

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

In the Matter of the
Application by
LSP-Cottage Grove, L.P.
for a Certificate of Need
for a Large Generating Facility

FINDINGS OF FACT,
CONCLUSIONS OF LAW,
AND RECOMMENDATION

The above-entitled matter came on for hearing before Steve M. Mihalchick, Administrative Law Judge, on July 18, 1994, in Cottage Grove and in St. Paul, Minnesota, on July 25, 1994. The record remained open for submission of exhibits and briefs. On August 17, 1994, the record closed in this matter.

Charles K. Dayton, Leonard, Street and Deinard, 150 South Fifth Street, Suite 2300, Minneapolis, Minnesota 55402, and William H. Wilson, Brown, Olson & Wilson, P.C., 501 South Street, Concord, New Hampshire, 03304, appeared on behalf of the Applicant, LSP-Cottage Grove, L.P. ("LSP-CG"). Audrey Zibelman, Senior Attorney, 414 Nicollet Mall, Minneapolis, Minnesota 55401, appeared on behalf of Northern States Power Company ("NSP"). Michael A. Sindt, Assistant Attorney General, 1200 NCL Tower, 445 Minnesota Street, St. Paul, Minnesota 55101-2130, appeared on behalf of the Minnesota Department of Public Service ("DPS"). David McMillan and Johannes Williams, Minnesota Power, 30 West Superior Street, Duluth, Minnesota 55802, appeared on behalf of Minnesota Power & Light Company ("MPL"). Jeffrey L. Landsman, Wheeler, Van Sickle & Anderson, Suite 801, 25 West Main Street, Madison, Wisconsin 53703-3398, appeared on behalf of Genoa Generating Limited Partnership ("Genoa"). David Jacobson, Peter Eknes, and Stuart Mitchell appeared for the MPUC staff.

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, Suite 350, 101 Seventh Place East, 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 request such argument. Such request must accompany the filed exceptions or reply, and an original and 15 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 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 LSP-CG satisfied the statutory and rule requirements to justify the need for its proposed cogeneration facility.

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

FINDINGS OF FACT

Procedural History and the Parties

1. The certificate of need applicant LSP-CG, a Delaware limited partnership, is an affiliate of LS Power Corporation ("LS Power"). On March 1992, LS Power submitted a proposal to NSP for an approximately 220 megawatt ("MW"), dispatchable, natural gas-fired, combined-cycle cogeneration facility ("Facility") located at 3M's Cottage Grove plant. The project was proposed as a qualifying facility ("QF") pursuant to the Public Utility Regulatory Policies Act of 1978 ("PURPA"). NSP also received additional proposals from other QFs and non-QFs.

2. On April 12, 1993, the MPUC ordered NSP to "negotiate immediately simultaneously with LS Power and any other developers who are on the record in this proceedings as having submitted proposals to meet all or part of NSP's projected need for intermediate capacity before the year 2000." In the Matter of the Complaint of LS Power Corporation Against Northern State Power Corporation, MPUC Docket No. E-002/C-92-899, (Order issued April 12, 1993).

3. On June 17, 1993, NSP submitted to the MPUC its report of the results of the simultaneous negotiation process, in which it stated that "NSP has determined that the proposal of LS Power Corporation ("LS Power"), for a combined-cycle, combustion turbine generating plant with a nameplate capacity of approximately 232 MW is the best alternative available to meet NSP's energy and capacity needs in a reliable and cost-effective manner." Memorandum of

Northern States Power Company in Response to the Commission's April 12, 1993 Order, Docket No E-002/C-92-899, at 1 (June 17, 1993). On August 30, 1993, MPUC granted NSP additional time to conclude its negotiations with LS Power a power purchase agreement for the Facility. On May 9, 1994, NSP and LSP-CG executed a thirty year power purchase agreement, which was filed with the MPUC on June 28, 1994.

4. On February 22, 1994, LSP-CG filed an application with the MPUC for a certificate of need to build the Facility. LSP-CG also filed with the MPUC a report containing environmental data elements for the certificate of need

application. The MPUC extended the deadline for completing the application by an Order issued on March 23, 1994. On March 29, 1994 LSP-CG made a supplementary filing. On April 20, 1994, the MPUC accepted the supplementary application as being in proper form and deemed the application complete as of March 29, 1994. The matter was then referred to the Office of Administrative Hearings for assignment to an Administrative Law Judge.

5. Petitions to intervene in this proceeding were filed by Genoa on May 5, 1994, by MPL on May 9, 1994, by DPS on May 13, 1994, by the Office of the Attorney General on May 16, 1994, and the City of St. Paul on June 3, 1994. The intervention of the Office of Attorney General and DPS were granted as of right by the Administrative Law Judge. By Order dated June 17, 1994, the petition for intervention by the City of St. Paul was denied. That order granted Genoa and MPL limited participation status to prefile testimony and argument.

6. On July 1, 1994, Genoa filed a request that its petition for intervention be certified to the MPUC and a request for a continuance. Both requests were denied by the Administrative Law Judge's Order dated July 12, 1994.

7. Notices of the public hearings to be held in this matter were published in the Saint Paul Pioneer Press and the Star Tribune on July 1, 1994, and July 8, 1994. Hearings were held on July 18, 1994, in Cottage Grove and on July 25, 1994, in St. Paul. The record closed in this matter on August 17, 1994.

8. On August 17, 1994, NSP filed a Petition to Intervene. NSP asserts that its failure to intervene sooner was inadvertent. The deadline for filing a petition for intervention was set by the Administrative Law Judge as May 1, 1994. NSP has not identified any interest not adequately represented by LSP as required by Minn. Rule 1400.6200, subp. 3. The Petition is untimely. For these reasons, the Administrative Law Judge denies NSP's Petition for Intervention.

Applicable Statutory and Rule Criteria

9. Minn. Stat. § 216B.243 prohibits siting or constructing a large energy facility in Minnesota without first obtaining a certificate of need from the MPUC. 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. 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 alternative;

(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; 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.

10. Under the Assessment of Need Criteria set forth at Minn. Rules part 7849.0120(A), the following factors for future adequacy, reliability and efficiency of energy supply must be considered:

- a. the accuracy of the forecast of demand for the type of energy that would be supplied by the proposed facility;
- b. the effects of existing or proposed conservation programs;
- c. the effects of promotional practices that may have given rise to the increase in energy demand;
- d. the ability of current and planned facilities not requiring certificates of need to meet future demand; and
- e. the effect of the proposed facility in making efficient use of resources.

11. The Facility will serve as a dispatchable intermediate load power generation resource for NSP, an investor-owned utility with customers in Minnesota, Michigan, Wisconsin, North Dakota, and South Dakota. NSP will have the ability to dispatch the Facility as if NSP itself owned the facility. Exh. 3, at 1. The Facility will be located at 3M's Chemolite plant and provide steam for that plant. Providing this steam will allow 3M to discontinue use of its coal-fired boilers at the Chemolite plant.

Effect of Denial on Future Adequacy, Reliability and Efficiency of Energy Supply

Accuracy of Forecast Demand

12. NSP identified its need for the additional power generation capacity that the Facility will fulfill in its 1991 Integrated Resource Plan (the "1991

Plan"), developed pursuant to Minn. Rule part 7843.02000 et seq. LSP Exh. 1
at 3.

13. The 1991 Plan was approved by order of the MPUC dated November 13
1992, which, in particular, found NSP's demand forecast to be reasonable.
Exh. 12, at 4.

14. NSP's 1991 Plan showed that up to 300 MW of additional intermediate load capacity would be needed in the late 1990s. LSP Exh. 3. at 8.

15. NSP's 1993 Integrated Resource Plan ("1993 Plan") lists the Facility as a Committed Resource. The 1993 Plan projects a need for between 300 MW and 1400 MW of additional power resources in 1997. LSP Exh. 3, at 9.

16. The DPS examined NSP's 1991 and 1993 forecasts in detail and developed its own forecasts of NSP's peak demand and energy requirements. DPS concluded that NSP's forecasts of peak demand and energy requirements were reasonable and appropriate for determining the need for the Facility. Litzau Direct, DPS Exh. 16, at 4-5.

17. NSP's 1991 forecast was slightly higher than that of DPS, and the differences amounted to a one year's difference in the timing of the need for the proposed facility. Litzau Direct, DPS Exh. 16, at 5. The 1993 forecasts of NSP and DPS are effectively identical for planning purposes and both are slightly higher than NSP's 1991 forecast. *Id.* While forecasting electricity needs is inherently uncertain, under NSP's most likely scenario, peak demand in 1997 will be 214 MW higher than in 1994 and will increase by approximately 9 MW per year in the following years. NSP's projection of its energy requirements shows annual increases in a similar pattern. Litzau Direct, DPS Exh. 16, at 4-5.

Effects of Conservation Programs

18. The conservation efforts of NSP affect the need for the Facility. NSP has an aggressive conservation program that exceeds state-mandated goals for utility spending on conservation programs. Additional NSP-initiated conservation programs will not provide a cost-effective substitute for the amount of electric capacity provided by the proposed facility. Krug Direct, DPS Exh. 18, at 7. The MPUC ordered NSP to include 4757 GWH of demand-side management ("DSM") as a resource option by 2005, which would correspond to a cumulative annual savings of 2262 GWH in 1997. NSP's 1993 forecast, adjusted for additional DSM throughout its planning period, is only 259 GWH below the optimal level of DSM ordered by the MPUC for 1997. At the anticipated load factor of 35%, the Facility will provide NSP's system with about 751 GWH of energy. The amount of DSM which could be achieved by NSP would not be sufficient to replace or delay the Facility. Donati Direct, DPS Exh. 15, at 8; Litzau Direct, DPS Exh. 16, at 6, 11. Requiring additional DSM is not a reasonable alternative for NSP.

19. LSP-CG will operate on an as-needed basis and thus will not be amenable to DSM efforts.

Effects of Promotional Practices

20. LSP-CG does not promote electricity consumption in the State of Minnesota. The effects of NSP's marketing and promotional practices on the need for the Facility are negligible. NSP calculates that its marketing and economic development activities from 1988 through 1997 will increase NSP's annual energy sales by 255 GWH. NSP has not created a need for the Facility through its marketing and economic development programs. Donati Direct, DPS Exh. 15, at 7-8; Litzau Direct, DPS Exh. 16, at 17.

Meeting Demand

21. NSP's current and planned facilities, which include NSP's own generating units and its power purchases, can meet NSP's demand in 1997 under NSP's semi-low scenario (as filed in the 1993 Plan), but not under its median or semi-high scenarios. NSP projects a surplus of 96 MW in 1997 under the semi-low scenario and deficit of 726 MW under the semi-high scenario. Under the median scenario, the forecasted deficit in 1997 equals the anticipated output of the Facility. Litzau Direct, DPS Exh. 16, at 8-9. Based on all of the forecasts and the DPS review of these forecasts, there is a need for the Facility.

22. The primary alternatives to the Facility that would not require certificates of need are power purchases from existing facilities, purchases from planned facilities outside Minnesota, or Minnesota facilities that are small enough not to require certificates of need. NSP and DPS have identified and evaluated various potential sources of power in the 1993 Plan. There are no cost-effective alternatives to the Facility that do not require a certificate of need. Litzau Direct, DPS Exh. 16, at 9-10.

Efficient Use of Resources

23. The primary fuel for the project is natural gas delivered by Peoples Natural Gas Company via a one mile interconnection with an existing pipeline owned by Northern Natural Gas. Back-up fuel is low sulfur distillate fuel oil. The Facility's water requirements will be almost entirely satisfied by recycling cooling water from 3M's existing sources. The Facility's process wastewater will be of a quality suitable for discharge into 3M's existing wastewater discharge system. The Facility will be located adjacent to NSP's existing Chemolite Substation and its power delivered to NSP's load centers existing transmission lines. LSP Exh. 3, at 2, 10-11; Krug Direct, DPS Exh. 18, at 3; July 18 Tr. at 6-7.

Alternatives to the Facility

24. A Certificate of Need cannot be issued if a more reasonable and prudent alternative to the proposed facility is demonstrated by a preponderance of the evidence on the record. Minn. Rule 7849.0120(B). The factors to be considered in assessing alternatives are:

- a. appropriateness of the size, type and timing of the proposed facility;

- b. cost of the proposed facility and cost of the energy to be supplied by the facility:
- c. effects on the natural and socioeconomic environments; and
- d. reliability.

Minn. Rule 7849.0120(B).

25. Alternatives available to provide electricity to NSP include DSM, other natural gas-fired technologies, coal-fired technologies, renewable technologies, and purchased power. Krug Direct, DPS Exh. 18, at 6-7.

Size, Type and Timing

26. NSP will need an intermediate load generating plant by 1997. To be reasonable, any alternative must be available by 1997 and be capable of operating efficiently at capacity factors and with operating characteristics typical of intermediate load units. Krug Direct, DPS Exh. 18, at 7.

27. In both its 1991 plan and its 1993 plan, NSP proposed levels of DSM as part of its energy forecast. The MPUC has determined the proposed level in the 1991 plan to be an optimal level of DSM for NSP. Expanding DSM beyond that level is unlikely to be cost-effective for NSP. Krug Direct, DPS Exh. 18, at 7; Donati Direct, DPS Exh. 15, at 3-7, 8.

28. Gas-fired, simple-cycle combustion turbines can be built in approximately two years, but are typically used to meet peak, not intermediate loads. A stand-alone, gas-fired, combined-cycle combustion turbine can be constructed within similar timeframe as the Facility, and be operated efficiently at capacity factors typical of intermediate units. Such a stand-alone unit will not provide the added benefits of increased overall efficiency and steam for use by 3M. Krug Direct, DPS Exh. 18, at 7-8.

29. Coal-fired technologies have high capital costs but low fuel costs and normally run at capacity factors well above intermediate units. For these reasons, coal-fired technologies are not suitable to meet dedicated intermediate load electricity needs. Lead time of five to eight years is required to construct a coal-fired facility. Constructing capacity with coal-fired technologies are not suitable to meet the short-term need identified by NSP and LSP-CG. Krug Direct, DPS Exh. 18, at 8.

30. Biomass technologies could serve either a base load or intermediate load and could be constructed within three to seven years. At present, however, only demonstration projects have been considered. Wind power is intermittent in nature. Wind resources are mostly used to meet energy, not capacity, needs. Intermediate loads are generally met with dispatchable resources that are capable of meeting both energy and capacity needs. Hydroelectric resources are site-specific, and the construction lead time for a resource large enough to meet NSP's intermediate load need would be five to seven years. No sites of the appropriate size are available in NSP's service territory. Photovoltaic systems depend on the sun and consequently are

typically not used to meet a utility's capacity needs. Krug Direct, DPS Exh 18, at 9-10.

31. NSP could meet its need by arranging for additional power purchases to the extent that other utilities in the Mid-Continent Area Power Pool ("MAPP") have excess capacity. MAPP is comprised of 29 participating utilities and two associated utilities. Over the decade from 1994 to 2003, MAPP forecasts a shift from a system-wide surplus of 3284 MW to a deficit of 822 in the summer season. MAPP forecasts a surplus of 7260 MW in 1994 descending to surplus of 2740 MW in 2003 in the winter season. Sherner Direct Testimony SDS Exhibit 3. Additionally, MAPP participating utilities must maintain a reserve capacity of 15% of their annual system demand (10% if their

supply is predominantly hydro-derived). Bartsch Rebuttal, LSP Exh. 7, at 4. Failure to maintain sufficient reserve capacity subjects a participating utility to a penalty of \$72,600 per MW of capacity deficiency purchased in a season. Bartsch Rebuttal, LSP Exh. 7, at 5-6. The calculation of surplus power available from MAPP included the reserve capacity of its participating utilities. No MAPP excess capacity will be available for purchase in 1997, to the anticipated deficit and the MAPP requirement to maintain a reserve capacity.

32. The alternative offered by Genoa is a natural gas-fired, combined cycle, combustion turbine with a fuel oil backup. Genoa would use an existing 75 MW turbine generator and add a similar generator rated at 150 MW. Thors Direct, Genoa Exh. 2, at 3. The total power generated would have a summer rating of 221 MW and a winter rating of 256 MW. Genoa's turbine would not provide cogeneration. Construction of the 150 MW generator requires a Certificate of Public Convenience and Necessity (CPCN) from the State of Wisconsin. McGree Rebuttal, NSP Exh. 8, at 4.

33. The alternative proposed by MPL consists of purchased power from MAPP.

Cost Comparison of Proposed Facility and
Energy Produced to Proposed Alternatives

34. NSP conducted negotiations with five electric producers under order from the MPUC. The fixed costs, variable costs, and startup costs of LSP-CG; Genoa; the Rainy River Energy Corporation; AES Plover, Inc.; the University of Minnesota were compared by NSP in that process. Those costs were submitted to the record as a proprietary exhibit. NSP Exh. 9 (Proprietary).

35. The cost of the Facility is highly competitive with other available options. NSP selected the LSP-CG final offer in competitive negotiations. NSP Exh. 18, at 10-11. NSP estimated the Genoa offer was \$8 million more expensive than the LSP-CG offer. McGree Rebuttal, NSP Exh. 8, at 3, 5. Out of twelve future cost scenarios, LSP-CG's offer was less expensive in nine of the twelve. McGree Rebuttal, NSP Exh. 8, at 5. Due to LSP-CG's status as a QF, NSP is bound by PURPA to accept LSP-CG's offer if that offer is as low or lower than competing offers. McGree Rebuttal, NSP Exh. 8, at 6. There is no evidence of favoritism or unfair dealing in NSP's selection of the LSP-CG proposal.

36. The Genoa project was considered as an alternative and was found to be inferior to and more expensive than the Facility. The project will be not be constructed in Minnesota and it will not displace 3M's coal-fired boilers.

The Genoa project will not provide the socioeconomic and environmental benefits that the Facility will provide. The Genoa project also will require Wisconsin regulatory approvals, which would likely delay the start of construction until November, 1996. McGree Rebuttal, NSP Exhibit 8, at 4; LSP Exh. 6, at 7-8.

37. The Rainy River Energy Corporation proposal was considered by NSP and rejected at the midpoint of the negotiation process as not competitive in price to the other offers under consideration. NSP Exh. 9 (Proprietary). The Rainy River Energy Corporation proposal consists of a natural gas-fired

cogeneration plant rated at 243 MW in the summer and 239 MW in the winter. The plant would provide steam to Blandin Paper Company and an additional 102 MW of electricity would be purchased from MAPP. This plant has not yet entered the approval process. The AES Plover, Inc. and University of Minnesota proposals were also rejected due to cost.

Effects on the Natural and Socioeconomic Environments

38. The Facility will replace 3M Cottage Grove's coal-fired steam plant by burning natural gas to generate steam for 3M and electricity for NSP. Natural gas burns cleaner than coal. The Facility will be equipped with state-of-the-art emissions controls for the pollutants that are produced through combustion. Replacing 3M's coal-fired steam plant with the Facility will result in a net reduction of emissions. Krug Direct, DPS Exh. 18, at 12.

39. Replacing the existing steam plant with the Facility will either reduce or not affect emissions of SO₂, NO_x, PM-10 (particulate matter), and trace elements. The area in which the facility will be located is classified as nonattainment for SO₂. Replacing the existing steam plant with the facility will improve the air quality in that area. Krug Direct, DPS Exh. 18, at 12.

40. Neither of the two natural gas alternatives (combustion turbine/simple cycle and combustion turbine/combined cycle) of a 245 MW size would produce more airborne pollutants than the Facility. However, construction of either natural-gas alternative without cogeneration capacity for 3M would result in much higher net emissions of SO₂, NO_x, VOCs, and CO₂, because neither alternative would displace 3M's coal-fired steam plant. Only a 245 MW wind or solar/photovoltaic plant would have air emissions lower than the Facility. Neither of those alternatives would displace 3M's steam plant. Krug Direct, DPS Exh. 18, at 13. Neither the wind or solar/photovoltaic alternatives are suitable for intermediate load electrical generation.

41. The Facility's groundwater use and wastewater disposal is negligible. Annual ash production will also be negligible. Only the wind and solar/photovoltaic alternatives offer levels of groundwater use and wastewater and solid waste disposal lower than those of the Facility. Krug Direct, DPS Exh. 18, at 13-14.

42. All of the alternatives would use more land than the Facility. The gas-fired turbine alternatives would use nearly identical amounts of land, but they would not allow the removal of 3M's existing steam plant.

43. Natural gas-fired, wind, and solar generating units require the fewest number of trucks and rail cars to deliver fuel. Since the Facility v

require occasional deliveries of back up fuel oil, its transportation requirements are slightly higher than for wind and solar. Krug Direct, DPS Exh. 18, at 14.

44. Potential socioeconomic benefits associated with electricity production include job creation and increases in economic activity under conditions of significant involuntary unemployment. Costs are incurred through utilities' use of publicly funded research, public infrastructure and

other public goods in the electricity production process. These are additional costs on society that are not accounted for by utilities. Another cost is incurred through the depletion of nonrenewable resources valued by society. The use of imported goods and resources in the electricity production process can affect national energy security, balance of payment goals, or other political or social goals deemed important. Krug Direct, DPS Exh. 18, at 15-16.

45. The Facility will create 275 temporary jobs during its construction phase, and from 20 to 25 permanent jobs. More jobs would be created by a coal-fired plant, 94 permanent jobs and 950 temporary jobs. Fewer jobs (13 permanent and 80 temporary) would be created by a simple-cycle combustion turbine. Krug Direct, DPS Exh. 18, at 16.

46. The Facility has benefitted from public services such as U.S. subsidies for oil and natural gas exploration. Krug Direct, DPS Exh. 18, at 16-17. The other natural gas-fired alternatives have received an equal benefit.

47. The Facility will deplete natural resources whether natural gas or No. 2 fuel oil is used. The Facility's projected efficiency is high and will deplete natural gas resources less than other natural gas-fired alternatives which have lower efficiency levels. The costs of resource depletion are accounted for in the price paid for the fuel. Krug Direct, DPS Exh. 18, at 18.

48. The Facility and the natural gas-fired alternatives are equally likely to use domestic and imported materials in their construction, resulting in similar impacts on the nation's balance of payments and energy security. Krug Direct, DPS Exh. 18, at 18-19.

49. The Facility will provide a net benefit to the socioeconomic environment. The Facility will provide a greater benefit to the socioeconomic environment than any of the reasonable alternatives.

50. The Facility is a reliable source of electricity. Biomass is not reliable for NSP's need. Wind does not provide the dispatchable power needed by NSP. The two gas-fired alternatives are as reliable as the Facility. Purchasing power from MAPP after 1997 is not a reliable source of power, due to the likelihood no surplus will be available at that time.

Benefits of the Facility

51. The Assessment of Need Criteria set forth in Minn. Rules part 7849.0120(C) requires a determination that, by a preponderance of the evidence,

on the record, the Facility will provide benefits to society in a manner compatible with protecting the natural and socioeconomic environments, including health, and specifically considering the following:

- a. the relationship of the Facility to overall state energy needs;
- b. comparison of the effects of the Facility on the natural and socioeconomic environments to the effect of not building the Facility;

- c. effects of the Facility on inducing future development;
- d. socially beneficial uses of the output of the Facility, including protection or enhancement of the environment

State Energy Needs

52. NSP's long range base forecast shows a median increase of 2.5% for both peak demand and native energy requirements from 1992 to 2006. 1993 Resource Plan, at III-2. In Minnesota, electricity consumption is anticipated to increase 2.1% annually over the next twelve years. Davis Direct, DPS Exh. 17, at 4-5. Additional sources of generation are also necessary to replace aging facilities that will no longer be able to generate electricity economically. Id. at 4. MAPP expects a capacity deficiency by the year 2006. Davis Direct, DPS Exh. 17, at 4. Existing capacity is insufficient to meet these energy demands. Id.

53. NSP plans to obtain electricity from the operation of the Facility between 25 and 45 percent of the time. To produce an equivalent amount of electricity, NSP would have to depend on its intermediate plants to produce additional 508,080 MWh to 914,544 MWh annually. Davis Direct, DPS Exh. 17, 6.

54. NSP's current and planned facilities, including purchased power contracts, are not capable of meeting NSP's demand in 1997 under NSP's medium and semi-high scenarios. Not constructing the Facility will reduce the reliability of NSP's electrical delivery system. Davis Direct, DPS Exh. 17, 9, 11.

Effects on the Environment

55. If the Facility is not constructed, NSP is likely to operate some of its older intermediate units more frequently. These intermediate load units are usually older, coal-fired former baseload units which lack state-of-the-art emissions control. Davis Direct, DPS Exh. 17, at 5-6.

56. Operation of the Facility will result in less environmental damage than if the Facility is not constructed. Increased use of NSP's existing plants would result in a net increase in emissions of SO₂, NO_x, PM-10, CO₂, VOCs, Hg, and other airborne pollutants as compared to operating the Facility. Davis Direct, DPS Exh. 17, at 8. The additional annual environmental costs from use of the existing plants could range from \$3.2 million to \$10.7 million (substituting NSP's Riverside 8 plant for the Facility) to \$5.7 million to

\$17.8 million (substituting NSP's Riverside 8 and High Bridge 6 units for the proposed Facility). Davis Direct, DPS Exh. 17, at 6-9.

57. Construction of the Facility will create approximately 275 temporary jobs and 20 to 25 permanent jobs. These jobs would not exist if the Facility were not constructed. While the number of jobs at NSP's intermediate load plants may increase slightly if the Facility were not constructed, there will probably be an overall net reduction in jobs if the Facility is not constructed. Davis Direct, DPS Exh. 17, at 10.

58. The Facility will provide 3M Cottage Grove with a cost-effective source of steam, which will help 3M lower its production costs and allow 3M compete more effectively in the global market. Davis Direct, DPS Exh. 17, at 10-11.

Future Development

59. Economic growth requires new sources of electricity generation offering reliable and less costly power. The Facility will help meet Minnesota's growing demand for electricity and will further foster economic growth in the state. Davis Direct, DPS Exh. 17, at 11. The Facility will have a beneficial impact on future development in Minnesota.

Socially Beneficial Uses

60. Other than the benefits derived from job creation, and electrical generation at the capacity needed by NSP, at greater efficiency, with less pollution, there are no specific socially beneficial uses arising from construction or operation of the Facility.

Compliance with Policies, Rules, and Regulations

61. The Assessment of Need Criteria set forth in Minn. Rules Part 7849.0120(C) requires that the record does not demonstrate that the design, construction, or operation of the Facility will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments.

62. There is no evidence in the record to show that the design, construction, or operation of the Facility will fail to comply with relevant policies, rules, and regulations of other state and federal agencies and local governments. The issuance of a certificate of need will not conflict with any other regulatory requirements. Krug Direct, DPS Exh. 18, at 21-22.

63. Granting a certificate of need to the Facility is consistent with Minnesota's policy of giving maximum encouragement to cogenerators. Final Environmental Report (DPS), at 3.

Based upon the foregoing Findings of Facts, the Administrative Law Judge makes the following:

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 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 LSP-COTTAGE GROVE, and NSP, and NSP's customers.

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

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

8. The record in this matter does not demonstrate that the design, construction, or operation of the Facility will fail to comply with the relevant policies, rules, and regulations of other state and federal agencies and local governments.

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

RECOMMENDATION

That a certificate of need be issued to applicant LSP-Cottage Grove, LSP-COTTAGE GROVE, without condition.

Dated this 2nd day of September, 1994.

/s/

STEVE M. MIHALCHICK
Administrative Law Judge

Transcript: Janet Shaddix Elling
Shaddix and Associates
Two Volumes

MEMORANDUM

LSP-CG has proposed a Facility which lowers pollution and meets a demonstrated need in electrical generation capacity at a reasonable cost. The only objections arose from other utilities that were unsuccessful in obtaining a certificate of need.

a contract from NSP to meet that need. Since the Facility is a QF, NSP is obligated under PURPA to contract for the QF's power if no other alternative presented at a lower cost. MPL's proposal was not competitive with that of LSP-CG. Under PURPA, NSP could not have accepted MPL's bid without incurring damages to LSP-CG.

MPL has attempted to show that the Facility is unnecessary because power is available for purchase from MAPP. To demonstrate this availability, MPL divided the MAPP participating utilities into a northern region ("Northern MAPP") and a southern region ("Southern MAPP"). Northern MAPP does show a surplus capable of meeting NSP's anticipated intermediate load needs for the foreseeable future. However, Northern MAPP only exists in MPL's argument in this matter. In reality, MAPP participants do not limit themselves into geographic subgroups. Two utilities which geographically should have been included in Northern MAPP were excluded. These two utilities anticipate deficits in their power supply.

The sale of surplus electricity occurs to all participants in MAPP, not just NSP. There is no basis in the record for determining MAPP surplus capacity by any measure other than an aggregate of all participants. Using that measure, MAPP does not have surplus power available that NSP can rely on in its forecasting. Without 102 MW of surplus power from MAPP, MPL's proposal does not meet NSP's need for electricity.

Minn. Rules part 7849.0110 requires that the MPUC consider only those alternatives proposed before the close of the public hearing and for which there exists substantial evidence on the record with respect to each of the criteria set forth in Minn. Rules part 7849.0120.

There is no substantial evidence on the record with respect to Genoa's proposed alternative and the assessment of need criteria listed in part 7849.0120 for Genoa's project to be considered as an alternative to the Facility. Genoa argued that it could not present this evidence under its limited participation status in this matter. Nothing precluded Genoa from filing that information as direct evidence in this matter. The only limitations to Genoa's participation were in discovery and cross examination.

Examining the Genoa project on its face strongly suggests it is inferior to the LSP-CG proposal. The two sources are nearly identical, both natural gas-fired turbines, but no cogeneration is accomplished under the Genoa project. This difference means that under Genoa's proposal more airborne pollutants would be released in Cottage Grove. Since Genoa needs a CPCN from Wisconsin to build the project, the plant is not likely to be ready in time to meet NSP's anticipated need. Under most of NSP's cost scenarios, the Genoa project will cost more for the electricity produced. The Genoa project is not a reasonable and prudent alternative to the Facility.

LSP-CG has met the statutory and rule requirements for issuance of a Certificate of Need and the Administrative Law Judge has therefore recommended that such a Certificate of Need be GRANTED.

S.M.M.

-15-