

**BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH**

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

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**Reconsideration Direct Testimony of Gregory L. Probst**

**February 10, 2006**

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

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

**Q. What is your position with Mountain West Consulting, LLC.(“MWC”)**

A. I am Managing Member.

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

A. I will be stating the position of MWC regarding issues to be considered by the task force subsequent to the close of the recent hearing in this case, in particular as regards wind QF projects and the availability of credits for avoided line losses and avoided transmission facility costs.

**Q. Why is the determination of avoided transmission capacity costs difficult?**

A. It is a good example of a regulatory choice that involves either accepting average values despite limitations on accuracy in the case of some individual projects, or trying to find a way to more precisely calculate the values associated with an individual project, but do so in a fashion that does not systematically ignore important elements, impose a level of complexity that discourages meaningful review by agencies and becomes a disincentive to QFs, or impose a regulatory burden that is unreasonable in comparison to potential accuracy benefits.

**Q. If avoided transmission capacity costs are to be determined on a project specific basis, what is the appropriate method of determining avoided transmission capacity cost for a wind facility?**

A. First, we should distinguish, as the Commission’s order already has, between wind facilities aggregating up

to the IRP amount of wind resources to be added over the time horizon of the IRP (the “IRP Amount”), and any wind facilities exceeding the IRP Amount. If avoided capacity costs are to be determined on a project specific basis, then for wind projects up to the IRP Amount, the initial stage of analysis properly focuses on the prevailing RFP contract and its associated transmission capacity cost characteristics. If (in addition to the interconnection costs which should always be paid by the RFP counterparty), the RFP counterparty has agreed to pay any system impact costs, as would be expected to typically be the case as it is required under FERC rules, or if there are no such system impact costs, then the inquiry for this stage of analysis would end, and there would be no transmission cost adjustment outside of the contract pricing. However, the Commission should require an informational filing by PacifiCorp in connection with the RFP contract approval process that makes clear the full results of the system impacts study and facilities study for the RFP project, what the transmission facilities costs associated with the RFP contract really totaled, and how the facilities costs were really allocated between the parties.

Review of the system impacts and facilities studies would be appropriate as part of the contract approval process because projects have both localized and system-wide impacts and in the absence of this review it is possible that the RFP counterparty actually imposes uncompensated significant system reliability degradation or other adverse impacts that are not fully captured by the contract price. For example, if the prevailing RFP facility would cause degradation from an ample margin to a razor thin margin, so that the timing of future transmission or substation upgrades within the IRP time horizon are accelerated forward, whether or not such future upgrades are in the then-current 5 year transmission plan, there may have been a material uncompensated transmission cost imposed on the system outside of the RFP contract. In fact, PacifiCorp essentially recognizes the validity of this point regarding the QF in its proposal to evaluate Network Upgrade dollar impact and review system reliability before and after the QF addition. However, PacifiCorp has failed to provide for the evaluation of comparable issues for the RFP resource on a

comparably rigorous and transparent basis, without which a full and fair comparison to the QF is impossible. In fact the focus of PacifiCorp's proposal is on the QF and the underlying analysis regarding the RFP resource remains a mystery. Unless system impact costs for the RFP always fully reflect the changes imposed by an individual RFP project, individual RFP projects' transmission system impacts are going to cause some deviation from preexisting system conditions and a question arises about when the deviation rises to a level that requires recognition and compensation, and whether that change has been fully reflected in contract rates and/or system impact fees, or in part has been passed to the utility and indirectly to ratepayers. This should be a concern readily addressed by a healthy review process.

However, there is a second level of analysis regarding the RFP project that appears appropriate. Looking at only the RFP project's direct system impact costs is not necessarily sufficient to clarify what transmission costs the QF may help avoid, because the RFP project occurs within a context also involving strategic transmission expansion planning, including planning over the 10 year term of the IRP, not just the term of the 5 year transmission plan. Not all future transmission facilities are dedicated only to a specific project. For example, a substantial part of power from a wind project in southern Idaho may conceivably be part of the intended load for the prospective transmission line from Idaho to northern Utah under the recent IRP update. Even if there are no short run system upgrade costs associated with the RFP project, if power from the project is really primarily intended for the Utah market during the term of the IRP, and power from a project at or near the Utah load center can be brought to the load center without the transmission cost impacts associated with a strategic transmission expansion for remote facilities, shouldn't the local project receive some consideration for that fact? The QF obviously does not actually allow deferral of the RFP contract power, as that is already committed. But as a proxy, the RFP pricing, for a project remote from load centers, represents additional remote wind resources the more proximate QF allows the system to avoid transmitting. Do we really capture the full transmission costs the QF allows us to avoid if we ignore the

additional costs of strategic transmission facilities caused by a combination of system growth and future remote wind resources? Probably not. When does it make sense to recognize this additional factor?

Probably primarily when the RFP resource is remote from the Utah load center, the QF is at or near the Utah load center and the strategic transmission line is included under the preferred IRP portfolio. Again, it may be viewed as curious that PacifiCorp's proposal appears to try to capture this factor for the QF by looking at impacts on the then-current 5 year transmission plan but appears to ignore it for the comparative RFP project.

Comments regarding this second level of analysis are primarily driven by the lack of clarity of PacifiCorp's proposal regarding how transmission costs associated with the RFP unit would be determined. If PacifiCorp can demonstrate a method to ensure that the costs of future strategic transmission facilities included under the preferred portfolio of the IRP are indeed fully taken into consideration in contract pricing or facilities charges for the RFP project, so that a fair comparison of the QF and the RFP resource is evident, these comments can probably be resolved.

**Q. Does PacifiCorp's proposal currently deal adequately with the subject of costs of strategic transmission resources?**

A. No; PacifiCorp appears inclined to say that if a QF project can't entirely displace a high voltage line it should receive no credit. However, whether specific transmission facilities are displaced or not by the QF is not the real focus. We need to start with the recognition that the RFP unit is a proxy. Although PacifiCorp is not prejudging RFP location, it is clear that it considers wind to be primarily a remote resource. It is unlikely that future RFP prevailing parties will be primarily small projects. That implies that for the most part power from these RFP projects will not be used primarily in a local load center, but will be significantly

directed to major load centers such as the Wasatch Front. The question of associated transmission cost is a legitimate concern and issue. Recall, the 2003 IRP estimated the cost of transmission for remote Wyoming resources at about \$800/KW. Would a QF wind project near the Wasatch Front cause a major transmission line to be physically downsized? Probably not; given the difficulty and expense of permitting and constructing such facilities it is more likely that the line would be built anyway at full scale. However, such a line would be capable of bringing additional resources, such as clean coal or more wind power, to the major load center as a result of the QF. The aggregate of power delivered to the major load center increases as a result of the QF presence compared to the underlying condition with only the RFP proxy present. That is why the QF would be entitled to a credit.

**Q. Is PacifiCorp's proposal to limit the period of transmission impact analysis to 5 years convincing?**

A. No; again, if you start with the recognition of the RFP resource as a proxy, there is little difference in character between the RFP unit impacts and the QF impacts. The same utility beginning point about concern about the system being dynamic and changing over time applies equally to RFP proxy power. That is not really a good reason to cut off transmission cost benefits at 5 years. Information limitations are approximately the same in each case. In fact a preferable resolution is to move in the direction of more, and a more detailed, consideration of cost impacts of strategic transmission assets over the first 10 years of the IRP planning horizon. Finally, a 10 year period does not actually affect system reliability issues; this is really a pricing comparability issue between the RFP proxy and the QF.

**Q. What about PacifiCorp's proposal limiting the benefit to 138KV and below?**

A. Actually, my response would be similar to the last one. If you eliminate facilities above 138KV you

automatically eliminate consideration of economic costs of high voltage transmission inherently connected with substantial import of remote power to major load centers. If PacifiCorp doesn't have the same plan horizon for facilities above 138KV as for lower voltages, perhaps that situation should be revisited. At a minimum, an IRP process should include a serious effort to include high voltage facilities to the extent reasonably possible, just as is the case for generation facilities, since the lead times for each are roughly comparable. It is more fair to include

consideration of the best estimate of those future costs than arbitrarily exclude them, which produces a deliberate undercounting.

**Q. Should wind QF facilities have an opportunity to obtain avoided line loss credit?**

A. Yes; it is an element to be included in avoided costs under FERC regulations. For purposes of initial implementation of the QF wind rates, it is acceptable to structure a comparison of respective line losses between the RFP proxy and its respective load center and the wind QF and its respective load center, with system average line losses filed with FERC serving as a proxy for time specific studies. In the near future, new emerging technologies should make it possible to more precisely measure actual avoided line losses on a quick and economic basis, and technology developments should be tracked by staff.

**Q. PacifiCorp has urged that an intermittent resource such as wind should not receive an avoided line loss credit. Do you agree?**

A. No; first, nearly every comment PacifiCorp would make about the wind QF would apply equally to the RFP proxy. Predictability attributes and their economic consequences depend on the time horizon involved for both resources and these characteristics are roughly equal. PacifiCorp has stated the RFP resource has to

date been treated as delivering power for local demand. That may or may not make sense for a 62 MW project in southern Idaho, but almost certainly will not make sense for large prevailing RFP facilities in the future. A remote 150 or 200 MW RFP project probably would deliver power primarily intended for major load centers; this question should at least require a review of project size and local demand. It is more likely that a small QF project such as the Wasatch Wind project or a small community based project such as Milford High School has expressed interest in would actually serve local load. And for these type of small QF facilities, location specific circumstances may actually produce far greater than system average avoided losses. PacifiCorp should have to disclose the avoided line loss characteristics of the RFP proxy.

PacifiCorp has indicated a concern about system back up requirements. It appears this concern has already been addressed and priced in system integration costs tasked by the Commission. Wind resources will already pay for incremental reserves/operating costs. Intermittency of small wind resources has a relatively modest system effect, especially on a regulating or hour ahead time frame and especially at low system wind penetration levels. Further, project output predictability over short time horizons is being steadily improved in the wind industry, through innovations in short run weather forecasting. Intermittency is one issue, avoided line loss another. The Commission has already provided for a project specific comparison between the RFP and QF projects. That actually takes care of the intermittency issue.

What is needed is an objective look at comparative avoided line losses as between the RFP proxy and the proposed QF.

Finally, PacifiCorp should provide additional clarity about how the load center is defined and conceptualized for purposes of this case. For example, considering the Wasatch Front to be a giant load center may make sense for some purposes, but seems to strain against common sense for purposes of

calculating comparative line losses. The goal should be a transparent and fair comparison between the RFP resource and the QF resource.

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

A. Yes, it does.