

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

In the Matter of the Application of
Northern States Power Company for
a Certificate of Need for Approximately
100 Megawatts of Wind Generation

FINDINGS OF FACT,
CONCLUSIONS AND
RECOMMENDATION

The above-entitled matter came on for hearing before Allan W. Klein, Administrative Law Judge, on January 8, 1996, in Ruthton, Minnesota.

Appearing on behalf of Northern States Power Company, the Applicant herein, was Jeffrey C. Paulson, Senior Attorney, Northern States Power Company, 414 Nicollet Mall, Minneapolis, Minnesota 55401.

Appearing on behalf of the Department of Public Service, Intervenor herein, was Kathy McGill, Assistant Attorney General, 1200 NCL Tower, 445 Minnesota Street, St. Paul, Minnesota 55101-2130.

Appearing on behalf of the Office of Attorney General, Intervenor herein, was Sara J. DeSanto, Assistant Attorney General, 1200 NCL Tower, 445 Minnesota Street, St. Paul, Minnesota 55101-2130. No representative of the Office took part in the hearing in Ruthton.

The record in this matter closed on January 30, 1996, upon receipt of stipulated proposed Findings of Fact and Conclusions of Law from the Applicant and the Department.^[1] The Administrative Law Judge was informed that the Office of Attorney General, the other Intervenor herein, had no objection to the proposed Findings.

Notice is hereby given that, pursuant to Minn. Stat. § 14.61, and the Rules of Practice of the Public Utilities Commission and the Office of Administrative Hearings, exceptions to this Report, if any, by any party adversely affected must be filed within 20 days of the mailing date hereof with the Executive Secretary, Minnesota Public Utilities Commission, 121 Seventh Place East, Suite 350, St. Paul, Minnesota 55101-2147. Exceptions must be specific and stated and numbered separately. Proposed Findings of Fact, Conclusions and Order should be included, and copies thereof shall be served upon all parties. If desired, a reply to exceptions may be filed and served within ten days after the service of the exceptions to which reply is made. Oral argument before a majority of the Commission will be permitted to all parties adversely affected by the Administrative Law Judge's recommendation who request such

argument. Such request must accompany the filed exceptions or reply, and an original and 11 copies of each document should be filed with the Commission.

The Minnesota Public Utilities Commission will make the final determination of the matter after the expiration of the period for filing exceptions as set forth above, or after oral argument, if such is requested and had in the matter.

Further notice is hereby given that the Commission may, at its own discretion, accept or reject the Administrative Law Judge's recommendation and that said recommendation has no legal effect unless expressly adopted by the Commission as its final order.

STATEMENT OF ISSUE

Has NSP met the statutory and rule requirements for a certificate of need from the Commission for its next 100 megawatts of wind generation?

Based upon all of the proceedings herein, the Judge makes the following:

FINDINGS OF FACT

1. NSP is a Minnesota corporation and public utility engaged in the business of providing electricity and natural gas to retail customers in Minnesota and four other states. In its 1994 session, the Minnesota Legislature enacted statutes which require NSP to construct and operate, purchase, or contract to construct and operate 225 megawatts of electric energy installed capacity generated by wind energy conversion systems within the state by December 31, 1998. Minn. Stat. § 216B.2423, subd. 1 (1994). NSP was also authorized to utilize casks for storage of spent nuclear fuel from its Prairie Island nuclear generating station; NSP's ability to use casks 10 through 17 was premised, in part, on its demonstration that it had constructed, contracted for construction and operation, or purchased installed capacity of 225 megawatts of wind power prior to December 31, 1998. Minn. Stat. § 116C.771(b)(1994). See Exh. F at 1; Exh. G at 1; Exh. E at 2-3.

2. On August 24, 1995, NSP filed a request with the Minnesota Public Utilities Commission for an exemption from certain filing requirements with respect to an application for a certificate of need for a wind generation project approximately 100 megawatts in size, pursuant to Minn. Rule 7849.0200, subp. 6. In an order dated September 25, 1995, the Commission exempted NSP from the requirements of Minn. Rules 7849.0270, 7849.0280, 7849.0290, 7849.0320(B)-(H) and (J), and 7849.0340. The requirements of Minn. Rules 7849.0240, subp. 1, 7849.0250(E), 7849.0300 and 7849.0310 were clarified in the context of NSP's proposed project. Commission Docket No. E002/CN-95-865, Order Granting Exemption from Certain Certificate of Need Filing Requirements and Variance, dated September 25, 1995.

3. On September 29, 1995, NSP filed its Application for a Certificate of Need for Approximately 100 MW of Wind Generation ("Application") with the Commission. Exh. F. The Commission accepted NSP's Application as complete in accordance with Minn.

Rule 7849.0200, subp. 5 and related rules. Commission Docket No. E002/CN-95-865, Order Accepting Application and Delegating Preparation of Environmental Report, dated November 2, 1995. The Commission delegated its responsibility for preparation of an environmental report as to the proposed project to the Minnesota Department of Public Service ("DPS"). *Id.* at 2-3. See Minn. Rules 4410.7000 and 4400.7100.

4. On November 2, 1995, the Commission issued its Notice and Order for Hearing referring the matter to the Office of Administrative Hearings for assignment to an Administrative Law Judge. A prehearing conference was held on November 15, 1995 in which NSP and DPS participated. Prehearing Orders were issued on November 29 and December 6, establishing a schedule and granting the Department's Petition to Intervene. The Office of Attorney General ("OAG") subsequently filed a petition to intervene. No other petitions were filed, either before or after the December 8, 1995 deadline. The OAG's petition was granted without objection on January 8, 1996.

5. Public hearings on NSP's Application and the draft Environmental Report prepared by DPS, as required by Minn. Stat. § 216B.243, subd. 4 and Minn. Rule 4410.7100, were held at 7:00 p.m., January 8, 1996, in Ruthton, Minnesota. An evidentiary hearing was also held on January 8, 1996 in Ruthton, Minnesota. Notices of the public and evidentiary hearings were published as follows:

The Buffalo Ridge Gazette	December 20, 1995
Lincoln County Valley Journal	December 20, 1995
Marshall, MN Independent	December 19, 1995
Pipestone County Star	December 21, 1995
Minneapolis Star Tribune	December 19, 1995
The Tyler Tribute	December 21, 1995
St. Paul Pioneer Press	December 19, 1995

Proofs of publication were filed by NSP with the Commission on January 25, 1996. Written comments from the public with respect to both the Certificate of Need and the draft Environmental Report were due January 16, 1996. None were received.

Applicable Statutory and Rule Criteria

6. Minn. Stat. § 216B.243 prohibits siting or constructing a large energy facility in Minnesota without first obtaining a certificate of need from the Commission. Minn. Stat. § 216B.243 and Minn. Rules, parts 7849.0010 through 7849.0400 set forth the criteria which must be met to establish need for proposed large energy facilities. Minn. Stat. § 216B.243, subd. 3, requires that the Commission evaluate several factors in assessing whether the applicant has justified the need for a proposed facility, including:

- (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;
- (4) Promotional activities that may have given rise to the demand for this facility;
- (5) Socially beneficial uses of the output of this facility, including its uses to protect or enhance environmental quality;
- (6) The effects of the facility in inducing future development;
- (7) Possible alternatives for satisfying the energy demand including, but not limited to, potential for increased efficiency of existing energy generation facilities;
- (8) The policies, rules, and regulations of other state and federal agencies and local governments; and
- (9) 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.

7. As set forth in Minn. Rule 7849.0120, a certificate of need must be granted to the applicant if:

- 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, considering:
 - (1) The accuracy of the applicant's forecast of demand for the type of energy that would be supplied by the proposed facility;
 - (2) The effects of the applicant's existing or expected conservation programs and state and federal conservation programs;
 - (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;

- (4) The ability of current facilities and planned facilities not requiring certificates of need to meet the future demand; and
 - (5) The effect of the proposed facility, or a suitable modification thereof, in making efficient use of resources.
- B. A more reasonable and prudent alternative to the proposed facility has not been demonstrated by a preponderance of the evidence on the record, considering:
- (1) The appropriateness of the size, the type, and the timing of the proposed facility compared to those of reasonable alternatives;
 - (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;
 - (3) The effects of the proposed facility upon the natural and socioeconomic environments compared to the effects of reasonable alternatives; and
 - (4) The expected reliability of the proposed facility compared to the expected reliability of reasonable alternatives.
- 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, considering:
- (1) The relationship of the proposed facility, or a suitable modification thereof, to overall state energy needs;
 - (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.
- 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.

Description of Project

8. NSP's proposed wind project ("Project") will be located in an area known as the Buffalo Ridge southeast of the city of Lake Benton, Minnesota. NSP has selected a proposed site for the Project, known as the Pipestone Site. Exh. D at 2-3, and exh. 2; Exh. G at 2-3, and figure 2; see Exh. F at 2 and App. 2. The site is approximately 14,000 acres in size. Exh. D at 2. The proposed site was developed to maximize potential wind energy production, minimize adverse environmental and social impacts and ease integration with existing and future wind projects and NSP's transmission facilities. Exh. D at 3-4; Exh. A at 2-11; Exh. F at 4-10; Exh. G at 21-36.

9. The wind generation facilities to be located on the Pipestone Site are expected to consist of wind turbines mounted on towers, step-up transformers, an electrical feeder system and related facilities to deliver the electricity generated to NSP's Buffalo Ridge substation and related access roads and maintenance and control facilities. Exh. A at 12; Exh. F at 10-12; Exh. G at 8-9. NSP upgraded its Buffalo Ridge substation to accommodate the increased load with work completed in December, 1995. Exh. B. at 3-4. In general, as wind passes over the rotors of the turbines, they will turn and generate electricity whenever wind speeds exceed 7-10 mph. Exh. A. at 12; Exh. F at 10; Exh. G at 8.

10. The nameplate capacity of the Project is expected to be 100 MW. Exh. F at 1; Exh. E at 3. NSP proposes to purchase all capacity and energy produced by the Project. Exh. A at 17; Exh. E at 6. No means of storing electricity generated is anticipated. Exh. A at 17. Based on expected availability, turbine efficiency, wind characteristics, and overall project size, energy production from the Project is estimated to be approximately 284,206 MWh per year. Id. at 19.

11. On December 29, 1995, NSP filed its application for a Site Permit with the Minnesota Environmental Quality Board ("MEQB"). Exh. G. The MEQB reviews proposed sites, including environmental impacts, and provides for citizen participation. Exh. D at 9; Minn. Stat. §§ 116C.691 et seq. The initial MEQB process is expected to be completed between June and August, 1996; MEQB will designate the final site for the proposed Project after selection of a final vendor in the first quarter of 1997. Exh. G at 46 (Table 5).

12. The Project will be developed by a bidder or bidder(s) selected as the result of a bidding process established by NSP and approved by the Commission. Exh. E at 13; Exh. F at 1-2. Bid awards are expected to be made during the first quarter of 1997. Exh. G at 46 (Table 5). NSP will own and operate the substation, feeder system and the wind easements on the common site for use by the winning bidder(s). The bidder(s) will provide all turbines, towers and related facilities. Exh. G at 7. The size and siting of turbines, towers and other bidder facilities will be determined by the winning proposal(s). Exh. A at 10, 13, 15.

Assessment of Project Relative to Statutory and Rule Criteria

Accuracy of Forecast Demand

13. NSP identified its need for additional generating capacity in its 1995 Resource Plan ("1995 Plan") developed pursuant to Minn. Rules 7843.0200, et seq. Exh. E at 4-5. The additions scheduled to meet NSP's expected need and statutory mandates include the 425 MW of wind generation required by law, of which 100 MW is represented by the proposed Project. Id. The demand forecasts underlying NSP's 1995 Resource Plan are based on the same methodologies used for the forecast in NSP's 1993 Resource Plan. Id. at 7.

14. NSP's 1993 Resource Plan was approved by the Commission in an order dated July 15, 1994. In its order, the Commission specifically found that NSP's forecast model has produced forecasts that have been extremely accurate over the long term. Exh. E at 7; Exh. F at 22. Docket No. E002/RP-93-630, Order Approving NSP's 1993 Resource Plan As Modified, July 15, 1994, at 4.

15. The addition of the Project to NSP's system will meet some of NSP's projected demand and satisfy the requirements of statutory mandates. The Project may lead to small reductions in the size of other planned generating additions which are demand-driven, and the Project's energy production is expected to displace more expensive generating resources on NSP's system to some extent, with resulting savings. Exh. E at 7; Exh. C at 6, 8-9 and exh. 2. See Exh. F at 19-20.

16. The Project is required and will be used to meet the long-range capacity and energy needs of NSP's customers. By meeting the statutory mandate, the Project also permits the continued use of other economical generating resources as well. Id. at 2-3, 5-6.

Effects of Conservation Programs

17. NSP engages in substantial conservation efforts. The effect of NSP's programs is projected to reduce 1999 demand by 82 MW and energy needs by 149 GWh. Exh. F at 23 and App. 6 at VI.3; Exh. E at 8.

18. Because the Project is principally a response to statutory mandates which are not based on expected demand, NSP's conservation programs will not reduce or eliminate the reason for which NSP proposes to construct the Project. Exh. F at 23.

19. NSP will purchase all capacity and energy produced by the Project irrespective of the price of such capacity and energy relative to other generating resources on NSP's system. Exh. E at 6; Exh. C at 8-9. The demand for energy and capacity from the Project will not be affected by conservation efforts as a result.

Effects of Promotional Practices

20. The Project is a response to statutory directives which are not demand-based, and, thus, even if NSP engaged in promotional activities, these activities would not have been responsible for the Project. Exh. E at 10; Exh. F at 23.

Ability of Existing Facilities to Meet Demand

21. The 1994 statutes specifically direct the addition of 225 MW of wind generation to NSP's system. NSP currently has only 25 MW of wind generation on its system. As a result, to meet the statutory mandate, NSP needs to add 200 MW of wind generation to its system. NSP's non-wind generating resources cannot be used to satisfy the wind mandates. While other wind additions to NSP's system might be possible instead of the Project, including individual contracts with developers or dispersed wind generation, pursuit of these alternatives would create (1) a risk that the statutory deadlines might not be met, (2) difficulties of system integration, and (3) the possibility of holdout pricing by developers increasing the overall costs of the generation additions. Exh. E at 12.

Efficient Use of Resources

22. The Project must be located in the State of Minnesota to meet statutory requirements. Minn. Stat. § 216B.2423, subd. 1 (1) (1994). NSP used existing wind resource data, and developed additional wind data, in order to identify locations within Minnesota which had the best wind characteristics for energy production. See Exh. A at 3-11; Exh. F at 4-9; Exh. G at 21-36.

23. The analyses of the U.S. Department of Energy, DPS and NSP identified the elevated area in Lincoln and Pipestone Counties known as Buffalo Ridge as the area in which wind resources are superior relative to other Minnesota locations. Exh. A at 3-5. More detailed analysis by NSP of the wind characteristics in the Buffalo Ridge area led to identification of the site proposed by NSP for the Project as the site most likely to maximize production of energy from available wind resources. *Id.* at 4-11; Exh. F at 4-9; Exh. G at 21-36. Bidders will have the opportunity to propose alternative sites with superior production potential in their bids. Exh. E at 14; Exh. F at 2.

24. Bidders will have strong incentives to operate the Project as efficiently as possible in order to maximize production and, thus, their revenues. As a result, maintenance and other factors within the control of the Project owners are expected to be conducted efficiently in a manner least likely to adversely affect production. Exh. A at 14-16; Exh. G at 2.

25. The Project will make a contribution to NSP's system reliability, although the contribution is expected to be minimal due to the Project's size relative to NSP's system and the inherent variability of wind. Exh. A at 24.

26. The Project will utilize available, unused wind resources which otherwise may not have been developed. The Pipestone Site allows for an orderly, efficient layout of wind turbines, minimizes the impact on existing land uses, and is designed to integrate with existing and future wind projects and available transmission and substation resources. Exh. F at 25; Exh. E at 11; Exh. D at 5-6. Spreading the acquisition of required wind generation into several increments over several years permits NSP to distribute the related financial impact and allows future projects to take advantage of continuing improvements in technology and related reductions in costs. Operating experience from earlier additions can also lead to improved performance in subsequent additions. The proposed site allows for the addition of wind generation facilities in the future on adjacent tracts with minimal difficulty. The site also minimizes line losses and interconnection costs. In sum, process, natural and technical resources are likely to be utilized in as efficient a manner as possible. Exh. F at 25.

Alternatives to the Facility

27. Because the Project is a response to statutory directives specifying wind as the generation resource to be used, generation resources based on non-wind resources are not available alternatives to the Project. Exh. E at 11-12.

28. The size and timing of wind projects is also constrained by statute, in that the next addition must equal 100 MW by the end of 1998 in order for NSP to use additional casks for storage of spent nuclear fuel from its Prairie Island nuclear generating station. Alternatives with a smaller total capacity which would not meet the 1998 deadline are therefore also not feasible. Id.

29. The option of developing a project larger than 100 MW was considered by NSP. Permitting a project larger than 100 MW would have been likely to take more time than allowed by the statute. Exh. E at 18. Moreover, spreading the required wind additions over several years in increments of 100 MW permits NSP to distribute the corresponding financial impact of these additions. Exh. F at 25-26. To the extent the wind generation industry is experiencing technology improvements and declining costs, spreading additions over time allows NSP to capture the benefits of these improvements and savings. Id. at 25.

30. Within the context of a 100 MW project, a number of specific alternatives exist, the range of which will be defined by the bids received in NSP's bidding process. Exh. A at 13-14. Turbines may range in size from 250 kW to 700 kW in size. Id. at 12 - 14. Turbines will generally have either one to three blades on a horizontal axis or two blades on a vertical axis. Horizontal axis turbines will be mounted on top of a tower support structure which will be either lattice or tubular in design. Id. Blade sizes and tower heights will be selected by bidders. Id. Horizontal turbines are less efficient but more readily shut down at high speeds. Vertical axis turbines are more efficient but more susceptible to damage in high winds. Id. Exh. G at 8-20.

31. Bidders will also propose their own layout for turbines. Turbines are generally designed in strings, but the exact placement of towers and strings will be left to bidders. Exh. A at 9-10. Bidders will consider wind direction, ridge slope and topography, wake interaction and array effects. Id. If a bidder uses 700 kW turbines, about 143 machines will be needed. Id. at 10. If a bidder uses 250 kW turbines, requiring 400 machines, turbines can be spaced more closely together, and will occupy no more space than the smaller number of larger machines. Id. at 10-11.

32. Irrespective of turbine siting, size and configuration, generated electricity will be carried to step-up transformers designed and sited to meet the winning bidder(s) project, and collected and sent to NSP's Buffalo Ridge substation. Exh. A at 15; Exh. G at 8-9, 18-19. Bidders will propose control facilities and maintenance facilities to service their proposed facilities. Exh. G at 9.

33. Alternatives to NSP's Pipestone Site could be proposed by bidders or MEQB. In any event, the bidding process is expected to result in selection of a Project which will produce an economical and efficient alternative to meet the 100 MW requirement. The independent evaluator selected to analyze bids will recommend the project or combination of projects which best meet NSP's requirement for the most economical wind generating resource possible. Exh. E at 13-14.

Cost Comparison of Project and Energy Produced

34. Because non-wind generation resources are not available alternatives, the relevant cost comparison is to other wind generation alternatives totalling 100 MW. The cost of the Project consists of costs incurred by the developer(s) and costs incurred by NSP. Exh. A at 24-25; see Exh. C.

35. The costs incurred by developers will be determined by the bidding process and are therefore expected to be the least cost alternatives available. The bids will be evaluated by an evaluator independent of NSP. Exh. E at 13. NSP estimates the total capital cost of the developers' portion of the Project will be 85-100 million dollars. Exh. A at 24. NSP estimates developers' operating and maintenance costs to be approximately \$.0075/kWh, which is less than historical experience because such costs have been declining in recent years. Exh. A at 22-23.

36. NSP's costs related to the Project consist of bidding and regulatory costs, the cost of constructing a feeder system between the Project and substation, substation improvement costs, and the expenses associated with acquiring the necessary wind rights for the Project. Exh. A at 25. These costs are expected to total about \$10.21 million. Id. Relative to any wind generation alternative located in the Buffalo Ridge area, of similar total size, roughly the same costs would be necessary, with the possible exception of wind right acquisition costs.

37. NSP elected to acquire options for wind and facility easements in the site proposed by NSP for the Project. Developers interested in bidding on all or a part of the

Project may rely on use of an NSP provided site. If such bid(s) are selected, NSP would convey sufficient wind rights for the Project to the developer(s), or may propose a Project on land to which they may hold wind rights. Through this acquisition of necessary wind rights, the bidding process will result in the most competitively priced proposals by eliminating wind right issues from the bidding equation. Exh. E at 13-14.

38. Using its cost assumptions, NSP analyzed the possible net cost of the Project to ratepayers using traditional revenue requirement analysis. Exh. C. Assuming that NSP purchased power from the Project at a cost ranging from three cents to six cents per kilowatt-hour, total Minnesota jurisdictional electric revenue requirements were estimated to increase from \$4.09 million to \$10.5 million annually. *Id.* at 10. This includes several million dollars in annual savings from displacement of higher cost energy by more economic wind energy. *Id.* at 8-9. Under these assumptions, the Project would increase rates by \$.00014/kWh to \$.00037/kWh. *Id.* at 10.

39. No evidence was presented indicating that any other wind generation alternative would meet the size and time requirements of the statute and also provide a more economical source of energy for NSP than the Project.

Effects on the Natural and Socioeconomic Environments

40. The Project will generate no emissions or waste, and is thus preferable to all non-renewable generating resources. Exh. H at 10; Exh. D at 4-5. The Project will have no significant impact on wildlife, historical sites, archaeological sites or other environmental concerns. Exh. D at 4-5. Wetlands will be avoided in the final siting. *Id.*

41. The energy produced by the Project is expected to displace other sources on NSP's system which produce air pollution emissions in varying quantities. Exh. H at 10.

42. The potential adverse environmental impacts of the Project include increased noise levels, increased avian mortality, removal of land from existing agricultural uses, and aesthetic considerations. Exh. H at 9-10; Exh. D at 4-9. NSP has taken steps to minimize any adverse impact of these potential impacts and none of these environmental problems is expected to occur at a significant level. Exh. D at 4-9; Exh. H at 11.

43. The Project, while sited over thousands of acres, is expected to remove only 60 to 70 acres for direct turbine placement. Exh. H at 10; Exh. G at 70. The location of access roads will be set to minimize land use disruptions. Acreage not in direct use by turbines will remain available for continued agricultural use, and crop and livestock production is expected to be unimpeded. Exh. D at 5-6. NSP will also ensure that any potential for increased erosion is minimized. Exh. G at 96.

44. Wind turbines produce noise in their immediate vicinity, and different turbine designs affect the amount of noise produced. Bidders will be expected to comply fully with

minimum standards set by the Minnesota Pollution Control Agency. Buffer zones of at least 500 feet will be required between turbines and residences or structures in order to allow for dissipation of noise produced. As a result, no significant adverse environmental or health impact is expected. Exh. D at 6-7; Exh. G at 92.

45. No significant increase is expected in avian mortality. The Project is not located in a migratory flyway and most birds are expected to fly at heights above turbine structures. Exh. D at 7-8; Exh. G at 115-118.

46. The visual impact of the towers is subjective. While there may be some aesthetic objection to the addition of towers to the area, only a limited amount of public concern has been voiced in proceedings related to prior projects and there are no indications that any substantial public concern will arise over this project. Exh. D at 8-9.

47. The Project will create three substantial socioeconomic benefits. Landowners will receive increased income through the purchase of their wind rights by NSP or developers. Second, the Project will create a substantial number of construction jobs and activity in the area, and is expected to lead to five to seven permanent jobs for Project operation, maintenance and control. Exh. H at 10-11; Exh. E at 10. Finally, taxation of towers and pads will generate revenues for local governments. *Id.* On the other hand, to the extent the Project causes an increase in rates which would otherwise be avoidable, the increase may have an adverse effect on NSP customers. Exh. F at 28.

Reliability

48. The reliability of the Project depends on two factors, the mechanical availability of the turbines and the extent to which the wind blows. Exh. A at 17. Although turbines will be sited to take maximum advantage of available resources, the amount of wind available is not subject to control. NSP has created incentives to ensure maximum mechanical availability of turbines and maximum utilization of wind resources. *Id.* at 17-18; Exh. F at 27.

49. Wind generation is not dispatchable due to the inherent variability of the wind, but the Project will contribute to system reliability, if only in a minimal way. Exh. A at 24.

Benefits of the Project

State Energy Needs

50. DPS and the Commission produced a report in 1992 describing the energy needs of the State of Minnesota and objectives for meeting those needs. Exh. E at 9. One identified goal is to double the amount of renewable-based generating resources used within Minnesota by 2020. *Id.* The addition of the Project will lead to the attainment of 45 percent of that goal. Together with the scheduled future additions of wind and biomass generation, the Project will contribute to the realization of the State's renewables

goal well ahead of schedule. Id. The Project will also enhance utilization of in-state energy resources and reduce reliance on generation fueled by out-of-state resources. Exh. F at 23-24.

Effects on the Environment/Alternative of No Construction

51. Because the Project is mandated by law, the alternative of not constructing the Project is not available. The Project offers significant environmental benefits relative to use of existing generation without significant adverse environmental impacts. Exh. F at 28-29; Exh. H at 10-11; Exh. G at 48-126.

Future Development

52. The Project is one phase of a series of wind generation additions and will foster those future projects. Local businesses and landowners will benefit from purchases of wind rights and the use of local contractors and suppliers in the construction process. Such benefits for the Phase II project, which is equal in size to the proposed Project, are estimated at \$15 million. Exh. E at 10. Some permanent job creation will also result. Id.; Exh. F at 27-8. In addition, towers and pads are now subject to taxation, which will generate substantial revenues for local government. Exh. E at 10; Exh. F at 27-8.

Socially Beneficial Uses

53. The Project creates environmental benefits, some economic and job benefits, contributes to State energy goals, and will enhance the development of renewable resources and technologies. See Exh. E at 9-10; Exh. F at 23-8.

Compliance with Policies, Rules and Regulations

54. The evidence in the record establishes that the Project will comply with relevant policies, rules and regulations of the MEQB, other state and federal agencies, and local governments. The issuance of a certificate of need will not conflict with any other regulatory requirements, including those associated with NSP's bidding process. Exh. D at 7-9; Exh. F at 29-30; Exh. H at 11-12. See generally, Exh. G.

55. Construction of the Project through a bidding process encourages competition consistent with the objectives of the Energy Policy Act of 1992. Exh. F at 29-30.

CONCLUSIONS

1. Any of the foregoing Findings which more properly should be designated as Conclusions are hereby adopted as such.

2. The Minnesota Public Utilities Commission duly acquired and has jurisdiction over this matter.

3. All relevant substantive and procedural requirements of law and rule have been fulfilled.

4. The application substantially conforms to the requirements of all applicable statutes and rules, as interpreted by orders of the MPUC.

5. The record in this matter demonstrates, principally due to the legislative mandates of Minn. Stat. § 216B.2423, that the probable result of denying the certificate of need would be an adverse effect on the future adequacy, reliability, and efficiency in the supply of electricity to NSP and NSP's customers.

6. No participant in this matter has demonstrated a more reasonable and prudent alternative exists to constructing the Project.

7. The record in this matter demonstrates the Project will provide benefits to society compatible with protecting both natural and socioeconomic environments, including human health.

8. The record in this matter demonstrates that the design, construction, and operation of the Project will comply with the relevant policies, rules, and regulations of other state and federal agencies and local governments.

THIS REPORT IS NOT AN ORDER AND NO AUTHORITY IS GRANTED HEREIN. THE PUBLIC UTILITIES COMMISSION WILL ISSUE THE ORDER OF AUTHORITY WHICH MAY ADOPT OR DIFFER FROM THE FOLLOWING RECOMMENDATIONS.

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

RECOMMENDATION

That the Minnesota Public Utilities Commission issue a Certificate of Need to Northern States Power Company for approximately 100 megawatts of wind generation.

Dated this 2nd of February, 1996.

ALLAN W. KLEIN
Administrative Law Judge

NOTICE

Pursuant to Minn. Stat. § 14.62, the Agency is required to serve its final decision upon each party and the Administrative Law Judge by first-class mail.

Reported: Tape Recorded, Transcript Prepared by Brennan & Associates, Bloomington.

MEMORANDUM

The only objection to the immediate granting of the certificate comes from a landowner in the Buffalo Ridge area who believes that the Commission ought to delay until NSP, Kennetech, and other easement holders have come to some sort of resolution of their ongoing dispute over NSP's right to acquire easements from unsuccessful bidders. This individual, who owns land that is involved in the Phase II NSP wind project, argued that the landowners have been put in the middle of a dispute between NSP and easement holders such as Kennetech, and that in order to induce NSP to get the dispute resolved, the Commission ought to hold up on this Phase III certificate.

The Administrative Law Judge does not discuss this issue in the Findings because he does not believe it is relevant to the certificate of need proceeding. If anything, it is relevant at the stage of the EQB's consideration of the granting of a site permit, but there is room for debate about whether it is relevant even at that stage. There is no basis for the Commission to delay action on the certificate of need because of the legal dispute between NSP and easement holders.

AWK

^[1] The Administrative Law Judge has adopted almost all of the stipulated proposed Findings. However, some changes have been made to the language, and some additional material has been added.