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TESTIMONY of

ALEXANDER LENNOX, RONALD J. HOMENICK, DANA M. JENSEN,

STEPHANIE A. ADAMS, and LEON D. NGUYEN

Witnesses for Bonneville Power Administration

**SUBJECT: TRANSMISSION REVENUE REQUIREMENT STUDY** **Page**

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**SUBJECT: TRANSMISSION REVENUE REQUIREMENT STUDY**

## 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-14-Q-BPA-40.

A. My name is Ronald J. Homenick, and my qualifications are contained in BP-14-Q-BPA-27.

A. My name is Dana M. Jensen, and my qualifications are contained in BP-14-Q-BPA-29.

A. My name is Stephanie A. Adams, and my qualifications are contained in BP-14-Q-BPA-02.

A. My name is Leon D. Nguyen, and my qualifications are contained in BP-14-Q-BPA-50.

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

A. The purpose of this testimony is to explain and support the development of the transmission revenue requirements for fiscal years (FY) 2014 and 2015 (the rate period). This testimony sponsors the revenue requirement portions of the Transmission Revenue Requirement Study (Study), BP-14-E-BPA-08, and the Documentation for the Transmission Revenue Requirement Study (Documentation), BP-14-E-BPA-08A.

**Section 2. Revenue Requirements**

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

A. No. We are using the same methodology as in the BP-12 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* Study, section 1.1.

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

A. The program spending levels that are used in the transmission revenue requirement were developed during the 2012 Integrated Program Review (IPR). In June and July 2012, BPA conducted the IPR with BPA customers and constituents to examine and take comments on BPA's proposed cost projections to be used in the rate case. Prior to the IPR, BPA held the Capital Investment Review (CIR), which was a public review of BPA's 10-year capital investment projections and draft asset strategies. BPA issued a close-out report on October 26, 2012, that described the forecast of program level expenses and capital investments to be used in the Initial Proposal. *See* Study section 2.1.

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

A. No. Forecasts of capital and expense program spending levels have not changed since the conclusion of the IPR. We have updated preliminary repayment study and depreciation forecast data to include the projected spending levels contained in the IPR close-out report.

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

A. Yes. As in the last four rate proceedings, this rate proposal includes two financial obligations involving non-Federal funding sources that benefit the transmission system during the rate period and beyond. First, the obligations for annual payments associated with third-party lease-purchase arrangements for long-term capitalized transmission asset purchases (lease-purchase), such as the Schultz-Wautoma project and other Northwest Infrastructure Financing Corporation (NIFC) and Port of Morrow projects, reflect transactions that have taken place through spring of 2012. Study section 2.3.4. Second, the reassignment to transmission of a portion of refinanced Energy Northwest (EN) non-Federal bond debt service obligations under BPA's Debt Optimization Program (also known as Debt Service Reassignment) 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 the past rate proceedings.

*Q.* *Does the revenue requirement include assumptions regarding transmission projects for which customers advance funds and are repaid through credits?*

A. Yes. As in past rate proceedings, this 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 section 2.3.5 of the Study. The forecast of the credits is developed in the Transmission Rates Study, BP-14-E-BPA-07, and is shown in Tables 17.1 and 17.2 of the Documentation for the Transmission Rates Study, BP-14-E-BPA-07A.

*Q. Have you made any changes related to revenue requirement forecasting methodologies?*

A. Yes. We have refined the calculations of depreciation expense and interest income so that rate period forecasts better reflect the conditions that affect actual operating year results.

*Q. Please describe the change to the depreciation expense forecast.*

A. The forecast of depreciation expense now incorporates a forecast, by FERC Account, of plant retirement during the rate period. Previously, the forecast of depreciation expense did not account for retirements that would occur during the rate period. During an operating year, though, plant will be retired for a variety of reasons. Therefore, we develop the forecast by starting with cumulative plant investment that has been updated to include retirements through 2011, the last historical year for which we have complete information. Then, we further update the cumulative plant investment to include forecasted annual additions to plant-in-service during the FY 2014–2015 rate period. These steps are the same as we have taken in previous rate cases. Finally, however, we now update the cumulative plant investment to reflect a forecast of retirements after the historical year, through the FY 2014–2015 rate period.

We develop this forecast of retirements by calculating the average of retirements by FERC Account for the last five historical years (2006–2011). We deduct this average from the calculation of cumulative plant for each FERC account for each year of the rate period to the extent that there are corresponding additions to plant-in-service forecast during the rate period. That is, we forecast retirements to offset the forecast additions. We then used the resulting cumulative plant-in-service for each FERC Account to calculate depreciation expense. The resulting forecast of total depreciation expense, net of retirements and additions, is segmented as has been done in prior rate proceedings.

This methodology accurately reflects the impact of retirements on depreciation expense and results in a reduction in depreciation expense of approximately $8.7 million per year of the rate period.

In addition, we have incorporated the results of the depreciation study that BPA completed during FY 2012. Overall, the results of the study were to increase service lives in various accounts, particularly the account for substation equipment (the largest investment account). An increase in service lives results in a decrease in annual depreciation expense. The change in annual depreciation expense from implementation of the study is a reduction of about $10.8 million per year in depreciation on existing plant investment. The two changes discussed above together result in an approximately $19.5 million reduction in depreciation expense per year of the rate period.

*Q. Please describe the change to the forecast of interest income.*

A. We have refined the forecast of interest income to include interest calculated on Funds Held For Others (FHFO). BPA's financial reserves fall into two categories: reserves available for risk and FHFO. FHFO refers to funds deposited with BPA that are not the result of the sale of transmission services and are intended for a specific purpose. For example, customers may advance funds for the construction of specific projects. Funds from the lease financing program also remain in the BPA Fund in the U.S. Treasury and fall into this category until they are spent.

Historically, the practice has been to forecast interest income during the rate period using only reserves available for risk. However, BPA earns interest income during an operating year on all cash in the BPA Fund (including funds in both categories), so including a forecast of interest earned on FHFO better reflects actual operating results. Including interest earned on FHFO increases the interest income in the Initial Proposal revenue requirement by approximately $1.3 million per year.

*Q. Are there other assumptions that affect the determination of transmission revenue requirements?*

A. Yes. As in the four previous rate proceedings, the transmission revenue requirements for the rate period reflect the assumption that BPA will use $15 million per year of transmission cash reserves instead of Treasury borrowing as a funding source for transmission capital investment. Study, BP-14-E-BPA-08, section 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* Documentation Chapter 5.

*Q. Are there any other changes that affect the development of the revenue requirement?*

A. There is one final change. In the course of testing the adequacy of proposed rates, we found that revenue at proposed rates was sufficient over the rate period as a whole to satisfy cost recovery requirements. We also found that in FY 2014, expected cash flow from revenues was greater than the cash requirements, but in FY 2015, expected cash flow from revenues was lower than cash requirements. To accommodate the timing of the projected revenues, we shifted $20.5 million in planned amortization from FY 2015 to FY 2014. We made this change without changing total planned amortization for the rate period. As noted in the Study, the reshaping of amortization in this manner has been a common practice in BPA's rate proposals. *See* Study, section 3.4 (citing WP-07-FS-BPA-10, section 4.3; WP-10-FS-BPA-02, section 4.3).

**Section 3. Repayment Study**

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

A. No. We continue to use the same model and methodology as in the BP-12 rate proceeding.

*Q. Have you made updates to the inputs to the repayment model?*

A. Yes. In addition to basing the projected capital investments used in the repayment study on the IPR close-out report, we have modified the calculation of repayment period replacements, which are included in the repayment studies pursuant to Department of Energy repayment policy.

*Q. Please describe this change to the calculation of repayment period replacements.*

A. Generally, we include replacements in the repayment study to reflect in the development of the levelized repayment schedule the funding needed to maintain the Federal Columbia River Transmission System in its current state to preserve its revenue-generating capability over the repayment period. Documentation Chapter 9. Therefore, the only replacements we include in the repayment study are the revenue-producing transmission system investments. *Id.* We have made several modifications to the calculation of replacements.

First, we have expanded the number of accounts included in the calculation by including FERC Account 397, Communication Equipment. Communication equipment is central to the provision of ancillary services, which is a significant component of transmission services sold to customers. By including communication equipment, we are better recognizing the contributions of ancillary services to BPA's transmission business unit revenues.

Second, we have simplified the calculation of AC Intertie replacements and the associated credits (reflecting the portion of replacements that are funded by the non-Federal capacity owners on the AC Intertie). Rather than calculating AC replacements by account, as was done previously, we have simplified the calculation by multiplying the expected replacements for each account by the proportion of total plant for each account attributed to the AC Intertie as of the end of the last historical year. We then multiplied the resulting calculation of AC Intertie replacements by a ratio that reflects the funding responsibility of non-Federal capacity owners, to produce a credit that reduces the cost of future replacements. This is a much simpler approach than in the past and therefore minimizes the risk of error. *Id.*

*Q. Have you made other changes to the calculation of replacements?*

A. Yes. We have incorporated the results of BPA's latest depreciation study, completed in 2012. The depreciation study included information and average service lives by FERC Account rather than by sub-accounts. The only FERC Account that was previously split into several BPA sub-accounts was FERC Account 353, Station Equipment. Account 353 is no longer split into sub-accounts, and the plant in it is now aggregated so that all of it has the same average service life. Without service lives for the Station Equipment sub-accounts, we cannot calculate replacements on those sub-accounts.

**Section 4. Segmentation of the Revenue Requirement**

*Q. Please describe the purpose of segmenting the revenue requirement.*

A. As part of the Revenue Requirement Study and Documentation, we allocate the overall transmission revenue requirement to the various transmission segments. The Transmission Segmentation Study discusses the transmission segments. BP-14-E-BPA-06. The purpose of the allocation is to determine the portion of the revenue requirement that should be recovered by the rates associated with each segment. The Transmission Rate Study discusses how the allocated (or "segmented") revenue requirements are used to develop proposed rates. Our methodology for segmenting the revenue requirement is described in detail in Chapter 2 of the Revenue Requirement Study Documentation and has not changed since the last time we developed the segmented revenue requirement.

*Q. Please describe generally how the revenue requirement is allocated to the transmission segments for use in the Transmission Rate Study.*

A. The various components of the revenue requirement are segmented in different ways, as described in detail in Chapter 2 of the Documentation. Generally, first we directly assign expenses that are associated with particular segments to those segments. Then, for net interest expense and planned net revenues that are not associated with particular segments, we allocate amounts to each segment based on the ratio of the net plant investment in the segment to the total transmission net plant investment. For other expenses that are not associated with particular segments, we allocate amounts to each segment based on the ratio of operations and maintenance expense in the segment to total operations and maintenance expense.

*Q. Are there new costs that are segmented now that did not exist when the revenue requirement was last allocated to the transmission segments in 2002?*

A. Yes. BPA has costs associated with customers providing advance funding for certain projects.

*Q. Please describe the costs associated with customer advance funding and how the costs are segmented.*

A. Under the generator interconnection provisions of BPA's Open Access Transmission Tariff, customers advance the funds required to construct Network Upgrades for the interconnection. (Network Upgrades are facilities at or beyond the point at which the interconnection facilities connect to BPA's transmission system.) Certain customers financed the COI upgrade described in section 2.3.5 of the Study as well. There are two costs of these customer-financed projects: (a) interest accrued on customer deposits with accompanying allowance for funds used during construction of the associated projects (AFUDC), and (b) the payback of the deposits and interest to the customers through transmission credits. *See* Study section 2.3.5. Both costs are non-cash elements, and they affect the revenue requirement in different ways. The interest that accrues on the deposits is included in the calculation of net interest expense. The net interest attributable to customer-financed Network Upgrades related to generator interconnections is assigned directly to the Network segment because those facilities are part of the Network. Likewise, the interest attributable to the customer-financed COI upgrade is assigned directly to the Southern Intertie (for the customer-financed COI upgrade). The remainder of net interest is then segmented based on the net plant investment in each segment. Documentation Chapter 2. The net plant investment does not include customer funding.

The payback of the advance funds provided by customers is accomplished through transmission credits. *See* Study, section 2.3.5. BPA applies credits to the customers' bills that reduce BPA's cash revenue. *Id.* Because these credits provide no cash for demonstrating cost recovery, minimum required net revenues (MRNR) (which are added to the income statement if necessary to ensure that all cash requirements are met) are required in the amount by which the credited revenues exceed the associated non-cash expenses—that is, the net interest expense described above and the depreciation of the customer-funded plant-in-service. *Id.*

Minimum required net revenues equal to the credited generator interconnection revenues less the associated net interest and depreciation expenses is assigned directly to the Network. Documentation Chapter 2. Similarly, MRNR equal to the credited COI upgrade revenues less the associated net interest and depreciation expenses is assigned directly to the Southern Intertie segment. *Id.* Any remaining MRNR is allocated to the segments based on the net plant investment in each segment. *Id.* As with the segmentation of net interest, the net plant investment used to determine the allocation of MRNR does not include customer funding.

**Section 5. Additional Modifications and Adjustments**

*Q. Have you made any other changes to the analysis performed in the Transmission Revenue Requirement Study?*

A. We have made one final change. As described in the Study, we test the adequacy of rates to satisfy cost recovery requirements both in the rate period and over the ensuing 35-year repayment period. We perform this test by comparing revenues to cash expenses and repayment obligations for each year to see if revenues equal or exceed the total annual cash requirements.  If they do, rates are adequate.  We perform this test using revenue at current rates and revenue at proposed rates.

We base the assumptions for the repayment period on data from the rate period. We assume that the revenue for each year in the repayment period equals the revenue of the second year of the rate period.  The repayment study for the second year of the rate period provides the capital-related costs for each year of the repayment period.  As to the O&M expenses during the repayment period, our previous practice was to use the expenses from the last year of the rate period as the expenses for each of the 35 years. For this rate proceeding, we have instead averaged the expenses from the two years of the rate period, and we have used the average as the expenses for each year of the 35-year repayment period.  We have made this change because rates for transmission services, and the resulting revenues, are based on the average rate period revenue requirement and not on a single test year.  Therefore, this change better reflects how rates are set and normalizes any unusual changes in expenses.

*Q. Could there be additional changes affecting the Transmission Revenue Requirement Study in the BP-14 Final Proposal?*

A. Yes.  At a minimum, we will update the repayment study database for any debt management actions completed prior to the Final Proposal.  The final Study may reflect BPA's borrowing plan for the remainder of FY 2013.  The repayment study will also reflect any changes in non-Federal repayment obligations data and assumptions.  If a new interest rate forecast has been performed, the repayment study will reflect that as well. The estimate of FY 2013 ending reserves will be updated for the Final Proposal, which could affect items including interest credit amounts, key risk modeling data assumptions, and probability results.  BPA may also review its program spending forecasts for

FY 2014–2015. 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 for the Final Proposal. We discovered one necessary correction after the completion of the study. Non-cash revenues associated with prepaid fiber optic contracts were mistakenly allocated to Ancillary Services instead of across all segments as described in Chapter 4 of the Documentation. We will correct this in the Final Proposal.

*Q. Are other Transmission Revenue Requirement Study changes possible in the Final Proposal?*

A. Yes. BPA expects that it will incur costs for the redispatch of non-Federal generators. As discussed in the transmission rate design testimony, a forecast of these costs was not included in the Initial Proposal revenue requirements, but we expect a forecast to be included in the Final Proposal. Bogdon *et al*. BP-14-E-BPA-30. The transmission rate design testimony discusses these costs more fully. *Id.*

*Q. Does this conclude your testimony?*

A. Yes.

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