

**BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C.**

Standard Market Design

Docket No. RM01-12-000

**COMMENTS OF
THE NATIONAL WIND
COORDINATING COMMITTEE**

In response to Federal Energy Regulatory Commission (FERC) Notice of Proposed Rulemaking (NOPR) on Standard Market Design (SMD) issued on July 31, 2002, the National Wind Coordinating Committee (NWCC)¹ files comments. As a multi-party collaborative organization, it was necessary for the NWCC to consult its diverse membership before submitting these comments. These comments represent the views of the individual members of the NWCC and not necessarily the organizations they represent.

Executive Summary of Comments

Wind generation is an environmentally attractive electric power source with increasingly competitive economics, and it is experiencing growing market acceptance in several

¹ The NWCC is a collaborative endeavor formed in 1994 that includes representatives from electric utilities and their support organizations, state legislatures, state utility commissions, consumer advocacy offices, wind equipment suppliers and developers, green power marketers, environmental organizations, and state and federal agencies. The NWCC identifies issues that affect the use of wind power, establishes dialogue among key stakeholders, and catalyzes activities to support the development of an environmentally, economically, and politically sustainable commercial market for wind power. More than 1,300 individuals from diverse

regions of the United States. The intermittency of wind as an energy resource and location of plentiful wind resources in remote areas make market design and operation very important issues for wind. Market rules and tariffs will have a large impact on the continued success of wind power.

The NWCC is pleased to see that the FERC has recognized some of the unique aspects of wind generation, and how it differs from conventional generation, in the proposed features of the Standard Market Design. For Order 2000, the NWCC developed a set of principles that it believes are critical to the successful operation of wind generation in the RTOs and energy markets. These principles are contained in the document “NWCC Regional Transmission Organization Principles” that is attached. The NWCC is pleased to note that all of these principles are being addressed either through the SMD NOPR, the two interconnection NOPRs, or through individual FERC orders.

The NWCC also believes additional features of the SMD will be beneficial to wind energy. The network access transmission service will help wind generators avoid having to choose between firm point-to-point transmission service and non-firm point-to-point transmission service. Furthermore, network access transmission service will avert a problem facing wind generators in regions where the transmission systems appear quite congested, even though operations data shows that the congested routes may only be congested for a few hours per year.

sectors and wind resource areas across the country have contributed to the NWCC's collaborative efforts.

In addition, assigning the transmission access charges to load will be beneficial to wind resources. Because wind energy has lower capacity factors than other generating technologies, imposing transmission access charges on generators would put wind energy generators at a severe competitive disadvantage vis-a-vis other generating technologies.

Finally, the NWCC is pleased that FERC is proposing to incorporate the California ISO's wind scheduling and settlements provisions, as approved by FERC on March 27, 2002, into the SMD pro forma tariff.

The NWCC has some concerns about certain comments sought in the SMD NOPR. In particular, the NWCC requests clarification from FERC that the "additional charges" proposed for uninstructed deviations in real time from schedules, such as for regulation or other ancillary services, may open the door for continuation of energy imbalance penalties that were promulgated in Order 888 in 1996, posing a formidable entry barrier to wind energy generators. The NWCC also is concerned that FERC appears to have delegated administration of capacity markets to the North American Energy Standards Board (NAESB). The NWCC requests that FERC direct NAESB to follow the recommendation in the staff working paper that wind energy be eligible as a capacity adequacy resource.

The NWCC also supports the creation of markets for electricity derivatives such as the generation attributes that may be unbundled and traded separately from energy.

The FERC should make sure that the tools are available at a regional level to implement such policies and thereby support green power markets.

Trading the attributes of renewable energy (in NWCC parlance, renewable energy credits) is increasingly recognized as a market-oriented mechanism to lower the cost of implementing such public policies. Renewable energy credit trading can also help to increase the growth and efficiency of renewable energy markets by increasing the options available to producers and consumers.

The implementation of tracking systems for generation attributes will be key to facilitate credit trading, and RTOs are in a strong and perhaps unique position to create and operate such tracking systems. Standard Market Design should include the creation and maintenance of attribute tracking systems among the responsibilities of RTOs. Further, we look to FERC to ensure that these regional generation attribute tracking systems can easily transfer attributes traded among regions. These comments are based on NWCC consensus on a set of credit trading guidelines intended to aid in the development of credit trading markets at the state, regional and national levels. The guidelines address both market definition and market operation, and appear as an attachment to these comments. The inclusion within Standard Market Design of mechanisms to track trading and ownership of generation attributes will be key to the expansion of renewable energy credit markets, and to the cost-effective implementation of a variety of public policies.

Introduction

Wind generation is an environmentally attractive electric power source with increasingly competitive economics, and it is experiencing growing market acceptance in several regions of the United States. Following an all-time high of 1,696 megawatts (MW) of new installations in 2001, there was a slow-down in development in 2002 to 400-450 MW of new capacity due to delay in extension of the wind Production Tax Credit. The American Wind Energy Association (AWEA) is projecting that well over 2,000 MW of new wind capacity will be installed in the U.S. in 2003.

Unlike firm generation, wind is an intermittent resource. Wind power is generated only when the wind is available. In addition, wind resources are often most plentiful in remote areas. These characteristics make market design and operation very important issues for wind. Market rules and tariffs will have a large impact on the continued success of wind power.

Present-day market operations often do not work well for intermittent technologies such as wind. Wind characteristics and their relationship to market design issues are addressed in an NWCC document that was published in late 2000. It represents a body of carefully developed principles that are germane to the current rulemaking process on SMD, and

that reflect a broad consensus of the NWCC's diverse membership.² Thus, the document is included as an attachment to these comments.

The NWCC also offers its comments on three additional features of the SMD which it believes will be beneficial to wind generation, and voices its concern on two other provisions which could have unintended negative consequences.

In addition, NWCC offers its observations on the importance of supporting generation attribute tracking systems in the SMD. Generation attribute tracking systems are critical to effective verification of tradable renewable energy credits and green power marketing claims, as well as to facilitate state environmental, resource diversification, and consumer information and education policies. The NWCC Credit Trading Guidelines,³ another consensus document, are also included as an attachment to these comments.

We hope FERC will consider these comments of the NWCC as it proceeds with this important rulemaking.

Proposed Standard Market Design and the NWCC RTO Principles

The NWCC believes that the proper design and functioning of the nation's electricity markets are critical to the successful development of our renewable energy resources, and

² To encourage participation and ownership in the many projects sponsored by NWCC, the NWCC operates on a consensus basis; i.e., every member of the NWCC must accept (i.e., be able to "live with") the themes and conclusions of a report before it is published.

in particular, to our wind resource. The NWCC is pleased to see that the FERC has recognized some of the unique aspects of wind generation, and how it differs from conventional generation, in the proposed features of the Standard Market Design.

For Order 2000, the NWCC developed a set of principles that it believes are critical to the successful operation of wind generation in the RTOs and energy markets. These principles are contained in the document “NWCC Regional Transmission Organization Principles” that is attached. This document was presented to FERC through the regional workshops on Order 2000 that were held in the spring of 2000 in Denver and Kansas City. The principles are summarized as follows:

1. While recognizing regional differences and needs, RTOs should cover large contiguous areas and coordinate with each other to widen trading areas and ensure transmission reliability
2. RTOs should eliminate pancaking of transmission rates within and between RTOs
3. RTO decision-making should provide for non-transmission owner participation in accordance with FERC Order 2000
4. RTOs should mitigate seams issues between RTOs and have sufficient authority to resolve seams problems

³ Rackstraw, et al. *Credit Trading and Wind Power: Issues and Opportunities*. Washington: National Wind Coordinating Committee, May 2002, pp. 35-36. Available at www.nationalwind.org.

5. RTOs should adopt interconnection requirements that are fair, non-discriminatory, and standardized
6. RTOs should accommodate the presence of and need for real-time markets as well as forward markets
7. Ancillary services should be based on competitive market prices
8. RTO pricing policies should support efficient competitive markets that treat intermittent resources fairly
9. RTO transmission planning processes should be transparent and open to all resource options.

These RTO principles may be found at the NWCC web site,

http://nationalwind.org/rto/rto_principles.htm, and they are also attached to these

comments.

The NWCC is pleased to note that all of these principles are being addressed either through the SMD NOPR, the two interconnection NOPRs,⁴ or through individual FERC

⁴ *Standardizing Generator Interconnection Agreements and Procedures - Notice of Proposed Rulemaking*, Docket No. RM02-1-000, April 24, 2002; and *Standardization of Small Generator Interconnection Agreements and Procedures Advance Notice of Proposed Rulemaking*, Docket No. RM02-12-000, August 16, 2002.

orders.⁵ The NWCC strongly supports the Commission's incorporation of these principles into its orders and rules.

Additional Comments about Standard Market Design

The NWCC also believes additional features of the SMD will be beneficial to wind energy. The network access transmission service will help wind generators avoid having to choose between firm point-to-point transmission service that is probably more than what wind generators need, and non-firm point-to-point transmission service that is probably less than what wind generators require.

In 1999, the NWCC issued a report that illustrated this point. A section of the report illustrates the predicament of wind generators in a world of firm and non-firm transmission:

A problem for intermittent renewable energy resources is that they may end up paying for firm transmission capacity that they may not be able to use. Intermittent generators may be able to circumvent this by purchasing non-firm transmission capacity, or a combination of firm and non-firm transmission capacity, as discussed below. However, if there is significant congestion on a transmission provider's system, or if these generators face possible displacement by transmission customers that desire firm or

⁵ See, for example, *Order Provisionally Granting RTO Status*, Docket No. RT01-2-000, July 12, 2001, where FERC preliminarily approved PJM as a RTO but required PJM to expand in order to meet the size

longer-term non-firm transmission, then intermittent generators may face a difficult choice of reserving more firm transmission, or choosing non-firm transmission and risk being interrupted or displaced. In addition, intermittent generators could try to sell unused firm transmission capacity on a secondary market, although such a market has been slow to emerge in some regions.⁶

Furthermore, network access transmission service will avert a problem facing wind generators in the Midwest and the West. In those regions, the transmission systems appear quite congested, since no available transmission capacity is shown for many transmission routes. However, operations data shows that the congested routes may only be congested for a few hours per year. The network access transmission service proposed in the SMD tariff could conceivably avoid this problem and make more use of the transmission system.

If the FERC does not adopt the network access transmission service as part of SMD, the NWCC would like FERC to consider adding a long-term non-firm transmission service to the Order 888 tariffs. Since non-firm service is only available under Order 888 tariffs for periods of up to one year, wind generators that need long-term contracts (ten years or more) cannot make use of non-firm service, even though the actual physical congestion they may experience would only impact them for a few hours of the year. A long-term

and scope requirements of RTO.

⁶ Brown, et. al. *Transmitting Wind Energy: Issues and Options in Competitive Electric Markets*. Washington: National Wind Coordinating Committee, January 1999, p. 20. Available at <http://nationalwind.org/pubs/trans/phase2.pdf>.

non-firm service that would offer transmission to wind producers subject to curtailment at times of congestion is simply not available. If curtailments were likely in summer, when wind production may be lower than other times of the year in some regions, such a long-term non-firm service might be very appropriate, offering curtailable transmission service to match the natural variability of wind production. More use of the physical transmission system could be made if long-term non-firm or curtailable service was offered.

In addition, assigning the transmission access charges to load will be beneficial to wind resources. Because wind energy has lower capacity factors than other generating technologies, imposing transmission access charges on generators would put wind energy generators at a severe competitive disadvantage vis-a-vis other generating technologies.

Finally, the NWCC is pleased that FERC is proposing to incorporate the California ISO's wind scheduling and settlements provisions, as approved by FERC on March 27, 2002, into the SMD pro forma tariff.⁷ The California ISO allows wind generators to schedule into the real-time market without incurring energy imbalance penalties, as long as wind generators participate in the California ISO's wind scheduling protocols and pay a forecast fee of up to \$0.1/MWh.

The NWCC has some concerns about certain comments sought in the SMD NOPR. At ¶ 316, comments are requested on whether additional charges should be assessed on

⁷ California Independent Operator Corp., 98 FERC ¶ 61,327, *Order Accepting Compliance Filing*, 99 FERC ¶ 61,309 (2002).

uninstructed deviations in real time from schedules, such as for regulation or other ancillary services. The NWCC is concerned that this may open the door for continuation of energy imbalance penalties that were promulgated in Order 888 in 1996. Energy imbalance penalty provisions across the country have posed a formidable entry barrier to wind energy generators. The wind energy industry has devoted considerable resources and time towards relieving the risk and costly burden of these provisions for wind generators. In addition, the threat of penalties may work at cross-purposes with FERC's goal of stimulating greater competition, by introducing enough risk that entities may not wish to participate in wholesale spot markets. The NWCC believes over- and under-schedules from day-ahead schedules should be settled in the real-time market. The NWCC requests clarification from FERC that the "additional charges" FERC is envisioning are not energy imbalance-type penalties.

The NWCC also is concerned that FERC may have retreated from statements in the staff working paper that intermittent resources can participate fully in capacity markets that may be administered by a Independent Transmission Provider (ITP) or RTO.⁸ No such statement appears in the SMD NOPR. Instead, FERC appears to have delegated this to the North American Energy Standards Board (NAESB). The wind energy industry has worked diligently to ensure wind's eligibility for ISO-administered capacity markets. Wind is eligible as a capacity resource in the New York ISO and ISO New England, and the wind industry is in active discussions with the PJM ISO and the California ISO about making wind an eligible capacity resource in those markets. The NWCC is concerned

that the wind industry will again have to fight to ensure wind's eligibility for capacity markets, this time in a membership-driven organization that may have little familiarity with wind energy. Thus, the NWCC requests that FERC direct NAESB to follow the recommendation in the staff working paper that wind energy be eligible as a capacity adequacy resource.

Generation Attributes Tracking and NWCC Credit Trading Guidelines

The NWCC also supports the creation of markets for electricity derivatives such as the generation attributes that may be unbundled and traded separately from energy. These generation attributes are important to verify consumer information disclosure on electricity labels, renewable portfolio standards, emission portfolio standards, and green power marketing claims.

While it is not FERC's role to promote such policies *per se*, because these policies may have significant wholesale market impacts, the Commission has a jurisdictional interest in them. Thus, the FERC should make sure that the tools are available at a regional level to implement such policies and thereby support green power markets.

Trading the attributes of renewable energy (in NWCC parlance, renewable energy credits) is increasingly recognized as a market-oriented mechanism to lower the cost of implementing such public policies. Renewable energy credit trading can also help to

⁸ "Demand resources and intermittent supply resources should be able to participate fully in energy,

increase the growth and efficiency of renewable energy markets by increasing the options available to producers and consumers.

The implementation of tracking systems for generation attributes will be key to facilitate credit trading, and RTOs are in a strong and perhaps unique position to create and operate such tracking systems. It is already accepted that RTOs will track the output of generation from wind and other facilities for operational and financial reasons, so much of the data necessary for tracking generation attributes will already be in their hands.

Standard Market Design should include the creation and maintenance of attribute tracking systems among the responsibilities of RTOs. Further, we look to FERC to ensure that these regional generation attribute tracking systems can easily transfer attributes traded among regions. Like the “seams issues” for electricity transmission, coordination among regional tracking systems will help promote larger, more competitive and more liquid markets for attributes. FERC Order 2000 requires RTOs to “ensure the integration of reliability practices within an interconnection and market interface practices among regions.” We encourage FERC to extend this responsibility beyond reliability practices to include interregional coordination and compatibility of regional generation attribute tracking systems.

These comments are based on NWCC consensus on a set of credit trading guidelines intended to aid in the development of credit trading markets at the state, regional and

ancillary services and capacity markets.” *Staff Working Paper on Standardized Transmission Service and Wholesale Electric Market Design*, March 15, 2002, p. 6.

national levels. The guidelines address both market definition and market operation, and appear as an attachment to these comments. Specific guidelines most relevant to establishing regional tracking systems include:

- "Laws, regulations and markets should recognize that renewable energy attributes...can be unbundled and traded separately from energy."
- "Attributes, credits, and products should be clearly defined and standardized to avoid disputes, double counting, and distrust of newly emerging markets, without discouraging necessary market and product innovation."
- "Attributes and kilowatt-hours should be uniquely identified and tracked...to avoid double counting."
- "Trading markets should encompass the largest feasible geographic area while remaining consistent with the functional characteristics of the attributes being traded."
- "To facilitate creation of large markets, attributes from renewables should be mobile across jurisdictional borders...This, which can also be described as the merging of markets on a regional, national, or multi-pollutant basis, requires an ability to track cross-border and cross-program trading to avoid double counting."

In summary, the inclusion within Standard Market Design of mechanisms to track trading and ownership of generation attributes will be key to the expansion of renewable energy credit markets, and to the cost-effective implementation of a variety of public policies.

Respectfully submitted,

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Attachments: NWCC Regional Transmission Organization Principles
NWCC Credit Trading Guidelines