

INDEX

TESTIMONY OF

ALEXANDER LENNOX, STEPHANIE A. ADAMS, MIRANDA E. GESTRIN,
WILLIAM W. HENDRICKS, ANNA-LISA MILLER, AND LEON D. NGUYEN

Witnesses for Bonneville Power Administration

SUBJECT: REVENUE REQUIREMENTS	Page
Section 1: Introduction and Purpose of Testimony	1
Section 2: Repayment Study.....	2
Section 3: Revenue Requirements.....	9
Section 4: Transmission-Specific Issues	16
Section 5: Power-Specific Issues.....	16
Section 6: Additional Modifications and Adjustments.....	23

This page intentionally left blank.

1 TESTIMONY OF

2 ALEXANDER LENNOX, STEPHANIE A. ADAMS, MIRANDA E. GESTRIN,
3 WILLIAM W. HENDRICKS, ANNA-LISA MILLER, AND LEON D. NGUYEN

4 Witnesses for Bonneville Power Administration

5
6 **SUBJECT: REVENUE REQUIREMENTS**

7 **Section 1: Introduction and Purpose of Testimony**

8 *Q. Please state your names and qualifications.*

9 A. My name is Alexander Lennox, and my qualifications are contained in BP-18-Q-BPA-22.

10 A. My name is Stephanie A. Adams, and my qualifications are contained in BP-18-Q-
11 BPA-01.

12 A. My name is Miranda E. Gestrin, and my qualifications are contained in BP-18-Q-
13 BPA-12.

14 A. My name is William W. Hendricks, and my qualifications are contained in BP-18-Q-
15 BPA-16.

16 A. My name is Anna-Lisa Miller, and my qualifications are contained in BP-18-Q-BPA-28.

17 A. My name is Leon D. Nguyen, and my qualifications are contained in BP-18-Q-BPA-44.

18 *Q. Please state the purpose of your testimony.*

19 A. The purpose of this testimony is to explain and support the development of the generation
20 and transmission revenue requirements for fiscal years (FY) 2018 and 2019 (the rate
21 period). This testimony sponsors the Power Revenue Requirement Study, BP-18-E-

1 BPA-02, and Documentation, BP-18-E-BPA-02A, and the Transmission Revenue
2 Requirement Study, BP-18-E-BPA-09, and Documentation, BP-18-E-BPA-09A.

3
4 **Section 2: Repayment Study**

5 *Q. Have there been any changes to the repayment study model?*

6 A. No.

7 *Q. How did you determine total repayment for Power Services?*

8 A. As in the last two rate proceedings, we established a minimum level of repayment that is
9 equal to the total non-cash elements (that is, depreciation, the capitalization adjustment,
10 and non-cash revenues) forecast for that period. When running the study, the repayment
11 model operator allows the model to determine the annual repayment amounts. If any
12 amount is below the minimum, the repayment operator will have the model set a higher
13 level equal to the minimum. *See* section 5, below, for a discussion of how two repayment
14 studies were conducted to determine the overall Power revenue requirement.

15 *Q. Why do you establish a minimum level of repayment?*

16 A. We set a minimum repayment threshold because it ensures that the expected cash
17 generated by the revenue requirement is dedicated to the repayment of the Federal
18 investment. The purpose of the repayment study is to annually establish a long-term plan
19 for repayment that satisfies the statutory requirement for repayment of the Federal
20 investment. The repayment study meets the statutory requirement for timely repayment
21 of the Federal investment by producing total debt service (*i.e.*, the sum of Federal and
22 non-Federal principal and interest) that is level (the same all years) for a given study year

1 and for the term of Power Services' ensuing 50-year repayment period. This is referred
2 to as levelizing debt service over the repayment period.

3 When non-Federal debt payments are very high, the repayment model will reduce
4 Federal repayment to a very low level. This would produce a level debt service stream,
5 but would also generate positive cash flow for BPA. While positive cash flow is not
6 necessarily undesirable, it would come from all BPA power customers, including Slice
7 customers. BPA's financial reserves would grow due to this Anticipated Accumulation
8 of Cash (AAC), which would generate interest income that would benefit only Non-Slice
9 customers. Slice customers would not benefit from the higher reserves balance because
10 they receive interest income based on a fixed level of reserves, which would not be
11 changed by the AAC. Matching Federal repayment to the sum of the non-cash elements
12 avoids the AAC and the resulting inequities. The result is that the forecast of net cash
13 flow in the rate period is zero, as is the calculation of Minimum Required Net Revenues
14 (MRNR). If MRNR is greater than zero, it means that the scheduled repayment is higher
15 than the minimum levels.

16 *Q. Was Power repayment set at the minimum level for the FY 2018–2019 rate period?*

17 *A.* Yes, but this occurred only for FY 2018. The repayment level for FY 2019 is \$68 million
18 higher than the minimum level.

19 *Q. Was this technique used in the Transmission repayment study too?*

20 *A.* Yes. While minimum repayment levels were identified for Transmission, the repayment
21 modeling results were not affected. The model scheduled Transmission repayment levels
22 that were higher than the minimum requirements. This is evident when looking at the

1 BPA-02, and Documentation, BP-18-E-BPA-02A, and the Transmission Revenue
2 Requirement Study, BP-18-E-BPA-09, and Documentation, BP-18-E-BPA-09A.

3
4 **Section 2: Repayment Study**

5 *Q. Have there been any changes to the repayment study model?*

6 A. No.

7 *Q. How did you determine total repayment for Power Services?*

8 A. As in the last two rate proceedings, we established a minimum level of repayment that is
9 equal to the total non-cash elements (that is, depreciation, the capitalization adjustment,
10 and non-cash revenues) forecast for that period. When running the study, the repayment
11 model operator allows the model to determine the annual repayment amounts. If any
12 amount is below the minimum, the repayment operator will have the model set a higher
13 level equal to the minimum. *See* section 5, below, for a discussion of how two repayment
14 studies were conducted to determine the overall Power revenue requirement.

15 *Q. Why do you establish a minimum level of repayment?*

16 A. We set a minimum repayment threshold because it ensures that the expected cash
17 generated by the revenue requirement is dedicated to the repayment of the Federal
18 investment. The purpose of the repayment study is to annually establish a long-term plan
19 for repayment that satisfies the statutory requirement for repayment of the Federal
20 investment. The repayment study meets the statutory requirement for timely repayment
21 of the Federal investment by producing total debt service (*i.e.*, the sum of Federal and
22 non-Federal principal and interest) that is level (the same all years) for a given study year

1 and for the term of Power Services' ensuing 50-year repayment period. This is referred
2 to as levelizing debt service over the repayment period.

3 When non-Federal debt payments are very high, the repayment model will reduce
4 Federal repayment to a very low level. This would produce a level debt service stream,
5 but would also generate positive cash flow for BPA. While positive cash flow is not
6 necessarily undesirable, it would come from all BPA power customers, including Slice
7 customers. BPA's financial reserves would grow due to this Anticipated Accumulation
8 of Cash (AAC), which would generate interest income that would benefit only Non-Slice
9 customers. Slice customers would not benefit from the higher reserves balance because
10 they receive interest income based on a fixed level of reserves, which would not be
11 changed by the AAC. Matching Federal repayment to the sum of the non-cash elements
12 avoids the AAC and the resulting inequities. The result is that the forecast of net cash
13 flow in the rate period is zero, as is the calculation of Minimum Required Net Revenues
14 (MRNR). If MRNR is greater than zero, it means that the scheduled repayment is higher
15 than the minimum levels.

16 *Q. Was Power repayment set at the minimum level for the FY 2018–2019 rate period?*

17 A. Yes, but this occurred only for FY 2018. The repayment level for FY 2019 is \$68 million
18 higher than the minimum level.

19 *Q. Was this technique used in the Transmission repayment study too?*

20 A. Yes. While minimum repayment levels were identified for Transmission, the repayment
21 modeling results were not affected. The model scheduled Transmission repayment levels
22 that were higher than the minimum requirements. This is evident when looking at the

1 Transmission income statement, which shows MRNR of \$34.7 million in FY 2018 and
2 \$28.1 million in FY 2019. Transmission Revenue Requirement Study Documentation,
3 BP-18-E-BPA-09A, Table 1-1. MRNR is added only when the cash obligations (*e.g.*,
4 debt repayment) exceed the sum of the non-cash elements of the revenue requirement.
5 Transmission Revenue Requirement Study, BP-18-E-BPA-09, at 18.

6 *Q. Have there been changes to assumptions used in the repayment model?*

7 A. Yes. There have been changes to assumptions about:

- 8 1. When projected debt will be issued;
- 9 2. The maturities of projected debt; and
- 10 3. The assumed sources of funds for capital investments.

11 *Q. How has the first assumption, when projected debt will be issued, been revised?*

12 A. Rather than assuming that debt will be issued periodically during the year, we assume
13 that all Federal debt will be issued in the last quarter of the fiscal year. This approach is
14 consistent with BPA's operational expectations.

15 *Q. Why do you assume debt will be issued in this manner?*

16 A. We are reflecting BPA's evolving practice for issuing debt in light of changes in how
17 BPA earns interest income on financial reserves, particularly the phasing out of the
18 Interest Offset Credit (IOC) as of the end of FY 2016. With the loss of the IOC, BPA
19 intends to delay actual borrowing as long as possible to minimize interest expense. We
20 mirror this practice in the repayment model.

1 Q. *How has the second assumption, when projected debt matures, changed?*

2 A. This is an iterative process in rate case repayment studies. Staff first conducts a
3 repayment study that assumes projected investments are issued at the maximum
4 allowable terms and no historical debt is refinanced. We then review the results of the
5 first year studied to identify “critical years,” which are years without any discretionary
6 debt repayment. Critical years are important because they determine the lowest level of
7 repayment possible given the assumptions of the study. If the critical year is driven by
8 historical debt, some debt due in that year will be targeted for refinancing and “rolled” to
9 a later maturity. If the critical year is driven by projected debt, the due dates of some
10 projected debt will be changed so the due dates are in years where discretionary payments
11 are made. When modifying the due dates of projected investments, the first issuance is
12 placed in the first year in which any projected debt is selected for early repayment. The
13 remaining debt is placed after that year based on the amount of discretionary payments
14 made in each year.

15 After the modifications are made, Staff re-runs the repayment study and repeats
16 the evaluation process, looking for critical years and attempting to eliminate them by
17 refinancing historical bonds or altering due dates on projected investments. This cycle
18 continues until critical years no longer appear, are not moveable, or appear only at the
19 end of the repayment period when they become unavoidable.

20 Once this review process is completed for the first study year, Staff reviews the
21 next year being studied and conducts the same analysis. This continues until all of the

1 years being studied have been reviewed. In the context of the BP-18 rate proceeding,
2 this process was performed for FY 2018 and FY 2019 results.

3 *Q. How has the third assumption about the sources of funds for projected capital*
4 *investments changed?*

5 A. This change affects only Transmission. The Transmission repayment modeling now
6 assumes that half of the projected transmission construction capital investments in the
7 rate period are financed through the lease-purchase program. Previously, we assumed
8 that all projected transmission construction capital investment would be financed with
9 Treasury debt.

10 *Q. What is the lease-purchase program?*

11 A. The lease-purchase program involves the use of capital leases as a means to finance
12 capital investments. BPA has pursued the use of leases as a way to extend access to
13 Treasury borrowing authority. A third party issues debt, either short-term lines of credit
14 (LOC) or long-term bonds that are backed by payments from BPA. The third party owns
15 the assets, but BPA has operational control. At the end of the lease, BPA can purchase
16 the assets for a minimal fee, hence the name lease-purchase program. The lease-purchase
17 program has become an important means for financing the Transmission capital program,
18 accounting for about half of recent investments.

19 *Q. Why did you change the assumption regarding the sources of funds for projected capital*
20 *investments?*

21 A. We are changing this repayment study modeling assumption to reflect BPA's practice of
22 financing Transmission capital investments, which accounts for about half of recent

1 investments. By assuming the use of the lease-purchase program to finance projected
2 investment, the rate period forecast of interest provides a better representation of actual
3 operating year results with the added benefit of a lower forecast of interest expense.

4 *Q. How are projected lease-purchase investments modeled?*

5 A. Lease-purchase investments are assumed to be financed in two phases. Projected lease-
6 purchase investments are modeled in the same way as they are actually completed. The
7 first phase is the use of an LOC that has a seven-year life, and the second phase is a long-
8 term bond. The interest rate on the LOC is fixed, based on the London Interbank Offered
9 Rate (LIBOR) index interest rates from the official agency interest rate forecast. *See*
10 *Transmission Revenue Requirement Study Documentation, BP-18-E-BPA-09A, § 8.2.*
11 A 60 basis point spread is added to the LOC rate, which is based on the average of the
12 spreads for existing lines of credit. When an LOC reaches its seven-year maturity, it is
13 refinanced with a long-term bond with maximum maturity of 23 years. The interest rates
14 are selected from the non-Federal taxable interest rate forecast of the official interest rate
15 forecast. *Id.* The maturities of the projected long-term bonds vary and are consistent
16 with BPA's debt management practice, which is to have \$100 million of lease-purchase
17 principal due every year starting in FY 2020.

18 *Q. What is the overall effect of the proposed changes to assumptions about issuance dates,*
19 *maturities, and sources of funding?*

20 A. All three will work together to reduce interest expense on projected investments, which
21 should minimize the magnitude of any variances between rate case forecasts and actual
22 results. There will still be differences in the amounts borrowed, interest rates, and timing.

1 However, by further aligning the projected investment interest with financing operations,
2 the differences in interest will be minimized, thereby reducing the variance between total
3 forecasted interest expense and actual results. In this way, BPA more closely aligns its
4 modeling with actual, rather than projected, results and in the process achieves some
5 degree of cost mitigation in its rates.

6 *Q. Has the modeling of Transmission replacements changed since the BP-16 rate*
7 *proceeding?*

8 A. Yes. Transmission replacements now include plant retirements in the calculation of total
9 outstanding net plant. For each year, the annual retirements are subtracted from the
10 annual additions to enable the calculation of outstanding net plant.

11 *Q. What is the purpose of the replacements forecast in repayment modeling?*

12 A. The repayment model studies a single year plus the following allowable repayment
13 period to produce level total debt service over the entire repayment period. In the
14 repayment demonstration and cost recovery demonstration made to the Federal Energy
15 Regulatory Commission (Commission), the revenues generated in the rate period must be
16 sufficient to recover all costs including debt service in the rate period and in the
17 allowable repayment period. Replacements represent investments made over the
18 repayment period to ensure that the revenue generating capability of the generation or
19 transmission system is kept stable in that period.

20 *Q. Why was this change made?*

21 A. Retired facilities have been either replaced with new facilities or shut down without
22 replacement. If the facilities have been replaced, the replacements forecast should be

1 based on the value of existing plant instead of both the original plant and its replacement.

2 If the facilities have been shut down, there is no need to replace the facilities because

3 they are no longer associated with activities related to revenue generation.

4 *Q. Is the repayment model available for parties to use?*

5 A. No. The repayment model is not a single computer program that can be installed on a
6 personal computer. It is a collection of databases and programs operating in different
7 languages and environments on several servers.

8 *Q. Since the model is not available to the parties, will BPA conduct repayment studies on
9 behalf of the parties?*

10 A. Yes. BPA Staff will conduct a limited number of studies for parties. If there is interest, a
11 noticed meeting will be held so Staff and the parties can discuss and identify scenarios
12 for additional analysis.

13
14 **Section 3: Revenue Requirements**

15 *Q. Have you made any changes to the way BPA determines revenue requirements?*

16 A. No. We are using the same methodology as in the BP-16 rate proceeding. The basis for
17 the revenue requirements is the total accrued expenses projected for each year of the rate
18 period, displayed in an income statement. In addition, a cash flow statement is used to
19 determine whether additional net revenues are required to cover the amortization
20 payments scheduled by the repayment study and the cash required for risk mitigation.
21 *See Power Revenue Requirement Study, BP-18-E-BPA-02, § 1.1, and Transmission
22 Revenue Requirement Study, BP-18-E-BPA-09, § 1.1.*

1 Q. *How did BPA develop the forecast of program spending levels and capital investments*
2 *used in the power and transmission revenue requirements?*

3 A. The program spending levels that are used in the power and transmission revenue
4 requirements were developed during the 2016 Integrated Program Review and Capital
5 Investment Review (IPR/CIR). In May and June 2016, BPA conducted the IPR/CIR with
6 BPA customers and constituents to examine and take comments on BPA's proposed
7 expense and capital cost projections for the rate period. BPA issued a close-out report for
8 the IPR on October 12, 2016, which identified expense and capital cost projections to be
9 used in the Initial Proposal. *See* Power Revenue Requirement Study, BP-18-E-BPA-02,
10 § 2.1, and Transmission Revenue Requirement Study, BP-18-E-BPA-09, § 2.1.

11 Q. *Has BPA's forecast of program spending levels changed since the IPR/CIR close-out*
12 *report?*

13 A. Yes. Some program spending level forecasts have changed as a result of modeling in the
14 rate case. The IPR/CIR process included some preliminary forecasts of costs that are
15 modeled in the rate case and as such would be updated for the Initial Proposal. For
16 Power Services, program spending modeled in the rate case includes contracted power
17 purchases, augmentation power purchases, and transmission acquisition and ancillary
18 services. Spending levels for Transmission Services have changed to reflect the proposed
19 BP-18 Generation Inputs and Transmission Ancillary and Control Area Services
20 Rates Settlement Agreement. *See* Fredrickson & Fisher, BP-18-E-BPA-18, Appendix A.

1 Q. *Have you made changes to how depreciation is forecast?*

2 A. The methodologies remain the same, but we have updated the depreciation forecast for
3 actual results through FY 2015. These updates include total investments by project or
4 FERC account and plant retirements. The updates also include a new plant in service
5 forecast.

6 Q. *Are non-Federal payment obligations incorporated in the BP-18 Initial Proposal?*

7 A. Yes. Both the Power and Transmission Revenue Requirement Studies include
8 non-Federal obligations. Both studies include all transactions completed through July 31,
9 2016. As in previous rate proposals, the Power Revenue Requirement Study includes
10 capitalized contracts for certain non-Federal power projects from which BPA has
11 acquired the output (*e.g.*, Columbia Generating Station) and the prepay program, under
12 which customers may prepay power bills by purchasing blocks of revenue credits that are
13 applied to billings through FY 2028, when the current Regional Dialogue contracts
14 expire. Power Revenue Requirement Study Documentation, BP-18-E-BPA-02A,
15 Tables 8A and 3G. Both of these obligations are being treated in the same manner as in
16 prior rate proceedings.

17 Q. *What non-Federal payment obligations are incorporated in the Transmission Revenue
18 Requirement Study?*

19 A. The Transmission Revenue Requirement Study includes three financial obligations to
20 non-Federal funding sources that benefit the transmission system during the rate period
21 and beyond. First, the study reflects obligations for annual payments associated with
22 third-party lease-purchase arrangements for long-term capitalized transmission asset

1 purchases. *See* Transmission Revenue Requirement Study, BP-18-E-BPA-09, § 2.2.4.
2 Second, as part of the Debt Service Reassignment program, the functionalization to (*i.e.*,
3 assigned to) transmission of a portion of refinanced Energy Northwest (EN) non-Federal
4 bond debt service obligations under BPA’s Debt Optimization Program reflects
5 transactions through the conclusion of the Debt Optimization Program in FY 2009. *Id.*
6 Third, this rate proposal includes non-cash revenues and expenses associated with
7 transmission credits for (1) customer-financed Network Upgrades under the large and
8 small generator interconnection provisions of BPA’s Open Access Transmission Tariff,
9 and (2) the customer-financed upgrade of the California-Oregon Intertie (COI). These
10 non-cash revenues and expenses are described in Transmission Revenue Requirement
11 Study section 2.2.5. The forecast of the credits is developed in the Transmission Rates
12 Study. *See* Transmission Rates Study and Documentation, BP-18-E-BPA-08,
13 Tables 16.1 and 16.2. All of these obligations are treated in the same manner as in the
14 BP-16 rate proceeding.

15 *Q. Have there been other changes related to the revenue requirement?*

16 A. Yes. For both the Power Revenue Requirement Study and the Transmission Revenue
17 Requirement Study, the revised revenue test was adjusted to ensure the demonstration of
18 annual cost recovery in the rate period. For both business units, cash flows for one year
19 were negative and cash flow for the two-year rate period was positive. This is a common
20 condition in a two-year rate period when revenues are relatively flat and stable while
21 expenses and cash requirements vary from one year to the next. For Power, costs in the
22 first year are significantly higher than in the second. The opposite is true for

1 Transmission. In the past, we addressed these situations by either shifting Federal
2 amortization payments between years or setting aside cash in the first year and applying it
3 to the second year. *See, e.g.*, BP-16 Power Revenue Requirement Study, BP-16-FS-
4 BPA-02, Table 10; BP-16 Transmission Revenue Requirement Study, BP-16-FS-
5 BPA-08, Table 9, line 12.

6 *Q. Please describe the revised revenue test for Transmission.*

7 A. For Transmission, cash requirements in the second year, FY 2019, were greater than the
8 cash flows from revenues. We reshaped the cash flow between the two years by holding
9 \$4.5 million in reserves in the first year to address the under-recovery in the second year
10 without changing the forecast cash flow for the two-year rate period. An adjustment has
11 been made in the Statement of Cash Flows to illustrate the change. *See* Transmission
12 Revenue Requirement Study, BP-18-E-BPA-09, Table 9.

13 *Q. Please describe the revised revenue test for Power.*

14 A. For Power, net cash flows in the first year, FY 2018, are forecast to be negative. To
15 address this, the repayment of Power's Federal debt was adjusted by shifting
16 \$49.5 million from FY 2018 to FY 2019. Total repayment during the rate period remains
17 the same. After the repayment shift, cash flow needed to be rebalanced again because
18 forecast cash flow for FY 2018 was slightly positive while that for FY 2019 was slightly
19 negative. As a result, \$600,000 was set aside in FY 2018 and applied against scheduled
20 Federal debt payments in FY 2019. *See* Power Revenue Requirement Study, BP-18-E-
21 BPA-02, Table 6.

1 Q. Does the shifting of Power repayment create an AAC with Slice customers contributing to
2 Power reserves?

3 A. No. The Regional Cooperation Debt (RCD) transaction that is anticipated for FY 2018
4 and the Slice True-Up (Power GRSP II.R) will prevent this from occurring.

5 Q. How will the Slice True-Up in FY 2018 differ from what appears in this rate proceeding?

6 A. The fundamental difference is that there is a high likelihood that an RCD transaction will
7 occur in FY 2018. The changes to EN debt service, interest expense, and MRNR that are
8 combined in the RCD Effect will be disaggregated and appear as changes to the
9 respective costs. The RCD transaction will result in a reduction in EN debt service that
10 reflects the refinancing of EN debt coming due, as well as a corresponding increase in
11 MRNR that reflects the advanced Federal repayment added to that scheduled in the
12 revised revenue test. The shifting of repayment from FY 2018 to FY 2019 in the revised
13 revenue test repayment amount will result in a matching reduction in MRNR in the Slice
14 True-Up.

15 Q. Can you illustrate how this works?

16 A. Yes. The RCD Effect calculation includes an estimate of MRNR after the completion of
17 the FY 2018 RCD transaction. Assuming that a transaction does occur in FY 2018, this
18 estimate is a reasonable proxy of MRNR that would be calculated in the Slice True-Up
19 before repayment was shifted in the revised revenue test. In FY 2018, MRNR in the
20 RCD Effect calculation was \$479 million. Power Revenue Requirement Study
21 Documentation, BP-18-E-BPA-02A, Table 3H. This level of MRNR uses the pre-shift
22 repayment schedule as the starting point of the calculation. By shifting amortization from

1 FY 2018 to FY 2019, the starting point for the Slice True-Up FY 2018 MRNR
2 calculation will be \$49.5 million lower. This will reduce MRNR by a corresponding
3 amount in that year to about \$429.5 million, which will reduce costs to Slice customers.

4 *Q. Will this shifting of amortization have broader effects on the Slice True-Up?*

5 *A.* Yes. The amortization shift should smooth the impact of the Slice True-Up in FYs 2018
6 and 2019. It is not unusual for one year of a rate period to produce a credit and the other
7 to produce a charge to Slice customers. In this case, the large negative net revenues and
8 cash flows in FY 2018 suggest that a large charge would be due in that year. The
9 significant positive net revenues and cash flows in FY 2019 suggest that a large credit
10 would be due then. *See* Power Revenue Requirement Study Documentation, BP-18-E-
11 BPA-02, Tables 3 and 4. Shifting amortization should mitigate the large swings that
12 might otherwise be expected in the Slice True-Up. As noted above, reducing
13 amortization in FY 2018 will reduce the Slice True-Up MRNR, creating the space to
14 absorb the negative net revenues. Increasing amortization in FY 2019 should absorb the
15 positive net revenues and cash flow expected in that year, reducing the credit that might
16 otherwise be expected. On a forecast basis, the Slice True-Ups in the rate period should
17 be closer to zero than would otherwise be expected, resulting in more stable effective
18 Slice rates.

1 **Section 4: Transmission-Specific Issues**

2 *Q. Does the Transmission Revenue Requirement Study include any uses of financial*
3 *reserves?*

4 A. Yes. As in the last six rate proceedings, the transmission revenue requirement for the rate
5 period reflects the assumption that BPA will use \$15 million per year of transmission
6 cash reserves as a funding source for transmission capital investment instead of Treasury
7 borrowing. Transmission Revenue Requirement Study, BP-18-E-BPA-09, § 2.2.3.

8 *Q. How is the proposed use of cash reserves reflected in the revenue requirement for the*
9 *rate period?*

10 A. In the statement of cash flows, the projected Treasury borrowing is \$15 million less than
11 the cash used for capital investments each year. The revenue requirement is generally
12 unaffected because a drawdown of cash reserves is included as a source of funds in cash
13 from current operations to cover that difference. *Id.* Table 4. However, interest income
14 is reduced as a direct result of the decrease in available cash reserves during the rate
15 period. *See* Transmission Revenue Requirement Study Documentation, BP-18-E-
16 BPA-09A, Ch. 5.

17
18 **Section 5: Power-Specific Issues**

19 *Q. What is included in the Other Income, Expense and Adjustments line of the Power income*
20 *statement?*

21 A. There are four components of the Other Income, Expense and Adjustments line of the
22 Power income statement. Power Revenue Requirement Study, BP-18-E-BPA-02,

1 Table 3; Power Revenue Requirement Study Documentation, BP-18-E-BPA-02A,
2 Table 3K. These components are:

- 3 1. IPR undistributed reduction
- 4 2. Expense Offset
- 5 3. RCD Effect
- 6 4. RCD Offset

7 *Q. Can you describe the first component, the IPR undistributed reduction?*

8 A. The undistributed reduction was included in the IPR/CIR closeout report, page 8. It is an
9 offset to expense. The October 2016 Integrated Program Review and Capital Investment
10 Review Close-out Report may be viewed at

11 [https://www.bpa.gov/Finance/FinancialPublicProcesses/IPR/2016IPRDocuments/2016-
12 IPR-CIR-Close-Out-Report.pdf](https://www.bpa.gov/Finance/FinancialPublicProcesses/IPR/2016IPRDocuments/2016-
12 IPR-CIR-Close-Out-Report.pdf)

13 *Q. Can you describe the second component, the Expense Offset?*

14 A. The Expense Offset is a means to mitigate the impact of moving the Energy Efficiency
15 investment program from capital to a current year expense, as decided in the 2015 IPR2
16 process held concurrent with the BP-16 rate proceeding. To produce the offset, some EN
17 debt is being refinanced and extended when it matures. The cash flows from rates
18 intended to repay this debt are then freed up to offset the higher cost of expensing the
19 Energy Efficiency investment program. As in the BP-16 rates, Lennox *et al.*, BP-16-E-
20 BPA-37, at 2, this cash is included in the income statement as a reduction to expense.

1 Q. *Can you describe the third component, the RCD Effect?*

2 A. The RCD Effect reflects the impact of certain EN debt refinancings that may occur in the
3 future. *See* Power Revenue Requirement Study, BP-18-E-BPA-02, at 23.

4 Q. *Please describe these refinancings.*

5 A. EN and BPA are considering future refinancings of EN debt as it comes due. The
6 refinancings allow BPA to use cash flows freed up by the refinancings to repay a like
7 amount of higher interest rate Federal appropriations and bonds. This practice is forecast
8 to generate significant interest rate savings over time. Because the intent of the
9 refinancings is to produce regional benefits, EN debt is now referred to as Regional
10 Cooperation Debt.

11 Q. *How have these refinancings been incorporated in the Power Revenue Requirement
12 Study?*

13 A. We included an adjustment to total Power expenses reflecting the estimated effect of the
14 RCD transactions through FY 2019. This adjustment is called the RCD Effect. *See*
15 Power Revenue Requirement Study Documentation, BP-18-E-BPA-02A, Table 3K.

16 Q. *How has the RCD Effect been calculated?*

17 A. To estimate the RCD Effect, we conducted two repayment studies. The first study, which
18 is used in the income statement and statement of cash flows, does not assume any
19 forecast of EN debt refinancing for FY 2018 and beyond, but it does establish the
20 baseline for capital-related costs in the FY 2018–2019 rate period. The second study
21 assumes that EN debt is refinanced and extended as it comes due. The cash flows freed
22 up because of refinancing EN debt are then used to retire Federal debt obligations (*e.g.*,

1 Federal bonds and appropriations). The costs associated with the second study are
2 calculated and compared to those of the first study to determine the net effect in each year
3 of the refinancings. *See* Power Revenue Requirement Study Documentation, BP-18-E-
4 BPA-02A, Table 3H. The effects of the transactions are then applied as an adjustment to
5 the Power income statement. *Id.*, Table 3K.

6 *Q. With respect to refinancing adjustments, why has the Power Revenue Requirement Study*
7 *been conducted in the manner that uses two studies?*

8 A. BPA can propose refinancings but does not control whether the EN debt refinancing
9 transactions will occur. Although the EN Board agrees with the refinancing concept, it
10 intends to consider and approve or disapprove each annual transaction individually. In
11 addition, there may be circumstances in which EN is unable to refinance the debt if it is
12 unable to access the bond market or if other unknown circumstances would make it
13 financially imprudent for EN to refinance the debt. If Staff assumed in the base case the
14 refinancing would occur but it did not, BPA would be faced with a larger scheduled
15 Treasury payment than would otherwise be anticipated, but without the means to make
16 the payment. The proposed approach avoids the risks presented by assuming the
17 refinancings will occur.

18 *Q. Will this modeling approach result in any change for the Final Proposal?*

19 A. Yes. The RCD program has evolved since the completion of the BP-16 rate proceeding.
20 The repayment of Federal obligations has been accelerated by EN using an LOC to pay
21 for its O&M and at least some of its interest expenses. This development reduces BPA's
22 cash requirements and frees up cash flows from BPA revenues, which can then be used to

1 pay Federal obligations. The LOC is repaid by cash flows freed up by the EN debt
2 refinancing in the following year.

3 *Q. Will the use of lines of credit affect the calculation of the RCD Effect in the Final*
4 *Proposal?*

5 A. Yes. It will be necessary to modify the process for calculating the RCD Effect in the
6 Final Proposal. In FY 2017, EN will be using an LOC that is not currently forecast in the
7 Initial Proposal. The repayment of the LOC will be in FY 2018, the first year of the rate
8 period. The LOC will be repaid with funds freed up by an RCD refinancing that will
9 need to be included in the repayment study. Unlike for the Initial Proposal, the first
10 repayment study used to calculate the RCD Effect will need to include a forecast of an
11 RCD refinancing. If we do not include a forecast of this transaction, rates would have to
12 increase because there would be no source of cash to repay the LOC. The second study
13 used in calculating the RCD Effect will include only that portion of the FY 2018 RCD
14 refinancing that is not associated with the repayment of the LOC.

15 *Q. Please describe the RCD Offset, the fourth component of the Other Income, etc., line of*
16 *the Power income statement.*

17 A. The RCD Offset is a result of timing differences between the RCD refinancings and the
18 Federal repayments due to the different fiscal years used by EN and BPA. The RCD
19 Offset captures the difference between fiscal years to ensure that repayment of the
20 Federal obligations matches the size of the RCD refinancing.

1 Q. *Please provide an example of the fiscal year conversion.*

2 A. EN's fiscal year 2015 ran from July 1, 2014, through July 30, 2015. In that year, EN
3 completed an RCD transaction for \$229.8 million. As a result, at the end of Federal
4 FY 2015 (October 1, 2014, through September 30, 2015), BPA paid down \$229.8 million
5 of Federal appropriations. The differing fiscal years adds complexity to determining the
6 effect on BPA's income statement. Converting EN's debt service from EN's fiscal year
7 to the Federal fiscal year requires splitting it across two Federal fiscal years. Only the
8 last three-quarters of EN's FY 2015 appear in BPA's FY 2015. The first one-quarter of
9 EN's FY 2015 RCD transaction overlaps BPA's FY 2014, so it is added to the EN debt
10 service for BPA's FY 2014. BPA's FY 2015 EN debt service is completed by adding
11 one-quarter of the debt service from EN's FY 2016.

12 As a result, the refinancing of EN bonds has a financial impact on expenses that
13 differs from the amount of the Federal obligation repayment. Although \$229.8 million of
14 EN bonds were refinanced and an equal amount of Federal debt repaid in BPA's
15 FY 2015, the fiscal year conversion produces a \$268.4 million reduction on BPA's
16 FY 2015 income statement. Since the reduction in expenses was larger than the increase
17 in repayment, reserves attributed to Power would have increased, assuming all else was
18 equal.

19 Q. *What was the cumulative effect?*

20 A. When this conversion process was applied to the transactions that occurred in BPA's
21 FY 2014 and FY 2015 (after rates had been set for this period), the total reduction in EN
22 debt service was about \$96 million larger across the two years than the increase in

1 Federal payments. Of this amount, Slice customers received about \$26 million in credits
2 through the annual Slice True-Up. Non-Slice customers, on the other hand, paid rates
3 based on the original, higher debt service schedule, which did not include the EN debt
4 service reduction. As a result, non-Slice customers contributed approximately
5 \$70 million to reserves.

6 *Q. Why is the RCD Offset applied in FY 2018?*

7 A. BPA pledged that every dollar freed up by the RCD refinancings would be used to repay
8 Federal obligations. The \$70 million collected from Non-Slice customers in FY 2014–
9 2015 comprise funds freed up by the refinancings. For that reason, these funds should be
10 used to offset higher Federal payments. These funds will be applied in FY 2018 when
11 the fiscal year conversion results in Federal debt payments that are greater than the
12 reduction in EN debt service. This can be seen in the calculation of the RCD Effect for
13 FY 2018, which shows a reduction of EN debt service of \$394 million while MRNR
14 increases by \$479 million because of higher Federal repayment. Power Revenue
15 Requirement Documentation, BP-18-E-BPA-02A, Table 3H.

16 *Q. Have there been changes to the format of the Power revenue requirement Statement of*
17 *Cash Flows?*

18 A. Yes. Two new lines, Non-Cash Expenses and Repayment of Non-Federal Obligations,
19 were added to the Statement of Cash Flows. Power Revenue Requirement Study, BP-18-
20 E-BPA-02, Table 4.

1 *Q. Why are these lines necessary?*

2 A. The use of an LOC changes the nature of EN's expenses. BPA will record in its actual
3 operating expenses the actual O&M and interest expenses of EN. Similarly, BPA will
4 include EN's expected expenses in the FY 2018–2019 rate period. The use of the LOC
5 will not reduce the O&M and interest expenses that BPA will record for EN. The LOC is
6 EN's source of cash for these expenses instead of revenues from BPA rates, thus
7 converting EN's O&M and interest costs into a non-cash expense for BPA. This result
8 affects the calculation of MRNR, which analyzes cash flows to ensure that revenues from
9 rates will be sufficient to make BPA's scheduled annual Treasury payments. To clearly
10 reflect the change of EN's O&M and interest costs into non-cash expenses, a new line has
11 been added for Non-Cash Expenses.

12 In addition, the repayment of the LOC will not be treated as the repayment of EN
13 debt, which is recorded on the Income Statement. Instead, it will be a cash obligation,
14 similar to Federal debt repayment. This means that a new line, Repayment of Non-
15 Federal Obligations, is necessary to ensure that the repayment of the LOC is included in
16 the revenue requirement.

17
18 **Section 6: Additional Modifications and Adjustments**

19 *Q. Could there be changes affecting the revenue requirement studies in the BP-18 Final*
20 *Proposal?*

21 A. Yes. At a minimum, we will update the repayment studies for:

- 22 1. any debt management actions, such as refinancings, debt issuances, and debt
23 repayment, completed prior to the Final Proposal;
- 24 2. revisions to BPA's borrowing plan for each business function;
- 25 3. revisions to replacement assumptions;

- 1 4. any revised assumptions regarding non-Federal repayment obligations; and
- 2 5. any new official Agency interest rate forecast issued prior to the Final Proposal.

3 In addition, the revenue requirements will be updated for:

- 4 1. revised estimates for FY 2017, which could affect interest credit amounts;
- 5 2. revised estimates of the allowance for funds used during construction (AFUDC);
- 6 3. updated depreciation forecasts and retirement rates for FY 2016 results; and
- 7 4. revisions to BPA program spending forecasts for FY 2018–2019 as a result of an
- 8 IPR 2 update.

9 *Q. Does this conclude your testimony?*

10 *A. Yes.*

11
12
13
14
15
16
17
18
19
20
21
22
23
24
25