

1 Q. Have you previously offered testimony in this proceeding?

2 A. Yes, I offered direct testimony on behalf of PacifiCorp.

3 **Purpose of Testimony**

4 Q. What is the purpose of your rebuttal testimony?

5 A. My testimony provides the results of detailed analysis to demonstrate that Public Counsel
6 witness Lazar relied on a flawed analysis to support his contention that the sale of the
7 Centralia Plant and Mine to TransAlta is not in the public interest. I will also provide
8 clarifying information on the Plant depreciation life in response to questions raised by
9 Staff witness Elgin.

10 **PacifiCorp's Economic Analysis**

11 Q. Does the Company believe that the analysis presented in its direct testimony is the
12 appropriate analysis on which the Commission should rely in deciding whether to
13 approve the sale of PacifiCorp's share of the Centralia Plant and Mine to TransAlta?

14 A. Yes. As I will discuss later in my testimony, the Company's analysis provides a
15 reasonable comparison of the revenue requirement impacts associated with either selling
16 or keeping Centralia. It is important to note that the Company has revised the initial
17 analysis to reflect updates and corrections to the original studies. These updates, filed
18 separately from this rebuttal testimony as revised Exhibit 214, result in an additional \$32
19 million - for a total of \$42 million - of net present value benefit associated with selling
20 Centralia.

21 The Keep Centralia case updates include the correction of the PacifiCorp
22 allocation of ongoing capital expenditures and property tax expense and the removal of
23 property tax expense originally calculated on Centralia emission control equipment. The

1 correction to the Sell Centralia case includes the addition of the amortization of the gain
2 on sale, which was inadvertently omitted from the original Sell Centralia case. With
3 these updates, year-by-year revenue requirement benefits from the sale are projected to
4 continue through 2013.

5 **California Sale**

6 Q. If the Company sells its California property would there be an impact on the net benefit
7 analysis presented as Revised Exhibit 214?

8 A. Yes.

9 Q What is the impact of the California property sale if the transaction is completed?

10 A. There would be an additional \$28 million of net present value benefits from selling
11 Centralia when compared to keeping Centralia under medium market prices.

12 Q. Have you prepared an analysis that summarizes the impact of the California sale?

13 A. Yes. The impact of selling the Company's California distribution assets is presented in
14 Exhibit 217 (RW-5).

15 Q. Is it likely that the Company's California property sale will be completed?

16 A. Yes. The Company's proposal to sell its California property is currently being reviewed
17 by the California Public Utilities Commission. At this time, the Company has no reason
18 to believe the sale will not be approved.

19 **Public Interest**

20 Do you agree with Mr. Lazar that the sale of Centralia is not in the public interest?

21 No. I continue to believe that the sale is in the public interest and will provide evidence in this
22 testimony to refute the arguments used by Mr. Lazar to draw his conclusions. In the
23 following sections, I offer corrections to Mr. Lazar's analysis, thereby using his approach

1 to demonstrate that the Centralia sale is, in fact, in the public interest. It is important to
2 note, however, that the Company believes that the data, assumptions and methodology
3 used in the analysis I presented in my direct testimony better reflect the potential revenue
4 requirement impacts associated with selling or keeping Centralia.

5 Q. Please describe the concerns you have with Mr. Lazar's Exhibit 501?

6 A. I have the following concerns:

7 The Northwest Power Planning (NWPPC) forecast on which Mr. Lazar relied was a
8 sensitivity analysis that should not have been used and is not the most recent forecast
9 from the NWPPC,

10 Mr. Lazar's failure to simulate redispatch of resources in his analysis does not reflect how

11 PacifiCorp will serve its customers once the sale of Centralia is completed,

12 Mr. Lazar's incorrectly assumed that Avista's incremental dispatch value is applicable to

13 PacifiCorp,

14 Mr. Lazar incorrectly included a \$1 per MWh capacity value adder, and

15 Mr. Lazar use of the Aurora model's western Oregon and Washington market prices for

16 replacement power cost calculations is not reflective of the markets in which

17 PacifiCorp will replace the Centralia power.

18 **Market Price Projections**

19 Q. Is the market price forecast used by Mr. Lazar in Exhibit 501 the latest NWPPC forecast?

20 No. It is our understanding, from conversations with NWPPC personnel, that the latest forecast

21 was dated November 29, 1999 and the forecast used by Mr. Lazar was a sensitivity case

22 for load side curtailment.

23 Q. Have you calculated the impact of correcting the market prices used in Mr. Lazar's

1 Exhibit 501?

2 Yes. The impact of replacing the market prices used in Mr. Lazar's Exhibit 501 to calculate
3 replacement power costs with the current NWPPC forecast is presented in Exhibit 218
4 (RW-6). The impact of using the latest NWPPC forecast, which the Company continues
5 to believe is too high, lowers the cost of Centralia market replacement power by \$316
6 million on a total plant basis or \$150 million on a PacifiCorp basis.

7 **Redispatch**

8 Q. Why are you concerned that Mr. Lazar did not redispatch resources in his Exhibit 501
9 analysis when calculating the cost of replacement power?

10 A. Mr. Lazar's analysis assumes purchase of in-kind amounts of replacement power,
11 meaning he assumed Centralia power production will be replaced with the same amount
12 and shape of power produced by Centralia. The Company believes the proper way to
13 evaluate the sale of a resource from an integrated system must be based on redispatch of
14 the remaining resources to balance loads and resources to optimize resources costs. On
15 this basis, Mr. Lazar's analysis overstates the cost of replacement power and thereby
16 understates the value of selling Centralia.

17 Q. Have other witnesses in this case suggested redispatching of resources as the proper
18 method to use when measuring the customer impact of selling Centralia?

19 A. Yes. Staff witness Buckley, on page 6, lines 12 through 20 of his testimony describes the
20 redispatch method of analysis that he believes is appropriate. He goes on to state that
21 PacifiCorp used this appropriate type of analysis.

1 Dispatch Adder

2 Q. Do you agree with Mr. Lazar's use of Avista's dispatch value adder in Exhibit 501?

3 A. No. Avista's dispatch value is based on Avista's load and resource requirements and
4 should not be used for PacifiCorp or any other Company, except Avista. PacifiCorp's
5 dispatch value adder should be developed separately based on its load and resource
6 requirements.

7 Q. Does the Company's analysis presented as Revised Exhibit 214 include a value for
8 dispatchability of resources?

9 A. Yes. Since the Company's production cost model is an economic dispatch model,
10 Centralia's dispatch value was included in the results as it was for market replacement
11 purchases.

12 Q. Have you compared the Company's dispatch value to the value used in Mr. Lazar's
13 Exhibit 501?

14 A. Yes. The Company's dispatch value is approximately \$77 million lower on a PacifiCorp
15 basis than the value used in Mr. Lazar's analysis. A summary of the calculation is
16 presented as Exhibit 219 (RW-7).

17 Capacity Value Adder

18 Q. Do you agree with Mr. Lazar's use of a \$1 per MWH capacity value adder?

19 A. No. The Aurora model only adds resources when expected market prices cover the fully
20 embedded cost of those resources including the investors' expected return on investment.
21 Therefore, the Aurora model price projections include the value of capacity in the price
22 calculation and Mr. Lazar's proposal to add \$1 per MWH for capacity should be rejected
23 as double counting.

1 Western Oregon and Washington Prices

2 Q. Do you agree with Mr. Lazar's assertion that the Aurora model's Western Oregon and
3 Washington market price projections are the appropriate prices to use for the Company to
4 determine the cost of market replacement power?

5 A. No. Despite the fact that the Centralia plant is located in this area, the Western Oregon
6 and Washington prices are not the appropriate prices to use. PacifiCorp is a very large
7 regional utility with loads in many parts of the western United States and access to energy
8 over the entire WSCC region. As such, the market prices used in the analysis should be
9 those that are optimal to the Company based on the location of the Company's loads and
10 transmission capability and market energy availability and prices throughout the region.
11 Based on the Company's operating experience, the Company's believes the market prices
12 used in Mr. Lazar's Exhibit 501 should be based 70% on Mid C prices and 30% on COB
13 prices.

14 Q. Have you calculated the impact of adjusting Mr. Lazar's Exhibit 501 to reflect the proper
15 market prices?

16 A. Yes. The cost of market replacement purchases would be approximately \$26 million
17 lower using the Company's recommended source of market purchases. A summary of
18 this calculation is presented as Exhibit 220 (RW-8).

19 Modeling Assumptions

20 Q. Does PacifiCorp have any concerns with the Aurora market price forecast?

21 A. Yes. Upon review of NWPPC's latest market price forecast we find that prices increase
22 quite rapidly, in the range of 6-8% during the 2000 through 2004 time frame. Reasons
23 given by NWPPC for the large price increases are:

- 1 * Generating units are assumed to be retiring during this period
- 2 * Demand is assumed to continue growing
- 3 * No new generation is modeled, except for 3200 MW of gas-fired generation
- 4 hard wired into the model.

5 These features combine to bring increasingly expensive gas generation onto the margin
6 where prices are set. However, in reality there is approximately 23,000 MW of gas
7 generation in either the permitting or construction phase. The Company believes a
8 significant amount of these gas resources will be built by 2004. If one were to take a
9 conservative view and assume only 1/3 to 1/2 of these resources are built by 2004, there
10 would still be a significant downward impact on the NWPPC market price forecast.

11 Further, based on historical perspectives of commodity markets, the Company
12 believes market prices will actually decrease in some years depending on how much new
13 resource construction occurs. Prices will subsequently increase again over time as
14 demand grows. The downward pressure of new resource additions will serve to limit
15 price growth to a greater extent than incorporated in the NWPPC forecast. Because of
16 this and other reasons I will discuss later in my testimony, I believe the NWPPC base
17 case market prices are unrealistically high.

18 **Natural Gas Price Escalation**

19 Q. Does PacifiCorp have concerns about the gas escalation used in the Aurora model?

20 A. Yes. The Company does not subscribe to the approximate 3.3% nominal, 0.8% real gas
21 escalation used in the 11/29/99 NWPPC forecast. Historically, gas prices have decreased
22 in real terms. Current gas prices are higher than the full cycle costs of developing new
23 gas resources and associated delivery facilities. Historically, this has meant new

1 production will come on-line and create a surplus of supply over demand and prices will
2 decline. In addition, there appears to be an ample supply of gas reserves in Canada and
3 other basins providing gas to WSCC generators. For these reasons, the Company thinks
4 it is unrealistic that gas prices will escalate in real terms for the next 20 years. For
5 example, average wellhead gas prices have decreased 4.0% in real terms over the prior 13
6 years. Despite this fact, over this period gas prices have continually been projected to
7 increase at higher rates that have never been achieved on a sustained basis. A summary
8 of institutional gas forecasts compared to actual gas prices is provided as Exhibit 221
9 (RW-9).

10 Q. Has PacifiCorp completed any analysis about the effect of lower gas price escalation?

11 A. Yes. NWPPC provided the Company an Aurora run with 1.5% gas escalation in place of
12 the 3.3% in their base case. All other Aurora inputs are the same in the 1.5% gas
13 escalation case as the Aurora base case run. The revised gas price escalation lowers
14 market prices and the cost of Centralia replacement power by \$172 million on a net
15 present value basis. A copy of the calculation is provided as Exhibit 222 (RW-10).

16 **CCCT Installation Cost Assumptions**

17 Q. Does PacifiCorp have any concerns about the capital cost used in the Aurora model?

18 A. Yes. The Aurora model's first-year combined cycle combustion turbine (CCCT) capital
19 cost of (\$583/kw), which escalates at a rate of 1.6% to 2.3% per year, is too high when
20 compared to a survey recently completed by the Monitor Co. The survey, which consists
21 of 18 combined cycle projects scheduled to go in service during from the year 2000
22 through 2002, indicates installation costs will average \$525 per kW. Also, the fact
23 remains that CCCT prices could actually come down after demand slows and the initial

1 thrust of new gas generation passes. The Company believes that the survey clearly
2 indicates that the CCCT capital cost assumption used in the NWPPC base case forecast is
3 too high and hence the projected market prices for electricity in the WSCC are too high.

4 A copy of the survey results is presented as Exhibit 223 (RW-11).

5 Q. Have you calculated the impact to Mr. Lazar's cost of replacement power if the CCCT
6 cost input included in the Aurora model were adjusted to PacifiCorp's \$525 per kw
7 value?

8 A. Yes. The cost of replacement power would be lower by approximately \$41 million. A
9 summary of my calculation is presented as Exhibit 224 (RW-12).

10 **“Hard Wired” New Capacity**

11 Q. In Mr. Lazar's direct filed testimony he states that the Company's analysis is seriously
12 deficient and offers as a reason for the deficiency the contention that PacifiCorp's market
13 clearing price (mcp) model assumes 22,000 MW of new combined cycle generation will
14 be built along the west coast. He contends this new capacity is “hard wired” into the
15 model and does not result from internal model logic simulating the expected cost-
16 effectiveness economics of timing and location of new investment by entrepreneurial
17 investors. Do you agree with his assertions?

18 A. No. Mr. Lazar is simply wrong about how PacifiCorp's mcp model addresses
19 investment in new generation capacity. In this model, investment is not hard wired. The
20 model adds CCCT generation only when and where in the region the fully embedded cost
21 can be justified on the basis of modeled market price expectations at an assumed 9% after
22 tax target rate of return. The model allows for the type of “bullishness-driven” over
23 investment typical of capital intensive commodity industries. As previously stated and

1 contrary to Mr. Lazar's assertions, there are approximately 23,000 MW of gas-fired
2 generation in either the permitting or construction phase at this time.

3 Further, as noted earlier, the NWPPC base case does hard wire in some new
4 construction. PacifiCorp does not dispute Aurora's use of this procedure in this case, but
5 it does seem questionable for Mr. Lazar to attack the PacifiCorp analysis (incorrectly) on
6 this basis when the projection he adopts uses this approach.

7 **Centralia Depreciation Life**

8 Could you clarify the Company's position on the depreciation life of the Company's Centralia
9 generating plant?

10 A. Yes. The original Centralia studies prepared by the Company for the Collaborative
11 Decision Making (CDM) group and for studies used to seek tax concessions from the
12 Washington legislature used an analysis period through 2025. This was based on the
13 assessment at that time that the life of the plant could be reasonably extended through
14 2025 by the addition of life extending capital.

15 In the present case before the Commission regarding the sale of Centralia, the
16 analysis period extends instead through 2023. The shortened life was the result of the
17 Company's new depreciation study that was filed with the Public Service Commission of
18 Utah. In that filing the Company proposed that the depreciation life of coal fired
19 generating plants across its system be set at 40 years, based on internal and consultant
20 engineering studies. This 40-year life would place Centralia's depreciable ending life at
21 2013.

22 The Depreciation Study also included a proposal that the depreciation life be
23 extended in 10-year increments for justified life extending capital. The addition of the

1 scrubbers at Centralia and the associated projects at the plant qualify as life-extending
2 capital. Therefore, the life of Centralia was extended to 2023 for the sale analysis.

3 The Company believes the two-year difference in depreciable life is immaterial,
4 would not change the results of the study, and is justified by the Depreciation Study.

5 **Summary**

6 Q. Have you summarized your recommended changes to Mr. Lazar's direct filed testimony
7 results?

8 A. Yes. A summary of my recommended changes to the results filed by Mr. Lazar is
9 presented as Exhibit 225 (RW-13). Even though I have not specifically been able to
10 quantify all of the shortcomings of Mr. Lazar's analysis, the results show that when
11 adjusted to replace his unreasonable assumptions, the approach used by Mr. Lazar shows
12 that the Centralia sale transaction utilizing the depreciation reserve method for sharing of
13 the gain is in the customer's interest.

14 Q. Does this conclude your rebuttal testimony?

15 A. Yes.