INDEX

TESTIMONY of

ALEXANDER LENNOX, STEPHANIE A. ADAMS,

WILLIAM W. HENDRICKS, AND LEON D. NGUYEN

Witnesses for Bonneville Power Administration

SUBJECT: REVENUE REQUIREMENTS **Page**

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Section 1: Introduction and Purpose of Testimony

Q. Please state your names and qualifications.

A. My name is Alexander Lennox, and my qualifications are contained in BP-16-Q-BPA-23.

A. My name is Stephanie A. Adams, and my qualifications are contained in BP-16-Q-BPA-02.

A. My name is William W. Hendricks, and my qualifications are contained in BP-16-Q-BPA-17.

A. My name is Leon D. Nguyen, and my qualifications are contained in BP-16-Q-BPA-33.

Q. Please state the purpose of your testimony.

A. The purpose of this testimony is to explain and support the development of the generation and transmission revenue requirements for fiscal years (FY) 2016 and 2017 (the rate period). This testimony sponsors the Power Revenue Requirement Study, BP-16-E-BPA-02, and Documentation, BP-16-E-BPA-02A, and the Transmission Revenue Requirement Study, BP-16-E-BPA-08, and Documentation, BP-16-E-BPA-08A.

Section 2: Revenue Requirements

Q. Have you made any changes to the way the Bonneville Power Administration (BPA) determines revenue requirements?

A. No. We are using the same methodology as in the BP-14 rate proceeding. The basis for the revenue requirements is the total accrued expenses projected for each year of the rate period, displayed in an income statement. In addition, a cash flow statement is used to determine whether additional net revenues are required to cover the amortization payments scheduled by the repayment study and the cash required for risk mitigation. *See* Power Revenue Requirement Study, BP-16-E-BPA-02, § 1.1; Transmission Revenue Requirement Study, BP-16-E-BPA-08, § 1.1.

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

A. The program spending levels that are used in the power and transmission revenue requirements were developed during the 2014 Integrated Program Review (IPR). In May and June 2014, BPA conducted the IPR with BPA customers and constituents to examine and take comments on BPA's proposed expense and capital cost projections for the rate period. BPA issued a close-out report for the IPR on October 3, 2014, which identified expense and capital cost projections to be used in the Initial Proposal. *See* Power Revenue Requirement Study, BP-16-E-BPA-02, § 2.1; Transmission Revenue Requirement Study, BP-16-E-BPA-08, § 2.1.

Q. Has BPA's forecast of program spending levels changed since the end of the IPR?

A. Yes. Some program spending levels are a result of modeling in the rate case. For Power Services, program spending modeled in the rate case includes contracted power purchases, augmentation power purchases, and transmission acquisition and ancillary services. Spending levels for Transmission Services have changed to reflect the addition of the administrative costs of managing oversupply conditions and the BP-16 Generation Inputs and Transmission Ancillary and Control Area Services Rates Partial Settlement Agreement (Partial Settlement Agreement), reached on September 25, 2014. In addition, Western Electricity Coordinating Council (WECC) and Peak Reliability (Peak) assessment costs were updated to reflect changes to billing practices and cost projections for FY 2016–2017.

Q. What changes did you make to include the administrative costs of managing oversupply conditions?

A. We included administrative costs incurred between FY 2012–2014 and costs forecast for FY 2015–2017 in the transmission revenue requirement as an operating expense within the technical operations program. The administrative costs are for using a third party (Accion) to review confidential cost submissions by generators and developing a generator dispatch curve for BPA to use when oversupply events occur. We allocated these costs to all transmission segments based on operations and maintenance (O&M) allocators. Thus, we are proposing to allocate the costs to all transmission rates. This allocation is discussed further in the Power and Transmission Rate Policy testimony. *See* Bliven and Fredrickson, BP-16-E-BPA-11, at section 3.

Q. What program spending levels changed to reflect the Partial Settlement Agreement?

A. We updated Transmission Services' acquisition and ancillary services program spending levels to reflect levels determined in the settlement agreement. Fisher and Fredrickson, BP-16-E-BPA-12, Appendix A, Attachment 3. The settlement does not affect Power Services' program spending levels.

Q. Why did you make changes to WECC and Peak assessments in the transmission revenue requirement?

A. We added WECC and Peak assessment costs in the transmission revenue requirement to accommodate changes to billing procedures. Previously, WECC and Peak assessments were directly billed to load-serving entities. Now WECC and Peak will bill BPA directly, and BPA will recover those costs in rates. This change in billing and recovery of costs is discussed further in the Transmission Rates Study and Rate Design Testimony. *See* Fredrickson *et al.*, BP-16-E-BPA-14, § 8. These costs are distinct from the WECC/Peak costs of $622,701 per year that are borne by Power Services for transfer loads and are included in the transfer budget in the power revenue requirement.

Q. How much did WECC and Peak assessment costs add to the transmission revenue requirement?

A. The additional WECC and Peak assessment costs, which are operating expenses within the engineering program, are $5.7 million in FY 2016 and $5.8 million in FY 2017.

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

A. The methodologies remain the same, but we have updated the depreciation forecast for actual results through FY 2013. These updates include total investments by project or

FERC account and plant retirements. In addition, we discovered that the transmission depreciation forecast model was using a rate at which depreciation is calculated for substation investments that did not match the last depreciation study. The correction changed the rate from 2.14 percent to 2.18 percent. This change has no net effect on the total revenue requirement because a change to depreciation results in a corresponding change in the opposite direction to Minimum Required Net Revenues (MRNR).

Q. Are non-Federal payment obligations incorporated in the rate proposal?

A. Yes. Both the Power and Transmission Revenue Requirement Studies include different forms of non-Federal obligations. Both studies include all transactions completed through the first week of August 2014. The Power Revenue Requirement Study includes two types of obligations. The first is capitalized contracts for certain non-Federal power projects from which BPA has acquired the output. The vast majority of these costs are related to the nuclear power projects for Energy Northwest. Power Revenue Requirement Study Documentation, BP-16-E-BPA-02A, Table 8A. The second type of obligation is related to the prepay program, under which customers prepay power bills by purchasing blocks of revenue credits that are applied to billings through FY 2028, when the current Regional Dialogue contracts expire. The funds generated through this program are being used for power capital investments. *Id.* at Table 3G. Both of these obligations are being treated in the same manner as in BP-14.

In addition, just as in the last six rate proceedings, the Transmission Revenue Requirement Study includes two financial obligations to non-Federal funding sources that benefit the transmission system during the rate period and beyond. First, the study reflects obligations for annual payments associated with third-party lease-purchase arrangements for long-term capitalized transmission asset purchases, such as the Schultz-Wautoma project and other Northwest Infrastructure Financing Corporation (NIFC) and Port of Morrow projects. *See* Transmission Revenue Requirement Study, BP-16-E-BPA-08, § 2.3.4. Second, as part of the Debt Service Reassignment program, the functionalization to transmission of a portion of refinanced Energy Northwest non-Federal bond debt service obligations under BPA's Debt Optimization Program reflects transactions through the conclusion of the Debt Optimization Program in FY 2009. *Id.* Both of these obligations are treated in the same manner as in past rate proceedings.

Q. Does the Transmission Revenue Requirement Study also include assumptions regarding transmission projects for which customers advance funds and are repaid through credits?

A. Yes. As in past rate proceedings, this rate proposal includes non-cash revenues and expenses associated with transmission credits for (1) customer-financed Network Upgrades under the large and small generator interconnection provisions of BPA's Open Access Transmission Tariff, and (2) the customer-financed upgrade of the California-Oregon Intertie (COI). These non-cash revenues and expenses are described in section 2.3.5 of the study. The forecast of the credits is developed in the Transmission Rates Study and is shown in Tables 16.1 and 16.2 of that study. *See* Transmission Rates Study and Documentation, BP-16-E-BPA-07, Tables 16.1 & 16.2.

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

A. Yes. For both the Power Revenue Requirement Study and the Transmission Revenue Requirement Study, there was an adjustment in the revised revenue test in the demonstration of annual rate period cost recovery. To accommodate constraints on cash requirements in the revenue requirement in FY 2017, cash flow in FY 2016 ($49 million for Power and $1 million for Transmission) was set aside for application against scheduled Federal debt payments in FY 2017. The cash flow from expected revenue in FY 2017 is lower than the cash requirement in that year. This is a common condition in a two-year rate period when revenues are relatively flat and stable while expenses and cash requirements increase from one year to the next. In the past, we addressed this problem by either shifting Federal amortization payments from the second year to the first or by explicitly setting aside cash in the first year and applying it to the second year. *See, e.g.*, Power Revenue Requirement Study, BP-12-E-BPA-02, Table 10, line 8. In this proceeding, we opted for the latter approach because it is significantly less complicated to perform and in either case the result is the same. Consequently, we have reshaped the cash flow between the two years in both studies by holding cash in reserves in the first year in the amount needed to address the under-recovery in the second year without changing the total cash flow for the rate period. An explicit adjustment has been made in the Statement of Cash Flows. *See* Power Revenue Requirement Study, BP-16-E-BPA-02, Table 10, line 8; Transmission Revenue Requirement Study, BP-16-E-BPA-08, Table 9, line 12.

Section 3: Repayment Study

Q. Have you made any changes to the repayment study model?

A. Yes. We upgraded the model to add a debt management planning capability for use in day-to-day operations, portfolio management, and long-term debt management to address access to capital concerns. For example, it provides a more flexible platform for studying new financing tools that BPA might eventually use. These capabilities are not intended for use in a rate case and, as such, do not affect the studies performed for this proceeding.

Q. Does the upgrade include any other refinements that are used in this proceeding?

A. Yes. The upgrade more accurately calculates interest expense. It also more accurately addresses the full range of call premiums that are available for BPA's outstanding debt, both Federal and non-Federal.

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

A. As in BP-14, rather than allow the repayment study to determine the level of Federal repayment in FY 2016 and 2017, we set the sum of amortization and irrigation assistance to equal the total non-cash elements (that is, depreciation, the capitalization adjustment, and non-cash revenues) forecast for that period. The study sees this requirement as a minimum level of repayment. It is free to schedule more repayment if necessary to ensure repayment of the Federal investment in the required period. This approach is akin to the original repayment methodology in which the repayment model started with a predetermined revenue level based on current rates and attempted to set repayment at that level. If necessary, the model would set repayment at a higher point which would require higher rates.

Q. Why did you establish a minimum level of repayment?

A. We set a minimum repayment threshold because it ensures that the expected cash generated by the revenue requirement is put to work for the repayment of the Federal investment. The purpose of the repayment study is to establish annually a long-term plan for repayment that satisfies the statutory requirement for ensuring "timely repayment of the Federal investment." It does this by levelizing total debt service, Federal principal and interest plus non-Federal projects' debt service, for a given study year plus Power Services' ensuing 50-year repayment period.

Under certain circumstances, the shape of non-Federal debt payments would otherwise cause the repayment model to reduce Federal repayment to a very low level. This would produce a levelized debt service stream, but it would also generate positive cash flow for BPA. While positive cash flow is not necessarily undesirable, it would come from all BPA power customers, including Slice customers. On the other hand, BPA's financial reserves would grow due to this Anticipated Accumulation of Cash (AAC), which would generate interest income that would benefit only non-Slice customers. Slice customers receive interest income based on a fixed level of reserves, which would not be changed by the AAC. Matching Federal repayment to the sum of the non-cash elements avoids the AAC and the resulting inequities. It means that the forecast of cash flow in the rate period is zero, as is the calculation of MRNR.

Section 4: Transmission-Specific Issues

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

A. Yes. As in the last six rate proceedings, the transmission revenue requirement for the rate period reflects the assumption that BPA will use $15 million per year of transmission cash reserves as a funding source for transmission capital investment instead of Treasury borrowing. Transmission Revenue Requirement Study, BP-16-E-BPA-08, § 2.3.3.

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

A. In the statement of cash flows, the projected Treasury borrowing is $15 million less than the cash used for capital investments each year. The revenue requirement is generally unaffected because a drawdown of cash reserves is included as a source of funds in cash from current operations to cover that difference. *Id.* Table 4. However, interest income is reduced as a direct result of the decrease in available cash reserves during the rate period. *See* Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A, ch. 5.

Q. Did you make any changes to the segmentation of the revenue requirement?

A. The methodology remains the same. The segmentation analysis has been updated to be consistent with the decision to change the O&M allocator for segmentation. *See* Transmission Segmentation Study and Documentation, BP-16-E-BPA-06, § 4.3.

Q. Did you make any other changes related to the transmission revenue requirement?

A. Yes, one. We identified an error in the BP-14 final proposal in the segmentation of O&M costs and are correcting it in this proceeding.

Q. Please describe the BP-14 O&M error.

A. The error concerns the allocation of O&M costs to the various transmission segments. O&M costs that are attributable to a given segment are directly assigned to that segment. *See* Transmission Revenue Requirement Study Documentation, BP-16-E-BPA-08A, ch. 2.2. Remaining O&M costs are allocated to segments based on the historical average of actual spending in each segment. *See* Transmission Segmentation Study, BP-16-E-BPA-06, Table 1. In July 2014, BPA staff discovered that the BP-14 segmented revenue requirement did not use the O&M historical averages developed for the BP-14 rate case. Instead, it used O&M averages from the BP-12 rate case.

Q. How did this error affect the BP-14 segmented revenue requirement?

A. This mistake resulted in a misallocation of costs between the segments. The Network and Eastern Intertie segments were allocated more than their correct share of O&M costs. The Generation Integration, Southern Intertie, Utility Delivery, and DSI Delivery segments were allocated less than their correct share. A comparison of the published BP-14 average annual revenue requirement for each segment to the corrected revenue requirement is shown in the table below.

<u>Differences in BP-14 Segmented Revenue Requirement (annual average)</u>

	A	B	C	D	E	F	G	H
	Total	Generation Integration	NETWORK	Southern Intertie	Eastern Intertie	Utility Delivery	DSI Delivery	SCD
1 BP-14 Published	910,410	9,655	653,431	94,088	9,920	6,281	3,384	133,651
2 BP-14 Corrected	910,410	12,159	644,177	100,050	8,883	7,145	4,345	133,651
3 Difference	0	2,504	(9,255)	5,963	(1,038)	864	962	0

Q. *Did the error result in under-recovery of total transmission costs?*

A. No. Despite the error, our forecast showed that total transmission revenues were sufficient to recover total system costs and ensure the repayment of the Federal investment. *See* BP-14 Transmission Revenue Requirement Study, BP-14-FS-BPA-08, Tables 8–10.

Q. *Does the transmission revenue requirement incorporate any changes resulting from the BP-14 O&M error?*

A. No. The adjustments are made in the Transmission Rates Study. The calculation and application of the adjustment are discussed in the Transmission Rates Study. *See* Transmission Rates Study and Documentation, BP-16-E-BPA-07, Table 1, lines 10, 21, & 32.

Section 5: Power-Specific Issues

Q. *Have there been modifications to the Power Revenue Requirement Study costs due to potential non-Federal debt management actions?*

A. Yes. The Power Revenue Requirement Study includes an assumption about potential refinancing of Energy Northwest (EN) debt.

Q. Please describe this potential transaction.

A. EN and BPA are considering future refinancings of EN debt associated with its two unfinished plants, Projects 1 and 3. EN would refinance and extend the debt associated with these projects as it comes due, and in its place BPA would repay a like amount of higher interest rate Federal appropriations. The expectation is that this would generate significant interest rate savings over time because we would be extending low interest rate EN debt in place of much higher rate appropriations.

Q. How have these adjustments been incorporated in the Power Revenue Requirement Study?

A. We included an undistributed reduction to total Power expenses scaled to match the estimated benefit of such transactions through 2018. This reduction is included, along with an undistributed program spending reduction assumed in the IPR, in the "Other Income and Expenses" line of the Power income statement. *See* Power Revenue Requirement Study, BP-16-E-BPA-02, Table 4. These transactions were discussed in detail in 2014 with interested parties at a series of public workshops. *See* *http://www.bpa.gov/Finance/FinancialPublicProcesses/Pages/Access-to-Capital.aspx*.

Q. How have these adjustments been calculated?

A. To estimate the benefit of these transactions, we ran the repayment model twice. The first study is the one documented in the Initial Proposal. While it includes the completed 2014 EN refinancing transaction, it does not assume any forecast of EN debt refinancing for FY 2015 and beyond. This establishes the baseline for capital-related costs in the FY 2016–2017 rate period. The second study assumes that EN debt is refinanced and extended as it comes due with Federal appropriations repaid in its place. The capital-related costs associated with the second study are calculated and compared to those of the Initial Proposal study to determine the cost savings. *See* Power Revenue Requirement Study Documentation, BP-16-E-BPA-02A, Table 3H. These savings are then applied as an undistributed reduction in the Power income statement. *See* Power Revenue Requirement Study, BP-16-E-BPA-02, Table 4. If the FY 2015 refinancing transaction occurs, BPA will model it for the final study. As a result, both the base study and the full refinancing study will change, and the undistributed reduction will be lower.

Q. Why has the Power Revenue Requirement Study been modified in this way?

A. BPA does not control whether the EN debt refinancing transactions will occur. While the EN Board agrees with the refinancing concept, it has not approved a multi-year refinancing program. It intends to consider and approve or disapprove each annual transaction individually. Moreover, there may be circumstances in which EN is unable to refinance the debt if it is unable to access the bond market. There may also be circumstances in which it would no longer be financially prudent to refinance the debt.

The alternative to the undistributed reduction is to model the future EN debt extensions and schedule matching higher Federal appropriations payments in the rate case. The consequences of being unable to refinance and extend EN debt would be much greater in this case than with the undistributed reduction. In the case of the undistributed reduction, BPA would lose approximately $21 million per year in FY 2016–2017, the amount of the reduction. *Id.* If the EN debt were not refinanced, modeling the transaction in the rate case would commit the agency to these very large principal payments. BPA would then be faced with scheduled Treasury bond and appropriation payments that would be $770 million higher without the assumed source of cash to make the payment. *See* Power Revenue Requirement Study Documentation, BP-16-E-BPA-02A, Table 3H, line 5. These payments would be more than twice the estimated financial reserves attributed to Power for the rate period, raising the specter of being forced to draw on the Treasury note or defaulting on the Treasury payment when the scheduled Treasury payment is due.

Q. *Does the Power Revenue Requirement Study incorporate any changes related to the energy efficiency post-2011 process?*

A. The energy efficiency post-2011 process includes two proposals, conservation billing credits and the large project program, that could affect the Power Revenue Requirement Study. The study does not include any forecast of either proposal. However, the cost table, a product of the study, has been modified by adding lines for the billing credits in the event that this program is active and has participants prior to the completion of the Final Proposal. *See* Power Rates Study Documentation, BP-14-E-BPA-01A, Table 2.3.1.1. The large project program will require no modifications to the study, as it will be recorded like any other energy efficiency investment. *See* Power Rate Schedules, BP-16-E-BPA-09, GRSP II.A.2, on the Large Project Program Targeted Adjustment Charge.

Section 6: Additional Modifications and Adjustments

Q. Could there be changes affecting the revenue requirement studies in the BP-16 Final Proposal?

A. Yes. At a minimum, we will update the repayment study database for any debt management actions, such as refinancings, debt issuances, and debt repayment, completed prior to the Final Proposal. The final studies will also reflect any updates to BPA's borrowing plan for each function. The repayment studies will reflect any changed assumptions regarding non-Federal repayment obligations. If a new interest rate forecast has been performed, the repayment studies will reflect that as well. The estimate of FY 2015 ending reserves will be updated for the Final Proposal, which could affect interest credit amounts, key risk modeling data assumptions, and probability results. Any updates to allowance for funds used during construction (AFUDC) will be reflected in the revenue requirement studies. Depreciation forecasts and retirement rates will be updated for FY 2014 results. BPA may also review its program spending forecasts for FY 2016–2017. If so, the review would be done publicly as part of an IPR update. The results of this review would be used in the Final Proposal. Finally, any errors discovered during the development of the study will be corrected in the Final Proposal.

Q. Does this conclude your testimony?

A. Yes.