

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

LeRoy Koppendrayner
Marshall Johnson
Phyllis A. Reha
Gregory Scott

Chair
Commissioner
Commissioner
Commissioner

In the Matter of an Independent Engineering
Study on the Impact of and Options for
Managing Intermittent Wind Resources on
Northern States Power Company d/b/a Xcel
Energy's Electric System

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ORDER REQUIRING ENGINEERING
STUDY

PROCEDURAL HISTORY

The Minnesota Legislature has mandated that a study be conducted to address how an increasing reliance on wind power affects the reliability of the electric system of Northern States Power Company d/b/a Xcel Energy (Xcel):

The commission shall order the electric utility subject to Minnesota Statutes, section 216B.1691, subdivision 7, to contract with a firm selected by the commissioner of commerce for an independent engineering study of the impacts of increasing wind capacity on its system above the 825 megawatts of nameplate wind energy capacity to which the utility is already committed, to evaluate options available to manage the intermittent nature of this renewable resource. The study shall be completed by June 1, 2004, and incorporated into the utility's next resource plan filing....¹

The Commission met on July 10, 2003, to consider this matter.

FINDINGS AND CONCLUSIONS

I. FACTUAL BACKGROUND

Environmental concerns have prompted the search for ever cleaner methods of generating electricity. The process of harnessing the power of the wind is proving to be a promising

¹Minn. Laws 2003, 1st Sp. Sess., Ch. 11, Art. 2, § 21.

means of generation. Minnesota Statutes § 216B.2423 provides for Xcel to acquire 825 megawatts (MW) of wind power capacity and § 216B.1691, subdivision 6(a), provides for an additional 300 MW.²

But the intermittent nature of wind has also prompted concerns. How does increasing reliance on wind power affect Xcel's system? How can the intermittent nature of wind power be managed? The new law reflects the Legislature's desire to explore these questions. The law directs Xcel to hire an outside firm to conduct the study. To guard against any suggestion that Xcel would be biased in the manner that it selected a firm, the Minnesota Department of Commerce is assigned the task of selecting the contractor to perform the study.

Furthermore, the Legislature directs Xcel to incorporate the study's results into its next resource plan filing. A resource plan contains a set of options that the utility could use to meet the projected needs of its customers over the next fifteen years, and the utility's recommended choice of options.³ The wind study will better inform Xcel, regulators and stakeholders about issues related to our increasing reliance on wind-powered generation.

At the hearing, the Department acknowledged its role in selecting a firm to conduct an engineering study. The Department proposes to take responsibility for designing the study. Furthermore, the Department proposes to administer this project. This would include drafting the Request for Proposals for the engineering study and generally providing ongoing supervision.

II. COMMISSION ACTION

Having heard from Xcel and the Department, and consistent with the statutory mandate, the Commission will now direct Xcel to retain an independent firm to study the effects of increasing wind capacity on its system beyond the 825 megawatts of wind energy capacity to which the utility is already committed. The firm shall also evaluate options available to manage the intermittent nature of wind-generated electricity. The Commission looks forward to receiving Xcel's full cooperation in this matter, including cooperation with the Department and the firm chosen to conduct the study.

Finally, the Commission appreciates the Department's participation in this matter, and will accept the Department's proposal to design the engineering study and administer the project.

²*Id.*, §3.

³Minn. Stat § 216B.2422, subd. 1(d); Minn. Rules chap. 7843.

ORDER

1. Northern States Power Company d/b/a Xcel Energy (Xcel) shall contract for an independent engineering study of the impacts of increasing wind capacity on its system above the 825 megawatts of nameplate wind energy capacity to which the utility is already committed, and to evaluate options available to manage the intermittent nature of this renewable resource as required by Minnesota Laws 2003, 1st Special Session, Chapter 11, Article 2, Section 21.
2. Xcel shall cooperate fully with the Commission, the Department and the firm chosen to conduct the study.
3. The Department shall take responsibility for designing the study, including its scope, and for administering this project, including the content of the Request for Proposals and ongoing supervision and oversight of the study.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

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