gas prices, the EBT analysis shows that the power sale will provide economic benefits to BPA beyond the current rate period.

As a consequence, this EBT extends beyond the range of the modeling tools and methodologies used in the BP-12 rate proceeding. Therefore, BPA used data and methodologies from the BP-12 rate proceeding for the EBT through September 30, 2013, and thereafter, to the extent possible, BPA used values and methodologies from the REP-12 rate proceeding through September 30, 2022, including escalation factors from October 1, 2017, through September 30, 2022. The REP-12 rate proceeding followed all the procedural safeguards of all other rate proceedings, such as discovery, testimony, rebuttal testimony and cross-examination, as required by Section 7(i) of the Northwest Power Act.

**b. IP Rate Forecast Used in EBT for the Agreement**

In prior analyses of equivalent benefits, BPA has assumed that IP rates remain unchanged for the entire term of the Agreement. *See* Alcoa Extension ROD at 7–9. BPA does not believe that this assumption is reasonable for a ten year contract term because holding the IP rate static does not account for the effects of BPA’s updated natural gas price forecast on the values of the secondary energy revenue credits, balancing power purchase expenses, augmentation expenses and 4(h)(10)(c) credits used when projecting BPA’s cost-based power rates. Therefore, in the EBT for the Agreement, BPA used an IP rate forecast that relies on models and cost inputs consistent with the REP-12 proceeding, which incorporates results of the completed 7(i) process, and agency decisions regarding capital and program spending as of the completed 2010 Internal Program Review (IPR). BPA has incorporated all assumptions as used in the REP-12 proceeding with the exception of revisions impacted by the updated natural gas price forecast. BPA’s methodology for determining the IP rate forecast is further explained in section IV.d below.

**c. BPA expects to be surplus during the Agreement Period**

BPA does not forecast the need to make purchases specifically to serve Alcoa during the Agreement under most water conditions. BPA has forecast a need to make some power purchases, including some normal “balancing” purchases in some months, to meet its total load obligations during the remainder of FY 2013 through September 30, 2022, particularly under critical water conditions.<sup>2</sup>

BPA’s most recent load and resources studies are contained in the *2011 Pacific Northwest Loads & Resources Study* (the “2011 White Book”), which forecasts loads and resources for both the federal system and the region as a whole for the 10-year period (Operating Years (OY) 2012–2021). BPA is forecast to have a surplus on an average annual basis under the middle 80 percent of historical water conditions for OY 2012 through OY 2021

---

<sup>2</sup> Balancing purchases are market purchases that BPA makes either before or within a particular month in order to balance its forecast load and resource position within that month. Whether BPA makes any balancing purchases, and in what amounts, is dependent, among other things, on updated water flow forecasts which inform the amount of hydroelectric generation that can be expected in the month, and on within-month weather conditions impacting BPA customer load levels.

as illustrated in Figure 1 below.<sup>3</sup> The 2011 White Book forecast includes 340 aMW of service to the DSIs through September 30, 2017. Using the same studies used to compile the 2011 White Book, the values for the average middle 80% water conditions in OY 2022 and OY 2023, are 1,243 aMW and 1,090 aMW of surplus power, respectively.

**Figure 1 – Excerpt from 2011 White Book**

***Potential Variability of Annual Federal Energy Surplus/Deficit Projections***

To illustrate the potential variability of annual Federal system energy surpluses and deficits for OY 2012 through 2021, this study compares different scenarios using varying levels of Federal system generation based on water conditions, normal weather conditions, and do not reflect future climate change impacts. Table 8, below, compares the annual Federal system surpluses and deficits under four resource scenarios: 1) 1937-critical water conditions (the base case of this study); and the averages of 2) the bottom ten percent; 3) the middle 80 percent; and 4) the top ten percent of the historical 70-water year conditions (1929 through 1998).

Table 8										
Potential Variability of Annual Federal Energy Surplus/Deficit										
For OY 2012 through 2021										
Utilizing Differing Water Conditions										
Operating Year	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
1937-Critical Water Conditions	-257	-92	-29	-266	-194	-401	-56	-192	-85	-250
Average Bottom 10% Water Conditions	-285	-104	-41	-281	-208	-414	-70	-206	-99	-263
Average Middle 80% Water Conditions	1,199	1,332	1,370	1,121	1,197	992	1,332	1,202	1,305	1,144
Average Top 10% Water Conditions	2,686	2,792	2,798	2,538	2,618	2,388	2,749	2,599	2,726	2,541

2011 White Book at 39, tbl.8; *see also* Exhibits 11–12 at 104–11.

The term of the Agreement includes: 7 months in OY 2013, all months in OY 2014 through OY 2022; and 2 months in OY 2023. The 300 aMW of power that will be sold to Alcoa under the Agreement represents approximately twenty-two percent of the forecast surpluses. As also illustrated, the 2011 White Book reflects a deficit on an average annual basis under extremely low water conditions, the 1937-Critical Water Conditions, during OY 2012 through OY 2021 respectively, and does so assuming 340 aMW of service to the DSIs through September 30, 2017. *See* 2011 White Book at 39.

While BPA has established a portion of its costs for the period of the BP-12 rate proceeding based on 1937-Critical Water Conditions, the secondary energy revenue credits, balancing power purchase expenses and 4(h)(10)(c) credits for the same period were set based on average values for the 70 water years. *See* BP-12-FS-BPA-03A at 138–139 (regarding Critical Water Conditions); BP-12-FS-BPA-04A at 45–46, tbls.19 &

<sup>3</sup> Operating Year (OY) in the 2011 White Book is the 12-month period August 1 through July 31. For example, OY 2012 is August 1, 2011, through July 31, 2012.



20, (regarding Secondary Sales revenues and Balancing Purchase costs); BP-12-FS-BPA-04A at 40, tbl.16 (regarding 4(h)(10)(c) credits).

For rate design and rate calculation purposes Power Services set power rates by allocating the costs of resources to loads and assumes firm resource availability under critical water. If firm resources are inadequate, it is assumed that the shortfall will be met by augmentation purchases, with these costs being recovered from both Slice and Non-Slice customers. When computing the PF and IP rates, additional adjustments are made to account for secondary energy revenue credits, balancing power purchase expenses and 4(h)(10)(c) credits, which are based on average values for the 70 water years. While this is the approach used for rate setting purposes, Power Service's marketing decisions in its typical operations are seldom conducted based on hydro generation under critical water conditions. The approach used in the EBT analysis is more aligned with expected conditions, and how Power Services would actually serve the Alcoa load, and is therefore a reasonable approach.

In sum, this analysis of the Equivalent Benefits Test is reasonably based on BPA's foregoing forecasts of for OY 2013 through OY 2021 in the 2011 White Book (Average Middle 80% Water Conditions) and BPA's Final Proposals in the BP-12 and REP-12 rate proceedings. BPA does not anticipate the need to alter its purchasing strategy for the power sold to Alcoa during the term of the Agreement.

Some parties expressed concern about BPA's use of the above forecasts in the EBT. *See, e.g.,* WGMT at 1 ("Under critical streamflow and the bottom 10% of water conditions, BPA faces an energy deficit that could exceed 400 MW. With a contract extending nearly ten years, the risk associated with energy deficits and the associated rate impacts are transferred to preference customers."). For the most part, these concerns are the same as those raised in connection with the prior 2009 Agreement. As was the case in that proceeding, BPA has fully considered relevant information. *See Alcoa* at 790 (rejecting the argument that BPA was arbitrary and capricious in its consideration of how weather and water flows would affect its profits during the Initial Period of the 2009 Agreement and holding that BPA "gave adequate consideration to these matters"). Moreover, BPA has explained above why its assumptions in this connection are reasonable and appropriate. Finally, commenters' concerns about the additional risk posed by the ten year term of the Agreement are addressed below in section V.a.

**d. Economic benefits to BPA will equal or exceed costs for the period of the Agreement**

BPA forecasts that the economic benefits it will accrue from the sale of 300 aMW of firm power to Alcoa at the IP rate, under the Agreement, will exceed by approximately \$89,905,111.00 the forecasted benefits BPA could otherwise obtain from selling that power into the market. *See* Attachment A, tbls.3–8. BPA notes that more than half of these benefits (\$48,633,782) are projected to accrue between the beginning of the Agreement and the end of BPA's next rate period (September 30, 2015). *See* Attachment A, tbl.6. Thus, the Agreement provides a stable revenue stream to hedge against low

natural gas and electricity prices and any associated low secondary revenues throughout the next rate period. This stable revenue stream continues throughout the entirety of this Agreement, further hedging against variability in BPA's secondary revenues by fixing a guaranteed revenue stream and helping to make BPA's rates more stable and predictable.

Consistent with BPA's EBT methodology established in the Alcoa ROD and the Port Townsend ROD, BPA's projected monthly revenues are determined by multiplying the heavy load hour (HLH) and light load hour (LLH) energy entitlements and demand entitlement by their respective IP rate components for each month. This analysis uses the IP-12 energy and demand rates estimated by the Rates Analysis Model (RAM) and adopted in the BP-12 rate proceeding through September 30, 2013. Thereafter, BPA's updated forecast of IP rates follows the methodology and inputs established in the REP-12 rate proceeding (REP-12).<sup>4</sup> Forecasted IP rates from FY 2014 to FY 2022 were recalculated in the Long-Term Rates Model (LTRM) using the inputs for REP-12 and revised surplus energy revenues, balancing purchase expenses, augmentation expenses, and 4(h)(10)(c) credits estimated by RiskMod for FY 2014–FY 2017. These updated values for 4(h)(10)(c) credits from RiskMod were based on updated spot market electricity prices (modeled by AURORA) associated with BPA's updated natural gas price forecast discussed in Attachment B.

Surplus energy revenues, balancing purchase expenses, augmentation expenses, and 4(h)(10)(c) credits for FY 2018–22 were derived by escalating the FY 2017 values using the Common Agency Assumption<sup>5</sup> forecast for inflation, plus 2%, as was done in the REP-12 proceeding. *See* REP-12-FS-BPA-01 at 69. The monthly–diurnal shape computed for FY 2012–13 in the BP-12 case was then imposed upon the annual rate forecast from the LTRM to create a monthly–diurnal forecast for the IP rate through the 10-year term. The annual growth rate implied by the change in the annual IP rate was applied to the known monthly–diurnal rates for FY 2012–13 from BP-12. *See* Attachment A, tbls.1 & 2 (reporting the IP rate forecast adopted in REP-12 and the IP rate forecast used in the EBT analysis for the Agreement).

BPA has calculated revenues under the Agreement based on a sale of 300 aMW of firm power each hour to Alcoa under the IP rate schedule beginning January 1, 2013, and ending September 30, 2022. *See* Attachment A, tbl.3. The energy and demand entitlements are the projected amounts to be sold by diurnal period each month in the Agreement. Since under the Agreement BPA expects to make 300 aMW available each

---

<sup>4</sup> The BP-14 Initial Proposal, released on November 14, 2012, contains an updated forecast that was developed for the upcoming rate case. Because this forecast was developed for the purpose of setting rates over a two year period and includes assumptions that are less conservative than those that went into the EBT, this forecast is less suitable for use in the EBT for the Agreement. In the interest of due diligence, however, BPA conducted an EBT analysis using the Initial Proposal numbers and determined that using this updated forecast in the EBT for the Agreement would not result in a shorter contract term. In fact, the forecast based on the Initial Proposal numbers showed a substantial increase in EBT benefits. Thus, the release of the Initial Proposal numbers does not affect BPA's decision to use the REP-12 forecasts for this EBT analysis.

<sup>5</sup> The Common Agency Assumption is a BPA forecast of various financial variables that is used by the Agency to produce a consistent economic view of the future.

month, 300 megawatts (MW) is the monthly demand amount specified in Table 3. BPA's projected monthly revenues are calculated using the IP rate components specified in Table 3, and then accumulated as illustrated in Table 4. *See* Attachment A, tbls.3 & 4.

**e. Forecast of revenues that would be obtained by selling an equivalent amount of surplus power.**

BPA routinely shapes its inventory to meet the need of its portfolio of contracts and sells its surplus inventory in the Pacific Northwest power market as described in BPA's BP-12 rate proceeding.<sup>6</sup> Additionally, BPA routinely forecasts Mid-Columbia trading hub (Mid-C) electricity prices consistent with the methodology described in the BP-12 rate proceeding to value these purchases and sales.<sup>7</sup>

In the absence of selling 300 MW of firm power to Alcoa in every hour, BPA would have one less firm power requirement sale in its aggregated portfolio load shape. Therefore, BPA assumes, for purposes of the EBT analysis, that it would have 300 aMW of surplus energy to sell in the market on an average annual basis. As illustrated in Attachment A, Table 5, BPA has forecast the revenues it would otherwise obtain from the market for the term of the Agreement using a forecast for the market price of electricity based on the methodology used in the BP-12 rate proceeding, the incorporation of BPA's updated natural gas price forecast, and the extension of the rate case methodology through September 30, 2022. *See* Attachment B, fig.1 (illustrating BPA's updated natural gas price forecast as compared to other recent forecasts of natural gas prices).

BPA determined its net benefit of serving Alcoa at the IP rate for each month by subtracting the forecasted opportunity cost of foregone surplus energy revenues detailed in Attachment A, Table 5, from the projected IP revenues described in Attachment A, Table 4. BPA's net benefit, before accounting for the benefits associated with adjustments described in section IV.f below, is illustrated in Attachment A, Table 6.

**f. Calculation of the net financial value of tangible economic benefits of selling power to Alcoa which would not be obtained by selling an equivalent amount of power on the market.**

Consistent with the methodology described in the 2009 Alcoa ROD and the Port Townsend ROD, BPA has identified a number of tangible economic benefits to BPA that would be achieved by selling 300 MW to Alcoa during the term of the Agreement which would not be achieved by selling an equivalent amount of power on the market. BPA conducted an economic analysis to determine the net value of those benefits.

---

<sup>6</sup> For a more complete description of the operating risk factors BPA faces in the course of doing business, refer generally to the *Power Risk and Market Price Study* in the BP-12 rate proceeding; and specifically to section 2.5.2 and section 2.6.3 for surplus energy sales and revenue. *See* BP-12-FS-BPA-04 at 37–39; 47–49.

<sup>7</sup> BPA employed its electricity price forecast for multiple purposes in the BP-12 rate proceeding as outlined in the *Power Risk and Market Price Study*. The study also details how BPA established its forecast of Mid-C electricity prices in the BP-12 rate proceeding. *See* BP-12-FS-BPA-04 at 15–36.

## **1. Value of Reserves**

Like Alcoa's previous contracts, the Agreement requires Alcoa to make supplemental operating reserves for power system contingencies available to BPA during the contract period. Such reserves would not be available from making a typical market sale. Sales at the IP rate reflect the value of BPA's right to obtain supplemental operating reserves.<sup>8</sup> Specifically, the energy rate tables in the IP-12 rate schedule adopted in the BP-12 rate proceeding include a \$0.94 per MWh credit for the value of these reserves. For this EBT, BPA used the value of reserves credit from the BP-12 rate proceeding for the EBT through September 30, 2013, and thereafter, BPA used the value of reserves credit from the REP-12 rate proceeding through September 30, 2022. Both the energy rate tables in the IP-12 rate schedule adopted in the BP-12 rate proceeding and the REP-12 rate proceeding include a \$0.94 per MWh credit for the value of these reserves.<sup>9</sup> Therefore, BPA's net benefit above compares a surplus power sale to a sale of power at the IP rate with reserves. BPA adjusted for this in each month through FY 2022 by adding back a value of reserves that provides an equal and opposite offset to the \$0.94 per MWh credit for the value of reserves in the IP-12 rate schedule. In other words, BPA has increased the IP rate by the value of reserves credit for purposes of this analysis so that the comparison to a surplus sale into the market is on an "apples to apples" basis. *See* Attachment A, tbl.7a.

## **2. Avoided Transmission and Ancillary Services Expenses**

When BPA makes a sale to a DSI, that DSI customer covers the cost of transmission and ancillary services through their own transmission contracts. Market prices, on the other hand, assume power is delivered by the seller to the Mid-Columbia trading hub (Mid-C); thus, the seller pays for the cost of transmission to that delivery point.

Power Services (PS), the organization within BPA that is responsible for the marketing of federal power, must pay the transmission and ancillary services costs to move surplus power to the Mid-C delivery point in order to realize the full market value for its surplus sales. PS maintains an inventory of transmission products and services to deliver the surplus power it intends to sell. However, this transmission product inventory is not sufficient to deliver all of the surplus power PS might sell under all load and resource conditions, especially during periods of high stream flows. As a result, there is a subset of load and resource conditions under which PS would incur incremental costs for transmission and ancillary services to deliver incremental surplus energy sales. The incremental transmission and ancillary services costs are avoided when BPA sells power to the DSIs because DSIs contract for their own transmission and ancillary services. The planned transmission and ancillary services expenses to address both the expected

---

<sup>8</sup> Sales at the IP rate require the provision of the DSI Minimum Operating Reserve – Supplemental. *See* 2012 Power Rates Schedules and General Rate Schedule Provisions, October 2011, at 21. The Agreement is a sale at the IP rate and, accordingly, Alcoa is required to make such supplemental operating reserves available to BPA, as specified in section 6.1 and Exhibit E to the Agreement.

<sup>9</sup> For the purposes of this EBT analysis, BPA has not forecast a change in the value of reserves credit to be included in future IP rate schedules.

expenses and their uncertainty were addressed in the WP-10 and BP-12 rate proceedings and are expected to be similarly addressed in each subsequent BPA rate proceeding.<sup>10</sup>

PS valued these avoided transmission and ancillary services costs for the period of the Agreement using the same methodology employed in the BP-12 rate proceeding to establish the total costs and risks associated with PS's inventory of transmission products and services.<sup>11</sup> For this EBT analysis, BPA has not forecast a change in the tariff costs even though there is a likelihood of a transmission rate increase sometime before September 30, 2022, especially considering BPA's recently proposed transmission rate increase for the next rate period.<sup>12</sup> BPA believes that this approach will produce the most conservative results under the EBT analysis.

In these computations, both fixed, take-or-pay costs and variable incremental transmission and ancillary services costs were computed under 3,500 load and resource conditions for each month. Incremental transmission and ancillary services costs were computed by comparing the amount of surplus energy available to the monthly excess amount of firm transmission products in the PS inventory.

BPA continues to value avoided transmission and ancillary services costs for the entire period of the Agreement using the tariff costs adopted by BPA's Transmission Services organization in the BP-12 rate proceeding.<sup>13</sup> These tariff costs were applied to the amount of surplus energy in excess of the PS transmission products inventory. Total monthly transmission and ancillary services costs were computed assuming no service to the DSIs and DSI service at 480 aMW continuing from January 1, 2013, through September 30, 2022.<sup>14</sup> The average total monthly expense values of the 3,500 games were computed with and without service to the DSIs and the differences were taken to determine the avoided PS transmission and ancillary services costs when PS makes these IP sale(s) to the DSIs. For purposes of this analysis, Alcoa has been allotted 62.5% in each month through September 2022, as illustrated in Attachment A, Table 7b. This

---

<sup>10</sup> For further information on BPA's methodology for addressing planned transmission and ancillary service expenses, refer to *Revenue Requirement Study*, WP-10-FS-BPA-02 at 13-28; *Risk Analysis and Mitigation Study* WP-10-FS-BPA-04 at 30-31. See also *Power Revenue Requirement Study Documentation*, BPA-12-FS-BPA-02A at 29 tbl.3A, line 121; *Power Risk and Market Price Study*, BP-12-FS-BPA-04 at 42-43.

<sup>11</sup> The megawatt amounts of surplus energy for FY 2013-FY 2017 were computed using RiskMod. The megawatt amounts of surplus energy were extended beyond FY 2017 by using megawatt amounts of surplus energy for FY 2016 (non-planned outage year for CGS) for FY 2018, FY 2020, and FY 2022 and megawatt amounts of surplus energy for FY 2017 (planned outage year for CGS) for FY 2019 and FY 2021.

<sup>12</sup> For additional information on the proposed transmission rate increase, see generally BP-14 Initial Proposal, released Nov. 14, 2012, available at <http://www.bpa.gov/Finance/RateCases/BP-14RateAdjustmentProceeding/Pages/Initial-Proposal.aspx>. See also Transmission, Ancillary and Control Area Service Rate Schedules, BP-14-E-BPA-10, released Nov. 14, 2012.

<sup>13</sup> For the purposes of this EBT analysis, BPA has not forecast a change in the tariff costs that may be adopted in future BPA rate proceedings.

<sup>14</sup> The current assumption for DSI service of 480 aMW includes 320 aMW for Alcoa, 20 aMW for Port Townsend Paper Company, and 140 aMW for Columbia Falls Aluminum Company. These amounts may vary depending on the amount defined in the individual DSI power sales contracts.

percent allotment represents Alcoa's portion of the total MW of DSI service assumed during the period of the Agreement.

### **3. Demand Shift**

The Demand Shift, as discussed in previous EBT analyses, assumes that the DSIs would not operate in the absence of BPA service. *See* 2009 Alcoa ROD at 44, 68–70. In its draft EBT analysis for the Agreement, BPA reduced the benefits of the Demand Shift to zero because BPA believed that Alcoa would continue to operate in the absence of BPA service since current market conditions suggest that it is possible for Alcoa to maintain operations through another supplier if BPA was unable to supply Alcoa's Intalco smelter. In such circumstances, the demand shift would not materialize because the Intalco load could not be considered incremental based solely on BPA's ability to provide service.

In its comments filed on the draft Agreement, Alcoa disagreed with BPA's conclusion, stating that BPA "misunderstands the nature of aluminum smelter operations" and believes that consideration of the demand is justified and would support extending the term even beyond the present EBT protection and perhaps warrant extending the term beyond ten years." AAIP12 0072, Alcoa Intalco Works (Alcoa) at 19. Thus, Alcoa requested that BPA include the demand shift benefit in its EBT analysis. Alcoa at 20. BPA declines to do so. BPA understands that continuing or discontinuing smelter operations are often based on factors unrelated to the condition in the power market. However, the EBT is largely geared toward considerations relevant to the power market. More importantly, since the EBT already supports the ten year term of the Agreement that the Administrator is willing to offer without the inclusion of the demand shift benefit, consideration of the issue is essentially moot.

### **g. Conclusion of Equivalent Benefits Test**

Attachment A, Table 8, illustrates that the financial benefits BPA expects to receive from selling 300 aMW at the IP rate to Alcoa during the period of the Agreement (from January 1, 2013 through September 30, 2022) exceed the forecasted revenues that BPA would otherwise obtain from selling the same amount of power on the wholesale electricity market by approximately \$89,905,111.00.

## **V. RESPONSE TO COMMENTS: SPECIFIC CONTRACT ISSUES**

This section responds to comments regarding specific terms of the Agreement.

### **a. Whether the ten year term of the Agreement is reasonable and consistent with sound business principles.**

#### **Summary of Comments**

Many of the comments offered by preference customers and interest groups centered on the risks associated with the ten-year term of the Agreement. *See* AAIP12 0073, Canby

Utility (Canby); AAIP12 0069, Industrial Customers of Northwest Utilities (ICNU); AAIP12 0064, Northwest Requirements Utilities (NRU); AAIP12 0067, Western Montana Electric Generating & Transmission Cooperative, Inc. (WMGT); AAIP12 0068, Seattle City Light (Seattle); AAIP12 0070, Public Power Council (PPC); and AAIP12 0071, Pacific Northwest Generating Cooperative (PNGC).

A primary concern, raised by several commenters, is the risk that BPA's market forecasts, which are the basis of BPA's EBT, will prove incorrect. ICNU states:

BPA has forecast that under certain market conditions, it will obtain economic benefits, but almost half the benefits accrue during the first two years of the contract. This places significant risk on BPA if current gas price forecasts prove to be inaccurate.

ICNU at 2. WMGT echoes this concern, stating that BPA's conclusion that revenues will exceed those expected from the wholesale power market over the ten year term is "highly questionable." WMGT at 2. PNGC notes that "BPA can be fairly certain of the range of power prices for the next year or two but, by 2022, things become murky." PNGC at 2. Commenters also expressed concern about BPA's forecasts of water conditions. *See, e.g.,* PPC at 3 (stating that "BPA's assertion that it can serve Alcoa out of BPA's existing inventory over most water conditions only increases BPA's risks").

Because of the uncertainty associated with long term forecasts, several commenters suggest that if BPA elects to enter into a contract with Alcoa, it should be for a shorter term. *See, e.g.,* NRU at 2, PNGC at 2. In their view, a shorter term contract would mitigate the risk associated with the principle that the farther out one goes in time, the more unknown variables could come into play with the potential for significant adverse consequences. NRU recommends that the term be no longer than five years, while PNGC suggests that two years and nine months would be an acceptable term. *See* NRU at 2; PNGC at 2.

Alcoa, in contrast, believes that BPA's use of the EBT artificially and unfairly truncates the term of the contract and the term should be extended to the point that the EBT forecasts only a small benefit to BPA. Alcoa at 13–14.

### **BPA's Position**

Offering a ten-year term for a sale of power to Alcoa at the IP rate is reasonable and consistent with sound business principles for the following reasons: (1) a ten-year contract is consistent with the statutory framework designed by Congress; (2) the EBT analysis forecasts that at the end of ten years BPA will have derived a significant financial benefit from the contract; (3) a sale at the IP rate provides a guaranteed revenue stream based on the IP rate and, due to BPA's rate-making requirements, will help to assure that BPA recovers its costs; (4) BPA would be unable to obtain a shorter term contract due to Alcoa's ability to obtain preferable arrangements from other suppliers; and (5) the Agreement will provide operational benefits to BPA.

## **Discussion**

### **1. A ten year contract is consistent with the statutory framework designed by Congress.**

When it enacted the Northwest Power Act, Congress understood that aluminum smelting and other then-existing directly served industries were, for the large part, electric power-intensive operations. *See* H.R. Rep. No. 96-976, pt. 1, at 28–29 (1980). At the time of enactment, DSI customers accounted for approximately 3400 MW (approximately one-third) of the Administrator’s total load obligation. *Id.* at 29.

In order to provide planning certainty for those customers with respect to their power supply needs, the Northwest Power Act provided that the Administrator would be required to offer an “initial long term power contract” based on the amount of power BPA was supplying pursuant to the contract in existence immediately prior to enactment. Northwest Power Act, 16 U.S.C. §§ 839–839h, 839c(d)(1)(B); 839c(g)(1). These contracts were anticipated to be contracts that would not exceed 20 years in duration. 16 U.S.C. § 839c(g)(1); 832d(a). In response, the Administrator offered, and BPA’s customers accepted, 20-year power sales contracts.

As to what would occur after expiration of the initial contracts, Congress left that decision to the Administrator’s discretion. As confirmed by the Ninth Circuit on more than one occasion, the Administrator is authorized, but not required, to sell power to DSIs, consistent with other statutory requirements, when in his business judgment it is appropriate to do so. *See, e.g., PNGC II* at 1073 (“BPA is certainly authorized to sell power to the DSIs at the IP rate. But that authority . . . is cabined by its obligation to ‘operate with a business-oriented philosophy.’”)(citation omitted). In this instance, the Administrator was faced with the expiration of Alcoa’s 2009 Agreement, fully appreciating that the 2009 Agreement resulted in very significant economic benefits to BPA relative to market. He considered the results of staff’s EBT analysis, and determined that it was in BPA’s economic interests to pursue negotiating a contract for the sale of power to Alcoa.

After deciding to pursue a power sales agreement with Alcoa, the Administrator has broad discretion to negotiate appropriate terms and conditions for such a sale pursuant to contracting authority provided by statute. *See* Bonneville Project Act of 1937, 16 U.S.C. §§ 832–832j, 832a(f) (Administrator is authorized to enter into contracts “upon such terms and conditions . . . as he may deem necessary”); *see also Alcoa* at 792 (“While in certain extreme circumstances we may conclude that BPA has strayed too far afield from business like operations, in the ordinary case we will not usurp BPA’s judgment regarding whether to sell surplus power to DSIs, or on what terms.”)(citation omitted). This authority extends to negotiating the length of the power sales agreement. Given the economic benefits provided by the Agreement, as discussed more fully below, it is plausible to assume that a contract half the length of the initial DSI contracts



contemplated by Congress would not be inconsistent with the intent of Congress when it enacted the Northwest Power Act and could be within the Administrator's discretion.

Despite PNGC's suggestion that Congress and the courts have contemplated a "phasing out" of DSI service, PNGC at 3, BPA finds no evidence to that effect in the statutes, legislative history, or court opinions. As noted above, when the Northwest Power Act was passed, DSI customers accounted for approximately 3400 MW of the Administrator's total load obligation and BPA, at the time, was the only viable supplier in the region given the then-existing power grid. Markets were not deregulated in order to create greater competition among potential suppliers until many years after the passage of the Northwest Power Act. It is far more likely that Congress assumed that much of that load would continue to exist and that BPA would continue to supply power to the DSIs.

In conclusion, given the broad scope of his contracting, settlement, and compromise authority, the particular term of a DSI contract (including the one establishing the length of the contract) is well within the scope of the Administrator's contracting discretion and should be upheld unless it is arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with the law.<sup>15</sup>

**2. The EBT analysis forecasts that at the end of ten years, BPA will have derived a significant financial benefit from the contract.**

The analysis conducted under the Equivalent Benefits Test shows that BPA is highly likely to obtain revenues well in excess of a sale at market prices for the first three to five years of the Agreement. For a full and detailed discussion of the EBT methodology and results, see section IV. These projected increased revenues from Alcoa will reduce the PF rate for at least the next two to three rate periods.

A number of commenters point out that any forecast inherently contains some degree of uncertainty and the actual state of the market in the future depends on events that are not yet known. In their comments, preference customers tend to focus on the possibility that the market could be higher than the IP rate in the later years of the contract and BPA might not, therefore, maximize its revenue stream. However, the opposite could be true and the IP could remain higher than anticipated for a longer period than contemplated by EBT analysis. If, for example, demand for power remains flat due to a continuing depressed economy, the market price for power could be lower than forecast by the EBT over the long term. Similarly, if gas supplies continue to increase as they have in recent years, that could also have a long term effect of lower than anticipated power prices because the marginal cost resource for the West Coast is currently the gas-fired

---

<sup>15</sup> It is also important to note that long term contracts for aluminum smelters are a common industry practice. For example, the New York Power Authority's power contract with Alcoa's Messina Plant is a 20 year contract with an option for an additional 10 years and Chelan County PUD has a 17-year contract with Alcoa to serve the Wenatchee Plant. See New Long-Term Power Supply Contract With Alcoa Approved By N.Y. Power Authority Trustees (Dec. 16, 2008), <http://www.nypa.gov/press/2008/081216a.htm>; Alcoa Reaches New Renewable Power Deal for Wenatchee, WA Smelter (July 15, 2008), [http://www.alcoa.com/global/en/news/news\\_detail.asp?pageID=20080715005215en&newsYear=2008](http://www.alcoa.com/global/en/news/news_detail.asp?pageID=20080715005215en&newsYear=2008).

combustion turbine. Thus, the stable revenue stream generated by the IP rate is, as discussed elsewhere, an effective risk mitigation strategy.

More importantly, however, while the preference customers state general concerns about risk and uncertainty, they have not demonstrated that BPA's reliance on these forecasts is misplaced. The fact that the future is uncertain does not make the decision to offer the Agreement unreasonable nor does it create any kind of legal infirmity because the Court does not expect more from BPA than it has done here. BPA does not need to have "perfect information before it takes any action." *N. Carolina v. Fed. Energy Regulatory Comm'n*, 112 F.3d 1175, 1190 (D.C. Cir. 1997) (quoting *Dep't of the Interior v. Fed. Energy Regulatory Comm'n*, 952 F.2d 538, 546 (D.C. Cir. 1992)). "In the face of 'serious uncertainties,' an agency need only 'explain the evidence which is available, and . . . offer a rational connection between the facts found and the choice made.'" *Id.* (citation omitted). As explained above, BPA has met this standard.

Moreover, there is nothing unusual about the ten-year term for the Agreement that BPA has considered in this proceeding. BPA routinely relies on long-term forecasts to evaluate long-term transactions, whether between itself and its customers or others. For example, BPA relied on forecasts that looked forward 17 years to test the reasonableness of the 2012 Residential Exchange Program Settlement Agreement ("REP Settlement"), which settled several controversial components of the REP until 2028. Based on long-term projections of BPA's costs, market conditions, loads, and other factors, the Administrator was able to conclude that the REP Settlement was in the region's interests, lawful, and met the agency's other identified goals, and agreed to sign the REP Settlement with six investor-owned utilities, a variety of interest groups and parties, and many preference customers (including many of the preference customers that have submitted comments in this proceeding).

Finally, the preference customers have not identified any defects in the forecasts BPA is relying on to evaluate the Agreement. This is not surprising because the underlying data BPA used to evaluate the Agreement was thoroughly vetted in the REP-12 proceeding, the proceeding that BPA established to evaluate the REP Settlement. No party identified any fundamental problems with BPA's long-term forecasts in the REP-12 proceeding and, similarly, no party in this proceeding has identified any problems with the data that BPA is using in its EBT analysis.

Commenter Alcoa contends that the Administrator's decision to offer ten years of service "artificially truncates the term" of the Agreement. Alcoa at 13. That claim is incorrect. The Administrator has considered the risks of the ten-year term and, accordingly, elected to limit the term of the contract offer to ten years, when the EBT shows a significant \$89,000,000 cushion in net financial benefits, rather than take the risk of extending the contract term further. In previous applications of the EBT, the Administrator was willing to allow benefits to decline further, but previous EBTs resulted in much shorter contract terms. Limiting the term of the Agreement to ten years is another way of mitigating the risk associated with the longer term of this contract, as opposed to previous ones.

**3. A sale at the IP rate provides a guaranteed revenue stream based on the IP rate that will help to assure that BPA recovers its costs.**

Under the Agreement, Alcoa will purchase power from BPA at the IP rate, which is the statutorily defined rate for the sale of Industrial Firm Power to DSI customers.<sup>16</sup> The IP rate is adjusted every time BPA sets its power rates by conducting a rate proceeding pursuant to Section 7(i) of the Northwest Power Act. In section 1.1 of BPA's Tiered Rate Methodology, BPA committed itself to set power rates every two years through the 2028 ending date of its preference customers' Contract High Water Mark Contracts. *See* Tiered Rate Methodology, TRM-12S-A-03, Sept. 2009, at 1–2. Therefore, BPA will be able to assure that its costs are recovered through the IP rate, even in the event that market or resource conditions change.

The IP rate is also subject to various risk mitigation policies that BPA has in place. For example, BPA's rates include planned net revenues for risk, a portion of which are recovered through the IP rate. The IP rate is also subject to various Cost Recovery Adjustment Clauses that go into effect when certain triggers are met, e.g., financial reserves drop to a point that could jeopardize cost recovery and Treasury repayment.

For planning purposes, selling a fixed amount of power over a fixed period of time and receiving predictable revenues at the IP rate is a sound business strategy. It insulates BPA from exposure to prices in the wholesale power market which, unlike the IP rate level, BPA has no control over. As noted above, BPA must periodically establish rates that are “based upon the Administrator’s total system costs” and “are sufficient to assure repayment of the Federal investment in the Federal Columbia River Power System over a reasonable number of years after first meeting the Administrator’s other costs.” 16 U.S.C. §§ 839e(a)(2)(A), (B).

Some comments suggest that BPA should forego this opportunity to lock in a long-term source of predictable revenues, effectively proposing a “wait and see” approach. *See, e.g.,* PNGC at 2 (suggesting a term of two years and nine months instead of ten years). Such an approach does not represent a sound business practice. As noted elsewhere, such comments focus only on the market situation where the IP rate is less than the price of power in the market. In such situations, the commenters argue, BPA would miss an opportunity to maximize revenues. However, it is also possible that market conditions like those that currently exist could continue or recur. In that situation, the “wait and see”

---

<sup>16</sup> *See* 16 U.S.C. § 839e(c). BPA notes that some parties have raised issues about whether Alcoa will be charged a rate that is above the rate paid by BPA's preference customers. To the extent that this is still a question, BPA notes that, as has been noted by the Ninth Circuit, the IP rate is developed pursuant to the formula for developing the IP rate that is clearly prescribed by Congress in sections 7(c) and 7(b)(2) of the Northwest Power Act, 16 U.S.C. § 839e(c), a formula that should result in an IP rate that is higher than the PF Tier 1 rate. First, the IP is subject to an adder known as the industrial margin. *See* 16 U.S.C. § 839e(c)(2). Second, the IP rate is subject to further increase due to rate protection afforded to preference customers with respect to recovering costs associated with the Residential Exchange Program, which provides benefits to residential and small farm customers of regional investor-owned utilities. 16 U.S.C. § 839e(b)(2).

approach places the agency at risk of under-recovering the revenues it had forecast in a prior rate proceeding from secondary market sales. BPA believes that it is reasonable to avoid that potential outcome by locking in sufficient revenues to recover costs through a firm power sale priced at the IP rate. As previously indicated, Alcoa was unwilling to enter into a contract for a term less than ten years and, in fact, sought a longer-term contract.

**4. A shorter term contract was not possible due to Alcoa's ability to obtain preferable arrangements from other suppliers.**

As described above, a number of comments indicated that a term well short of ten years would better mitigate risks in the outyears and create greater certainty. These comments recommend that BPA revise the contract to make the term much shorter than ten years, usually the three to five year range. *See, e.g.,* NRU at 2 (suggesting a term of five years); PNGC at 2 (suggesting a term of two years, nine months).

Without conceding the argument that a short term is not always better from a risk mitigation standpoint, the suggestion that BPA could dictate the term of the contract in this instance is greatly oversimplified. Currently, market prices are well below the IP rate and BPA stands to maximize revenues for the next several years by selling at the IP rate rather than selling on the open market. That means Alcoa, which has access to power providers other than BPA, could have and would have obtained a better price and terms in a market transaction for a term less than ten years in the absence of a BPA contract.

As noted in its comments, Alcoa is not interested in a BPA contract because it enjoys paying an IP rate that is considerably higher than the market prices that are expected to continue for the next several years. Instead, Alcoa is only willing to accept that situation in exchange for the certainty of a long-term power supply at a cost based rate that may or may not be lower than market prices during the later years of the contract. Alcoa at 5. Thus, Alcoa has concluded, based on its own business judgment, that the Agreement must have a term of at least ten years in order for it to make sense to forego the more favorable market prices at which it could presently acquire power. *Id.* (stating that a ten year term is the minimum period that would allow Alcoa to amortize its expected capital investments in the Intalco plant).

In consideration of both the likelihood of significant financial benefits to BPA in the first several years of the transaction and the business interests of Alcoa, negotiations quickly turned to the possibility of a ten-year contract that would protect BPA's ability to maximize revenues in the early years and provide a stable revenue stream in the later years. Given Alcoa's position and current market conditions, BPA continues to believe there were only two potential outcomes: a ten year agreement or no agreement at all.

In sum, while sales to DSI customers like Alcoa are now discretionary, that does not mean Alcoa is a "captive" customer of BPA that must accept whatever terms and conditions BPA chooses to dictate. To the contrary, Alcoa has access to the same markets that BPA might be selling into in the absence of this contract. Without this

contract, Alcoa would be paying less and BPA's secondary revenues would be lower. It was only possible to proceed with this negotiation process by reckoning with the reality that Alcoa had some amount of bargaining power due to its access to other suppliers willing to charge prices significantly lower than the IP rate.

#### **5. The Agreement will provide additional operational benefits to BPA.**

Alcoa commented that BPA has declined to take into account the operational advantages that sales to Alcoa (and other DSIs) have provided since the 1930s when determining the term of its proposed sale to Alcoa. *See* Alcoa at 18. Although Alcoa is correct that BPA has not included the value of such operational benefits in the EBT, the Administrator has nonetheless considered these benefits and they have bolstered his decision to offer a ten-year term. As described elsewhere in this section, the EBT analysis is not the sole determinative factor in the Administrator's decision to offer a ten-year term. The operational benefits which can be provided by Alcoa to BPA support the Administrator's decision to offer Alcoa a ten-year term by offsetting some of the risk posed by the length of the term and providing additional assurance that the Agreement will have an overall benefit to BPA and therefore to BPA's customers.

As BPA has readily acknowledged, DSI load has historically provided value to BPA in connection with the Administrator's statutory obligation to assure an adequate, efficient, economical, and reliable power supply, by providing the Administrator with flexibility to help manage the complexities and uncertainties of marketing large quantities of federal power. *See* 2009 Alcoa ROD at 72–82. BPA has referred to these operational benefits as “intangible benefits” in past RODs. These operational benefits include: 1) operational flexibility during oversupply events; 2) balancing reserves; and 3) potential demand response arrangements.

First, the sale to Alcoa will provide BPA with a flat, continuously operating load, which acts to level the shape of BPA's overall load. Alcoa's load is also able to increase or decrease with a fair degree of certainty when called upon, providing valuable operational flexibility to BPA. This ability helps BPA during periods of oversupply, when large volumes of water flows in the Columbia River system and large amounts of wind generation connected to BPA's transmission system require BPA and federal dam operators to balance both the federal power system and transmission system to meet environmental requirements (protection of endangered salmon listed under the Endangered Species Act) and the provision of transmission services. The concentration of wind resources within BPA's balancing area authority has created operational challenges during these high water and high wind events. BPA is taking steps to manage generation during these events, but adding load (particularly during light load hours) is another way to help bring the system into balance during oversupply events.<sup>17</sup> Alcoa has the ability to consume more power, within plant operating limits, during light load hours, thereby producing more aluminum at night and less during the day. Alcoa has already provided such benefits on a short-term basis during the 2009 Agreement. At BPA's

---

<sup>17</sup> For more information about BPA's oversupply management and wind integration efforts, see BPA's website at <http://www.bpa.gov/Projects/Initiatives/Pages/default.aspx>.

request, Alcoa purchased additional surplus power and began consuming approximately 25 MW more per hour in light load hours from 11 pm to 6 am. By offering Alcoa a long term contract BPA will be able to pursue these operational benefits in the future.

Second, continuing BPA's long-time relationship with Alcoa provides potential opportunities for BPA to purchase additional contingency reserves from Alcoa. During the spring of 2011 and 2012, Alcoa provided support for BPA's efforts to deal with oversupply by making additional load interruptible (in excess of the contingency reserve requirement in the 2009 Agreement). Alcoa at 17.

Third, BPA and Alcoa have discussed the potential for additional collaboration on demand response projects. BPA is currently pursuing several demand response pilot projects that do not include Alcoa.<sup>18</sup> Alcoa's operational flexibility makes it an ideal candidate for demand response, especially as it relates to industrial process load control.

In conclusion, the Administrator has considered the operational benefits of service to Alcoa when deciding to offer the ten year Agreement.

### **Final Decision**

For all of these reasons, the record demonstrates that providing service to Alcoa for a term of ten years is a reasonable business decision.

#### **b. Whether the termination and curtailment provisions of the Agreement are appropriate.**

### **Comments**

A number of parties raised concerns regarding Alcoa's curtailment and termination rights under the Agreement. Several of BPA's preference customers (PNGC, PPC, Canby, NRU and ICNU) argued that Alcoa's termination and curtailment rights in the Agreement were unacceptable risks and should either be amended or eliminated from the Agreement. This sentiment is typified by PNGC's statement:

Alcoa would be able to terminate the contract for "any reason" at any time, provided it pays limited liquidated damages tied, in part, to the price of aluminum at the time on the London Metal Exchange. Alcoa would also be able to terminate if it becomes subject to certain environmental regulations or emissions requirements. In addition, Alcoa would be able to twice "curtail" some or all of its power purchases during the contract for a period of up to two years, subject only to limited liquidated damages.

It should go without saying that these extensive termination and curtailment rights would significantly undermine the take-or-pay nature of

---

<sup>18</sup> For more information about BPA's demand response program, see BPA's website at [http://www.bpa.gov/Energy/N/Smart\\_Grid-Demand\\_Response/index.cfm](http://www.bpa.gov/Energy/N/Smart_Grid-Demand_Response/index.cfm).

the new contract. The provisions would also create unacceptable risk and uncertainty for Bonneville, significantly undermining the value of Bonneville entering into the contract in the first place.

PNGC at 5; *see also* Canby at 1, ICNU at 2, PPC at 1–2, NRU at 3.

Along these same lines, ICNU argued that if Alcoa were to have these curtailment and termination rights that BPA should similarly enjoy broad termination and curtailment rights:

This will allow Alcoa to walk away but require BPA to continue selling power to Alcoa in the event that conditions change, so that it becomes a significant money losing transaction. BPA should alter the contract to allow BPA to terminate, and reduce Alcoa's ability to walk away from the contract if market conditions change.

ICNU at 2.

### **BPA's Position**

Including these limited termination rights for Alcoa in return for the assurance of higher-than-market revenues and long term stability is a sound business decision.

### **Discussion**

First, the preference customers' comments fail to recognize BPA's termination rights, which are found in section 19.2 of the Agreement. Section 19.2 includes rights to terminate for Alcoa's: (1) failure to pay, (2) failure to provide payment assurance, (3) failure to maintain employment levels, (4) reselling of Firm Power, (5) failure to provide a letter of credit, and (6) failure to provide documentation showing 35 million dollars in capital investment to the plant. None of these termination rights require BPA to make Alcoa financially whole by paying liquidated damages or providing any other form of compensation to Alcoa. In contrast, all three of Alcoa's termination rights require Alcoa to provide notice ahead of termination, and to compensate BPA either by purchasing power through the notice period or paying liquidated damages.

Second, the comments neither appear to recognize that these termination and curtailment rights are the product of lengthy negotiations between Alcoa and BPA, nor do they recognize the value that BPA receives in exchange for these rights. As BPA's preference customers are aware and Alcoa references in its own comment, the EBT shows that BPA and Alcoa are entering into this contract at a time when the IP rate is significantly higher than the market price of power. Alcoa at 5. On average, the IP rate is expected to remain higher than market prices for more than seven years, according to BPA's forecasts included in the EBT. Given these circumstances, Alcoa could easily choose to forego power service from BPA in order to purchase less expensive power from market suppliers.

BPA worked with Alcoa to negotiate an agreement that would be acceptable to both parties because BPA believes that the Agreement will benefit both BPA and its preference customers. In essence, BPA has asked Alcoa “to forgo the more favorable market prices at which it could presently (and for some time) acquire power.” *Id.* In exchange, Alcoa negotiated for several termination and curtailment rights but also agreed to BPA’s requested liquidated damages provision. These liquidated damages provisions are designed to assure that BPA will receive a significant percentage of the EBT’s forecast benefits even if Alcoa exercises one of the termination rights afforded it by the Agreement. By protecting the benefits BPA will accrue during the first three years of the Agreement, BPA protects the PF rate paid by BPA’s preference customers.

Lastly, BPA notes that these termination and curtailment rights are in fact an improvement over the termination and curtailment rights Alcoa held under the 2009 Agreement. Under the 2009 Agreement, which had a potential term of seven years or longer, Alcoa would not have been liable for any liquidated damages during any period of curtailment. Furthermore, Alcoa held termination rights that were either more liberal than or equivalent to the termination rights in this Agreement.<sup>19</sup>

### **Final Decision**

Alcoa’s termination and curtailment provisions will be included in the Agreement without changes.

#### **c. Whether section 15.2, Uncontrollable Forces, should be adjusted in response to comments received.**

### **Comments**

NRU comments regarding section 15.2:

Under section 15.2, Uncontrollable Forces includes, “any failure of Alcoa’s production, distribution or transmission facilities that prevents Alcoa from taking Firm Power delivered to the Point of Receipt.” This language is far too broad regarding Alcoa’s “production”. This provision should be modified to clearly define what circumstances constitutes an uncontrollable force regarding Alcoa’s production.

NRU at 2.

---

<sup>19</sup> The previous contract allowed Alcoa to terminate for any reason during the first several years of the contract with six month’s notice, with liability limited to 90 percent of the Firm Power obligated under the contract for the first three months of the notice and then only for power taken in the last three months period and Alcoa could then choose to purchase power amounts at or below the Firm Power amount the last three months of the notice period. Under the terms of the previous contract, during the last five years of the contract (had the contract continued), Alcoa was allowed the same termination right it enjoys after September 30, 2015, in the Agreement: requiring twelve months’ notice of termination and compensation to BPA for any Firm Power amount not taken during those twelve months.



## **BPA's Position**

BPA believes that this contract provision adequately defines what circumstances constitute an uncontrollable force.

## **Discussion**

The Uncontrollable Forces provision is an agency standard provision which has been developed and approved pursuant to BPA's internal processes. A nearly identical provision is used in BPA's Regional Dialogue contracts, including those signed by NRU's members. Additionally, BPA disagrees with NRU that the language is far too broad. Though not mentioned in NRU's comments, the events allowed as uncontrollable forces under section 15 are very limited. Specifically, section 15.2 states that the event must be:

[B]eyond the reasonable control of, and without the fault or negligence of the Party claiming the Uncontrollable Force that prevents that Party from performing its contractual obligations under this Agreement and which by exercise of that Party's reasonable care, diligence, and foresight such Party was unable to avoid.

Based on the successful past use of this agency standard clause, combined with the protections afforded by the clause that were not mentioned in NRU's comments, BPA believes that this contract language is adequate and need not be changed.

## **Final Decision**

Section 15.2 will not be changed.

- d. Whether section 5.5, No Purchases from Third Parties During Curtailment, should be changed in response to comments received.**

## **Comments**

NRU expressed concern regarding section 5.5, No Purchases from Third Parties During Curtailment, of the Agreement, stating:

Under section 5.5 regarding curtailments, the contract states that, "Alcoa shall not make any *market purchases* from third party suppliers to replace all or any portion of the amount curtailed." It is unclear why Bonneville would limit this clause to market purchases. Alcoa should not be allowed to make any power purchases, including but not limited to market purchases, if it is in a period of curtailment. Therefore, NRU advises Bonneville to replace the term "market purchase" with "power purchase."

NRU at 3–4.

### **BPA's Position**

BPA agrees with NRU's comment.

### **Discussion**

In order to eliminate any ambiguity, section 5.5, No Purchases from Third Parties During Curtailment, will be changed to read:

During any period of curtailment, Alcoa shall not make any power purchases from third party suppliers to replace all or any portion of the amount curtailed.

### **Final Decision**

BPA will make the changes stated above.

- e. **Whether section 19.2, BPA's Right to Terminate, should be changed in response to comments received.**

### **Comments**

NRU commented on section 19.2, BPA's Right to Terminate, specifically, section 19.2.7:

Under section 19.2.7, Alcoa must demonstrate that it has invested 35 million dollars, or more, in capital projects at the Intalco Plant by September 30, 2019, or Bonneville may terminate the contract. In order to put the appropriate parameters around such a requirement, Bonneville should include a starting date for such investment.

NRU at 4.

### **BPA Position**

BPA agrees with NRU's comment.

### **Discussion**

In order to eliminate any ambiguity, section 19.2.7 will be changed to read:

Alcoa fails to provide BPA with documentation showing that it has invested 35 million dollars or more in capital projects at the Intalco Plant between January 1,

2013 and September 30, 2019. In order to facilitate the administration of this provision, Alcoa shall provide BPA with a yearly accounting of capital project expenditures at the Intalco Plant on September 1 of every year under this Agreement. BPA reserves the right to determine, at its own discretion, the adequacy of the documents provided by Alcoa under this section.

### **Final Decision**

BPA will change the provision as shown above.

- f. Whether clarification of the effect of a court ruling that partially invalidates the Agreement is needed.**

### **Comments**

PNGC asked BPA to clarify the effects of a court ruling on section 4.3 and 18.7 of the contract. Specifically, PNGC states:

Section 4.3 of the draft new contract addresses termination of the contract if a court were to invalidate the contract. The section addresses what happens in the event of a complete invalidation of the contract but it is not clear what would happen if a court were to only partially invalidate the contract. Further, it is not clear how section 4.3 is meant to interact with section 18.7, which addresses severability.

Should the parties decide to go forward with the new contract, they should clarify sections 4.3 and 18.7.

PNGC at 6.

### **BPA Position**

The contract language as drafted adequately addresses the effects of a partial invalidation of the Agreement. BPA clarifies its reasons for including both provisions below.

### **Discussion**

Section 4.3, Termination Upon Court Opinion or Other Ruling, reads as follows:

Notwithstanding anything in this Agreement to the contrary, in the event that the Ninth Circuit issues an opinion or other ruling that holds, or that otherwise renders, this Agreement unlawful and prevents BPA from performing its obligations hereunder, this Agreement shall terminate upon issuance of the Court's mandate, unless the Court further stays the issuance of the mandate or otherwise extends the period that BPA can

provide service to Alcoa or unless this Agreement can be amended to comply with the Court's holdings. The Parties agree that they will confer prior to issuance of the mandate regarding issues arising from or related to any such Court order. BPA agrees not to challenge any effort by Alcoa to obtain a stay of the mandate or otherwise extend the period that BPA can provide service to Alcoa.

The contract language specifies that this section applies only if the Ninth Circuit holds the Agreement unlawful and prevents BPA from continuing to serve Alcoa under the Agreement. PNGC is correct that this provision does not address a "partial invalidation" of the Agreement.

On the other hand, section 18.7 applies to situations where specific terms of the Agreement are invalidated by a court but other portions of the agreement remain undisturbed, i.e., a "partial invalidation" of the Agreement. Section 18.7, Severability, states:

If any term of this Agreement is found or rendered invalid or unenforceable by a court of competent jurisdiction, then, unless that term is not severable from all other provisions of this Agreement, such invalidity or unenforceability shall not otherwise affect any remaining lawful obligations under this Agreement. Neither Party shall be liable to the other Party for any damages associated with any term being severed from this Agreement.

BPA does not believe it is feasible to clarify what would happen if a court were to only partially invalidate this contract at this time. The effect on performance of the contract would be dependent on which term of the agreement was found invalid or unenforceable.

Finally, BPA does not understand PNGC's comment that it is not clear how section 4.3 is meant to interact with section 18.7. The two provisions were intentionally drafted to address different circumstances, and therefore the interaction of the two provisions should not be problematic.

### **Final Decision**

Sections 4.3 and 18.7 are sufficiently clear and will not be changed.

- g. Whether Section 18.11, Waiver of Damages, should be included in the Agreement.**

### **Comments**

Several parties object to the inclusion of section 18.11, Waiver of Damages. A common concern among the commenters is that including a damages waiver provision will leave BPA with no ability to recover funds from Alcoa in the event that the Agreement is

invalidated, and thus deprives BPA's customers of a remedy. *See, e.g.,* PNGC; PPC; NRU; WMGT.

### **BPA's Position**

BPA believes that inclusion of the damages waiver provision is mutually beneficial to both the agency (and thus its preference customers) and Alcoa.

### **Discussion**

The Ninth Circuit recently upheld the use of a nearly identical damages waiver provision in the 2009 Agreement, stating that the damages waiver provision falls within BPA's claim-settling authority and does not violate either statutory or constitutional provisions. *Alcoa*, 698 F.3d at 791–92. Further, because BPA explained in the ROD that the damage waiver protects BPA from claims that Alcoa may raise against BPA, the Court held that, “[i]t is not our place to second-guess the agency’s considered judgment regarding the balance of risks embodied in a damage waiver or similar release or settlement provision.” *Id.* at 792.

The rationale for including the damages waiver provision in the 2009 Agreement is largely applicable today, and may be even more compelling in light of current market conditions. As noted in Alcoa's comments, BPA is not Alcoa's only power supply option. Alcoa at 5. Alcoa is willing to pay the IP rate, even though the IP rate is above market, in exchange for the certainty of a long-term power supply. If, however, the Agreement is invalidated two or three years from the beginning of power deliveries, Alcoa may feel that it has a valid grievance with respect to lost market opportunities during the initial years of the Agreement and lost protection from the vagaries of the market in the long term. Any Ninth Circuit opinion invalidating the Agreement would most likely be issued within two to three years of the beginning of the contract. During this period, market forecasts indicate that BPA should receive revenues well in excess of those it would otherwise receive from a market sale. Therefore, Alcoa will almost certainly have paid higher prices for power in reliance on the validity of the Agreement.

Moreover, given expected market conditions for the next several years, the damage waiver provision is more likely to protect the interests of BPA's preference customers than Alcoa's. There can be only be one challenge to the decision to offer the contract, and that challenge must commence within ninety days of the date the Agreement is executed. *See Blachly-Lane Elec. Coop. Ass'n v. U.S. Dep't of Energy*, 79 Fed. Appx. 975, 977 (9th Cir. 2003); *see also* 16 U.S.C. § 839f(e)(1)(B) (providing that power sales are final agency actions subject to judicial review). Consequently, the validity of the Agreement will most likely be decided within the first two to three years of the contract term. As noted above, during that two to three year period, Alcoa is likely to pay higher-than-market prices for power service, and the preference customers' rates will be lower as a result.

NRU suggests that this damage waiver is not a two-way provision because “there are not likely to be third parties suing Alcoa over the terms of the contract.” NRU at 2. This comment misunderstands the intent of the damage waiver provision. The damage waiver is a provision in a contract between two parties, Alcoa and BPA. It is designed to provide mutual protection. If the Ninth Circuit finds the contract unsustainable, Alcoa could allege that it was injured by BPA’s actions and attempt to raise a claim in the Court of Federal Claims. At this time, it is not possible to know whether such a claim would have merit, but even an ultimately unsustainable claim would require BPA to expend time, money, and human resources to address it. The damage waiver provision allows the Administrator to avoid such a prospect by agreeing that, if the contract is set aside as unlawful, the parties walk away without a right to claim damages against the other. The Administrator finds nothing inappropriate about such a negotiated result in light of his broad contracting and settlement authorities. *See supra* section V.a.1 (discussing the Administrator’s contracting authority).

PNGC supports its argument against the inclusion of the damages waiver by stating that “if Bonneville undercharges Alcoa under the new contract at the expense of other customers, then Bonneville could be unable to recover funds that rightfully belong to other customers.” PNGC’s example is unpersuasive. Under the terms of the Agreement, Alcoa will be charged the IP rate, which is the appropriate statutory rate for service to the DSIs. 16 U.S.C. § 832e(c)(1). The Court has been very clear that any offer of service to a DSI must be priced at the IP rate. *PNGC I* at 807 (“[I]f the agency chooses to offer firm power to the DSIs . . . it must first offer them the IP rate.”). It is therefore implausible that the Court would, at a later date, determine that BPA has “undercharged” Alcoa under the Agreement by applying the very rate that the Congress has prescribed and that the Court has endorsed as the sole basis for any initial offer. Since PNGC has provided no credible support for its assertion that BPA could, as a matter of fact or law, “undercharge” Alcoa by charging the IP rate, BPA sees no justification for eliminating the damage waiver provision on that basis.

### **Final Decision**

The inclusion of the damages waiver provision is a sound business decision and the clause will be included in the Agreement.

#### **h. Whether Section 11, Employment Levels, should be included in the Agreement.**

### **Comments**

A number of commenters raised questions about BPA’s motives for including Section 11, Employment Levels, in the Agreement. Canby commented, based on BPA’s press release materials, that the purpose of the Agreement is ‘preserving hundreds of family-wage jobs’ and ‘long term certainty to Alcoa and its employees.’” Canby at 2. PPC points out that the Ninth Circuit has previously rejected “BPA’s attempts to use employment levels to justify entering into contracts with the DSIs because Congress did

not intend for BPA to consider such factors in deciding whether or not to sign a power sales agreement with a DSI customer.” PPC at 4. PNGC also reminds BPA that it may not enter into a new contract with Alcoa in order to preserve jobs at the Intalco plant. PNGC at 4. PNGC states that “to the extent that this is the reason, or even part of the reason, that Bonneville is considering entering into the new contract, Bonneville must cease negotiations with Alcoa and decline to enter into the new contract.” *Id.*

### **BPA’s Position**

To the extent that commenters imply that job creation is the actual basis for BPA’s decision, they are incorrect. The Administrator has the discretion to include terms in the DSI contracts that are not directly related to the tangible benefits included in the EBT analysis.

### **Discussion**

BPA agrees that the Ninth Circuit has held that creation of jobs, does not provide legal justification for offering a power sale to the DSIs. However, the Court recently upheld the validity of the 2009 Agreement, which contained an identical Minimum Employment provision. The Court stated, in reviewing the 2009 Agreement that:

[W]e consider merely whether ‘the agency considered the relevant factors and articulated a rational connection between the facts found and the choices made,’ we do not second-guess its policy judgments.

*Alcoa* at 788 (citation omitted). The Court also found that BPA’s ROD “expressly disclaimed reliance on job impacts as a factor in its decision and declined to include such impacts in its Equivalent Benefits analysis.” *Id.* at 789. However, nothing in the opinion states that BPA may not even broach the subject of employment in the contract as long as BPA’s decision to make the sale is in accord with sound business principles. *Id.* at 792 (“[I]n the ordinary case, we will not usurp BPA’s judgment regarding whether to sell surplus power to DSIs, or on what terms.”).

As BPA has thoroughly explained above, its decision to offer the Agreement is consistent with sound business principles. The employment levels at the Intalco plant are not part of BPA’s business justification for offering the Agreement. Rather, the Agreement is supported by tangible, financial benefits to BPA which are forecast to exceed the cost of providing service to Alcoa during the contract term, and therefore, the Agreement is consistent with sound business principles.

Although supporting employment at the Intalco plant is not part of the business justification for this Agreement, the Administrator is not precluded from considering the numerous comments filed in support of this Agreement, many of which stress that very point. For example, many comments expressed that the continued operation of Intalco is valuable to the regional economy and the Ferndale community. *See, e.g.,* AAIP12 0005, Superintendent, Ferndale School District (“Intalco Works is enormously important to the

health of our local economy.”); AAIP12 0057, Washington State Senator Doug Ericksen (“This agreement is vital to the people of Whatcom County, and to the people of Washington State. Alcoa at Ferndale provides 625 family-wage jobs in Northwest Washington and over 1,800 indirect jobs in the region. The value of Intalco employee wages, benefits, leave, etc. totals over \$65 million, and Intalco’s contribution to Washington’s GDP is over \$210 million.”); AAIP12 0004, Northwest Workforce Council (“The economic impact of the plant is vital to all of the communities in Whatcom County and our local schools. Whatcom County’s unemployment rate continues to remain high, 7.7% in August, and Washington State’s unemployment rate is currently 8.6%. We cannot afford to lose this plant or the family-wage jobs it provides.”). The Administrator appreciates these comments and believes that, given the current economic situation, it would not be appropriate for the Administrator to ignore concerns expressed by the public and others regarding the economic well-being of the region.

Moreover, employment requirements are not unheard of in long-term contracts for power supply to industrial customers. For example, the New York Power Authority’s power sales contract for service to Alcoa’s Massena East smelter in New York State specifies that Alcoa will maintain at least 900 jobs at their two Massena smelters. *New Long-Term Power Supply Contract With Alcoa Approved By N.Y. Power Authority Trustees* (Dec. 16, 2008), <http://www.nypa.gov/press/2008/081216a.htm>.

Additionally, the employment requirement incentivizes Alcoa to take physical power from BPA and not utilize its curtailment rights under the Agreement. As established in Exhibit F of the Agreement, even if Alcoa were to curtail its power load down to zero, Intalco would still be required to employ 120 people. As a result, Alcoa will be less likely to curtail load at the Intalco Plant compared to its other aluminum smelters operating in the United States that do not have the same provision working against them, due to the additional continuing costs required by Exhibit F.

### **Final Decision**

The Minimum Employment Requirements provision will be included in the Agreement.

#### **i. Whether BPA should include the capital investment requirement in the Agreement.**

### **Comments**

PPC commented on the “capital investment provision” which requires Alcoa to invest \$35 million in the Intalco Plant during the first seven years of the Agreement. *See* Section 19.2.7. (providing that BPA may terminate the Agreement if Alcoa fails to provide BPA with documentation showing that it has invested 35 million dollars or more in capital projects at the Intalco Plant by September 30, 2019). PPC comments that:

Despite the Court’s admonishments, BPA appears to continue to rely on factors that should be irrelevant to its consideration of this contract. . . . [A]s a precondition for receiving service from BPA, Alcoa would be



required to invest \$35 million in the Intalco smelter. It is unclear how [this requirement] would further BPA's business interests or promote a business-oriented philosophy.

PPC at 4.

NRU's similar comment focuses on a recital included in the Agreement which states that "if Alcoa commits to expend strategic capital in excess of the capital expenditures required in Section 19 that would require a period of amortization exceeding the remaining term of this Agreement, the parties will consult concerning whether it might be in their mutual interest to extend the term of this Agreement." NRU at 3. NRU asserts that this recital should be removed because BPA's interest in whether Alcoa makes capital investments is unclear. *Id.*

### **BPA's Position**

BPA has not relied on Alcoa's capital investment as part of the legal justification for offering the Agreement. BPA agreed to include the capital investment recital as part of its negotiations with Alcoa. Both the capital investment provision and recital provide additional assurance to BPA that Alcoa is motivated to continue to operate the Intalco Plant for the duration of the Agreement, which BPA perceives as having economic value to BPA.

### **Discussion**

In response to PPC's comment, BPA has not relied on Alcoa's capital investment as part of the legal justification for offering the Agreement. No benefits to BPA from Alcoa's capital investment are included in the EBT. BPA has required this investment requirement as a means of Alcoa demonstrating a commitment to the long-term viability of the plant and the continued benefit of this Agreement to BPA and its preference customers. Alcoa will be far less likely to shut down the plant after investing additional capital into it since Alcoa would then have to consider the capital invested in the plant as a complete loss. This is one of the reasons why failure to maintain capital investment requirement was included as a termination right for BPA after seven years (and not as a "precondition for receiving service" as was incorrectly suggested by PNGC). According to the EBT forecast, the market rate may become higher than the IP rate during the seventh year of the Agreement. *See* Attachment A, tbl.6. In such conditions, if Alcoa is not making investments to assure the long term stability of the plant then BPA has the ability to terminate the contract if it would be economically advantageous to do so.

Lastly, PPC appears to be suggesting that each individual provision of a DSI contract must further BPA's business interests. BPA disagrees with this interpretation of the Ninth Circuit's holdings. As noted above, the Court has indicated the Administrator has discretion to determine the terms of BPA's agreements with DSIs, as long as overall BPA's decision to make the sale is in accord with sound business principles. *Alcoa* at

792 (“[I]n the ordinary case, we will not usurp BPA’s judgment regarding whether to sell surplus power to DSIs, or on what terms.”).

With regard to NRU’s comment about the recital, BPA included this recital as a result of negotiations between Alcoa and BPA. During negotiations, Alcoa raised the question of whether it would be possible to discuss a contract extension in the event that Alcoa has made significant capital investments at Intalco, above the requirements of Section 19.2.7. Rather than include a provision in the Agreement itself, the parties concluded that a recital would be an appropriate way to memorialize the parties’ commitment to future discussions in the event that an extension of the contract term is mutually beneficial to both parties. It is difficult to see how an acknowledgement that some situations might result in the parties to the Agreement talking to one another about certain matters has any detrimental bearing on the exercise of business judgment.

### **Final Decision**

Section 19.2.7 will be included in the Agreement and the recital concerning capital investment will also be retained.

## **VI. RESPONSE TO COMMENTS: GENERAL POLICY COMMENTS**

Comments also raised issues not specific to a particular contract provision, but which instead dealt with more general policy concerns. Those comments are addressed in this section.

### **a. Whether the EBT should be revised to measure actual benefits.**

#### **Comments**

PNGC comments that the EBT should measure actual benefits to Bonneville, not just forecasted benefits, and that Bonneville should be able to exit the contract if actual benefits fail to materialize. PNGC at 4. PNGC goes on to suggest that BPA should re-draft the EBT to provide for an ongoing analysis of the actual benefits of serving Alcoa over the life of the contract and should modify the new contract to allow BPA to exit the contract if there should cease to be a real net benefit to Bonneville at any time during the life of the contract. PNGC at 5.

#### **BPA’s Position**

Implementation of PNGC’s suggestion would be inconsistent with sound business principles.

#### **Discussion**

PNGC’s suggestion that BPA should provide for an ongoing analysis of the actual benefits of serving Alcoa over the life of the contract and that BPA should modify the

new contract to allow BPA to exit the contract if there should cease to be a real net benefit to BPA at any time during the life of the contract is inconsistent with sound business principles. As our preference customers are keenly aware, business contracts are instruments that allocate risks between the parties negotiating them. Parties to a business contract typically enter a contractual agreement based on the facts available and forecasted at the time of contracting, and therefore, risk is allocated between the parties at the time of the agreement. If BPA were to insist that it would bear none of the risk but reap all of the rewards, BPA's marketing opportunities would be largely eliminated. Such an approach would reduce the Administrator's discretion to make DSI sales to no discretion at all, an absurd result that would be inconsistent with principles of statutory interpretation. Negotiated contracts, as in this case, require the parties to deal with one another in good faith to achieve mutually acceptable benefits and an equitable allocation of risks, as this Agreement does.

### **Final Decision**

BPA declines to implement PNGC's suggestion because it would be inconsistent with sound business principles.

#### **b. Whether continued service to Alcoa will exacerbate PSANI transmission congestion.**

### **Comments**

The City of Seattle expressed concerns that the Agreement would "perpetuate a power delivery that exacerbates transmission congestion through the greater-Seattle area." Seattle then goes on to describe the Puget Sound Area Northern Intertie (PSANI) transmission capacity limitations and concludes with the following:

Therefore, Seattle feels that it is essential that BPA, prior to entering into *any* power sales agreement, determine that such sale will not exacerbate transmission congestion in the region during the term of the agreement

Seattle at 2. Seattle also argued that Alcoa should be susceptible to PSANI curtailments along with other Puget Sound area power customers.

### **BPA's Position**

BPA's continued service to Alcoa will not exacerbate transmission congestion in the Puget Sound region.

### **Discussion**

The PSANI area consists of BPA's network transmission facilities interconnected with the electric systems of customers in the Puget Sound area and BPA's Northern Intertie (NI) facilities interconnected with the BC Hydro system to the north. BPA monitors the

system operating limits (SOL) of the monitored facilities in the south to north direction to determine if the SOL levels will be sufficient for the transactions using those facilities in the operating hour. The transactions contributing to the SOL exceedences of the monitored facilities include south to north scheduled deliveries to Puget Sound Area customers north of Covington and scheduled deliveries over the NI. The measures that are monitored have been identified as the PSANI mitigation or congestion measures. A PSANI congestion problem is a south to north problem that arises when multiple factors interact at the same time to affect the power flow and the SOL in this direction. These factors include: planned and/or unplanned facility outages; temperature; the forecasted generation patterns in Puget Sound Area, the forecasted load in the Puget Sound Area, and all of the scheduled deliveries in the south to north direction to serve the load in the area and deliveries to Canada, taking into account any north to south deliveries (i.e., counterflows) from Canada.

BPA's continued service to Alcoa will not exacerbate transmission congestion in the area above existing firm uses for two reasons. First, the load level at Alcoa's Intalco plant, by itself, is not the source of the PSANI congestion. All deliveries of power in a south to north direction contribute to the congestion problems in the area, including south to north deliveries to serve Alcoa's load. If Alcoa or any other load in the area acquires power from the north, in most cases those counter flows help to alleviate any PSANI congestion problems. However, even if Alcoa's Intalco Plant were to be served by another power marketer, that by itself is not likely to do anything to help relieve the area congestion. Instead, BPA would continue to be obligated to manage the south to north deliveries to any load in the area including Snohomish PUD, Seattle, BPA's transfer customers, Puget Sound Energy or deliveries to Canada.

Second, Alcoa has a long-term firm transmission contract which is separate from the Agreement. BPA has already concluded that even if BPA were not to serve Alcoa, the Intalco Plant would continue to operate on power purchased at the market. In all likelihood, that power would be purchased at Mid-C and transferred to the Intalco Plant utilizing Alcoa's existing firm transmission rights. Furthermore, even if the Alcoa load disappears, Alcoa holds those transmission rights and would be able to permanently transfer them to any eligible and willing buyer. Moreover, if any transmission capability reverted to BPA and is available, BPA must release it to the market under its open access transmission service policies. Since multiple factors contribute to the problem, and the congestion is specific to all of the conditions that apply at the time, BPA cannot definitively say that if Alcoa did not operate the plant, the congestion problem would disappear. Therefore, entering into this Agreement is likely to have no incremental effect on PSANI congestion.

BPA has worked closely with Puget Sound Energy, Snohomish PUD and Seattle City Light ("Puget Sound Area customers") on issues contributing to congestion in the PSANI area, including coordinating planned maintenance outages to minimize impacts, and undertaking efforts to encourage the Puget Sound Area customers to increase generation in the area during periods of congestion. BPA, Seattle City Light and Puget have also agreed to invest in transmission reinforcements in the area. In addition, BPA has

conducted training for operations and technical staff of the Puget Sound Area customers so all entities understand implementation and operation of the PSANI curtailment procedures. BPA is continuing to work with the Puget Sound Area customers to increase understanding of the interconnected systems and operations practices that will help to meet the future service needs.

Additionally, in response to Seattle's second comment, Alcoa is, in fact, affected by PSANI related curtailments and has been curtailed for PSANI events in the past and will continue to be curtailed when deemed necessary in the future, consistent with NERC priorities and on a pro rata basis.

### **Final Decision**

BPA's continued service to Alcoa will not exacerbate transmission congestion in the Puget Sound region.

#### **c. Whether the Agreement should be BPA's last contract for service to Alcoa.**

### **Comments**

PNGC suggests that if BPA decides to go forward with the Agreement, it should be the last contract for service to Alcoa. PNGC at 3. PNGC asserts that this approach would provide "adequate notice and certainty" to Alcoa, other DSIs, and other regional stakeholders regarding DSI service going forward. *Id.* PNGC goes on to say that "preference customers would have certainty that they no longer will have to live with the specter of Bonneville attempting to subsidize BPA's service to Alcoa through preference rates." *Id.*

### **BPA's Position**

Deciding that this will be the last contract for service to Alcoa would be an unreasonable, unbusiness-like decision made without the benefit of consideration of relevant facts and conditions.

### **Discussion**

BPA does not understand how making a determination that this will be the last contract with Alcoa would be anything other than arbitrary, capricious, and inconsistent with any sound business principles. BPA's approach to DSI service since *PNGC II* has been to assess each contract individually, together with the facts available at the time in order to make a reasoned decision on whether or not to offer the contract. The court recently upheld this approach with respect to BPA service to Alcoa. *See Alcoa* at 791 ("BPA's explanations are plausible and rationally connected to the facts that were before it at the time."). Declaring that this will be the last contract with Alcoa would be the opposite of assessing the business case for each contract. The Administrator will not foreclose the

possibility of future power sales contracts with Alcoa when such future contracts may be beneficial to BPA and its preference customers.

As for the “specter of Bonneville attempting to subsidize BPA’s service to Alcoa through preference rates,” PNGC’s concerns are unsupported by the facts and record of this case. First, under the EBT, BPA anticipates garnering substantially more revenue from the Agreement than would otherwise be achieved so there is no basis upon which to claim that there is a subsidy. Second, as reaffirmed in the recent *Alcoa* decision, the Administrator may lawfully sell physical power to Alcoa at the IP rate. *See, e.g., PNGC II* at 1073; *Alcoa* at 789. While BPA does not expect it to be the case for the duration of this contract, the Court has further held that it is lawful for BPA to include the costs of federal base system replacement resources in the PF rate, even if those resources are purchased to meet DSI contract obligations. *See Golden Nw. Aluminum v. Bonneville Power Admin.*, 501 F.3d 1037, 1045–46 (9th Cir. 2007). In the recent *Alcoa* decision, the Court held that there is no evidence “supporting PNGC’s claim that BPA entered into the Alcoa Contract to subsidize Alcoa.” *Alcoa* at 789. The Court also rejected PNGC’s argument that the terms of the 2009 Agreement required BPA to subsidize Alcoa’s rate by providing a credit for Alcoa’s provision of contingency power reserves to BPA, as required by statute, which explicitly requires that BPA obtain such reserves and provides for a credit to the IP rate to reflect their value. *Id.* at 791; *see also* 16 U.S.C. § 839e(c)(3). BPA believes that the allegations regarding subsidies to Alcoa are unfounded. It should also be noted that the revenues accruing from the prior sale to Alcoa outpaced even the EBT projected financial benefits.

Furthermore, BPA notes that PNGC’s comment is premised upon a clearly misleading restatement of Ninth Circuit case law. PNGC states:

As the Ninth Circuit clarified in *PNGC I*, although the Northwest Power Act envisioned a phasing out of Bonneville service to DSIs after 2000, Bonneville may, but is not obligated to, continue to provide service to Alcoa and the other DSIs . . . .

PNGC at 3. The Ninth Circuit did not state in its *PNGC I* opinion that the Northwest Power Act “envisioned a phasing out of Bonneville service to DSIs after 2000.” Rather, the Court found that Congress’s use of the phrase “initial contract” gives rise to a reasonable inference that other contracts may follow the initial long term agreements, and held that BPA is authorized to offer additional contracts. *PNGC I* at 808–09. In addition, PNGC provides no citation for its proposition that the Northwest Power Act envisioned a phasing out of BPA service to DSIs after 2000. In fact, this proposition is contrary to the legislative history cited by the Court in *PNGC I* to support its conclusion that BPA is authorized, but not obligated, to offer additional contracts to the DSIs:

The House Interior Committee’s report on S. 885 states that “[s]ection 5(d)(1) authorizes [BPA] to sell power to its existing direct-service industrial customers and requires [the agency] to offer to such customers initial long-term power sale contracts.” H.R. Rep. No. 96-976, pt. 2, at 34

(1980) (emphasis added). . . . The report goes on to explain that, in addition to mandating that “[i]nitial long-term 20-year contracts are to be offered by BPA” to the DSIs, “[s]ubsequent contract . . . are authorized but not mandated. H. Rep. 96-976, pt.1, at 61 (1980).

*Id.* at 809.

Third, despite repeated allegations that BPA is attempting to subsidize Alcoa’s rate for power through preference rates, the converse is actually closer to the truth. The statutory rate directives set forth in section 7(c) of the Northwest Power Act assure that the IP rate will continue to be higher than the rate paid by preference customers. Section 7(c) provides that the IP rate is to be equal to the applicable wholesale rate (the rate paid by preference customers), plus the industrial margin, less the value of reserves, plus any section 7(b)(3) reallocation of the 7(b)(2) rate protection amount. The formula for developing the IP rate in this manner is clearly prescribed by Congress in Sections 7(c) and 7(b)(2) of the Northwest Power Act. *See* 16 U.S.C § 839e(c).

The IP rate increase for the industrial margin reflects the “overhead” costs that are paid by industrial customers who purchase power from BPA’s preference customer utilities and so such amounts are not even a part of BPA’s overall cost structure. The IP rate is subject to further increase due to rate protection afforded to preference customers with respect to recovering costs associated with the Residential Exchange Program, which provides a benefit to residential and small farm customers of regional investor-owned utilities. *See* 16 U.S.C. § 839e(b)(2). The IP and the PF-Exchange rate are both formulated, in certain defined circumstances, to move costs associated with the Residential Exchange Program away from preference customers.

For the foregoing reasons, BPA believes that the allegations regarding subsidies to Alcoa are unfounded.

### **Final Decision**

BPA will not make a determination that the Agreement is the last contract for service to Alcoa. Further, BPA believes that the argument that the Agreement may result in preference customers subsidizing the Agreement is unfounded, contrary to the Agreement, and refuted by the record.

#### **d. Whether BPA is offering the Agreement “solely because Alcoa sued the agency on the Residential Exchange Settlement Agreement.”**

### **Comments**

PNGC states that “Bonneville should not offer Alcoa this contract solely because Alcoa sued the agency on the Residential Exchange Settlement Agreement.” PNGC at 3.

## **BPA's Position**

BPA is not offering the Agreement “solely” to dismiss Alcoa’s REP Settlement petition. Alcoa’s agreement to dismiss its REP Settlement petition played only a minimal part in the negotiations of this Agreement.

## **Discussion**

BPA’s motivations for offering the Agreement are described in detail in the preceding sections of this ROD. As described above, BPA expects to receive (at least) \$42 million in net revenue over the term of the Agreement, in addition to the various other operational and risk mitigation benefits attributable to serving Alcoa’s load. It is for these tangible reasons that BPA has decided to offer the Agreement to Alcoa.

An additional requirement of the Agreement is described in section 18.12, which requires Alcoa to dismiss its current challenges to the REP Settlement and prohibits future challenges to BPA’s decision to implement the REP Settlement. The REP waiver provides value to BPA by removing some challenges to the REP Settlement pending before the Ninth Circuit, thereby narrowing the issues the Court must consider. With fewer petitioners challenging the REP Settlement, and fewer issues for the Court to consider, the likelihood that the REP Settlement will be upheld by the Court increases. Inclusion of the REP waiver is in BPA’s business interest as a sound exercise of the Administrator’s settlement authority.

Certain commenters have apparently misconstrued BPA’s motives for including this provision and allege that BPA’s “sole” rationale for offering Alcoa the Agreement is to remove them from the pending REP litigation. This assertion is untrue.

BPA requested the inclusion of the REP waiver and dismissal during the course of the negotiations. BPA does not believe Alcoa would have ultimately prevailed.

It would have made no practical sense for BPA to place the inordinate value on obtaining the waiver that PNGC ascribes when it alleges the waiver was the “sole” motivation. By the time the issue came up in negotiations, BPA had already fully briefed and responded to every issue Alcoa raised in its own brief. Beyond that, the value from a legal perspective is that certain issues that Alcoa had raised will no longer be present, allowing the Court to render an opinion based on a somewhat smaller number of issues and simplifying the challenges to the REP Settlement that the Court must hear.

However, even with the departure of Alcoa, the REP litigation will proceed to a decision because of the presence of another active petitioner that raised many of the same issues Alcoa raised. To propose that BPA would have offered Alcoa a ten year power arrangement in order to simply narrow issues pending before the Court is illogical. In effect, PNGC is criticizing BPA for including in the Agreement a requirement that Alcoa dismiss its challenges to the REP Settlement, a settlement that regional parties (including PNGC) spent over a year to develop and which ends a decade worth of litigation. The



alternative to the REP waiver language, however, would have been to omit any mention of Alcoa's REP challenges, thereby permitting Alcoa to continue its suit against the REP Settlement, while also receiving a long-term power arrangement from BPA. This outcome, to BPA, would have been far more unreasonable. Indeed, it is highly likely that if the REP waiver had *not* been included in the Agreement, PNGC and the other preference customers would have sent in comments demanding that language should be added to the contract requiring Alcoa to drop the lawsuit and stressing that without the inclusion of this language BPA should not enter into the Agreement.

In conclusion, BPA sees no basis for PNGC's allegation that that Alcoa "filed its petition on the REP Settlement solely to gain leverage against BPA in negotiating a new power sales contract" for the simple reason that economic considerations were the primary factor and the waiver, in and of itself, did not provide any compelling basis for offering the contract. That is not to say that the waiver is of no value in terms of streamlining the litigation by eliminating some issues from the Court's consideration, a result that BPA believes the Court will find desirable.

### **Final Decision**

BPA is offering this contract based on sound business considerations and the negotiated waiver of the REP Settlement litigation supports these business considerations.

## **XI. ENVIRONMENTAL EFFECTS**

BPA has reviewed the Agreement for potential environmental effects that could result from its implementation, consistent with the National Environmental Policy Act (NEPA), 42 U.S.C. § 4321, et seq. Executing this Agreement would involve providing continued service to a facility (the Intalco smelter) that is already in existence and currently operating. This Agreement does not require BPA to take any action that would have a potential effect on the environment. BPA expects to provide power from existing generation sources that would continue to operate within their normal operating limits. This power would be supplied over existing transmission lines that connect Intalco to BPA's electrical transmission system and no physical changes to this system would occur. In addition, the proposed Agreement would not cause a change in Intalco's existing operations in such a way that environmental impacts would significantly differ from the currently existing situation. Further, BPA anticipates that Alcoa will comply with applicable statutory, regulatory, and permit requirements for environment, safety, and health.

For these reasons, BPA has determined that the Agreement falls within a class of actions excluded from further NEPA review pursuant to U.S. Department of Energy NEPA regulations, which are applicable to BPA. More specifically, this Agreement falls within Categorical Exclusion B4.1, found at 10 CFR 1021, Subpart D, Appendix B, which provides for the categorical exclusion from NEPA of actions involving "[e]stablishment and implementation of contracts, policies, and marketing and allocation plans related to electric power acquisition that involve only the use of the existing transmission system

and existing generation resources operating within their normal operating limits.” The Environmental Clearance Memorandum that documents this categorical exclusion for the contract has been posted at BPA’s website at:  
[http://efw.bpa.gov/environmental\\_services/categorialexclusions.aspx](http://efw.bpa.gov/environmental_services/categorialexclusions.aspx).

## **X. CONCLUSION**

For the foregoing reasons, BPA will has sign the Agreement on December 7<sup>th</sup>, 2012.

Issued at Portland, Oregon, this 6th day of December, 2012.

/S/ STEPHEN J. WRIGHT  
Stephen J. Wright  
Administrator and Chief Executive Officer

12/6/12  
Date

# ATTACHMENT A EBT ANALYSIS

**TABLE 1 – IP Rate Forecast from REP-12**

REP-12					
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Avg Electricity Prices (\$/MWh)	\$ 28.53	\$ 39.78	\$ 42.20	\$ 43.00	\$ 44.52
Henry Hub Natural Gas Prices (\$/mmBtu)	\$3.34	\$4.96	\$5.12	\$5.38	\$5.62
<b>IP Rate (\$/MWh)</b>	<b>\$36.31</b>	<b>\$38.87</b>	<b>\$38.87</b>	<b>\$41.28</b>	<b>\$41.28</b>
7b3 Surcharge (\$/MWh)	\$7.72	\$8.14	\$8.21	\$8.65	\$8.70
Net Margin (\$/MWh)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)
Flat PF Rate (\$/MWh)	\$28.84	\$30.95	\$30.95	\$32.86	\$32.86
Surplus Energy Revenues including Slice Secondary (\$000)	\$626,339	\$613,005	\$592,901	\$602,036	\$614,441
Balancing Power Purchase Expenses (\$000)	\$72,632	\$74,120	\$37,554	\$42,536	\$29,805
Augmentation Expenses (\$000)	\$66,155	\$52,864	\$130,704	\$93,396	\$174,463
Net (\$000)	\$487,552	\$486,022	\$424,642	\$466,104	\$410,173
4h10c Credits (\$000)	\$95,847	\$100,859	\$104,727	\$107,165	\$109,699
<b>Surplus energy revenues after Slice is removed</b>	<b>\$458,141</b>	<b>\$448,389</b>	<b>\$433,683</b>	<b>\$440,365</b>	<b>\$449,438</b>
REP-12 (continued)					
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Avg Electricity Prices (\$/MWh)	\$ 45.85	\$ 47.23	\$ 48.65	\$ 50.11	\$ 51.61
Henry Hub Natural Gas Prices (\$/mmBtu)	\$5.79	\$5.96	\$6.14	\$6.33	\$6.52
<b>IP Rate (\$/MWh)</b>	<b>\$42.96</b>	<b>\$42.96</b>	<b>\$41.45</b>	<b>\$41.45</b>	<b>\$43.49</b>
7b3 Surcharge (\$/MWh)	\$9.14	\$9.13	\$7.21	\$7.25	\$7.60
Net Margin (\$/MWh)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)
Flat PF Rate (\$/MWh)	\$34.09	\$34.09	\$34.47	\$34.47	\$36.14
Surplus Energy Revenues including Slice Secondary (\$000)	\$632,874	\$651,860	\$673,256	\$691,559	\$712,305
Balancing Power Purchase Expenses (\$000)	\$30,700	\$31,620	\$32,658	\$33,546	\$34,553
Augmentation Expenses (\$000)	\$119,302	\$204,004	\$123,411	\$198,081	\$132,018
Net (\$000)	\$482,872	\$416,236	\$517,186	\$459,931	\$545,735
4h10c Credits (\$000)	\$113,967	\$118,377	\$122,970	\$127,692	\$132,468
<b>Surplus energy revenues after Slice is removed</b>	<b>\$462,922</b>	<b>\$476,809</b>	<b>\$492,459</b>	<b>\$505,847</b>	<b>\$521,022</b>

# ATTACHMENT A EBT ANALYSIS

**TABLE 2 – IP Rate Forecast used in this EBT Analysis**

ALCOA EBT Analysis					
	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017
Avg Electricity Prices (\$/MWh)	\$28.53	\$34.15	\$37.99	\$39.31	\$40.42
Henry Hub Natural Gas Prices (\$/mmBtu)	\$3.34	\$3.97	\$4.35	\$4.61	\$4.86
<b>IP Rate (\$/MWh)</b>	<b>\$36.31</b>	<b>\$40.14</b>	<b>\$40.14</b>	<b>\$42.32</b>	<b>\$42.32</b>
7b3 Surcharge (\$/MWh)	\$7.72	\$8.26	\$8.38	\$8.82	\$8.87
Net Margin (\$/MWh)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)
Flat PF Rate (\$/MWh)	\$28.84	\$32.46	\$32.46	\$34.13	\$34.13
Surplus Energy Revenues including Slice Secondary (\$000)	\$626,339	\$507,339	\$531,284	\$543,203	\$538,958
Balancing Power Purchase Expenses (\$000)	\$72,632	\$65,869	\$31,209	\$36,292	\$27,646
Augmentation Expenses (\$000)	\$66,155	\$45,191	\$123,549	\$87,015	\$162,587
Net (\$000)	\$487,552	\$396,279	\$376,525	\$419,896	\$348,725
4h10c Credits (\$000)	\$95,847	\$96,472	\$101,213	\$104,265	\$107,110
<b>Surplus energy revenues after Slice is removed</b>	<b>\$458,141</b>	<b>\$371,098</b>	<b>\$388,613</b>	<b>\$397,331</b>	<b>\$394,226</b>
ALCOA EBT Analysis (continued)					
	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022
Avg Electricity Prices (\$/MWh)	\$41.61	\$42.88	\$44.18	\$45.48	\$46.85
Henry Hub Natural Gas Prices (\$/mmBtu)	\$5.01	\$5.16	\$5.31	\$5.47	\$5.64
<b>IP Rate (\$/MWh)</b>	<b>\$44.12</b>	<b>\$44.12</b>	<b>\$42.58</b>	<b>\$42.58</b>	<b>\$46.10</b>
7b3 Surcharge (\$/MWh)	\$9.31	\$9.30	\$7.34	\$7.39	\$7.75
Net Margin (\$/MWh)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)	(\$0.26)
Flat PF Rate (\$/MWh)	\$35.49	\$35.49	\$35.80	\$35.80	\$38.92
Surplus Energy Revenues including Slice Secondary (\$000)	\$555,127	\$571,780	\$590,547	\$606,602	\$624,800
Balancing Power Purchase Expenses (\$000)	\$28,475	\$29,329	\$30,292	\$31,115	\$32,049
Augmentation Expenses (\$000)	\$111,181	\$190,118	\$115,011	\$184,598	\$123,031
Net (\$000)	\$415,470	\$352,333	\$445,244	\$390,888	\$469,720
4h10c Credits (\$000)	\$111,277	\$115,583	\$120,068	\$124,678	\$129,341
<b>Surplus energy revenues after Slice is removed</b>	<b>\$406,053</b>	<b>\$418,234</b>	<b>\$431,961</b>	<b>\$443,705</b>	<b>\$457,016</b>

See Revenue at Proposed Rates, BP-12-FS-BPA-01A at 136, tbl.4.2 (regarding secondary energy revenues, balancing power purchase expenses, augmentation expenses, and 4h10c credits for FY 2013). See Market Price Inputs and Secondary Energy, REP-12-FS-BPA-01A at 203–04, tbl.10.4.2.3.1 (regarding secondary energy revenues, balancing power purchase expenses, and augmentation expenses for FY 2014 – FY 2022). See Cost of Service Analysis, General and Other Revenue Credits, REP-12-FS-BPA-01A at 202, tbl.10.4.2.2.1 (regarding 4(h)(10)(c) credits for FY 2014 – FY 2017); see also REP-12-FS-BPA-01 at 69 (regarding escalation of 4(h)(10)(c) credits for FY 2018 – FY 2022).

ATTACHMENT A  
EBT ANALYSIS

**TABLE 3 - Usage and Rates**

Month	Alcoa Ferndale Usage			Projected IP Rates		
	Demand (kW)	HLH (MWh)	LLH (MWh)	Demand (\$ / kW)	HLH (\$ / MWh)	LLH (\$ / MWh)
Jan-13	300,000	124,800	98,400	\$9.70	\$40.68	\$32.35
Feb-13	300,000	115,200	86,400	\$9.92	\$41.58	\$33.82
Mar-13	300,000	124,800	98,100	\$9.60	\$40.22	\$32.98
Apr-13	300,000	124,800	91,200	\$9.10	\$38.18	\$31.06
May-13	300,000	124,800	98,400	\$8.50	\$35.71	\$25.05
Jun-13	300,000	120,000	96,000	\$8.72	\$36.62	\$23.67
Jul-13	300,000	124,800	98,400	\$10.20	\$42.72	\$30.56
Aug-13	300,000	129,600	93,600	\$10.75	\$45.00	\$32.80
Sep-13	300,000	115,200	100,800	\$10.53	\$44.10	\$34.24
Oct-13	300,000	129,600	93,600	\$9.18	\$42.50	\$35.10
Nov-13	300,000	120,000	96,300	\$9.31	\$43.06	\$35.32
Dec-13	300,000	120,000	103,200	\$9.97	\$46.10	\$37.53
Jan-14	300,000	124,800	98,400	\$9.70	\$44.91	\$35.65
Feb-14	300,000	115,200	86,400	\$9.92	\$45.91	\$37.29
Mar-14	300,000	124,800	98,100	\$9.60	\$44.40	\$36.35
Apr-14	300,000	124,800	91,200	\$9.10	\$42.13	\$34.22
May-14	300,000	124,800	98,400	\$8.50	\$39.39	\$27.54
Jun-14	300,000	120,000	96,000	\$8.72	\$40.40	\$26.01
Jul-14	300,000	124,800	98,400	\$10.20	\$47.18	\$33.66
Aug-14	300,000	124,800	98,400	\$10.75	\$49.71	\$36.15
Sep-14	300,000	120,000	96,000	\$10.53	\$48.71	\$37.75
Oct-14	300,000	129,600	93,600	\$9.18	\$42.61	\$35.21
Nov-14	300,000	115,200	101,100	\$9.31	\$43.18	\$35.43
Dec-14	300,000	124,800	98,400	\$9.97	\$46.21	\$37.64
Jan-15	300,000	124,800	98,400	\$9.70	\$45.02	\$35.77

ATTACHMENT A  
EBT ANALYSIS

**TABLE 3 - Usage and Rates**

Alcoa Ferndale Usage				Projected IP Rates		
Month	Demand (kW)	HLH (MWh)	LLH (MWh)	Demand (\$ / kW)	HLH (\$ / MWh)	LLH (\$ / MWh)
Feb-15	300,000	115,200	86,400	\$9.92	\$46.02	\$37.40
Mar-15	300,000	124,800	98,100	\$9.60	\$44.51	\$36.47
Apr-15	300,000	124,800	91,200	\$9.10	\$42.24	\$34.33
May-15	300,000	120,000	103,200	\$8.50	\$39.50	\$27.66
Jun-15	300,000	124,800	91,200	\$8.72	\$40.51	\$26.12
Jul-15	300,000	124,800	98,400	\$10.20	\$47.29	\$33.78
Aug-15	300,000	124,800	98,400	\$10.75	\$49.82	\$36.27
Sep-15	300,000	120,000	96,000	\$10.53	\$48.82	\$37.87
Oct-15	300,000	129,600	93,600	\$9.18	\$44.83	\$37.05
Nov-15	300,000	115,200	101,100	\$9.31	\$45.43	\$37.28
Dec-15	300,000	124,800	98,400	\$9.97	\$48.62	\$39.61
Jan-16	300,000	120,000	103,200	\$9.70	\$47.37	\$37.63
Feb-16	300,000	120,000	88,800	\$9.92	\$48.42	\$39.35
Mar-16	300,000	129,600	93,300	\$9.60	\$46.83	\$38.37
Apr-16	300,000	124,800	91,200	\$9.10	\$44.44	\$36.13
May-16	300,000	120,000	103,200	\$8.50	\$41.56	\$29.10
Jun-16	300,000	124,800	91,200	\$8.72	\$42.62	\$27.49
Jul-16	300,000	120,000	103,200	\$10.20	\$49.75	\$35.54
Aug-16	300,000	129,600	93,600	\$10.75	\$52.41	\$38.16
Sep-16	300,000	120,000	96,000	\$10.53	\$51.36	\$39.84
Oct-16	300,000	124,800	98,400	\$9.18	\$44.88	\$37.10
Nov-16	300,000	120,000	96,300	\$9.31	\$45.48	\$37.33
Dec-16	300,000	124,800	98,400	\$9.97	\$48.66	\$39.66
Jan-17	300,000	120,000	103,200	\$9.70	\$47.41	\$37.68
Feb-17	300,000	115,200	86,400	\$9.92	\$48.47	\$39.40

ATTACHMENT A  
EBT ANALYSIS

**TABLE 3 - Usage and Rates**

Month	Alcoa Ferndale Usage			Projected IP Rates		
	Demand (kW)	HLH (MWh)	LLH (MWh)	Demand (\$ / kW)	HLH (\$ / MWh)	LLH (\$ / MWh)
Mar-17	300,000	129,600	93,300	\$9.60	\$46.88	\$38.42
Apr-17	300,000	120,000	96,000	\$9.10	\$44.49	\$36.18
May-17	300,000	124,800	98,400	\$8.50	\$41.61	\$29.15
Jun-17	300,000	124,800	91,200	\$8.72	\$42.67	\$27.54
Jul-17	300,000	120,000	103,200	\$10.20	\$49.80	\$35.59
Aug-17	300,000	129,600	93,600	\$10.75	\$52.46	\$38.21
Sep-17	300,000	120,000	96,000	\$10.53	\$51.41	\$39.89
Oct-17	300,000	124,800	98,400	\$9.18	\$46.77	\$38.68
Nov-17	300,000	120,000	96,300	\$9.31	\$47.39	\$38.92
Dec-17	300,000	120,000	103,200	\$9.97	\$50.70	\$41.34
Jan-18	300,000	124,800	98,400	\$9.70	\$49.40	\$39.28
Feb-18	300,000	115,200	86,400	\$9.92	\$50.50	\$41.07
Mar-18	300,000	129,600	93,300	\$9.60	\$48.85	\$40.05
Apr-18	300,000	120,000	96,000	\$9.10	\$46.37	\$37.72
May-18	300,000	124,800	98,400	\$8.50	\$43.37	\$30.41
Jun-18	300,000	124,800	91,200	\$8.72	\$44.47	\$28.74
Jul-18	300,000	120,000	103,200	\$10.20	\$51.88	\$37.11
Aug-18	300,000	129,600	93,600	\$10.75	\$54.65	\$39.83
Sep-18	300,000	115,200	100,800	\$10.53	\$53.56	\$41.58
Oct-18	300,000	129,600	93,600	\$9.18	\$46.75	\$38.66
Nov-18	300,000	120,000	96,300	\$9.31	\$47.37	\$38.90
Dec-18	300,000	120,000	103,200	\$9.97	\$50.69	\$41.32
Jan-19	300,000	124,800	98,400	\$9.70	\$49.39	\$39.27
Feb-19	300,000	115,200	86,400	\$9.92	\$50.48	\$41.06
Mar-19	300,000	124,800	98,100	\$9.60	\$48.83	\$40.03

ATTACHMENT A  
EBT ANALYSIS

**TABLE 3 - Usage and Rates**

Month	Alcoa Ferndale Usage			Projected IP Rates		
	Demand (kW)	HLH (MWh)	LLH (MWh)	Demand (\$ / kW)	HLH (\$ / MWh)	LLH (\$ / MWh)
Apr-19	300,000	124,800	91,200	\$9.10	\$46.35	\$37.70
May-19	300,000	124,800	98,400	\$8.50	\$43.35	\$30.40
Jun-19	300,000	120,000	96,000	\$8.72	\$44.46	\$28.72
Jul-19	300,000	124,800	98,400	\$10.20	\$51.87	\$37.09
Aug-19	300,000	129,600	93,600	\$10.75	\$54.64	\$39.82
Sep-19	300,000	115,200	100,800	\$10.53	\$53.55	\$41.57
Oct-19	300,000	129,600	93,600	\$9.18	\$45.13	\$36.96
Nov-19	300,000	120,000	96,300	\$9.31	\$45.75	\$37.21
Dec-19	300,000	120,000	103,200	\$9.97	\$49.10	\$39.65
Jan-20	300,000	124,800	98,400	\$9.70	\$47.78	\$37.58
Feb-20	300,000	120,000	88,800	\$9.92	\$48.89	\$39.38
Mar-20	300,000	124,800	98,100	\$9.60	\$47.22	\$38.35
Apr-20	300,000	124,800	91,200	\$9.10	\$44.72	\$36.00
May-20	300,000	120,000	103,200	\$8.50	\$41.69	\$28.63
Jun-20	300,000	124,800	91,200	\$8.72	\$42.81	\$26.94
Jul-20	300,000	124,800	98,400	\$10.20	\$50.28	\$35.38
Aug-20	300,000	124,800	98,400	\$10.75	\$53.08	\$38.13
Sep-20	300,000	120,000	96,000	\$10.53	\$51.98	\$39.89
Oct-20	300,000	129,600	93,600	\$9.18	\$45.17	\$37.01
Nov-20	300,000	115,200	101,100	\$9.31	\$45.79	\$37.25
Dec-20	300,000	124,800	98,400	\$9.97	\$49.14	\$39.69
Jan-21	300,000	120,000	103,200	\$9.70	\$47.83	\$37.62
Feb-21	300,000	115,200	86,400	\$9.92	\$48.93	\$39.42
Mar-21	300,000	129,600	93,300	\$9.60	\$47.26	\$38.39
Apr-21	300,000	124,800	91,200	\$9.10	\$44.76	\$36.04



ATTACHMENT A  
EBT ANALYSIS

**TABLE 3 - Usage and Rates**

Month	Alcoa Ferndale Usage			Projected IP Rates		
	Demand (kW)	HLH (MWh)	LLH (MWh)	Demand (\$ / kW)	HLH (\$ / MWh)	LLH (\$ / MWh)
May-21	300,000	120,000	103,200	\$8.50	\$41.74	\$28.67
Jun-21	300,000	124,800	91,200	\$8.72	\$42.85	\$26.98
Jul-21	300,000	124,800	98,400	\$10.20	\$50.33	\$35.43
Aug-21	300,000	124,800	98,400	\$10.75	\$53.12	\$38.17
Sep-21	300,000	120,000	96,000	\$10.53	\$52.02	\$39.94
Oct-21	300,000	124,800	98,400	\$9.18	\$48.85	\$39.98
Nov-21	300,000	120,000	96,300	\$9.31	\$49.53	\$40.24
Dec-21	300,000	124,800	98,400	\$9.97	\$53.17	\$42.89
Jan-22	300,000	120,000	103,200	\$9.70	\$51.74	\$40.64
Feb-22	300,000	115,200	86,400	\$9.92	\$52.94	\$42.60
Mar-22	300,000	129,600	93,300	\$9.60	\$51.13	\$41.48
Apr-22	300,000	124,800	91,200	\$9.10	\$48.41	\$38.92
May-22	300,000	120,000	103,200	\$8.50	\$45.12	\$30.92
Jun-22	300,000	124,800	91,200	\$8.72	\$46.33	\$29.08
Jul-22	300,000	120,000	103,200	\$10.20	\$54.46	\$38.26
Aug-22	300,000	129,600	93,600	\$10.75	\$57.50	\$41.24
Sep-22	300,000	120,000	96,000	\$10.53	\$56.30	\$43.16

ATTACHMENT A  
EBT ANALYSIS

**TABLE 4 - BPA's Projected Revenue**

Revenues by Rate Determinant				Projected IP Revenue	
Month	Demand (\$)	HLH (\$)	LLH (\$)	Month (\$)	Cumulative Total Contract- to-Date (\$)
Jan-13	\$0	\$5,076,552	\$3,182,994	\$8,259,546	\$8,259,546
Feb-13	\$0	\$4,789,728	\$2,921,832	\$7,711,560	\$15,971,106
Mar-13	\$0	\$5,019,144	\$3,235,093	\$8,254,237	\$24,225,343
Apr-13	\$0	\$4,764,552	\$2,832,444	\$7,596,996	\$31,822,339
May-13	\$0	\$4,456,296	\$2,464,674	\$6,920,970	\$38,743,309
Jun-13	\$0	\$4,394,100	\$2,272,080	\$6,666,180	\$45,409,489
Jul-13	\$0	\$5,331,144	\$3,006,858	\$8,338,002	\$53,747,491
Aug-13	\$0	\$5,831,676	\$3,069,846	\$8,901,522	\$62,649,013
Sep-13	\$0	\$5,080,032	\$3,451,140	\$8,531,172	\$71,180,185
Oct-13	\$0	\$5,507,636	\$3,285,085	\$8,792,721	\$79,972,905
Nov-13	\$0	\$5,167,664	\$3,401,247	\$8,568,911	\$88,541,817
Dec-13	\$0	\$5,531,670	\$3,873,141	\$9,404,811	\$97,946,628
Jan-14	\$0	\$5,604,561	\$3,508,219	\$9,112,779	\$107,059,407
Feb-14	\$0	\$5,288,643	\$3,221,509	\$8,510,152	\$115,569,560
Mar-14	\$0	\$5,540,773	\$3,566,194	\$9,106,967	\$124,676,527
Apr-14	\$0	\$5,257,888	\$3,120,797	\$8,378,686	\$133,055,212
May-14	\$0	\$4,915,376	\$2,710,072	\$7,625,447	\$140,680,660
Jun-14	\$0	\$4,847,658	\$2,496,770	\$7,344,428	\$148,025,088
Jul-14	\$0	\$5,887,446	\$3,312,508	\$9,199,954	\$157,225,042
Aug-14	\$0	\$6,203,611	\$3,557,419	\$9,761,031	\$166,986,073
Sep-14	\$0	\$5,845,009	\$3,624,256	\$9,469,264	\$176,455,337
Oct-14	\$0	\$5,522,436	\$3,295,774	\$8,818,210	\$185,273,547
Nov-14	\$0	\$4,974,113	\$3,582,326	\$8,556,439	\$193,829,986
Dec-14	\$0	\$5,767,189	\$3,704,232	\$9,471,421	\$203,301,407
Jan-15	\$0	\$5,618,813	\$3,519,456	\$9,138,269	\$212,439,676
Feb-15	\$0	\$5,301,799	\$3,231,376	\$8,533,175	\$220,972,851
Mar-15	\$0	\$5,555,025	\$3,577,397	\$9,132,422	\$230,105,273
Apr-15	\$0	\$5,272,141	\$3,131,212	\$8,403,353	\$238,508,626
May-15	\$0	\$4,740,027	\$2,854,056	\$7,594,082	\$246,102,709
Jun-15	\$0	\$5,055,817	\$2,382,346	\$7,438,163	\$253,540,872
Jul-15	\$0	\$5,901,698	\$3,323,746	\$9,225,444	\$262,766,315
Aug-15	\$0	\$6,217,863	\$3,568,657	\$9,786,520	\$272,552,835
Sep-15	\$0	\$5,858,713	\$3,635,219	\$9,493,932	\$282,046,767
Oct-15	\$0	\$5,809,988	\$3,467,795	\$9,277,783	\$291,324,550
Nov-15	\$0	\$5,233,075	\$3,769,287	\$9,002,362	\$300,326,912
Dec-15	\$0	\$6,067,219	\$3,897,401	\$9,964,619	\$310,291,532
Jan-16	\$0	\$5,683,851	\$3,883,752	\$9,567,603	\$319,859,135
Feb-16	\$0	\$5,810,030	\$3,494,342	\$9,304,372	\$329,163,507
Mar-16	\$0	\$6,068,908	\$3,579,856	\$9,648,764	\$338,812,271
Apr-16	\$0	\$5,546,687	\$3,294,702	\$8,841,389	\$347,653,659
May-16	\$0	\$4,987,060	\$3,003,581	\$7,990,642	\$355,644,301
Jun-16	\$0	\$5,319,227	\$2,507,286	\$7,826,514	\$363,470,815
Jul-16	\$0	\$5,969,857	\$3,667,929	\$9,637,787	\$373,108,602
Aug-16	\$0	\$6,792,673	\$3,571,683	\$10,364,356	\$383,472,957

ATTACHMENT A  
EBT ANALYSIS

**TABLE 4 - BPA's Projected Revenue**

Revenues by Rate Determinant				Projected IP Revenue	
Month	Demand (\$)	HLH (\$)	LLH (\$)	Month (\$)	Cumulative Total Contract- to-Date (\$)
Sep-16	\$0	\$6,163,332	\$3,824,774	\$9,988,106	\$393,461,064
Oct-16	\$0	\$5,600,933	\$3,650,464	\$9,251,397	\$402,712,461
Nov-16	\$0	\$5,457,014	\$3,595,060	\$9,052,074	\$411,764,535
Dec-16	\$0	\$6,073,349	\$3,902,234	\$9,975,583	\$421,740,118
Jan-17	\$0	\$5,689,745	\$3,888,821	\$9,578,566	\$431,318,684
Feb-17	\$0	\$5,583,287	\$3,404,144	\$8,987,432	\$440,306,116
Mar-17	\$0	\$6,075,274	\$3,584,439	\$9,659,712	\$449,965,828
Apr-17	\$0	\$5,339,247	\$3,472,822	\$8,812,069	\$458,777,898
May-17	\$0	\$5,192,673	\$2,868,713	\$8,061,386	\$466,839,283
Jun-17	\$0	\$5,325,357	\$2,511,766	\$7,837,123	\$474,676,407
Jul-17	\$0	\$5,975,752	\$3,672,998	\$9,648,750	\$484,325,157
Aug-17	\$0	\$6,799,039	\$3,576,280	\$10,375,319	\$494,700,476
Sep-17	\$0	\$6,169,227	\$3,829,489	\$9,998,716	\$504,699,192
Oct-17	\$0	\$5,836,618	\$3,805,705	\$9,642,323	\$514,341,515
Nov-17	\$0	\$5,686,491	\$3,747,886	\$9,434,377	\$523,775,892
Dec-17	\$0	\$6,084,526	\$4,265,949	\$10,350,475	\$534,126,367
Jan-18	\$0	\$6,165,660	\$3,865,483	\$10,031,143	\$544,157,510
Feb-18	\$0	\$5,817,350	\$3,548,397	\$9,365,747	\$553,523,257
Mar-18	\$0	\$6,330,367	\$3,736,554	\$10,066,922	\$563,590,179
Apr-18	\$0	\$5,564,019	\$3,620,737	\$9,184,756	\$572,774,934
May-18	\$0	\$5,412,048	\$2,992,723	\$8,404,770	\$581,179,705
Jun-18	\$0	\$5,550,033	\$2,620,828	\$8,170,861	\$589,350,566
Jul-18	\$0	\$6,225,952	\$3,829,598	\$10,055,550	\$599,406,116
Aug-18	\$0	\$7,083,047	\$3,728,099	\$10,811,145	\$610,217,261
Sep-18	\$0	\$6,170,070	\$4,191,235	\$10,361,305	\$620,578,566
Oct-18	\$0	\$6,059,299	\$3,618,757	\$9,678,056	\$630,256,622
Nov-18	\$0	\$5,684,820	\$3,746,545	\$9,431,366	\$639,687,988
Dec-18	\$0	\$6,082,855	\$4,264,512	\$10,347,367	\$650,035,355
Jan-19	\$0	\$6,163,922	\$3,864,113	\$10,028,035	\$660,063,390
Feb-19	\$0	\$5,815,746	\$3,547,194	\$9,362,940	\$669,426,330
Mar-19	\$0	\$6,094,172	\$3,927,423	\$10,021,594	\$679,447,924
Apr-19	\$0	\$5,784,842	\$3,438,430	\$9,223,272	\$688,671,196
May-19	\$0	\$5,410,310	\$2,991,352	\$8,401,663	\$697,072,859
Jun-19	\$0	\$5,334,900	\$2,757,429	\$8,092,329	\$705,165,188
Jul-19	\$0	\$6,473,252	\$3,650,107	\$10,123,359	\$715,288,547
Aug-19	\$0	\$7,081,242	\$3,726,795	\$10,808,037	\$726,096,584
Sep-19	\$0	\$6,168,466	\$4,189,832	\$10,358,298	\$736,454,882
Oct-19	\$0	\$5,848,281	\$3,459,836	\$9,308,118	\$745,763,000
Nov-19	\$0	\$5,490,073	\$3,583,242	\$9,073,315	\$754,836,315
Dec-19	\$0	\$5,891,534	\$4,091,655	\$9,983,189	\$764,819,504
Jan-20	\$0	\$5,963,552	\$3,697,557	\$9,661,109	\$774,480,612
Feb-20	\$0	\$5,866,535	\$3,496,786	\$9,363,320	\$783,843,933
Mar-20	\$0	\$5,893,201	\$3,762,021	\$9,655,222	\$793,499,154
Apr-20	\$0	\$5,581,209	\$3,282,831	\$8,864,040	\$802,363,194

ATTACHMENT A  
EBT ANALYSIS

**TABLE 4 - BPA's Projected Revenue**

Revenues by Rate Determinant				Projected IP Revenue	
Month	Demand (\$)	HLH (\$)	LLH (\$)	Month (\$)	Cumulative Total Contract- to-Date (\$)
May-20	\$0	\$5,003,321	\$2,954,713	\$7,958,033	\$810,321,227
Jun-20	\$0	\$5,342,626	\$2,456,910	\$7,799,537	\$818,120,764
Jul-20	\$0	\$6,275,545	\$3,481,709	\$9,757,253	\$827,878,017
Aug-20	\$0	\$6,624,242	\$3,751,820	\$10,376,062	\$838,254,079
Sep-20	\$0	\$6,237,114	\$3,829,720	\$10,066,833	\$848,320,912
Oct-20	\$0	\$5,853,816	\$3,463,834	\$9,317,649	\$857,638,561
Nov-20	\$0	\$5,275,390	\$3,766,163	\$9,041,553	\$866,680,114
Dec-20	\$0	\$6,132,525	\$3,905,548	\$10,038,073	\$876,718,187
Jan-21	\$0	\$5,739,309	\$3,882,332	\$9,621,642	\$886,339,829
Feb-21	\$0	\$5,636,793	\$3,405,968	\$9,042,761	\$895,382,589
Mar-21	\$0	\$6,125,397	\$3,581,931	\$9,707,328	\$905,089,917
Apr-21	\$0	\$5,586,538	\$3,286,725	\$8,873,264	\$913,963,181
May-21	\$0	\$5,008,445	\$2,959,120	\$7,967,565	\$921,930,746
Jun-21	\$0	\$5,347,956	\$2,460,805	\$7,808,761	\$929,739,507
Jul-21	\$0	\$6,280,874	\$3,485,911	\$9,766,785	\$939,506,292
Aug-21	\$0	\$6,629,571	\$3,756,022	\$10,385,593	\$949,891,885
Sep-21	\$0	\$6,242,238	\$3,833,819	\$10,076,057	\$959,967,943
Oct-21	\$0	\$6,096,437	\$3,933,606	\$10,030,043	\$969,997,986
Nov-21	\$0	\$5,943,503	\$3,875,320	\$9,818,823	\$979,816,808
Dec-21	\$0	\$6,635,207	\$4,220,739	\$10,855,946	\$990,672,755
Jan-22	\$0	\$6,208,923	\$4,194,243	\$10,403,166	\$1,001,075,920
Feb-22	\$0	\$6,098,712	\$3,680,688	\$9,779,400	\$1,010,855,321
Mar-22	\$0	\$6,626,202	\$3,870,207	\$10,496,409	\$1,021,351,730
Apr-22	\$0	\$6,041,562	\$3,549,783	\$9,591,344	\$1,030,943,075
May-22	\$0	\$5,414,262	\$3,190,444	\$8,604,706	\$1,039,547,781
Jun-22	\$0	\$5,782,154	\$2,651,768	\$8,433,922	\$1,047,981,703
Jul-22	\$0	\$6,535,101	\$3,948,106	\$10,483,207	\$1,058,464,910
Aug-22	\$0	\$7,451,626	\$3,860,203	\$11,311,829	\$1,069,776,739
Sep-22	\$0	\$6,755,752	\$4,143,377	\$10,899,129	\$1,080,675,868

ATTACHMENT A  
EBT ANALYSIS

**TABLE 5 - BPA's Forecasted Revenues Obtained from the Market**

Month	Forecasted Market Price		Forecasted Revenues Obtained from the Market			
	HLH Price (\$ / MWh)	LLH Price (\$ / MWh)	HLH (\$)	LLH (\$)	Month (\$) (HLH + LLH)	Cumulative Total Contract-to-Date (\$)
Jan-13	\$31.81	\$25.26	\$3,970,382	\$2,485,730	\$6,456,112	\$6,456,112
Feb-13	\$33.57	\$26.81	\$3,867,510	\$2,316,219	\$6,183,729	\$12,639,841
Mar-13	\$32.44	\$26.08	\$4,048,504	\$2,558,317	\$6,606,821	\$19,246,663
Apr-13	\$29.49	\$23.94	\$3,680,527	\$2,183,663	\$5,864,190	\$25,110,853
May-13	\$28.80	\$21.06	\$3,593,642	\$2,072,413	\$5,666,056	\$30,776,909
Jun-13	\$29.48	\$20.06	\$3,537,629	\$1,925,985	\$5,463,614	\$36,240,523
Jul-13	\$33.36	\$24.79	\$4,162,734	\$2,439,629	\$6,602,363	\$42,842,886
Aug-13	\$38.39	\$28.02	\$4,974,807	\$2,622,983	\$7,597,789	\$50,440,675
Sep-13	\$37.70	\$29.29	\$4,342,933	\$2,952,460	\$7,295,393	\$57,736,067
Oct-13	\$37.70	\$30.82	\$4,886,074	\$2,884,795	\$7,770,869	\$65,506,936
Nov-13	\$36.79	\$29.45	\$4,414,332	\$2,835,739	\$7,250,072	\$72,757,008
Dec-13	\$39.24	\$31.11	\$4,709,368	\$3,210,897	\$7,920,265	\$80,677,273
Jan-14	\$40.26	\$31.18	\$5,024,878	\$3,067,812	\$8,092,689	\$88,769,962
Feb-14	\$42.03	\$33.12	\$4,841,727	\$2,861,261	\$7,702,987	\$96,472,950
Mar-14	\$40.16	\$31.97	\$5,012,304	\$3,135,966	\$8,148,271	\$104,621,221
Apr-14	\$35.96	\$27.54	\$4,487,375	\$2,511,986	\$6,999,361	\$111,620,582
May-14	\$31.35	\$20.24	\$3,912,664	\$1,991,541	\$5,904,205	\$117,524,786
Jun-14	\$32.04	\$19.43	\$3,845,218	\$1,864,976	\$5,710,194	\$123,234,980
Jul-14	\$38.80	\$27.16	\$4,842,832	\$2,672,933	\$7,515,766	\$130,750,746
Aug-14	\$43.55	\$30.95	\$5,435,123	\$3,045,640	\$8,480,763	\$139,231,508
Sep-14	\$42.50	\$32.82	\$5,099,896	\$3,150,602	\$8,250,498	\$147,482,006
Oct-14	\$42.82	\$35.03	\$5,549,698	\$3,279,024	\$8,828,723	\$156,310,729
Nov-14	\$42.38	\$34.12	\$4,882,448	\$3,449,990	\$8,332,438	\$164,643,167
Dec-14	\$44.99	\$35.34	\$5,615,335	\$3,476,998	\$9,092,333	\$173,735,500
Jan-15	\$43.86	\$33.44	\$5,473,120	\$3,290,073	\$8,763,194	\$182,498,694
Feb-15	\$44.79	\$35.12	\$5,159,431	\$3,034,494	\$8,193,926	\$190,692,619
Mar-15	\$44.53	\$35.20	\$5,557,891	\$3,453,028	\$9,010,919	\$199,703,538
Apr-15	\$39.93	\$29.94	\$4,983,448	\$2,730,957	\$7,714,405	\$207,417,944
May-15	\$36.07	\$22.26	\$4,328,406	\$2,297,302	\$6,625,708	\$214,043,652
Jun-15	\$37.05	\$22.20	\$4,624,448	\$2,024,562	\$6,649,010	\$220,692,662
Jul-15	\$44.29	\$29.78	\$5,527,597	\$2,930,633	\$8,458,230	\$229,150,892
Aug-15	\$47.72	\$33.00	\$5,955,764	\$3,247,231	\$9,202,995	\$238,353,887
Sep-15	\$46.60	\$35.14	\$5,592,563	\$3,373,060	\$8,965,622	\$247,319,509
Oct-15	\$46.38	\$37.33	\$6,011,282	\$3,494,210	\$9,505,492	\$256,825,001
Nov-15	\$45.60	\$36.00	\$5,252,848	\$3,639,261	\$8,892,109	\$265,717,110
Dec-15	\$46.43	\$36.33	\$5,794,873	\$3,574,626	\$9,369,499	\$275,086,609
Jan-16	\$46.08	\$34.64	\$5,529,818	\$3,574,529	\$9,104,346	\$284,190,956
Feb-16	\$47.93	\$37.60	\$5,752,068	\$3,338,459	\$9,090,527	\$293,281,483
Mar-16	\$45.14	\$35.22	\$5,849,993	\$3,286,077	\$9,136,070	\$302,417,553
Apr-16	\$41.49	\$31.71	\$5,177,404	\$2,892,174	\$8,069,578	\$310,487,131
May-16	\$37.09	\$23.64	\$4,451,099	\$2,439,230	\$6,890,329	\$317,377,460
Jun-16	\$36.20	\$20.69	\$4,517,432	\$1,886,578	\$6,404,010	\$323,781,470
Jul-16	\$45.20	\$29.80	\$5,423,518	\$3,075,190	\$8,498,709	\$332,280,178
Aug-16	\$48.27	\$33.09	\$6,255,374	\$3,096,867	\$9,352,241	\$341,632,420

ATTACHMENT A  
EBT ANALYSIS

**TABLE 5 - BPA's Forecasted Revenues Obtained from the Market**

Month	Forecasted Market Price		Forecasted Revenues Obtained from the Market			
	HLH Price (\$ / MWh)	LLH Price (\$ / MWh)	HLH (\$)	LLH (\$)	Month (\$) (HLH + LLH)	Cumulative Total Contract-to-Date (\$)
Sep-16	\$48.73	\$35.81	\$5,847,213	\$3,438,173	\$9,285,385	\$350,917,805
Oct-16	\$49.33	\$39.06	\$6,156,120	\$3,843,117	\$9,999,237	\$360,917,042
Nov-16	\$46.46	\$36.55	\$5,574,863	\$3,519,899	\$9,094,763	\$370,011,804
Dec-16	\$48.83	\$38.47	\$6,094,444	\$3,785,427	\$9,879,871	\$379,891,675
Jan-17	\$48.43	\$36.69	\$5,811,396	\$3,786,488	\$9,597,884	\$389,489,560
Feb-17	\$49.36	\$38.93	\$5,686,487	\$3,363,617	\$9,050,103	\$398,539,663
Mar-17	\$46.72	\$36.75	\$6,055,416	\$3,429,155	\$9,484,571	\$408,024,234
Apr-17	\$41.41	\$30.78	\$4,968,793	\$2,954,487	\$7,923,280	\$415,947,514
May-17	\$37.81	\$23.26	\$4,718,508	\$2,288,840	\$7,007,347	\$422,954,861
Jun-17	\$38.93	\$23.12	\$4,859,020	\$2,108,871	\$6,967,892	\$429,922,753
Jul-17	\$45.67	\$30.23	\$5,480,381	\$3,120,208	\$8,600,589	\$438,523,342
Aug-17	\$48.69	\$33.06	\$6,309,855	\$3,094,093	\$9,403,948	\$447,927,290
Sep-17	\$48.55	\$35.38	\$5,825,486	\$3,396,410	\$9,221,896	\$457,149,186
Oct-17	\$50.01	\$40.00	\$6,240,799	\$3,936,442	\$10,177,241	\$467,326,427
Nov-17	\$48.79	\$38.30	\$5,855,070	\$3,688,645	\$9,543,715	\$476,870,142
Dec-17	\$50.20	\$39.15	\$6,024,251	\$4,039,859	\$10,064,110	\$486,934,252
Jan-18	\$49.88	\$37.79	\$6,225,167	\$3,718,684	\$9,943,851	\$496,878,103
Feb-18	\$50.84	\$40.10	\$5,857,081	\$3,464,525	\$9,321,606	\$506,199,709
Mar-18	\$48.13	\$37.86	\$6,237,078	\$3,532,030	\$9,769,108	\$515,968,818
Apr-18	\$42.65	\$31.70	\$5,117,857	\$3,043,121	\$8,160,978	\$524,129,796
May-18	\$38.94	\$23.96	\$4,860,063	\$2,357,505	\$7,217,568	\$531,347,364
Jun-18	\$40.10	\$23.82	\$5,004,791	\$2,172,138	\$7,176,928	\$538,524,292
Jul-18	\$47.04	\$31.14	\$5,644,793	\$3,213,814	\$8,858,607	\$547,382,899
Aug-18	\$50.15	\$34.05	\$6,499,151	\$3,186,915	\$9,686,066	\$557,068,965
Sep-18	\$50.00	\$36.44	\$5,760,241	\$3,673,218	\$9,433,458	\$566,502,424
Oct-18	\$51.51	\$41.20	\$6,675,254	\$3,856,753	\$10,532,008	\$577,034,431
Nov-18	\$50.26	\$39.45	\$6,030,722	\$3,799,304	\$9,830,026	\$586,864,457
Dec-18	\$51.71	\$40.32	\$6,204,979	\$4,161,054	\$10,366,033	\$597,230,491
Jan-19	\$51.38	\$38.93	\$6,411,922	\$3,830,244	\$10,242,167	\$607,472,657
Feb-19	\$52.37	\$41.30	\$6,032,794	\$3,568,461	\$9,601,254	\$617,073,912
Mar-19	\$49.57	\$38.99	\$6,186,257	\$3,825,155	\$10,011,412	\$627,085,324
Apr-19	\$43.93	\$32.65	\$5,482,248	\$2,977,694	\$8,459,943	\$635,545,266
May-19	\$40.11	\$24.68	\$5,005,865	\$2,428,230	\$7,434,095	\$642,979,361
Jun-19	\$41.31	\$24.53	\$4,956,668	\$2,355,054	\$7,311,722	\$650,291,084
Jul-19	\$48.45	\$32.08	\$6,046,702	\$3,156,264	\$9,202,966	\$659,494,050
Aug-19	\$51.65	\$35.07	\$6,694,125	\$3,282,523	\$9,976,648	\$669,470,698
Sep-19	\$51.50	\$37.53	\$5,933,048	\$3,783,414	\$9,716,462	\$679,187,160
Oct-19	\$53.05	\$42.44	\$6,875,512	\$3,972,456	\$10,847,968	\$690,035,128
Nov-19	\$51.76	\$40.64	\$6,211,643	\$3,913,284	\$10,124,927	\$700,160,055
Dec-19	\$53.26	\$41.53	\$6,391,128	\$4,285,886	\$10,677,014	\$710,837,069
Jan-20	\$52.92	\$40.09	\$6,604,280	\$3,945,152	\$10,549,432	\$721,386,501
Feb-20	\$53.94	\$42.54	\$6,472,685	\$3,777,612	\$10,250,297	\$731,636,798
Mar-20	\$51.06	\$40.16	\$6,371,845	\$3,939,909	\$10,311,754	\$741,948,552
Apr-20	\$45.25	\$33.63	\$5,646,716	\$3,067,025	\$8,713,741	\$750,662,293

ATTACHMENT A  
EBT ANALYSIS

**TABLE 5 - BPA's Forecasted Revenues Obtained from the Market**

Month	Forecasted Market Price		Forecasted Revenues Obtained from the Market			
	HLH Price (\$ / MWh)	LLH Price (\$ / MWh)	HLH (\$)	LLH (\$)	Month (\$) (HLH + LLH)	Cumulative Total Contract-to-Date (\$)
May-20	\$41.31	\$25.42	\$4,957,731	\$2,623,081	\$7,580,812	\$758,243,106
Jun-20	\$42.54	\$25.27	\$5,309,583	\$2,304,421	\$7,614,003	\$765,857,109
Jul-20	\$49.90	\$33.04	\$6,228,103	\$3,250,952	\$9,479,055	\$775,336,165
Aug-20	\$53.20	\$36.12	\$6,639,580	\$3,554,383	\$10,193,964	\$785,530,128
Sep-20	\$53.05	\$38.66	\$6,365,666	\$3,711,349	\$10,077,015	\$795,607,143
Oct-20	\$54.64	\$43.71	\$7,081,777	\$4,091,630	\$11,173,407	\$806,780,550
Nov-20	\$53.32	\$41.86	\$6,142,073	\$4,231,588	\$10,373,661	\$817,154,211
Dec-20	\$54.86	\$42.78	\$6,846,176	\$4,209,139	\$11,055,315	\$828,209,527
Jan-21	\$54.51	\$41.30	\$6,540,777	\$4,261,726	\$10,802,503	\$839,012,030
Feb-21	\$55.56	\$43.82	\$6,400,191	\$3,785,780	\$10,185,971	\$849,198,001
Mar-21	\$52.59	\$41.37	\$6,815,424	\$3,859,545	\$10,674,968	\$859,872,969
Apr-21	\$46.60	\$34.64	\$5,816,117	\$3,159,036	\$8,975,153	\$868,848,122
May-21	\$42.55	\$26.18	\$5,106,463	\$2,701,773	\$7,808,237	\$876,656,359
Jun-21	\$43.82	\$26.03	\$5,468,870	\$2,373,553	\$7,842,424	\$884,498,783
Jul-21	\$51.40	\$34.03	\$6,414,946	\$3,348,481	\$9,763,427	\$894,262,210
Aug-21	\$54.80	\$37.21	\$6,838,768	\$3,661,015	\$10,499,783	\$904,761,992
Sep-21	\$54.64	\$39.82	\$6,556,636	\$3,822,690	\$10,379,325	\$915,141,318
Oct-21	\$56.28	\$45.03	\$7,024,074	\$4,430,500	\$11,454,574	\$926,595,892
Nov-21	\$54.92	\$43.11	\$6,589,932	\$4,151,602	\$10,741,535	\$937,337,427
Dec-21	\$56.50	\$44.06	\$7,051,562	\$4,335,413	\$11,386,975	\$948,724,402
Jan-22	\$56.14	\$42.53	\$6,737,001	\$4,389,578	\$11,126,579	\$959,850,980
Feb-22	\$57.22	\$45.13	\$6,592,197	\$3,899,353	\$10,491,550	\$970,342,530
Mar-22	\$54.17	\$42.61	\$7,019,886	\$3,975,331	\$10,995,217	\$981,337,748
Apr-22	\$48.00	\$35.68	\$5,990,601	\$3,253,807	\$9,244,408	\$990,582,155
May-22	\$43.83	\$26.97	\$5,259,657	\$2,782,827	\$8,042,484	\$998,624,639
Jun-22	\$45.14	\$26.81	\$5,632,936	\$2,444,760	\$8,077,696	\$1,006,702,335
Jul-22	\$52.94	\$35.05	\$6,353,264	\$3,617,176	\$9,970,440	\$1,016,672,775
Aug-22	\$56.44	\$38.32	\$7,314,851	\$3,586,901	\$10,901,753	\$1,027,574,528
Sep-22	\$56.28	\$41.01	\$6,753,335	\$3,937,370	\$10,690,705	\$1,038,265,233

ATTACHMENT A  
EBT ANALYSIS

**TABLE 6 - BPA's Net Benefit before Adjustment**

Net Revenue or (Cost)		
Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
Jan-13	\$1,803,434	\$1,803,434
Feb-13	\$1,527,831	\$3,331,265
Mar-13	\$1,647,415	\$4,978,680
Apr-13	\$1,732,806	\$6,711,486
May-13	\$1,254,914	\$7,966,400
Jun-13	\$1,202,566	\$9,168,966
Jul-13	\$1,735,639	\$10,904,605
Aug-13	\$1,303,733	\$12,208,338
Sep-13	\$1,235,779	\$13,444,117
Oct-13	\$1,021,852	\$14,465,969
Nov-13	\$1,318,839	\$15,784,808
Dec-13	\$1,484,546	\$17,269,355
Jan-14	\$1,020,090	\$18,289,445
Feb-14	\$807,165	\$19,096,610
Mar-14	\$958,696	\$20,055,306
Apr-14	\$1,379,325	\$21,434,631
May-14	\$1,721,243	\$23,155,874
Jun-14	\$1,634,234	\$24,790,108
Jul-14	\$1,684,189	\$26,474,297
Aug-14	\$1,280,268	\$27,754,564
Sep-14	\$1,218,767	\$28,973,331
Oct-14	(\$10,513)	\$28,962,818
Nov-14	\$224,001	\$29,186,819
Dec-14	\$379,089	\$29,565,907
Jan-15	\$375,075	\$29,940,983
Feb-15	\$339,249	\$30,280,232
Mar-15	\$121,503	\$30,401,735
Apr-15	\$688,948	\$31,090,683
May-15	\$968,374	\$32,059,057
Jun-15	\$789,153	\$32,848,209
Jul-15	\$767,214	\$33,615,423
Aug-15	\$583,525	\$34,198,948
Sep-15	\$528,309	\$34,727,257
Oct-15	(\$227,709)	\$34,499,549
Nov-15	\$110,253	\$34,609,802
Dec-15	\$595,120	\$35,204,922
Jan-16	\$463,257	\$35,668,179
Feb-16	\$213,845	\$35,882,024
Mar-16	\$512,694	\$36,394,718
Apr-16	\$771,810	\$37,166,529
May-16	\$1,100,313	\$38,266,841
Jun-16	\$1,422,504	\$39,689,345
Jul-16	\$1,139,078	\$40,828,423
Aug-16	\$1,012,114	\$41,840,538
Sep-16	\$702,721	\$42,543,259



ATTACHMENT A  
EBT ANALYSIS

**TABLE 6 - BPA's Net Benefit before Adjustment**

Net Revenue or (Cost)		
Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
	Oct-16	(\$747,839)
	Nov-16	(\$42,688)
	Dec-16	\$95,712
	Jan-17	(\$19,318)
	Feb-17	(\$62,671)
	Mar-17	\$175,141
	Apr-17	\$888,789
	May-17	\$1,054,038
	Jun-17	\$869,232
	Jul-17	\$1,048,161
	Aug-17	\$971,371
	Sep-17	\$776,820
	Oct-17	(\$534,918)
	Nov-17	(\$109,337)
	Dec-17	\$286,365
	Jan-18	\$87,292
	Feb-18	\$44,141
	Mar-18	\$297,813
	Apr-18	\$1,023,777
	May-18	\$1,187,203
	Jun-18	\$993,932
	Jul-18	\$1,196,943
	Aug-18	\$1,125,079
	Sep-18	\$927,847
	Oct-18	(\$853,952)
	Nov-18	(\$398,660)
	Dec-18	(\$18,666)
	Jan-19	(\$214,132)
	Feb-19	(\$238,314)
	Mar-19	\$10,182
	Apr-19	\$763,329
	May-19	\$967,568
	Jun-19	\$780,606
	Jul-19	\$920,393
	Aug-19	\$831,389
	Sep-19	\$641,836
	Oct-19	(\$1,539,850)
	Nov-19	(\$1,051,612)
	Dec-19	(\$693,825)
	Jan-20	(\$888,323)
	Feb-20	(\$886,977)
	Mar-20	(\$656,533)
	Apr-20	\$150,299
	May-20	\$377,221
	Jun-20	\$185,533

ATTACHMENT A  
EBT ANALYSIS

**TABLE 6 - BPA's Net Benefit before Adjustment**

Net Revenue or (Cost)		
Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
Jul-20	\$278,198	\$52,541,853
Aug-20	\$182,098	\$52,723,951
Sep-20	(\$10,182)	\$52,713,769
Oct-20	(\$1,855,758)	\$50,858,011
Nov-20	(\$1,332,108)	\$49,525,903
Dec-20	(\$1,017,243)	\$48,508,660
Jan-21	(\$1,180,862)	\$47,327,799
Feb-21	(\$1,143,210)	\$46,184,588
Mar-21	(\$967,641)	\$45,216,948
Apr-21	(\$101,889)	\$45,115,058
May-21	\$159,329	\$45,274,387
Jun-21	(\$33,663)	\$45,240,724
Jul-21	\$3,358	\$45,244,082
Aug-21	(\$114,189)	\$45,129,893
Sep-21	(\$303,268)	\$44,826,625
Oct-21	(\$1,424,532)	\$43,402,093
Nov-21	(\$922,712)	\$42,479,381
Dec-21	(\$531,028)	\$41,948,353
Jan-22	(\$723,413)	\$41,224,940
Feb-22	(\$712,150)	\$40,512,790
Mar-22	(\$498,808)	\$40,013,983
Apr-22	\$346,937	\$40,360,919
May-22	\$562,222	\$40,923,142
Jun-22	\$356,226	\$41,279,367
Jul-22	\$512,767	\$41,792,134
Aug-22	\$410,076	\$42,202,211
Sep-22	\$208,424	\$42,410,634

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7a - BPA's Net Benefit Adjustments**  
**Value of Reserves**

Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
Jan-13	\$209,808	\$209,808
Feb-13	\$189,504	\$399,312
Mar-13	\$209,526	\$608,838
Apr-13	\$203,040	\$811,878
May-13	\$209,808	\$1,021,686
Jun-13	\$203,040	\$1,224,726
Jul-13	\$209,808	\$1,434,534
Aug-13	\$209,808	\$1,644,342
Sep-13	\$203,040	\$1,847,382
Oct-13	\$209,808	\$2,057,190
Nov-13	\$203,322	\$2,260,512
Dec-13	\$209,808	\$2,470,320
Jan-14	\$209,808	\$2,680,128
Feb-14	\$189,504	\$2,869,632
Mar-14	\$209,526	\$3,079,158
Apr-14	\$203,040	\$3,282,198
May-14	\$209,808	\$3,492,006
Jun-14	\$203,040	\$3,695,046
Jul-14	\$209,808	\$3,904,854
Aug-14	\$209,808	\$4,114,662
Sep-14	\$203,040	\$4,317,702
Oct-14	\$209,808	\$4,527,510
Nov-14	\$203,322	\$4,730,832
Dec-14	\$209,808	\$4,940,640
Jan-15	\$209,808	\$5,150,448
Feb-15	\$189,504	\$5,339,952
Mar-15	\$209,526	\$5,549,478
Apr-15	\$203,040	\$5,752,518
May-15	\$209,808	\$5,962,326
Jun-15	\$203,040	\$6,165,366
Jul-15	\$209,808	\$6,375,174
Aug-15	\$209,808	\$6,584,982
Sep-15	\$203,040	\$6,788,022
Oct-15	\$209,808	\$6,997,830
Nov-15	\$203,322	\$7,201,152
Dec-15	\$209,808	\$7,410,960
Jan-16	\$209,808	\$7,620,768
Feb-16	\$196,272	\$7,817,040
Mar-16	\$209,526	\$8,026,566
Apr-16	\$203,040	\$8,229,606
May-16	\$209,808	\$8,439,414
Jun-16	\$203,040	\$8,642,454
Jul-16	\$209,808	\$8,852,262
Aug-16	\$209,808	\$9,062,070
Sep-16	\$203,040	\$9,265,110

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7a - BPA's Net Benefit Adjustments**  
**Value of Reserves**

Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
Oct-16	\$209,808	\$9,474,918
Nov-16	\$203,322	\$9,678,240
Dec-16	\$209,808	\$9,888,048
Jan-17	\$209,808	\$10,097,856
Feb-17	\$189,504	\$10,287,360
Mar-17	\$209,526	\$10,496,886
Apr-17	\$203,040	\$10,699,926
May-17	\$209,808	\$10,909,734
Jun-17	\$203,040	\$11,112,774
Jul-17	\$209,808	\$11,322,582
Aug-17	\$209,808	\$11,532,390
Sep-17	\$203,040	\$11,735,430
Oct-17	\$209,808	\$11,945,238
Nov-17	\$203,322	\$12,148,560
Dec-17	\$209,808	\$12,358,368
Jan-18	\$209,808	\$12,568,176
Feb-18	\$189,504	\$12,757,680
Mar-18	\$209,526	\$12,967,206
Apr-18	\$203,040	\$13,170,246
May-18	\$209,808	\$13,380,054
Jun-18	\$203,040	\$13,583,094
Jul-18	\$209,808	\$13,792,902
Aug-18	\$209,808	\$14,002,710
Sep-18	\$203,040	\$14,205,750
Oct-18	\$209,808	\$14,415,558
Nov-18	\$203,322	\$14,618,880
Dec-18	\$209,808	\$14,828,688
Jan-19	\$209,808	\$15,038,496
Feb-19	\$189,504	\$15,228,000
Mar-19	\$209,526	\$15,437,526
Apr-19	\$203,040	\$15,640,566
May-19	\$209,808	\$15,850,374
Jun-19	\$203,040	\$16,053,414
Jul-19	\$209,808	\$16,263,222
Aug-19	\$209,808	\$16,473,030
Sep-19	\$203,040	\$16,676,070
Oct-19	\$209,808	\$16,885,878
Nov-19	\$203,322	\$17,089,200
Dec-19	\$209,808	\$17,299,008
Jan-20	\$209,808	\$17,508,816
Feb-20	\$196,272	\$17,705,088
Mar-20	\$209,526	\$17,914,614
Apr-20	\$203,040	\$18,117,654
May-20	\$209,808	\$18,327,462
Jun-20	\$203,040	\$18,530,502

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7a - BPA's Net Benefit Adjustments**  
**Value of Reserves**

Month	Month (\$)	Cumulative Total Contract-to-Date (\$)
Jul-20	\$209,808	\$18,740,310
Aug-20	\$209,808	\$18,950,118
Sep-20	\$203,040	\$19,153,158
Oct-20	\$209,808	\$19,362,966
Nov-20	\$203,322	\$19,566,288
Dec-20	\$209,808	\$19,776,096
Jan-21	\$209,808	\$19,985,904
Feb-21	\$189,504	\$20,175,408
Mar-21	\$209,526	\$20,384,934
Apr-21	\$203,040	\$20,587,974
May-21	\$209,808	\$20,797,782
Jun-21	\$203,040	\$21,000,822
Jul-21	\$209,808	\$21,210,630
Aug-21	\$209,808	\$21,420,438
Sep-21	\$203,040	\$21,623,478
Oct-21	\$209,808	\$21,833,286
Nov-21	\$203,322	\$22,036,608
Dec-21	\$209,808	\$22,246,416
Jan-22	\$209,808	\$22,456,224
Feb-22	\$189,504	\$22,645,728
Mar-22	\$209,526	\$22,855,254
Apr-22	\$203,040	\$23,058,294
May-22	\$209,808	\$23,268,102
Jun-22	\$203,040	\$23,471,142
Jul-22	\$209,808	\$23,680,950
Aug-22	\$209,808	\$23,890,758
Sep-22	\$203,040	\$24,093,798

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7b - BPA's Net Benefit Adjustments**  
**Avoided Tx and Ancillary Service Costs**

Month	Month (\$)	Proportional Month (\$)	Cumulative Total Contract-to-Date (\$)
Jan-13	\$359,890	\$224,931	\$224,931
Feb-13	\$305,454	\$190,909	\$415,840
Mar-13	\$312,962	\$195,601	\$611,441
Apr-13	\$624,506	\$390,316	\$1,001,758
May-13	\$903,774	\$564,859	\$1,566,617
Jun-13	\$713,103	\$445,689	\$2,012,306
Jul-13	\$402,631	\$251,644	\$2,263,950
Aug-13	\$92,382	\$57,739	\$2,321,689
Sep-13	\$29,385	\$18,366	\$2,340,054
Oct-13	\$22,053	\$13,783	\$2,353,837
Nov-13	\$39,072	\$24,420	\$2,378,257
Dec-13	\$108,059	\$67,537	\$2,445,794
Jan-14	\$355,084	\$221,928	\$2,667,722
Feb-14	\$302,740	\$189,212	\$2,856,934
Mar-14	\$311,639	\$194,774	\$3,051,708
Apr-14	\$625,085	\$390,678	\$3,442,386
May-14	\$953,527	\$595,954	\$4,038,340
Jun-14	\$838,514	\$524,071	\$4,562,412
Jul-14	\$375,118	\$234,449	\$4,796,861
Aug-14	\$75,160	\$46,975	\$4,843,836
Sep-14	\$26,102	\$16,314	\$4,860,150
Oct-14	\$18,325	\$11,453	\$4,871,603
Nov-14	\$23,560	\$14,725	\$4,886,328
Dec-14	\$94,437	\$59,023	\$4,945,350
Jan-15	\$334,966	\$209,354	\$5,154,705
Feb-15	\$273,273	\$170,796	\$5,325,500
Mar-15	\$289,318	\$180,824	\$5,506,324
Apr-15	\$596,784	\$372,990	\$5,879,314
May-15	\$893,002	\$558,126	\$6,437,440
Jun-15	\$657,224	\$410,765	\$6,848,205
Jul-15	\$346,939	\$216,837	\$7,065,042
Aug-15	\$63,957	\$39,973	\$7,105,015
Sep-15	\$21,579	\$13,487	\$7,118,502
Oct-15	\$17,387	\$10,867	\$7,129,369
Nov-15	\$17,495	\$10,935	\$7,140,304
Dec-15	\$84,043	\$52,527	\$7,192,831
Jan-16	\$320,500	\$200,313	\$7,393,143
Feb-16	\$314,540	\$196,588	\$7,589,731
Mar-16	\$281,957	\$176,223	\$7,765,954
Apr-16	\$583,753	\$364,846	\$8,130,800
May-16	\$948,318	\$592,699	\$8,723,499
Jun-16	\$793,253	\$495,783	\$9,219,282
Jul-16	\$385,512	\$240,945	\$9,460,227
Aug-16	\$63,316	\$39,572	\$9,499,799
Sep-16	\$19,624	\$12,265	\$9,512,065

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7b - BPA's Net Benefit Adjustments**  
**Avoided Tx and Ancillary Service Costs**

Month	Month (\$)	Proportional Month (\$)	Cumulative Total Contract-to-Date (\$)
Oct-16	\$17,047	\$10,654	\$9,522,719
Nov-16	\$17,574	\$10,984	\$9,533,703
Dec-16	\$81,706	\$51,066	\$9,584,769
Jan-17	\$316,921	\$198,076	\$9,782,844
Feb-17	\$263,464	\$164,665	\$9,947,510
Mar-17	\$280,514	\$175,321	\$10,122,831
Apr-17	\$582,452	\$364,032	\$10,486,863
May-17	\$872,758	\$545,474	\$11,032,337
Jun-17	\$683,776	\$427,360	\$11,459,697
Jul-17	\$350,438	\$219,024	\$11,678,720
Aug-17	\$53,553	\$33,471	\$11,712,191
Sep-17	\$16,933	\$10,583	\$11,722,774
Oct-17	\$20,315	\$12,697	\$11,735,471
Nov-17	\$21,284	\$13,303	\$11,748,774
Dec-17	\$89,679	\$56,050	\$11,804,824
Jan-18	\$328,449	\$205,281	\$12,010,104
Feb-18	\$295,387	\$184,617	\$12,194,721
Mar-18	\$287,530	\$179,706	\$12,374,427
Apr-18	\$593,861	\$371,163	\$12,745,590
May-18	\$955,830	\$597,394	\$13,342,984
Jun-18	\$806,210	\$503,881	\$13,846,865
Jul-18	\$385,512	\$240,945	\$14,087,810
Aug-18	\$63,316	\$39,572	\$14,127,382
Sep-18	\$19,624	\$12,265	\$14,139,648
Oct-18	\$17,047	\$10,654	\$14,150,302
Nov-18	\$17,574	\$10,984	\$14,161,286
Dec-18	\$81,706	\$51,066	\$14,212,352
Jan-19	\$316,921	\$198,076	\$14,410,427
Feb-19	\$263,464	\$164,665	\$14,575,093
Mar-19	\$280,514	\$175,321	\$14,750,414
Apr-19	\$582,452	\$364,032	\$15,114,446
May-19	\$872,758	\$545,474	\$15,659,920
Jun-19	\$683,776	\$427,360	\$16,087,280
Jul-19	\$350,438	\$219,024	\$16,306,303
Aug-19	\$53,553	\$33,471	\$16,339,774
Sep-19	\$16,933	\$10,583	\$16,350,357
Oct-19	\$20,315	\$12,697	\$16,363,054
Nov-19	\$21,284	\$13,303	\$16,376,357
Dec-19	\$89,679	\$56,050	\$16,432,406
Jan-20	\$328,449	\$205,281	\$16,637,687
Feb-20	\$304,772	\$190,482	\$16,828,170
Mar-20	\$287,530	\$179,706	\$17,007,876
Apr-20	\$593,861	\$371,163	\$17,379,039
May-20	\$955,830	\$597,394	\$17,976,432
Jun-20	\$806,210	\$503,881	\$18,480,313

ATTACHMENT A  
EBT ANALYSIS

**TABLE 7b - BPA's Net Benefit Adjustments**  
**Avoided Tx and Ancillary Service Costs**

Month	Month (\$)	Proportional Month (\$)	Cumulative Total Contract-to-Date (\$)
Jul-20	\$385,512	\$240,945	\$18,721,258
Aug-20	\$63,316	\$39,572	\$18,760,831
Sep-20	\$19,624	\$12,265	\$18,773,096
Oct-20	\$17,047	\$10,654	\$18,783,750
Nov-20	\$17,574	\$10,984	\$18,794,734
Dec-20	\$81,706	\$51,066	\$18,845,800
Jan-21	\$316,921	\$198,076	\$19,043,876
Feb-21	\$263,464	\$164,665	\$19,208,541
Mar-21	\$280,514	\$175,321	\$19,383,862
Apr-21	\$582,452	\$364,032	\$19,747,895
May-21	\$872,758	\$545,474	\$20,293,368
Jun-21	\$683,776	\$427,360	\$20,720,728
Jul-21	\$350,438	\$219,024	\$20,939,751
Aug-21	\$53,553	\$33,471	\$20,973,222
Sep-21	\$16,933	\$10,583	\$20,983,806
Oct-21	\$20,315	\$12,697	\$20,996,503
Nov-21	\$21,284	\$13,303	\$21,009,805
Dec-21	\$89,679	\$56,050	\$21,065,855
Jan-22	\$328,449	\$205,281	\$21,271,136
Feb-22	\$295,387	\$184,617	\$21,455,753
Mar-22	\$287,530	\$179,706	\$21,635,459
Apr-22	\$593,861	\$371,163	\$22,006,622
May-22	\$955,830	\$597,394	\$22,604,015
Jun-22	\$806,210	\$503,881	\$23,107,896
Jul-22	\$385,512	\$240,945	\$23,348,841
Aug-22	\$63,316	\$39,572	\$23,388,414
Sep-22	\$19,624	\$12,265	\$23,400,679



ATTACHMENT A  
EBT ANALYSIS

**TABLE 8 - BPA's Net Benefit after Adjustments**  
**BPA's Adjusted Net Revenue or (Cost)**

Month	Net Revenue or (Cost) (A) Month (\$)	Value of Reserves (B) Month (\$)	Avoided Tx Costs (C) Month (\$)	Demand Shift (D) Month (\$)	A + B + C + D Month (\$)	Cumulative Total Contract-to-Date (\$)
Jan-13	\$1,803,434	\$209,808	\$224,931	\$0	\$2,238,173	\$2,238,173
Feb-13	\$1,527,831	\$189,504	\$190,909	\$0	\$1,908,244	\$4,146,417
Mar-13	\$1,647,415	\$209,526	\$195,601	\$0	\$2,052,543	\$6,198,959
Apr-13	\$1,732,806	\$203,040	\$390,316	\$0	\$2,326,162	\$8,525,121
May-13	\$1,254,914	\$209,808	\$564,859	\$0	\$2,029,581	\$10,554,703
Jun-13	\$1,202,566	\$203,040	\$445,689	\$0	\$1,851,295	\$12,405,998
Jul-13	\$1,735,639	\$209,808	\$251,644	\$0	\$2,197,091	\$14,603,089
Aug-13	\$1,303,733	\$209,808	\$57,739	\$0	\$1,571,280	\$16,174,369
Sep-13	\$1,235,779	\$203,040	\$18,366	\$0	\$1,457,185	\$17,631,554
Oct-13	\$1,021,852	\$209,808	\$13,783	\$0	\$1,245,442	\$18,876,996
Nov-13	\$1,318,839	\$203,322	\$24,420	\$0	\$1,546,582	\$20,423,578
Dec-13	\$1,484,546	\$209,808	\$67,537	\$0	\$1,761,891	\$22,185,469
Jan-14	\$1,020,090	\$209,808	\$221,928	\$0	\$1,451,826	\$23,637,295
Feb-14	\$807,165	\$189,504	\$189,212	\$0	\$1,185,881	\$24,823,176
Mar-14	\$958,696	\$209,526	\$194,774	\$0	\$1,362,997	\$26,186,173
Apr-14	\$1,379,325	\$203,040	\$390,678	\$0	\$1,973,043	\$28,159,215
May-14	\$1,721,243	\$209,808	\$595,954	\$0	\$2,527,005	\$30,686,220
Jun-14	\$1,634,234	\$203,040	\$524,071	\$0	\$2,361,346	\$33,047,566
Jul-14	\$1,684,189	\$209,808	\$234,449	\$0	\$2,128,446	\$35,176,011
Aug-14	\$1,280,268	\$209,808	\$46,975	\$0	\$1,537,051	\$36,713,062
Sep-14	\$1,218,767	\$203,040	\$16,314	\$0	\$1,438,120	\$38,151,182
Oct-14	(\$10,513)	\$209,808	\$11,453	\$0	\$210,748	\$38,361,931
Nov-14	\$224,001	\$203,322	\$14,725	\$0	\$442,047	\$38,803,978
Dec-14	\$379,089	\$209,808	\$59,023	\$0	\$647,920	\$39,451,898
Jan-15	\$375,075	\$209,808	\$209,354	\$0	\$794,237	\$40,246,135
Feb-15	\$339,249	\$189,504	\$170,796	\$0	\$699,549	\$40,945,684
Mar-15	\$121,503	\$209,526	\$180,824	\$0	\$511,853	\$41,457,537
Apr-15	\$688,948	\$203,040	\$372,990	\$0	\$1,264,978	\$42,722,515
May-15	\$968,374	\$209,808	\$558,126	\$0	\$1,736,308	\$44,458,823
Jun-15	\$789,153	\$203,040	\$410,765	\$0	\$1,402,958	\$45,861,781
Jul-15	\$767,214	\$209,808	\$216,837	\$0	\$1,193,859	\$47,055,640
Aug-15	\$583,525	\$209,808	\$39,973	\$0	\$833,306	\$47,888,945
Sep-15	\$528,309	\$203,040	\$13,487	\$0	\$744,836	\$48,633,782
Oct-15	(\$227,709)	\$209,808	\$10,867	\$0	(\$7,034)	\$48,626,748
Nov-15	\$110,253	\$203,322	\$10,935	\$0	\$324,510	\$48,951,258
Dec-15	\$595,120	\$209,808	\$52,527	\$0	\$857,455	\$49,808,713
Jan-16	\$463,257	\$209,808	\$200,313	\$0	\$873,377	\$50,682,090
Feb-16	\$213,845	\$196,272	\$196,588	\$0	\$606,705	\$51,288,795
Mar-16	\$512,694	\$209,526	\$176,223	\$0	\$898,443	\$52,187,238
Apr-16	\$771,810	\$203,040	\$364,846	\$0	\$1,339,696	\$53,526,935
May-16	\$1,100,313	\$209,808	\$592,699	\$0	\$1,902,819	\$55,429,754
Jun-16	\$1,422,504	\$203,040	\$495,783	\$0	\$2,121,327	\$57,551,081
Jul-16	\$1,139,078	\$209,808	\$240,945	\$0	\$1,589,831	\$59,140,912
Aug-16	\$1,012,114	\$209,808	\$39,572	\$0	\$1,261,494	\$60,402,407
Sep-16	\$702,721	\$203,040	\$12,265	\$0	\$918,026	\$61,320,433

ATTACHMENT A  
EBT ANALYSIS

**TABLE 8 - BPA's Net Benefit after Adjustments**  
**BPA's Adjusted Net Revenue or (Cost)**

Month	Net Revenue or (Cost) (A) Month (\$)	Value of Reserves (B) Month (\$)	Avoided Tx Costs (C) Month (\$)	Demand Shift (D) Month (\$)	A + B + C + D Month (\$)	Cumulative Total Contract-to-Date (\$)
Oct-16	(\$747,839)	\$209,808	\$10,654	\$0	(\$527,377)	\$60,793,056
Nov-16	(\$42,688)	\$203,322	\$10,984	\$0	\$171,618	\$60,964,674
Dec-16	\$95,712	\$209,808	\$51,066	\$0	\$356,586	\$61,321,259
Jan-17	(\$19,318)	\$209,808	\$198,076	\$0	\$388,566	\$61,709,825
Feb-17	(\$62,671)	\$189,504	\$164,665	\$0	\$291,498	\$62,001,322
Mar-17	\$175,141	\$209,526	\$175,321	\$0	\$559,989	\$62,561,311
Apr-17	\$888,789	\$203,040	\$364,032	\$0	\$1,455,862	\$64,017,173
May-17	\$1,054,038	\$209,808	\$545,474	\$0	\$1,809,320	\$65,826,493
Jun-17	\$869,232	\$203,040	\$427,360	\$0	\$1,499,632	\$67,326,124
Jul-17	\$1,048,161	\$209,808	\$219,024	\$0	\$1,476,992	\$68,803,117
Aug-17	\$971,371	\$209,808	\$33,471	\$0	\$1,214,650	\$70,017,767
Sep-17	\$776,820	\$203,040	\$10,583	\$0	\$990,443	\$71,008,210
Oct-17	(\$534,918)	\$209,808	\$12,697	\$0	(\$312,413)	\$70,695,797
Nov-17	(\$109,337)	\$203,322	\$13,303	\$0	\$107,287	\$70,803,084
Dec-17	\$286,365	\$209,808	\$56,050	\$0	\$552,222	\$71,355,306
Jan-18	\$87,292	\$209,808	\$205,281	\$0	\$502,381	\$71,857,687
Feb-18	\$44,141	\$189,504	\$184,617	\$0	\$418,262	\$72,275,949
Mar-18	\$297,813	\$209,526	\$179,706	\$0	\$687,046	\$72,962,995
Apr-18	\$1,023,777	\$203,040	\$371,163	\$0	\$1,597,980	\$74,560,975
May-18	\$1,187,203	\$209,808	\$597,394	\$0	\$1,994,404	\$76,555,379
Jun-18	\$993,932	\$203,040	\$503,881	\$0	\$1,700,853	\$78,256,232
Jul-18	\$1,196,943	\$209,808	\$240,945	\$0	\$1,647,696	\$79,903,928
Aug-18	\$1,125,079	\$209,808	\$39,572	\$0	\$1,374,459	\$81,278,388
Sep-18	\$927,847	\$203,040	\$12,265	\$0	\$1,143,152	\$82,421,540
Oct-18	(\$853,952)	\$209,808	\$10,654	\$0	(\$633,489)	\$81,788,051
Nov-18	(\$398,660)	\$203,322	\$10,984	\$0	(\$184,354)	\$81,603,696
Dec-18	(\$18,666)	\$209,808	\$51,066	\$0	\$242,208	\$81,845,904
Jan-19	(\$214,132)	\$209,808	\$198,076	\$0	\$193,752	\$82,039,656
Feb-19	(\$238,314)	\$189,504	\$164,665	\$0	\$115,855	\$82,155,511
Mar-19	\$10,182	\$209,526	\$175,321	\$0	\$395,030	\$82,550,541
Apr-19	\$763,329	\$203,040	\$364,032	\$0	\$1,330,402	\$83,880,942
May-19	\$967,568	\$209,808	\$545,474	\$0	\$1,722,849	\$85,603,792
Jun-19	\$780,606	\$203,040	\$427,360	\$0	\$1,411,006	\$87,014,798
Jul-19	\$920,393	\$209,808	\$219,024	\$0	\$1,349,224	\$88,364,022
Aug-19	\$831,389	\$209,808	\$33,471	\$0	\$1,074,668	\$89,438,690
Sep-19	\$641,836	\$203,040	\$10,583	\$0	\$855,459	\$90,294,149
Oct-19	(\$1,539,850)	\$209,808	\$12,697	\$0	(\$1,317,345)	\$88,976,804
Nov-19	(\$1,051,612)	\$203,322	\$13,303	\$0	(\$834,987)	\$88,141,816
Dec-19	(\$693,825)	\$209,808	\$56,050	\$0	(\$427,968)	\$87,713,849
Jan-20	(\$888,323)	\$209,808	\$205,281	\$0	(\$473,234)	\$87,240,615
Feb-20	(\$886,977)	\$196,272	\$190,482	\$0	(\$500,222)	\$86,740,392
Mar-20	(\$656,533)	\$209,526	\$179,706	\$0	(\$267,301)	\$86,473,092
Apr-20	\$150,299	\$203,040	\$371,163	\$0	\$724,501	\$87,197,593
May-20	\$377,221	\$209,808	\$597,394	\$0	\$1,184,423	\$88,382,016
Jun-20	\$185,533	\$203,040	\$503,881	\$0	\$892,454	\$89,274,470
Jul-20	\$278,198	\$209,808	\$240,945	\$0	\$728,951	\$90,003,421

ATTACHMENT A  
EBT ANALYSIS

**TABLE 8 - BPA's Net Benefit after Adjustments**  
**BPA's Adjusted Net Revenue or (Cost)**

Month	Net Revenue or (Cost) (A) Month (\$)	Value of Reserves (B) Month (\$)	Avoided Tx Costs (C) Month (\$)	Demand Shift (D) Month (\$)	A + B + C + D Month (\$)	Cumulative Total Contract-to-Date (\$)
Aug-20	\$182,098	\$209,808	\$39,572	\$0	\$431,478	\$90,434,899
Sep-20	(\$10,182)	\$203,040	\$12,265	\$0	\$205,123	\$90,640,023
Oct-20	(\$1,855,758)	\$209,808	\$10,654	\$0	(\$1,635,296)	\$89,004,727
Nov-20	(\$1,332,108)	\$203,322	\$10,984	\$0	(\$1,117,802)	\$87,886,925
Dec-20	(\$1,017,243)	\$209,808	\$51,066	\$0	(\$756,369)	\$87,130,557
Jan-21	(\$1,180,862)	\$209,808	\$198,076	\$0	(\$772,978)	\$86,357,578
Feb-21	(\$1,143,210)	\$189,504	\$164,665	\$0	(\$789,041)	\$85,568,537
Mar-21	(\$967,641)	\$209,526	\$175,321	\$0	(\$582,793)	\$84,985,744
Apr-21	(\$101,889)	\$203,040	\$364,032	\$0	\$465,183	\$85,450,927
May-21	\$159,329	\$209,808	\$545,474	\$0	\$914,610	\$86,365,537
Jun-21	(\$33,663)	\$203,040	\$427,360	\$0	\$596,737	\$86,962,274
Jul-21	\$3,358	\$209,808	\$219,024	\$0	\$432,190	\$87,394,464
Aug-21	(\$114,189)	\$209,808	\$33,471	\$0	\$129,090	\$87,523,553
Sep-21	(\$303,268)	\$203,040	\$10,583	\$0	(\$89,645)	\$87,433,909
Oct-21	(\$1,424,532)	\$209,808	\$12,697	\$0	(\$1,202,027)	\$86,231,882
Nov-21	(\$922,712)	\$203,322	\$13,303	\$0	(\$706,087)	\$85,525,795
Dec-21	(\$531,028)	\$209,808	\$56,050	\$0	(\$265,171)	\$85,260,624
Jan-22	(\$723,413)	\$209,808	\$205,281	\$0	(\$308,324)	\$84,952,300
Feb-22	(\$712,150)	\$189,504	\$184,617	\$0	(\$338,029)	\$84,614,271
Mar-22	(\$498,808)	\$209,526	\$179,706	\$0	(\$109,576)	\$84,504,695
Apr-22	\$346,937	\$203,040	\$371,163	\$0	\$921,139	\$85,425,835
May-22	\$562,222	\$209,808	\$597,394	\$0	\$1,369,424	\$86,795,259
Jun-22	\$356,226	\$203,040	\$503,881	\$0	\$1,063,147	\$87,858,406
Jul-22	\$512,767	\$209,808	\$240,945	\$0	\$963,520	\$88,821,926
Aug-22	\$410,076	\$209,808	\$39,572	\$0	\$659,456	\$89,481,382
Sep-22	\$208,424	\$203,040	\$12,265	\$0	\$423,729	\$89,905,111

## ATTACHMENT B GAS PRICE FORECAST

The gas price forecast component of BPA's electricity price forecast is important because natural gas price movements contribute to price movements in electric power markets in the Pacific Northwest, as a preponderance of the generating resources establishing marginal prices for electric power are fueled by natural gas. BPA's natural gas price forecast used in the BP-12 rate proceeding, the methodology for its development and its use as an input to BPA's electricity price forecasts, are outlined in section 2.3.1 of the Power Risk and Market Price Study. *See* BP-12-FS-BPA-04 at 15. That natural gas price forecast was released July 26, 2011. BPA has updated its forecast of natural gas prices for use in this analysis of the Agreement in FY 2013 and all subsequent periods. BPA's updated natural gas price forecast was completed at the end of February 2012, during BPA's fiscal second quarter.

BPA has compared its updated forecast of spot market natural gas prices at the Henry Hub to the recent forecasts produced by other forecasters in the industry. The comparison, shown in Figure 2 below, includes a history of the Henry Hub spot prices – as opposed to the more frequently referenced NYMEX (now CME Group) forward market for Henry Hub natural gas prices – BPA's forecast of natural gas prices from the BP-12 Final Proposal, and other forecasters' views of the future. The forecasters, in alphabetical order, typically included in our comparisons are: Bentek Energy LLC (Bentek), Cambridge Energy Research Associates (CERA), the United States Department of Energy's Energy Information Administration (EIA), PIRA Energy Group, and Wood Mackenzie. With the exception of the EIA, each of these forecasters considers their information to be proprietary. The vintage of these forecasts is August 2012. The historical observations reflect the monthly average of the daily spot market prices for natural gas at the Henry Hub quoted on the Intercontinental Exchange (ICE) for the months from October 2008 through April 2012.

## ATTACHMENT B GAS PRICE FORECAST

**Figure 1: Henry Hub Natural Gas Spot Price Forecast**

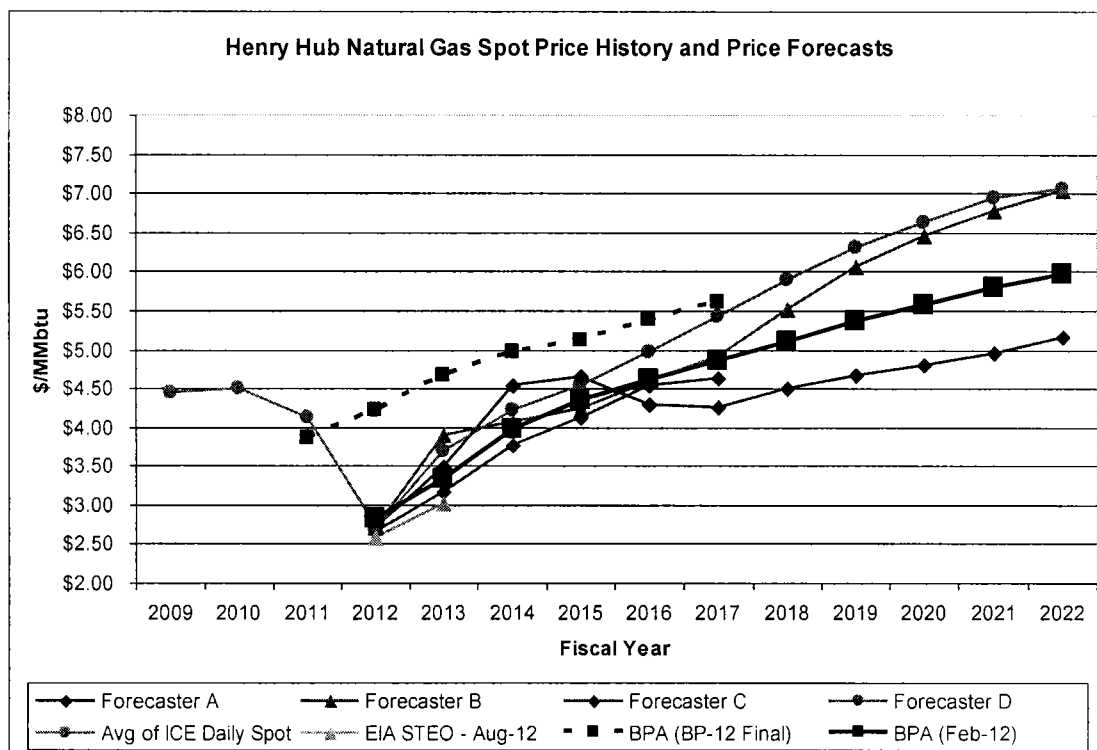


Figure 1 demonstrates that recent spot market prices for natural gas at the Henry Hub have been less than \$5 per MMBtu on an annual average basis in FY 2009, FY 2010 and FY 2011, and has averaged less than \$3 per MMBtu in FY 2012 through April 30, 2012. This illustration also demonstrates that the forecasts of five other industry experts are between \$3.02 per MMBtu and \$3.90 per MMBtu for FY 2013 – the starting fiscal years of BPA’s evaluation of equivalent benefits for the Agreement – and the forecasts of all five (5) of the other industry forecasters remain lower than \$5 per MMBtu through at least FY 2016. BPA’s updated forecast of spot prices for natural gas at the Henry Hub is consistent with the views reflected by these five industry experts. As a result, BPA believes its updated natural gas price forecast is reasonable compared to a recent history of monthly average Henry Hub spot prices for natural gas and compared to the expectations of other industry experts. Figure 1 also depicts the extent to which BPA’s updated natural gas price forecast has progressed downward since the Final Proposal in BP-12.

**This foregoing document was electronically filed with the Public Utilities**

**Commission of Ohio Docketing Information System on**

**6/14/2013 4:53:55 PM**

**in**

**Case No(s). 09-0119-EL-AEC**

Summary: Motion Motion to Amend the 2009 Unique Arrangement Between Ohio Power Company and Ormet Primary Aluminum Corporation and Request for Emergency Relief electronically filed by M HOWARD PETRICOFF on behalf of Ormet Primary Aluminum Corporation