

BP-20 Rate Case Workshop: Power Rates

Transmission Scheduling Service and
Tier 2 Rates

July 25, 2018

Transmission Scheduling Service

- Transmission Scheduling Service (TSS) allows BPA Power Services to use the flexibilities of customers' network rights in combination with other network customers' rights to manage BPA's power resources efficiently.
- Power Services schedules all Federal power deliveries and Non-Federal resource deliveries to the customers' load.
- Power Services performs necessary scheduling functions by creating E-Tags and making preschedule and real-time adjustments as needed.

Current TSS requirements

- Customers are required to enter their hourly Non-Federal resource schedule into the ISSAC portal on a preschedule basis so that Power Services can create all E-Tags.
- Customers that purchase TSS can elect to use Transmission Curtailment Management Service (TCMS).
 - BPA provides TCMS when power from a customer's Non-Federal resource cannot be delivered to the customer's load, due to congestion or a transmission outage.
 - Customers taking TCMS avoid exposure to UAI charges and instead are charged a market indexed rate based on BPA's cost to replace the customer's Non-Federal power.
- Customers with scheduled Non-Federal resource deliveries are required to pay a TSS fee. This is a flat monthly fee calculated every Rate Case.

TSS-Lite proposal

- The customer (or its agent):
 - takes on all scheduling and tagging functions for their Non-Federal resources;
 - creates all E-Tags for Non-Federal resources and ‘CC’ BPA Power Services (BPAP) on each tag;
 - will not be required to use the ISAAC portal;
 - will still be eligible for TCMS; and
 - must use TSS-lite for all scheduled Non-Federal resources.
- To be eligible for TSS-lite, transfer service customers will be required to use the Non-Federal market purchase exchange that was established in the CHWM Contracts during the BP-18 rate case.

TSS-Lite rate design proposal

- TSS-lite rate: \$180/TSS-lite event
 - \$180 is based on 3 hours of BPA FTE staffing time. An average BPA employee costs \$125,000 (including benefits) per year or \$60 per hour.
- TSS-lite billing determinant: Count of TSS-lite events, a TSS-lite event includes:
 - each time a customer fails to CC Power Services on a schedule
 - each day a customer has a TCMS charge
- Other considerations:
 - A customer may have multiple events for a single hour if there are multiple schedules for an hour that do not include CCs to Power Services.
 - If a TCMS charge occurs, then the customer will pay the TSS-lite rate in addition to paying for replacement power and transmission (if applicable) during the transmission curtailment.
 - If the customer fails to CC Power Services and the schedule is curtailed; then the customer is subject to UAI charges.

Tier 2 rates

- Review BP-18 Tier 2 Short Term rates
- Share our BP-20 Tier 2 Short Term and Load Growth rate proposals
- Discuss Tier 2 Vintage rates

<i>Tier 2 Rates (\$/MWh)</i>					
Fiscal Year	Rate Case	Load Growth	VR1-2014	VR1-2016	Short Term
2012	BP-12	N/A	N/A	N/A	\$46.48
2013	BP-12	\$48.63	N/A	N/A	\$48.69
2014	BP-14	\$35.58	N/A	N/A	\$35.58
2015	BP-14	\$41.62	\$41.56	N/A	\$39.65
2016	BP-16	\$45.18	\$44.72	\$40.60	\$29.72
2017	BP-16	\$49.60	\$49.08	\$43.18	\$32.01
2018	BP-18	\$47.68	\$51.40	\$46.50	\$27.20
2019	BP-18	\$45.42	\$53.02	\$48.02	\$24.97

Short Term rates

Tier 2 Short Term Rates and Rate Case Market Price Forecasts (\$/MWh)										
Fiscal Year	Rate Case	Market Purchase?	Tier 2 Short Term Rate Components						Market Price Forecast	
			Purchase/Forecast Price	Risk Adder	Losses	TSS	Overhead Adder	Short Term Rate	80-year Average	Critical Water
2012	BP-12	yes	\$43.70	\$0.00	\$1.39	\$0.23	\$1.16	\$46.48	\$33.46	\$37.88
2013	BP-12	yes	\$45.98	\$0.00	\$1.30	\$0.23	\$1.18	\$48.69	\$37.87	\$42.84
2014	BP-14	yes	\$33.28	\$0.00	\$0.97	\$0.15	\$1.18	\$35.58	\$28.84	\$33.47
2015	BP-14	yes	\$37.25	\$0.00	\$1.04	\$0.15	\$1.21	\$39.65	\$28.86	\$34.08
2016	BP-16	no	\$24.29	\$3.18	\$0.85	\$0.14	\$1.26	\$29.72	\$24.29	\$27.47
2017	BP-16	no	\$26.43	\$3.20	\$0.91	\$0.14	\$1.33	\$32.01	\$26.43	\$29.63
2018	BP-18	no	\$23.14	\$2.06	\$0.77	\$0.14	\$1.09	\$27.20	\$23.14	\$27.26
2019	BP-18	yes	\$23.00	\$0.00	\$0.71	\$0.14	\$1.12	\$24.97	\$22.83	\$26.99

- **BP-18 Tier 2 Short Term rates:**
 - BPA forecast a surplus for FY 2018 and the Short Term rate was based on the average of the two rate case spot market price forecasts (critical water and 80 water year average).
 - BPA forecast a deficit for FY 2019 and the Short Term rate was based on the price of a market purchase made for that fiscal year.

Decision criteria

- Decision criteria used to develop and evaluate BP-20 Tier 2 Short Term rate proposals:
 - Consistent with Tiered Rate Methodology, previous rate case decisions, and CHWM Contracts.
 - Tier 2 Short Term rate should be reasonably comparable to products/prices available from the market, but with added benefits. BPA's Tier 2 rates include the following benefits:
 - Firm network transmission
 - No adder for odd lot purchase size (>25 MW or < 25 MW increments)
 - No requirement for customer to post additional credit support
 - No adder for the very low carbon output of the FCRPS
 - Clear documentation: Straightforward to implement and understand in the rate case.

Short Term rate proposals

- If BPA is forecasting a surplus, then the Short Term rate would be based on a proxy forward market price. We are considering two methods for establishing a proxy price for a flat annual block of power:
 - BP-18 method: rate case 80-year annual average spot market price forecast (Aurora) plus a risk adder; or
 - ICE method: average (from three consecutive dates) forward market settlement prices on ICE for Mid-C electricity futures contracts, may include a small risk adder.
- If BPA is forecasting a deficit, then BPA would make market purchases to meet its load obligations and the Tier 2 Short Term rate would be based on the market purchase price.

Load Growth rate proposal

- BPA would use the same methodology used to establish the Short Term rate to determine the Load Growth rate (BP-20 Short Term rate = BP-20 Load Growth rate).
- Both Short Term and Load Growth rates would continue to include adders for losses, TSS, and overhead costs. It may also be appropriate to include a risk adder.

Tier 2 – ICE market settlements

- The Intercontinental Exchange (ICE), a web-based trading platform for commodity energy, publishes daily settlement prices for a 10 year listing cycle of monthly Mid-C electricity futures contracts.
 - Daily settlement prices reflect actual transactions and systematic adjustments to those futures contracts not traded.
 - These prices do not necessarily reflect the actual price at which BPA could transact.
- For the last two rounds of purchases of Tier 2 energy, BPA paid slightly above the comparable ICE settlement prices.

BPA Tier 2 Purchases

Delivery Period	FY14	FY15	FY19
Purchase Date	11/16/2012	11/16/2012	2/20/2017
Actual Purchase Price*	\$33.28	\$37.25	\$23.00
Purchase Date ICE Settlement	\$33.10	\$36.58	\$22.22
Delta Actual-ICE	\$0.18	\$0.67	\$0.78

*Including Letter of Credit

Tier 2 – ICE market settlements (cont.)

- There are a variety of ways physical delivered power differs from the futures contracts traded on ICE, such as transmission costs and the impact on system emission factors.
- Reasons a physical purchase might be higher than comparable ICE Settlements:
 - Required credit support
 - Lack of liquidity
 - Odd lot size
 - Carbon market uncertainty
 - ICE market settlement price
- Comparison of Tier 2 purchases to ICE market settlements indicates a small adder (~\$0.50) may be appropriate to convert a financial price to a physical price.

Proxy forward market prices

	Consistent with TRM, rate cases, contracts	Comparable to products available in market	Straightforward to implement and understand in rate case
BP-18 Method: Rate case spot market price forecast (Aurora) plus risk adder	Yes, methodology has been used in two rate cases.	Possibly, although using this method for FY2018 resulted in a rate \$2 higher than the FY2019 rate that was based on an actual market purchase.	Yes, methodology is based on market price forecast data developed for the rate case.
ICE Method: Forward market settlement prices on ICE for Mid-C electricity futures contracts may include a small risk adder	Yes, provided that BPA has sufficiently mitigated for risks, including the risk of shifting costs from Tier 2 to Tier 1.	Yes, daily settlement prices reflect actual transactions and systemic adjustments to those futures contracts not traded. Could be more comparable if a small risk adder, benchmarked to actual annual block purchases, is added.	Yes, will need to develop the specific methodology for the rate case proposal. Will also need consent from ICE to use ICE settlements pricing data in the rate case.

Vintage rates

- BPA is open to offering Tier 2 Vintage rates for customers with specific resource objectives (solar, wind, market, etc.)
- Customers looking for direct market purchases outside of the Tier 2 Short Term/Load Growth framework should contact BPA's trading floor.

Next steps

- Comments or questions? Email techforum@bpa.gov
- Please provide comments by August 8th.