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TESTIMONY OF

WILLIAM J. DOUBLEDAY, LAWRENCE E. KITCHEN, BYRON G. KEEP, AND  
ROBERT J. PETTY

Witnesses for Bonneville Power Administration

**SUBJECT: Rate Case Market Price Forecast for Investor-Owned Utilities' Residential Exchange Program Settlements**

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6 **SUBJECT: RATE CASE MARKET PRICE FORECAST FOR INVESTOR-OWNED**  
7 **UTILITIES' RESIDENTIAL EXCHANGE PROGRAM SETTLEMENTS**

8 **Section 1. Introduction and Purpose of Testimony**

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

10 A. My name is William J. Doubleday and my qualifications are contained in  
11 WP-02-Q-BPA-17.

12 A. My name is Lawrence E. Kitchen and my qualifications are contained in WP-02-Q-BPA-37.

13 A. My name is Byron G. Keep and my qualifications are contained in WP-02-Q-BPA-34.

14 A. My name is Robert J. Petty and my qualifications are contained in WP-02-Q-BPA-58.

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

16 A. The purpose of this testimony is to discuss the reasons supporting Bonneville Power  
17 Administration's (BPA) proposed 2002 power rate case forward flat block market price  
18 forecast, which will be used in the calculation of the cash component of the Residential  
19 Exchange Program (REP) Settlements with regional investor-owned utilities (IOUs).  
20 These REP settlements are described in greater detail in BPA's Power Subscription  
21 Strategy and in the Administrator's Record of Decision on REP Settlement Agreements  
22 with Pacific Northwest Investor-Owned Utilities.

23 *Q. How is your testimony organized?*

24 A. This testimony is organized in three sections. Section 1 outlines the purpose of our  
25 testimony. Section 2 describes the different price forecasts used in BPA's 2002 rate case.  
26

1 Section 3 discusses the reasons supporting BPA's market price forecast for the calculation  
2 of the cash component of REP settlements with regional IOUs.

3 **Section 2. Rate Case Price Forecasts**

4 *Q. Why did BPA develop price forecasts in its 2002 rate case?*

5 A. For the purposes of this rate case, BPA has developed price forecasts to be used in:  
6 (1) designing rates; (2) determining surplus revenue; (3) calculating the cash component  
7 of the proposed settlement of the REP with regional IOUs; (4) estimating the cost of  
8 augmenting the Federal Base System (FBS) with five-year flat block purchases; and  
9 (5) developing BPA's Cost Recovery Adjustment Clause (CRAC) analyses.

10 *Q. Please describe the price forecasts BPA uses for these purposes.*

11 A. For designing rates, BPA relies on the Marginal Cost Analysis (MCA) Study, which uses  
12 the AURORA model. The MCA is described in detail in the testimony of Anderson,  
13 *et al.*, WP-02-E-BPA-16. The testimony of Keep, *et al.*, WP-02-E-BPA-17, describes  
14 how the MCA is used in rate design. For determining surplus revenue, BPA uses a  
15 forecast of prices based on the MCA but with adjustments. This forecast is described in  
16 greater detail in the testimony of Conger, *et al.*, WP-02-E-BPA-15. The five-year flat  
17 block price forecast that BPA initially proposed for calculating the cash component of the  
18 proposed settlement of the REP, and which BPA used for estimating the cost of  
19 augmenting the FBS with five-year flat block purchases, is discussed below. The price  
20 forecast BPA used for its CRAC analysis in BPA's 2002 Amended Rate Proposal is  
21 discussed in Conger, *et al.*, WP-02-E-BPA-63, at 11-15, and the price forecast BPA uses  
22 for its CRAC analysis in BPA's 2002 Supplemental Proposal is discussed in BPA's  
23 Supplemental Proposal Study. (*See* WP-02-E-BPA-67.)

24 *Q. Please describe BPA's initial five-year flat block price forecast.*

25 A. BPA's initial five-year flat block price forecast was used for two purposes. The first  
26 purpose was for calculating the cash component of the proposed settlement of the REP

1 with regional IOUs as described in BPA's Power Subscription Strategy. *See* Oliver,  
2 *et al.*, WP-02-E-BPA-20, at 3-4. The Power Subscription Strategy, at 8-9, states:

3 BPA's strategy is that IOUs may agree to a settlement of the  
4 Residential Exchange Program in which they would be able to  
5 purchase a specified amount of power under Subscription for their  
6 residential and small farm consumers at a rate approximately  
equivalent to the PF Preference rate.

7 In Subscription, BPA proposes a settlement in which residential  
8 and small farm loads of the IOUs will be assured access to the  
9 equivalent of 1,800 aMW of federal power for the 2002–2006  
10 period. Of this amount, at least 1,000 aMW will be met with  
11 actual BPA power deliveries. The remainder may be provided  
through either a financial arrangement or additional power  
deliveries, depending on which approach is most cost-effective for  
BPA.

12 . . . Any cash payment will reflect the difference between the  
13 market price of power forecast in the rate case and the rate used to  
14 make such subscription sales. The actual power deliveries for  
these loads will be in equal hourly amounts over the period. . . .

15 BPA determined that it was necessary to develop a separate forecast for this purpose. *See*  
16 Oliver, *et al.*, WP-02-E-BPA-20. The second purpose of BPA's initial forecast was to  
17 estimate the purchase price for power for five-year flat blocks of energy to meet BPA's  
18 firm obligations. *Id.* at 3.

19 *Q. How did BPA develop its initial price forecast for five-year flat block purchases?*

20 *A.* BPA used a combination of qualitative and quantitative assessments as well as  
21 professional judgment to arrive at a price estimate of five-year flat block purchases.  
22 *See* Oliver, *et al.*, WP-02-E-BPA-20, at 3. BPA used actual market experience to derive  
23 a price estimate of five-year flat block purchases and confirmed this estimate by using a  
24 derivation of BPA's MCA, market quotes for forward transactions in the five-year period,  
25 and a reasonable extrapolation of current market prices. *Id.* In summary, based on recent  
26 market experience and confirmed by a variety of information using a derivation of the

1 MCA, financial swap quotes, and a reasonable extrapolation of current prices using  
2 historical and forecasted assessments of price escalation for its initial May Proposal, BPA  
3 determined that a price of \$28.1 per megawatthour (MWh) reasonably reflected the  
4 average long-term purchase price for five-year flat block energy. *Id.* at 7.

5 **Section 3. Five-Year Flat Block Price Forecast for Calculation of Residential Exchange**  
6 **Program Settlement Monetary Benefits**

7 *Q. What is the relationship between BPA's 2002 Supplemental Power Rate Proposal*  
8 *(Supplemental Proposal) and the benefits provided to regional IOUs in the REP Settlement*  
9 *Agreements?*

10 A. BPA's REP Settlement Agreements provide two types of benefits to the residential and  
11 small farm consumers of regional IOUs: (1) actual power sales at the Residential Load  
12 rate (RL) or Priority Firm Power (PF) Exchange Subscription rate; and (2) monetary  
13 benefits based on the difference between the RL (or PF Exchange Subscription) rate and  
14 BPA's rate case five-year flat block price forecast. BPA proposes that its RL and PF  
15 Exchange Subscription rates for power sales to IOUs should be subject to CRACs.  
16 BPA's proposed CRACs would affect the effective level of the RL and PF Exchange  
17 Subscription rates and, therefore, the cost of the power sale portion of the REP  
18 Settlements. In addition, assuming the total package of the proposed rate case settlement,  
19 the monetary portion of the REP Settlement benefits will be calculated using the  
20 difference between the RL (or PF Exchange Subscription) rate and BPA's Supplemental  
21 Proposal for a five-year flat block price forecast, which differs from the five-year flat  
22 block price forecast used in BPA's 2002 Final Power Rate Proposal published in  
23 May 2000 (May Proposal) and BPA's 2002 Amended Proposal.

1 Q. What market price forecast did BPA propose to use in its Amended Proposal as its five-year  
2 forward flat block forecast in the calculation of monetary benefits under the REP  
3 Settlements?

4 A. BPA proposed to use the risk-adjusted average market price forecast for the Fiscal Year  
5 (FY) 2002-2006 rate period that was developed in BPA's May Proposal. The  
6 risk-adjusted average market price forecast is the average spot market price for all hours  
7 of the year estimated by AURORA to quantify BPA's operating risk in RiskMod for the  
8 Risk Analysis Study. The risk-adjusted average market price forecast in BPA's  
9 Amended Proposal is \$34.1/MWh. See Conger, *et al.*, WP-02-E-BPA-63.

10 Q. Why did BPA propose to use the risk-adjusted spot market forecast of \$34.1/MWh as  
11 BPA's five-year flat block forecast in the Amended Proposal?

12 A. BPA proposed this change for some of the same reasons it proposed to amend the May  
13 Proposal. See Doubleday, *et al.*, WP-02-E-BPA-65, at 5. First, BPA's load obligations  
14 have increased substantially over earlier rate case forecasts on which BPA's May  
15 Proposal market price forecast, in part, was based. *Id.* The increase in load obligations  
16 would make it difficult for BPA to meet all its augmentation needs with five-year flat  
17 block purchases made prior to the start of the rate period. *Id.* Since a substantial portion  
18 of BPA's purchase requirements may be met with spot market or short-term forward  
19 purchases, it was thought to be more reasonable to use BPA's rate case risk-adjusted  
20 average price forecast as the five-year forward flat block forecast of market prices for  
21 calculating monetary settlement benefits. *Id.* In addition, there was a realistic  
22 expectation that market prices could be higher than was anticipated in the May Proposal.  
23 *Id.* Therefore, changing from the prior market price forecast of \$28.1/MWh to BPA's  
24 proposed \$34.1/MWh rate case market forecast was a reasonable step to meet the original  
25 intent of the Power Subscription Strategy. *Id.* BPA believed that the \$34.1/MWh rate  
26

1 would also more accurately reflect BPA's purchase power costs for its entire amount of  
2 five-year flat blocks of power for the rate period. *Id.*

3 *Q. What costs are intended to be included in the five-year flat block forecast?*

4 A. The five-year flat block forecast was designed: (1) to capture the costs of making  
5 purchases prior to the rate period for terms longer than one year to augment the FBS; and  
6 (2) to estimate the cost of advance purchases of five-year flat block energy by the IOUs.  
7 *See Oliver, et al., WP-02-E-BPA-20, at 3.* BPA anticipated that actual purchases of  
8 power would be made above and below the forecast price and that a portion of the energy  
9 would be provided from surplus energy rather than energy purchased in advance of the  
10 rate period. *Id.* at 4.

11 *Q. Did BPA consider other options for the five-year flat block price forecast used in the*  
12 *calculation of the IOUs' monetary benefits under the REP Settlements?*

13 A. BPA considered whether it was appropriate to change the five-year flat block forecast at  
14 all. This forecast is a forecast of the cost of forward purchases prior to the start of the  
15 rate period. While BPA faces a large amount of additional purchases during the rate  
16 period, the amount of purchases covered by the financial element of the REP Settlements  
17 has remained relatively constant since December 1998. BPA proposed 800 aMW of  
18 financial benefits in its September 1998 Power Subscription Strategy. BPA increased the  
19 amount of financial benefits to 900 aMW in its April 1999 Revised Power Subscription  
20 Strategy. These amounts are spread over six different IOUs. The amount of purchases  
21 by each IOU to serve the load covered by the financial benefits is much smaller than the  
22 amount of purchases that BPA faces. It is reasonable to assume that the IOUs purchased  
23 a portion of this energy before recent increases in market prices.

1 Q. *If BPA has a reasonable expectation that the market price of power could be over*  
2 *\$40/MWh during the rate period, why is \$34.1/MWh a reasonable value to use in the*  
3 *calculation of the monetary benefits under the REP Settlements?*

4 A. The price forecast of \$34.1/MWh is reasonable for three reasons. First, while current  
5 forecasts of the average price of the marginal MWh for the five-year rate period,  
6 purchased during the five-year rate period, may average in the \$40 to \$50/MWh range,  
7 BPA has already purchased over 700 average megawatts (aMW) of power at prices at or  
8 below \$28.1/MWh. The most current estimate of the amount of power BPA will  
9 purchase for the five-year rate period is 3,305 aMW (1,745 aMW of BPA purchases for  
10 forecasted loads plus 1,560 aMW for non-forecasted loads). BPA expects to purchase the  
11 3,305 aMW per year at an average cost that is below the marginal cost indicated by the  
12 current market price forecasts used in establishing BPA's new proposed CRACs.

13       Second, the monetary benefits provide for 900 aMW of IOU residential load  
14 service under the REP Settlements. The IOUs must make purchases to serve these  
15 900 aMW of residential load service during the five-year rate period. The IOUs have  
16 known about the need to purchase additional resources to serve these loads since  
17 December 1998 and have likely made some of those purchases. Since the five-year  
18 forward flat block forecast was designed to forecast the market price of these forward  
19 purchases, it is reasonable to conclude that some of the IOU purchases were made prior  
20 to the recent increase in market prices.

21       Third, current estimates of the market price would not be an appropriate forecast to  
22 use for purchases that cover a range of market conditions and purchases. As discussed in  
23 the policy testimony of Burns, *et al.*, WP-02-E-BPA-62, BPA has addressed the impact  
24 of the current price volatility for the REP Settlements by proposing to exempt the RL and  
25 PF Exchange Subscription rates from the application of the proposed CRACs when such  
26 rates are used for calculating monetary benefits. It is more appropriate to eliminate the

1 cost impacts of current price volatility from the rates used to calculate the monetary  
2 benefits rather than redoing a forecast at the end of the forecast period. *See Burns, et al.*,  
3 WP-02-E-BPA-62.

4 *Q. Has BPA proposed any adjustments in its Supplemental Proposal to the \$34.1/MWh*  
5 *forward flat block forecast it proposed in its Amended Proposal?*

6 *A. Yes. BPA has made a policy decision to adjust its forward flat block forecast from*  
7 *\$34.1/MWh to \$38/MWh. This issue is addressed in the policy testimony of Burns,*  
8 *et al., WP-02-E-BPA-70.*

9 *Q. Why has BPA made this adjustment?*

10 *A. In summary, BPA recently conducted settlement discussions with all interested parties in*  
11 *BPA's WP-02 rate case. See Burns, et al., WP-02-E-BPA-70. A large number of those*  
12 *parties proposed a partial settlement of many rate case issues. Id. One element of that*  
13 *proposal was that the forecast used to calculate the financial benefits under the REP*  
14 *Settlements should be \$38/MWh. Id. When viewed in the context of the Partial*  
15 *Settlement Agreement, BPA elected to make this adjustment, also noting that prices had*  
16 *increased since the time of BPA's Amended Proposal. Id. While BPA does not expect*  
17 *current prices to continue for the five-year period of the forward flat block forecast, BPA*  
18 *believed, viewed in the context of the total settlement proposal, that current high market*  
19 *prices lasting through the first 6 to 18 months of the forecast period justified an increase*  
20 *in the forecast price to \$38/MWh. Id.*

21 *Q. Does BPA's Supplemental Proposal contain any other elements that would affect the*  
22 *benefits provided under the REP Settlements?*

23 *A. Yes. As noted above and as originally proposed in BPA's Amended Proposal in the*  
24 *policy testimony of Burns, et al., WP-02-E-BPA-62, BPA proposes that the RL and PF*  
25 *Exchange Subscription rates, only when used for the calculation of monetary benefits for*  
26 *the 900 aMW designated as monetary benefits in the REP Settlements, should be exempt*

1 from the proposed Load-Based and Financial-Based CRACs. REP Settlement Power  
2 (1,000 aMW) that is converted into monetary benefits under the REP Settlement,  
3 however, shall use the RL or PF Exchange Subscription rate that applied to such power  
4 sales, *i.e.*, the rate subject to the Load-Based CRAC and Financial-Based CRAC, in the  
5 calculation of such new monetary benefits. The Load-Based CRAC is designed to  
6 recover the cost of serving load not forecasted in the May Proposal. The Financial-Based  
7 CRAC is designed to recover higher than expected costs, including increased market  
8 price purchases of power. BPA chose to protect the monetary benefits from current price  
9 volatility by exempting the RL and PF Exchange Subscription rates from the proposed  
10 Load-Based and Financial-Based CRACs instead of changing the forecast of five-year  
11 forward flat block purchases. Since the amount of the monetary portion is fixed, it is  
12 reasonable to exclude the load served by the monetary benefits from the possible rate  
13 volatility introduced by application of the proposed Load-Based and Financial-Based  
14 CRACs. BPA's proposal provides a greater amount of certainty to the monetary benefit  
15 calculation.

16 *Q. Does this conclude your testimony?*

17 *A. Yes.*