

Preliminary FY 2019 Spill Surcharge

Workshop April 18, 2019

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Background

- Bonneville included in its final BP-18 power rate schedules a Spill Surcharge that charges customers for the cost of any increased planned spill that occurs relative to the amount of spill modeled in the Federal hydro generation forecast used in setting BP-18 rates.
- The Spill Surcharge is:
 - Calculated independently for each year of the FY 2018-2019 rate period based on planned spill operations for each year.
 - Applicable to non-Slice power sales.
- For each year of the rate period, the preliminary Spill Surcharge amount must be provided to customers no later than May 31, with a public meeting and a comment period of at least 10 business days.
 - BPA will issue the final Spill Surcharge no later than 14 calendar days after the comment period closes.

Background: Forecast vs. Actuals

What the Spill Surcharge *is*:

- The Spill Surcharge is an established formula rate adjustment that approximates the additional amount customers would have been charged if BPA had known the planned spill operations when setting final BP-18 rates.
- Because the planned spill operations were not known when the final BP-18 rates were calculated, the Spill Surcharge adjusts power rates in each year of the rate period (FY 2018 and FY 2019) for the new *planned* spill operations relative to the *planned* spill operations modeled when final rates were set.
- Rates are set based on an analysis of monthly forecast generation and market prices over 80 historical water year conditions.

What the Spill Surcharge *is not*:

- The surcharge does not reflect actual conditions on the Federal hydro system or actual net secondary revenue.
- All else equal, if *actual* net secondary revenue is higher than revenue forecast when setting rates, it would add to financial reserves; if lower than forecast, it would decrease financial reserves and could contribute to triggering the Power Cost Recovery Adjustment Clause.

FY 2019 Process

April 8 Release preliminary FY 2019 Spill Surcharge and documentation

April 18 Workshop to review preliminary FY 2019 Spill Surcharge
(See BPA Event Calendar for meeting information)

April 18 – May 2 Comment Period
(See BPA Public Comments webpage)

May 16 Final FY 2019 Spill Surcharge and decision document issued

Spill Surcharge Formula

There are three major components of the Spill Surcharge formula.

- 1) **Spill Cost Component** – The average lost generation, over the modeled 80 historical water year record, multiplied by the rate case forecast Mid-C price of electricity.
 - 2) **Cost Reduction Component (CostR)** – Administrator’s discretion to reduce the Spill Surcharge by applying “specific forecast and actual program spending reductions” to the Spill Surcharge Amount.
 - 3) **Secondary Revenue Component (SecR)** – Net impact on Bonneville’s balancing purchases and remaining secondary sales. Accounts for the impact that more spill would have on the market clearing price. On average, more spill would cause an upward shift in the forecast Mid-C market-clearing price, which would impact Bonneville’s balancing purchases and remaining secondary sales.
- The Spill Surcharge formula also includes a **Non-Slice Component** adjustment that adjusts the formula to reflect the cost associated with Non-Slice PF power sales only.

Spill Surcharge Formula, cont.

Cost Reduction Component (CostR)

At Administrator’s discretion, “specific forecast and actual program spending reductions” relative to the cost included in the final BP-18 power rates.

Non-Slice Component

Adjusts the formula to reflect cost associated with Non-Slice PF power sales only.

$$\left(\left(\frac{\sum_{i=1}^{1120} ((BP18FedGen_i - RevFedGen_i) \times BP18Price_i)}{80} \right) - CostR \right) \times \left(1 - \sum Slice\% \right) - SecR$$

Spill Cost Component

Average water year cost – The average lost generation, over the modeled historical 80-water year record, multiplied by the rate case forecast Mid-C electricity price.

Secondary Revenue Component (SecR)

Net impact on Bonneville’s balancing purchases and remaining secondary sales. Accounts for the impact that more spill would have on the market clearing price. On average, more spill would cause an upward shift in the forecast Mid-C market-clearing price, which would impact Bonneville’s balancing purchases and remaining secondary sales.

Spill Surcharge Formula - Results

| | Final FY 2018 (\$million) | Preliminary FY 2019 (\$million) | | Notes |
|-------------------------------|---------------------------------|---------------------------------------|---|---|
| Spill Cost | \$38.6 | \$34.9 | The average lost generation in each year due to more planned spill, over the modeled 80 historical water year record, multiplied by the rate case forecast Mid-C electricity price. | <u>Spill Plan modeled</u> FY 2018: 2018 Spill Plan FY 2019: 2019-21 Spill Operation Agrmt |
| Cost Reduction (CostR) | <u>(\$15.5)</u> | <u>(\$26.4)</u> | Program spending reductions relative to those assumed for setting BP-18 rates. Represents a forecast reduction of F&W costs and the corresponding reduction in the NW Power Act section 4(h)(10)(C) credit (22.3% credit on F&W costs). | <u>F&W Cost Reductions</u> FY 2018: \$20 million FY 2019: \$34 million |
| | \$23.1 | \$8.5 | Net cost | |
| Non-Slice % | <u>X .7726</u> | <u>X .7726</u> | Adjusts formula to reflect costs associated with non-Slice PF power sales only. | |
| | \$17.8 | \$6.6 | Non-Slice portion of cost | |
| Secondary Revenue (SecR) | <u>(\$7.6)</u> | <u>(\$6.8)</u> | Accounts primarily for the impact that more spill would have on the market clearing price for the remaining secondary sales. | |
| Spill Surcharge Amount | \$10.2 | \$0 | | |

Spill Cost

- Hydro study process
 - New spill criteria are created based on the spill plan described in the 2019-2021 Spill Operation Agreement (Dec 2018).
 - The BP-18 final rate proposal hydro study is rerun using these new spill criteria.
 - Outputs reflecting the new spill criteria are run through AURORA® to update lack-of-market spill, which is subsequently incorporated into the hydro study.

Spill Criteria

| Spill Criteria for FY 2019 Spill Surcharge | | | | |
|--|------------------------------|-----------|-----------------|------------------|
| Project | Spill | Min Turb | Days | Hours |
| Lower Granite | 45 kcfs | 11.5 kcfs | Apr 3 - Jun 20 | 16 hours per day |
| | 20 kcfs | | | 8 hours per day |
| | 18 kcfs | | Jun 21 - Aug 31 | All hours |
| Little Goose | 52 kcfs | 11.5 kcfs | Apr 3 - Jun 20 | 16 hours per day |
| | 30% of total flow | | | 8 hours per day |
| | 30% of total flow | | Jun 21 - Aug 31 | All hours |
| Lower Monumental | 44 kcfs | 11.5 kcfs | Apr 3 - Jun 20 | 16 hours per day |
| | 30 kcfs (bulk spill pattern) | | | 8 hours per day |
| | 17 kcfs | | Jun 21 - Aug 31 | All hours |
| Ice Harbor | 87 kcfs | 9.5 kcfs | Apr 3 - Jun 20 | 16 hours per day |
| | 30% of total flow | | | 8 hours per day |
| | 30% of total flow | | Jun 21 - Aug 31 | All hours |
| McNary | 180 kcfs | 50 kcfs | Apr 10 - Jun 15 | 16 hours per day |
| | 48% of total flow | | | 8 hours per day |
| | 57% of total flow | | Jun 16 - Aug 31 | All hours |
| John Day | 146 kcfs | 50 kcfs | Apr 10 - Jun 15 | 16 hours per day |
| | 32% of total flow | | | 8 hours per day |
| | 35% of total flow | | Jun 16 - Aug 31 | All hours |
| The Dalles | 135 kcfs | 50 kcfs | Apr 10 - Jun 15 | 16 hours per day |
| | 40% of total flow | | | 8 hours per day |
| | 40% of total flow | | Jun 16 - Aug 31 | All hours |
| Bonneville | 122 kcfs | 30 kcfs | Apr 10 - Jun 15 | 16 hours per day |
| | 100 kcfs | | | 8 hours per day |
| | 95 kcfs | | Jun 16 - Aug 31 | All hours |

Note: 120% TDG spill production estimates (gas caps) from the 2019-2021 Spill Operations Agreement were assumed to apply throughout spill season.

Spill Cost - Results

The new spill criteria result in:

- 223 aMW decrease in 80-year average hydro generation (compared to the BP-18 final rate studies)
 - For comparison, the spill criteria modeled for the FY 2018 spill surcharge resulted in a 253 aMW decrease in 80-year average hydro generation.
- FY 2019 spill cost of \$34.9 million using the template as established through the rate-setting process
 - For comparison, the FY 2018 spill cost was \$38.6 million.

Spill Cost – Results (cont'd)

- Change in generation between BP-18 final study and relevant fiscal year (in aMW):

| | APR | MAY | JUNE | JULY | AUG | AVG |
|----------------------------|-------|-------|------|------|------|------|
| FY 2018 Final | -1186 | -1271 | -573 | 0 | 0 | -253 |
| FY 2019 Preliminary | -918 | -1061 | -590 | +41 | -147 | -223 |

- The effects of spring *and* summer spill plans are included in this cost.
 - Summer spill was not included in the FY 2018 Spill Surcharge cost estimate because only spring spill was affected by the FY 2018 spill plan.

Secondary Reduction (SecR)

- Modeled prices at Mid-C increase generally, on average, due to lost generation:
 - Price deltas relative to BP-18 final rates (\$/MWh)

| Spill Surcharge | APR | MAY | JUNE | JULY | AUG |
|----------------------------|------|------|------|--------|------|
| FY 2018 Final | 1.32 | 1.54 | 0.88 | | |
| FY 2019 Preliminary | 1.14 | 1.33 | 0.93 | (0.16) | 0.14 |

- The price effect is greatest in May because May has the most available generation relative to April and June.
- In total, the price effect contributes to a SecR of \$6.8 million.

Cost Reduction (CostR)

- Background:
 - The Administrator has the discretion to reduce the Spill Surcharge by applying “specific forecast and actual program spending reductions” to the Spill Surcharge Amount.
 - In the BP-18 ROD, the Administrator stated that he was “committed to working with our regional partners to find program cost savings, including in our Environment, Fish and Wildlife spending, to help offset this surcharge.”
- Final FY 2018 Spill Surcharge:
 - BPA applied the forecast Fish and Wildlife program cost reductions of \$20 million to the Spill Surcharge.
 - Actual FY 2018 program costs were \$32 million lower than rate case.
- Preliminary FY 2019 Spill Surcharge: The calculated cost of additional spill will be offset through Fish and Wildlife program reductions in FY 2019 compared to those assumed for setting BP-18 rates.

Cost Reduction (cont'd)

- Savings includes cost management actions within contracts (e.g., restrictions on travel, training and discretionary spending) and reform efforts within Research, Monitoring, and Evaluation (RME) programs that occurred in FY 2018 and carry forward.
- BPA is not proposing further program or project cuts in FY2019. Reductions are occurring through efficiencies and reduced contract budgets that have already been agreed upon.