OAH Docket No. 12-2500-19613-2
MPUC Docket No. E-002/CN-08-185

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS
FOR THE PUBLIC UTILITIES COMMISSION

In the Matter of the Application of Northern States Power Company, a Minnesota Corporation, for a Certificate of Need for the Monticello Nuclear Generating Plant Extended Power Uprate

FINDINGS OF FACT, CONCLUSIONS OF LAW, AND RECOMMENDATION

An evidentiary hearing was held before Administrative Law Judge Steve M. Mihalchick on October 6, 2008, in St. Paul, Minnesota. The following appearances were made:

Valerie Means, Assistant Attorney General, Minnesota Office of the Attorney General, 1400 Bremer Tower, 445 Minnesota Street, St. Paul, Minnesota 55101-2130, appeared on behalf of the Office of Energy Security.

Michael Ahern, Dorsey & Whitney LLP, 50 South 6th Street, Suite 1500, Minneapolis, Minnesota 55402-1498, appeared on behalf of Xcel Energy.

Brian Zelenak, Manager, Regulatory Administration, Xcel Energy, 414 Nicollet Mall, Minneapolis, Minnesota 55401, appeared on behalf of Xcel Energy.

Michael Kaluzniak, Senior Facility Planner, Minnesota Public Utilities Commission, 121 East Seventh Place, Suite 350, St. Paul, Minnesota 55101-2147, appeared on behalf of the Public Utilities Commission.

NOTICE

Pursuant to Minn. R. 7829.2700, subp. 1, exceptions to this Report, if any, by any party adversely affected must be filed within fifteen (15) days of the mailing date hereof with the Executive Secretary of the PUC, 350 Metro Square Bldg., 121 Seventh Place East, St. Paul, Minnesota 55101-2147. Exceptions must be specific, relevant to the matters at issue in this proceeding, and stated and numbered separately. Proposed Findings of Fact, Conclusions, and Recommendations should be included, and copies thereof shall be served upon all parties.

The Minnesota Public Utilities Commission ("Commission" or "PUC") will make the final determination on the matter of the Certificate of Need ("CON") after the expiration of the period for filing exceptions as set forth above or after oral argument if such is requested and granted in this matter.

Further notice is hereby given that the PUC may, at its reasonable discretion, accept, modify, condition, or reject the Administrative Law Judge's Recommendation and that said Recommendation has no legal effect unless expressly adopted by the PUC.

STATEMENT OF ISSUES

The issue to be decided is whether the proposed Extended Power Uprate at the Monticello Generating Plant satisfies the criteria for a Certificate of Need in Minn. Stat. § 216B.243 and Minnesota Rules Chapter 7849.

The Administrative Law Judge concludes that Xcel Energy has demonstrated that its proposal to increase the generating capacity of the Monticello Generating Plant by 71 megawatts meets the legal criteria and that no other party has demonstrated that a more reasonable and prudent alternative exists at this time.

Based upon the proceedings herein, the Administrative Law Judge makes the following:

FINDINGS OF FACT

I. Parties and Procedural History

1. The Applicant, Northern States Power Company, a Minnesota corporation, (hereinafter "Xcel Energy") is a public utility that generates electrical power and transmits, distributes, and sells the power to its residential and business customers within service territories assigned by state regulators in parts of Minnesota, Wisconsin, Michigan, South Dakota, and North Dakota. Ex. 2 (CON Application) at 2-2.

2. The Monticello Nuclear Generating Plant ("Monticello Plant") is a 600-megawatt, nuclear-powered boiling water reactor electric generating plant located near Monticello, in Wright County, Minnesota. The Monticello Plant is owned by Xcel Energy and had been operated by Nuclear Management Company, LLC ("NMC"), under contract with Xcel Energy. During the pendency of this proceeding, the reintegration of the functions of NMC into Xcel Energy was completed. In addition to the Monticello Plant, Xcel Energy now operates the Prairie Island Nuclear Generating Plant as well. Ex. 2 (CON Application) at 2-2 to 2-3, 3-1; Xcel Energy Letter to Judge Mihalchick (Oct. 24, 2008).

3. The Monticello Plant is licensed by the Nuclear Regulatory Commission ("NRC") to operate until 2030. Ex. 2 (CON Application) at 1-4.

4. Xcel Energy's 2004 Resource Plan identified opportunities for increasing the capacity and energy production of the Monticello, Prairie Island, and Sherco generating plants by approximately 320 MW to meet the state's energy needs in the most cost-effective manner and with the least environmental impact. Ex. 2 (CON Application) at 1-4, 5-1; Ex. 34 (Engelking Direct) at 3.

5. The Commission approved Xcel Energy's 2004 Resource Plan on July 28, 2006 in Docket No. E002/RP-04-1752 and required Xcel Energy to pursue the necessary regulatory approvals for the Monticello uprate project. Ex. 2 (CON Application) at 2; Ex. 34 (Engelking Direct) at 3.

6. The Commission's September 28, 2007 Order in the 2004 Resource Plan docket granted a delay of the filings until at least December 14, 2007. The delay was granted based on Xcel Energy's request to reassess the impacts of the state's Next Generation Energy Act of 2007. Ex. 2 (CON Application) at 2; Ex. 34 (Engelking Direct) at 3-4.

7. Xcel Energy filed its 2007 Resource Plan in PUC Docket No. E002/RP-07-1572 on December 14, 2007. Ex. 2 (CON Application) at 2; Ex. 34 (Engelking Direct) at 4.

8. On February 14, 2008, Xcel Energy submitted its Application for a Certificate of Need ("CON") for an extended power uprate to increase the generating capacity of the Monticello Plant. Under the proposal, Xcel Energy will implement design uprates to take advantage of the additional capability of the nuclear reactor at the Monticello Plant. Xcel Energy estimates that the uprate would increase the generating capacity of the plant by 71 megawatts. Ex. 2 (CON Application) at 3-13 to 3-15.

9. Monticello cannot operate at the increased thermal power level until the NRC approves an amendment to the Plant's operating license. An application for an operating license amendment was submitted to the NRC on March 31, 2008 and later withdrawn after consultation with the NRC. The application is expected to be re-filed in the fall of 2008, and Xcel Energy expects to receive the NRC license amendment in early 2010. Ex. 35 (Williams Direct) at 3, 12.

10. The necessary modifications to the plant will be made during the planned 2009 and 2011 refueling outages. The modifications completed during the 2009 refueling outage will increase the output by 15 megawatts upon the NRC's approval of the license amendment to operate at the increased thermal power level. The plant's output will increase by an additional 56 megawatts upon completion of additional modifications during the 2011 outage. Ex. 35 (Williams Direct) at 2-3.

11. Xcel Energy's CON Application included a discussion of carbon risk analysis strategies as required by the Commission's July 28, 2006 Order from the 2004 Resource Plan (Docket No. E002/RP-04-1752). Ex. 2 (CON Application) at 8-4 to 8-11

12. On February 20, 2008, the Commission issued a notice requesting comments on the completeness of Xcel Energy's CON Application and whether there were material facts in dispute that would require a contested case hearing.

13. On March 17, 2008, the Commission issued an Order extending the completeness review period for an unspecified but reasonable period of time, with the understanding that the meeting to review the request would be held as soon as practicable following receipt of the written comments. Ex. 29.

14. Xcel Energy filed a supplement to the CON Application on April 7, 2008. Ex. 30 (CON Supplement).

15. The Commission met on April 10, 2008 to consider the CON Application. In an Order dated April 18, 2008, the Commission accepted the CON Application as substantially complete and referred the matter for a contested case proceeding and public hearing. Ex. 31.

16. On May 2, 2008, Xcel Energy filed a Site Permit Application for the extended power uprate to increase the generating capacity of the Monticello Plant. Ex. 3.

17. On May 12, 2008, the Commission issued an Order accepting the Site Permit Application as complete and approving coordination of the public hearing for the Site Permit with the public hearing for the CON. Ex. 9.

18. Minn. R. 7849.7030 requires the Department of Commerce to prepare an Environmental Report on a proposed large electric power generating plant at the need stage. Minn. R. 7849.7100, however, provides that in the event an applicant for a certificate of need applies to the Commission for a site permit prior to completion of the Environmental Report, the Department of Commerce may elect to prepare an Environmental Assessment in lieu of the required Environmental Report. The OES has elected to prepare an Environmental Assessment addressing the proposed uprate to the Monticello Plant in lieu of an Environmental Report. The OES released its Environmental Assessment scoping decision on June 10, 2008, and released the Environmental Assessment on July 31, 2008. Ex. 10 (EA Scoping Decision); Ex. 14 (EA).

19. At the time the Commission makes a final decision on the CON and Site Permit Applications, the Commission shall determine whether the Environmental Assessment and the record created address the issues identified in the scoping decision. The Commission must issue a certificate of need before it may issue a site permit. Minn. R. 7849.5720.

20. A coordinated public hearing relating to the CON and the Site Permit Applications was held on August 21, 2008, in Monticello, Minnesota. Notice of the public hearing was published in the Monticello Times on August 7, 2008, the St. Cloud Times on August 8, 2008, and the Minneapolis Star Tribune on August 8, 2008. Ex. 18.

21. An evidentiary hearing relating to the CON was held on October 6, 2008 in St. Paul, Minnesota.

22. Proposed Findings of Fact, Conclusions of Law, and Recommendation were submitted by Xcel Energy on October 27, 2008. The Office of Energy Security ("OES") submitted a letter dated November 12, 2008, stating that it had no objection to the Proposed Findings of Fact, Conclusions of Law, and Recommendation as submitted by Xcel Energy. The record was closed on November 18, 2008, upon receipt of the mailed original of OES's letter.

II. Related Proceedings

23. Related proceedings that affect this proceeding are occurring before the Commission and other regulatory bodies. These are the Commission's review of Xcel Energy's 2007 Resource Plan and Site Permit Application, the Office of Energy Security's preparation of an Environmental Assessment and the NRC's review of Xcel Energy's operating license amendment.

24. Xcel Energy is required to submit a Resource Plan to the Commission that examines the need for electricity over a 15-year planning period, evaluates a broad spectrum of alternatives to meet the anticipated demand for power, and presents a plan for meeting the need. Minn. Stat. § 216B.2422. The Commission then accepts, modifies, or rejects the Resource Plan. As noted above, Xcel Energy filed its 2007 Resource Plan on December 14, 2007. The 2007 Resource Plan, among other things, addresses the role of the Monticello Plant in meeting the demand for electricity and alternatives to the proposed power uprate. Xcel Energy submitted Reply Comments in the 2007 Resource Plan docket on September 5, 2008. Among other items, the Reply Comments outline Xcel Energy's increased demand-side management goal of 1.3 percent by 2012 and also include an updated forecast of energy and demand. Ex. 37 (Wishart Supplemental Direct) at 1, 3-4.

25. Xcel Energy submitted its Site Permit Application for the Monticello extended power uprate on May 2, 2008. Ex. 3. The power uprate qualifies for the alternative environmental review process available under Minn. R. 7849.5500, and by a letter dated December 5, 2007, Xcel Energy gave notice pursuant to Minn. R. 7849.5500 subp. 2 that it intended to file the Site Permit Application pursuant to the alternative review process. Ex. 1.

26. The NRC is responsible for overseeing the safe operation of nuclear generation facilities. The NRC regulates the radiological, engineering, health and safety standards applicable to operation of the Monticello Plant. The regulatory approval process to amend a nuclear facility's operating license and technical specifications is governed by Title 10 of the Code of Federal Regulations, Part 50. Ex. 2 (CON Application) at 2-5.

27. NMC applied to the NRC for an operating license amendment to operate the reactor at a higher thermal power on March 31, 2008. Between May 20, 2008 and June 12, 2008, NMC submitted a number of supplements to the original application. Ex. 35 (Williams Direct) at 12.

28. On June 25, 2008, after consultation with the NRC, NMC withdrew the operating license amendment application. Per the agreement, the application will be modified to include additional information and analysis requested by the NRC. The application is expected to be re-filed in the fall of 2008. Ex. 35 (Williams Direct) at 12.

III. The Proposed Project

A. Plant Characteristics and Performance

29. The Monticello Plant was initially granted its operating license by the NRC in September 1970. The facility employs a single-unit boiling water reactor powered by nuclear fuel. In such a configuration, a nuclear reaction in the reactor core generates heat, which boils water to produce steam inside the reactor vessel, which in turn is directed to turbine generators to produce electrical power. The water is cooled in a condenser and returned to the reactor vessel to be boiled again. The cooling water is force-circulated by electrically powered feedwater pumps. Emergency cooling water is supplied by other pumps, which can be powered by onsite diesel generators. Ex. 2 (CON Application) at 3-1, 3-9.

30. From 2002 through 2006, the plant has maintained an average capacity factor of 94.2 percent. In 2006, the Monticello Plant generated a record 5,070,000 megawatt-hours of electricity. The plant supplies about 10 percent of Xcel Energy's Upper Midwest customers' electric energy requirements. Ex. 2 (CON Application) at 1-4, 3-2.

31. The Monticello Plant has received the General Electric Outstanding Plant Performance Award for boiling water reactors 17 times. The Monticello Plant also has received the Minnesota Safety Council Award for the past five years for outstanding efforts in reducing workplace injuries and illnesses. The plant has "green" indicators from the NRC's Reactor Oversight Process, the highest performance indicator given by the NRC. Ex. 2 (CON Application) at 3-2; Ex. 35 (Williams Direct) at 6.

B. Nuclear Fuel Characteristics

32. Nuclear fuel used at the Monticello Plant consists of high-density ceramic uranium dioxide pellets, which are fabricated into fuel assemblies and transported to the Monticello Plant by truck. Ex. 2 (CON Application) at 3-9 to 3-10.

33. A fuel assembly consists of standard fuel rods, part length fuel rods, tie rods, and water rods. Standard rods contain the nuclear fuel, the part length rods extend to an intermediate point in the assembly, tie rods are included to provide support to the assembly, and water rods are hollow Zircaloy tubes with several holes located at each end to facilitate water flow through the assembly. Each fuel assembly is 5.28 by 5.28 inches wide and up to 172 inches long. A fuel rod consists of high-density ceramic uranium dioxide fuel pellets, each about the size of a thimble, stacked in a Zircaloy tube. When filled with fuel, the air in a fuel rod is evacuated, helium is backfilled, and the rod sealed by welding plugs in each end. Ex. 2 (CON Application) at 3-10.

34. The plant's reactor core consists of 484 fuel assemblies, arranged in 121 cells. Each cell contains 4 fuel bundles of assemblies and a control blade. Ex. 2 (CON Application) at 3-10.

35. Approximately every two years, the Monticello Plant is shut down to refuel the reactor. During the shutdown, approximately one-third of the fuel assemblies, or about 150 fuel assemblies, are replaced with new assemblies. Thus, each nuclear fuel assembly provides heat constantly over about a six-year period before its output declines to the point it is replaced to maintain the desired plant output level. These spent fuel assemblies are then removed from the reactor and stored in the spent fuel pool to cool and are ultimately placed in dry storage casks and moved to the Independent Spent Fuel Storage Installation ("ISFSI"). Ex. 2 (CON Application) at 3-10.

C. Power Uprate History

36. Several decades of reactor safety technology improvements, plant performance feedback, and improved fuel and core designs have shown that Monticello and many similar reactors throughout the country can operate at higher thermal output than allowed under the original NRC license and still remain well within NRC calculated safe operational levels. Many nuclear power plants throughout the United States have requested power increases above the original NRC approved thermal power level. Ex. 2 (CON Application) at 3-12.

37. As of December 2007, the NRC had completed 123 power uprate project reviews. GE is the lead vendor for the power uprate projects for boiling water reactors and has been the primary engineering firm for each power uprate. Ex. 35 (Williams Direct) at 12.

38. Under NRC terminology, a power uprate of more than seven percent (up to a maximum of 20 percent) over the Original Licensed Thermal Power ("OLTP") that requires significant balance-of-plant upgrades is called an "Extended Power Uprate" or "EPU". As of May 2008, the NRC has approved extended power uprates for 14 boiling water reactor plants. Ex. 2 (CON Application) at 3-12; Ex. 35 (Williams Direct) at 4-5, 12.

39. Monticello was the lead plant for GE's Power Uprate Program. In 1998, the thermal power rating for the Monticello Plant was increased from the original design rating of 1670 MWt to 1775 MWt, or 106.3 percent of OLTP. The first power uprate was completed by making use of available excess equipment, system and component capabilities at the site. The plant was able to increase generation by 35 MWe to a nominal net electrical output to the grid of 585 MWe with very few changes to installed plant equipment. Ex. 2 (CON Application) at 3-13; Ex. 35 (Williams Direct) at 5.

D. Proposed Increase in Generating Capacity

40. Xcel Energy proposes to expand the generating capacity of the Monticello Plant by 71 MW by (1) increasing the amount of the steam produced in the reactor, and (2) improving the balance-of-plant equipment that converts the steam into electricity. Ex. 2 (CON Application) at 3-13.

41. Higher steam flow from the reactor is obtained by operating the reactor at a higher thermal power level. The additional heat is achieved primarily by increasing

the number of new fuel assemblies replaced in the reactor core at each refueling. The goal of the power uprate project is to increase the thermal power to 120 percent of OLTP, which would increase reactor power from the current licensed thermal power level of 1775 MWt to 2004 MWt. The corresponding increase in net generator output is estimated at 71 MWe for a nominal net electrical output delivered to the grid of 656 MWe. Xcel Energy projects that plant operation at power uprate conditions will require on average approximately 173 of the 484 fuel assemblies to be replaced during each refueling instead of 150. Ex. 2 (CON Application) at 3-10, 3-13; Ex. 35 (Williams Direct) at 6-7, 9.

42. The project will take place over two refueling outages and will require very few modifications to the reactor and the reactor support systems that produce steam. Ex. 2 (CON Application) at 3-13 to 3-14.

43. To take advantage of the increased steam output, Xcel Energy proposes a number of balance-of-plant improvements to the systems that convert the steam produced in the reactor to generate additional electricity. The implementation of the power uprate is scheduled to take place during each of the next two routine refueling outages in 2009 and 2011. The modifications completed during the 2009 refueling outage will increase output by approximately 15 MWe upon the NRC's approval of the license amendment to operate at the increased thermal power level, and the modifications completed during the 2011 refueling outage will increase output by approximately 56 MWe. Ex. 2 (CON Application) at 3-15; Ex. 35 (Williams Direct) at 2-3.

44. Modifications to be completed during the 2009 refueling outage include replacement of the rotating element and diaphragm assemblies of the high pressure turbine, modification of several of the low pressure turbine stages, replacement of the condensate demineralizer vessels, and upgrades to the isophase bus duct cooling system. Ex. 2 (CON Application) at 3-15 to 3-16; Ex. 35 (Williams Direct)at 7-8.

45. Modifications to be completed during the 2011 refueling outage include replacement of the condensate pumps and motors, a new 13.8 KV bus and 1R and 2R transformers and distribution systems, replacement or modification of the steam dryer, rewind of the main generator stator, replacement of feed water pumps and motors, and an increase of the drain capacity of the two feedwater heaters. Ex. 2 (CON Application) at 3-16 to 3-17; Ex. 35 (Williams Direct) at 7-8.

46. In general, operation of the plant will not change after implementation of the power uprate. The primary impact will be more frequent operation of the cooling towers to supplement the cooling provided by the Mississippi River over the course of a year. Ex. 2 (CON Application) at 3-18; Ex. 35 (Williams Direct) at 9.

47. The power uprate will result in a total of approximately 230 additional fuel assemblies being produced over the remaining operating license period. Three new dry storage canisters may be necessary to support operations until 2030 due to the power uprate. The three additional storage canisters would not become necessary until

approximately 2025. Xcel Energy is not requesting additional storage canisters at this time because it anticipates that the federal government could begin to remove spent fuel from Monticello in time to preclude the need for more than the 30 canisters already approved. Ex. 2 (CON Application) at 3-18; Ex. 35 (Williams Direct) at 9.

E. Site Characteristics and Qualities

48. The Monticello Plant is located within the city limits of Monticello, Minnesota, in Wright County, on property abutting the Mississippi River, in Section 32, T-122N, R-25W, at 45° 20' N latitude and 93° 50' W longitude, approximately 50 miles northwest of Minneapolis-St. Paul. Ex. 2 (CON Application) at 3-1.

49. The plant site consists of 2,150 acres owned by Xcel Energy and configured on the eastern bank of the Mississippi River in Sherburne County and the western bank in Wright County. The physical plant is on the western bank in Wright County. A perimeter fence and other barriers restrict access to the plant. Ex. 2 (CON Application) at 3-1.

50. The Upper Mississippi River near the Monticello Plant supports a variety of plant and animal species that are typical of free-flowing rivers in the upper Midwest. The major primary producers, or plant groups, present are periphyton (attached algae), phytoplankton (floating algae), and macrophytes, which are larger flowering plants, either rooted or floating. Near the site, periphytons are the most important primary producer. Neither phytoplankton nor macrophytes are prominent in the area because they are not well adapted to the relatively turbulent currents in the area. Ex. 14 (EA) at 33.

51. The Benthic invertebrate community, comprising a great variety of insects, crustaceans, mollusks, and others, constitute a prominent faunal feature of the Mississippi River near Monticello. The Mississippi River also supports a diverse array of fish species. Ex. 14 (EA) at 33.

IV. Requirements of Statute and Rule

52. Minn. Stat. § 216B.243 and Minnesota Rules Chapter 7849 set forth the criteria which must be met by the Applicant to establish need for its proposed power uprate.

53. Minn. Stat. § 216B.243 prohibits the Applicant from siting or constructing a large energy facility without first obtaining a CON from the PUC. Minn. R. 7849.0030 requires the Applicant to obtain a CON for the expansion of a large electric generating facility when the expansion itself is of sufficient size to come within the definition of a large electric generating facility.

54. The power uprate at the Monticello Plant will increase the generating capacity by 71 megawatts, which would qualify as a large energy facility under Minn. Stat. § 216B.2421, subd. 2(1), and a large electric generating facility under Minn. R. 7849.0010, subd. 13.

55. Minn. Stat. § 216B.243, subd. 3, provides:

Subd. 3. **Showing required for construction**. No proposed large energy facility shall be certified for construction unless the applicant can show that demand for electricity cannot be met more cost effectively through energy conservation and load-management measures and unless the applicant has otherwise justified its need. In assessing need, the commission shall evaluate:

(1) the accuracy of the long-range energy demand forecasts on which the necessity for the facility is based;

(2) the effect of existing or possible energy conservation programs under sections 216C.05 to 216C.30 and this section or other federal or state legislation on long-term energy demand;

(3) the relationship of the proposed facility to overall state energy needs, as described in the most recent state energy policy and conservation report prepared under section 216C.18, or, in the case of a high-voltage transmission line, the relationship of the proposed line to regional energy needs, as presented in the transmission plan submitted under section 216B.2425;

(4) promotional activities that may have given rise to the demand for this facility;

(5) benefits of this facility, including its uses to protect or enhance environmental quality, and to increase reliability of energy supply in Minnesota and the region;

(6) possible alternatives for satisfying the energy demand or transmission needs including but not limited to potential for increased efficiency and upgrading of existing energy generation and transmission facilities, load-management programs, and distributed generation;

(7) the policies, rules, and regulations of other state and federal agencies and local governments;

(8) any feasible combination of energy conservation improvements, required under section 216B.241, that can (i) replace part or all of the energy to be provided by the proposed facility, and (ii) compete with it economically;

(9) with respect to a high-voltage transmission line, the benefits of enhanced regional reliability, access, or deliverability to the extent these factors improve the robustness of the transmission system or lower costs for electric consumers in Minnesota;

(10) whether the applicant or applicants are in compliance with applicable provisions of sections 216B.1691 and 216B.2425, subdivision 7, and have filed or will file by a date certain an application for certificate of need under this section or for certification as a priority electric transmission project under section 216B.2425 for any transmission facilities or upgrades identified under section 216B.2425, subdivision 7;

(11) whether the applicant has made the demonstrations required under subdivision 3a; and

(12) if the applicant is proposing a nonrenewable generating plant, the applicant's assessment of the risk of environmental costs and regulation on that proposed facility over the expected useful life of the plant, including a proposed means of allocating costs associated with that risk.

56. Minn. Stat. § 216B.243, subd. 3a, provides:

Subd. 3a. **Use of renewable resource.** The commission may not issue a certificate of need under this section for a large energy facility that generates electric power by means of a nonrenewable energy source, or that transmits electric power generated by means of a nonrenewable energy source, unless the applicant for the certificate has demonstrated to the commission's satisfaction that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that the alternative selected is less expensive (including environmental costs) than power generated by a renewable energy source. For purposes of this subdivision, "renewable energy source" includes hydro, wind, solar, and geothermal energy and the use of trees or other vegetation as fuel.

57. As set forth in Minn. R. 7849.0120, a certificate of need must be granted to the applicant on determining that:

A. the probable result of denial would be an adverse effect upon the future adequacy, reliability, or efficiency of energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states;

B. a more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record;

C. by a preponderance of the evidence on the record, the proposed facility, or a suitable modification of the facility, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health; and

D. the record does not demonstrate that the design, construction, or operation of the proposed facility, or a suitable modification of the facility, will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

58. Additionally, Minn. Stat. § 216B.2422, subd. 4, states that the PUC shall not approve a new or refurbished nonrenewable energy facility in a CON unless the utility has demonstrated that a renewable energy facility is not in the public interest.

V. Satisfaction of Criteria: Minnesota Rules Chapter 7849 and Minn. Stat. § 216B.243

59. There is considerable overlap between Minn. Stat. § 216B.243 and Minn. R. 7849.0120. Consequently, these findings are structured around Minn. R. 7849.0120, but specific information required under Minn. Stat. § 216B.243 is also referenced.

A. The Probable Result of Denial of the CON Would be an Adverse Effect upon the Future Adequacy, Reliability, or Efficiency of the Energy Supply.

60. The first criterion under Minn. R. 7849.0120 is whether the probable result of denial of the CON would be an adverse effect upon the adequacy, reliability, and efficiency of the energy supply to the applicant, to the applicant's customers, or to the people of Minnesota and neighboring states. The factors to be considered are:

(1) the accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility (*see also*, Minn. Stat. § 216B.243, subd. 3(1));

(2) the effects of the applicant's existing or expected conservation programs and state and federal conservation programs (*see also*, Minn. Stat. § 216B.243, subd. 3(2));

(3) the effects of promotional practices of the applicant that may have given rise to the increase in the energy demand, particularly promotional practices which have occurred since 1974 (*see also*, Minn. Stat. § 216B.243, subd. 3(4));

(4) the ability of current facilities and planned facilities not requiring certificates of need to meet the future demand (*see also*, Minn. Stat. § 216B.243, subd. 3(8)); and

(5) the effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources.

61. Xcel Energy's 2004 Resource Plan identified opportunities for increasing the capacity and energy production of its Sherco, Prairie Island, and Monticello plants to

meet the state's energy needs in the most cost-effective manner and with the least environmental impact. Ex. 34 (Engelking Direct) at 3.

62. In its July 28, 2006 Order approving the 2004 plan, the Commission recommended that Xcel Energy pursue a package of uprates, including the Monticello uprate, as part of an effort to meet the projected need. Ex. 34 (Engelking Direct) at 3.

63. Xcel Energy's 2007 Resource Plan identified a continuing need, even after assuming that Xcel Energy would add 2,600 MW of wind resources by 2020 to comply with Minnesota's Renewable Energy Standard ("RES") and that it would increase the level of DSM savings from 0.8 percent to 1.1 percent of retail sales in accordance with the Next Generation Energy Act of 2007. Ex. 2 (CON Application) at 1-4, 5-1.

64. In its September 5, 2008 Reply Comments in the Resource Plan docket, Xcel Energy updated its energy and demand forecasts. The new forecast incorporates the downturn in economic conditions as well as Xcel Energy's increased commitment to DSM. Xcel Energy agreed to increase the level of DSM savings from 1.1 percent to 1.3 percent annual savings by 2012. Ex. 37 (Wishart Supplemental Direct) at 2-4.

65. The Commission has not yet approved Xcel Energy's 2007 Resource Plan. OES witness Hwikwon Ham testified that Xcel Energy's initial forecast is reasonable, and there is no evidence in the record to suggest that Xcel Energy's revised projections are not reasonable. Ex. 39 (Ham Direct) at 5.

66. The power uprate at the Monticello Plant will help Xcel Energy meet the State's energy needs by providing an additional 71 MW of highly reliable, low-cost, carbon-free energy for many years. The uprate will improve reliability by increasing energy production from a facility with a strong service record and a high capacity factor. Additionally, adding nuclear generation further diversifies Xcel Energy's generation portfolio, protecting against price increases in other fuels. The extended power uprate does not rely on significant load growth to justify its benefit: the additional energy from Monticello will replace more expensive and CO2 intensive energy elsewhere in the Xcel Energy system. Ex. 34 (Engelking Direct) at 6; Ex. 37 (Wishart Supplemental Direct) at 6-7.

67. Xcel Energy has extensive conservation programs that include a variety of load management, incentives, rebates, discounts, and efficiency standards. Energy conservation and load management, however, are not capable of meeting the need the uprate is proposed to fulfill. Ex. 2 (CON Application) at 6-3 to 6-4 and Appendix C; Ex. 38 (Davis Direct) at 7-8; Ex. 34 (Engelking Direct) at 10.

68. Approval of the Monticello power uprate will help Xcel Energy comply with the RES by freeing up natural gas plants to operate as complements to Xcel Energy's expanding use of wind resources. In addition, the expanded use of nuclear energy to carry the base load will give Xcel Energy a fuel hedge against future variations in natural gas prices. Ex. 34 (Engelking Direct) at 6-7.

69. Minnesota's Next Generation Energy Act of 2007 sets a goal of reducing statewide carbon dioxide emissions by 30 percent by 2025. Approval of the Monticello power uprate will result in a reduction of carbon dioxide emissions by replacing fossil fuel generation with reliable, zero-carbon power. Ex. 34 (Engelking Direct) at 7.

70. Xcel Energy has not engaged in any promotional practices that created the need for the uprate at the Monticello Plant. Ex. 2 (CON Application) at 5-6; Ex. 41 (Rakow Direct) at 26.

71. Denial of the certificate of need would cause an adverse effect upon the adequacy, reliability, and efficiency of the energy supply to the Xcel Energy, to Xcel Energy's customers, and to the people of Minnesota and neighboring states.

B. A More Reasonable and Prudent Alternative to the Uprate has not been Demonstrated.

72. The second criterion under Minn. R. 7849.0120 is whether a more reasonable and prudent alternative to the proposed facility has been demonstrated by a preponderance of the evidence on the record. The factors to be considered are:

> (1) the appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives (*see also*, Minn. Stat. § 216B.243, subd. 3(6));
>
> (2) the cost of the proposed facility and the cost of energy to be supplied by the proposed facility compared to the costs of reasonable alternatives and the cost of energy that would be supplied by reasonable alternatives (*see also*, Minn. Stat. § 216B.243, subds. 3(11), 3(12), and 3a);
>
> (3) the effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives (*see also*, Minn. Stat. § 216B.243, subd. 3(12)); and
>
> (4) the expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.

73. Both Xcel Energy and the OES examined several alternatives that might provide a replacement for the electricity generated by the Monticello uprate.

74. Before seeking Commission approval for the proposed project, Xcel Energy examined the following alternatives: (1) demand-side management, (2) increased efficiency of existing facilities, (3) long-term purchased power, (4) short-term purchased power, (5) new transmission lines, (6) distributed generation, (7) reduced project size, (8) no facility, and (9) construction of facilities powered by different fuels. Ex. 2 (CON Application) at 6-3, App. D.

75. Demand-side management was rejected as an option because Xcel Energy is already implementing or preparing to implement a wide variety of new conservation programs to meet the goals of the Next Generation Energy Act, which approximately doubled the DSM goals approved in Xcel Energy's 2004 Resource Plan. After submitting the CON Application, Xcel Energy committed to increase its DSM savings goal from 1.1 percent to 1.3 percent by 2012. Xcel Energy's demand-side management programs remain untested at these higher levels. It is not possible for Xcel Energy to rely on DSM to satisfy both the Next Generation Energy Act and replace the energy and capacity from the Monticello uprate project. Ex. 2 (CON Application) at 6-3 to 6-4; Ex. 34 (Engelking Direct) at 10; Ex. 37 (Wishart Supplemental Direct) at 4.

76. Xcel Energy is already pursuing efficiency increases at its six largest plants, including the Monticello Plant. It is seeking uprates at its Prairie Island and Sherco generation plants as part of its 2007 Resource Plan, and is in the process of modifying its King, Riverside, and High Bride plants as part its of Metro Emission Reduction Program. Therefore, there are no reasonably available opportunities remaining for additional efficiency projects to supplant the Monticello power uprate. Ex. 2 (CON Application) at 6-4.

77. Xcel Energy determined long-term purchased power to be appropriate in terms of size, type, and availability in its Certificate of Need application. However, Xcel Energy's analysis showed that the costs, including externalities, of such an agreement, would be substantially higher than the costs of the Monticello power uprate. Ex. 2 (CON Application) at 6-12 to 6-20.

78. Short-term purchased power would not be an appropriate alternative to the Monticello power uprate, principally for reasons of reliability and cost. While the Monticello power uprate would provide ratepayers with a stable, low-cost source of capacity and energy, the short-term market may be subject to significant variations in price. Ex. 2 (CON Application) at 6-5.

79. New transmission lines are not viable alternatives to the proposed project for several reasons. First, there is no reason to believe the transmission lines would provide access to low-cost, environmentally friendly sources of power, since any such sources in the area are likely fully subscribed. Second, new transmission takes considerable time to permit and construct, particularly if the line is of significant length. Ex. 2 (CON Application) at 6-5.

80. It is unlikely that distributed generation would be available in sufficient quantities to fill Xcel Energy's current need. Available in limited quantities to begin with, distributed generation is primarily available in the form of wind generation or demand-side management. Xcel Energy is already vigorously pursuing wind and demand-side management to comply with the RES and the Next Generation Energy Act. The remaining options for distributed generation are too limited to meet demand here. Ex. 2 (CON Application) at 6-6.

81. The proposed 71 MW increase will optimize the operation of the Monticello Plant. Therefore, any reduction in the size of the project will both increase the unit cost of power production at the plant and reduce the energy and capacity available from the power uprate. Ex. 2 (CON Application) at 6-6.

82. A no facility alternative would result in a larger energy need in the coming years, making it an unreasonable alternative. Ex. 2 (CON Application) at 6-6.

83. Xcel Energy closely examined the possibility of constructing plants powered by different fuels and found biomass and natural gas fired facilities to be viable alternatives in terms of size, type, and timing. However, for both, Xcel Energy's analysis showed the Monticello power uprate's economic and environmental costs to be superior. It would therefore also be unreasonable for Xcel Energy to select these alternatives. Ex. 2 (CON Application) at 6-14 to 6-20.

84. For each of the three viable alternatives (long-term coal based power-purchase, biomass, and natural gas), Xcel Energy analyzed the economic and environmental impacts using the Strategist model. The sensitivity analysis showed that the Monticello uprate is the least-cost alternative under a wide spectrum of modeling assumptions. Additionally, the power uprate was projected to result in significantly lower system emissions than all the alternatives evaluated. The Monticello uprate project was the preferred alternative from both an economic and environmental perspective. Ex. 2 (CON Application) at 6-14 to 6-20.

85. After submission of the CON Application, Xcel Energy made several modifications to the Strategist model to incorporate a new forecast and other modifications suggested by the OES. The updated Strategist results indicate that the power uprate project continues to perform best both economically and environmentally over the other alternatives considered and remains the preferred alternative. The revised analysis confirms that the extended power uprate is the most cost-effective alternative, will significantly reduce Xcel Energy's carbon emissions, and will provide a hedge to fluctuations in natural gas and coal markets. The minimal impact of the numerous changes in the Strategist model and the results of the multiple sensitivities analysis confirms the robustness of Xcel Energy's analysis. Ex. 37 (Wishart Supplemental Direct) at 3, 6-10.

86. OES witness Steve Rakow performed a Strategist analysis to compare the proposed power uprate to a biomass option and a "wind plus system back-up" option as renewable alternatives. Dr. Rakow's analysis showed that the renewable alternatives were either not feasible or were more expensive (including environmental costs) than the proposed uprate. Ex. 41 (Rakow Direct) at 9-12.

87. Dr. Rakow also performed a Strategist analysis to compare the proposed uprate to non-renewable alternatives and concluded that the Monticello power uprate is the least cost alternative, even if steam dryer replacement is necessary at the plant. Ex. 41 (Rakow Direct) at 14-21.

88. Xcel Energy and the OES have analyzed a comprehensive list of potential alternatives to this project. It would be neither reasonable nor prudent of Xcel Energy to choose any of them over the Monticello power uprate.

C. The Uprate will Provide Benefits to Society in a Manner Compatible with Protecting the Natural and Socioeconomic Environments.

89. The third criterion under Minn. R. 7849.0120 is whether by a preponderance of the evidence on the record, the proposed facility, or a suitable modification thereof, will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including public health. The factors to be considered are:

> (1) the relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs (*see also*, Minn. Stat. § 216B.243, subd. 3(3));
>
> (2) the effects of the proposed facility, or a suitable modification thereof, upon the natural and socioeconomic environments compared to the effects of not building the facility;
>
> (3) the effects of the proposed facility, or a suitable modification thereof, in inducing future development; and
>
> (4) the socially beneficial uses of the output of the proposed facility, or a suitable modification thereof, including its uses to protect or enhance environmental quality (*see also*, Minn. Stat. § 216B.243, subd. 3(5)).

90. The proposed power uprate will help to ensure continued reliability of the state electricity system by supplying dependable, low-cost, carbon-free, base load power that could only be reliably replaced by more expensive sources. In addition, it will increase the ability of Xcel Energy to satisfy the demands of its Minnesota customers as the state works to add wind resources and remove carbon-emitting generation units from the system and will have a positive impact on the State's energy need. Ex. 2 (CON Application) at 7-1; Ex. 39 (Ham Direct) at 4-5; Ex. 34 (Engelking Direct) at 6-9.

91. The proposed power uprate will have a minimal impact on environmental resources. The project is an expansion of an existing facility, taking full advantage of existing infrastructure and minimizing land use impacts. Nuclear power is among the most appropriate generation technologies for the base load service need the project is intended to address. And by operating the facility at a higher capacity, Xcel Energy will obtain energy at a lower unit cost than it does currently, an improvement that works in the favor of ratepayers with more efficient production. Additionally, the uprate project displaces capacity and energy from both new and existing carbon emitting resources, contributing to Xcel Energy's ability to implement the carbon and fossil fuel reductions required by the 2007 legislature. Ex. 2 (CON Application) at 7-1 to 7-3; Ex. 34 (Engelking Direct) at 6-7.

92. The region surrounding Monticello is an "attainment area" that currently meets all federally allowed air concentration limits for criteria air pollutants. The power uprate project will not affect air quality in the area. Non-radiological air emissions are not expected to increase or decrease as a result of the uprate. Diesel engines, a boiler, and other sources currently associated with the Monticello Plant emit various non-radioactive air pollutants to the atmosphere. Air emissions from these sources are subject to the terms and conditions of a Title V air pollution control permit issued by the Minnesota Pollution Control Agency ("MPCA"). No changes to the MPCA air permit are required as a result of the uprate. Ex. 14 (EA) at 32.

93. The power uprate will result in an increase in the production and activity of radioactive gaseous effluents of approximately 13 percent. This increase is well within the regulatory limits of 10 CFR Part 20 (Standards for Protection Against Radiation) and maintains compliance with the design objectives of Appendix Ito 10 CFR Part 50 (Domestic Licensing of Production and Utilization Facilities). Ex. 14 (EA) at 32, 36-38; Ex. 35 (Williams Direct) at 17.

94. The uprate will not result in any changes in the operation or design of equipment of the solid and liquid waste systems, and the safety and reliability of those systems is unaffected. The uprate will result in a small increase in reactor wastes and radioactive solid waste. The uprate will not result in radiological levels above the safe thresholds established by the NRC and in the Technical Specifications for the plant. Ex. 14 (EA) at 44.

95. The NRC has oversight authority regarding the safety of nuclear power generation facilities. Xcel Energy must obtain an amendment to the operating license for the facility from the NRC in order to operate the plant at a higher thermal output. A review conducted by NMC and General Electric concluded that the Monticello power uprate could be completed without affecting the continued safe operation of the facility. Ex. 35 (Williams Direct) at 11, 13-15.

96. The power uprate may cause some increase in effluent levels for a few chemical constituents monitored under the site's NPDES permit, but those levels will remain well below the permit's daily discharge limits. Ex. 14 (EA) at 43.

97. The project will result in a small increase in the site's discharge canal temperature, but that increase will not require any changes to the NPDES-permitted discharge temperature limits. The limits imposed by the NPDES permit are conservative and assure no significant adverse impact on the environment. Studies have confirmed that cooling tower operation during the summer months has adequately prevented detrimental environmental effects, and water temperatures downstream are not high enough to harm aquatic species or impede fish migration. Ex. 14 (EA) at 33, 41-42; Ex. 35 (Williams Direct) at 16.

98. The Environmental Assessment prepared by the OES notes that the likelihood of cold shock events are not related to the power uprate and that the project will not significantly change the magnitude of a temperature decrease in a cold shock

situation. The cold shock concerns of river fish species have been reduced by the construction of a weir at the end of the discharge canal, and by backwashing of the traveling screens above 50 degrees. The weir limits the number of fish in the discharge canal and reduces the effects of cold shock on aquatic species in the river. Ex. 14 (EA) at 33-34.

99. The proposed power uprate will not result in a significant increase in the impingement and entrainment of organisms in the site's condenser cooling system and will not cause effects that have not been previously evaluated. Section 316(b), 33 U.S.C. § 1326(b), of the Clean Water Act requires the location, design, construction, and capacity of cooling water intake structures to reflect the best technology available for minimizing adverse environmental impacts. A 316(b) demonstration was developed and submitted to the MPCA in 1978 and approved by the MPCA in September 1979, with the conclusion that entrainment and impingement at Monticello offers "... no substantial detriment to the fisheries population." Furthermore, studies of fish populations in the vicinity of the plant have shown the plant's cooling system has resulted in no substantial detriment to the fisheries population. Ex. 14 (EA) at 34.

100. The projected increase in discharge canal inlet temperature will not involve any significant increase in harmful thermophilic organisms in the discharge canal. Ex. 14 (EA) at 34.

101. No changes to land use are anticipated as a result of the power uprate and therefore there are no anticipated impacts to rare and unique natural resources or species. Ex. 14 (EA) at 35.

102. The Environmental Assessment concluded that the power uprate will not negatively affect the trumpeter swans' use of the area downstream of the plant in the winter. Ex. 14 (EA) at 35.

103. The uprate will not result in any construction activities outside of the Monticello site; therefore, no impacts to cultural, archaeological, or historic resources are anticipated as a result of the project. Ex. 14 (EA) at 36.

104. The change in water consumption due to the power uprate is not expected to be significant, so no change in the Monticello Plant's Groundwater Appropriations Permit will be necessary. Ex. 14 (EA) at 43-44.

105. The estimated increase in surface water consumption resulting from the power uprate is within the values previously evaluated by the NRC for licensing purposes, and is not considered to be significant. It will not involve any changes to the Surface Water Appropriations Permit issued by the Minnesota Department of Natural Resources. Ex. 14 (EA) at 40-41.

106. The Minnesota Department of Natural Resources ("DNR") submitted an amended letter to the OES offering several comments on the Environmental Assessment. The DNR letter expressed concern about the increase in site's discharge canal temperature and suggested that an auxiliary dry cooling tower could address the

increase and eliminate any concerns of impairment to aquatic biota as well as address the increased potential for cold shock. The DNR also expressed concern that the additional heat loads would increase the temperature and size of the open water downstream of the plant and attract an excessive number of trumpeter swans. Finally, the DNR suggested that Xcel Energy use the uprate as an opportunity to improve management of plant lands. Ex. 24.

107. Xcel Energy has effectively addressed the DNR's criticisms through its comments submitted in reply to the DNR's letter and the testimony of Allen L. Williams offered at the evidentiary hearing. Xcel Energy noted that the current cooling capabilities of the plant are sufficient to continue operation of the plant post power uprate within the terms of the existing NPDES permit. Additionally, Xcel Energy stated that cold shock events are related to the scheduled and unscheduled shutdown of the plant and are independent of and technically unrelated to the proposed power uprate. Xcel Energy also noted that research indicates that even during worst-case years, the thermal plume is largely restricted to one side of the river, disperses rapidly, and is not a barrier to fish movement. Xcel Energy also outlined the potential impacts of the ongoing CWA Section 316(b) rulemaking proceeding. The final rules associated with Section 316(b) could significantly impact the cooling tower solution, and any change involving cooling towers is premature and could be in conflict with the final Section 316(b) rules. Ex. 25; Evidentiary Hearing, Tr. at 11-13, 17-18.

108. Mr. Williams also testified regarding two provisions in the existing NPDES permit that could authorize additional review by the MPCA following completion of the extended power uprate. First, any discharge that would result in increasing the pollutant loading to the Mississippi River would be subject to the MPCA's Non-Degradation Review. Second, the NPDES permit states that the permit may be reopened to insert a more restrictive thermal limit or the requirement to complete a 316(a) study if it is has been shown that the thermal components of the service water discharges affect the safety and propagation of a balanced, indigenous population of shellfish, fish, and wildlife in and on the Mississippi River. This provision gives the MPCA the authority to either change the thermal discharge limit to protect aquatic wildlife and/or require a new study to evaluate the thermal discharge impacts to the river if the agency believes that the thermal discharges may negatively impact the river. Evidentiary Hearing, Tr. at 13-14.

109. Whereas the DNR suggests that the warmed water has increased the number of trumpeter swans and made feeding them necessary because of scarce food supply, Xcel Energy suggests that it is the local citizens and the DNR providing food for the trumpeter swans that encourages them to remain in the area during the winter. That is a situation that will require some further analysis and discussion, but it does not override the need for the facility. Xcel Energy also noted that since the power uprate project will take place entirely within the existing plant boundaries and facilities, the project will not have any impact on the surrounding habitat about which the DNR expressed concern. Ex. 25.

110. As a provider of base-load energy, the power uprate will help keep energy costs low in the region, helping it attract businesses and maintain steady economic growth. The project is also expected to provide significant tax benefits at the local, state, and federal levels. Ex. 2 (CON Application) at 7-4.

111. The project will provide socially beneficial uses by supplying Xcel Energy's customers with reliable, low-cost power.

D. The Design, Construction, Operation, and Retirement of the Uprate will Comply with Applicable State and Federal Policies and Laws.

112. The fourth criterion under Minn. R. 7849.0120 is whether the record demonstrates that the design, construction, or operation of the proposed facility will comply with relevant policies, rules, and regulations of other state and federal agencies and local governments (*see also*, Minn. Stat. § 216B.243, subds. 3(7) and 3(10)).

113. There is no evidence in the record that the design, construction, and operation of the proposed uprate would fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments. Xcel Energy intends to submit a new license amendment application to the NRC in the fall of 2008 and expects to receive the NRC license amendment in early 2010. Ex. 35 (Williams Direct) at 3; Ex. 34 (Engelking Direct) at 9.

VI. Compliance with Other Statutes

114. Xcel Energy has an obligation to comply with the requirements of Minn. Stat. § 216B.1691. OES witness Susan L. Peirce testified that Xcel Energy is in compliance with Minn. Stat. § 216B.1691 and has met the objective in Minn. Stat. § 216B.1691, subd. 2, to obtain at least 1 percent of its Minnesota retail sales from renewable sources and has plans in place to meet its RES requirements through at least 2016. Ex. 40 (Peirce Direct) at 13-15.

115. Minn. Stat. § 216B.243, subd. 3(10), requires the Commission to evaluate whether an applicant is in compliance with the applicable provisions of section 216B.2425, subd. 7, which requires utilities to determine necessary transmission upgrades to support development of renewable energy resources to meet objectives under section 216B.1691. OES witness Steve Rakow testified that Xcel Energy has met the statutory criteria. Ex. 41 (Rakow Direct) at 23-25.

Based on the foregoing Findings of Fact, the Administrative Law Judge makes the following:

CONCLUSIONS

1. Any of the foregoing Findings of Fact more properly designated as Conclusions of Law are hereby adopted as such.

2. The Administrative Law Judge and the Minnesota Public Utilities Commission have jurisdiction over the subject matter of this hearing pursuant to Minn. Stat. § 216B.243.

3. All relevant procedural requirements of law and rules have been fulfilled prerequisite to the issuance of a Certificate of Need to the Applicant.

4. As required by the Commission's 2004 Resource Plan Order, Xcel Energy's CON Application included a discussion of carbon risk analysis strategies.

5. The forecasts, power system analyses, and cost analyses presented in these proceedings through Xcel Energy's Integrated Resource Planning Process, CON Application, Exhibits, and Xcel Energy witness testimony were reasonably reliable and appropriate for determining the need for the upgrade.

6. Failing to increase the generating capacity of the Monticello Plant would adversely affect the future adequacy, reliability, and efficiency of the energy supply to Xcel Energy's customers and the people of Minnesota and neighboring states.

7. No more reasonable and prudent alternative to the uprate of the Monticello Plant has been demonstrated to exist.

8. The power uprate at the Monticello Plant will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including human health.

9. The record does not demonstrate that the design, construction, or operation of the Monticello Plant following the uprate will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

10. Xcel Energy has demonstrated that it has explored the possibility of generating power by means of renewable energy sources and has demonstrated that a renewable energy facility is not in the public interest when compared to the proposed project.

11. Xcel Energy has demonstrated that the proposed power uprate satisfies the criteria for a Certificate of Need in Minn. Stat. § 216B.243 and Minn. R. 7849.0120.

12. The Certificate of Need requested by Xcel Energy should be issued.

Based upon the foregoing Conclusions, the Administrative Law Judge makes the following:

RECOMMENDATION

IT IS RESPECTFULLY RECOMMENDED that the Public Utilities Commission issue a Certificate of Need to Xcel Energy for a 71 megawatt increase in the generating capacity for the Monticello Plant.

Dated: November 19, 2008

s/Steve M. Mihalchick
STEVE M. MIHALCHICK
Administrative Law Judge

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