

**UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION**

**Assessing the State of Wind Energy
In Wholesale Electricity Markets**

Docket No. AD04-13-000

**December 1, 2004
Statement of Mark Maher
Vice President, Transmission Policy, PacifiCorp**

Introduction

Good morning, I'm Mark Maher. Thanks for providing PacifiCorp the chance to offer our views on the tariff issues and other challenges affecting wind energy participation in wholesale energy markets. PacifiCorp has an active interest in this proceeding as both a major proponent of renewable resources, wind generation in particular, and as an operator of one of the largest investor-owned open-access transmission systems in the Western United States. As background, our transmission footprint, spanning some 15,000 miles of high voltage transmission (69 kV+) over six states, is near good wind resources, increasing our ability to interconnect and transfer additional wind resources across our system. Regional planning efforts are projecting the possible addition of 2,705 MW of new wind resources to meet load growth in the Rocky Mountain region (RMATS study, Phase 1). Also, we're aiming to purchase 1,100 MW of new wind resources over the next seven years to meet our current Integrated Resource Plan. Finally, we have the fifth largest retail wind energy program in the country. It's within this context that I offer the following observations.

PacifiCorp's Experiences Accommodating Wind Integration

PacifiCorp has a proven track record of working to identify and overcome the challenges of interconnecting and integrating wind facilities into the interstate electricity grid without degrading system reliability. We've actively participated in the Commission's ongoing proceeding to consider adoption of national "grid code" standards applicable to the

interconnection of large wind generators. With respect to transmission service, PacifiCorp has used various means to integrate wind onto our grid. The primary product that we have offered to purchasers of our transmission capacity where their full request could not be met is “partial firm”. As part of our Commission-approved OATT, this provision takes advantage of unused transmission capacity and defines the period or periods when capacity is not available. Long term contracts are offered and are being used by loads in our system today. What are not available in these contracts are any rights during the “not available” period. However, purchasers can enter the NF market to attempt to gain service. We have made this available to purchasers of wind generation.

We have also sold partial firm where we have defined the “not available” period yet allowed the purchaser to carry firm through this period but not schedule on it. Instead, the purchaser will use their rights to schedule an alternate point of delivery somewhere else on our system. Many purchasers have enough flexibility to accommodate this product. Another product we have offered is PTP firm with a remedial action scheme that would trip off the generator in an N-1 condition. Again, it takes advantage of unused capacity and allows firm service without having to construct more capacity. The attached appendix lists examples of service provided to purchasers of wind generation to date.

PacifiCorp’s OATT is Wind Friendly

PacifiCorp believes the FERC Order No. 888 has not held back the development of wind projects in the PacifiCorp transmission service area. Prior to FERC 888, PacifiCorp had no large scale modern permanent wind generators connected to our system. Since 888, PacifiCorp has experienced 535 MW of wind generation interconnecting to and transferring power on PacifiCorp's transmission system. There are eight additional generation interconnection projects in queue, which potentially could add 1,255 MW of new wind capacity.

Importantly, PacifiCorp proposed and the Commission has approved two changes to our tariff/rate schedules that are favorable to wind. This, along with the “partial firm” product that PacifiCorp has offered to wind comes close to the conditional firm product being discussed.

- First, point-to-point customers can submit day-ahead schedule changes up to 20 minutes before the operating hour without penalty. This allows flexibility for scheduling wind resources, and is a much shorter timeframe than the *pro forma* OATT allows. In addition, the five percent bandwidth and 10 percent penalty makes customers stay sharper in their scheduling. Currently, to our knowledge, only PacifiCorp and BPA offer this scheduling flexibility.
- Second, PacifiCorp has modified its Generation Imbalance rate schedule to eliminate the penalty of 100 mills/kWh (for deviations between schedule and actual generation). Instead, PacifiCorp charges the incremental cost of energy plus 10 percent. (This is similar to the BPA Generation Imbalance rate schedule).

In short, we believe our tariff updates and scheduling practices are indeed “wind friendly”, but we are certainly open to potential improvements, as I’ll discuss below.

Prospective FERC Policy Reform

PacifiCorp understands that the *pro forma* OATT’s transmission services and the related ancillary services may not sufficiently accommodate intermittent resources. We feel that Transmission Providers should consider providing transmission service to intermittent resources, including large wind generating plants, in a safe, efficient and reliable manner that recognizes the characteristics that are inherent to intermittent energy resources and are beyond the control of such generators.

Accordingly, PacifiCorp believes any consideration of modifications to the existing Order No. 888 *pro forma* tariff should take into account the following principles, under which we believe Transmission Providers and federal and state regulators should all work together to:

- Recognize the historical orientation of transmission area resource planning and policy towards dispatchable resources and the growing imperative to accommodate intermittent resources such as wind through innovative approaches;
- Recognize the environmental, energy security and resource diversity benefits of wind;

- Achieve full, optimal use of existing transmission capacity and associated recovery of costs within the context of ensuring reliability and avoiding cost shifts among customer classes;
- Ensure WECC requirements for reliability will be met;
- Honor and preserve rights under existing contracts and avoid favoring one supplier of customers over others in all cases;
- Take into account the dynamic nature of load patterns and generation patterns and hence the scale and timing of path constraints;
- Develop and implement standards on a regional (e.g., WECC) basis for scheduling adjustment, regulation and reserves for intermittent resources to ensure Transmission Provider consistency and comparability; and
- Strive towards an RTO that can provide long-term solutions for transmission and wind.

We feel the technical workshops being proposed by the FERC Staff are the right approach to continue exploring potential problems and solutions for intermittent resources and, ultimately, for building consensus support for developing novel tariff proposals and service offerings like those described in the Briefing Paper. For instance, it is critically important that stakeholders agree on a definition for conditional firm, particularly the pricing and assignment of curtailment risk. In that regard, within current regulations PacifiCorp's willingness to pursue offering new transmission products will in large part be determined by assurances that we gain full cost recovery, avoid cost shifts and that the product is made available to all transmission customers on a non-discriminatory basis. We anticipate that a properly-designed and priced conditional firm product or its equivalent should be quite beneficial, providing for greater utilization of the transmission system and additional revenues as an interim measure until firm (100 percent availability) is available. We look forward to working with interested stakeholders to refine and test this concept in the months ahead.

Conclusion

Again, thank you for the opportunity to contribute our perspective. I look forward to your questions and drilling down a bit further into these issues.

Appendix 1: PacifiCorp Service Provided to Purchasers of Wind Generation to Date

Network Resource

Example: The Combine Hills project located in North Central Oregon came online in December 2003. The output of the project (41 MW) was sold to PacifiCorp's merchant as a network resource under PacifiCorp's OATT Network Integration Transmission Service Agreement.

Purchase of LT Firm

Example: The Uinta Wind project located in Southeastern Wyoming came online in December 2003. The output of the project (144 MW) was sold to PPM Energy, ScottishPower's unregulated subsidiary and PacifiCorp's affiliate, and delivered from the project to PacifiCorp's Mona substation under PacifiCorp's OATT Firm Point-to-point Transmission Service Agreement. The transmission service was provided with the condition that the vendor install a remedial action scheme so that generation dropping was available for the project.

Move to another control area using non-firm transmission for the transfer

Example: The Stateline project located in Southeast Washington came online in December 2001. The output of the project (210 MW) was sold to PPM. PPM resold 35 MW to Avista Energy and Avista Energy is moving this purchase from PacifiCorp's control area into their control area. PPM acquires non-firm transmission to provide for deliveries to Avista. During periods when non-firm transmission is not available, PPM uses secondary transmission rights under their firm point-to-point transmission agreement for Wallula to Mid C to schedule this delivery.

Displacement (Shaping)

Example: The Foote Creek #1 project located near Rawlins, Wyoming came online in 1999. PacifiCorp and EWEB each own a share of the project, and the output (50 MW) was sold to BPA as a network resource under PacifiCorp's Network Integration Transmission Service Agreement.

Sales of the output are scheduled for delivery to the purchasing entities 168 hours after the actual amount is generated by the project. PacifiCorp merchant uses secondary transmission rights under their firm point-to-point transmission agreement to schedule this delivery. The sale price of the output includes transmission charges and a storage fee for the 168 hour delayed delivery of the output. This is a unique arrangement where the purchasing entity can schedule with certainty what the hourly schedule will be rather than receiving the actual variable generated amount and risking energy imbalance charges.