Before the Public Service Commission of Utah

In the Matter of the Application of PacifiCorp for a Certificate of Convenience and Necessity Authorizing the Construction of the Currant Creek Power Project	Docket No. 03-035-29 DPU Exhibit 1.0R

Rebuttal Testimony

Of

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Division of Public Utilities

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CERTIFICATE OF CONVENIENCE AND NECESSITY
CURRANT CREEK POWER PROJECT
DOCKET NO. 03-035-29

Introduction

Q: Would you introduce yourself and tell us on whose behalf you are testifying?

A: My name is Artie Powell and I am testifying on behalf of the Division of Public Utilities.

Q: Are you the same Artie Powell whose direct testimony is marked as DPU Exhibit 1?

A: Yes.

Q: What do see as the main issues in this proceeding?

A: I believe there are two primary issues both of which are centered on PacifiCorp's evaluation of the bids. Several parties argue that PacifiCorp's evaluation of the bids was flawed because first, it "unfairly" compared PacifiCorp's 35-year self-build option to 20-year projects; and second, PacifiCorp incorrectly applied a real levelized comparison of the bids.

Q: Do you agree with these arguments?

A: No.

Impact on Ratepayers

Q: Would you explain why you disagree with the argument that PacifiCorp used an unfair comparison in its bid analysis?

A: As I stated in direct testimony, the fact that PacifiCorp's NBA is a 35-year project and was used as a benchmark to compare the bids is neither fair nor unfair; it is simply the way the RFP was constructed. It is my understanding that PacifiCorp restricted purchase power agreements to

1 twenty years or less. To compel PacifiCorp to accept or enter into a
2 contract of longer duration would be to dictate to PacifiCorp how to
3 manage its business. Alternatively, to allow or require PacifiCorp to
4 recover rate based costs over shorter periods would have a direct impact
5 on ratepayers. From the Division's point of view, either of these
6 alternatives would represent a fundamental change in regulatory policy
7 and is beyond the scope of this proceeding.

8 Additionally, the arguments put forward by various parties ignore the
9 impact on ratepayers. For example, in direct testimony Mr. Braeber
10 states, "The fact is Spring Canyon proposed to build a plant just like
11 PacifiCorp's NBA, for less. ... Spring Canyon was prepared to sell the
12 plant at the end of the 20 year tolling agreement for as little as a $1." [1]
13 Given Spring Canyon's decision to finance its project over twenty years,
14 selling the plant for a dollar misses the point: ratepayers pay off the plant
15 in the first twenty years and, therefore, rates are higher than they would
16 be if the plant was paid off over a longer period.

17 **Q: Do you agree with Mr. Graeber's assertion that 20 versus 38-year**
18 **comparison posed an "insurmountable" problem or barrier to bids?**

19 A: No. Again the implication in Mr. Graeber's assertion is that PacifiCorp's
20 analysis was somehow flawed because of this difference in the length of
21 the life of Spring Canyon's bid versus the life of the NBA. But the
22 restriction of a twenty-year contract and the pricing of the proposal are
23 decisions made by two separate entities. PacifiCorp made the decision to
24 limit the term of contracts; the pricing decision was left entirely to the
25 bidder. The contract length is not the limiting factor for the bidder; the
26 limiting factor is the bidders proposal and the bidders financial capability.

27 The twenty-year limit is not a limit on the type of proposal a bidder could

[1] F. David Graeber, 'Direct Testimony of F. David Graeber for Spring Canyon Energy LLC, Docket 03-035-29, p. 10-11.

1 offer, it is simply a restriction on the length of contracts. A bidder, for
2 example, could have bid a turn-key operation, where the bidder builds the
3 plant and sells it to PacifiCorp after construction is complete, which
4 PacifiCorp would have evaluated over the life of the project. Indeed, at
5 least two bids on the short-list are turn-key operations.

6 **Q: Do you believe that that 20 versus 35-year comparison would be a**
7 **difficult hurdle for bidders to overcome?**

8 A: Yes, I believe it would be difficult. In direct testimony Mr. Falkenberg
9 states, "the remaining $65 million adjustment fails to capture any effect
10 of increasing the bidder's cost because they assumed a 20-year term."[2]
11 From this statement, I take it that Mr. Falkenberg believes that the affect
12 of the 20-year financing decision is more than $65 million.

13 Mr. Falkenberg goes on to state, "If a bidder assumed 20-year financing,
14 for example, they would be in a position to offer a bid extension at a very
15 low price, having completely paid off project debt and amortized the
16 investment by the end of 20 years." This argument is essentially the
17 argument put forth by Mr. Graeber that Spring Canyon offered to sell its
18 plant for $1 at the end of the contract. The argument overlooks entirely
19 the primary issue: what affect will it have on rates.

20 The argument is analogous to PacifiCorp arguing it could offer lower
21 rates in the future if they were allowed to depreciate assets over a shorter
22 period of time. The argument on its face is true – rates will be lower in
23 future years given all of the costs have been paid off in the earlier years.
24 However, rates in the earlier years will be greater than they would be
25 otherwise. In addition, there appears to be a mismatch between costs and
26 benefits. Ratepayers in the early years are paying the fixed costs of the
27 benefits received by those in the latter years. Again, this is contrary to

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[2] Randall J. Falkenberg, "Direct testimony of Randall J. Falkenberg For the Committee of Consumer Services," Docket 03-035-29, p. 35.

the regulatory principle of cost causation and would be a fundamental change in regulatory policy.

Q: Do you agree with Mr. Wolverton's assertion that PacifiCorp wasted bidders time?

A: No. This assertion is based on the argument that PacifiCorp unfairly compared a 35-year bid to 20-year proposals. There are several reasons why I do not agree with this argument. First, as I have explained before, the structure and pricing of the proposal was entirely up to each individual bidder. Second, as I explained in direct testimony, the purpose of a real levelized calculation is to allow for a comparison of projects with different start and end dates. Third, it seems reasonable to expect a knowledgeable bidder to recognize that a regulated utility's self-build option, if chosen, would be rate-based and, therefore, entail a lengthy cost recovery period. Finally, after reviewing PacifiCorp's RFP process, Navigant, the outside evaluator retained in this RFP, concluded that the modeling and comparison of the various bids was carried out in a reasonable manner. Therefore, in my opinion, PacifiCorp has not wasted bidder's time.

Q: Would you agree with the argument that bidders are unlikely to obtain financing for periods longer than the term of a contract?

A: Yes. However, the inability of bidders to receive financing over longer periods is a reflection of competitive market realities and each bidders own financial capability. The main issue is the impact these decisions have on ratepayers: to recover the costs of an asset over a period shorted than the life of the asset necessitates higher rates in the recover period compared to the rates that would prevail if the costs of the asset were spread over the life of the asset.

To recover the costs over the shorter period amounts to inter-generational transfer of wealth: ratepayers are paying in the early years the costs of

1 producing electricity in the latter years. To do so, would arguably violate
2 the principle of cost-causation and would be a fundamental change in
3 regulatory policy.

4 **Real Levelized Costs**

5 **Q: In direct testimony Mr. Wolverton purports to show how prices in the**
6 **out years affect the real levelized costs. Do you agree with his**
7 **conclusions?**

8 A: No. In his direct testimony Mr. Wolverton states, "PacifiCorp's 'Real
9 Levelized Revenue Requirements' approach is not an appropriate method
10 of analysis because … out-of-bid-period market prices and operating costs
11 largely drive the results."[3] The fact that prices affect the value or
12 calculation of the real levelized (net) costs is not surprising. In its report
13 on avoided costs, Tellus cautions, "[I]t is important to note that to the
14 extent that avoided costs are under-/over-estimated in the later years of
15 the reported planning period, this would affect the levelized values in all
16 years."[4] Mr. Wolverton tries to use this fact – over or under stating out-
17 year values – to imply that PacifiCorp's price forecast is fundamentally
18 flawed and, therefore, PacifiCorp's evaluation is incorrect. His example
19 of doubling prices in the out-of-bid-period years is, however, misleading.

20 **Q: In what sense is Mr. Wolverton's example misleading?**

21 A: In a simple example, based on the NBA and Bid #401, Mr. Wolverton
22 doubles prices in the out-of-bid-period and reports the affect on the real
23 levelized value relative to the Bid value, which is not affected by the
24 price change. (See UAE Exhibit 1.3). This example however ignores the
25 relationship between prices and costs and, therefore, overstates the affect,
26 if any, doubling out-of-period prices would have on the evaluation of the

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[3] Lincoln Wolverton, "Prefiled Direct Testimony of Lincoln Wolverton," Docket 03-035-29, p. 2.

[4] [4] "Costing Energy Resource Options: An Avoided Cost Handbook for Electric Utilities," Tellus Institute, September 1995, p. B-1.

1 NBA relative to the other bids in the 2003-A RFP.

2 **Q: Is Mr. Wolverton aware of the relationship between prices and costs?**

3 A: Apparently he is. In direct testimony he states, “over the long haul
4 production costs will have a significant impact on market prices.”[5]

5 **Q: Can you demonstrate how Mr. Wolverton overstates the affect of out-**
6 **of-period prices?**

7 A: Yes. In DPU Exhibit 1.1R, I have, with a few minor alterations,
8 replicated the “NBA” portion of UAE Exhibit 1.3. In this example we
9 have the market prices and operating costs for a CCCT and for duct-
10 firing. We can use these values to obtain a yearly nominal net value. (See
11 columns A through G of DPU Exhibit 1.1R). The present value over a
12 ten-year period is $54,814. This present value is converted to a real
13 levelized value, which when inflated over the 10 years of the example
14 yields a stream that has an equivalent present value. (See column I).
15 This can be converted into either a $/MW value or $/100 MW value. Mr.
16 Wolverton uses the former in his testimony, PacifiCorp uses the later in
17 its bid evaluation. Since Mr. Wolverton’s example is based on the $/MW,
18 we will continue with that representation here.[6] The $/MW value for the
19 NBA over the entire ten year period is $99.66.[7] If we only consider the
20 first five years of the example, the period over which the bid and the NBA
21 would be compared, the $/MW value of the NBA is $52.91.

22 If the prices in the out-of-period years are doubled, as in Mr. Wolverton’s
23 example, the $/MW value for the NBA increases to $143.17,[8] which is an

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[5] [5] Lincoln Wolverton, “Prefiled Direct Testimony of Lincoln Wolverton,” Docket 03-035-29, p. 192.

[6] In his direct testimony, Mr. Wolverton incorrectly labels the value as a $ per 100 MWh value. I assume that this is simply a typographical error.

[7] Mr. Wolverton reports a value of $99.69. The difference is probably due to rounding differences.

[8] Mr. Wolverton reports a value of $151.77, which is much different than the $143.17

1 approximately 170% increase. (See DPU Exhibit 1.2R). Mr. Wolverton
2 uses this "dramatic" increase to imply that there is a problem with
3 PacifiCorp's forward price curve and therefore with the bid evaluation.
4 But Mr. Wolverton's conclusions are not warranted for two reasons.
5 First, all this example demonstrates is that changing any value or input,
6 not just the out-of-period prices, which affects the NPV will also affect
7 the real levelized value. The real argument is with the validity of the
8 forward price curve, an argument I will leave to PacifiCorp. Second, if
9 the relationship between prices and costs are taken into account, the affect
10 that Mr. Wolverton demonstrates is much smaller. To see this, in DPU
11 Exhibit 1.3R I double both the prices and the operating costs in the out-
12 of-bid-period years. In this case, the resulting $/MW value only increases
13 to $75.79, an increase of approximately 43%.

14

15 **Table 1: The Affect of Out-of-Period Prices and Costs on Real Levelization**

	Real Levelized Value (PV, $/MW)	Percentage Change (From Original)
Original	$52.91	
Double Prices	$143.17	170%
Double Both Prices and Costs	$75.79	43%

16

17 **Q: Mr. Wolverton reports the results of another experiment where he**
18 **doubles the prices in the out-of-period years in the NBA model. Do**
19 **you find a similar overstatement of the affects in this analysis?**

20 A: Yes. In DPU data request 5.1, I asked PacifiCorp to replicate Mr.

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reported here. Apparently, Mr. Wolverton used the real discount rate in obtaining his figure instead the correct nominal discount rate.

1 Wolverton's analysis doubling prices in the NBA model. And also to
2 report the results doubling both prices and fuel cost in the same out-
3 period years. In response to this data request, PacifiCorp indicated that
4 they were willing to assist in completing the necessary model runs. The
5 results are summarized in DPU Exhibit 1.4R.

6 If prices in the out-years are doubled, as Mr. Wolverton suggests, the
7 value of the NBA increases by about 1,200%. However, if both prices and
8 fuel costs are doubled the value of the NBA increases by about 546%.
9 The affect is reduced by almost half. Furthermore, if the heat rate of the
10 NBA is adjusted to match the implied heat rate in forward curve, the
11 increase in prices and fuel costs cancel each other out: doubling prices
12 and fuel costs have no affect on the value of the NBA.

13 **Q: Do you have any other comments with respect to the use of real**
14 **levelized comparisons?**

15 A: Yes. Mr. Wolverton argues in direct testimony that the correct
16 application or use of real levelization excludes all but capital costs. (The
17 Committee's witness, Mr. Falkenberg, makes a similar argument). On
18 page 2 of direct testimony Mr. Wolverton states, "PacifiCorp's 'Real
19 Levelized Revenue Requirements" approach is not an appropriate method
20 of analysis, because the method is not restricted to costs of the
21 alternatives."[9] And again on page 13 he states, "it is not simply not
22 appropriate to consider out-of-period operating costs and revenues as part
23 of a levelized cost analysis. From this last statement I gather Mr.
24 Wolverton has two objections to PacifiCorp's use of a real levelized
25 comparison: the inclusion of operating costs and the inclusion of
26 revenues. I disagree with Mr. Wolverton's, as well as Mr. Falkensberg's,
27 criticisms of PacifiCorp's levelized calculation.

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[9] Lincoln Wolverton, "Prefiled Direct Testimony of Lincoln Wolverton," Docket 03-035-29, p. 2.

1 In a report on integrated resource planning, Tellus institute explains,

> 2 Economic screening requires comparing power plants with very
> 3 different capital costs, operating costs, size, output, and
> 4 lifetimes. One tool for preliminary economic comparison is to
> 5 convert the life-cycle costs (LCC) of each power plant option
> 6 into a uniform (levelized) amount each year. LCC costs are **all**
> 7 the costs to produce electricity over the life of a plant: capital
> 8 costs including return on investment; taxes; depreciation; fuel
> 9 costs; maintenance costs; costs of expected repairs, and
> 10 decommissioning. The plants real levelized value, A, is
> 11 obtained as follows:
>
> 12 $$A = \frac{S*(1-R)}{1-(R^n)}$$ where:
>
> 13 S = Present value sum of **all lifecycle costs**
>
> 14 R = 1/(1 + real discount rate)
>
> 15 N = number of values summed (in S).[10]

16 Clearly, contrary to Mr. Wolverton's claim, operating costs should be
17 included in a real levelized calculation.

18 **Q: Do you agree with Mr. Wolverton that revenues should not be included**
19 **in a real levelized calculation?**

20 A: No. If all costs are to be included in the real levelized calculation, then
21 the variable costs must be determined in one way or another. To
22 determine the fuel costs for example, it is necessary to know how the
23 plant will run. I suppose PacifiCorp could make this determination by
24 arbitrarily setting a dispatch for all bids to follow say, 7x16 (7 days per
25 week, 16 hours per day). But this approach would in my opinion be
26 overly restrictive relative to the way in which PacifiCorp actually
27 determined the operating costs for each bid.

28 **Q: How did PacifiCorp determine to the operating costs of each proposal?**

[10] "Best Practices Guide: Integrated Resource Planning for Electricity," The Tellus Institute, Boston Massachusetts, p. 18. (emphasis added)

1 A: It is my understanding that within the model PacifiCorp dispatched each
2 proposal against its forward price curve: when the variable costs were less
3 than the price, the plant ran; if the price was less than the variable costs,
4 the plant did not run. In this way the operating efficiencies or
5 characteristics of each proposal were accounted for. In addition,
6 PacifiCorp ran each proposal against several operating schedules (e.g.,
7 7x16, 6x16, flat all hours etc.) and chose the scenario with the best
8 economics as the representation of that bid. On the other hand, the NBA
9 was restricted to one scenario, 7x16. The revenue from this exercise was
10 included as part of the real levelized calculation. This approach, absent a
11 concrete alternative, appears reasonable to me.

12 **Q: Do you believe that PacifiCorp's forward price curve is fundamentally**
13 **flawed?**

14 A: PacifiCorp will have to defend its forward price curve. I have not seen
15 any evidence, however, to suggest that PacifiCorp tried to manipulate or
16 construct its forward price curve in such a way as to favor its self-build
17 option, Currant Creek, in this proceeding.

18 **Odds and Ends**

19 **Q: Mr. Wolverton seems to argue that PacifiCorp should have used a**
20 **higher discount rate, a rate similar to that achieved in competitive**
21 **markets, in comparing the NBA to alternative bids. Do you agree with**
22 **this argument?**

23 A: No. Again, Mr. Wolverton fails to acknowledge (or maybe even
24 recognize) the implications of his argument, namely, ratepayers would pay
25 higher rates.

26 Suppose for a moment that Mr. Wolverton is correct when he says, "The
27 ultimate risk may be the same as between a regulated-utility or market-
28 offered project." By his reasoning, in the next rate case we can dispense
29 with any arguments over the rate of return on equity and simply award

1 PacifiCorp a rate of return commensurate with that risk associated with
2 competitive firms, say rate equal to the average rate of return for the S&P
3 500. While PacifiCorp may not argue against this approach, other parties
4 would likely have, what is euphemistically called in my house, a
5 conniption fit.

6 The point is the argument is invalid. While it is true that ratepayers bear
7 the risk that an asset will be uneconomic in the future, this is true of any
8 asset or contract.[11] The regulatory compact recognizes this risk and trades
9 that risk off with lower rates – regulated utilities, unlike competitive
10 firms, depreciate assets over the physical life of the asset in exchange for
11 a franchise. The regulated utility accepts the obligation to serve in
12 exchange for the opportunity to earn an authorized rate of return.

13 **Q: The Committee makes a number of recommendations. Do you have**
14 **comments regarding these recommendations?**

15 A: The Division believes that some of the recommendations made by the
16 Committee are not tenable. For example, providing bidders with copies of
17 the Company's models is problematic in two ways. First, the models
18 contain proprietary information such as forward price curves. Second,
19 providing copies of the models to tens if not hundreds of bidders along
20 with the necessary training and support would be expensive and time
21 consuming. Other recommendations seem reasonable and could
22 potentially improve the RFP process and bid evaluation. However, the
23 Division would like an opportunity to fully vet these recommendations in
24 a setting outside of this docket. Therefore, the Division supports the
25 Committees recommendation to open a docket to discuss ways in which
26 the RFP process can be improved.

[11] Indeed, it is my understanding that a large portion of the stranded costs identified in California were due to uneconomic QF contracts.

1 **C o n c l u s i o n s**

2 **Q: What do you conclude from all this?**

3 A: Parties in this docket have argued that PacifiCorp's RFP process and
4 evaluation of the bids was seriously flawed and the certificate should be
5 denied and the RFP should possibly be re-bid. In particular, parties have
6 argued that, for one reason or another, PacifiCorp's RFP unfairly
7 compared a its NBA project to other bids. However, after thoroughly
8 reviewing the available evidence, it is the Division's opinion that
9 recommendations to deny the certificate and/or re-bidding the RFP are not
10 supported by the evidence presented in this case. In its final report to the
11 Commission on PacifiCorp's 2033-A RFP, Navigant concluded that the
12 RFP process was fair and consistent, and managed in a manner that lead to
13 "unassailable" results.[12] In general, the Division's investigation in this
14 matter found no evidence to refute Navigant's conclusions.

15 The Division is aware of the possible affects on ratepayers, but after
16 weighing the evidence before them, including direct testimony filed by
17 other parties, the Division concludes that PacifiCorp's Currant Creek is
18 the least cost alternative among the bids submitted in this RFP and
19 granting the certificate is in the public interest. Therefore, the Division
20 recommends awarding PacifiCorp the certificate of Necessity and
21 Convenience.

22 **Q: Does this conclude your testimony?**

23 A: Yes.

[12] "Navigant Consulting's Final Report on PacifiCorp's RFP 2003-A," Navigant Consulting, Inc., February 11, 2004.