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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In the Matter of the Application)	Docket No. 01-035-01
Of PacifiCorp for an Increase in)	PRE-FILED DIRECT COST OF
Its Rates and Charges)	SERVICE AND SPREAD OF RATES
)	TESTIMONY OF JOSEPH A. HERZ, P.E.
)	FOR THE UNITED STATES
)	EXECUTIVE AGENCIES

June 13, 2001

Prepared Cost of Service and Spread of Rates Direct Testimony
of
Joseph A. Herz, P.E.

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1 **COST OF SERVICE AND SPREAD OF RATES**
2 **DIRECT TESTIMONY OF JOSEPH A. HERZ, P.E.**
3

4 **I. INTRODUCTION**

5 Q. Please state your name.

6 A. My name is Joseph A. Herz.

7
8 Q. Are you the same Joseph A. Herz that provided Direct Revenue Requirement Testimony
9 in this proceeding on behalf of the Department of the Air Force representing the United
10 States Executive Agencies (USEA)?

11 A. Yes, I am.

12
13 Q. What is your role in the Cost of Service and Spread of Rates phase of this proceeding?

14 A. My role in this phase of the proceeding is to review and analyze the PacifiCorp Cost of
15 Service Study and proposed Spread of Rates, and to provide comments and describe
16 some of the adjustments that should be incorporated for purposes of establishing cost
17 responsibility of customer classes.

18
19 Q. What did you do in preparation for filing your direct testimony?

20 A. I reviewed PacifiCorp's application, certain testimonies, exhibits and work papers
21 pertaining to the PacifiCorp Cost of Service and Rate Design Models. I reviewed certain
22 responses to interrogatories and requests for production of documents submitted by
23 USEA and various intervenors to this proceeding. In addition, there were a number of
24 discussions with PacifiCorp representatives regarding the PacifiCorp Cost of Service

1 Model in an attempt to achieve a better understanding and familiarity with the Cost of
2 Service Model and some of the input assumptions. The PacifiCorp Cost of Service
3 Model was used to evaluate the impact of the corrections and adjustments described in
4 my testimony.

5

6 Q. Are you sponsoring any exhibits in this Cost of Service and Spread of Rates phase of the
7 proceeding?

8 A. Yes, I am sponsoring Exhibits USEA-____ (JAH-6) and ____ (JAH-7). Exhibit
9 USEA-____ (JAH-6) provides the Cost of Service impact of the adjustments and
10 sensitivities of certain inputs described later in this testimony. Exhibit USEA-____
11 (JAH-7) provides a comparison of the spread of present and proposed rates together with
12 Cost of Service distributions. My workpapers USEA-WP-7 through USEA-WP-9 are
13 also provided with this testimony.

14

15 Q. Were these exhibits prepared by you or under your direct supervision?

16 A. Yes, they were.

17

1 **II. SUMMARY**

2 Q. Please summarize your testimony in the Cost of Service and Spread of Rates phase of this
3 proceeding.

4 A. Based on the results of the Cost of Service Study, and in the interest of implementing any
5 rate increase resulting from this proceeding in a fairly uniform manner across customer
6 classes, PacifiCorp proposes to allocate the price increase to most customer classes on an
7 equal percentage basis. (See Direct Testimony of William R. Griffith, Page 2, lines 10 –
8 13.) The exceptions to the uniform percentage increase are the Irrigation class, which
9 PacifiCorp proposes to increase prices by approximately 125% of the overall average
10 increase, and the Lighting classes, which PacifiCorp proposes to increase prices by
11 approximately 75% of the overall average increase. PacifiCorp indicates the Cost of
12 Service results were the basis for proposing an above average price increase to the
13 Irrigation customers and a below average price increase for the Lighting customers. (See
14 Direct Testimony of William R. Griffith, Page 27, lines 16 – 19.)

15
16 In the consideration of the Spread of Rates for implementation, there are certain
17 adjustments and sensitivities to PacifiCorp's Cost of Service Study to be taken into
18 account (these items are discussed later in my testimony). Consideration of these
19 adjustments and sensitivities would result in the need for an above average price increase
20 for the Residential class and a below average increase for the General Service - High
21 Voltage class.

1 **III. COST OF SERVICE AND SPREAD OF RATES**

2 Q. What Cost of Service considerations should the Commission take into account with
3 regard to Cost of Service and Spread of Rates?

4 A. At this time, there are two principal considerations that need to be taken into account.
5 These are:

6 (1) PacifiCorp's use of a 75% weighted demand, 25% weighted energy allocation factor
7 rather than assignment of demand, or fixed, types of costs on the basis of a 100%
8 demand allocation factor.

9 (2) Residential coincident demand inputs may be understated.

10

11 Q. What test year revenue requirements are used in your Cost of Service analysis?

12 A. I used PacifiCorp's test year revenues, expenses and rate base filed in February 2001 and
13 the \$142,156,000 revenue increase requested by PacifiCorp. It is my understanding that
14 PacifiCorp may make changes to its net power costs, and that such changes will likely
15 impact test year off-system revenues and power cost expenses. Accordingly, the changes
16 that PacifiCorp plans to make to test year revenue requirements, if allowed by the
17 Commission, may impact Cost of Service results and spread of rate recommendations.

18

19 It is also my understanding that the procedural schedule provides the opportunity to
20 update my Cost of Service analysis and Spread of Rates recommendations in surrebuttal
21 testimony to recognize the Commission's Final Order on revenue requirements
22 anticipated to be issued in September 2001. Therefore, my Cost of Service and Spread of

1 Rates recommendations are pending the Commission's actions on PacifiCorp's plans to
2 make test year changes and the Final Order on revenue requirements.

3
4 **A. 75/25 Demand/Energy Allocation Factor**

5 Q. Please explain PacifiCorp's use of the 75/25 demand/energy allocation factor.

6 A. PacifiCorp allocated system demand or fixed costs on the basis of an allocation
7 factor that is weighted 75% to demand and 25% to energy. An example of the
8 types of demand or fixed costs that are allocated between the various customer
9 classes by use of the 75/25 demand/energy allocation factor would be Utah's
10 share of PacifiCorp's production plant and the fixed, non-variable operation and
11 maintenance (O&M) expenses associated with such production facilities. These
12 fixed production O&M expenses and production plant are demand related and not
13 directly related to jurisdictional energy use. On the other hand, Utah's share of
14 PacifiCorp's variable production O&M expenses, such as fuel expense, is
15 directly related to jurisdictional energy requirements. PacifiCorp assigns these
16 variable production O&M expenses on the basis of an energy-only factor.
17 PacifiCorp allocates fixed costs on the basis of the 75/25 demand/energy
18 allocation factor. PacifiCorp's methodology is equivalent to redefining 25% of
19 its demand or fixed costs as being variable or energy related and allocating such
20 redefined fixed costs on the basis of an energy factor. PacifiCorp's use of a
21 75/25 demand/energy allocation factor is inconsistent with its definition of
22 demand (fixed) costs and is inappropriate in that it does not allocate demand
23 related costs on the basis of a demand factor, but rather on the basis of a factor

1 consisting of weighted demand and energy factors. This results in an inequitable
2 distribution of demand or fixed costs between the customer classes.

3
4 Q. Why is this inappropriate?

5 A. PacifiCorp's use of a 75/25 demand/energy allocation factor is inappropriate in
6 that a portion of its demand related costs are allocated according to energy use.
7 Demand related costs are incurred to meet Utah's share of PacifiCorp's demand
8 requirements, not necessarily the energy usage. Likewise, it would be
9 inappropriate to allocate Utah's share of PacifiCorp's energy costs on a 75/25
10 energy/demand allocation factor consisting of a weighting of energy and demand
11 factors. Energy costs are variable costs incurred for purposes of meeting energy
12 requirements. PacifiCorp allocates these energy related costs on an energy only
13 factor. The same applies for Utah's share of PacifiCorp's demand or fixed costs.
14 Such costs should be allocated on the basis of a demand-only factor.

15
16 Q. Why is this significant to the Commission's consideration of Cost of Service
17 Study results?

18 A. PacifiCorp's use of a 75/25 demand/energy allocation factor to allocate its
19 demand costs overstates the revenue requirement responsibility for its high load
20 factor customers. The energy allocation factor for the high load factor customers
21 is significantly higher than its demand allocation factor. Use of a 75/25
22 demand/energy allocation factor as proposed by PacifiCorp in this proceeding

1 would penalize some customer classes such as the General Service - High Voltage
2 class for its higher load factor characteristics.

3
4 Q. How does use of a 75/25 demand/energy allocation factor affect the General
5 Service – High Voltage class?

6 A. As shown by Workpaper for Exhibit UP&L ____ (DLT3) Tab 5, Page 1, the
7 75/25 demand/energy allocation factor would assign 15.466% of Utah’s share of
8 PacifiCorp’s fixed costs to the General Service – High Voltage Class; whereas
9 the demand factor indicates that Transmission class customers should be
10 responsible for only 14.80% of Utah’s share of PacifiCorp’s fixed costs. Use of
11 the 75/25 demand/energy allocation factor would, accordingly, assign demand or
12 fixed costs to the General Service – High Voltage class in an amount which
13 exceeds the demand costs responsibility.

14
15 Q. What impact does the use of a 75/25 demand/energy allocation factor have on
16 Cost of Service results.

17 A. Exhibit USEA-____ (JAH-6) summarizes the impact of the use of the 75/25
18 demand/energy allocation factor on Cost of Service results. As indicated by
19 Exhibit USEA-____ (JAH-6), the 75/25 demand/energy allocation factor
20 understates the assignment of demand or fixed costs to the Residential and
21 General Service Large and Small customer classes and overstates the assignment
22 of demand or fixed costs to the General Service – High Voltage and other

1 customer classes. The impact on the General Service – High Voltage class is an
2 impact of over \$3,000,000.

3
4 Q. What consideration should this have on the Commission’s evaluation of the Cost
5 of Service and Spread of Rates phase of this proceeding?

6 A. In the event the Commission does not implement a uniform rate increase to either
7 the Residential or the General Service – Large rate classes as proposed by
8 PacifiCorp, then an above average price increase should be applied to the
9 Residential classes, and a below average price increase should be applied to the
10 General Service – Large class.

11
12 **B. Residential Coincident Demand Input**

13 Q. What comments do you have on the results of Residential coincident demand
14 inputs used in PacifiCorp’s Cost of Service Study?

15 A. The Residential coincident demand inputs were much lower than I expected
16 would be the case. Since Residential demands are not normally metered, as in the
17 case of Large Power customers, certain assumptions must be made regarding
18 Residential class demands. The assumed Residential demand inputs to the Cost
19 of Service Model have a significant impact on Cost of Service results.

20
21 Q. What do you think the reason is?

22 A. It appears the coincident peak demand for the Residential class is the reason.

23

1 Q. What is the basis for PacifiCorp's residential demand inputs?

2 A. Through conversation, PacifiCorp indicated it has an ongoing load research
3 program on customers that are not metered with demand meters, such as
4 Residential customers. PacifiCorp stated the Residential demand inputs are based
5 on the results of its load research efforts, and that the estimates of the Residential
6 coincident and non-coincident peak demands are determined from the load
7 research programs.

8

9 Q. Did PacifiCorp provide the results of the load research that were used in this Cost
10 of Service Study?

11 A. Only the results of the load research study were provided by PacifiCorp in the
12 Cost of Service analysis. The information in the Cost of Service analysis
13 indicates that the Residential class load factor is approximately 15% based on
14 non-coincident demand and 72% based on coincident demand. These load factor
15 ratios are different than I expected, so attempts were made to get more
16 information than that provided in the PacifiCorp filing.

17

18 Q. Please describe these efforts.

19 A. A request was made for studies relied on for developing demands for non-demand
20 metered customers (see USEA second set data requests 2.10 and 2.15).
21 PacifiCorp did not provide any additional documents or information, but instead
22 referred back to the inputs used in the Cost of Service Model (see PacifiCorp's
23 responses to USEA second set data requests 2.10 and 2.15). Follow-up attempts

1 were made to discuss the load research information requested. The last attempt
2 occurred one week before the filing deadline of this testimony. PacifiCorp
3 indicated a written data request would need to be submitted to obtain the load
4 research information. Concerns were expressed that submitting a data request
5 again would not get the information before the filing deadline and a request for
6 this information to be provided electronically via E-mail was made. Although
7 initially it was indicated that I might receive the information electronically, I was
8 later informed that PacifiCorp would not be providing the additional information.

9
10 Q. What did you do next?

11 A. Lacking the opportunity to review the underlying basis for the Residential
12 demand inputs to the Cost of Service, I evaluated the impact on the Cost of
13 Service results of an increase of 10% for the estimated coincident peak demand
14 for the Residential class inputted in the Cost of Service Model. Absent additional
15 information from PacifiCorp, this increase in coincident peak demand brought the
16 load factor for the Residential class closer to the range of an expected load factor.
17 This 10% change to the Residential demand input provides an evaluation of the
18 sensitivity of the inputs used by PacifiCorp.

19
20 Q. What impact did this 10% increase to the estimated Residential class coincident
21 peak have on the Cost of Service results?

22 A. As shown in Exhibit USEA-____ (JAH-6), this 10% change to the estimated
23 coincident peak for the Residential class increases its cost responsibility by

1 \$10,945,181. The Cost of Service results to all other rate classes decreased by
2 \$10,945,181.

3
4 Q. How should this factor into the Commission's consideration of Cost of Service
5 results and Spread of Rates in this phase of the proceeding?

6 A. Absent the opportunity to review the underlying basis for the Residential class,
7 one is not able to due diligently gain comfort with PacifiCorp's inputs to the Cost
8 of Service Model. The Cost of Service results are significantly impacted by the
9 Residential coincident demand inputs to the model. Accordingly, the preciseness
10 of the results of Cost of Service Study remains an open question and is of limiting
11 value for Spread of Rates other than a uniform price increase to all classes. The
12 exceptions, of course, are the Irrigation and Lighting classes which continue to
13 show a significant deviation from Cost of Service even with the sensitivity
14 adjustment to Residential coincident demands.

15
16 Q. If the Commission were to consider a Spread of Rates different than proposed by
17 PacifiCorp, how would these considerations impact the Spread of Rates.

18 A. These considerations would point to the need to increase prices to the Residential
19 class greater than the overall average and to decrease the price increase to the
20 General Service – High Voltage class to less than the overall average. All other
21 classes should receive the price increases as proposed by PacifiCorp.

22
23

1 **IV. RATE DESIGN**

2 Q. Please describe PacifiCorp's proposed rate design changes in this rate case?

3 A. USEA's principle focus is with the Schedule 9 rate schedule. My testimony will address
4 the proposed rate design to Schedule 9. Schedule 9 is presently structured with customer
5 demand and energy charges. PacifiCorp is proposing an equal percentage increase of
6 demand and energy charges that produces the targeted revenue from the class. No
7 change is proposed to the customer charge.

8

9 Q. Do you agree with PacifiCorp's proposed rate design changes for Schedule 9?

10 A. Yes, at this time I do. However, as previously indicated, it is not known at this time
11 what actions the Commission may take regarding PacifiCorp's plans to make changes to
12 its test year operations, or on PacifiCorp's test year revenue requirements. As a result, it
13 is not known what, if any, impact these decisions will have on my recommendations at
14 this time. However, it is my understanding such matters can be addressed in surrebuttal
15 testimony following the Commission's Final Order on revenue requirements.

16

17 Q. Does this conclude your testimony?

18 A. Yes it does.

19