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TESTIMONY of

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

Witnesses for Bonneville Power Administration

**SUBJECT: REVENUE REQUIREMENT STUDY**

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**SECTION 1: PURPOSE OF TESTIMONY**

*Q. Please state your names and qualifications.*

A. My name is Alexander Lennox, and my qualifications are contained in WP-10-Q-BPA-37.

A. My name is Ronald J. Homenick, and my qualifications are contained in WP-10-Q-BPA-26.

A. My name is Dana M. Jensen, and my qualifications are contained in WP-10-Q-BPA-30.

*Q. What is the purpose of your testimony?*

A. This testimony sponsors the Revenue Requirement Study (Study), WP-10-E-BPA-02, and the two volumes of the Documentation of the Revenue Requirement Study, WP-10-E-BPA-02A and WP-10-E-BPA-02B. This testimony also sponsors cost analyses derived directly from the revenue requirement, such as the Cost of Service Analysis and the Slice revenue requirement, as well as embedded cost determinations for the generation inputs to ancillary services and the Corps and Bureau transmission facilities. In addition, the outyear (post rate period) Program Case revenue requirements and 7(b)(2) Case revenue requirements used in the Section 7(b)(2) Rate Test Study are developed by this panel consistent with the assumptions of the rate period revenue requirements.

*Q. How is your testimony organized?*

A. Our testimony is organized in 6 sections. Section 1 is the introduction and purpose of the testimony. Section 2 addresses the revenue requirement study. Section 3 addresses the cost analyses used in rate development that are derived from the revenue requirement. Section 4 addresses the repayment study. Section 5 addresses the Slice Debt Optimization Demonstration. Section 6 addresses potential changes that may be incorporated in the final proposal.

## SECTION 2: GENERATION REVENUE REQUIREMENT

*Q. Does the WP-10 Initial Proposal make any changes to the methodology used to determine the generation revenue requirement?*

A. No. The WP-10 Initial Proposal uses the same methodology to determine revenue requirements as has been used since the 1987 Wholesale Power and Transmission Rate Filing. 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. Study, WP-10-E-BPA-02, section 1.1. Since the WP-07 rate proceeding, only minor changes have been made to the categories by which the expenses are displayed. The line items in the operating expenses on the income statement have been reconstituted to reflect BPA's current standard financial report format. See the Study, WP-10-E-BPA-02, section 4.1, for descriptions of the contents in the line items.

*Q. How is the forecast of program spending levels and capital investments used in the generation revenue requirement developed?*

A. The program spending levels in the generation revenue requirement were developed during the Integrated Program Review (IPR). In May through July 2008, 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 concurrent generation and transmission rate cases. With regard to generation, the IPR focused on nine major cost areas including

U.S. Army Corps of Engineers and U.S. Bureau of Reclamation operation and maintenance costs and capital investments, Columbia Generating Station operation and maintenance costs and capital investments, transmission acquisition costs, Fish and Wildlife program expenses and capital investments, internal operations costs charged to power rates, conservation program costs, and renewable program costs. Federal and non-Federal debt service and debt management were discussed, though these forecasts are not determined in the IPR process.

On November 14, 2008, after the close of the public comment period, BPA issued a final report that described the forecast of program level expenses and capital investments to be used in the WP-10 Initial Proposal. That report appears as Appendix A to the Study, WP-10-E-BPA-02.

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

A. No. The forecasts of program spending levels remain the same. However, the IPR did display data for two areas that are not determined in the IPR but rather are determined as output of models used in this rate proceeding; these two areas have been updated since the IPR.

Q. *Please describe these updates.*

A. Two categories, short-term power purchases and transmission acquisition/ancillary services, have been updated, and will potentially change again for the Final Proposal, because they are based on the load-resource balance and secondary sales forecast used in the Initial Proposal. These items are dynamic variables that are an outcome from loads and sales and change accordingly during the rate development process if those assumptions change.

Q. *Has the forecast of capital investments changed since the end of the IPR?*

A. No. The forecast of capital investments has not changed since the IPR. However, as was explained in the IPR final report, depreciation and amortization have been recalculated.

The repayment studies have been rerun to produce the planned amortization payments and resulting gross Federal interest expense using the projected capital spending levels decided on in the IPR. The new studies also corrected an error discovered after the IPR that omitted about $100 million of rate period amortization associated with commitments made under the Debt Optimization program. The repayment studies and the revenue requirement also reflect other decisions BPA has made related to Federal and non-Federal debt and debt management.

*Q. Have there been other changes affecting the development of the revenue requirement?*

A. Yes. During the rate development process, BPA staff identified an unexpected and unintended cost shift from Slice customers to non-Slice preference customers because of the need to add additional Planned Net Revenues for Risk (PNRR) to account for the forecast of a Slice True-Up Adjustment in FY 2011. See the testimony of Bliven and Lefler, WP-10-E-BPA-10; Rodehorst, *et al.*, WP-10-E-BPA-14; and Lee, *et al.*, WP-10-E-BPA-21, for discussion of the cost shift and its implications. As one of the measures to address the impacts of this cost shift, $50 million of planned amortization was moved from FY 2011 to FY 2010. Reshaping amortization within a rate period is a longstanding practice in the development of rate proposals and is accomplished without changing the total amount scheduled by repayment studies in the rate period. *See, for example*, WP-07 Revenue Requirement Study, WP-07-FS-BPA-02, Chapter 1. The rescheduled amortization and its attendant changes to interest expense have been applied to re-establish the base revenue requirement. Typically, such amortization shifts are performed to accommodate cash flows from revenues at proposed rates. In this instance, the amortization shift described above anticipated that need, and no further adjustment to the amortization schedule was necessary for demonstrating cost recovery under the revenues from proposed rates. *Id.*

**SECTION 3: COST ANALYSES**

*Q. What cost analyses do you prepare in the power rate development process that are derived from the power revenue requirement?*

A. In any rate period, the revenue requirement must be assigned to the various products and services for which rates and charges are developed. First, because the Slice revenue requirement mirrors the overall generation revenue requirement in most components, we ensure consistency in its development, particularly in regard to its Minimum Required Net Revenues (MRNR) component. Second, we prepare the Itemized Revenue Requirement in the Cost of Service Analysis (COSA). In this preliminary step in rate development, the revenue requirement is assigned to the resource pools: Federal Base System, New Resources, Residential Exchange, Conservation and BPA Programs. Third, the costs of the Federal Base System for Federal Hydro facilities and BPA Fish and Wildlife programs are sub-allocated to develop those costs that will be passed to BPA Transmission to be recovered in transmission and ancillary services rates and charges. These are the embedded costs of operating and regulating reserves, synchronous condensing, and COE and Reclamation Network and Utility Delivery transmission facilities. Fourth, for the Section 7(b)(2) Rate Test Study, WP-10-E-BPA-06, it is necessary to develop generation revenue requirements and attendant Itemized Revenue Requirements for the four years that follow the rate test period (the Program Case). In addition, the 7(b)(2) Case revenue requirements and attendant Itemized Revenue Requirements are developed for the rate period and those ensuing four years, reflecting the exclusion of costs required by section 7(b)(2) of the Northwest Power Act. Repayment studies are run reflecting those exclusions in order to prepare the 7(b)(2) Case revenue requirements.

*Q. Have there been any changes in these cost analyses?*

A. Yes, in two areas, the development of the Itemized Revenue Requirement in the COSA and development of the embedded costs of the reserves in the generation inputs to ancillary services.

*Q. Please explain what has changed related to the COSA.*

A. In the COSA, the Itemized Revenue Requirement, Net Interest, and Total Planned Net Revenues are allocated to the line items that contain Federal investment. Normally, average net plant investment would be the basis for such an allocation. Previously, however, as a first step, elements called equivalent annual costs were used as the basis to prorate these revenue requirement components between conservation and all other categories. The amount for all other categories would then be distributed *pro rata* between Federal hydro, fish and wildlife, and BPA programs based on average net plant investment. Equivalent annual costs are calculated on a mortgage payment basis from gross investment in the above categories. They previously had been determined to be a more equitable means to assign repayment study results between conservation and the rest of generation instead of directly identifying conservation elements from repayment study results because they compensated for notable differences in interest rates and service lives. As BPA testified in the 1987 rate case, "Within the generation repayment study, there is still the contrast between generation long-term obligations (based on 50 year repayment and relatively low interest rates) and conservation debt (based on 20 year repayment and higher interest rates)." Roberts, WP-87-E-BPA-15, at 30. Since the Appropriations Refinancing Act of 1996, interest rates on all generation obligations are comparable. The only important difference that should be compensated for is between hydro facilities' depreciation period (75 years) and repayment period (50 years). All other investments in generation are depreciated or amortized over their service life, which is the same as their maximum allowable repayment lives. Consequently, in the WP-10

Initial Proposal, the equivalent annual costs were used to prorate net interest expense and total planned net revenues between the hydro facilities and the rest of generation. The remainder was distributed between fish and wildlife, conservation, and BPA capital equipment based on the average net investment in those areas.

*Q. Were there any other changes made for preparing the COSA's Itemized Revenue Requirement tables?*

A. No.

*Q What changes were made regarding the embedded costs of the generation inputs to ancillary services?*

A. There were two changes made in the embedded cost methodologies previously employed. The first is that the embedded costs of operating reserves, which had previously been based on all of the Federal projects in the FCRPS, have been reduced to include only the projects in BPA’s balancing authority area. This eliminates the Boise units, Minidoka-Palisades, Green Springs (Reclamation projects), and Lost Creek (COE) from the calculation. Generation Inputs Study, WP-10-E-BPA-08, section 3; *see also* Klippstein *et al.*, WP-10-E-BPA-24. Further, for both operating reserves, regulating reserves, and wind balancing reserves, rather than including total planned net revenues in the embedded costs, the PNRR component has been eliminated, so that only the MRNR component of net revenues is included in the embedded costs. *Id.*

*Q. Were there any further changes in the embedded costs analyses?*

A. No.

## SECTION 4: REPAYMENT STUDY

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

A. No. This Study continues to use the same methodology and repayment study model as used in the WP-07 and WP-07 Supplemental rate cases.

*Q. Do you anticipate any changes affecting the repayment study model?*

A. It is possible that the computer model used to produce the repayment study will be replaced prior to the Final Proposal. The current model is customized to operate with the Munex debt management database system. Technical support from Munex for the repayment model is no longer available. As a result, there will be a change in the debt management database system from a Munex database system to the DBC database system produced by SS&C Technologies, Inc. Because the current repayment study model is customized to operate with Munex and is not compatible with DBC, BPA staff are developing a new computer model to function with the new database system.

*Q. Will this change in model affect the methodology of the repayment study?*

A. No. While the computer model will change, the repayment methodology used in the study will remain the same. As a result, the output of the new DBC-based model will be the same as the Munex-based model. This will be demonstrated in a workshop outside of this rate proceeding if it appears likely that the new model will be used for the Final Proposal.

*Q. Will the new model introduce any improvements?*

A. Yes. Since the completion of the 2007 Power and 2008 Transmission rate proceedings, BPA has entered into a new arrangement with the U.S. Treasury on how BPA borrows funds. The new arrangement introduces a wide array of terms for calling outstanding debt for early amortization. Unlike the current Munex model, the new model will fully replicate these options.

**SECTION 5: SLICE/DEBT OPTIMIZATION DEMONSTRATION**

*Q. What is the Slice/Debt Optimization Demonstration?*

A. In the settlement of three lawsuits, BPA, Slice purchasers and Northwest Requirements Utilities (NRU) signed a Memorandum of Understanding (Slice Settlement Agreement) that provided, in part, that BPA would make a demonstration showing that "rates of each of BPA's business lines [Transmission Power] are no higher with the [Debt Optimization Program] DOP than they would have been in the absence of the DOP." The Slice Settlement Agreement further provided that "BPA will continue to so demonstrate achievement of this principle annually and in the next and subsequent general wholesale power and transmission rate proceedings so long as new DOP refinancings occur." *See* Documentation, WP-10-E-BPA-02A, Chapter 11. Given the continuation of the DOP refinancings, the Slice Settlement Agreement requires BPA to provide the demonstration.

*Q. Please describe the DOP Demonstration provided in the revenue requirement study.*

A. The DOP demonstration describes the results of two repayment studies. The first study, which uses the same assumptions as the Initial Proposal, does not include any forecast of additional DOP actions. The second study includes forecast DOP actions beyond the last historical year, FY 2008. The results showed that over a 20-year horizon the total capital costs (Federal amortization, interest, and third-party debt service) were on average no higher in the DOP study, which means that rates would be no higher with DOP than without such actions, including rates for this rate period. *Id*.

**SECTION 6: POSSIBLE CHANGES FOR FINAL PROPOSAL**

*Q. Could there be additional changes affecting the Revenue Requirement Study in the WP-10 Final Proposal?*

A. Yes. At a minimum, the repayment study database will be updated for any FY 2009 debt management actions completed prior to the Final Proposal. The Final Study may reflect BPA's current borrowing plan for the remainder of this year and the timing of borrowing and typical maturities and associated interest rates in the FY 2010 projected borrowing. FY 2009 ending reserve estimates will be updated for the Final Proposal, which could affect such things as interest credit amounts, key risk modeling data assumptions, and probability results. The repayment study will also reflect any changes in non-Federal debt management data and assumptions, including any debt optimization transactions. If a new interest rate forecast has been done, that will be reflected as well.

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

A. Yes. In the IPR closeout report, BPA committed to hosting an abbreviated cost review process in the spring of 2009. This second phase of the IPR will allow an opportunity to review BPA's forecasts and consider whether new information would cause changes to forecasts, and will provide interested parties with another opportunity to review and comment on BPA's program spending level and capital investment forecasts. After public comment, BPA will determine what changes are appropriate to be made in these forecasts. The outcome of this process will be used in the production of the WP-10 Final Proposal. At this time, we are aware of one category that will change. Prior to publication of the Initial Proposal, we realized that Long-Term Generating Projects, a component of the Operating Generation line item in the revenue requirement income statement, includes billing credits that are based on the proposed Priority Firm Power (PF) rate calculated in the rate case. As a result, these costs should be subject to review in the rate proceeding and not be considered program spending items that are outside the scope of this proceeding. In addition, we have discovered slight differences between the IPR's forecast cost of resources in the Long Term Generating Projects category and the costs calculated under the contracts. These discrepancies will be reviewed and corrected as needed in the second phase of the IPR.

Q. *Does that conclude your testimony?*

A. Yes.