BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION

LeRoy Koppendrayer	Chair
Marshall Johnson	Commissioner
Ken Nickolai	Commissioner
Thomas Pugh	Commissioner
Phyllis A. Reha	Commissioner

In the Matter of Northern States Power Company d/b/a Xcel Energy's Application for Approval of its 2005-2019 Resource Plan

ISSUE DATE: July 28, 2006

DOCKET NO. E-002/RP-04-1752

ORDER APPROVING RESOURCE PLAN AS MODIFIED, FINDING COMPLIANCE WITH RENEWABLE ENERGY OBJECTIVES STATUTE, AND SETTING FILING REQUIREMENTS

PROCEDURAL HISTORY

On November 1, 2004, Northern States Power Company d/b/a Xcel Energy (Xcel) made its 2004 resource plan filing, which had four major components: (1) its 2004 resource plan, covering the fifteen-year planning period from 2005 through 2019; (2) its proposal to revise its procedures for securing new generation through competitive bidding and other market-based, competitive-procurement processes; (3) its report on its progress toward meeting its renewable energy objectives under Minn. Stat. § 216B.1691; and (4) its report on the implementation of the Northern Flood Agreement, an agreement between three Canadian governmental entities and five Cree Nations affected by a massive hydroelectric project from which Xcel purchases a significant amount of summertime energy.

The following persons and organizations filed comments on the Company's filings:

- Minnesota Department of Commerce (the Department)
- Izaak Walton League of America – Midwest Office, Minnesotans for an Energy-Efficient Economy, Union of Concerned Scientists, and Minnesota Center for Environmental Advocacy, filing jointly ("Joint Environmental Intervenors")
- LS Power Associates, L.P.
- Excelsior Energy Inc.
- Gascoyne Project
- North Dakota Industrial Commission
- Calpine Corporation

- Gerdau Ameristeel
- The Minnesota Project
- Metropolitan Counties Energy Task Force
- Minnesota Chamber of Commerce
- North American Water Office
- Sierra Club North Star Chapter
- Green Institute
- Ms. Carol A. Overland
- Senator Ellen R. Anderson
- Communities United for Responsible Energy
- Displaced Residents of South Indian Lake
- Tataskweyak Cree Nation, also known as Split Lake Cree First Nation
- Nisichawayasihk Cree Nation
- Pimicikamak Cree Nation
- Minnesota Witness for Environmental Justice
- University of Minnesota Human Rights Center and the JustEnergy Program of Minnesotans for an Energy-Efficient Economy, filing jointly
- Manitoba Hydro
- Government of Manitoba

On May 31, 2006, after several rounds of stakeholder comments, extensive discovery, briefing, and oral argument, the Commission issued an order acting on the Company's proposal to revise its competitive resource-procurement processes.[1] The order adopted a modified version of the Company's proposal.

On June 13, 2006, the Commission heard oral argument on the two remaining parts of the Company's filing: the resource plan and the report on Company compliance with the renewable energy objectives statute. On June 15, 2006, the Commission met to decide those issues. Having reviewed the entire record herein and having heard the arguments of the parties, the Commission makes the following findings, conclusions, and order.

FINDINGS AND CONCLUSIONS

The Company's Renewable Energy Objectives Filing

I. Introduction and Factual Background

In 2001, the Minnesota Legislature passed Minn. Stat. § 216B.1691, setting renewable energy objectives for Minnesota's investor-owned electric utilities, generation and transmission cooperatives, and municipal power agencies. The statute required these utilities, cooperatives, and power agencies (hereinafter "utilities") to make good faith efforts to generate or otherwise secure

[1] Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. § 216B.2422, Subd. 5, and Requiring Compliance Filing, this docket.

enough electricity from qualifying renewable energy technologies to represent 10% of total retail electric sales by the year 2015.

In 2003, the Legislature amended the statute to require the Commission to supervise and facilitate these good faith efforts. Among other things, the 2003 amendments required the Commission to issue orders implementing the statute and detailing what utilities must do to demonstrate compliance. The Commission has so far issued four general orders under the statute.[2]

The 2003 amendments also placed special responsibilities on Xcel based on its status as the state's only nuclear utility and the owner of the Prairie Island nuclear plant.[3] These responsibilities are summarized below:

(1) For Xcel, the renewable energy objectives are not just objectives but requirements, subject to the resource planning and least-cost planning requirements of Minn. Stat. § 216B.2422, barring a demonstration that meeting them would jeopardize system reliability.

(2) By 2010, Xcel must deploy 300 megawatts of nameplate wind capacity above the amount already required by Minnesota law and Commission order as of May 1, 2003, with at least 100 megawatts purchased from wind facilities of two megawatts or less that are ineligible for production incentive payments under Minn. Stat. § 216C.41. The Company may not own, construct, or operate more than 100 of the total 300 megawatts required, and must strive for intrastate geographic diversity in acquiring them, consistent with the findings of the wind engineering study commissioned by the 2003 Legislature.

(3) Xcel must enter into a purchased power agreement by January 1, 2004 for ten to 20 megawatts of biomass generation from a project described in Minn. Stat. § 216B.2424, subd. 5. This requirement was the subject of a separate docket.[4]

Under the renewable energy objectives statute and the Commission orders implementing it,

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[2] See Commission orders of June 1, 2004, August 13, 2004, and October 19, 2004 in docket E-999/CI-03-869, *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility's Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. § 216B.1691,* and Commission order of February 21, 2006 in docket E-999/CI-04-1616, *In the Matter of a Commission Investigation into a Multi-state Tracking and Trading System for Renewable Energy Credits*.

[3] Minn. Stat. 216B.1691, subd. 6.

[4] *In the Matter of the Requirement Under Minnesota Statutes 216B.1691, Subdivision 6 (c) for Northern States Power Company d/b/a Xcel Energy to Enter into a Purchased Power Agreement,* docket number E-002/CI-03-2044.

utilities must file biennial reports on their compliance status, compliance efforts, and future plans for compliance. These biennial filings are to be made with their biennial resource plan filings whenever possible, as Xcel did in this case.[5]

II. Commission Action

A. Summary of Commission Action

In the course of this proceeding, the Company and the other stakeholders found common ground on most issues regarding the Company's responsibilities under the renewable energy objectives statute. The Commission concurs with the stakeholders on these issues.

Of the issues that remain contested, none require resolution before the Company's next biennial filing, when two years' additional experience with the statute and up-to-date data on load characteristics, system configuration, and transmission capabilities should ensure a more informed decision than can currently be made.

These findings are explained below.

B. Xcel-Specific Standards Unnecessary

As discussed earlier, Xcel, as a nuclear utility and the owner of the Prairie Island nuclear plant, has special responsibilities under the renewable energy objectives statute. Stakeholders debated whether the Commission should develop special compliance standards for Xcel or apply the general criteria and standards established in the industry-wide orders issued under the statute.[6]

The Commission concurs with the Department that the criteria and standards set in the industry-wide orders for determining compliance with the renewable energy objectives statute are equally helpful and applicable in determining Xcel's compliance. The industry-wide orders basically identify the factors that go into determining compliance; they do not attempt to quantify how those factors should be weighed, since the statutory standard is "good faith efforts," and assessing good faith requires a holistic, not a mechanical, approach.

The factors identified in the industry-wide orders are equally applicable to Xcel and clearly provide a workable analytical framework. While these factors may be weighed differently in analyzing compliance with *requirements*, as opposed to *objectives*, they remain sound and helpful as analytical categories. At this point, at least, there is no need to refine the criteria and standards of the industry-wide orders to determine exactly how they will be applied to Xcel.

C. Additional Wind Generation Required

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[5] Minn. Stat. § 216B.1691, subd. 3.

[6] See Commission orders of June 1, 2004, August 13, 2004, and October 19, 2004 in docket E-999/CI-03-869, *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility's Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. § 216B.1691*.

1. 1,680 Megawatts Over Planning Period

In the course of this proceeding, Xcel determined that it could, in fact, expand its reliance on wind generation by 1,680 megawatts over the 15-year planning period, as recommended by the Department and the Joint Environmental Intervenors. The Company also committed to adding 300 megawatts of wind under the new community-based, energy-development (C-BED) program by 2007, and a total of 500 megawatts of C-BED wind by 2010.

The Commission concurs in these decisions, which both improve the Company's compliance status under the renewable energy objectives statute and serve the public interest as defined by the Public Utilities Act.

Increased reliance on wind generation is a cornerstone of Minnesota energy policy. Not only has the Legislature forbidden the construction of non-renewable generation and associated transmission facilities unless renewable generation is too costly or impractical,[7] but it has designated wind and solar resources as first choice fuels for future generation.[8] The decision to add 1,680 megawatts of wind generation over the planning period is a sound one and will be required.

2. The 300 Wind Megawatts Explicitly Required by Statute

A related issue debated by the parties was whether the 300 megawatts of nameplate wind capacity required in Minn. Stat. § 216B.1691, subd. 6 (a) counted toward Xcel's renewable energy objectives obligation or constituted an additional, unrelated obligation. That statutory-interpretation issue need not be decided today and will therefore be deferred.

First, Xcel may acquire enough wind generation to meet its obligation without counting the 300 megawatts, making a decision on the issue unnecessary. Second, if and when a decision is required, the Commission, Company, and stakeholders will have gained additional experience with the statute and its application, ensuring a more informed decision.

Finally, whether these 300 megawatts are countable under the statute or not, it is important to facilitate their prompt deployment and to secure stakeholder input on how best to achieve the statutory goals of geographical diversity and encouraging small wind development.

The Commission will therefore require the Company to file, within 120 days of this Order, as a supplement to its 2005-2019 resource plan, a report detailing its plan for complying with Minn. Stat. § 216B.1691, subd. 6 (a). Besides outlining its compliance plan, this report will describe stakeholder input in developing the plan, state how many of the 300 megawatts are expected to come from the new, community-based, energy-development (C-BED) projects authorized under Minn. Stat. § 216B.1612, identify the geographic areas of the state in which the energy will be generated, and address related transmission issues.
Such filings will become routine in the future, since Minn. Stat. § 216B.1612, subd. 5 (b) requires utilities to include in future resource plans, reports on their efforts to buy C-BED power, a list of

[7] Minn. Stat. § 216B.243, subd. 3a.

[8] Minn. Stat. § 216C.051, subd. 7 (c).

C-BED projects under contract, and the total amount of C-BED energy purchased.

The Commission will also require the compliance filing to update the Company's wind deployment schedule.

D. Current Compliance

Compliance with the renewable energy objectives statute is an ongoing process, not an event, but at present – and at least through 2006 – Xcel is in compliance. The Company is clearly, substantially on track to meet the statutory requirement that by 2015 it generate 10% of retail sales with eligible renewable technologies, including specified percentages of biomass technologies.

This finding, of course, does not imply any finding that particular generation projects are countable under the statute; it is a general finding that the plan filed by the Company demonstrates compliance, subject to confirmation of individual project eligibility through normal regulatory processes.

E. Vintage Allocation, Fixed Allocation Factor Adopted

Xcel, like many utilities subject to the renewable energy objectives statute, operates in more than one state, raising the issue of how to allocate the Company's renewable generation between states. Clearly, it is important to avoid the double-counting that would result from permitting utilities to count the same renewable megawatts toward the renewable generation requirement of each state in which they operate. Equally clearly, it is important to avoid forcing utilities to acquire the amount of renewable generation that would be necessary if every state had the same renewable requirement as Minnesota.

To avoid both pitfalls, the Department has long supported the "vintage" allocation method. Under that method, generation from renewable facilities that were operating prior to the statute's 2001 enactment are considered system resources and allocated to all jurisdictions based on jurisdictional sales. Renewable generating facilities that began operating after the statute was enacted, however, can be allocated to Minnesota alone, if the utility demonstrates that they were developed to comply with the Minnesota statute and that they are not being counted toward any other jurisdiction's renewable energy requirements.

A related issue, in allocating system resources between jurisdictions based on jurisdictional sales, is whether to use a fixed allocator, based on average sales, or a variable allocator, tracking actual sales. The Department recommended a fixed allocator, for purposes of certainty and efficiency.

The Company's filing used the vintage allocation method and a fixed allocator, without explicitly discussing or adopting them. At oral argument the Company stated that it had no objection to using them on a going-forward basis. The Commission concurs with the Department that these are reasonable, practical, and equitable allocation tools and will direct the Company to use them in future filings.

F. Future Filings

The renewable energy objectives statute is a long-term policy initiative and necessitates long-term reporting and monitoring. The Commission will continue to monitor Xcel's compliance through periodic updates, future resource plan filings, and, when intervals between resource plans exceed two years, future stand-alone biennial filings under the renewable energy objectives statute.

To that end, the Commission will require a report and update by October 1 of this year, demonstrating continuing compliance with the renewable energy objectives statute and providing any information requested by the Department for purposes of preparing its January 2007 report to the Minnesota Legislature on utility compliance with the statute.

The Company's Resource Plan Filing

I. Introduction and Factual Background

The resource planning statute and rules are detailed, but they basically require utilities to file biennial reports on (1) the projected energy needs of their service areas over the next 15 years; (2) their plans for meeting projected need; (3) the analytical process they used to develop their plans for meeting projected need; and (4) their reasons for adopting the specific resource mix proposed to meet projected need. Minn. Stat. § 216B.2422 and Minn. Rules Chapter 7843.

These requirements are designed to strengthen utilities' long term planning processes by providing input from the public, other regulatory agencies, and the Commission. They are also designed to ensure that utilities give adequate consideration to factors whose public policy importance has grown in recent years, such as the environmental and socioeconomic impact of different resource mixes. For example, the statute requires utilities to develop plans for meeting 50% and 75% of new and refurbished capacity needs with conservation and renewable energy; it also requires them to factor into resource decisions the environmental costs of different generation technologies.

Although the Commission must approve, reject, or modify the resource plans of investor-owned utilities, the resource planning process is largely collaborative and iterative.

The process is collaborative because there are few hard facts dictating resource choices or deployment timetables. The facts on which resource decisions depend -- how quickly an area and its need for electricity will grow, how much electricity will cost over the lifetime of a generating facility or a purchased power contract, how much conservation potential the service area holds and at what cost -- all require the kind of careful judgment that sharpens with exposure to the views of engaged and knowledgeable stakeholders.

The process is iterative because analyzing future energy needs and preparing to meet them is not a static process; strategies for meeting future needs are always evolving in response to changes in actual conditions in the service area. When demographics, economics, or technologies change, so do resource needs and strategies for meeting them.

II. Commission Action

A. Forecasting Issues to be Developed

Forecasting the future energy needs of any utility's service area is an inherently complex, dynamic, and inexact process. Forecasts are always in the process of being refined and updated, and so are forecasting methods.

Probably the most significant forecasting change the Company has made since its last resource plan is to switch from a 50% probability baseline forecast to a 90% probability baseline forecast. This means that, instead of acquiring resources to fully meet a demand forecast with a 50% chance of being over or under actual demand, the Company plans to acquire resources to meet a demand forecast with only a 10% chance of being under actual demand. The Company based its decision to adopt a 90% probability forecast on recent reductions in the region's short-term capacity reserves, mounting constraints on the transmission system, and the need to maintain minimum capacity requirements imposed by the Mid-Continent Area Power Pool.

Several stakeholders expressed concern about using a 90% probability forecast, since it significantly increases projected resource needs. They pointed out that moving to a 90% probability forecast over time, instead of immediately, would avoid disrupting established processes and expectations and would permit careful evaluation as the change occurred. The Commission will require the Company to provide, in its next resource plan, more detailed information and analysis on the implications of moving from a 50% baseline to a 90% baseline.

The Department originally had more extensive and fundamental objections to the Company's forecasting process, stating that the Company had been resistant to collaboration and that the resulting forecast was unreliable for planning purposes. By the date of the hearing, however, the two parties were closer to agreement, and did agree on what near-term capacity additions were required. The Company also agreed to work more closely with the Department on forecasting issues. The Commission will require the Company to do so, and will require a report on those efforts by December 1.

Finally, it remains important to tap whatever potential exists for controlling peak demand through customer control/demand response provisions, and the Commission will require the Company to report on this potential within the next 60 days.

B. Capacity Additions Approved and Required

Ultimately there was less controversy about the need for additional capacity than about what technologies should provide that capacity. The Commission concurs with the Company, the Department, and most commenting stakeholders that the Company should be authorized to issue a Request for Proposals for 136 megawatts of gas peaking capacity, with an online target date of 2011, and to move toward developing 375 megawatts of baseload capacity, with an online target date of 2015.

The Commission concurs with the Department that it is critical to begin the baseload acquisition process immediately. Several business organizations, ranging from utility consortiums to private power producers to the Integrated Gasification Combined Cycle project in northern Minnesota,

have stated their interest in providing this baseload capacity. If they are to have any meaningful opportunity to compete to provide it, the competitive procurement process must begin immediately.

Baseload development requires extremely long planning horizons, and the certificate-of-need-like process for selecting new baseload acquisition adopted earlier in this case[9] will be time- and labor-intensive. Since the need to keep the lights on ultimately trumps other interests, delays along the way favor unilateral action by Xcel, who, as the provider of last resort, must step in and build, buy, or otherwise secure the generating capacity required to fulfill its duty to serve.

The Commission will therefore require Xcel to initiate the competitive resource acquisition process established in the May 31, 2006 Order by filing a certificate of need application for 375 megawatts of baseload capacity on or before November 1 of this year.

Finally, the Company believes that upgrades to its Sherco, Monticello, and Prairie Island plants could provide another 320 megawatts of baseload capacity at a cost between $650/kW and $1400/kW, depending upon the extent of the upgrades. Clearly, the potential inherent in these upgrades must be promptly and thoroughly explored, and to ensure that this happens, the Commission will require the Company to file for any required Commission review or approval of these upgrades by the end of this year.

C. Heightened Demand-Side Management Goals Accepted

In the course of discussions with the Department and other stakeholders, Xcel has agreed to adopt higher demand-side management goals than it had first proposed, agreeing to use the "Goal + 25%" scenario outlined in its resource plan filing. This scenario implies an energy savings goal of 3,935 GWh and a peak demand savings goal of 1,156 MW over the 15-year planning period. The Commission concurs in the adoption of higher conservation goals as clearly consistent with state energy policy and clearly serving the public interest.

The Company's strategy for meeting these higher goals is the one set forth in its 2007/2008/2009 Triennial Plan Conservation Improvement Report, filed with the Commissioner of Commerce in docket E,G-002/CIP-06-80. The Conservation Improvement Program (CIP) offers unique opportunities for demand-side management, inevitably leading commentators to discuss CIP issues in the resource planning context. By separate letter, the Commission will forward to the Deputy Commissioner of Commerce, for his consideration, comments received in this case regarding that program.

D. Expanded CO2 Risk Analysis Required

One of the most pressing but difficult issues in resource planning is how to account for the

[9] Order Establishing Resource Acquisition Process, Establishing Bidding Process Under Minn. Stat. § 216B.2422, Subd. 5, and Requiring Compliance filing, this docket (May 31, 2006).

possibility that the cost of coal-fired generation – even in dollars, as opposed to environmental impact – may skyrocket over the approximately 30-year life of any plant built today. While coal is often the least expensive baseload fuel today, it is widely believed that the growing need to control carbon emissions – and the stringent emissions controls, carbon taxes, and similar measures that may well result – will make it very expensive in the future.

The Joint Environmental Intervenors introduced a great deal of evidence about the future cost of coal-fired generation under different regulatory scenarios and recommended adopting a "hedge value" to be applied to each ton of carbon dioxide produced by future generation. Xcel argued that adopting that hedge value would be inconsistent with the monetary values the Commission assigned to environmental externalities in an earlier proceeding.[10]

Obtaining more clarity – and, if possible, more consensus – on these serious issues is clearly in the public interest and in the interests of all stakeholders. The Commission will therefore require Xcel to work with the Joint Environmental Intervenors and the Department to expand and improve its CO2 risk analysis strategies. The Commission will require the Company to carefully examine the risk analysis framework advocated by the Intervenors, as well as other risk analysis strategies, and to report on this examination in the baseload certificate of need filing required above in section II B, as well as in future certificate of need applications, its next resource plan, and other proceedings involving the acquisition of generation resources.

Further, the Commission will require the Company to include in its next resource plan an update on the expansion of its CO2 risk analysis and contingency planning processes. The Commission will also require the Company to provide an analysis of the cost of different resource mixes under different carbon-regulatory scenarios, using the example provided by the Department in its comments of August 1, 2005. That example was based on circumstances specific to Interstate Power and Light and should be adapted to reflect Xcel's circumstances.

And finally, the Commission will require the Company to investigate and report back on the current state of research and development on capturing, shipping, and storing carbon dioxide emissions from coal-fired Integrated Gasification Combined Cycle (IGCC) power plants, and to provide the most reliable cost estimates currently available for those functions. IGCC technology is believed to hold real promise for low-cost, low-environmental-impact generation, but the associated technology for carbon sequestration has not yet been perfected.

It is important for regulators and stakeholders to have the best available information on the likely costs of these emerging technologies, and the Commission will therefore require similar filings from other utilities as state-wide resource planning progresses.

E. Wind Storage Technology to be Investigated

As discussed earlier, in regard to Xcel's obligations under the renewable energy objectives statute,

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[10] *In the Matter of the Quantification of Environmental Costs Pursuant to Laws of Minnesota 1993, Chapter 356, Section 3*, Docket No. E-999/CI-93-583.

increased reliance on wind generation occupies a central place in Minnesota state energy policy. Not only has the Legislature authorized incentive payments to encourage wind production,[11] but it has required utilities to develop tariffs encouraging community-based wind projects[12] and has designated wind and solar-fueled technologies as the first choice for generation to meet Minnesota's future energy needs.[13]

Of course, the two major – and interrelated – obstacles to heavier reliance on wind generation are its intermittent nature and the lack of efficient, cost-effective storage technologies. It is clear that aggressive, focused research and development efforts are necessary to determine the potential for cost-effective wind energy storage. What is less clear is who can most productively conduct and coordinate these efforts and how these efforts will be funded.

These questions are beyond the immediate scope of this docket, but it is critical that they begin to be systematically addressed. The Commission will therefore require Xcel to conduct its own investigation into the current state of research and development on wind storage technologies and to include a report on this investigation in its next resource plan filing.

The Commission will place the same responsibility on other utilities in future dockets, in an effort to secure an accurate picture of current realities and future possibilities.

F. Wind-Related Transmission Reporting Required

Another obstacle to implementing state policies favoring wind generation is the configuration of the transmission system, which was basically designed to support large, centrally located power plants, not the smaller, geographically dispersed wind projects the Legislature is encouraging. In fact, even large wind farms are sometimes not well served by the existing system, because they are located in places where planners did not expect large power plants.

Clearly, it is important for Xcel to change its transmission planning processes, at both the system and regional levels, to incorporate the needs of wind generators, large and small. This means filing certificate of need applications to construct the new transmission facilities necessary to support the wind projects to which it commits in this and future resource plans as it commits to them. It also means factoring into transmission planning the need for more 69 kV and 115 kV lines, to support the smaller wind projects developing in response to legislative initiatives.

The Commission will require Xcel to report on these efforts in its next resource plan and its next biennial transmission projects report under Minn. Stat. § 216B.2425.

G. Reporting on Northern Flood Agreement Concluded

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[11] Minn. Stat. § 216C.41.

[12] Minn. Stat. § 216B.1612.

[13] Minn. Stat. § 216C.051,subd. 7.

1. Introduction and Background

Xcel purchases some 500 megawatts of hydroelectric power from Manitoba Hydro, which is both a Crown Corporation owned by the Province of Manitoba and the fourth largest electrical utility in Canada. Manitoba Hydro generates electricity from a system of dams constructed in the northern part of the province in the 1960's. These dams have significant environmental and socioeconomic effects on communities and individuals in the immediate vicinity, most of whom are members of one of five Cree Nations.

The Canadian government, the Government of the Province of Manitoba, Manitoba Hydro, and the five affected Cree Nations have therefore entered into an agreement, the Northern Flood Agreement, which requires compensation and other assistance to persons and communities dealing with the dams' adverse consequences. The agreement was signed in 1977, and because it was clear to everyone that the effects of the dams would unfold over time, the Agreement established an ongoing arbitration process for dealing with the dams' impact.

In 2003, one of the Five Nations, the Pimicikamak Cree Nation (PCN), challenged Xcel's purchased power contract with Manitoba Hydro when it came before the Commission under Xcel's competitive bidding approval process. PCN claimed that the Commission had failed to discharge its duty under Minnesota law and its own resource planning rules to examine the environmental and socioeconomic impacts of the hydroelectric generation Xcel was purchasing.

The Commission found that these impacts had been internalized by the Northern Flood Agreement and continued to be adequately addressed as they arose, through the ongoing arbitration provisions of the Agreement. PCN appealed that determination, and the Court of Appeals upheld the Commission's decision, finding, among other things, that there was little to be gained by any attempt to insert this Commission or the State of Minnesota into ongoing disputes within the Canadian judicial process:

> In essence, this lawsuit by relator is a collateral end run around the NFA [Northern Flood Agreement], which contains within its four corners relators' remedies. Manitoba Hydro is a Canadian project, located in Canada, involving Canadian waters and Canadian Indian tribes. The project is approximately forty years old, contains a lengthy agreement detailing rights and obligations of all parties, and, as stated above, contains arbitration provisions carefully setting out the settlement of grievances. Nothing in this aforementioned enumeration involves Minnesota courts. We decline to become entangled in Canadian disputes. The environmental and socioeconomic impacts caused by the Manitoba Project are capable of being addressed under the NFA. . . .
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> *In the Matter of the Petition of Northern States Power Company for Review of its 1999 All Source Request for Proposals*, 676 N.W.2d 326, 337 (Minn. Ct. App. 2004).

The Commission's order, however, did require Xcel to "monitor and report on the status of the

on-going implementation of the NFA in its next Resource Plan." Xcel filed that report as part of this resource plan. The Company reported that it had done its best to monitor implementation of the Northern Flood Agreement, but that, being neither a party to the Agreement nor an adjudicator, it had limited access to information and limited expertise.

The Company reported that the arbitration process established in the Agreement was clearly being used, that some $80 million had been spent for mitigation, compensation, and programming since the mid-1970's, and that some $11 million had been spent as part of a 2003-2004 action plan for addressing the dams' adverse environmental and socioeconomic effects. Xcel also stated that its reporting obligation had placed it in the awkward position of appearing to offer the kind of "end-run" opportunity criticized by the Court of Appeals, and the Company asked to be relieved of further reporting obligations.

2. Commentator Positions

Four of the Agreement's signatories – Manitoba Hydro, the Government of Manitoba, the Nisichawayasihk Cree Nation, and the Tataskweyak (Split Lake) Cree Nation – opposed further reporting, arguing that responsibility for monitoring compliance with the Northern Flood Agreement lay with the Canadian government and that Xcel's third-party monitoring could only distract the parties and undermine their collective engagement. None of the other signatories to the Agreement offered comments.

The Minnesota Department of Commerce recommended accepting Xcel's report and discontinuing monitoring.

Several commentators, including one group of 400 displaced residents, Minnesota Witness for Environmental Justice, the Joint Environmental Intervenors, the University of Minnesota Human Rights Center and Minnesotans for an Energy-Efficient Economy, and Senator Ellen R. Anderson, recommended further, more extensive monitoring of the implementation of the Northern Flood Agreement, citing persistent poverty and unemployment among residents and communities affected by the dams.

3. Commission Action

While it was reasonable, in 2001, to require an initial report on the operation of the Northern Flood Agreement, that report demonstrates that the Agreement is anything but a dead letter. Implementation and enforcement activities are vigorous and ongoing. These activities are marked by controversy, but, for an undertaking this vast and complex, controversy does not necessarily signal a dysfunctional process. In fact, the absence of controversy might raise concerns.

Further, it is significant that no signatory to the Agreement filed comments recommending the continuing involvement of Xcel or this Commission, and that four signatories have affirmatively asked this Commission to end its involvement. The two signatory arms of the Canadian government who commented in this case stated that, while they have the resources, jurisdiction, and expertise to implement and enforce the Agreement, this Commission does not. And the two

signatory Cree Nations who commented stated that this Commission, however well-intentioned it may be, is ill-equipped to add anything helpful to the implementation and enforcement process.

The Commission concurs with the commenting signatories and the Minnesota Court of Appeals that responsibility for monitoring and enforcing compliance with the Northern Flood Agreement lies in the hands of the Canadian government and should be left there. The commenting signatories are also clearly correct that issues such as persistent poverty and high unemployment – important as they are – do not lie within the Commission's specific areas of expertise.

Finally, as the Court of Appeals noted, continued involvement by this Commission creates "end-run" opportunities that can distract parties from duly established processes for seeking redress, potentially undermining the effectiveness of those processes. It would be both ironic and tragic if Commission efforts to address humanitarian needs resulted in exacerbating those needs.

For all these reasons, the Commission will accept Xcel's report on the implementation of the Northern Flood Agreement and will not require further reporting at this time.

H. Study of Distributed Generation Required

Distributed generation has long been a preferred means of meeting new demand; the Legislature has required the Commission to give careful consideration to distributed generation when acting on resource plans, biennial transmission projects reports, and certificate of need applications.[14] It has also required the Commission to establish standard interconnection tariffs for distributed generation projects[15] and has authorized the use of Conservation Improvement Program funds for distributed generation projects.[16] Distributed generation technologies and opportunities remain underdeveloped, however, and serious, sustained effort is required to determine and tap their potential.

The Commission will require this serious and sustained effort from Xcel, which will be required to commission a study by qualified experts, similar to the wind integration study required by the Legislature, to determine what a comprehensive distributed generation strategy would entail. This study will include a technical evaluation of the opportunities, technical potential, and economics of adding significant distributed generation resources to the Xcel system.

The study must include an evaluation of large customer sites, to identify those with significant distributed generation potential, and must include evaluation of possible Combined Heat and Power initiatives with industrial customers engaged in ethanol production or other enterprises. It must include analyses of the total technical potential for distributed generation within Xcel's service area, the benefits of distributed generation for the grid, and the total economic impact of distributed generation, under both utility ownership and customer ownership.

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[14] Minn. Stat. § 216B.2426.

[15] Minn. Stat. § 216B.1611.

[16] Minn. Stat. §216B.2411, subd. 1 (b).

The Commission will require a report on Company progress in its next resource plan filing and will require similar information from other utilities in the future, to ensure progress on this key energy policy initiative.

I. Next Resource Plan Filing Date Set

The resource planning statute does not specify how often resource plans should be filed, leaving that to Commission discretion. The Commission's rules specify biennial filings,[17] but as resource plans have become more complex, the Commission has sometimes varied the biennial filing requirement. It is sometimes possible to defer these filings with no harm to the public interest and significant cost savings for utilities, other stakeholders, and the regulatory agencies.

Here, Xcel's next resource plan filing would be due November 1, 2006, using the two-year interval set forth in the rules. The Commission will extend that filing date to July 1, 2007, to give the Company adequate time to incorporate the requirements of this order into that planning process.

The Commission finds that this eight-month extension will adequately protect the public interest while conserving the resources of all concerned and facilitating a more useful filing. The Commission will therefore vary the two-year filing requirement as permitted under Minn. Rules, part 7829.3200, making the following findings:

(1) Enforcing the two-year filing requirement would impose an excessive burden on the Company, the Department of Commerce, other stakeholders, and the Commission, by requiring a time-consuming and less informative filing than one submitted at a later date.

(2) Extending the filing deadline will not adversely affect the public interest.

(3) Extending the filing deadline does not conflict with any standards imposed by law.

Xcel's next resource plan will therefore be due on or before July 1, 2007.

ORDER

Wind Expansion

1. In the course of this planning period, 2005-2019, Xcel shall deploy an additional 1,680 megawatts wind generation. At least 500 megawatts of this generation shall be from

[17] Minn. Rules, part 7843.0300, subp. 2.

community-based energy development (C-BED) projects, with at least 300 megawatts deployed by 2007, and the remainder deployed by 2010.

2. Within 60 days of the date of this Order, Xcel shall update its wind deployment schedule.

Transmission to Support Wind Development

3. The Commission encourages Xcel to improve its transmission planning to facilitate wind development by aggregating projected wind development projects and integrating these aggregated projects into regional transmission planning.

4. The Commission encourages Xcel to file certificate of need applications for new transmission facilities at the same time that it commits to new wind generation, when new transmission facilities are required to support the new wind development.

5. The Commission encourages Xcel to take into account, in future transmission planning, the need for 69 kV and 115 kV lines to support the development of small and medium sized wind projects located across Minnesota.

6. Xcel shall report on the efforts required in paragraphs 3 and 4 in its next resource plan and its next biennial transmission projects filing. It shall report on the efforts required in paragraph 5 in its next biennial transmission projects filing.

Research and Development in Wind Storage Technology

7. Xcel shall include in its next resource plan a report on its investigation into wind storage research and development.

Demand Side Management Goals

8. Xcel shall use the "Goal + 25%" scenario in setting its demand-side management goals over the 2005-2019 planning period.

Forecasting, Modeling, and Capacity Additions

9. Xcel shall issue a Request for Proposals for 136 megawatts gas peaking capacity, intended for an in-service date of 2011.

10. On or before November 1, 2006, Xcel shall file a certificate of need application to initiate the competitive resource acquisition process for 375 megawatts of baseload capacity with an intended in-service date of 2015.

11. By December 31, 2006, Xcel shall make a filing requesting any mandatory Commission review or approval for any upgrades to its Sherco, Prairie Island, and Monticello

baseload facilities discussed in its resource plan filing.

12. Within 60 days of the date of this Order, Xcel shall examine and report on the potential for demand response/customer control provisions to help control peak demand.

13. In its next resource plan, Xcel shall include further information and analysis on the implications of moving from a 50% median probability forecast to a 90% probability forecast.

14. The Company shall meet with the Department to continue discussions regarding improvements to its forecast and shall file a report on these discussions on or before December 1, 2006.

CO2 Planning and Risk Analysis

15. Xcel shall work with the Joint Environmental Intervenors and the Department of Commerce to expand its carbon dioxide risk analysis strategy, including consideration of the analytical framework proposed by the Joint Environmental Intervenors in this case, as well as other risk analysis methodologies.

16. Xcel shall discuss carbon risk analysis strategies in the November 1, 2006 baseload certificate of need filing required in paragraph 10, in its next resource plan, in future certificate of need filings, and in other proceedings involving the acquisition of generation resources.

17. In its next resource plan, Xcel shall report on the current state of research and development regarding capturing, shipping, and storing carbon dioxide emissions from coal-fired Integrated Gasification Combined Cycle power plants and shall provide the most reliable cost estimates currently available for those functions.

18. In its next resource plan, Xcel shall provide an update on the expansion of its carbon dioxide contingency planning, including an analysis of the cost of different resource mixes under different carbon-regulatory scenarios, using the example provided in the Department's comments of August 1, 2005, adapted to reflect Xcel's circumstances.

Renewable Energy Objectives

19. The Commission hereby finds Xcel in compliance with the renewable energy objectives statute in 2005 and 2006; the Commission will continue to monitor future compliance through compliance filings, updates and future resource plan filings.

20. The finding in paragraph 19 does not imply any finding that particular generation projects are countable under the renewable energy objectives statute; it is a general finding that the plan filed by the Company demonstrates compliance, subject to confirmation of individual project eligibility through normal regulatory processes.

21. Xcel shall apply the Vintage Allocation method and the Fixed Allocation Factor, both discussed above, in gauging its compliance with the renewable energy objectives statute.

22. On or before October 1, 2006, Xcel shall file a report and update showing its compliance with the renewable energy objectives statute. This report shall include any information sought by the Department of Commerce for its January 2007 report to the Minnesota Legislature.

23. Within 120 days of the date of this Order, Xcel shall file as a supplement to its 2005-2019 resource plan, a report detailing its plan for complying with Minn. Stat. § 216B.1691, subd. 6 (a). Besides outlining its compliance plan, this report shall describe stakeholder input in developing the plan, state how many of the 300 megawatts of wind power required under the statute are expected to come from the C-BED projects, identify the geographic areas of the state in which the energy will be generated, and address related transmission issues.

Distributed Generation Resources

24. Xcel shall commission a study by qualified experts, similar to the ongoing wind integration study required by the Legislature, to determine what a comprehensive distributed generation strategy would entail. This study shall include a technical evaluation of the opportunities, technical potential, and economics of adding significant distributed generation resources to the Xcel system.

25. The study required in paragraph 24 must include an evaluation of large customer sites, to identify those with significant distributed generation potential, and must include evaluation of possible Combined Heat and Power initiatives with industrial customers engaged in ethanol production or other enterprises. It must also include analyses of the total technical potential for distributed generation within Xcel's service area, the benefits of distributed generation for the grid, and the total economic impact of distributed generation, under both utility ownership and customer ownership.

26. In its next resource plan, Xcel shall provide a report on its progress in conducting the distributed generation study required above.

Next Resource Plan

27. Xcel shall file its next resource plan on or before July 1, 2007.

28. This Order shall become effective immediately.

BY ORDER OF THE COMMISSION

Burl W. Haar
Executive Secretary

(S E A L)

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