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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application of
PACIFICORP for Approval of its Proposed
Electric Service Schedules and Electric
Service Regulations

DOCKET NO. 04-035-42

PREFILED DIRECT TESTIMONY OF NEAL TOWNSEND

[REVENUE REQUIREMENT]

The UAE Intervention Group hereby submits the Prefiled Direct Testimony of Neal Townsend on revenue requirement issues.

DATED this 3rd day of December, 2004.

Gary A. Dodge,
Attorney for UAE Intervention Group

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was sent this 3rd day of December, 2004, to the mail or email addresses listed below:

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PREFILED DIRECT TESTIMONY

Of

NEAL TOWNSEND

[REVENUE REQUIREMENT]

On behalf of UAE Intervention Group

In the Matter of the Application of PACIFICORP for Approval of its Proposed Electric Service
Schedules and Electric Service Regulations

Docket No. 04-035-42

December 3, 2004

1 **Q. Please state your name and business address.**

2 A. My name is Neal Townsend. My business address is 39 West Market
3 Street, Suite 200, Salt Lake City, Utah 84101.

4 **Q. For whom do you work?**

5 A. I am a Senior Consultant in the firm of Energy Strategies, LLC, a
6 professional energy consulting firm.

7 **Q. Please describe your educational background.**

8 A. I received an MBA from the University of New Mexico in 1996. I also
9 earned a B.S. degree in Mechanical Engineering from the University of Texas at
10 Austin in 1984.

11 **Q. Please describe your professional experience and background.**

12 A. I have provided regulatory and technical support on a variety of energy
13 projects at Energy Strategies since I joined the firm in 2001. Prior to my
14 employment at Energy Strategies, I was employed by the Utah Division of Public
15 Utilities as a Rate Analyst from 1998 to 2001. I have also worked in the
16 aerospace and oil and natural gas industries.

17 **Q. On whose behalf are you testifying?**

18 A. I am filing testimony on behalf of the Utah Association of Energy Users'
19 Intervention Group (UAE).

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

21 A. I was asked to develop a reasonable but conservative estimate of the
22 revenue requirement impact for the test year in this rate case of PacifiCorp's (the

1 Company) reliance on the West Valley lease extension, the Currant Creek plant
2 and market purchases in comparison to a hypothetical power project that would
3 have been available during the test year had the company elected to proceed
4 sooner with development of a long-term, low-cost natural gas generating unit. To
5 develop such an estimate, I had intended to use the projected heat rate, load factor,
6 costs and other data from the Lake Side project, given that PacifiCorp has now
7 identified that resource as the preferred option for a resource coming on line in
8 2007. My intent was to calculate the amount of savings, if any, that would have
9 resulted had the Lake Side project been brought on line approximately two years
10 earlier, in April of 2005. We requested information on the Lake Side project that
11 would have allowed us to do this comparison. The company refused to provide
12 some of the necessary information, however, so I had to develop data for a
13 combined cycle combustion turbine (CCCT) proxy plant. I turned to publicly
14 available sources to develop the necessary inputs for this proxy plant.

15 **Q. Can you please summarize your testimony?**

16 A. In my testimony, I explain how I derived an estimate of the test period
17 impact of removing the costs associated with the West Valley peakers and the new
18 air-cooled Currant Creek plant. I also provide an explanation of how I developed
19 the impact associated with a new water-cooled CCCT proxy plant located within
20 the Utah transmission bubble for inclusion in the test period revenue requirement.
21 The estimated Utah impact for each of these adjustments is shown on Exhibit
22 UAE 2.1 (TNT-1)

1 **Q. How did you estimate the West Valley Peaker costs in the test period?**

2 A. The Company provided a number of test period costs related to the West
3 Valley plant in a data response to CCS data request 8.2. I have used these costs to
4 estimate the impact of removing non-fuel costs for West Valley from the test
5 period. The net power cost study results provided in Tab 5 of Company's exhibit
6 JTW-1 include the projected normalized West Valley fuel costs that I have also
7 removed from the test period. The detail for these adjustments is shown in
8 Exhibit UAE 2.2 (TNT-2)

9 **Q. How did you estimate the Currant Creek costs in the test period?**

10 A. To my knowledge, the full test period impact of the Currant Creek plant
11 has not been explicitly detailed by PacifiCorp in this case. I have thus derived the
12 estimated cost impact from various sources of available information.

13 For the electric plant in service, accumulated depreciation, and
14 depreciation expense, I used the Company's rate case methodology to estimate the
15 values. The Company added \$127 million dollars for the initial simple cycle
16 phase to rate base in July 2005, allocated on the SSGCT factor. An additional
17 \$221 million is added to rate base in March 2006, allocated on the SG factor, to
18 reflect the conversion to combined cycle operation. A thirteen month average is
19 then determined for each of these balances. Since the plant is brand new, I have
20 not assumed any monthly retirements or additions to the base Currant Creek rate
21 base additions noted above. For depreciation, the Company has developed
22 composite depreciation factors for each account. These depreciation factors

1 appear to be applied to a twelve month average account balance to determine the
2 depreciation expense. This depreciation expense is then added to accumulated
3 depreciation for each account. I have used this same method to determine the
4 depreciation expense and accumulated depreciation for the Currant Creek plant.
5 Since the Currant Creek plant is new, the accumulated depreciation begins at zero.

6 For fuel costs, I have again used the net power cost study contained in Tab
7 5 of JTW-1 to remove the costs associated with Currant Creek. The net power
8 cost study appears to model Currant Creek as a simple cycle plant throughout the
9 test period despite the inclusion of the combined cycle plant costs added to rate
10 base in March 2006. However, the simple cycle fuel costs for March 2006 are
11 allocated to PacifiCorp's various jurisdictions using the SE factor instead of the
12 seasonal combustion turbine allocation. I assume PacifiCorp made this
13 adjustment to recognize that the combined cycle plant costs are included in March
14 2006.

15 I have also removed non-labor, non-fuel expenses associated with the
16 plant provided in JTW-1 on Tab 4, Adjustment 16. For property taxes, I have
17 used the property tax factor used in the present value revenue requirement
18 (PVRR) analysis in the Currant Creek CC&N proceeding. The detail for these
19 adjustments is shown in Exhibit UAE 2.3 (TNT-3)

20 My analysis is conservative in that I made no adjustment to remove the
21 test period costs projected for upgrading the Wasatch Front South transmission
22 constraint. PacifiCorp noted in a data response that there is approximately \$1.3

1 million included in FY 2005 and \$1.1 million in FY 2006 related to a multi-year
2 upgrade of this transmission path to increase its capacity by 525 MW, presumably
3 to accommodate the Currant Creek Plant.¹ While these costs could properly be
4 eliminated from the test year, I have elected not to do so. Also, I made no
5 adjustments for labor O&M or any other costs or benefits associated with the
6 Currant Creek plant – on the assumption that the proxy plant will have similar
7 costs and benefits for such factors.

8 **Q. How did you estimate the impact of adding a proxy CCCT plant?**

9 A. For electric plant in service, I have used the cost of the Lakeside plant as
10 projected by the Company in its Lakeside CC&N public testimony.² Again, I
11 used the Company's 13-month average rate base methodology to determine the
12 test period electric plant in service. However, I added the costs into rate base at
13 the beginning of the test period, April 2005. As described earlier, I then applied
14 the composite depreciation rate to the 12-month account average to determine the
15 test period depreciation expense and accumulated depreciation. Unlike the West
16 Valley and Currant Creek plants, these costs under the MSP Protocol would be
17 allocated to PacifiCorp's various jurisdictions using the SG factor, since this is a
18 CCCT plant.

19 To estimate net power cost impacts, I used the capacity of the Lake Side
20 plant for both the CCCT portion (489 MW, including the 19 MW associated with

1 See PacifiCorp Response to UIEC Data Request No. 2.26b.

2 See PacifiCorp's M. Tallman Lakeside CC&N (Docket No. 04-035-30) Direct Testimony at p. 12

1 steam augmentation) and the duct firing portion (45 MW). These capacities are
2 varied seasonally in a similar manner to the pattern used in the Currant Creek
3 PVRR analysis. For the capacity factor for the CCCT and duct firing, I have used
4 the capacity factors from the Currant Creek PVRR analysis for each month
5 corresponding to the test period. I have used average annual heat rates for the wet
6 CCCT and duct firing from information provided by PacifiCorp for "PAC East" in
7 its current 2004 integrated resource plan (IRP) process. These heat rates are
8 varied seasonally in a manner similar to the Currant Creek heat rates used in the
9 PVRR analysis. For the fuel cost of the new plant, I have used the Currant Creek
10 fuel costs, except for the first three months of the test period before Currant Creek
11 is projected to go into operation. For these three months, I use the West Valley
12 plant fuel costs. These inputs were used to estimate monthly fuel costs and fuel
13 dispatch costs.

14 The proxy CCCT plant would produce more energy than the West Valley
15 Peakers and the Currant Creek plants are projected to produce during the test year.
16 If the monthly dispatch cost of the proxy CCCT plant (excluding duct firing) was
17 less than short term firm (STF) and balancing purchase market prices projected by
18 PacifiCorp for the test year for East Main and the Deseret Southwest, I displaced
19 those purchases with the additional proxy plant output. Any remaining energy
20 was assumed to be sold at the average fuel dispatch cost (including duct firing),
21 thus offsetting the related fuel cost. This assumption is conservative because it is
22 likely that the excess generation could either offset purchases at other locations or

1 be sold for more than fuel costs.

2 I have also included a property tax adjustment at the same rate as used in
3 the Currant Creek PVRR analysis and a non-fuel, non-labor O&M adjustment
4 using the same ratio as the Currant Creek amount in the test year. Similar to the
5 Currant Creek analysis, I have made no adjustment for labor O&M or for any
6 other impacts related to the proxy plant. The detail of these adjustments is shown
7 in Exhibit UAE 2.4 (TNT-4).

8 **Q. Could you have re-run the GRID model to estimate net power cost impacts of**
9 **the proxy plant?**

10 A. A GRID run would certainly be another method for projecting the net
11 power cost impacts of the proxy plant. A GRID run would theoretically take into
12 account most areas of potential impacts. The output of a GRID run, of course, is
13 dependent upon all of the assumptions and projections that are normally input into
14 the model, as well as a number of assumptions and projections that would be
15 necessary to replace West Valley and Currant Creek with Lake Side. We have
16 asked the company to run the GRID model without the West Valley and Currant
17 Creek resources and with the Lake Side project online by April 1, 2004. The
18 results of this run will be of interest. However, I am confident that my estimate of
19 net power costs impacts is both reasonable and conservative.

20 **Q. What is the test year revenue requirement impact with the changes and**
21 **adjustments that you propose?**

22 A. The net estimated test year impact of this adjustment is a reduction of

1 \$16.4 million dollars in Utah revenue requirement for the test year. This
2 calculation is detailed in Table 1 below.

Table1
(\$000s)

<u>Ln</u>	<u>Description</u>	<u>Amount</u>
7	1 WV Peaker Expense Impact	(20,968)
8	2 Currant Creek Expense Impact	(19,513)
9	3 Proxy Plant Expense Impact	<u>27,700</u>
10	4 Net Change in Expense (Ln 1 + Ln 2 + Ln 3)	(12,781)
11		
12	5 Currant Creek Rate Base Impact	(42,749)
13	6 Proxy Plant Rate Base Impact	<u>122,892</u>
14	7 Net Change in Rate Base (Ln 5 + Ln 6)	80,143
15		
16	8 Return on Rate Base @ 8.732% (Ln 7 x 8.732%)	6,998
17		
18	9 Net Impact before Bump-Up (Ln 4 + Ln 8)	(5,783)
19	10 Net to Gross Bump-Up of 1.6246 (Ln 9 x 1.6246)	(9,395)
20	11 Additional Sales Revenue	(7,026)
21	12 Total Estimated Rev. Req't Impact (Ln 10 + Ln 11)	<u>(16,421)</u>

23 **Q. Does this conclude your testimony?**

24 A. Yes it does.