



Department of Energy

Bonneville Power Administration
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POWER SERVICES

June 15, 2016

In reply refer to: P-6

To Regional Customers, Stakeholders, and Other Interested Parties:

Under section 11 of the Regional Dialogue Power Sales Agreements (Agreement), Bonneville Power Administration (BPA) preference customers have a one-time right to request a change to their purchase obligations. BPA has received requests from four Slice/Block customers exercising this notice right to change to another purchase obligation: City of Idaho Falls, Klickitat PUD, Okanogan PUD, and Seattle City Light.

In accordance with section 11.1.2 of the Agreement, BPA has completed its assessment of the aggregate effect of these customers' requests upon BPA's forecast of its total monthly firm coincident peak loads under various Slice peak assumptions. BPA's assessments show that the aggregate effect of all four requests, irrespective of the Slice peak assumption used, would not result in the increase of BPA's forecasted total monthly peak loads by 300 MW or more in any one month in Fiscal Year 2020. BPA has posted its peak load forecast assessment, methodology, and findings at:

<https://www.bpa.gov/power/pl/regionaldialogue/implementation/documents/#20yrRDcontracts>

Customers will note that in BPA's assessment, BPA assumed no reallocation of the Slice amounts made available by the four customers' requests to change their purchase obligations to any of the remaining Slice customers. The net peaking capacity impact of reallocation would surpass the 300 MW threshold stated in section 11.1.2 of the Agreement. Moreover, BPA received no requests from Load Following customers for a change in purchase obligation, and neither the Agreement nor the associated policies or records of decision provide for the reallocation of such Slice amounts to current Slice customers. Therefore, BPA does not intend to revisit the reallocation issue at this time.

In accordance with section 11.1.3 of the Agreement, in its assessment, BPA analyzed potential charges and cost shifts that would result from the customers' requests and found that none of the four customers that elected to change their purchase obligation will incur any additional contract charges as a result of its request to change its purchase obligation. All costs would continue to be collected in rates; no additional costs would be incurred by allowing a change in the deliveries or shape for the new purchase obligation choices; and, customers would continue to be subject to penalties, including Unauthorized Increase Charge. However, BPA is presently investigating timing complications caused by BPA's debt actions and will be proposing its findings and potential solution in the BP-18 Initial Proposal. In short, the financial impacts of BPA's debt actions can ripple through Slice sales differently than Non-Slice sales – causing a timing but not an equity issue. The timing difference can span multiple rate periods with equity restored at the end. BPA and customers are presently in the middle of debt actions that potentially have this

timing characteristic. Thus, it is important that BPA evaluate this issue in the context of product change and, if needed, propose a customer financial adjustment to restore equity. For these reasons, BPA staff does not anticipate that any other customers would be subjected to additional costs as a result of these four customers' requests to change their purchase obligations.

The City of Idaho Falls and Seattle City Light have both requested to change their purchase obligation effective October 1, 2017, which is earlier than allowed in the Agreement. Similar to the 2013 public comment process BPA conducted to evaluate Pend Oreille PUD's request for an early change, BPA will initiate a 2-week public comment process shortly after July 15, 2016, to evaluate the City of Idaho Falls' and Seattle City Light's requests to change their purchase obligation early.

If you have any questions, please contact your Power Services Account Executive or Scott Wilson at (503) 230-7638.

Sincerely,



Mark O. Gendron
Senior Vice President for Power Services

Product Switching Analysis

Aggregate Effect of All Requests to Change Products on BPA's Peak Load Forecast

Introduction

Section 11 of BPA's Regional Dialogue Power Sales Agreements (RD contracts) gives each customer a one-time conditional right to request a change in its purchase obligation (also known as the product) to another purchase obligation available from BPA. Under section 11.1.2, if the aggregate effect of all customer requests to change purchase obligations increases BPA's forecast of its total monthly firm coincident peak loads in the first year that the changes become effective by more than 300 MW, then BPA has the option to either deny the request or delay the increase in BPA's monthly firm peak load obligations. BPA conducted an assessment of the aggregate effect on peak loads, consistent with section 11.1.2, which is summarized below.

Assumptions and Methodology

Four customers submitted requests to change their products by the May 31, 2016 deadline. The four product change requests are:

- City of Idaho Falls: Slice/Block to Block with Shaping Capacity
- Klickitat PUD: Slice/Block to Load Following
- Okanogan PUD: Slice/Block to Block
- Seattle City Light: Slice/Block to Block

The aggregate change in BPA's monthly peak loads is evaluated for Fiscal Year (FY) 2020 consistent with the October 1, 2019 effective date stated in section 11.1.1 of BPA's RD contracts. Quantifying the aggregate change in BPA's monthly peak loads can be broken down into three discrete steps:

1. For customers requesting to change products, forecast the aggregate monthly peak loads based on their current products.
2. For the same subset of customers, forecast the aggregate monthly peak loads based on their requested product change.
3. Calculate the difference between the aggregate monthly peak loads based on their requested product change (2) and their current products (1).

The data sources and methodologies for the first two steps are summarized below. A fundamental assumption in this analysis is that no amount of the unsubscribed Slice is reallocated to any existing Slice/Block customer.

Peak Loads for Current Products

All customers requesting to change products are currently purchasing the Slice/Block product. BPA recognizes there may be multiple reasonable assumptions to make when forecasting its monthly peak loads for Slice. Consequently, results are presented for each of the following Slice assumptions:

- The highest monthly coincidental usage in FY 2015 by the four customers
- The highest theoretical monthly usage in FY 2015 obtained by assuming all four customers used Slice in the same manner as the product change customer that shaped most aggressively in each month



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- The 2015 White Book monthly 1-hour peak Slice load forecast for FY 2020 under 1937 (critical) water conditions
- The 2015 White Book monthly 1-hour peak Slice load forecast for FY 2020 under 1958 (average) water conditions

The monthly load forecast for Block is based on the 2015 White Book forecast for FY 2020. The monthly Slice and Block loads are summed to calculate BPA's monthly peak load.

Peak Loads for Requested Products

Each product requested requires a different methodology to forecast the peak load. To the extent possible, consistent data sources are used for each product.

For Load Following, BPA's monthly peak load is calculated as the customer's FY 2020 monthly peak total retail load minus the customer's FY 2020 monthly dedicated resources. The 2015 White Book monthly 1-hour peak total retail load forecast and customer's RD contract Exhibit A dedicated resource information serve as the data sources for this calculation.

Calculating BPA's monthly peak load for Block requires multiple steps. First, the 2015 White Book FY 2020 forecasts of BPA's Slice load under 1937-critical water conditions and Block load amounts are used to determine BPA's total energy load to each customer. Second, BPA's total energy load is multiplied by the customer's contract-specified Monthly Shaping Factors to allocate the energy amounts into each month. Third, the energy amount in each month is multiplied by the customer's contract-specified Diurnal Shaping Factors to determine the amount of heavy load hour energy for each month. Finally, the monthly heavy load hour energy is divided by the number of heavy load hours in each month to convert the units to average megawatts.

Similar to the methodology in the preceding paragraph for Block, calculating BPA's monthly peak load for Block with Shaping Capacity requires multiple steps. The first step in determining Shaping Capacity is to calculate the customer's FY 2010 monthly peak to heavy load hour energy ratio based on the same data used to establish the customers' Contract Demand Quantities and Contract High Water Marks. This ratio is multiplied by the customer's FY 2012 monthly heavy load hour energy as specified in the customer's contract and then reduced by the same value to determine the monthly Shaping Capacity. The monthly heavy load hour Block and Shaping Capacity loads are summed to calculate BPA's monthly peak load.

Results

The aggregate effect of all four customers' requests to change products on BPA's forecast of its total monthly peak loads is shown below, which includes results for all four Slice assumptions. The results indicate that irrespective of the Slice assumption chosen, the increase in BPA's forecast of its total monthly peak loads does not exceed 300 MW in any month.

Aggregate Effect of All Requests to Change Products on BPA's FY 2020 Peak Load Forecast												
	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
1937 Water Year (Critical) Slice	-22	38	111	151	81	62	-130	-425	-484	-201	-212	5
1958 Water Year (Average) Slice	-39	34	82	-37	-87	-130	-340	-487	-601	-316	-235	4
2015 Highest Coincidental Slice	-55	62	40	3	-153	-97	-310	-283	-356	-142	-130	0
2015 Highest Theoretical Slice	-102	31	-37	-70	-171	-133	-344	-329	-421	-192	-224	-178



Product Switching Analysis

Evaluation of Potential Charge for Product Switch from Slice/Block to Alternative Product

The TRM allows for a one-time consideration of a product switch. At the outset of the Regional Dialogue there was concern that switching products could impose unfair cost shifts on other customers. Therefore, BPA retained the right to apply a special charge on customers whose product change would impose a greater burden of costs upon other, non-switching customers.

The principles of the TRM are designed to treat customers fairly regardless of the product choices they make and the resulting impact of those choices on BPA and other customers. Through the TRM's existing rate design, a product switch would already account for differing impacts associated with product choice. The three fundamental components to consider are: 1) allocation of costs and credits (*e.g.*, allocation of secondary energy revenue); 2) impact to BPA's balancing energy costs; and 3) use of and payment for capacity.

On the first factor, with the exception to timing complications caused by BPA's debt actions¹, a Slice/Block to Block Only or Load Following switch provides additional secondary energy to BPA's Trading Floor and is included in the forecast secondary sales revenues included in the Non-Slice customer charge. Examining this impact alone results in no change to the Non-Slice customer rate because the secondary energy credit included in the Non-Slice cost pool (numerator) would increase proportional to the increased non-Slice load obligation (denominator).

With regard to the second factor, BPA's Load Shaping charges account for energy load shape differences among customers. If a customer's switch from Slice/Block to Block Only or Load Following impacts the shape of the energy purchased from BPA, that customer would pay, or be credited, market-based rates for any deviation in that load shape from the shape of BPA's system. This increase or decrease in Load Shaping charges effectively accounts and compensates BPA (and thereby other customers) for resulting changes to BPA's balancing energy costs.

Lastly, the third factor, capacity (demand) must be considered – both use of and impact on BPA's demand charge revenue collection. If the product choice is Block Only without shaping capacity, there is no additional capacity obligation and no impact to demand revenues – the customer requires no additional shaping capacity, pays no additional demand charge, and is treated no differently than a Load Following customer with a perfectly flat monthly load or the block portion of the Slice/Block product. This condition exists for both Seattle City Light and Okanogan PUD.

Additional evaluation is needed for customers converting to Block with Shaping Capacity or Load Following because the product switch will impact both BPA's capacity obligation and demand charge revenue collection. If the use of Federal capacity and the corresponding demand charge revenue collection is roughly proportional to BPA's other non-Slice customers, then the

¹ BPA is presently investigating this issue and will be proposing its findings and potential solution in the BP-18 Initial Proposal. In short, the financial impacts of BPA's debt actions can ripple through Slice sales differently than Non-Slice sales – causing a timing but not equity issue. The timing difference can span multiple rate periods with equity restored at the end. BPA and customers are presently in the middle of debt actions that potentially have this timing characteristic. Thus, it is important that BPA evaluate this issue in the context of product switching and, if needed, propose a customer financial adjustment to restore equity.



Product Switching Analysis

product switch is determined to be without undue cost shift to other customers. In other words, if a customer is using capacity, that customer should pay its fair share for the use of that capacity relative to other customers that also use and pay for capacity. Some variances are expected. For example, a customer may have high or low Contract Demand Quantities based upon historical load shapes which impact that customer's forecast demand charge revenue collection. The methodology used to test capacity equity is described below, and the results of this test found no undue capacity-related cost shifts. The only customer requesting to switch to Block with Shaping Capacity, City of Idaho Falls, was found to be within the range of what typical Load Following customers pay for demand, making BPA comfortable that no additional charges should be assessed. The only customer requesting to switch to Load Following, Klickitat PUD, was found to be within the range of what typical Load Following customers pay for demand, making BPA comfortable that no additional charges should be assessed.

Methodology

To assess the reasonableness of demand revenue collection post-product switch, BPA compared each product-switching customer to other customers currently taking the load following product, with similar load factors. A distribution of customers by load factor (averaged across all months) among current Load Following customers was developed. The imputed load factor on BPA of each customer proposing the product switch was then computed (also averaged across all months). For each customer, 20 customers were selected from the distribution of Load Following customers that were closest to the imputed load factor of each product-switching customer. These represent the two "cohorts" of customers with similar load factors to each product-switching customer. Then each of the product-switch customers' anticipated demand rate revenue collection, in \$/MWh, was compared to the average of \$/MWh demand rate revenue collection for each customers' applicable cohort.²

Results

Both City of Idaho Falls and Klickitat PUD are expected to produce demand revenues that exceed the average of each respective cohort. Therefore, BPA believes there is no significant capacity-related cost shifts to address.

² To remove potential distortion in the shape of the demand rate across the year, the demand rate is de-shaped before computing the \$/MWh rate of demand revenue collection for each customer, to remove potential shape bias.

