

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

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Chair
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In the Matter of Northern States Power
Company's Petition for Approval of a Small
Wind Energy Tariff

ISSUE DATE: August 10, 2001

DOCKET NO. E-002/M-00-1747

ORDER APPROVING TARIFF WITH
MODIFICATIONS

PROCEDURAL HISTORY

The Commission, in its June 12, 2000 ORDER APPROVING MERGER AS CONDITIONED,¹ approved, among other things, the Stipulation Agreement between Xcel Energies, Inc. and the Department of Commerce (DOC). As part of that stipulation, Xcel Energies Inc. agreed to work with the DOC and other interested parties to develop a Distributed Generation Tariff for facilities of up to 2 MW facilities in general and for small wind projects in particular.

On December 29, 2000, Northern States Power Company d/b/a Xcel Energy (Xcel or the Company) filed its proposal for a Small Wind Energy Tariff. The purpose of the tariff is to facilitate the development of small, distributed wind generation projects within Xcel's service territory in Minnesota. The tariff is intended to provide a simplified method of interconnecting and selling electricity to Xcel from projects greater than 40kW and less than 2 MW in size.

On January 29, 2001 the Department of Commerce (DOC) submitted its comments. The DOC recommended approval of the tariff with several modifications.

On January 30, 2001, Windustry² submitted its comments.

On February 28, 2001, Xcel filed its reply comments.

On March 1, 2001, Windustry, joined by the Izaak Walton League, Minnesotans for an Energy-

¹ *In the Matter of the Application of Northern States Power Company for Approval to Merge with New Century Energies, Inc.*, Docket No. E,G002/PA-99-1031.

² A resource for information on wind energy for landowners and others exploring the feasibility of wind sponsored by the Institute for Agriculture and Trade Policy, a non-profit organization serving the economic, environmental, and social well-being of rural communities.

Efficient Economy, American Wind Energy Association and the Institute for Local Self Reliance, filed reply comments.

On March 27, 2001, the DOC filed reply comments.

On June 21, 2001, this matter came before the Commission.

FINDINGS AND CONCLUSIONS

I. Xcel's Proposed Tariff

The proposed tariff is intended to facilitate the development of small, distributed wind generation projects by providing a simplified method of interconnecting and selling energy to Xcel. The tariff is available to any Minnesota customer receiving retail electric service from Xcel who agrees to construct, own and operate a wind-powered generating facility to be operated parallel with the Company's distribution system. To qualify for use of this tariff, the wind generation project must be less than 2MW in size and request interconnection with the Company's distribution system at a voltage of less than 69 kV.

The Company proposes to use the standard 2MW wind power purchase agreement (PPA) previously approved by the Commission.³ The tariff will provide the rate at which Xcel will purchase power from the qualifying wind energy facility under the standard PPA. In addition to entering the standard PPA, customers will need to request an interconnection study which would identify the capability for interconnection at the desired location and the associated costs.

Other features of the tariff are:

- all the electricity generated by the wind facility must be sold to Xcel;
- the seller must enter into the standard, Commission approved PPA for a term of up to 20 years;
- the price for wind is fixed for the duration of the contract at 3.3 cents per kWh;
- the seller must sign an interconnection agreement with Xcel;
- the interconnection facilities must meet Xcel's Interconnection Guidelines for Parallel Operation of Distribution Connected Customer-Owned Generation;
- Xcel will provide a customer-specific list of required interconnection equipment, and cost and responsibilities relating to the interconnection facilities.

³ See Docket No. E002/M-97-1628, June 11, 1998.

II. Summary of the Issues

Several issues were addressed by the parties including: the price; interconnection issues including the interconnection process, interconnection technical specification standards and the interconnection agreement; the standard purchase power agreement; and specific tariff terms. Each will be discussed in turn.

III. The Price

A. Position of the Parties

1. The DOC

The DOC agreed that the price of 3.3 cents per kWh, as proposed by the Company, is appropriate at this time because it reflects current market conditions.

2. Windustry

In its initial comments, Windustry argued that the 3.3 cents /kWh was too low and recommended 3.5 cents / kWh. Windustry stated that over the long term, the 3.3 cents / kWh would likely be much less than the Company's other alternative sources of power. Further, when the 3.3 cents / kWh fixed rate was adjusted for inflation it declined by about half over 20 years. This was in contrast to natural gas which might decline over the next few years but in the long run its price was expected to rise. Windustry argued that 3.5 cents /kWh for wind generation was a more appropriate reflection of the true value.

In its reply comments, Windustry argued that the Xcel proposed rate of 3.3 cents /kWh would not encourage distributed energy in areas outside of the Buffalo Ridge area. It stated that adding more wind turbines to the distribution grid in Southwest Minnesota or the Buffalo Ridge area would cause the grid capacity situation to be exacerbated. However, adding wind turbines elsewhere in Minnesota would likely benefit the existing grid without costly transmission or distribution upgrades. A distributed wind project located in the best wind resource outside the Buffalo Ridge area in Xcel's service territory would require a levelized long term contract price of 4.9 cents /kWh based on Windustry's analysis.

3. Xcel

Xcel stated that the rate identified in its proposed tariff is what was presented in the market. Xcel argued that if there is insufficient development at this price level, the Commission can revisit this issue. Raising the price before a tariff is offered will not encourage efforts to lower prices.

B. Commission Action

The Commission recognizes that the Company and the industry are in disagreement as to the appropriate price for wind. Both the Company and the DOC supported a price of 3.3 cents per kWh based on Xcel's last wind contract. The industry supported a price of 4.9 cents per kWh based on other factors including benefits to the existing grid and the cost of production from small wind projects. The Commission will approve the market-based rate as proposed by the Company and supported by the DOC as a reasonable rate at this time.

IV. Interconnection Issues

The interconnection issues will be discussed in three parts: the interconnection process, the interconnection technical specifications, and the interconnection agreement.

A. The Interconnection Process

1. Position of the Parties

a. The DOC

When a customer requests interconnection of facilities to the distribution system, Xcel indicated that it would then do a technical review of the interconnection to determine whether the hardware met industrial guidelines, whether the technology would be able to integrate with the distribution system, and whether there would be any impacts from the proposed facility. The DOC argued that the Company's proposed individual review of each application was unnecessary and could be streamlined.

Among other things, the DOC suggested pre-certification of equipment and a fixed cost and fixed time frame for an initial technical review. It also recommended that Xcel develop an internal set of screening criteria so that a majority of applications could be reviewed and approved within a 30 day time frame. The DOC proposed and recommended the adoption of an Interconnection Process to be part of the Company's tariff.⁴

b. Xcel

Xcel argued that the Interconnection Process recommended by the DOC, in its Attachment 1, is unnecessary and would be more appropriate as a provision of an interconnection agreement.

Xcel argued that an individual review of each requested interconnection was necessary because each area of the distribution system presented a unique set of circumstances. It agreed with the DOC that developing a streamlined review process was desirable but did not agree that technical standardization should be part of the tariff. Xcel indicated that it has many internal process reviews in progress designed to work towards standardization.

In response to the DOC's suggestion that Xcel create a pre-certified list of equipment, Xcel indicated that it was agreeable to providing information about equipment but believed that the use of the term pre-certified would lead to confusion. It indicated that a particular machine may be acceptable at one location but that the characteristics of the system at a second location may mean that the same machine would be unacceptable without modification. If a piece of equipment is labeled pre-certified, it could suggest to a customer that the customer could interconnect and the interconnection costs would be minimal, which would not necessarily be the case. Xcel suggested that the Company maintain a list and knowledge base of equipment already reviewed and indicate any generally applicable facts for that machine regarding interconnection.

⁴ Attachment 1 to DOC comments, January 26, 2001.

In response to the DOC's suggestion that the Company develop a screening criteria that will result in the majority of applications being reviewed and approved in 30 days, Xcel proposed that when a customer-vendor completes its application with the Company the customer be provided with an estimated amount of time for study completion.

c. DOC's Reply

The DOC agreed with the Company that each location on the grid needs a specific engineering review. However, the DOC argued that the equipment could be pre-certified so as to avoid redundant analysis for services of interconnection applications covering the same technology hardware.

The DOC continued to argue that a standard review process with a predetermined completion would ensure equal and timely treatment of all applicants.

d. Windustry

Windustry stated that the Company's interconnection and operating standards should be more clearly defined and should include defined timetables and guidelines for how long Xcel can take to conduct its interconnection studies and reviews. Windustry argued that 30-45 days would be reasonable.

B. Interconnection Technical Specification Standards

1. Position of the Parties

a. The DOC

The DOC argued that the tariff should contain agreed-upon interconnection technical guidelines rather than a reference in the tariff to internal company documents on technical issues. The DOC recommended that the Commission establish standards now, on an interim basis, to allow deployment of distributed wind turbine generators without delay. It recommended that standards developed by the DOC, based on the technical guidelines developed in Texas, be approved as interim guidelines for small wind turbine system installations and become part of the Company's tariff.⁵

b. Xcel

Xcel indicated that it intended to adopt the Institute of Electrical and Electronic Engineers Standard for Distributed Resources Interconnected with Electric Power Systems, (IEEE Standard P1547), currently being developed. It argued that the Xcel energy standards, which will adopt the IEEE Standards and other industry standards, recognize the evolving industry standards and allows changes for system-specific experience. Xcel argued that trying to duplicate this effort in the tariff is unnecessary and would require further tariff revisions. The Company stated that it wanted to avoid bringing every technical issue or standard change to the Commission as a request for a tariff or rule change.

⁵ See Attachment 2 of the DOC's January 26, 2001 filing.

c. DOC's Reply

The DOC reviewed the Company's internal document *Interconnection Guidelines for Parallel Operation of Distribution Connected Customer Owned Generation* and found its process and technical requirements complex and confusing. It did not provide a specific time period or a capped cost for the standard reviewing process. The DOC stated that the standards that it proposed were intended to be used as interim standards to be used until Xcel adopts the IEEE P1547 standards.

C. Interconnection Agreement

1. Position of the Parties

a. DOC

The Company's filing referenced the need for an interconnection agreement to address the addition, modification or replacement of any transmission or distribution components made necessary by the customer's wind generating facility. Since the Company did not provide a copy of an interconnection agreement with its filing, the DOC was concerned about what may or may not be addressed within the scope of such an agreement. The DOC argued that there should be a standard prior approved form for an interconnection agreement. The DOC proposed an interconnection agreement for Commission authorization and to become part of the Company's tariff.⁶

b. Xcel's Position

Xcel proposed that it continue to work with the DOC in developing standardized agreements which will not require modification in the near future.

D. Commission Action on the Interconnection Process, the Interconnection Technical Specifications and the Interconnection Agreement

The Commission will approve as part of the tariff the Interconnection Process, the Interconnection Technical Specifications and the Interconnection Agreement recommended by the DOC.

The Commission agrees with the DOC that in order for the tariff to encourage and simplify the development of small wind generation, it is important that providers have the maximum amount of information set out and available to them before developing a proposal. This can best be accomplished by the Commission approving as part of the tariff the Interconnection Process, the Interconnection Technical Specifications and Interconnection Agreement as recommended by the DOC. Further, the Commission agrees that these standards as well as the pre-certification of equipment, setting a fixed cost for initial technical review, and determining a fixed time frame for initial technical review will facilitate a quick, efficient and minimal cost review of a request for interconnection.

⁶ See Attachment 3 of the DOC's January 26, 2001 filing.

V. Standard Power Purchase Agreement

A. Position of the Parties

1. DOC

The DOC argued that the Commission approved Standard PPA⁷ was derived from a contract that had been used for larger competitive bid procurement procedures and was too complex and included many unnecessary features. The DOC proposed a simpler standard contract that better fits small distributed wind projects and recommended that it be approved by the Commission and become part of the Company's tariff.⁸

2. Xcel

Xcel indicated that it could accept much of the editing that the DOC proposed to the Commission approved PPA. However, Xcel did not agree with any editing that required Commission approval of the interconnection process, interconnection standards, operating standards, technical specifications or any other engineering design standards.

B. Commission Action

The Commission will approve the revised power purchase agreement submitted by the DOC. The Commission agrees that amending the standard PPA, which was previously approved by this Commission, in order to make it simpler and easier for new small wind projects to sell energy to Xcel is reasonable in this situation. A standard power purchase agreement specifically for these projects will provide uniform information that does not require project-by-project negotiation thereby encouraging higher participation.

VI. Tariff Terms

A. Position of the Parties

The DOC questioned certain specific language in the Company's tariff and generally argued that the tariff should include references to Commission approved interconnection guidelines and contracts.

The Company, in its reply comments agreed to certain suggestions of the DOC. However, the Company continued to argue that technical documents, including such items as interconnection specifications, guidelines and standards, and power purchase agreements were dynamic documents that would likely change frequently and because of this should not be made part of the tariff. If they were part of the tariff, the Company argued, any change would require reconsideration by the Commission with the associated administrative procedures and time requirements.

⁷ See footnote 3, above.

⁸ See Attachment 5 of the DOC's filing dated January 26, 2001, with the revisions set forth in Exhibit 4 of the DOC's reply comments of March 27, 2001.

B. Commission Action

As discussed above, the Commission will approve the tariff with the modifications recommended by the DOC, including references to Commission approved interconnection guidelines and contracts.

Further, convinced of the necessity of moving forward in a timely manner, the Commission will require an interim status report from the parties in six months and a full report in one year.

ORDER

1. The tariff is approved with modifications and shall include:
 - the Power Purchase Agreement as modified by the DOC and set forth in Exhibit 4 of the DOC's reply comments.
 - the Interconnection Process provided by the DOC in Attachment 1 of its initial comments;
 - the Technical Guidelines provided by the DOC in Attachment 2 of its initial comments;
 - the Interconnection Agreement as provided by the DOC in Attachment 3 of its initial comments.
2. Parties shall submit an interim status report in six months and a full report in one year from the date of this Order.
3. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

(S E A L)

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