

2003 Safety-Net Cost Recovery Adjustment Clause

Rebuttal Testimony

SN-03-E-BPA-14 SECONDARY REVENUE AND POWER PURCHASE
EXPENSE FORECAST

May 2003

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REBUTTAL TESTIMONY OF
STEPHEN R. OLIVER, ELLIOT E. MAINZER, ROBERT W. ANDERSON,
ROBERT J. PETTY, AND ARNOLD L. WAGNER
Witnesses for Bonneville Power Administration

SUBJECT: Secondary Revenue Forecast

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1 TESTIMONY OF

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5
6 **SUBJECT: Secondary Revenue Forecast**

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

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

9 A. My name is Stephen R. Oliver and my qualifications are contained in SN-03-Q-BPA-20.

10 A. My name is Elliot E. Mainzer and my qualifications are contained in SN-03-Q-BPA-14.

11 A. My name is Robert W. Anderson and my qualifications are contained in SN-03-Q-BPA-01.

12 A. My name is Robert J. Petty and my qualifications are contained in SN-03-Q-BPA-22.

13 A. My name is Arnold L. Wagner and my qualifications are contained in SN-03-Q-BPA-27.

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

15 A. The purpose of this testimony is to respond to the testimony of the Columbia River Inter-
16 Tribal Fish Commission and Yakama Nation (CRITFC), the Joint Customers, the
17 Generating Public Utilities (GPU), the Public Power Council (PPC), Northwest
18 Requirements Utilities (NRU), the Coalition Customers, and the Washington Public
19 Agencies Group (WPAG) regarding Bonneville Power Administration's (BPA)
20 secondary revenue forecast, which was one of the factors in determining the magnitude of
21 BPA's currently proposed Safety-Net Cost Recovery Adjustment Clause (SN CRAC).

22 *Q. How is your testimony organized?*

23 A. This testimony is organized into five sections, including this introductory section.
24 Section 2 discusses BPA's natural gas forecast. Section 3 discusses BPA's AURORA
25 inputs. Section 4 discusses BPA's 2,500 aMW adjustment to AURORA prices.
26 Section 5 discusses proposals to increase secondary revenues due to increased

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Arnold L. Wagner

1 streamflows.

2 **Section 2. Natural Gas Forecast**

3 *Q. The Joint Customers argue that the NYMEX futures market is less accurate in predicting*
4 *prices farther out in time than in the immediate near-term, and tends to project the*
5 *impact of current events on gas prices continuing into the future. Bliven, et al., SN-03-E-*
6 *JC-01, at 29. The Joint Customers argue that NYMEX prices should be merged into the*
7 *fundamentals forecast somewhere between one and three years out. Id. Do you agree?*

8 A. It is important to note that BPA's forecast in the Initial Proposal relied on supply and
9 demand fundamentals. "BPA's forecast of Henry Hub prices draws on an internal
10 analysis of market fundamentals and compares BPA's analysis to a NYMEX futures
11 price for natural gas at Henry Hub." See SN-03 Study, SN-03-E-BPA-01, at 4-9. BPA's
12 description of the natural gas price forecast, however, may have relied too heavily on
13 comparisons to the NYMEX futures market. Therefore, BPA agrees to use natural gas
14 market fundamentals as the basis for the mid-term and long-term natural gas forecasts
15 and to more fully describe the fundamentals outlook behind the forecast used in the final
16 proposal.

17 *Q. The Joint Customers are concerned that the NYMEX prices described in the Initial*
18 *Proposal rely too heavily on one day's set of prices. Bliven, et al., SN-03-E-JC-01, at*
19 *29-30. The Joint Customers argue that there is significant volatility in daily forward*
20 *prices, and choosing any particular day carries more risk than taking an average of the*
21 *preceding days. Id. Therefore, the Joint Customers propose the use of a 10-day average*
22 *to help mitigate some of the volatility in daily gas pricing. Do you agree?*

23 A. BPA agrees that the volatility of the natural gas futures market may create problems in
24 short-term forecasting. BPA also agrees to undertake a more thorough review of several
25 recent NYMEX pricing series in developing its short-term forecast. However, BPA does
26 not agree that volatility in futures markets necessarily makes an average of ten (or

1 several) days' price series a better forecasting tool than the most current daily price
2 series. The volatility of NYMEX prices may be due to factors that are not supported by
3 fundamentals and ultimately not sustainable, such as irrational market exuberance or even
4 random fluctuations. In this case, the volatility of forward prices may lead to increased
5 forecast error, as the Joint Customers argue. However, changes in futures market prices
6 may instead be a reflection of more current or accurate information and therefore provide
7 a better window of future market activity. BPA agrees, however, to examine several
8 recent NYMEX pricing series and evaluate the volatility of these series. BPA also agrees
9 to use an average of several recent daily price series unless there is reason to believe that
10 more recent prices are reflecting more current or accurate information.

11 **Section 3. AURORA Inputs**

12 *Q. The Joint Customers express concern that BPA is using a dated version of inputs to*
13 *AURORA, particularly in the resource and resource modifier files. Bliven, et al.,*
14 *SN-03-E-JC-01, at 32. The Joint Customers argue that there are a number of resources*
15 *specified more than once in the file, which overstates the existing resource base in the*
16 *Western Interconnection by 3,671 MW. Id. Do you agree?*

17 *A. BPA does not agree that BPA is using an out of date, default database. In data response*
18 *BPA-JC-004, the Joint Customers state that they did not perform an analysis comparing*
19 *the database that BPA used in the initial proposal and the "dated" version of the database*
20 *supplied by the vendor. See Attachment A. BPA, in fact, updated the resources in the*
21 *default database. BPA, however, has reviewed the Joint Customers' data and believes*
22 *there are several legitimate changes identified by the Joint Customers that BPA now*
23 *proposes to make in its AURORA database for purposes of running the final case. These*
24 *changes are identified below.*

25 *Q. The Joint Customers argue there are several resources that were installed with*
26 *temporary operation permits, comprising 236.7 MW, which have been removed by the*

1 *AURORA* vendor and should be removed from BPA's analysis. *Bliven, et al.,*
2 *SN-03-E-JC-01, at 33. Do you agree?*

3 A. Yes.

4 Q. *The Joint Customers argue that BPA's initial proposal intended to include only those*
5 *new resources intended to be on-line before the end of 2003, but four resources, totaling*
6 *1,771 MW, either will not be completed in this time period or have yet to begin*
7 *construction. Bliven, et al., SN-03-E-JC-01, at 33. Do you agree?*

8 A. Yes.

9 Q. *The Joint Customers argue that there are several resources that need to have their*
10 *on-line dates revised. Bliven, et al., SN-03-E-JC-01, at 33. Do you agree?*

11 A. Yes.

12 Q. *The Joint Customers argue that, based on the WECC's latest listing of resources, BPA's*
13 *input file contains 2,037 MW of resources that are unavailable due to retirements or*
14 *being on cold standby status, which includes 214 MW of generation in Alberta that will*
15 *be retired in June 2004. Bliven, et al., SN-03-E-JC-01, at 33. Do you agree?*

16 A. Yes.

17 Q. *The Joint Customers argue that a number of resources in BPA's inputs are specified in*
18 *the wrong AURORA area. Bliven, et al., SN-03-E-JC-01, at 33-34. Do you agree?*

19 A. Yes.

20 Q. *The Joint Customers argue that a number of resources are specified with the wrong fuel,*
21 *and such fuels should be consistent with those shown in the 2002 WECC listing. Bliven,*
22 *et al., SN-03-E-JC-01, at 34. Do you agree?*

23 A. Yes.

24 Q. *The Joint Customers argue that there have been a number of new resources added to the*
25 *Western Interconnection since BPA's file was compiled and, using BPA's guideline of*
26 *including resources due on-line before the end of 2003, BPA should include the Gila*

1 *River units, the Mesquite project, the Bighorn project, the Blythe project, and 1,660 MW*
2 *of combined cycles in Baja, Mexico. Bliven, et al., SN-03-E-JC-01, at 34. Do you agree?*

3 A. BPA agrees with the majority of this statement, with the exception of the Baja Mexico
4 resource additions. As noted below, at this time BPA has not been able to corroborate
5 that including the Baja area of Mexico will have an impact on electricity prices in the
6 Pacific Northwest. BPA will continue to research the Baja area of Mexico additions and
7 their possible impact on regional prices.

8 Q. *The Joint Customers argue that a new Baja pricing area should be added to AURORA or*
9 *BPA should add 800 MW of combined cycle generation in Southern California to reflect*
10 *the intended marketing of one-half of new Baja generation in California and the current*
11 *transmission capacity limit. Bliven, et al., SN-03-E-JC-01, at 35. Do you agree?*

12 A. BPA acknowledges that the Baja area of Mexico is connected to the Southern California
13 area. However, at this time, BPA has not been able to develop sufficient information
14 regarding the contractual obligations of those generators to provide power into the grid,
15 nor the firmness of the transmission interconnections, to convince BPA that the Baja area
16 will have any effect on regional prices. Therefore, BPA has decided to not include the
17 Baja area in its WECC database at this time. As noted above, BPA will continue to
18 monitor the Baja area and may add it to BPA's database in the future.

19 Q. *The Joint Customers argue, based on the WECC's resource listing and recent news, that*
20 *BPA should include 1,560 MW of older generation and 850 MW of wind generation in*
21 *BPA's resource file. Bliven, et al., SN-03-E-JC-01, at 35. Do you agree?*

22 A. Yes.

23 Q. *The Joint Customers argue that BPA has overstated the plant capacities of the plants in*
24 *BPA's resource file by about 1,410 MW. Bliven, et al., SN-03-E-JC-01, at 35. Do you*
25 *agree?*

26 A. Yes.

1 Q. *The Joint Customers argue that in averaging loads over time and across risk scenarios to*
2 *get expected values for loads, and comparing those forecasts to current load forecasts*
3 *from the WECC, BPA's forecasts appear too low. Bliven, et al., SN-03-E-JC-01, at 36-*
4 *37. Do you agree?*

5 A. Yes. BPA agrees to adopt the 2003 load forecast as supplied in Bliven, et al., SN-03-E-
6 JC-01, as a base for its load forecast for 2003. However, BPA will continue to use the
7 load growth forecast that BPA used in its Initial Proposal.

8 Q. *The Joint Customers argue that BPA's assumption of retiring 14,000 MW of resources*
9 *from 2002 through 2006 is too high compared with past history of retirements and BPA*
10 *should reduce the amount of generation retirements to the 500 to 1,000 MW per year*
11 *range. Bliven, et al., SN-03-E-JC-01, at 37. Do you agree?*

12 A. BPA's statement regarding the 14,000 MW of resource retirements is the maximum
13 amount of retirements that the AURORA model can retire. What the model actually
14 retires is based on such factors as the resources, loads, hydroelectric generation and gas
15 inputs. In reviewing the database, however, BPA will modify the maximum amounts of
16 retirements that AURORA may retire for the 2002 to 2006 time frame down to 10,000
17 MW, or approximately 2,000 MW per year. The amount of 10,000 MW of resources that
18 AURORA may decide to retire was determined by using the default amounts provided by
19 the vendor but adjusting them to not allow retirements in the 2000-2002 time frame. For
20 the final proposal, BPA will let the AURORA model, based on economics, determine
21 how many resources are retired during the 2002 to 2006 time frame, within this 10,000
22 MW maximum retirement limit.

23 Q. *The Joint Customers argue that BPA should replace its assumption of 480 MW of generic*
24 *resource additions in 2002 and 1,440 MW in 2003 with current knowledge of actual*
25 *resource additions. Bliven, et al., SN-03-E-JC-01, at 37. Do you agree?*

26 A. Yes.

1 Q. *The Joint Customers suggest that BPA should replace generic resource additions in the*
2 *near term with specific resources under development, that is, that BPA should allow*
3 *AURORA to select the generation it wants to add from a list of generators under*
4 *development in conjunction with the generic resources. Bliven, et al., SN-03-E-JC-01, at*
5 *37-38. Similarly, the Joint Customers argue that BPA's resource modifier shows 1,920*
6 *MW of new generation added in 2004, but there are about 3,000 MW comprised of five*
7 *new combined cycle projects under construction, which should be modeled as potential*
8 *new resources that AURORA could choose based on the same criteria it chooses generic*
9 *new projects – the cost to complete the unit. Id. at 38. The Joint Customers also argue*
10 *that using only generic full cost resources distorts near-term forecasts, causing them to*
11 *be higher than they should be. Id. at 38-39. Do you agree?*

12 A. BPA has largely agreed to the Joint Customers' proposed revisions for existing resources
13 and retired resources. However, BPA will continue to let AURORA add and retire
14 resources based on the economics associated with the generic new resources and the
15 economics of the existing resources for the future. In the run for the Initial Proposal,
16 BPA did not add resources in the Pacific Northwest during the study period.
17 Furthermore, the Joint Customers have not provided a study demonstrating that adding
18 specific resources already under construction would differ from the generic resources that
19 AURORA adds based on the economics of the generic resources. Also, the resource
20 additions proposed by developers in the WECC have been so volatile over the past
21 several years that BPA is not confident that relying on those representations would
22 produce results as reliable as the model. Therefore, BPA will run AURORA in a mode
23 that lets generic resources be added in the future based on the economics of these
24 resources.

25 Q. *The Joint Customers argue that BPA's transmission link file needs to be updated. Do you*
26 *agree?*

1 A. Yes. BPA, at the suggestion of the Joint Customers, has reviewed the transmission link
2 file. In data response BPA-JC-006, the Joint Customers state that the 2000 path rating
3 catalogue was used as the basis for the Joint Customers' proposed changes. *See*
4 Attachment B. The 2000 path rating catalogue is somewhat dated but BPA has decided
5 to use the majority of the suggestions of the Joint Customers. However, since the 2000
6 path rating catalogue is somewhat dated, BPA reviewed other transmission link
7 information. The other transmission link information has come from the BPA
8 Transmission Business Line.

9 *Q. What other transmission link information needs to be updated?*

10 A. There are two transmission link factors that need to be updated. The first is the fact that
11 the transmission link between Oregon/Washington/Northern Idaho and Southern
12 California (NOB) has a scheduled outage during the 2004 calendar year time frame.
13 NOB is scheduled to be substantially derated from April 2004 through December 2004.
14 BPA proposes to account for these derates in the Final Proposal. The second factor BPA
15 discovered regards the actual available transmission link capacities for the
16 Oregon/Washington/Northern Idaho areas to the Southern California Area (COB) and the
17 Northern California Area (NOB). In reviewing the actual available capacities, BPA
18 discovered it was overstating the transfer capabilities through the use of the rated transfer
19 capability. BPA's experience has been that through a combination of unplanned outages,
20 factors such as loop flow limitations, and transmission marketing practices, the rated
21 transfer capacity has not been 100 percent. Based on the Joint Customers' request for
22 BPA to review this issue, BPA proposes to use the actual average transfer availabilities
23 over the past four years for the North to South and South to North on both the AC and
24 DC interties for the final proposal. The amount for North to South on COB will be
25 adjusted to 3,986 and on NOB will be adjusted to 2,392. The amount for South to North
26 will be adjusted to 3,107 on COB and 1,974 on NOB.

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1 Q. *The Joint Customers argue that BPA's transmission link file is incorrect because the link*
2 *between Northern California and Southern California should use Path 15 as the*
3 *demarcation and, according to the California ISO, the modeling limits on Path 15 are*
4 *1,275 from north to south and 3,900 from south to north. Bliven, et al., SN-03-E-JC-01,*
5 *at 39. Do you agree?*

6 A. Yes.

7 Q. *The Joint Customers argue that, regarding the link between Southern California and*
8 *Northern Nevada, BPA uses a transfer capability of 180 MW northbound, while the*
9 *actual tie is a 55 kV line rated at 17 MW, suggesting BPA may have made a simple error.*
10 *Bliven, et al., SN-03-E-JC-01, at 39. Please respond.*

11 A. BPA will correct the noted transfer capability.

12 Q. *The Joint Customers argue that for the link from New Mexico to Arizona, BPA uses a*
13 *transfer capability of 1,500 MW, but the link consists of two paths, Path 22 and Path 54,*
14 *which total 3,435 MW. Bliven, et al., SN-03-E-JC-01, at 39. Do you agree?*

15 A. Yes.

16 Q. *The Joint Customers argue that while BPA uses a transfer capability of 8,195 MW for the*
17 *Arizona/Southern Nevada to Southern California link, this is lower than the rating of*
18 *10,118 MW on Path 46, which includes the transmission lines between Southern Nevada*
19 *and California. Bliven, et al., SN-03-E-JC-01, at 40. Do you agree?*

20 A. Yes.

21 Q. *The Joint Customers argue that while BPA uses a rating of 545 MW from Utah to*
22 *Northern Nevada and 450 MW in the reverse direction, both values are 300 MW greater*
23 *than the ratings of Path 32, which suggests that Path 35 was inappropriately added to*
24 *Path 32, when Path 35 should be a part of the link between Utah and Arizona/Southern*
25 *Nevada. Bliven, et al., SN-03-E-JC-01, at 40. Do you agree?*

26 A. Yes.

1 Q. *The Joint Customers argue that BPA needs to add a link specification representing Path*
2 *78, between Utah and New Mexico, with a transfer capability of 560 MW southbound and*
3 *600 MW northbound, and the transfer capability between Utah and Northern Nevada*
4 *should be set to the Path 32 rating, 245 MW westbound and 150 MW eastbound. Bliven,*
5 *et al., SN-03-E-JC-01, at 40. Do you agree?*

6 A. Yes.

7 Q. *The Joint Customers argue that the transfer capability between Utah and*
8 *Arizona/Southern Nevada should be set at the sum of the ratings of Path 35 and Path 79,*
9 *with 565 AMW southbound and 600 MW northbound. Bliven, et al., SN-03-E-JC-01, at*
10 *40-41. Do you agree?*

11 A. Yes.

12 Q. *The Joint Customers calculated the results of their recommendations by constructing a*
13 *reference case based on averages and another reference case reflecting BPA's 2,500*
14 *aMW Pacific Northwest load reduction. Bliven, et al., SN-03-E-JC-01, at 41. The Joint*
15 *Customers showed revenues for each case ranging between \$730 million and \$780*
16 *million. Id. at 42. Please respond.*

17 A. BPA disagrees that the reference case should be adopted by BPA for the Final Proposal.
18 In data response BPA-JC-007, the Joint Customers state, "It should be noted that we are
19 not advocating that the BPA should use these values in its rate setting modeling. Rather,
20 we are advocating that BPA update its input dataset to be current with the market as it
21 exists today, and use that updated data in its normal course of rate, risk, and modeling.
22 The results from our reference cases may not be those determined through the full range
23 of risk variables that BPA models." See Attachment C. BPA has previously identified
24 the changes to the AURORA model BPA proposes to use for the Final Proposal. BPA
25 proposes to update the model and run the AURORA model in its normal course of rate,
26 risk, and modeling for the Final Proposal. BPA does not agree that making these

1 resource and transmission link modifications will necessarily result in secondary
2 revenues of the magnitude cited by the Joint Customers.

3 **Section 4. Adjustment to AURORA Prices**

4 *Q. The Joint Customers argue that BPA should not make a 2,500 aMW adjustment to the*
5 *AURORA model because it undermines the value of tools like AURORA, and it would be*
6 *better for BPA to update its input files. Bliven, et al., SN-03-E-JC-01, at 42. Do you*
7 *agree?*

8 *A. No. In response to the Joint Customers' comments on BPA's direct testimony, BPA has*
9 *agreed to update certain portions of the AURORA database. Notwithstanding these*
10 *changes, however, the arguments advanced by the Joint Customers have not convinced*
11 *BPA that the 2,500 aMW adjustment should be eliminated. BPA addresses the Joint*
12 *Customers' arguments below.*

13 *Q. The Joint Customers dispute BPA's claim that the 2,500 aMW adjustment is reasonable*
14 *given the differences between the way AURORA simulates the market and the way the*
15 *market operates, because they disagree with BPA's premise that BPA cannot achieve the*
16 *exact hourly marginal clearing price determined by AURORA, because no seller expects*
17 *to achieve the exact AURORA prices, and the proper question is whether any seller can*
18 *achieve the approximate AURORA prices. Bliven, et al., SN-03-E-JC-01, at 42. Please*
19 *respond.*

20 *A. BPA's objective in preparing its secondary revenue forecast is to produce an accurate*
21 *estimate of the prices it will receive for sales of secondary energy in the wholesale power*
22 *market. The nuances of "exact" versus "approximate" AURORA prices are less of a*
23 *concern to BPA than the overall accuracy and reasonableness of the secondary revenue*
24 *forecast. Relying entirely on the raw output of a production cost model to forecast an*
25 *important variable in BPA's overall cost structure is not necessarily prudent, especially*
26 *when the implied market structure of AURORA is different from the dynamics of the*

1 market in which BPA transacts, and important behavioral variables are difficult to
2 capture in the model's logic. BPA considers its adjustment to be an appropriate and
3 reasonable mechanism to better estimate the prices BPA can obtain for secondary sales
4 given BPA's understanding of market dynamics and BPA's extensive experience in the
5 Pacific Northwest electricity market.

6 *Q. The Joint Customers dispute BPA's justification of the 2,500 aMW adjustment by arguing*
7 *that AURORA takes into account the amount of surplus hydro generation from BPA in*
8 *determining its market prices, with AURORA prices being lower when there is more*
9 *surplus generation and higher when there is less surplus generation (all else equal), and*
10 *no further adjustment to AURORA is needed to reflect the presence of BPA's surplus*
11 *generation. Id. Do you agree?*

12 *A. BPA agrees that AURORA reflects the fact that when there is "high" or "low"*
13 *hydroelectric production in the Pacific Northwest, the price estimates from AURORA*
14 *reflect these conditions. AURORA then takes an average of numerous random "games"*
15 *using varying water supply to produce average expected secondary prices. BPA's view is*
16 *that when actual market participants observe that the regional hydro system is really on*
17 *track to produce an average quantity of secondary energy surplus, they respond by*
18 *adjusting their expectation of surplus prices and resource operations. This in effect*
19 *eliminates the random nature of the AURORA approach. The AURORA approach*
20 *assumes the average water condition appears with no forewarning or advance market*
21 *knowledge, and that parties simply, and perfectly, displace their dispatchable thermal*
22 *resources hour by hour to match this average water condition. In fact, market participants*
23 *in the WECC can observe over time Pacific Northwest reservoir elevations, snow pack*
24 *accumulations, and precipitation forecasts. They also understand the general nature of*
25 *whether the Pacific Northwest is short, or surplus, of supply based on regional planning*
26 *processes such as those conducted by the PNCA and Regional Council. They also*

1 understand that the Pacific Northwest hydro systems are by and large run of the river
2 systems that cannot massively store and shape their hydro supplies. On this basis, BPA
3 has seen market and pricing behavior in these types of conditions that substantially
4 discounts the marginal value of power. The most recent example was FY2002, where
5 near average Pacific Northwest hydro conditions occurred, yet the average net revenue
6 received by BPA was about \$21/mwh. (This occurred in a period where natural gas
7 prices averaged above what BPA had seen for 5 years preceding the 2000-2001 market
8 price spikes.) In certain periods of the spring 2002, hydro run-off had substantial peaks,
9 and the market responded by offering low single digit prices, because it recognized the
10 lack of ability for Pacific Northwest hydro-related marketing interests to store or shape
11 this supply.

12 BPA's past experience with participants in the bilateral market is that when BPA
13 discusses this surplus price issue with them, they are very clear that they understand the
14 Pacific Northwest has a largely non-dispatchable and largely non-discretionary power
15 supply that is driven by weather and non-power directives such as fisheries and flood
16 control operations.

17 *Q. The Joint Customers dispute BPA's argument that the revenue it receives cannot be*
18 *estimated by the variable cost of generating the last kWh sold, which implies that a*
19 *bilateral market cannot sustain this price level. Bliven, et al., SN-03-E-JC-01, at 43.*
20 *They argue that this argument fails to recognize that markets often trade in excess of the*
21 *variable cost of the marginal generating unit, and that BPA runs the AURORA model*
22 *with a bid variable set to 5 percent, close to a perfectly competitive market and well*
23 *below the observed levels that were measured in the CalPX. Id. at 43-44. Please*
24 *respond.*

25 *A. Bid margins in the California PX during the late 1990s, while interesting, may tell us*
26 *very little about how markets in the Pacific Northwest will behave, especially during*

1 periods of hydroelectric surpluses when runoff shape and timing issues can create pricing
2 effects that diverge from straightforward merit-order dispatch logic. Moreover, the
3 bidding strategies of the marginal clearing units are not necessarily representative of the
4 bidding strategies of the full range of market participants in a single-price market, as the
5 marginal units, possibly aware of their critical position in the stack, may have had a
6 significant interest in attempting to set high marginal clearing prices in the California PX
7 market, given the PX design. Thankfully, the California PX model has not been
8 proposed to be adopted in the Pacific Northwest where BPA sells the bulk of its power.
9 Moreover, current market conditions are much different than those prevailing when the
10 studies cited by the Joint Customers were completed.

11 The ability to sell above variable cost, whether in a single price market or in a
12 bilateral market, is a function of the underlying supply demand balance in the market.
13 The market in the Pacific Northwest is surplus and is expected to stay surplus through the
14 study period. The recent announcements of power plant delays and cancellations in the
15 Pacific Northwest are one indication of concern among knowledgeable power plant
16 developers that Mid-Columbia prices will likely not allow them to recover their capital
17 costs in the foreseeable future.

18 BPA acknowledges that, at times, depending on the short-term load resource
19 balance in the market, sellers will be able to sell at prices above their variable costs.
20 However, BPA believes those situations will only occur under relatively rare conditions
21 over the remainder of this rate period. West-wide FERC price caps will place a check on
22 diversions from variable costs in the event that markets experience short-term supply
23 deficits. Hence, BPA believes that the 5% bid margin used in its AURORA simulations
24 is justified. BPA does not believe that increasing this margin would be an accurate
25 reflection of current conditions in the Pacific Northwest, nor does it render unnecessary
26 the 2,500 aMW adjustment BPA has made to its AURORA runs.

1 Q. *The Joint Customers argue that BPA improperly relied on an old dataset that had not*
2 *been updated to reflect current system conditions, and since these errors are matters of*
3 *empirical observation, the market prices produced in BPA's AURORA runs have no*
4 *rational basis. Bliven, et al., SN-03-E-JC-01, at 45. They also argue that making an ad*
5 *hoc adjustment to prices resulting from this stale data cannot be supported, especially*
6 *when the reasons for the adjustment are unsupportable. Id. Please respond.*

7 A. There are literally hundreds of inputs that feed into the AURORA model, and BPA acted
8 reasonably to keep those inputs as current as possible. Although BPA proposes to update
9 some of its resource files for the Final Proposal, the Joint Customers have not
10 demonstrated that the need to update data renders BPA's forecast irrational. BPA's
11 forecast is rational. Also, BPA's 2,500 aMW adjustment is supported by market realities
12 and BPA's experience in selling large volumes of power in the Pacific Northwest.

13 Q. *The Joint Customers argue that the lack of a rational basis for the AURORA output is*
14 *critical to BPA's proposed SN CRAC because a large portion of the proposed rate*
15 *increase is to cover BPA's calculated variability in revenues from surplus power sales in*
16 *future years, and the current net revenue risk to BPA from such sales is likely in excess of*
17 *70 percent. Bliven, et al., SN-03-E-JC-01, at 45. Please respond.*

18 A. BPA recognizes the critical role that secondary revenues plays in its rate setting process.
19 This is exactly the reason that BPA applies the AURORA model in a fashion that is
20 consistent with BPA's experience in the Pacific Northwest electricity market. The Joint
21 Customers argue that making adjustments to AURORA prices, even when they conflict
22 with BPA's historical experience and understanding of BPA's daily business,
23 "undermines the value of tools like AURORA." BPA believes that uncritically accepting
24 the output of tools like AURORA undermines the value of the seasoned professional and
25 ignores the uncertainty surrounding estimates of secondary revenues. Despite the need
26 for a few adjustments to BPA's inputs, BPA considers its approach to have been entirely

1 rational, prudent, and in the best interests of the agency and its customers.

2 **Section 5. Increased Steamflows**

3 *Q. A number of parties argue that BPA should recognize higher secondary revenues that*
4 *result from recent increases in streamflows. Lovely, et al., SN-03-E-GP-01, at 4;*
5 *Crinklawn, et al., SN-03-E-PP-01, at 4; Saven, et al., SN-03-E-NR-01, at 6; Faddis, et al.,*
6 *SN-03-E-CC-01, at 5; Saleba and Piliaris, SN-03-E-WA-01, at 7. Please respond.*

7 *A. BPA, as stated in the initial proposal, will update the hydroelectric assumptions, as well*
8 *as other information, for the final proposal. BPA will recognize the implications and*
9 *impacts of the variables for the final proposal.*

10 *Q. Does this conclude your testimony?*

11 *A. Yes.*