BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

In The Matter of the Application of PacifiCorp for Approval of an IRP Based Avoided Cost Methodology for QF Projects Larger than 1MW	))))))	Docket No. 03-035-14

Reconsideration Rebuttal Testimony of Gregory L. Probst

February 17, 2006

Q. Please state your name.

A. Gregory L. Probst, 9 Pepperwood Drive, Sandy. Utah.

Q. You previously submitted testimony in this docket?

A. Yes, I submitted Reconsideration Direst testimony.

Q. What is the purpose of your testimony?

A. I will be responding to positions taken by other parties to this proceeding in Reconsideration Direct testimony, in particular regarding wind QF projects and the availability of credits for avoided line losses and avoided transmission facility costs.

Q. Please give a summary of your testimony.

A. QF wind facilities should be eligible to receive avoided transmission costs in appropriate cases. QF wind facilities should almost all be eligible for avoided line loss credits. This Commission should mandate that staff monitor development of emerging technologies that may greatly improve the timeliness, ease and economy of the measurement of avoided line losses and other transmission and distribution system benefits to improve the efficiency of the transmission and distribution system and when technology has been validated should implement an equitable allocation of measured benefits.

Q. Do you agree with Mr. Griswold that remotely sited wind generators may incur greater line losses being transmitted to a load center than the average values of the PacifiCorp Open Access Transmission Tariff (OATT)?

A. That appears likely in some cases; it would depend on the characteristics of the facility and the transmission

system, such as size and location of use. The same question applies with equal force to the RFP facility and the QF facility, so in each case an accurate characterization would require the same kind of review. PacifiCorp has focused its review on the characteristics of the QF and not on the comparison between the two facilities as it should.

For example, the RFP facility may be located at a remote location and the QF resource close to or in the Wasatch Front load center. In this case, an initial expectation may be that the RFP facility may incur greater line losses. The reverse case could also apply. However, in either event the remote resource may actually serve primarily local load and may help avoid line losses on a radial system component. Or, the remote facility may serve little local load compared to its size and primarily send power to more distant load centers. It is possible that one facility or the other may have losses associated with transformation. So the actual line losses for either facility involves a determination that is unique, but to simply review the QF without comparing to the RFP facility will not be adequate.

Q. Does your previous answer imply that you believe we should ignore system average line losses in assessing project line loss comparisons?

A. No; PacifiCorp has claimed that it would be difficult to calculate incremental avoided line losses, and in fact would require multiple snapshots to reflect seasonal and future year variations. PacifiCorp has expressed a concern about the adequacy of its current tools to perform these multiple analyses. Accordingly, it recommends using system average line loss rates and relative proximity of the proxy and QF resource to determine comparative avoided line losses (although it curiously claims that only thermal resources should be entitled to this benefit). The suggestion of a determination based on a relative distance comparison is probably reasonable as a beginning point, but the limitation to “predictable” thermal projects is preposterous. The system average line loss rates are determined in reference to all energy moving over the

system. We will discuss this point further below. As an alternative, the comparison of line losses could reevaluated on a periodic basis, such as every five years, to reflect any substantial future changes in the system. As a better alternative, the Commission could set an initial procedure, such as the proximity comparison based on system average line losses, but order the staff and utility to monitor changes in transmission and distribution modeling software and recommend implementation of an alternative system when reasonably justified by technology developments. We will discuss this point below.

Q. Do you accept PacifiCorp's characterization of wind projects as "unpredictable"?

A. No; you actually have to take a closer look at the time frame of measurement and compare to the characteristics of the proxy RFP unit. The attribution of "unpredictability" is both inaccurate and a red herring. PacifiCorp's own IRP studies have demonstrated that wind resources have significant predictability over short time frames, and that the incremental reserves required to compensate for the intermittency of wind resources in short time frames are extremely modest. The incremental operating costs caused by wind resources have also been estimated and are very modest. A very similar result has been obtained under numerous system integration cost studies by third parties. Any claimed "unpredictability" has probably already been adequately compensated by system integration charges ordered by the Commission and this claim by PacifiCorp may be a misleading attempt to double discount. For all to understand the issue better, PacifiCorp would need to start an honest look at this issue by comparing the respective "unpredictability" of the RFP proxy unit with the QF wind facility, measure difference in associated line losses, show that the QF is so significantly different than the proxy as to constitute a significant divergence from the "predictability" of the RFP unit and demonstrate a significant financial result of that divergence. PacifiCorp has not even started such a comparison in its testimony. It will be very difficult to show any meaningful difference between the RFP proxy and the QF unit, particularly at low levels of penetration of wind resources, where the real impact of any such differences on the system will be minuscule. In reality it is likely that the same

stable of operating reserve resources would operated in virtually the same way whether the RFP proxy or the wind QF resource is involved and that any claimed difference in line losses has already been adequately approximated by the proximity comparison. This “unpredictability” argument is specious as a basis to deny avoided line loss credit to wind QFs as a group. Again, the system average line loss numbers are determined considering energy on the system as a whole, considering many kinds of facilities of varying degrees of “predictability”, including resources such as PacifiCorp’s dreaded intermittent hydro resources.

Q. PacifiCorp refers to the QF as bearing the cost of the individual line loss study. In such a case, how would the QF be compared to the RFP resource?

A. An initial line loss study of the RFP resource, using system averages as approximations, should be undertaken up front, prior to the approval of the RFP contract, as a part of an information filing disclosing the characteristics of the RFP resource, so that subsequent proximity comparisons with the QF resource characteristics can later be completed in a timely and cost effective manner. If the QF chooses not to use the proximity comparison with the RFP resource, but requests a project specific line loss study, then the QF could conceivably either compare against the proximity study of the RFP resource or request a companion study of the RFP resource for the same time frame as the QF so that QF comparison with the RFP is more precise. Frankly, the subject of the PacifiCorp line loss modeling technology was not explored in detail in the task force and the model itself was not disclosed, and it is currently unclear how difficult or expensive such studies really would be. It would be beneficial for PacifiCorp to shed additional light on this subject. However, in general it appears appropriate that the QF resource should pay for the project specific studies if it is not willing to accept the proximity comparison.

Q. To clarify, should wind as well as thermal QF facilities have the opportunity to specifically request and obtain an individual line loss study instead of accepting the standard proximity comparison with the RFP proxy?

A. Yes; in fact, it is possible that in individual cases the QF resource avoided line losses may be significantly higher than those of the RFP proxy. That would happen under project specific circumstances that may not be fully measured by a simple proximity comparison test. These effects may be more likely for small future QF projects located on subtransmission or distribution lines. The wind QF should have the option to pay for an individual line loss study, just like the thermal QF would.

Q. Are avoided line losses the only benefit small QFs can provide to the transmission and distribution system and how should potential system benefits be determined?

A No; QFs may provide a range of benefits to the system that are not currently measured or compensated and although it is outside of the scope of issues for determination in this hearing, the Commission should direct its staff to begin the process of reviewing reports, gathering information, and thinking about the transmission and distribution benefits that non-utility resources can provide and how to use such resources with other available measures in optimizing the system. In the near future, new emerging software technologies should make it possible to more precisely measure actual avoided line losses and other system benefits on a quick, economic and project specific basis, and such technology developments should be tracked by staff. One reason to begin such a review is that recognizing and compensating such system benefits has a broader basis than avoided cost determinations under PURPA and may be undertaken pursuant to the State's policy to encourage renewable generation and cogeneration and the Commission's inherent power to undertake reasonable measures to encourage optimization of the system. One promising

candidate is the AEMPFAST product, but since this has already proven extremely beneficial on the Santa Clara system and is in a large utility test on the Southern California Edison system, competitors will be trying to improve their products as well.

Q. PacifiCorp witness Houston has urged that the 5 year transmission planning horizon be used for determination of avoided transmission costs. Do you agree?

A. No; I can see no good reason not to use the 10 year period used under the IRP for identification of future generation and transmission additions. The wind QF should compared against the RFP proxy. In the course of that comparison, if you ignore future IRP transmission assets planned under the prevailing portfolio, you are systematically ignoring large transmission projects and long lead time items. Mr Houston has clarified that the 5-year plan only includes facilities at 138KV and below. To ignore large facility costs is just undercounting. That the IRP estimates are essentially proxies for actual doesn't change that result. They are the best reasonable long term estimate to which we have access, unless PacifiCorp can suggest a superior alternative. It is far more reasonable to include the best cost estimates we can rather than arbitrarily exclude them.

Q. Is the preference of PacifiCorp to construct a line that could be reduced in capacity or delayed by a QF a reason not to give avoided transmission credits?

A. No; the QF may make it possible to reduce capacity or delay, but given rights of way, permitting and construction costs and project complexity, and conceivable future problems if lines are downsized near term and then demand increases, the utility is unlikely to ever want to downsize a line. Mr. Houston acknowledged this in his testimony. The QF should still get credit if the line could have been delayed, could

have been downsized. In the case of the wind QF, if the presence of the wind QF would allow more power in the aggregate to be moved to major load centers over the same system than is the case if only the RFP proxy is present, there should be a credit. That may happen if, for example, the QF is at or near a major load center and the RFP unit is remote from the major load center but intended to send significant power to the load center. That might not be a frequent event, because the wind QF is probably generally more likely to be remote like the RFP resource, but there are two parties to this proceeding that appear to fit that description, so in the case of small wind QF projects it will happen sometimes and should be compensated when it does.

Q. Is the PacifiCorp view of whether wind Qfs may defer or downsize transmission facilities associated with the RFP proxy adequate?

A. No; I have probably adequately described my response already in my Direct testimony. We should not limit the comparison with the RFP unit by failing to fully understand the costs and system degradation impacts the RFP unit may impose. PacifiCorp needs to fully disclose the results of the transmission system impacts and facilities studies, so that the Commission can determine whether the RFP is actually imposing a significant hidden cost on the utility. If there is one it should be taken into consideration when it is time to compare with the QF.

Q. Does this conclude your testimony?

A. Yes, it does.