

RHWM Process Workshop

BP-18 Rate Period – Preliminary Outputs

Rates Hearing Room

June 30, 2016



RHWM Process Workshop Agenda

Topic	Presenter
Introductions and Purpose of Workshop	Lindsay Bleifuss
City of Idaho Falls' Bulb Turbines and the T1SFCO	Tim Misley Steve Belcoff
Address stakeholders' concern regarding the treatment of ALCOA and the T1SFCO	Lindsay Bleifuss Peter Stiffler
Load forecast changes associated with customer comments	Reed Davis
Treatment of Product Switch requests and the T1SFCO	Lindsay Bleifuss Peter Stiffler
Brief BiOp update	Jason Sweet
Next Steps	Lindsay Bleifuss

Bulb Turbines

- Historically, BPA has purchased the output of the Idaho Falls Bulb Turbines.
- At the time of the May 10 Initial RHWM kick-off meeting, BPA and Idaho Falls were in negotiations regarding BPA continuing the purchase of the output of the Bulb Turbines.
- The output of the Bulb Turbines was included in the initial T1SFCO values shared at the May 10 meeting.
- Subsequently, Idaho Falls decided to apply the output of the Bulb Turbines to its load starting in FY 2017.
- As a result, the T1SFCO will be reduced an additional 14 aMW, and the total reduction to the T1SFCO (formerly 31 aMW) relative to the BP-16 T1SFCO is now 46 aMW.

Federal Tier 1 System Firm Critical Output Summary

Federal Tier 1 System Firm Critical Output Projection - 2-Year Average RHWM Process for BP-18 Rate Period

Study: S135-RC-20160623-133806

1.	T1SFCO Projections Energy in aMW	2018	2019	Average
2.	Total Federal System Hydro Generation (<i>TRM Table 3.1</i>)	6,589.8	6,584.8	6,587.3
3.	Total Designated Non-Federally Owned Resources (<i>TRM Table 3.2</i>)	1,148.8	986.0	1,067.4
4.	Total Designated BPA Contract Purchases (<i>TRM Table 3.3</i>)	137.0	137.7	137.4
5.	Total Designated System Obligations (<i>TRM Table 3.4</i>)	-918.5	-909.6	-914.1
6.	Federal Tier 1 System Firm Critical Output	6,957.1	6,798.9	6,878.0

- ❑ Total RHWM is lower by 14.5 aMW from those presented in the May 10, 2016 RHWM Process meeting due to the following:
 - Line 2: Removal of Idaho Falls bulb turbines (-14.1 aMW)
 - Line 5: Small change in Transmission Losses and Slice Transmission Loss Returns (-0.4 aMW)

T1SFCO Difference

Table 2.12.0				
Federal Tier 1 System Firm Critical Output Projection - 2-Year Average				
Comparison: BP-18 RHWM Process versus BP-16 Final RHWM Process				
Study: S135-RC-20160623-133806				
T1SFCO 2-Year Average Comparison (Energy in aMW)	RHWM Process for BP-18 Rate Period (FY 2018-19)	BP-16 Final RHWM Process (FY 2016-17)	Difference 2-Year Average	Component Details
T1SFCO Resource Differences				
1. Total Federal System Hydro Generation (TRM Table 3.1)	6,587	6,702	-115	Hydro generation forecasts were reduced due to the following: <ul style="list-style-type: none"> Lower outflows from Canadian projects, more Grand Coulee pumping and the removal of the max transport no spill assumption in the second year of study; and changes in the Grand Coulee inflows that drafted deeper in November through February resulting in head losses (-101 aMW) Removal of the Idaho Falls Bulb turbines generation (-14 aMW)
2. Total Designated Non Federally Owned Resources (TRM Table 3.2)	1,067	1,050	18	Non Federally owned resource changes: <ul style="list-style-type: none"> Columbia Generating Station (+23 aMW) GP-Paper (Wauna) contract acquisition expired 4/5/2016 (-5 aMW)
3. Total Designated BPA Contract Purchases (TRM Table 3.3)	137	177	-40	Contract purchase changes: <ul style="list-style-type: none"> BPA/RVSD contract expired 4/30/2016 (-8 aMW) BPA/BCHA Libby Coordination Agreement (LCA) settled financially (-32 aMW)
T1SFCO Load/Obligation Differences				
4. Total Designated System Obligations (TRM Table 3.4)	-914	-1,005	91	Contract purchase changes: <ul style="list-style-type: none"> BPA/USBR Obligations (+4 aMW) BPA/BCHA Canadian Entitlement Return (-4 aMW) BPA/AVWP WNP3 Settlement (+3 aMW) BPA/PSE WNP3 Settlement contract expires 6/30/2017 (-42 aMW) BPA/RVSD contract expired 4/30/2016 (-1 aMW) BPA/BHEC Legacy contract expires 6/30/2016 (-8 aMW) Transmission loss calculation w/updated resources and contracts (-11 aMW) BPA/BCHA Libby Coordination Agreement (LCA) settled financially (-32 aMW)
5. Federal Tier 1 System Firm Critical Output (2-year average)	6,878	6,924	-46	Difference was -31 aMW presented in the May 10, 2016 RHWM Process meeting

Alcoa and the T1SFCO

- Power sales to Direct Service Industrial Customers (DSIs) do not impact the calculation of the T1SFCO.
- The T1SFCO is based on 1937 critical water conditions and is made up of the TRM-established Tier 1 resources and contracts. (These are listed in tables 3.1, 3.2, 3.3, and 3.4 of the TRM.)
- RHWMs are sized to the T1SFCO + RHWm Augmentation before accounting for DSI loads
- RHWm Augmentation is a defined term in the TRM, and includes only Additional CHWM tied to preference customer loads meeting specific requirements.
- DSI Loads do not affect the amount of firm power BPA has available to sell to preference customers at a Tier 1 rate.
- Therefore, adding DSI load loss as a new type of RHWm Augmentation would represent a significant shift from Regional Dialogue Policy and the TRM.

Load Forecast Update

- All comments merited adjustment based on the criteria.
- Changes made to Total Retail Load resulted in:
 - Fiscal Year 2018 3.6 aMW decrease
 - Fiscal year 2019 8.7 aMW decrease
- After the comment period ended, we became aware of two additional events likely to cause changes to the load forecast. Assuming BPA receives comments from customers during the August comment period requesting these changes to their load forecast, the final RHWM analyses and outputs published in September will likely reflect the changes.

Product Switch Requests

- Four customers have requested to switch products:
 - The Power Sales Agreement anticipates any switching to occur beginning FY 2020
 - Some customers have requested to switch early (at the beginning of FY 2018)
- No customers have yet made **final** decisions to switch products.
- The BP-18 RHWM process assumes the status quo for all of the customers' products.
- Decisions on product switching that affect the BP-18 rate period (FY 2018-2019) will be addressed in the BP-18 rate case.

Questions?

Appendix

RHWM Timeline

Action	FY16 Timing
<i>PRELIMINARY PROCESS BEGINS</i>	
Public workshop - Present preliminary RHWM process outputs (T1SFCO, RHWM, and Above-RHWM Loads)	May 10 (Tuesday)
Public comment period will run for two weeks following the public workshop (on BPA comment page)	May 11 (Wednesday) - May 25 (Wednesday)
Second public workshop before official process begins (if necessary)	June 30 (Thursday)
Calculate draft final RHWM process outputs	July
<i>FORMAL PROCESS BEGINS</i>	
Public workshop - Present draft final RHWM process outputs (T1SFCO, RHWM, and Above-RHWM Loads)	August 9 (Tuesday)
Draft final RHWM process outputs published	August 9 (Tuesday)
Public comment period will be run for 10 business days following the public workshop (on BPA comment page)	August 10 (Wednesday)-August 23 (Tuesday)
Deadline for written preservation of right to dispute	August 12 (Friday)
Republish RHWM process outputs (if changes made due to public comments)	September 6 (Tuesday)
Deadline for dispute notice	September 16 (Friday)
Publish final RHWM process outputs	September 30 (Friday)

Final RHWM outputs will be published on September 30th assuming there is no dispute

Federal System Hydro Generation

Used in T1SFCO Calculation

Federal System Hydro Generation for use in the T1SFCO Calculation
RHWM Process for BP-18 Rate Period
TRM Table 3.1

Study: S135-RC-20160623-133806

1.	Regulated Hydro	2018	2019	Average
2.	Albeni Falls	22.3	21.9	22.1
3.	Bonneville	390.7	390.7	390.7
4.	Chief Joseph	1,100.1	1,100.1	1,100.1
5.	Dworshak	141.6	137.0	139.3
6.	Grand Coulee	1,907.1	1,907.1	1,907.1
7.	Hungry Horse	81.4	81.4	81.4
8.	Ice Harbor	109.1	109.1	109.1
9.	John Day	784.7	784.7	784.7
10.	Libby	186.8	186.8	186.8
11.	Little Goose	156.4	156.4	156.4
12.	Lower Granite	146.3	146.3	146.3
13.	Lower Monumental	146.4	146.4	146.4
14.	McNary	478.2	478.2	478.2
15.	The Dalles	599.3	599.3	599.3

Federal System Hydro Generation

Used in T1SFCO Calculation *(continued)*

Federal System Hydro Generation for use in the T1SFCO Calculation
 RHWM Process for BP-18 Rate Period
TRM Table 3.1

Study: S135-RC-20160623-133806

16.	Independent Hydro	2018	2019	Average
17.	Anderson Ranch	12.2	12.2	12.2
18.	Big Cliff	9.7	9.7	9.7
19.	Black Canyon	6.2	6.2	6.2
20.	Boise River Diversion	1.2	1.2	1.2
21.	Chandler	6.1	6.1	6.1
22.	Cougar	19.0	19.0	19.0
23.	Cowitz Falls	26.5	26.5	26.5
24.	Detroit	33.8	33.8	33.8
25.	Dexter	9.4	9.4	9.4
26.	Foster	12.2	12.2	12.2
27.	Green Peter	26.9	26.9	26.9
28.	Green Springs - USBR	7.3	7.3	7.3
29.	Hills Creek	17.9	17.9	17.9
30.	Idaho Falls - City Plant (expires 9/30/2016)	0.0	0.0	0.0
31.	Idaho Falls - Lower Plants #1 & #2 (expires 9/30/2016)	0.0	0.0	0.0
32.	Idaho Falls - Upper Plant (expires 9/30/2016)	0.0	0.0	0.0
33.	Lookout Point	35.8	35.8	35.8
34.	Lost Creek	30.1	30.1	30.1
35.	Minidoka	10.7	10.7	10.7
36.	Palisades	67.4	67.4	67.4
37.	Roza	6.9	6.9	6.9
38.	Total Tier 1 Federal System Hydro Generation	8,607.8	8,603.8	8,605.8

Designated Non-Federally Owned Resources

Used in T1SFCO Calculation

Designated Non-Federally Owned Resources for use in the T1SFCO Calculation
RHWM Process for BP-18 Rate Period
TRM Table 3.2

Study: S135-RC-20160623-133806

1.	Project	2018	2019	Average
2.	Ashland Solar Project	0.0	0.0	0.0
3.	Columbia Generating Station	1,100.0	937.3	1,018.6
4.	Condon Wind Project	11.7	11.7	11.7
5.	Dworshak/Clearwater Small Hydropower	2.6	2.6	2.6
6.	Foote Creek 1	3.6	3.6	3.6
7.	Foote Creek 2	0.0	0.0	0.0
8.	Foote Creek 4	4.0	4.0	4.0
9.	<i>Fourmile Hill Geothermal (Not included)</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
10.	<i>Georgia-Pacific Paper (Wauna) (Acquisition Expired 4/5/2016)</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
11.	Klondike I	5.7	5.7	5.7
12.	Stateline Wind Project	21.2	21.2	21.2
13.	White Bluffs Solar	0.0	0.0	0.0
14.	Total Designated Non-Federally Owned Resources	1,148.8	986.0	1,067.4

Designated BPA Contract Purchases

Used in T1SFCO Calculation

Designated BPA Contract Purchases for use in the T1SFCO Calculation
Preliminary RHW M Process for BP-18 Rate Period
TRM Table 3.3

Study:S135-RC-20160623-133806

1.	Contract Purchases	Contract #	2018	2019	Average
2.	Priest Rapids CER for Canada	97PB-10099	29.2	28.8	29.0
3.	Rock Island #1 CER for Canada	97PB-10102	17.7	18.3	18.0
4.	Rock Reach CER for Canada	97PB-10103	37.1	37.6	37.3
5.	Wanapum CER for Canada	97PB-10100	28.2	28.4	28.3
6.	Wells CER for Canada	97PB-10101	23.9	23.6	23.7
7.	BCHP to BPA PwrS	99PB-22685	1.0	1.0	1.0
8.	BCHP to BPA LCA <i>(settled financially)</i>	99PB-22685	0.0	0.0	0.0
9.	PASA to BPA Pk Repl <i>(expired 4/30/2015)</i>	94BP-93658	0.0	0.0	0.0
10.	PASA to BPA S/N/X <i>(expired 4/30/2015)</i>	94BP-93658	0.0	0.0	0.0
11.	PASA to BPA Xchg Nrg <i>(expired 4/30/2015)</i>	94BP-93658	0.0	0.0	0.0
12.	RVSD to BPA Pk Repl <i>(expired 4/30/2016)</i>	94BP-93958	0.0	0.0	0.0
13.	RVSD to BPA Seas Xchg <i>(expired 4/30/2016)</i>	94BP-93958	0.0	0.0	0.0
14.	RVSD to BPA Xchg Nrg <i>(expired 4/30/2016)</i>	94BP-93958	0.0	0.0	0.0
15.	PPL to BPA SNX (Spring Return) <i>(expired 6/1/2014)</i>	94BP-94332	0.0	0.0	0.0
16.	PPL to BPA SPX (Summer Return) <i>(expired 6/1/2014)</i>	94BP-94332	0.0	0.0	0.0
17.	Total Designated BPA Contract Purchases		137.0	137.7	137.4

Designated BPA System Obligations

Used in T1SFCO Calculation

**Designated BPA System Obligations for use in the T1SFCO Calculation
Preliminary RHWB Process for BP-18 Rate Period
TRM Table 3.4**

Study: S135-RC-20160623-133806

1.	System Obligation	Contract #	2018	2019	Average
2.	BPA to BRCJ Chief Joseph	14-03-17506; 14-03-49151	-8.8	-8.8	-8.8
3.	BPA to BRCB Columbia Basin Project	lbp-4512; 14-03-001-12160	-142.9	-142.9	-142.9
4.	BPA to BRRCR Crooked River Project	14-03-73152	-0.7	-0.7	-0.7
5.	BPA to BROP Owyhee Project	EW-78-Y-83-00019	-1.7	-1.7	-1.7
6.	BPA to BRRP Rathdrum Prairie Project	14-03-49151	-0.6	-0.6	-0.6
7.	BPA to BRSID Southern Idaho Projects	EW-78-Y-83-00019	-20.0	-20.0	-20.0
8.	BPA to BRSIN Spokane Indian Develop.	14-03-49151	-0.3	-0.3	-0.3
9.	BPA to BRSV Spokane Valley	14-03-63656	-0.7	-0.7	-0.7
10.	BPA to BRTD The Dallas Reclamation Project	14-03-32210	-2.0	-2.0	-2.0
11.	BPA to BRTV Tualatin Project	14-03-49151	-0.8	-0.8	-0.8
12.	BPA to BRUB Umatilla Basin Project	10GS-75345	-2.4	-2.4	-2.4
13.	BPA to BRYK Yakima Project	DE-MS79-88BP92591	-1.8	-1.8	-1.8
14.	BPA to BCHP LCA <i>(settled financially)</i>	99PB-22685	0.0	0.0	0.0
15.	BPA to BCHA Can Ent	99EO-40003	-468.5	-462.4	-465.5
16.	BPA to BCHA NTSA	12PG-10002	-9.1	-9.1	-9.1
17.	BPA to BHEC 2012PSC <i>(expired 6/30/2017)</i>	97PB-10051	0.0	0.0	0.0

Designated BPA System Obligations

Used in T1SFCO Calculation *(Continued)*

**Designated BPA System Obligations for use in the T1SFCO Calculation
Preliminary RHWM Process for BP-18 Rate Period
TRM Table 3.4**

Study: S135-RC-20160623-133806

1.	System Obligation	Contract #	2018	2019	Average
18.	BPA to PASA C/N/X <i>(expired 4/30/2015)</i>	94BP-93658	0.0	0.0	0.0
19.	BPA to PASA S/N/X <i>(expired 4/30/2015)</i>	94BP-93658	0.0	0.0	0.0
20.	BPA to RVSD C/N/X <i>(expired 4/30/2016)</i>	94BP-93958	0.0	0.0	0.0
21.	BPA to RVSD Seas Xchg <i>(expired 4/30/2016)</i>	94BP-93958	0.0	0.0	0.0
22.	Federal Intertie Losses <i>(Calculated: 3.0% of Intertie Sales Table 2.12.5 lines 18-21)</i>	n/a	0.0	0.0	0.0
23.	BPA to AVWP WP3 S <i>(expires 6/30/2019)</i>	85BP-92186	-44.8	-44.8	-44.8
24.	BPA to PPL SNX (Spring Delivery) <i>(expired 6/1/2014)</i>	94BP-94332	0.0	0.0	0.0
25.	BPA to PPL SPX (Summer Delivery) <i>(expired 6/1/2014)</i>	94BP-94332	0.0	0.0	0.0
26.	BPA to PSE WP3 S <i>(expired 6/30/2017)</i>	85BP-92185	0.0	0.0	0.0
27.	BPA to PSE Upper Baker 2	09PB-12126	-1.3	-1.3	-1.3
28.	BPAP to BPAT <i>(Dittmer/Substation Service)</i>	09PB-12128	-9.4	-9.4	-9.4
29.	Federal Power Trans. Losses	n/a	-238.0	-234.4	-236.2
30.	Slice Transmission Loss Returns	n/a	35.5	34.7	35.1
31.	Total Designated System Obligations		-918.5	-909.6	-914.1