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BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

IN THE MATTER OF THE APPLICATION)
OF PACIFICORP FOR APPROVAL OF) Docket No. 99-035-10
ITS PROPOSED ELECTRIC RATE)
SCHEDULES AND ELECTRIC) AFFIDAVIT OF ROBERT
SERVICE REGULATIONS) MCCULLOUGH IN SUPPORT OF
) MOTION FOR ADDITIONAL TIME
) TO FILE DIRECT TESTIMONY

STATE OF OREGON)
)
COUNTY OF _____)

1. I am a principal in McCullough Research. We have been retained by the Large Customer Group (“LCG”) to prepare testimony in this rate case on issues relating to PacifiCorp’s wholesale costs and revenues, power supply models, and related matters.

2. On December 20, 1999, the LCG served “LCG Data Request No. 2 to PacifiCorp” requesting information needed for us to complete our analysis. PacifiCorp began responding to the request on January 13, 2000, but its response was incomplete. Additional responses were provided throughout the following week.

3. Some information readily available to PacifiCorp on the day the data request was submitted has still not been provided. Other information provided by PacifiCorp was damaged and/or incomplete. For example, PacifiCorp’s power supply model, PD/Mac, was supplied on obsolete Macintosh 720k diskettes. One of the three diskettes supplied to us was damaged and had to be replaced. PD/Mac would still not run properly on any of the Macintosh machines at my office. We sent the diskettes to the Committee’s expert, Mr. Phillip Hayet. He informed us that the disks provided to us by PacifiCorp also showed an “unimplemented trap” error on his computer, even though the files provided directly to Mr. Hayet apparently did not develop this error. After substnatial inquiry we have found that the minimal documentation supplied by Pacific – 18 pages – incorrectly identified the process of setting up their model’s directories on a Macintosh.

4. The most critical component of PacifiCorp’s modeling – the development of spot market prices – is developed by a model unmentioned in Mr. Widmer’s testimony – the “Impact Model,” which was first provided to me on January 18, 2000. Critical documentation, without which computer models are difficult to run or complete, was not provided. On

January 24, 2000, PacifiCorp provided us with information reflecting that critical portions of the Impact Model are proprietary and will not be supplied to us.

5. In both cases – PD/Mac and Impact – Pacific has supplied only the most cursory documentation. Industry practice for major computer models is to include detailed running instructions, a variable dictionary, a code hierarchy, and a write up of the operation of the model. For models whose impacts may well run into the hundreds of millions of dollars and whose construction cost hundred of thousands of dollars, it is very unlikely that such documentation does not exist.

6. A critical review of PacifiCorp's PD/Mac model is seriously complicated by the unique and obsolete nature of that model. The current version of the model dates from the early part of the last decade. In a world where computer capability has expanded enormously, old, obsolescent computer models written in even older obsolete computer languages tend to defeat the very purposes of regulatory review and open ratemaking proceedings.

7. The primary purpose of our current review is to analyze whether PacifiCorp's models are appropriate forecasting tools for power costs and sales-for-resale. PacifiCorp's computational methods and tools are unusually opaque, particularly by regulatory standards, in a number of ways:

a. First, PD/Mac, the primary computer model, will not run on currently available computers or with currently available computer tools or languages.

b. Second, PD/Mac was provided in a fashion that makes reliable operation very difficult. Operation requires special undocumented steps such as renaming the name of the hard drive.

c. Third, the model is written in an unusual and archaic computer dialect that makes auditing extremely difficult. This is comparable to providing numerical tables in Sanskrit – a language not commonly used in regulatory proceedings. In order to audit this model, the calculations must be translated into commonly available languages that can run on commonly available computers. McCullough Research is working feverishly on this translation, but it is a very difficult and time-consuming task and our progress has been delayed by delays in receiving information.

d. Fourth, the model reflects a state of the electric utility industry that is largely obsolete. Tremendous and basic changes in the industry over the past decade are not reflected in the model. Thus, even if the model were fully audited and were shown to correctly do calculations based on its inputs, the results would be largely irrelevant to an evaluation of PacifiCorp's power costs in today's world. The model needs to be carefully evaluated, updated and adjusted in light of industry changes since the early 1990s. Considering that this period has seen the most substantive changes in the entire history of the industry, the simple operation of an outdated model is clearly insufficient.

e. Fifth, the PD/Mac model is critically dependent on the outputs of the Impact Model. The Impact Model is written in a current computer language that will run on currently available computers. Unfortunately, however, critical parts of the Impact Model are apparently proprietary and cannot easily be understood or reviewed. .

8. McCullough Research is taking appropriate steps to review and audit the two computer models utilized by PacifiCorp. We are working diligently to complete our assignment and prepare testimony, but our work has been severely complicated and delayed due to the items summarized above. We will not be in a position to file direct testimony by this Friday. Our testimony is dependent upon our ability to operate the PD/Mac model and to check its operations. These steps are underway and we anticipate that we can complete them and file our testimony by February 11, 2000.

Robert McCullough

Subscribed and sworn to before me this ____ day of _____, 2000.

[Seal]

Notary Public

Residing at: _____

My Commission Expires:

CERTIFICATE OF SERVICE

I hereby certify that a true and correct copy of the foregoing was mailed, postage prepaid, this ____ day of _____, 2000, to the following: Edward Hunter

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