

Federal Energy Regulatory Commission
Technical Conference:
Assessing the State of Wind Energy in Wholesale Electricity Markets
Docket No. AD04-13-000

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I would like to thank the Commission for inviting UWIG to participate in this conference. I will provide a status report on the evolution of competitive electricity markets across the country, and how wind is being treated in them. This report is based on a panel session on wind participation in Eastern electricity markets at the UWIG meeting held in Albany in October 2004.

Representatives of FERC and 5 RTOs, including the MISO, NYISO, ISO-NE, PJM, and the Ontario IMO, participated. Speakers described how wind participates in their markets, and responded to 6 questions posed to the panelists. We have summarized the results of the panel session for presentation at this Technical Conference, and expanded it to include the remaining RTOs, ERCOT, SPP, and CAISO, and added a comparison with the Order 888 provisions.

Six questions were posed:

- How is wind scheduled in energy markets?
- How are wind energy imbalances settled?
- How are wind plants' ancillary service needs and costs recognized?
- What role does wind forecasting play?
- How is capacity value for wind plants calculated?
- How is capacity value recognized in capacity obligations and capacity markets?

An examination of what Order 888 says reveals the following:

- **Scheduling in Markets:** There is no requirement for centralized markets.
- **Imbalance settlement:** Energy imbalance charges may apply if energy deliveries differ by more than +/- 1.5% from advance schedules. Actual payments or penalties are left to the discretion of the transmission provider, but may be substantial.
- **A/S:** The transmission provider is required to offer scheduling and billing services and act as the purchasing agent for customers needing A/S.
- **Wind Forecasting, Capacity Value Calculation and Capacity Value Recognition** are not discussed.

The reason that Order 888 is important is several fold:

- It applies to all regions not included in an RTO
- Most of the WECC is not covered by an RTO and may not be for some time
- Some of the best wind resources are located in the western region of the US
- The Order 888 tariff is problematic for wind

Changes in generation technology drive the need for changes in Order 888:

- This Technical Conference is evidence we are recognizing the differences between wind and conventional generation.
- RTOs are being innovative and taking different approaches in how they treat wind in energy, capacity, and imbalance markets.
- Yet Order 888 is silent on a number of distinguishing characteristics of wind energy.
- It is time to acknowledge the need to make some changes to Order 888 to reflect natural characteristics of wind and treat it fairly.

A comparison of RTOs on major features related to wind reveals the following:

- Wind often has the choice of participating in forward markets or bi-lateral contracts
- Imbalance markets settle schedule deviations without penalty
- Wind ancillary service requirements are generally handled through the load serving entities and reflected in bi-lateral contract prices
- CAISO is developing a model wind forecasting program for system operators which is being closely watched across the country
- Capacity value calculation procedures using different approaches are being developed across the RTOs as an evolving process
- Capacity markets and reserve margin requirements are beginning to recognize the capacity value of wind plants
- RTOs are proceeding cautiously, learning by doing, and staying open to change.

Overall, it is important to recognize the significant burden that is lifted for wind plants operating under an RTO tariff as compared to operating under an Order 888 tariff as currently configured:

- Competitive electricity markets allow wind energy to be bid in on a day ahead or hour ahead basis
- Balancing markets allow wind imbalances to be settled without penalty
- Large single market areas allow transmission rate pancaking to be eliminated
- Treatment as a network resource resolves issues of transmission reservation and access fees
- Open and transparent transmission planning processes provide greater opportunity for wind developers to participate and achieve better results.

Great strides have been made in much of the country, but much remains to be done in areas operating under Order 888. An accompanying presentation and a detailed table comparing the various RTO and Order 888 market features will be provided as attachments to these comments in a filing in this docket.

