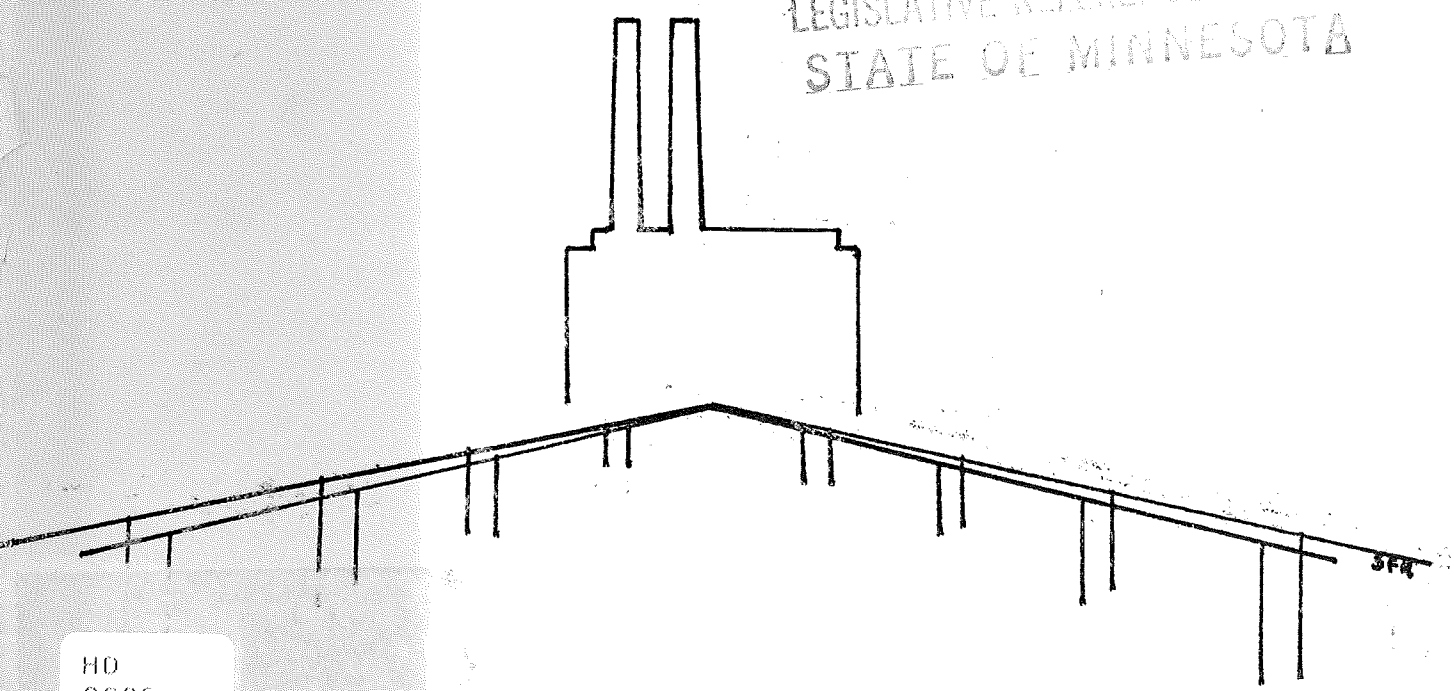
REGULATING ELECTRICAL UTILITIES IN MINNESOTA

PART II

Responses and Review of Survey Questions to Interested Persons, Regulatory Agencies, and Electrical Utilities



LEGISLATIVE COORDINATING COMMISSION
SUBCOMMITTEE ON SCIENCE AND TECHNOLOGY

Representative Gordon O. Voss, Chairman

SCIENCE & TECHNOLOGY PROJECT STAFF

Room 17, State Capitol Building
St. Paul, Minnesota 55155

John G. Malinka, Director
(612) 296-8039

Samuel F. Hohmann, Research Scientist
(612) 296-8040

Judy Bailey, Secretary/Administrative Assistant
(612) 296-8041

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REGULATING ELECTRICAL UTILITIES IN MINNESOTA

PART II

RESPONSES AND REVIEW OF SURVEY QUESTIONS TO INTERESTED PERSONS, REGULATORY AGENCIES, AND ELECTRICAL UTILITIES

by

Patrick Lee Reagan

December 1978

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I. INTRODUCTION

This study was undertaken by the Science and Technology Project at the request of the Subcommittee on Science and Technology of the Legislative Coordinating Commission and the House Select Committee on Energy. Representatives Gordon Voss and Ken Nelson and Senator Wayne Olhoft were the principal legislators responsible for determining the direction and scope of the study as well as the questions that were sent to interested persons, regulatory agencies, and electrical utilities.

The study was limited to electrical utilities and designed to examine how administrative and regulatory processes factored a wide variety of concerns into their decision-making. These concerns include environmental and technological variables, questions of equity for all parties, state policies, and how the public, which is defined as non-governmental, non-utility people for the purposes of this study, interacts with the decision-making process. The study was not designed to evaluate the appropriateness of any particular variable (e.g., the value of nuclear over coal power, etc.). Rather, the study evaluates the process to see if the variables and concerns of all parties are given due consideration.

The study is divided into four parts. Part one looks at the energy issue at a broad level on a national and Minnesota basis. In addition, a look at how Minnesota regulates utilities from a constitutional and economic perspective is provided. Finally, a section summarizes the role of the federal government in energy policy by examining laws and regulations governing supply, demand, equity, health and environment, conservation resource control, and others. This first part is designed as background information for reviewing the way in which Minnesota regulates electrical utilities.

The second part reviews how Minnesota presently regulates electrical utilities. This is accomplished by reviewing the laws and regulations affecting the various parties. These parties include the electrical utilities, the Minnesota Energy Agency,

the Minnesota Environmental Quality Board, the Pollution Control Agency, and other pollution control departments such as the Department of Health and Department of Natural Resources, the Public Service Commission and its related agency, the Office of Consumer Services, and how the various publics interact in the regulatory processes. The second part is designed to be descriptive in nature and is provided as background to the process issues discussed in part three.

Part three examines those issues that the principal legislators determined to be the most pressing. The legislators concluded after extensive discussion that the study should include the following process issues. First, the certificate of need process should be examined to determine how conservation policy and forecasting techniques affect the determination of need. Second, environmental and health factors and considerations of alternative technologies should be examined to see how they affect the decision on size and type of a proposed generating facility. Third, the way in which environmental and health factors affect the decision for determining the location of the proposed facility should be analyzed. Fourth, how the rate structure can be affected by the question of equity within the rate structure, by the desire to minimize new facilities, and by technological and environmental variables should be reviewed. Finally, how the public may be limited in impacting on the process should be examined by looking at the public's traditional entry points into the process such as judicial review and hearing stages and at time limitations or other factors.

The final part of the paper was designed to offer ideas, which may act as a catalyst for legislation, oriented towards focusing debate on specific proposal for change and recommending areas for future study. Some specific types of proposals were requested by the legislators. These include issues involving restructuring the decision-making process, imposing time constraints, defining criteria to be included within specific parts of the decision-making process, increasing the information flow to all parties, and increasing or improving public participation.

In addition, the principal legislators requested that the study conduct a survey of all parties including interested persons, regulatory agencies, and electrical utilities to see if a consensus could be arrived at on any issue. The survey was not designed to resolve differences, but to get input on the nature of the various problems within the existing process, on the potential solutions, and to determine if there is any unanimity on the nature of the problems or their solutions by those surveyed.

II. THE SURVEY DESIGN

The survey questions were designed to accomplish two purposes. The first purpose is to get factual information from the utilities and state agencies relating to practices and procedures on how they arrived at their decisions, descriptions of their functions and resources (staff, etc.), and projections for new facilities, rate requests, etc. for the future. The second purpose of the survey is more subjective in nature. A series of questions was designed to identify specific problem areas where the parties to electrical utility regulation proceedings (the interested persons, agencies, and utilities) believed the process was inadequate or skewed in one direction or the other. In addition, the questions were designed to elicit suggested changes in the process.

The questions were reviewed and approved by the principal legislators before the survey was distributed. As may be noted, many of the questions were rather specific in terms of offering options for suggested process changes. Many of the survey questions were the result of informal discussions with agency personnel and others who identified many thoughts and suggestions that had been floating around with regard to the process. As noted above, one of the purposes of the survey was to determine if a consensus on the problems or solutions could be established. Consequently, the questions were purposefully designed to be specific where possible, in order to ascertain if a consensus did indeed exist on these thoughts and suggestions.

Five sets of questions were designed. Many of the questions were repeated in each set. One set of questions was sent to interested persons. These were individuals or groups who have participated in electrical utility regulatory proceedings of one sort or another. The names were derived from lists kept by the Secretary of State's Office, the Minnesota Energy Agency, the Environmental Quality Board, the Public Service Commission, and others. Between 350 and 400 questionnaires were sent out to interested persons.

The second group surveyed was state agencies. One questionnaire was sent to the Pollution Control Agency, the Department of Natural Resources, the Department of Health and the Environmental Quality Board. Another questionnaire was sent to the Public Service Commission and the Office of Consumer Services within the Commerce Department. A final questionnaire was sent to the Minnesota Energy Agency.

The final group surveyed was the electrical utilities. All utilities including investor, cooperative, and municipal utilities were surveyed. One hundred and eighty-seven questionnaires were sent out in this group.

III. THE SURVEY RESULTS

Of the 350 to 400 questionnaires sent out to interested persons, only 18 responses were received. All state agencies that in one fashion or another regulate utilities responded. Only 9 of 187 questionnaires sent to the electrical utilities were returned. The results from the public and utilities (about 5%) are disappointing. However, most major utilities did respond.

Ten questions asked of nearly all recipients of the questionnaires are summarized in the following 10 tables. The responses to the questions and many comments are provided. References are provided on each question number from each questionnaire grouping and for each respondent. The specific responses to the questionnaires are contained in section four of this report. The questionnaires are included with the responses and located just prior to them (see table of contents).

The following comments and conclusions are drawn from the limited responses received. The conclusions are not valid in the statistical sense, nor was the questionnaire designed with statistical analysis in mind. Rather, as noted previously, the survey was designed to determine if a consensus existed on the problems or solutions to them.

Table II-1 shows that 4 of the 6 people who responded to the question believe that health and environmental factors should override the type of facility.

Table II-2 indicates that 15 of 16 who responded to the question feel that location factors can affect size and type decisions. The most common specific factors include environmental effects, availability of cooling water, and the ability to utilize district heating.

Table II-3 indicates that many interested persons and the regulatory agencies feel that size, type, and location decisions should be made by the regulatory agencies. The utilities felt that they should make these decisions. Nobody felt that the legislature should decide. Two interested persons felt the public should decide. There were 14 responses to this question. Most respondents felt that environmental, health, economics, and land use factor should be included in these decisions.

Table II-4 shows that 4 of 9 respondents felt that size, type, and location should be considered together. Of 9 respondents, 6 felt size and type should be considered independent of need. Only the MEA liked the present situation (size and type with need, independent of location). One felt that size, type, and location should be considered with need, and one felt that size, type, and location should not be decided by the government.

Table II-5 shows that 8 of 23 feel that the EIS should be done before need. Another 8 of 23 feel that the EIS should be done after need, but before the siting decision. Only 7 of 23 agreed with the present system which is that the EIS be done

after need and after siting, but before permits are issued. One respondent thought no EIS should be done. There was no unanimity within any group. However, 15 of 23 felt that the EIS should be done earlier that is now the case.

Table II-6 shows that the majority of respondents to the survey feel that the EIS process should cover more than just location. Of 17 respondents, 11 felt that size and type should be included with location in the EIS. Other respondents felt that alternative technologies should also be included in the EIS process. Of these 10 respondents, 4 felt that alternative mechanisms such as price incentives and conservation should also be included. Others felt that economics (2), human lifestyle (1), social (1), and transmission lines (1) should also be included in the EIS. The Supreme Court stated that the MEQB should develop some independent expertise for evaluating any EIS.

Table II-7 shows that of the 9 who responded, about half feel that the position papers required to be submitted under M. S. § 116H.13 are inadequate for determining health and environmental effects of a proposed facility.

Table II-8 shows that about 40% (6 of 15) believe that an EIS should be done on total end use energy requirements for Minnesota.

Table II-9 shows that 10 of 17 respondents believe that the public should be funded, at least to some extent, in order to participate in the decision-making process. Of 13, 10 respondents felt they should participate at the EIS stage. Of 8 respondents, 4 felt they should participate in court. Of 18 respondents, 16 felt they should participate at the hearing stage. Two suggested the rulemaking stage, 3 the planning stage, and 2 not at any stage.

Table II-10 shows that no respondents (13 of 13) felt that the government should operate the utilities.

IV. THE SURVEY RESPONSES

Below are the responses to the surveys with the appropriate questionnaire proceeding them.

TABLE II-1

QUESTION: IS THERE ANY FACTOR THAT SHOULD OVERRIDE THE TYPE OF FACILITY?*
(This is question 1 of the public group, question 4 of the MPCA group, question 3 of the PSC group, question 13 for MEA, and question 6 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	4	14
Government	1	6
Utilities	1	8

RESPONSE:

GROUP	YES		NO	IF YES, WHAT
Public	Supreme Court	(A1)		- Non-proliferation of power lines
	CACWU	(A2)		- Public attitudes towards the technology
	J. Waelti	(A5)		- Safety and human health
	J. Meissner	(A17)		- Safeguarding the environment
Government	MPCA	(B1)		- Human and environmental effects
Utilities	UPA	(C1)		- Demonstrated health effects

* The original question stated: "How should the type of facility be determined? What criteria should be used? Is there any factor that should override the type of facility?" The responses to the first two parts of this question are reserved for Part I of this report.

TABLE II-2

QUESTION: CAN LOCATION FACTORS AFFECT SIZE AND TYPE DECISIONS? HOW? SHOULD THEY?
(This is question 2 of the public group, question 3 of the MPCA group, question 3 of the PSC group, question 12 for MEA, and question 5 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	8	10
Government	3	4
Utilities	5	4

RESPONSE:

GROUP	YES	NO	COMMENT
Public	Supreme Court (A1)		- Human impact, environmental impact, reliability, and cost
	CACWU (A2)		- Availability of cooling water, transmission distance, transportation distance, environment (air, water, land), public health, district heating, land use priorities, critical areas, farmland, public attitudes
	J. Waelti (A5)		- Environmental effects
	M. Walton (A6)		- Ground water supply, use district heating
	MN Dept. Ed. (A10)		- Avoid taking farmlands
	G. Lynne (A11)		- Air, population density, land use needs should override
		D. Wendt (A14)	-
		N. Bodin (A18)	- Size and type predetermine location, not vice-versa
Government	MPCA (B1)		- Air & water constraints, district heating
	MEQB (B4)		- Air & water constraints, district heating
	MEA (B7)		- Air & water constraints, district heating
Utilities	UPA (C1)		- Cooling water, fuel availability, transmission distance
	CPA (C2)		- Cooling water, fuel availability, air, transmission distance, land use
	Kandiyohi (C3)		- Size - no; Type - fuel availability
	Runestone (C6)		- Ecology, scenic and historical sites
	MUA (C7)		- Population center or wilderness area

TABLE II-3

QUESTION: WHO SHOULD MAKE THE FINAL DECISION ON SIZE, TYPE, AND LOCATION DECISIONS? THE UTILITIES? THE GOVERNMENT? THE LEGISLATURE? OR THE PUBLIC? WHY? PLEASE RANK ORDER THE FACTORS YOU FEEL SHOULD BE CONSIDERED IN MAKING THE FINAL DECISION.
(This is question 3 of the public response, question 12 of the MPCA group, question 5 of the PSC group, question 16 for MEA, and question 24 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	5	13
Government	4	3
Utilities	5	4

RESPONSE:

GROUP	UTILITIES	GOVERNMENT	LEGISLATURE	PUBLIC	COMMENT
Public				CACWU (A2)	- If 50% or more opposed and no not utilize 50% of facility with geographic region, then no facility on community, county, or regional level
		M. Walton (A6)			- No comment
		MN Dept. Ed. (A10)			- Protect farmland
		D. Wendt (A14)			- No comment
				W. Bradley (A15)	- Local community
	N. Bodin (A18)				- No comment
Government		MPCA (B1)			- Health, air, water, economics, land
		MDH (B2)			- Engineering, demand, health, environment, economics, social
		MEQB (B4)			- No rank
		MEA (B7)			- Economics, environment, technology availability, fuel availability, power deficit
Utilities	UPA (C1)				- Cost, environment, reliability
	Kandiyohi (C3)				- Economics, energy conservation, fuel supply, environment, cost and availability of land, land type, transmission line acceptance, rates
	Crow Wing (C4)				- No comment
	Federated (C5)				- No comment
	Runestone (C6)				- No comment

TABLE II-6

QUESTION: WHAT SHOULD AN EIS COVER? SIZE? TYPE? LOCATION DECISIONS? ALTERNATE TECHNOLOGIES? ALTERNATIVE MECHANISMS TO MEET DEMAND (CONSERVATION, PRICE INCENTIVES, ETC.?)
(This is question 8 of the public group, question 10 of the MPCA group, question 9 of the PSC group, question 22 for MEA, and question 13 for the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	10	8
Government	3	4
Utilities	4	5

RESPONSE:

GROUP	RESPONDENT		SIZE	TYPE	LOCATION	ALTERNATE TECHNOLOGIES	ALTERNATIVE MECHANISMS	OTHER
Public	Supreme Court	(A1)						X - MEQB should have independent expertise
	CACWU	(A2)	X	X	X	X	X	
	J. Waelti	(A5)	X	X	X	X		
	M. Walton	(A6)	X	X	X	X	X	
	P. Gersmehl	(A9)			X		X	X - Economics & social
	MN Dept. Ed.	(A10)	X	X	X			
	G. Lynne	(A11)	X	X	X	X		X - Human lifestyle
	P. Mead	(A13)	X	X	X	X		
	D. Wendt	(A14)	X	X	X	X		X - Economics
	J. Meissner	(A17)	X	X	X	X		
Government	MPCA	(B1)	X	X	X	X		X - timing, transmission lines
	MDH	(B2)	X	X	X	X		
	MEA	(B7)			X			
Utilities	UPA	(C1)			X			
	CPA	(C2)			X			
	Runestone	(C6)	X	X	X	X	X	
	MUA	(C7)			X			

TABLE II-7

QUESTION: ARE THE POSITION PAPERS REQUIRED TO BE SUBMITTED UNDER M. S. § 116H.13 ADEQUATE FOR DETERMINING THE HEALTH AND ENVIRONMENTAL EFFECTS OF A PROPOSED FACILITY? WHY?
(This is question 9 of the public group, question 8 of the MPCA group, question 20 for MEA and question 11 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	4	14
Government	3	2*
Utilities	2	7

RESPONSE:

GROUP	YES	NO	COMMENT
Public		CACWU (A2)	- No criteria for content, no public review, location impacts size and type (not included)
	MN Dept. Ed. (A10)		-
		G. Lynne (A11)	- Each site has different needs
		N. Nuessmeier (A16)	- Power line effects
Government		MPCA (B1)	- Best estimate - does not give environmental factors equal weight
	MEQB (B4)		- Insufficient data for EIS
	MEA (B7)		- Can't do EIS because site is not known
Utilities	UPA (C1)		- Not enough decisions made for EIS
	Runestone (C6)		

* The PSC group was not asked this question.

TABLE II-8

QUESTION: SHOULD AN EIS BE DONE ON TOTAL END USE ENERGY REQUIREMENTS FOR MINNESOTA? WHY?
(This is question 10 of the public group, question 11 of the MPCA group, question 23 for MEA, and question 14 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	9	9
Government	3	2*
Utilities	3	6

RESPONSE:

GROUP	YES		NO		COMMENT
Public	CACWU	(A2)			- Planning and evaluating alternative technologies for environmental impacts
	G. Lynne	(A11)			- For planning
	N. Nuessmeier	(A16)			- For planning
			J. Waelti	(A5)	- Not practical
			M. Walton	(A6)	- Energy directions change too much
			Mn Dept. Ed.	(A10)	- Cost, time, obsolescence due to new technologies
			D. Wendt	(A14)	- Future needs cannot be known at this time
			W. Bradley	(A15)	- Central energy planning implies inappropriate scale and type
			N. Bodin	(A18)	- Cannot predict with any accuracy total end use energy requirements
Government	MPCA	(B1)			- To show environmental impacts of alternate sources compared with conventional
			MEQB	(B4)	- EIS would be too conjectural
			MEA	(B7)	- No EIS, but environmental report on generic impacts
Utilities	UPA	(C1)			- Consideration must be given to the environmental impact of small users at specific locations
	Runestone	(C9)			- Essential to planning
			MUA	(C7)	- Situation changes too fast to be meaningful

* The PSC group was not asked this question.

TABLE II-9

QUESTION: WHERE SHOULD NON-UTILITY, NON-GOVERNMENTAL PEOPLE IMPACT IN THE PROCESS? AT THE EIS STATE? IN COURTS? IN HEARINGS? OTHER? SHOULD THESE PEOPLE BE FUNDED? WHY?
(This is question 11 of the public group, question 13 of the MPCA group, question 10 of the PSC group, question 24 for MEA, and question 25 of the utility group.)

GROUP	NUMBER RESPONDING	NUMBER NO RESPONSE OR INDETERMINATE
Public	16	2
Government	5	2
Utilities	6	3

RESPONSE:

GROUP	RESPONDENT		EIS	COURTS	HEARING	OTHER	FUNDED	COMMENT
Public	Supreme Court	(A1)	X	X	X			
	CACWU	(A2)	X	X	X	Rulemaking, planning	YES	- Necessary for equity in process
	T. Donovan	(A4)					YES	- Public cannot be constructive without funding
	J. Waelti	(A5)	X				NO	-
	M. Walton	(A6)		NO	X		NO	- Funding for notification only
	K. Lochler	(A7)	X	X	X	Early in process	YES	- For expenses, notification
	F. Smith	(A8)					YES	- Alternative is just opposition
	P. Gersmehl	(A9)				Planning		
	MN Dept. Ed.	(A10)					NO	- Public are fanatics
	G. Lynne	(A11)	X		X		YES	-
	P. Schwartz	(A12)	X		X		YES	- On study committees
	P. Mead	(A13)	X		X		YES	-
	D. Wendt	(A14)	X		X		YES	- Transportation, food only
	N. Nuessmeier	(A16)	X					
	J. Meissner	(A17)				Before	YES	- Transportation only
	N. Bodin	(A18)	NO	NO	X		NO	-
Government	MPCA	(B1)	X		X		YES	- Effective
	MDH	(B2)			X		NO	
	MEQB	(B4)			X	Planning	NO	
	PSC	(B5)			X		Through OCS/RUCU	
	MEA	(B7)			X	Rulemaking	?	
Utilities	UPA	(C1)			X		NO	
	Crow Wing	(C4)	NO	NO	NO	No Place		
	Federated	(C5)	NO	NO	NO	After decision		
	Runestone	(C6)				Input into decision, utility decides		
	MUA	(C7)		X	X	Public advocate		

QUESTIONS FOR INTERESTED PERSONS

Certificate of Need Questions

1. How should the type of facility be determined? What criteria should be used? Is there any factor that should override the type of facility?

2. Can location factors affect size and type decisions? How? Should they?

3. Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or the public? Why? Please rank order the factors you feel should be considered in making the final decision.

4. When, ideally, in the legal process should size, type, and location decisions be made?

5. How do you determine the "right" technology to meet end use energy requirements? Include an evaluation of temperature and reliability as factors in the determination of the technology.

Environmental Questions

6. How do you determine environmental and health impacts of proposed facilities? Be specific.

7. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

8. What should an EIS cover? Size? Type? Location decisions? Alternate technologie Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

9. Are the position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate for determining the health and environmental effects of a proposed facility? Why?

10. Should an EIS be done on total end use energy requirements for Minnesota? Why?

Policy Questions

11. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

12. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

13. What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed?

14. In light of the recent suggestion that Minneapolis should buy NSP plants, should the government operate the utilities? Why or why not?

15. How is uncertainty in the process affected by judicial review, the hearing examiner process and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

PR/jb
10/6/78

A 1

THE SUPREME COURT OF MINNESOTA
SAINT PAUL

October 24, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17 - State Capitol
Saint Paul, Minnesota 55155

Dear Mr. Reagan:

Perhaps the most helpful and appropriate response for me to make to Representative Voss' request of October 5, 1978, is to refer you to the three decisions of the Supreme Court in the "power line cases" as follows: 1) No Power Line, Inc. v MEQC, 250 N.W. 2d 158 (1976); 2) No Power Line, Inc. v MEQC, 262 N.W. 2d 312 (1977); 3) PEER v MEQC, 266 N.W. 2d 858 (1978). While these decisions do not, for the most part, directly respond to the specific questions you have asked, they represent conclusions reached by the court after extensive deliberation on the legal and policy issues involved. I believe that in presenting a coherent judicial response to the problem of power line routing, these decisions deal with many of the factors of concern to you.

Some of the specific points made in the opinions which may be of interest to you are:

1. The court suggests the wisdom of requiring MEQC to prepare the EIS early in the process. (#2 at 326) See question 7.

2. An agency should not rely on information presented by the parties in the preparation of an EIS but must be a source of independent expertise. (#2 at 327 and #3, note 19 at 871) See question 8.

3. The EIS must include an analysis of all alternative routes if it is to be a meaningful guide to agency decision-making. (#3 at 871) See question 8.

4. The court suggests that MEQC should perhaps play a more active role as an advocate for environmental values. (#2 at 326)

5. Both MEQC and the utilities have an obligation to monitor facilities for unanticipated environmental effects. (#2 at 328) See question 6.

6. The crucial concepts behind the PPSA are that the process should be orderly and that there should be public participation at all stages of agency decision making. (#2 at 321) See question 11.

7. MERA applies to routing decisions, further suggesting the appropriateness of extensive citizen input. (#3 at 865) See question 11.

8. Minnesota is committed to the principle of non-proliferation. (#3 at 868) See question 1.

9. The human impact to be considered in routing decisions does not include compensable damages such as the destruction of homes. (#3 at 870) See questions 1, 2, 6.

10. Judicial review is possible only if the agency states with clarity and completeness the facts essential to its decision. (#3 at 871) See question 15.

11. Closely related to the last point is the importance of maintaining a record at all levels. (#2 at 328)

I hope this information contributes toward making your study a fruitful one.

Yours very truly,

Robert J. Sheran

cok

1708 UNIVERSITY AV., ST. PAUL, MINNESOTA 55104

October 27, 1978

Mr. Patrick L. Reagan
Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minn. 55155

Re: Our Review of the Process Governing Electrical Utilities.

Dear Mr. Reagan:

This letter is in response to the October 6, 1978, letter and questionnaire sent to me be Represntative Gordon Voss. After considerable internal discussion, the following is Clear Air, Clear Water Unlimited's response.

1. The type of facility should be determined as a separate question from the determination of need. The certificate of need process should be considered independently of size, type and location decisions. The criteria to be used in determining the type of factility should include 1) the public health and environmental impacts; 2) whether the choice of technology would encourage competition within the energy industry; and 3) the acceptability of the technology to the public. If the public is generally predisposed against a technology, such as nuclear, then such technology should not be used.

2. Location factors can have a big impact on size and type decisions. Such factors include 1) the availability of cooling water; 2) transportation distance for fuel supply; 3) power transmission distance; 4) environmental impacts on air, water and land (with special attention to crops and forests); 5) public health impacts; 6) abiltiy to utilize district heating; 7) land use priorities such as "critical areas" or farmland; 8) public attitudes. Location factors should always be considered in size and type decisions. Size, type and location decisions should be considered together in the agency determinations.

3. The procedure involving size, type and location decisions must be changed. First, size, type and location must be considered together and independent of need. Second, power plants greater than 50 MW should not be forced upon a community, county, or region that does not utilize at least 50% of the plant's capacity. Finally, no technology should be utilized in which 50% or more of the public, determined through a statistically valid opinion poll, finds unacceptable. Therefore, community, county or regional units of government should have veto power over plant sites or transmission line corridors via the elected officials, where less than 50% of the electricity is used by people within the confines of that unit of government. The factors to be used, therefore, are public attitudes, regional or local electrical utilization of the plant, plant size, as well as the factors listed under 2 above. We must not allow one area of the state to be impacted while another consumes the power.

4. Size, type and location decisions should be made after the certificate of need is granted and after the final EIS is approved, but before plant construction permits are issued. Alternatively, size, type and location could be done concurrently with need by a different agency, but still after a Final EIS is approved. The legislature has wisely provided an Environmental Rights Act in these matters, and the EIS must be taken seriously by all agencies and parties.

5. The determination of the "right" technology to meet end use energy requirements assumes that the utility knows what the end use energy requirements are. If the utility does not know this, then it should be required. Once end use energy requirements are known, then the EIS process in terms of evaluating alternative technologies would be the appropriate mechanism for determining the "right" technology. If the end use requirement is for a low temperature purpose, then special consideration should be given to non-electrical technologies to meet the end use requirement.

6. Environmental and health impacts of proposed facilities are determined through research and monitoring of air, water and land. The EIS process is the tool in conjunction with the Power Plant Siting Act. This effort can be of better scientific quality than others have been to date.

7. The EIS should be done after the certificate of need is granted, but before the siting decision is made. Alternatively, the EIS could be done concurrently with the certificate of need, but it still must be approved before the siting decision is made.

8. The EIS should cover size, type, location, alternative technologies, and the mechanisms for meeting demand through conservation, rate regulation, tax controls, etc. We feel that economic analysis in the broad sense, would kill many unwise projects.

9. The position papers required under both M.S. § 116H.13 and M.S. § 116C.61 are inadequate for determining environmental and health impacts of proposed facilities. The EIS process spells out what must be included in order to measure environmental and health impacts. No such criteria exist for these "position papers" required to be submitted by the agencies. In addition, the position papers are not subject to the same review by the public as the EIS would be. Furthermore, since the certificate of need process includes size and type decisions, and because location decisions are made separately from size and type, the position papers can be at best only a guess of the environmental and health impacts. In addition, since additional position papers are required for location decisions and since size and type have already been determined (size and type clearly affect location decisions; see 2 above) the ability to truly determine the environmental and health impacts to ultimately arrive at the best technology (safest) becomes bypassed at the certificate of need stage. Consequently, the siting decision becomes one of finding a location to meet the constraints of size and type, rather than an objective decision to arrive at the safest and most healthful decision necessary to satisfy demand. We have objected to this steam roller in the past without success.

10. An EIS should be done on total end use energy requirements for Minnesota. By determining the end use energy requirements for electrical consumers, one can begin to evaluate these end uses in terms of available technology. In addition, the environmental impact of these alternate technologies should be evaluated. The EIS mechanism is the appropriate technique to arrive at these decisions, since these considerations and others are evaluated together in a mechanism that provides for

public participation. A major policy question arises though. If an alternate technology can meet the end use requirement, and is as or more environmentally sound as electrical production and is economically competitive, then should that user be forced (?) to adopt the new technology if he wants to increase his energy consumption? A partial answer to this dilemma may come through marginal cost pricing as an economic rather that a coercive signal to the user.

11. Non-utility, non-governmental people or the public should impact at all stages in the process. These include planning, governmental hearings on specific proposals as well as rulemaking, at information gathering and evaluation stages such as the EIS stage or in courts if they so choose. To deny the public access at any stage would violate the Fifth and Fourteenth Amendments which guarantee due process, as well as the trend in Minnesota towards openness in government. The idea of funding the public to represent themselves is long overdue. The utilities draw on tremendous resources through their revenues, the government agencies get large appropriations for their participation, but what resources do the publics get? Without public participation and resources to fairly and equitably participate in the process as an equal, these processes are a farce. Industry claims that the issues are too involved and technical for the public to understand, and therefore industry states that the public should be excluded from the decision and that the public should trust the utility. We disagree. The key is not to take the public's role away from them, but to inform their participation. If the issues are too complicated and technical for the public to understand, then fund the public to hire someone who does understand to represent their interests (their self-interest) in the proceedings. Government cannot represent them, the agencies are supposed to be objective. Funding a wide variety of groups to represent their self-interest would provide for a more balanced and equitable proceeding in arriving at the final decision. Wisconsin's Public Intervenor in the Attorney General's office is one model.

Do not forget that the public does have a stake here. They will breath the air contaminated by emissions from the plant. They drink the water containing pollutants emitted from the plant. The people have their land taken for plants and lines. The people pay the bill for all these new facilities. The very least that government can do is give those who wish to participate an opportunity to represent themselves in a fair and equitable manner.

12. Utilities are what economists call natural monopolies. This means that the government permits an industry to engage in monopolistic practices, because it is ostensibly in the public interest. There are no economic incentives to choose the cheaper of two facilities which accomplish the same end. The only incentive is to not build facilities which are not used immediately upon completion. First, they derive no revenue from unused facilities. Second, because they derive no revenue from unused facilities, they suffer a loss not credited to them during the rate hearings. If the loss gets too big they will become a poor risk in the bond market. Without having good status in the bond market, they cannot borrow money for new facilities. Without new facilities, the utility cannot grow. Without growth they cannot maximize profits to give dividends to investors or members. Consequently, they do not build unnecessary facilities. However, they may build the more expensive one since they can get a return on their investment of 5%, they will want to get a return on a larger amount.

13. The major problem with the process is that the various publics do not get to participate on an equal footing with the utility or the agencies (see 11 above). Size and type decisions are made at the wrong time (see 3 and 4 above). The EIS needs to be done earlier (see 7, 8, and 9).

14. The government should undertake a study with equal participation by the public to see if greater competition could take place in the industry. For example, should investor owned utilities become cooperative? Should distribution be separated from generation?

15. Uncertainty is not affected by judicial review or hearing examiner process. However, timing may be. Uncertainty is a result of incomplete information, with decisions made in the wrong order, and the public not fairly and equitably involved in the process. All of these things need to be changed (see 3, 4, 7, 8, 9, and 11). The biggest uncertainty is how long one can continue to produce energy in the old ways before our planet is ruined.

I hope you find this response useful.

Sincerely yours,

Rodney Loper
President

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

ENVIRONMENTAL RESEARCH LABORATORY – DULUTH
6201 CONGDON BOULEVARD
DULUTH, MINNESOTA 55804

24 October 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St Paul MN 55155

Dear Mr. Reagan:

I would like to briefly address some of the questions concerning the study to evaluate the legal process governing electrical utilities in Minnesota per the request of Representative Gordon O. Voss dated 6 October 1978.

The total information base on which coal-fired electrical generating stations are evaluated is growing very rapidly as a result of the large federally funded Interagency Energy/Environment Research and Development Program which began three years ago. I believe that the legal process which encompasses the questions asked concerning electrical generating stations must specifically require that the latest, most up-to-date information be brought forward and considered at the appropriate decision stage where actual alternatives are possible. The single most important and difficult problem to be corrected is that most of the information now used in the decision making process comes from the utilities proposing the project. Extensive supplemental processes should be adopted to make sure that all relevant information is provided for answering technical and non-technical issues and that conflict of interest be dealt with at each and every stage of the process.

I am enclosing a paper that summarizes the expanding information data base as it applies to health and ecological effects. Of particular interest is the recent discovery of the nature of fly ash particles (bottom half of page 16) which raises significantly new issues and requires that a reassessment of the potential hazard of these materials be made.

I would be happy to discuss these ideas and answer any questions you may have concerning the research findings.

Sincerely yours,

Gary E. Glass, Ph.D.
Senior Research Chemist

Encl a/s

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THOMAS L. DONOVAN
ATTORNEY AT LAW
1060 NORTHWESTERN BANK BUILDING
POST OFFICE BOX 1411
MINNEAPOLIS, MINNESOTA 55440
TELEPHONE 612/372-6827

November 17, 1978

Mr. Patrick Reagan
Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

RE: Energy Process Study
10-6-78 Letter of Representative Gordon Voss

Dear Mr. Reagan:

Over the past year I have represented the Sierra Club in various hearings involving the proposed Tyrone nuclear power plant near Durand, Wisconsin. I am also the Chairman of the Nuclear Task Force of the North Star Chapter of the Sierra Club. In that capacity I have appeared before the MPCA Board.

My experience is somewhat unique in that I have been active in both Wisconsin and Minnesota. The chief lesson to be learned from hearings in both states is that public funding of intervenors is absolutely necessary if the public interest is to be served.

THE NEED FOR PUBLIC FUNDING OF INTERVENORS

This is an age of tight administrative budgets and increasingly complex and important energy issues. As a result the staffs of administrative agencies are too often underfunded and overworked. Such staffs are hard pressed to both evaluate utility proposals and formulate reasonable alternatives. In comparison, the utilities are well able to make their case with a fleet of expert witnesses orchestrated by experienced attorneys. Intervenors on the other hand are usually forced to make their case by cross-examination.

There is nothing illegal or unethical with this. Yet it does point out the basic inequity which results from the fairest of procedures when only one side has the financial resources and expertise to make its view known. Fairness alone is not my chief concern, rather the public's interest in informed decision making is being thwarted by the lack of meaningful public participation.

Intervenors simply cannot have a constructive impact on energy-related hearings without adequate funding of direct testimony from relevant experts in the field. Intervenors are needed in these hearings since they represent those segments of the public most concerned. They are able to present a point of view unrestricted by current political considerations. Their participation, if meaningful, although not necessarily successful, can stem the explosive alienated reaction against imposed decisions typified by the power line controversy in northwestern Minnesota.

Often intervenors are accused of obstruction and delaying tactics. It is asserted that they are not sufficiently concerned with constructively aiding a decision on the merits. In fact, without legal representation and expert testimony, intervenors are largely unable to play a constructive role.

PUBLIC FUNDING: TO WHAT END?

The Tyrone hearings provide a case in point of what can be expected of publicly funded citizen interventions. What is crucial is not the outcome of those hearings but rather the important role played by intervenors in presenting the decision maker with a well balanced record.

The Wisconsin legislature recently mandated its Public Service Commission to draw up a comprehensive ten year electrical energy plan. This Advance Plan would stipulate the size, type and location of all new power plants. The resulting hearings took 14 months and spawned 190 exhibits and over 13,000 pages of testimony. While many intervenors strove to make their case by cross examination, the direct testimony was almost exclusively that of the utilities or the PSC staff.

The prime issue was coal versus nuclear. The Wisconsin PSC was chiefly concerned with the economic aspects of that issue. Still it was not until the Sierra Club intervened that the highly technical economic arguments against nuclear power was made. Experts from the California Energy Commission and elsewhere provided a capital cost analysis and a 30 year levelized cost assessment of Tyrone versus an 800 MW and 400 MW coal plant. Further, the adequacy of domestic supplies of uranium was discussed. I would be happy to provide copies of this testimony upon request.

The Wisconsin PSC concluded these hearings with a moratorium on future nuclear power plant construction. This moratorium was based primarily on economic grounds and followed in large part the Sierra Club testimony. This testimony and related expenses cost less than $3,500 with legal representation being provided free. No matter what one thinks of the merits of this ~~discussion~~ decision, unquestionably Sierra Club provided the PSC with valuable information at a very low cost.

The proposed Tyrone plant was to some extent "grandfathered" in as to the moratorium and the PSC has set electrical demand hearings for December 11, 1978. Sierra Club will present a critique of NSP's econometric forecast through the testimony of a witness who has a background in econometric modeling. The Badger State Coalition, a group composed of farmers and environmentalists, will not only present a critique but also an independent forecast based on an end-use model. This is being provided by the Energy Systems Research Group of New York at a cost in excess of $10,000.

These examples are provided to indicate the complexity and cost involved in any serious effort by the general public to intervening in energy hearings. Funding is a major problem. Sierra Club's witnesses have not been fully paid and the dollars needed for the demand hearings have not yet been raised.

RELEVANT FEDERAL PROGRAMS

What is commonly known as Section 205 money is available from DOE. The program began in 1977 with an initial allocation of $2 million. The federal funds flow through a state agency which is responsible for administering the funds.

A nearby example is in Michigan where $200,000 was awarded to the Attorney General's office. The A.G. used $110,000 to supplement its own programs and awarded $90,000 to local intervenors. $49,000 of that amount went to the Michigan Public Interest Research Group. No matching state funds were involved. MPIRG is using the funding in electrical demand hearings, conservation hearings and a rate case.

This program is on-going with funding expected to reach $8 million soon. Ten states are currently involved.

OTHER ISSUES

Let me make a few brief responses to your questions involving the Minnesota scene. The separate nature of the MEA, MPCA and MPSC is an advantage. Yet it may be more useful for power plant related decisions to be made through jointly held hearings. For instance, the role of the MPCA and environmental considerations generally is subservient under the present procedures. Once the MEA grants a need and site compatability certificate it is nearly impossible for the MPCA to deny a permit on purely environmental grounds. Since they come in at the end of the process, they are faced with an inflexible take it or leave it choice.

Next, the MEA should be playing a much more aggresive role in the development of an adequate utility demand forecast. NSP uses an aggregate econometric model which is simply too gross a tool for a very complex procedure, electrical demand forecasting. At the very least a disaggregate econometric forecast should be required. Even this is unacceptable since a forecast based on an end-use model provides the most accurate result. In this regard the MEA is also far too willing to accept the basic forecast inputs from NSP rather than gathering its own data.

Finally, the MEA and the MPSC should follow the lead of the Wisconsin PSC in investigating through rule making hearings the potential for voluntary and/or mandatory conservation techniques as they impact on electrical demand. The following electrical demand reduction techniques should be studied closely:

1. Load Management

   (a) Interruptable load residential water heating.
   (b) Interruptable load commercial/residential air conditioning.
   (c) Interruptable tariffs for commercial/industrial users.
   (d) Use of voluntary and/or mandatory application of these techniques.

2. Electrical Rates

   (a) Time-of-use rates for commercial/industrial/residential users.
   (b) Effect of life-line rates on electrical demand.
   (c) Practice of volume discounts.
   (d) Relationship between equitable rates and the need for demand reduction.
   (e) Likelihood of price escalation and its effect on demand.

3. Metering and Electrical Storage Systems.

   (a) Cost, effectiveness and available technology.
   (b) Effect on utility's ability to generate more accurate demand forecast.

4. Efficiency Improvements in Electrical Appliances.

5. Industrial Co-Generation.

   (a) Applicability to proposed new taconite plants in northern Minnesota.

6. Electrical Space Heating.

   (a) Effectiveness of residential insulation program on those homes using electrical heating.
   (b) Likelihood of gas/oil heated homes converting to electricity.
   (c) Expected future use of electrical space heating and the desirability of policies limiting such use.

7. Alternative Electrical Energy Systems.

   (a) Primary emphasis on solar water heating systems as a means of reducing both base and peak load.
   (b) Wind, photovoltaic cells and hydro.
   (c) Effect of passive/active solar space heating on future electrical space heating.
   (d) Role of utilities in promoting such alternatives.
   (e) State tax credits, state insured low-interest loans, conversion of state buildings.

8. District heating for large commercial/industrial users which might otherwise be forced to convert to electricity due to national energy policies.

9. Development of a detailed end-use analysis model as a prerequisite to demand reduction programs and accurate utility demand forecasts.

10. Peak Load/Base Load Reduction.

   (a) Effect of each of these techniques on peak load and base load.
   (b) Desirability and availability of gas/oil for peak and intermediate load plants.

If I can be of any further aid, please feel free to call.

Very truly yours,

Thomas L. Donovan
Attorney at Law

TLD/jcb

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UNIVERSITY OF MINNESOTA
TWIN CITIES

Department of Agricultural and Applied Economics
231 Classroom Office Building
1994 Buford Avenue
St. Paul, Minnesota 55108

October 17, 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

I am returning my answers to the questionnaire of October 6, 1978 on electrical utilities.

Some very important questions are raised, some of which I do not feel qualified to attempt to answer. I have attempted to answer those on which I feel I have some constructive thoughts.

I appreciate having had the chance to respond.

Sincerely yours,

John J. Waelti

John J. Waelti
Professor

JJW/dmm

Enclosure

Response to "Energy Process Study"

John J. Waelti, Professor
Agricultural and Applied Economics
University of Minnesota

1. "Type" of facility should be determined jointly by the utility and state and local government. Criteria should include safety (including human health), economics, environment, and aesthetics, probably in that order, although a case can be made for reversing economics and environment, depending on the specific situation. Safety and human health should be the overriding factors. I'm thinking particularly of the disposal of nuclear wastes, but there are human health considerations with other types of facilities as well.

2. Certainly! We don't want to locate plants such that they release dangerous pollutants directly on half the state's population. Of course, rural areas don't want to be the recipients for pollutants produced by energy used in the cities. And, of course, the power line dispute has given this another dimension. It seems that location is just about the whole ball game.

3. Obviously, the day is over when any one entity makes the entire decision. It has to be jointly by the utility, the state, and the public, and specifically with the local unit of government and local citizens involved. When I say state government, I mean an agency or board--not the legislature. The legislature should set broad policy guidelines and not get involved in specific site selections.

4. I'm not sure what you mean by legal process. But obviously, size, type, and location must be made early--as early as possible before extensive effort is underway.

5. The "right" technology is a combination of all factors--safety, environment, health, economics, etc. The "best" technology from a safety standpoint may not be the best from an environment or aesthetic standpoint.

6. I believe the problem is that you cannot determine health and environmental effects with certainty. You get the most qualified people to predict, you get the benefit of past experience, and perhaps commission studies. These are costly, cumbersome, lengthy, and uncertain procedures. But, what else do we have? When so many people and so much is at stake, we have to go with the best knowledge we have. The problem is that we may be economists, legislators, health experts, etc., but we are not magicians or prophets! We are mortals, and we can't determine, with certainty, the impacts. But we must go through the procedures of assessing with the best we have available. The cumbersome, lengthy, frustrating process must be performed!

7. If it is not to be "after the fact," it would seem that the EIS should be after the Certificate of Need, and in conjunction with several likely sites. My interpretation of a proper initial EIS would be for a broad brush approach to weed out the obviously unqualified sites. The EIS as presently done, I think, is more costly and lengthy than need be. A broad brush approach on several likely sites may be a pragmatic compromise between timeliness and costliness.

8. The EIS must be done with some size, type, location, technology, etc. in mind, or perhaps for the relative impacts of alternatives. Again, an abbreviated EIS may make sense.

9. I really do not feel qualified to answer this one.

10. I am not sure that this is practical, or that anyone would know how to do it. With unlimited funding, this may be nice. However, with limited funds, one will have to settle for the Chevy instead of the Cadillac. Limited funds can best be put to other uses, it would seem. At least, that is my initial reaction.

11. Every effort should be made to avoid the courts. Depending on how the EIS stage relates to the siting process stage, I think it is necessary to bring local people in early. If they do not feel a part of the decision, they will resist. They might anyway, but if they aren't brought in early, it virtually guarantees resistance. I don't think these people can be funded. Through what mechanism and with what dollars? Limited funds would better be used to improve the process in general, rather than directly subsidizing various groups.

12. This is the classic economic problem of a natural monopoly. In return for exclusive rights to serve an area, the utility must be regulated by government. If the regulatory agency is tough enough on holding down rate increases, the utility is forced to minimize costs. If the regulatory agency is permissive, the utility has less incentive to hold down costs because costs can be passed along as rate increases. Another problem is that since return is based on a percentage of capital investment, the utility has an incentive to maximize use of capital relative to labor. There is an incentive to expand facilities.

13. Realistically, I don't think any one group is to blame, or responsible. It is a product of the times--expanding demand for energy, concern for the environment, greater demand for the existing resource base, and a feeling on the part of people that they wish to assert their rights. Utilities are in business to produce power, local officials want to protect their constituents, and local people do not want to be tromped upon. The state is caught in the middle. The above may describe the situation, but not resolve it. Perhaps the balance of power is working now but decisions still need to be made. Perhaps some form

of environmental arbitration could be tried. A balance needs to be struck between protection of rights and getting things done. I don't pretend to have that formula. I do think that some form of environmental arbitration should be tried. I think the courts should be avoided at all costs. The courts are poor places to make such important decisions.

14. As stated above, a utility is a "natural monopoly". The alternatives are to a) keep government out, b) regulate the private utility, and c) government ownership and operation. I favor the middle ground. Clearly, a natural monopoly needs some supervision. But, public ownership is not necessary or ~~perhaps~~ often desirable. Let the utility make internal day-to-day decisions, but subject it to regulation in matters of rates, location, type of generator (nuclear, fossil fueled, etc.). We live in a "mixed system", basically capitalistic, but with substantial decisions by the public sector. This is the only pragmatic way. Rational people can disagree on the "correct" combination. On the matter of utilities, I favor private ownership with rather stringent public supervision and regulation because of a) the monopolistic (necessarily) nature of the industry, and b) because of the tremendous impact resulting from the decisions of the utility. The personnel running the utility must recognize the need for public supervision here. One can be a rather "rock-ribbed" capitalist and see the need for public regulation in this case, I would think. By the same token, an advocate for the public sector should be able to see the advantages of private ownership of the utility. What we are striving for is some combination that is efficient and equitable, given the complexity of the times and the diversity of our citizens.

15. I don't feel qualified to answer this one. However, as a general principle, I believe that the courts should be involved to the least extent possible. We don't need more crowded court dockets or more work for attorneys. We ought to work toward something involving arbitration; early public involvement, settling on points of agreement, consequences of alternatives, and arbitration of differences. Not everyone can be entirely pleased, but if decisions can be made in a manner that interested parties are involved, that is about as much as we can hope for. I would be extremely suspicious of anyone who claimed to have the exclusive answers to these important questions.

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UNIVERSITY OF MINNESOTA
TWIN CITIES

Minnesota Geological Survey
1633 Eustis Street
St. Paul, Minnesota 55108
(612) 373-3372

October 11, 1978

Mr. Patrick Regan
Consultant, Science and Technology Project
Room 17, State Capitol
St. Paul, MN 55155

Dear Mr. Regan:

Pursuant to the request from Representative Gordon O. Voss to comment on questions relating to the governance of utilities in Minnesota, I should first say that the Minnesota Geological Survey is basically charged with investigating and doing research on the geology of Minnesota and providing this information in forms that are useful to the citizens of Minnesota. We have no administrative or regulatory functions whatsoever. However, I have served on the Citizen's Advisory Board of the Power Plant Siting Project of the Environmental Quality Council, and I do feel that the development of large electrical-generating facilities implicates the geology of the state in many ways. Therefore I will take the opportunity you have provided to comment on those questions that you raise which in my opinion have some geological implications.

Questions

1. Water requirements are a major factor and the type of facility that is feasible may be dependent on the availability of water. The geology becomes an important factor if significant use of ground water is required or if large impoundments are required. Foundation conditions for large structures may also be a concern in some parts of Minnesota.

2. A number of small dispersed power plants may be preferable to large centralized facilities if the development of a large, concentrated water demand would threaten to overstress available ground water or surface water resources. Smaller and more numerous units located near load centers with smaller transmission line requirements and better opportunities for the use of rejected heat may make more sense than large, distant, concentrated facilities. The efficiencies of very large generating units may be offset by higher line losses, less opportunities to use rejected heat and more intensive environmental stress. These factors should definitely enter into decisions.

3. The public should certainly be heard, but decisions should definitely not be based on public opinion or some kind of referendum. Public opinion, which tends to be overly influenced by emotional issues raised by various self-serving public interest groups, is simply not competent to make highly technical decisions that affect the broad public interest as opposed to purely local interests.

The utility companies also have a track record of tending toward self-serving and overly conservative decisions. Decisions of this type must be made by properly constituted, technically capable governmental bodies within a framework established by appropriate legislation.

4. Final decisions should be made after the need for additional power has been duly established and certified, the various alternatives for obtaining the additional power have been reviewed and evaluated and reasonably reliable estimates can be made of the relative costs, energy efficiency and environmental impacts of the feasible alternatives. I believe that there have been a number of cases where the sites have been chosen strictly on the grounds of engineering feasibility and availability of the property, and the decision-making process has been an exercise in backing the horse into the stall.

5. This is not a geology-related question except to the extent that different technologies have different site requirements. This would have to be determined by specific instances.

6. Unless you are asking us to write a book, how can one be specific on so general a question?

7. An EIS draft should be prepared after a certificate of need has been provisionally granted, the performance specifications for the needed system have been established and it is possible to identify and describe some realistic, feasible alternative systems and potentially appropriate sites. It is only then that a meaningful EIS can be prepared. Many aspects of an EIS are site-specific.

8. The EIS should cover the specific identifiable impacts on the environment of feasible alternatives within the range of existing and available technology for obtaining the needed power. It should also include impacts of any feasible alternatives for conserving and reallocating existing power resources so that the use of additional power can be avoided.

9. We have not analyzed the statute in question.

10. Only if a meaningful definition and evaluation of total end use energy requirements can be made. Frankly, I would be skeptical of the validity of such an estimate. It would depend on pyramiding a whole series of trend projections when the one thing you can now be sure of is that present trends in respect to energy will not continue.

11. Adequate provision should be made for public hearings and public input prior to each major decision point starting with the issuance of a certificate of need. However, as much as possible should be done to shield the responsible public agencies from frivolous and obstructionist intervention through the courts once public input has been duly received and considered. I do not believe that funds should be provided for interest groups, but I believe that money should be expended both to inform the public and also to contact a fair sampling of people who will be affected so that the responsible governmental agency will know what public opinion is and what interests and obstacles affect the project.

12. I do not feel qualified to answer this question.

13. I do not really know what is wrong with the process, but I suspect that one difficulty is that most real long-range planning is done by utilities themselves, based on a go-go-go growth philosophy without any real incentive or concern for conservation or for taking chances with innovative technologies and smaller scale, environmentally unobtrusive solutions to problems. The incentive for utilities is to build huge, centralized power systems whose engineering and economics are well known and which are easily managed and optimized. I don't really know what the biggest time-consuming aspect of the process is, but I suspect that one important aspect has to do with the utilities largely doing the long-range planning and then trying to promote the favored solution as a fait accompli. This is then followed by lengthy controversy and cumbersome and confusing jurisdictions and permitting processes. Perhaps a background of much more coherent and thoughtful government planning would help. I don't mean to suggest that rigid plans for power development should be set up years in advance. What I would suggest is that an impartial planning agency should consider a number of alternatives, scenarios and solutions and should be constantly evaluating the environmental, economic and social consequences of the alternatives so that a good deal will be known about the trade-offs and pros and cons of different basic alternatives. These alternatives could be known and discussed before a major proposal suddenly appeared. Planning of this kind should be done by a completely independent agency of competent professionals in a variety of fields including economics, environmental fields, and sociology as well as engineering. This group should be charged with working closely with both public interest groups and utilities and with other aspects of state planning, and they should not be secretive. Options and alternatives should be constantly presented to the public and discussed, not in the context of an immediate controversy over a transmission line or a power plant but in terms of future directions.

14. This is a complicated question and one I don't feel competent to deal with. I don't see any objection to publicly-operated utilities if it can be shown that genuine incentives are not present for private utilities to optimize their operations in the public interest in relation to the total energy picture and not just in relation to the sale of electricity. For example, private utility companies have tended to simply neglect the development of systems for using waste heat efficiently and have simply fought to be allowed to throw it away as cheaply as possible.

15. In my opinion the privilege of judicial review has been abused. The courts should take a much firmer stand on the validity of duly constituted governmental agency hearings as due process. I would hope that planning of the type I described above could pave the way for development and operation of utility systems so that as new elements were

needed they would have already been considered and simply regarded as a logical and expected step in an orderly process that had already, in effect, been reviewed. Obviously the kind of planning process I have suggested will not eliminate controversy and may actually stimulate certain kinds of controversy. For example, the alternative of nuclear versus non-nuclear power will not easily be resolved, but it is better to argue it out in principle rather than waiting until a new major generating plant is needed and a permit is being sought for a nuclear plant. If the kind of long-range planning I am suggesting can be made to work, which I would agree is debatable, then a good deal of the uncertainty attending the present process would be moved out in front to a realm of policy debate rather than confrontation, and the uncertainty that afflicts the present process might be somewhat dissipated in advance. To add a sour note, effective public debate and resolution of serious and highly complex issues requires effective public information media, and as long as our press is as generally trivial, irresponsible and self-serving as it usually is it isn't going to be easy to get effective public awareness of complex issues.

These rambling comments may not be exactly what you wanted, but I thank you for the opportunity of expressing a few thoughts which I would not otherwise have a chance to voice.

Sincerely,

Matt Walton
Director

MW:jp

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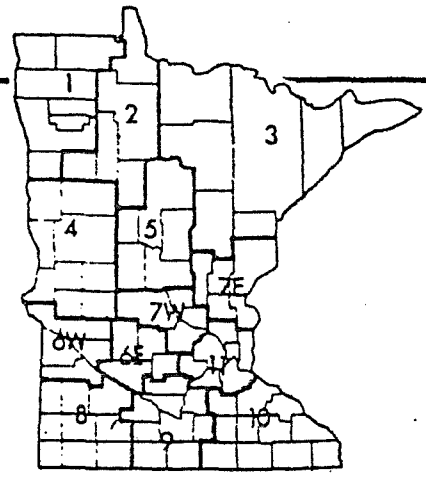
state of minnesota

environmental education board



October 25, 1978

Rep. Gordon O. Voss
251 State Office Building
St. Paul, MN 55155

Dear Representative Voss:

I am writing on behalf of the Minnesota Environmental Education Board (MEEB) in response to your letter of October 6, requesting input into electrical utilities procedures in Minnesota. While we appreciate having the opportunity to respond, I am afraid MEEB can not provide the specific kind of technical information most of your questions demand.

MEEB and its system of 13 regional councils exist to provide the means for allowing Minnesota citizens access to education and information about environmental issues facing our state. From the beginning the organization's policy has been opposed to promoting or advocating a particular course of action. We are, however, advocates for education and it is from that perspective that I offer the following brief response, which could probably best be attributed as answers to the questions posed in #11:

> Certainly non-utility and non-government people should impact in the process. And in general, MEEB would suggest that those contributions be requested immediately, ie. not at the point when the public is being asked where an electrical facility should be located, but rather, from the beginning, ie. is an additional electrical facility needed? If it is determined to be a necessity and the public is still broadly opposed, an opportunity should be provided for individuals and groups to suggest what it is that they are willing to forego to avoid a new facility.

phones (612) 378-7010, 296-2368

meeb

257 hennepin square building
2021 e. hennepin avenue
minneapolis, minnesota 55413

From our experience there is widespread feeling that asking for public input at any of the stages your question suggests--EIS, courts, hearings--is too late. It is already after the fact; decisions are all but carved in concrete.

Also hearings are generally not well-publized, nor is adequate advance notice given. The more recent technique of using display newspaper ads to promote a public hearing, is certainly a vast improvement over small-print legal notices. Finally, MEEB would make a plea for greater attempts at interpretation of the possible implications of potential actions. Even mailed notices are generally presented in such "engineerese" that most people simply are not willing or capable of understanding the message. It is grossly unfair to expect that individual citizens or groups of citizens can provide the translations and/or technical information needed to have any real impact on these vitally important processes. I think it's fair to assume that this kind of service can not be expected from utility companies; therefore, it undoubtedly will have to be done by government.

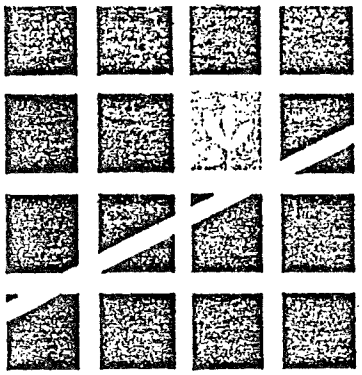
MEEB's experience regarding the payment of volunteers has shown that while per diem is probably not necessary, it is important to cover actual expenses of persons asked to participate.

If citizen participation is ever going to more than catchy verbage, we're going to have to provide the tools to make it happen. In closing I would like to say that within our network of 197 volunteers there are individuals who could respond in some detail to the more technical questions. Please call me if we can be of assistance.

Sincerely,

Karen Loechler

Karen Loechler
Executive Director



ENTER FOR URBAN ENCOUNTER 3410 University Ave., S. E. Minneapolis, Minn. 55414 331-6210 Wm. Grace direct

November 2, 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, MN 55155

Dear Mr. Reagan:

This letter is in response to Rep. Gordon Voss's invitation of October 6 to provide "input in evaluating the administrative and regulatory processes governing eledtrical utilities in Minnesota."

I respond from eight years experience in assisting citizen groups organize to articulate their varying concerns about the performance of electrical utilities, particularly NSP. Among these campaigns are various rate interventions, opposition to the Henderson site, a formal proxy solicitation to elect a consumer representative to the Board of Directors of NSP, property tax exemption for active solar hardware, sales tax exemption for home heating fuel, and so on.

I cannot do justice to your excellent questions. Let me, instead, share two general concerns and respond directly, then to at least one of the questions.

Both concerns risk sending the obvious in pursuit of the self-evident but they need to be emphasized yet again. (I should also add that my personal opinion is that we will never adequately solve our energy crisis as long as private, investor owned corporations enjoy monopolistic, and/or monopsonistic, or oligopolistic positions; it is a waste of resources to spend millions of dollars of governmental monies to try and insure -- frequently unsuccessfully -- that these entities conform to even the most minimal standards of decency not to mention social welfare. To my knowledge, virtually all other industrialized countries have realized the basic contradiction in attempting to provide an essential service/public need through privately owned corporations. Nevertheless, given our present situation....) The first concern is the abysmally inadequate supply of information on genuinely alternative options to the present energy delivery system. The budget of the MEA is a case in point with the solar and alternative energy departments getting only a miniscule part of the agency's resources. Or, should Minneapolis approve a feasibility study of municipalization, who will do the study? I understand that there are very, very few firms with the resources available to conduct such a study that will objectively assess the municipalization potential; there are many who will give elaborate rationalizations for why it is not feasible. Or, the

capabilities of the PSC staff to assess the information given them by NSP are, by their own admission, inadequate -- and the same situation exists, of course, at the federal level. Or, in the private sector, no organization begins to approach the resources of NSP or even the smaller utilities; we do with college interns while NSP turns to New York consultants. The primary point here is that when citizen organizations do not have the resources to operate through the established channels, they are forced to turn to other modes of action. This brings me to my second concern. If these organizations -- "non-utility, non-governmental people" -- in the words of question #11 -- are not funded and have the resources necessary to take the initiative, offer new alternatives, they will inevitably have to react (oppose) whatever changes are suggested; and, of course, one never knows when, where, how the reaction comes.

A brief response to question #14. Municipalizing one segment of a private utility leads, it seems to me, to more problems than it solves, in the short run. Outright condemnation or the reverse use of eminent domain might begin to meet some of these but leaving generating capacity in private hands, etc. compounds the difficulties faced by a municipal. As a first step, however, towards a state-wide energy delivery system that is not privately owned, municipalization becomes much more attractive.

I look forward to seeing a copy of the final report.

Sincerely,

Frederick W. Smith hdm

Frederick W. Smith, Associate Director
Center for Urban Encounter
FWS/hdm

A 9

UNIVERSITY OF MINNESOTA
TWIN CITIES

Department of Geography
414 Social Sciences Building
267 19th Avenue South
Minneapolis, Minnesota 55455

27 October 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Certificate of Need Questions

Type-of-facility decisions should be based on alternative scenarios for demand, cost, locational constraints, and linkages with other sectors of the economy. This is a standard algorithm, but I would add that the process should not be a single-minded search for an overall least-cost or greatest benefit/cost facility. Rather, it must take into account the allied questions of sensitivity to changes in assumptions and ability to be modified without great cost. In other words, the economy of a certain least cost solution should not depend too heavily upon the realization of too many assumptions.

Environmental Questions

These questions impinge directly on my area of professional interest. The implicit purpose of an EIS is to guide planning in such a way as to guarantee that environmental considerations are included right from the outset. If the environment is indeed being considered in every phase of planning, then the timing of the publication of a draft EIS is not a particularly crucial issue for the agency. Outraged protests concerning the "burden imposed by early EIS requirements" would seem to imply that the spirit of the Environmental Policy Act is being ignored. Also in this spirit, the alternatives of meeting demand by conservation or price incentives should be included in any EIS, and the EIS for a particular project should be fitted into an overall energy EIS (and, to be fair, also an Economic and Social Impact study of energy use).

Policy Questions

Non-utility and non-governmental people should most emphatically be included in the planning process. In my work with watershed planning and general district planning, I have been subjected to a truly incredible amount of half-truth and misinformation about the future demands and probable behavior of "the public." Most of this erroneous information was being disseminated by well-intentioned planners who had conducted a rather amateurish "poll" of public opinion but did not provide a mechanism for outsiders to evaluate their conclusions. Future demand forecasting rests on assumptions about future behavior that often minimize the possibility of conscious change in human expectations. Ironically, awareness of the adverse consequences (economic, social, and/or environmental) is one of the most powerful incentives for a change in attitudes and therefore of behavior. Proper assessment of possible

attitudinal change is a vital but extremely difficult task, one that deserves open public scrutiny precisely because it is so easy to retreat into a closed thought world created and shared by a small number of individuals. I do not intend to impugn motives; these individuals often are exemplary in their personal attitudes and behavior, but the mechanism of assessing public opinion is faulty. Why else should such individuals be so often surprised by powerline opposition, Proposition 13, or bond rejections?

On the other side of the argument, scheduled public hearings probably do an even worse job of taking the pulse of the people. Planning for future energy supply must get answers to questions like "How will your behavior change if X condition prevails?" rather than "What do you want to see?" The former question gives a planner an assessment of mental tradeoff matrices; the latter simply provides a political forum for special interests.

Sorry about the date; I just got the letter on the 25th (not your fault)

Sincerely,

Phil Gersmehl
Associate Professor
Department of Geography
University of Minnesota

MN STATE DEPT. OF EDUCATION

A10

ENERGY PROCESS STUDY S-5

Certificate of Need Questions

1. How should the type of facility be determined? What criteria should be used? Is there any factor that should override the type of facility?

BY ENERGY DEMAND SOME PLUS EFFICIENCY

2. Can location factors affect size and type decisions? How? Should they? YES
YES- SHOULD TAKING PROACTIVE PART LANDS

3. Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or the public? Why? Please rank order the factors you feel should be considered in making the final decision.
THE GOVT AGENCIES— THIS IS WHAT THEY WERE AUTHORIZED TO

4. When, ideally, in the legal process should size, type, and location decisions be made? IN THE ORIGINAL APPLICATION PROCEDURE

5. How do you determine the "right" technology to meet end use energy requirements? Include an evaluation of temperature and reliability as factors in the determination of the technology.

Environmental Questions

6. How do you determine environmental and health impacts of proposed facilities? Be specific. FROM RELIABLE DATA FROM MORE THAN ONE SOURCE. OPPONENTS WILL QUOTE ONLY THOSE FACTS

7. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? (Never) A combination thereof (please specify)? Or other?

8. What should an EIS cover? (Size? Yes) (Type? Yes) (Location decisions? Yes) Alternate technologies? NO Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

9. Are the position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate for determining the health and environmental effects of a proposed facility? Why?
Yes

10. Should an EIS be done on total end use energy requirements for Minnesota? Why?
NO— COST TIME, OBSOLESCENCE DUE TO NEW TECHNOLOGY

Policy Questions

11. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not? BECAUSE THEY ARE FOR THE MOST PART A RADICAL, ONE ISSUE GROUP / FANATICS
NO

12. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down? GALOPING INFLATION- BUREAUCRATIC INTERVENTION

13. What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed? TOO MANY SELF STYLED EXPERTS— WHILE MOST ARE INTELLIGENT, FEW HAVE ANY COMMON SENSE

14. In light of the recent suggestion that Minneapolis should buy NSP plants, should the government operate the utilities? Why or why not? NO- WHAT INDUSTRIES DO THE GOVT OPERATE WITHOUT COLOSSAL COSTS, INEFFICIENCY

15. How is uncertainty in the process affected by judicial review, the hearing examiner process and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?
HOW DO YOU GET AN UNBIASED HEARING OFFICER

PR/jb
10/6/78

A 11

1. A committe consisting of a power company representative, an individual selected by the governo a member of the state planning agency, and a known well rounded nongovernment environmentali should determine facility types.

2. Aethetic,economic and fuel problems should be considered as criteria when deciding what type of facility to develop.

   Problems relating to human health and long range needs should override the type of facility.

3. Location factors such as air quality, large populations, and land use needs should determine the size and type of power facilities in a world where all things relating to man are becoming critical.

4. Legislature,Public, Utility, Government. The legislature has local inputs as well as reports from various state departments and therefore should take the lead in determining size, type, and location decisions in the end.

5. After studies have been made, suggested alternatives presented, and a public hearing is held; then size, type and location decisions should be made.

6. Solar power would present the fewest problems and could be developed with more study. Nuclear power presents all sorts of problems such as: getting rid of heated water, danger from breaks in the mechanisms, and getting rid of nuclear wastes.

   In the short term, coal could be developed carefully with the proper studies. It might also be the most reliable. In the long run, nuclear power is out but solar power will prevail because of limitless energy.

   Studies should be made of possible effects on human health caused by power plant development in the future. Sites with old plants should also be reveiwed to make sure they are safe.

7. An Environmental Impact Statement should be carried out after the certificate of need has been developed and before the siting process commences. Less time and money will be lost if problems are discussed prior to engineering and other early siting expenses occur.

8. An E.I.S. relating to power plant sites should cover all considerations such as site,type, location, technologies available, and the effect on human life styles.

9. NO Each site may have different situations and needs.

10. YES An overall plan should be developed so we can focus on areas with the greatest needs with the least amount of difficulty.

11. Nonutility Non government people should have input during the E.I.S. stage and the during hearing related to site and type proposals. People concerned with these problems should be at least partially funded.

12. Transportation costs, mining expense, power line development and upkeep and increased demand for cheap power are market forces which relate to utilities.

Development of coal fields in the west and also large scale production of solar units will help to hold costs down.

13. The existing energy process envolves to many different companies who really hold a monoply on their product. We need to correlate prices and energy dispersal better; maybe under one department of government.

14. The government is already envolved in many utilites simply because they already generate much of the total power. One company from the private sector with government controls might be the answer. In this type of situation the people would be obtaining cheap power with the least expense.

15. The factors of Judicial reveiw, ahearing examiner, and others should be reviewed and compared with possible alternatives developed by a study commission.

Gladwin A. Lynne
523 No. Montana Street
Warren, Minnesota 56762

A 12

Rt. 1 Box 136
Belle Plaine, Minnesota 56011
October 25, 1978

Patrick Reagan, Consultant
Science and Technology Report
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

The following is in reference to a letter sent out by Representative Gordon O. Voss requesting input for the Science and Technology Project with regards to electrical utilities in Minnesota.

My involvement in electrical utility proceedings was mainly concerned with proceedural policy. Because my background and education in Certificate of Need and Environmental Questions is quite limited, I will address mainly those questions relating to policy with the exception of no. 7.

7. I feel that a first draft EIS should be done before the siting process commences. Then a final EIS should be done after the siting process but before construction permits are issued.

   By doing a first draft EIS before the siting process commences will give the planners and those making proposals an idea of desirable and undesirable sites in a given study area. This could possibly prevent duplication of effort at a later date.

   It is very possible sometime during the entire siting process that additional vital environmental information, not contained in the first draft EIS, can surface. Therefore a final EIS should be done before permits are issued.

11. Non-utility, non-governmental people should have input before a Certificate of Need is issued and then again before Construction permits are issued. Ideally, you

would also have this type of input before the EIS is done but I personally question the amount of active informed public interest at that point. Please refer to no. 7 regarding EIS input.

I feel that the present system of Citizen Study Committees and the public hearing process are effective avenues for non-utility, non-government input. It is vital, though, that NO utility or governmental people serve on or advise these Citizen Committees.

Concerning the question of funding, I feel that citizens serving on a Study Committee should be compensated for their mileage plus a small stipend for each meeting attended. Having served on a Citizens Committee I know that conscientious committee members expend a great deal of time, concern and study to their charge.

13. The present existing energy process appears to spend too much time trying to justify the need for NEW facilities, NEW sites and NEW right-of-ways.

    There should be laws requiring cooperation between utilities as far as their future needs are concerned. <u>There should never be a duplication of facilities.</u> Utilities should be required to rent or buy the commodity of another utility whenever possible even if it would require some changes in the existing facility at the requesting utilities shared expense.

    If the preceeding paragraph were enforced I believe that the existing energy process would be substantially decreased.

14. If we can't achieve cooperation between utilities to maximize on existing facilities and subsequently eliminate duplication then maybe government operation is the answer. Personally, I would favor private ownership with full cooperation among utilities if it is possible.

15. If the request by a utility is legitimate then there should be no uncertainty at any stage of the process. But if there is some margin for conflict, then there will possibly be an element of uncertainty at any point in the process until all of the input has been evaluated.

I feel that the 1976 legislative changes made in the Power Plant Siting law were good.

Thank you for the opportunity to give my input in your study. I will look forward to reading the final report.

Sincerely,

Pat Schwartz

(Mrs.) Pat Schwartz

A13

Phyllis Mead
Route 1
Millville, MN 55957
October 24, 1978

ENERGY PROCESS STUDY

Certificate of Need Questions

1. Availability and cost of energy source with its impact on electric rates seem the logical criteria. However, if electricity is being generated on an immediate economic basis, the loger range, heavier impact on environment with its ultimate cost in human health could be ignored until some real crisis has already developed. A very long range assessment of cost is necessary.

   The nuclear question because of the unknowns and the unsolvables, should be a last resort after all other alternatives are exhausted.

2. Of course, location is pretty much dictated by size with our current technologies and the trend to large generation centers. The "solution to pollution is dilution" means putting large plants out in the rural areas. Only by reducing size of plants can locations be determined in an equitable manner.

3. The public is the consumer. The people who have the ultimate control of consumption most definitely need to be informed. The layers of bureaucracy react to what they interpret as what "the public demands". The public needs to be aware that they are getting what they ask for--they need to be responsible. The topic of proper energy use and energy conservation are BORING to the public in general (sometimes even threatening). I believe that would change if the whole picture was understood by the people "in control"--the public.

4. Need cannot be rationally determined without examination and consideration of size, type and location. These decsions must be in harmony with each other.

5. ?

Environmental Questions

6. This is a highly technical area and I don' t know what improvements of the present system are possible. I do feel some effort must be made to consider--or foretell cumulative health effects. The Science Court concept seems to hold promise.

7. The EIS must be done concurrently with need certification. If the environmental impact is too heavy, it would surely have an affect on the need as it is interpreted by determining bodies.

8. Size, type, location are BASIC to the EIS. All workable alternatives should be presented but perhaps this is asking an impossible task of the utilities and this may be important enough to provide tax money to enable a disinterested patty to formulate alternatives.

9. ?

10. I don't understand the question.

Policy Questions

11. Where ever possible, "lay people" should be present and represented. Utility and government people are sometimes hard to discriminate between. They are ususally very similar in outlook, values, and background. Lay people are the key to a vital balance.

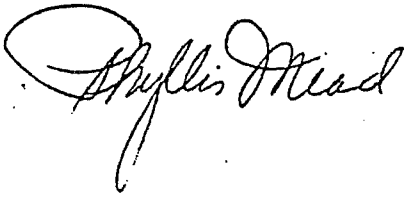
    Most people do not hav e the time or funds for prolonged activities of this sort. Funding would be helpful--the source of the funding would be questionable.

12. I don't know.

13. The number 1 problem in the process is the autonomous decree of need certification without EIS and the EIS being virtually artificial without a fairly specific siting area. All these issues hinge on each other--they cannot be divorced from the whole issue.

14. It seems decentralization of power and power generation would be more appropriate than a few very large installations. With the general sentiment of rural Minnesota leaning towards smaller facilities, perhaps the siting provess should include smaller sizes than the present minimum 50 MW plant to insure an orderly distribution of power generation plants.

15. ?



A 14

TOWN OF BASS BROOK

BOX 146
COHASSET, MINNESOTA 55721

Office hours of Clerk
9:00 a.m. - 4:00 p.m.
Tuesdays & Wednesdays

Office Phone
328-6677

October 24, 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
ST. Paul, Minnesota 55155

Re: Energy Process Study

Dear Mr. Reagan:

In response to your letter of October 6, 1978, we wish to submit the following replies to your questionnaire:

Certificate of Need

1. The type should be determined by its utility. Economics should be the major criteria subject to reasonable environmental considerations.

2. Size and type should be determined first and then location considered.

3. Final decision on size, type and location should be made by an energy commission made up of equal number of representatives of the utility, governmental energy people and knowledgeable people from the immediate area of the proposed facility.

4. All decisions should be made at public meetings of the above commission after all interested people have had an opportunity to be heard. All such meetings should be held in the vicinity of the proposed facility.

5. This energy commission would be advised by experts in the areas under consideration.

Environmental Questions

6. From information on similar installations.

7. An EIS statement should be prepared after the Certificate for Need is issued, as part of the siting process, but before the permits for building are issued.

8. The EIS should cover all factors affecting all environmental effects including air, water and soil, as well as economic factors.

9. No comment

10. No. It is not necessary to spend the time and money because future needs cannot be accurately known at this time.

Policy Questions

11. Local people should be involved in the entire process including the EIS stage and all hearings as suggested under question three.

12. Utilities are run by businessmen who are very conscious of economic factors. However, so many public and governmental factors have recently made it very difficult and often impossible for the utility managers to control costs. The Public Service Commission does have the necessary authority to limit increases in utility costs.

13. Energy process is now too drawn out, repetitious and expensive. Reduce the multiple and duplicated hearings to only one as suggested in question three.

14. Minneapolis should not buy NSP plants. Governmental operation of such utilities is certain to be less efficient and more expensive. Private business can always do such jobs cheaper without the usual governmental politics and graft.

15. Uncertainty in the process is caused by too many political appointees who are not scientifically qualified to make wise decisions. They are influenced more by political and personal opinions than by scientific facts.

We appreciate the opportunity to present our feelings regarding the administrative and regulatory processes governing electrical utilities in Minnesota.

Yours truly,

Donovan D. Wendt

Donovan D. Wendt, Supervisor
BASS BROOK TOWN BOARD

A 15

INTRODUCTION

Solar energy (collectors wind, bio conversion) is now available at "economic" costs. Only a State Energy Policy acting on behalf of the central energy industry will prevent its realization on a decentralized, locally controlled scale. The questionnaire is phrased in such a way that it is clear that little good can come of it. The questionnaire presumes large scale, non-renewable sources under central management.

ANSWERS TO QUESTIONS

1. As needed locally to supply energy of a quality matched to end use from locally available renewable resources. The MEA should act as a source of communications and information only. Decisions should be made locally.

2. No large plants (> 25 MW) would be built if the process was not controlled by the utilities (except hydro).

3. The local community only and according to human needs (not profit or political power).

4. Nonapplicable

5. The laws of Thermodynamics are the physical energy laws. Efficiencies should be determined on the basis of the 2nd Law (Entropy Law). "Right" is also a local cultural decision entirely outside the evolutions presumed by the current technocracy.

6. There is currently no methodology to determine the expected disastrous impacts of large coal and nuclear facilities, they simply should not be allowed. Instead, the law presumes they will be built and mandates various warrants for neglect of the environment and especially human health.

7. An EIS should not be done since it is simply a warrant for neglect. A thorough analysis of impacts of larger plants could not be done adequately with current methods and provide protection. Fortunately the large coal and nuclear plants need not be built.

8. An EIS presumes central bureaucratic decision making and inappropriate technology. Central energy agency decision making will never provide human scale, decentralized renewable energy to the people.

9. Currently all Certificates of Need have been issued illegally since the MEA has never established a forecast of peak demand that is utility specific and that could serve as a basis for cerfifying LEGP's as mandated by 116H.13 in their Biennial Report.

10. No. Central energy planning implies inappropriate scale and type because the process is inevitably controlled by the interests of property, profit, and privilege - these are the reasons central government was <u>forced</u> upon us in the first place.

11. Allow people control over their own destiny and the natural right of access to the resources of their region whose ecology they would come to understand and they will develop authentic balanced community and decentralized (appropriate) technology.

12. The short term interests of profit and control (power) by the few rule utility decisions (and hence the government bureacracy). Capitalism will never provide for human needs and purposes - witness the increasing rich-poor gap and decreasing stability and beauty.

13. There is no possibility for public impact at the Need stage. The contested case hearing structure requires about $50,000 per intervener (lawyer, expert, witnesses, etc.). All the rest (EQB, PCA, DNR, etc.) is prefunctory. The MEA Biennial Report shows their policy is essentially that of the utilities.

14. Large urban centers are another manifestation of political and economic centralization; until they are dissolved into manageable social communities, fluidized-bed back fits with district heating under public control is needed after conservation and solar possibilities are exhausted.
but only

15. Hearing examiners have not had sufficient education to understand the complex mathematical data Need hearings. Judicial review is too lengthy (a year late), expensive, and goes only to question discretion in decisions. Most of the plants and lines have been approved and cited without a forecast or an inventory of sites as required by law - no judge will go back on such a huge energy complex (it would be political suicide to cancel, for example, the CU project after it is built)

Wendell Bradley
R 1 B 120
St. Peter, MN 56082

A 16

October 12, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, MN 55155

Dear Mr. Reagan:

Re: Letter of October 6, 1978, from Rep. Gordon O. Voss

In reply to the questionnaire, I will answer to the number as follows:

1. By the actual need; which should be decided not by the utility companies figures; but by an independent study. The criteria of why needed; how much and who will truly benefit. The most important factor to be considered is what technology has or will have developed in the future which could insure that a plant would not have to built for peak capacity, but a method of storage would have been developed--so size could be limited.

2. Yes---we should have regional distribution, not these three or more state wide projects, which eat up money and land.

3. a. The public--its our land that will be used; our money (whether private or public monies) and we are the ones who are supposed to benefit; so we should a better say.

   b. The government--because they will be giving the advice to the people and are supposed to be working for the people.

   c. The utilities--they will have to build and maintain them. So much should be done by open dissertations.

   d. The legislature--to monitor and make sure the process is open; the public is informed and the utilities are complying.

4. After the need; the certificate of need has been decided--the size can be looked at; location decisions should only be made after an informed people have had a voice in the matter.

5. Scientific technology will have to be the criteria used---only a qualified group of electrical engineers with training in projection can aid in deciding these factors.

6. By adequate standards--done by testing under actual conditions, i.e., the drop of a high voltage power line during hot, humid weather, cold weather; the height of a combine; this should also be done when a line is energized and nonenergized (the effects of man coming that close to that high a voltage for _____minutes of time, these factors have not been conclusively taken into account when fiquring effects of high voltage power lines.

7. Yes--if a certificate of need is issued; then an EIS should be done--the site possibilities would have been narrowed only as some basic criteria will always have to be met (water supply, transportation access, etc.).

8. ?

9. No--adequate study about the adverse effect of a high voltage power line has not been done.

10. Yes--the state needs to know what is needed; what will be needed; so that overbuilding is not done.

11. Definitely they should be non-utility; non-government involved--preferably during the EIS to give valuable input-everyone learns when the process is opened to the public. They should be paid nominally for transportation, food--but otherwise no. It is our public duty as a citizen to help in making decisions important to all—otherwise, our democracy is a sham.

12. Number one should be the elimination of tax relief for building new plants--this is the biggest incentive to keep building plants without looking at other alternatives. Inflation has been good on that point as its increased the cost so that the utility companies are looking twice at the costs of building.

13. Too many points--certificate of need issued, etc., were decided before the public was aware, informed--this alone creates bad feelings. Nothing can change the time used--as more people are involved, it will take more time. This is a fact-but if we are to halt confrontations such as there have been this past year, it will have to be done. Modern communications have enabled the public to become better informed, better educated-they want to know, want to take part; don't want to be pushed towards a decision. If we are to have law-abiding citizens, they will have to be involved from the <u>beginning</u>--just how I'm unsure.

14. No--privately owned utilities will always be more amenable to public opinion than a government owned utility. Actually, if you have county wide facilities--it might be done.

15. The uncertainty in the process would be eliminated if the public was in on the process from the beginning; not formed (i.e., Citizen's Route Evaluation Committee) after a corridor and a certificate of need have been decided.

Because the people feel left out--they tend to disbelieve the judicial review, etc.--if you can talk about something, question; before its decided issues, concerns can be covered that receive a fairer hearing than <u>after</u> the fact--we are all human and this is part of the complexities of human nature.

One big question I have regarding the whole procedure is the value placed on <u>non</u>-taxable land. Why is it so sacred. What gives it the right to <u>not</u> even be looked at when placing poles; sites, etc. Why is it that <u>non</u>-revenue producing land cannot be used. I can not see the justification for this. If all the tax producing land ends up being used for non-taxable purposes, who is going to pay the taxes to support this <u>non</u>-producing land. The argument has always been to save beauty, wildlife, etc., I feel strongly that it <u>should be looked at</u> with the <u>same</u> criteria as all other land and the justification for using or not using should be part of the EIS; but they should be allowed to be looked

at and not be blatantly crossed out as a no-no. This is unfair.

Sincerely,

Norma J Nuessmeier

Mrs. Norma Nuessmeier
Route 1, Box 179
Le Sueur, MN 56058

NN/n

A 17

October 8,1978

Patrick Reagen, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul 55155

Dear Mr. Reagen:

I will try to answer your questions. As a housewife far removed from your hearings I find your questions vague. The questbons are more political than scientific. The issue of how, when, where and why of public utilities is a very complex issue.

All too often we who sit on committees of various governmental, social and educational groups become complacent and insensitive to the needs of the immediate concerned tax-paying citizen.

1. How do we determine the type of facility?
   a. We must consider our natural resources. We have coal for at least another century. Are the utilities doing enough research on wind and sun energy to drive turbines? I think not. Nuclar power should be used only as a last resort.
   b. What criteria? We must protect our environment--this must be our prime concern as this over rides everything else.
   c. Overriding factors are? The safeguarding of our environment--our people animal and plant life as well as water and soil. Peoples concerns must be HEARD who are immediatley affected. How would you like a utility placed on your property or a power line placed there as an after thought?

2.Can location affect size? Ay area with its given ecological and indigenous and endemic amenities MUST affect the utility to be built, otherwise we have the cart ahead of the horse.

3. Who makes the fiaal decision? Someone from the utility itself, someone from the governmental district(political official) and the governmental agency involved directly and the public especially the public from the immediate area.
   The people from the immediate area must be heard, then other areas of concern. Care must be taken that government does not over ride the public view. Too many decisions are made by too many committees too far removed from the area of immediate concern. I believe the environmental issue would overide all others if it were truly allowed to surface. Is not the immediate problem in western Minn. an environmental one?

4. When are the size , type and location made? Certainly not the way they have beem. A totalitarian process has existed in the past. If the public had been made a part of this issue the problems which exist today would not be so over burdening to the utilities. How long has the public been directly involved in the determining where facilities go? Where power lines are routed, what type of line, what type of pole?
   When the need is determined by whomever, the process should begin to involve others, especially the public. Involve them immediatley. It is supposedly the public need that causes the facility to be built. Involve them NOW--not tomorrow.

5. What is the right technology required? Are you saying as politicians do we talk to the utility, the University, to scientists the public or who? I see no way the evuluation can be determined except by the utility with feed-back to them from the public. If the need is there, then let those whose need it, share in whatever technology you are looking for.

6. Environmental impacts are determined by what? Possible changes in air, water soil, human animal and plant life. The study of electrical energy on plant life has not been given proper study. For example, do plants growing under an electrical poer line show any sign of stress or are there any cell changes in the plant--is there stress involved? Does vibration affect the plants, animals? at what level? It seems to me if people can feel an effect from being under a line, why wouldn't a plant? At this point in time no one can say there is little affect because the surface has not been scratched in the study of the affect on plant life--this affects us all. After all in the food chain this is the beginning. Also water and soil studies need expanding.

7. When is an E.I.S. done? It should be a part of the site selection process.

8. The E.I.S. should cover what? This statement should cover all aspects including alternate sites, all studies and environmental studies, price, health factors, size, type and why that type, advantages, disadvantages--the scientific aspect has been left along the sidelines and environmetal issues the overriding ones not allowed to surface or be truly studied or the utilities in western Minn. would not have had the problems they did.

9. Position papers and their adequacy. Different people with different criteria and different depths of knowledge and true scientific knowledge brought to play must be increased. Creative and imiganitive thinkers must do these papers--not robots of a pre-ordained concept.

10.E.I.S. on total energy requirements for Minnesota. No doubt this is difficult to project because the public demands can change. Education is so necessary and the need to conserve so evident.

11. Nonutility and non governement people should impact where? When the need is first determined. Many people give many hours of their energy to the SERVICE of their fellow man. The true service minded servant need be funded only for milage and does not need to spend hours determining his importantce. Involve people immediately before hearings, courts or the like.

12. What market forces economically exist? Who demenads the facility? What incentives hold cost down? The type of facility, size, where it is located are a few factors as well as the imput from the public? Had the public been involed in western Minnesota no doubt the damage to the utility so far would be much less. It is self evident a totalitarian process was put into use there and little scientific knowledge was brought forth nor were thse people truly listened to. Because of this the UTILIY should pay for the cost of the damage not the public, because that effect is from decisions incorrectly mad by the utility.

13.What is wrong with the existing energy process? Those who are to be affected the most have the lest imput. Wordy questions such as these are difficult for simple minded people to answer. Besides I feel will anyone read this? If they do they will say,"Oh it is just from an irrate know-nothing from out there some where, and then file it in the circular file. After all this type of thing is what keeps government going.....

14. Should Minneapolis by NSP plants? Certainly not. That city has all it can do to handle what problems it has. No way should the government in any form

operate utilites. We have too-oo much government. Government cannot do it cheaper. It just makes the process more involved and cost more. A beautiful example is the postal system in this country. Someday this will be private and watch it then improve.

15. Uncertainty affected how? Double talk, rhetoric. Really what is All this about? Can statements be made to the point and simple?

If this is a true attempt to gather information and someone does take this information from all citizens to HEART I bless this idea and say go forth and expand.....

Sincerly!

Jan Meissner

Jan Meissner
WestLakeland Township

P.S. I am happy to see both sides of the paper (letter and questions) together -

CONSULTING ENGINEERS

PHONE 612-546-3333

ULTEIG ENGINEERS, INC.

P. O. BOX 26388

MINNEAPOLIS, MN 55426

October 27, 1978

Mr. Patrick Reagan
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

Our comments to the questions posed in Mr. Gordon Voss' letter of October 6, 1978 are as follows:

Energy Process Study

Certificate of Need Questions

1. How should the type of facility be determined?

We are assuming that this question relates to generating stations with a 50 megawatt or larger capacity and transmission lines 200-300 KV of 50 miles length and lines 300 KV and above of 25 miles length.

The major electrical utilities in our state are all members of MAPP. This organization has ongoing committees which are staffed with full time planning and operation personnel from each utility. They are best able to determine the type of generation or transmission facility required, and which utility should provide it.

What criteria should be used?

The electric utilities have the responsibility to provide power to any customer at the exact instant that the customer desires. This requires a spinning reserve and adequate lines to carry the energy to the load. Criteria for a facility should be based on the projected needs of the utilities within our region.

Is there any factor that should override the type of facility?

Utility personnel must live with a facility the same as any other citizen. As long as we as citizens and energy consumers demand 100% availability of energy, we should take our chance that the utility decision will be the best for all. A political decision to force conservation of energy by limiting facilities should be determined by a vote of all citizens.

2. Can location factors affect size and type decisions? How? Should they?

Generating facilities cannot be located just anywhere. Each type of facility has certain requirements which are peculiar to the facility such as the availability of water, fuel, transmission line corridors, and so forth. Whether we like it or not, the size and type of facility required will determine the type of location needed.

3. Who should make the final decision on size, type and location decisions?

The final decision should be made by the utility. They are best qualified to make the decision and they are responsible for providing the energy to us when we demand it.

4. When ideally in the legal process should size, type and location decisions be made?

The size type and location decision should not be a legal question. The legal profession, politicians, the legislature, are not responsible for providing for the day to day energy needs of the citizenry, nor are they capable of understanding all the associated problems. Letting non-industry people make final decisions is detrimental to not only electrical facilities, but also highways, pipelines, water and sewage systems, etc.

5. How do you determine the "right" technology to meet and use energy requirements?

The right technology should be determined by the energy supplier. The role of the government is to guarantee the rights of the individuals in the path of the facility.

<u>Environmental Questions</u>

6. How do you determine environmental and health impacts of proposed facilities?

The health impacts should be determined by experience gained from existing comparable facilities. Time after time we have made duplicate studies of similar facilities only to find that the health impact of a transmission line is inconsequential. This is wasteful of tax monies. The environmental impacts should also be determined by experience gained from existing comparable facilities, but in addition should be based on evaluation of the predicted effect of physical and social changes which may be created by the facility.

7. When should an EIS be done?

An Environmental Impact Statement should be done after the Certificate of Need is issued. The need for the facility is an energy agency decision, and until it is made and a Certificate of Need is issued and EIS is superfluous. Basic broad environmental outlines must be considered in the siting process. Assuming this is done, the formal EIS should be prepared after siting, but before permits. This allows detailed environmental analysis of a specific site.

8. What should an EIS cover?

An EIS should cover the environmental aspects only, and nothing else.

9. I am unfamiliar with Minnesota Statutes Chapter 116H.13; however, from the wording of the question I would assume that they speak to the health and environmental effects of a given facility. I've already discussed the environmental and health effects of a proposed facility in question 6.

10. Should an EIS be done on total end use energy requirements for Minnesota?

No. An EIS should be done for specific sites only. How can anyone predict with any accuracy the total end use energy requirements for the State of Minnesota?

Policy Questions

11. Where should non-utility, non-governmental people impact in the process?

Non-utility, non-governmental people should be concerned in the hearing portion of the energy process study. These people should not be funded, any more than people are funded during the selection of a highway routing.

12. What market forces in the economy sense exist for utilities?

Even though utilities are regulated competition still exists between utilities when the decision as to which energy form shall be used is made by the citizens. Utility services are price sensitive.

13. What do you feel is wrong with the existing energy process?

There is entirely too much government impact in the existing energy process study.

14. In light of recent suggestions that Minneapolis should buy NSP plants, should the government operate the utilities?

The government should operate a utility only when it has a valid reason to do so. If the energy supplier is totally

unreliable and too expensive the energy supplier should be changed. It is my observation that investor-owned utilities are much more efficient than government-operated utilities.

15. How is uncertainty in the process affected by judicial review, the hearing examiner process and imposed time constraints?

Uncertainty is caused by a multiplicity of rules and regulations from various government agencies, plus the complexity of a problem whose solution can not be resolved by "cook book recipe" formulas. Judicial review compounds the uncertainty. The hearing examiner process uncertainty leads to questions which create an integrity problem as far as the process is concerned, and generates unreasonable time delays.

16. Should any of these factors be changed?

We need less government regulation or more consistent regulations. Judicial review should be a last resort only.

Yours very truly,

ULTEIG ENGINEERS, INC.

Neal A. Bodin

Neal A. Bodin

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QUESTIONS FOR THE MPCA, MDH, MDNR, & MEQB

Personnel Question

1. How many personnel are employed by your agency? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other. How does your agency utilize federally funded employees?

Certificate of Need Questions

2. Do you have the authority to alter size, type location decisions of the utility or other agencies? If so, what factors and criteria do you use? If not, should you have this authority?

3. Can location factors affect size and type decisions? How? Should they?

4. Should the type of facility be determined in a different manner than is now used? What criteria should be used? Is there any factor that should override the type of facility?

5. Where, ideally, in the legal process should size, type, and location decisions be made?

6. How do you determine the "right" technology to meet end energy use requirements? Include an evaluation of temperature levels and reliability as factors in the determination of the technology?

Environmental Questions

7. How do you determine environmental and health impacts of proposed facilities? Be specific.

8. Are the agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate to determine health and environmental effects of a proposed facility? Why?

9. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

10. What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

11. Should an EIS be done on total end use energy requirements for Minnesota? Why?

Policy Questions

12. Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or other? Why? Please rank order the factors you feel should be considered in making the final decision.

13. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

14. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

15. What do you feel is wrong with the existing energy process? What would you change

about the process? What is the most time-consuming aspect of the process and how or should it be changed?

16. How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

17. In light of the recent suggestion that Minneapolis buy NSP plants, should the government operate the utilities? Why?

PR/jb
10/6/78

B1

Minnesota Pollution Control Agency

November 2, 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

SUBJECT: Evaluation of Governmental Processes Relating to Electrical Utilities

Dear Mr. Reagan:

Responses to the questions posed are given below in the order in which they are listed in the letter from Representative Voss.

1) How many personnel are employed by your Agency? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other. How does your Agency utilize federally funded employees?

The following totals are estimates of the man-years Agency staff devotes to the indicated categories of work relating to projects of electrical utilities:

Research	
EIS	1.3
Enforcement	1.2
Forecasting	
Need Determination	0.2
Cost Analysis	
Conservation	
Alternative Technologies	0.1
Other:	
siting and routing	0.1
permits	2.5
administration	1.7
engineering	0.7
technical services	0.5
planning	0.3
noise control	0.1
TOTAL	8.7

Federally funded staff are employed throughout the Agency's programs.

(612) 296-7301
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2) Do you have the authority to alter size, type, location decisions of the utility or other agencies? If so, what factors and criteria do you use? If not, should you have this authority?

The Pollution Control Agency (PCA) does not have the authority directly to alter size, type or location decisions of a utility or other agency, but may in certain situations influence such decisions by the application of its pollution control requirements to the project. If it is found that a given proposal cannot meet pollution control requirements by reason of factors relating to the size, type or location of the proposed project, the PCA could refuse to grant the necessary emission facility, effluent discharge and waste disposal system permits and in effect could exercise a veto over the decision of the utility or other agency until the project is modified to comply with such requirements. The criteria used to determine compliance of electric utilities with pollution control requirements are set forth in the regulations promulgated by the Agency, including the administrative (MPCA), water pollution control (WPC), air pollution control (APC), solid waste (SW) and noise pollution (NPC) series. Hazardous waste (HW) rules, which also may apply, are currently in the process of promulgation.

The Executive Director of the PCA is, by statute, a member of and represents the PCA on the Environmental Quality Board (EQB) which has the authority to site large electric power generating plants (LEPGP) and to route high voltage transmission lines (HVTL) proposed to be constructed by utilities. The criteria used are given in the applicable regulations of the EQB. As a member of the EQB, the Executive Director of the PCA also may participate in reviewing decisions made by the Energy Agency on the size, type and timing of LEPGPs and HVTLs.

The PCA Board has not indicated a need to have the Legislature expand its authority to include specific direct control over the size, type or location of electric utility projects, although members have expressed concern over the existing EIS process. Previously, it had recommended that the Legislature impose a moratorium on the construction of nuclear plants. A copy of the Agency's current policy recommendation on this subject is enclosed as Attachment A.

3) Can location factors affect size and type decisions? How? Should they?

Location factors have potential for affecting size and type decisions as indicated in the response to question 1 above. Application of pollution control requirements can be done precisely only when the location, site, environmental characteristics and plant design are known in detail. In the absence of such detailed knowledge at the time when the size and type decisions are being made, it is possible to provide only estimates or approximations of pollution control requirements on a general basis. This being the case, a search for a suitable site must then be instituted, which may or may not be successful in finding a single site to satisfy all applicable utility and regulatory requirements. A new electric power plant, for example, must meet federal Prevention of Significant Deterioration (PSD) requirements and the allowable ambient air contaminant increase will be affected by proximity to a non-attainment area or a pristine area.

In considering the impacts of coal or nuclear power plants, risks to public health must be considered. For example, it is doubtful that a nuclear power plant would be sited in the Twin Cities area. District heating applications are a good example of where location factors could heavily influence size and type decisions. Location factors, thus, should be taken into account at the time when the size and type decisions are made. We believe this can be accomplished only by having available a reliable inventory of potential sites which are known to be suitable for the location of various sizes and types of plants. Although such an inventory was required by the original power plant siting act, this requirement was not successfully implemented and a suitable site inventory is not yet available. We would recommend that the plant site inventory should consist of state acquired holdings of specific sites which have been evaluated in sufficient detail to leave no doubt as to their suitability for use for this purpose. Location factors are of paramount importance from the viewpoint of environmental effects and economic feasibility.

4) Should the type of facility be determined in a different manner than is now used? What criteria should be used? Is there any factor that should override the type of facility?

Determination of the type of facility should be constrained by the same limitations which are now included in the power plant siting act with respect to location; i.e., it should not be permissible to certify a need for a specific type of plant if that type of plant cannot be located or operated in conformance with other state agency regulations. The potential for disastrous human and environmental effects from failures of nuclear plants and waste disposal facilities is so great that these considerations clearly should override any certification of need for this type of plant in Minnesota (see Attachment A). A certificate of need for this type of plant should be issued only as a last resort, after every other feasible means of satisfying the need for the energy has been exhausted.

5) Where, ideally, in the legal process should size, type and location decisions be made?

We believe that the siting or location decision should be made in concert, or concurrently, with the need decision which determines the size, type and timing. This could be accomplished by amending the power plant siting and certificate of need statutes or regulations to require simultaneous submission by the utility of applications to the Energy Agency and the EQB for certificates of need and site compatibility, respectively. This procedural change would allow for maximum public participation in evaluation of the need for and location of the proposed plant, minimize duplication with respect to public hearings and related matters, and eliminate potential conflicts among size, type and location decisions.

There should be a focal point in the regulatory process where size, type and location factors can be considered concurrently with detailed environmental impact information available. All these factors are interrelated and impact each other. To be consistent with the Environmental Policy Act (Minn. Stat. 116D), decisions of type, size and location should not be final until the EIS is completed. This is the ideal situation.

The current process is not ideal because it is segmented and their is no focal point where many interrelated factors can be considered. A major problem that has resulted has been one relating to public participation. As a power plant proposal goes through the existing process and more detailed information is developed, increased public concern is expressed. When specific information concerning impacts of a power plant on a geographical location is finally developed in the EIS, it is already too late for citizens in that area to balance their impacts against or affect the need and siting decisions made. If a local government or citizens group in a geographical area were concerned over impacts of siting a power plant in their area, in the existing process they would have to participate in every hearing concerning every power plant application for a Certificate of Need.

6) How do you determine the "right" technology to meet energy use requirements? Include an evaluation of temperature levels and reliability as factors in the determination of the technology.

In the EIS process the Agency is limited to considering alternative technologies consistent with the determinations made by the Energy Agency and EQB. Initially in the EIS process we require our power plant engineering consultants to prepare a list of possible alternatives. Criteria for selecting reasonable alternatives are developed and the list of possible alternatives is reduced to a list of reasonable alternatives. These reasonable alternatives usually include major modifications to the proposed action (e.g. utilization of wood as a supplemental fuel). All major alternatives are evaluated with regard to environmental impacts and how these might differ from those associated with the proposed action. Mitigating measures, alternatives of less magnitude (e.g. alternative air quality pollution control equipment) are also evaluated.

In preparing the EIS the Agency has involved Energy Agency staff and referenced previous Energy Agency Certificate of Need decisions.

The above comments concerning the EIS process explain how we arrive at the right technology. Basically, we evaluate all feasible and prudent alternatives, as is required by the Environmental Policy Act. Reliability and other factors are utilized as criteria in our decision-making processes when we determine which reasonable alternative to evaluate and which technology to require.

7) How do you determine environmental and health impacts of proposed facilities? Be specific.

The site specific environmental impact statement (EIS) which is required to be done on LEPGPs by the PCA under the EQB's EIS regulations is used to evaluate these impacts. This has been done by organizing an EIS team consisting of consultants and technical staff of the PCA. The EIS team reviews all available information, including the need and site application proceedings records, the environmental report, site background data and design information furnished by the applicant, any air, water, land and biota resources monitoring and other data available from state and federal sources, together with environmental and health regulatory requirements and information on the state of the art of the technology involved in the project. Based on this information and the knowledge and experience of the consultants and technical staffs, evaluations are made of the likelihood of compliance of the project with applicable regulatory requirements, the impacts which reasonably may be expected to be associated with construction and operation of the project, and the feasibility of measures for mitigating the environmental and health impacts. For example, with respect to air quality effects, the evaluation will include the following:

a) Determine anticipated emissions from the proposed facility.
b) By dispersion modelling, determine the anticipated impact on receptors at various distances and under different meteorological conditions.
c) Determine whether or not the addition of the proposed emissions to the background levels will violate state air quality standards and if the addition will meet federal PSD requirements.

The EIS team includes a broad array of engineering and scientific disciplines, and the work may require up to a year or more for completion at a cost of several hundreds of thousands of dollars.

A copy of the Draft EIS for Northern States Power Company's SHERCO Units 3 and 4 proposal is enclosed as Attachment B. In this EIS you will find that we provide: 1) an executive summary, 2) an introduction, 3) a description of the proposed action, 4) a description of the environment in the vicinity of the proposed action, 5) an evaluation of the impacts of the proposed action, 6) a discussion of methods of minimizing significant impacts, 7) a discussion of unavoidable impacts, 8) a discussion concerning short-term uses of the environment versus long-term productivity, 9) a discussion concerning irreversible and irretrievable commitments of resources, 10) a discussion of alternatives and 11) a discussion of how we have contacted and coordinated with other government bodies and interested persons.

For the SHERCO Units 3 and 4 Draft EIS, we identified fifteen major technical information categories: 1) description of the proposed action, 2) description of reasonable alternatives to the proposed action, 3) assessment of air quality impacts, 4) assessment of water quality impacts, 5) assessment of aquatic ecology impacts, 6) assessment of terrestrial ecology impacts, 7) assessment of noise impacts, 8) assessment of land use and aesthetic impacts, 9) assessment of transportation impacts, 10) assessment of socio-economic impacts, 11) evaluation of the solid waste system, 12) assessment of geology and hydrology impacts, 13) an energy analysis for the existing and proposed units, 14) assessment of alternative fuels and fuel transportation and 15) documentation of bioassay results. There were technical work papers prepared for each of these technical categories. These technical work papers serve as the basis for the Draft EIS.

Also, we included comments on public health impacts in several areas of the Draft EIS. In the hearings on the Draft EIS, the public expressed concern that public health impacts had not been investigated thoroughly enough. Agency staff prepared a Human Health Effects Supplement which surveyed existing literature and presented available information specific to the SHERCO site.

Impacts are determined in EIS documents by presenting all available information. Impact information can relate to specific environmental standards (e.g. MPCA air quality standards) or to impacts for which there are no specific standards (e.g. decreased agricultural productivity). Available information includes that gathered by our consultant and that supplied by the proposer. Information submitted by the proposer is used if it is found to be accurate.

After completion and acceptance of the EIS, additional technical evaluations may be made by the PCA staff based on more specific information furnished by the applicant on the final design and construction plans for the waste disposal facilities for the plant.

8) Are the Agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate to determine health and environmental effects of a proposed facility? Why?

The PCA position papers submitted to the Energy Agency and the EQB in conjunction with the need and siting processes, respectively, usually are not adequate to allow making a fully

informed determination of these effects. Because of the lack of specificity of the information available at these stages under current procedures, the PCA can provide little more than an informed estimate based on the expressed intention of the utility and the existing state of the art of the technology involved that, given certain circumstances, it would be possible for the applicant to design, construct and operate the plant to comply with applicable regulations. PCA position papers can only be regarded as best estimates on our part and are in no way definitive enough to insure that environmental considerations are given at least equal weight in the need and siting decision processes. Until the EIS has been completed, it is nearly impossible to draw sound conclusions concerning compliance or noncompliance with Agency standards.

9) When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

To better serve the purpose for which it is intended, and to conform with the requirements of the Environmental Policy Act concerning its availability before final decisions are made, the EIS should be completed before and be available for use at all three stages of the regulatory process; i.e. need determination, site certification, and construction and operation permit issuance. Given the availability of a reliable inventory of suitable sites and the simultaneous submission of applications, as discussed in our responses to questions 3 and 5 above, it would be possible to prepare the EIS before the first stage of the regulatory process rather than after the second stage and to produce a better and more informative product, without adding substantially to the lead time required for the regulatory process. This procedural change also would require that the utilities do their site environmental background and preliminary engineering studies at a much earlier stage and on several potential sites rather than on a preferred one or two sites.

Consistent with MEPA (Minn. Stat. 116D) no state agency should make a final decision (i.e. issue a permit or certificate) until an EIS has been completed. The current process in which the EIS comes after second step in the regulatory process has problems related to the segmented nature of the process. Three alternatives to the existing process should be considered:

1) the EIS could be prepared first which would require the utility to initially present specific information on the size, type, location and etc., with the certificates of need and siting as well as the permits being issued only after the EIS is prepared, 2) the process could proceed similar to the current process except that the Energy Agency and EQB would not issue final certificates until after the EIS is prepared, and the EIS would consider energy and siting alternatives, or 3) the EIS and siting processes could be combined with the Energy Agency issuing a preliminary certificate of need prior to the EIS and a final certificate after the EIS. It is important to have a process that works efficiently, is consistent with the Environmental Policy Act and responsive to the public. Alternative No. 1 above would accomplish this.

10) What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

The scope of the project EIS should be expanded to include alternatives with respect to size, type, timing, siting, and differing technologies, all of which subjects are now required to be addressed in the environmental reports to be prepared by the Energy Agency or the EQB in the existing need and siting processes.

A power plant EIS should present all available information concerning all impacts of the proposed action as well as an evaluation of all reasonable alternatives to the proposed action. This would mean a significant expansion over the current scope of power plant EIS documents, and would result in a higher degree of consistency with the letter and intent of MEPA as well as consistency with the environmental review process for all other major industries in Minnesota.

An additional issue is whether transmission line impacts should also be considered in a power plant EIS. While it may be appropriate to consider power plant impacts and transmission line impacts independently when the power plant is in another state, it is not appropriate to consider transmission line impacts independently when both will be built in Minnesota. It is difficult to imagine how new power plants built in Minnesota will be built in the absence of a need for additional transmission lines. Indeed, the need for transmission lines could be a major factor in the siting of power plants. Power plant EIS documents should consider impacts of transmission lines which will be constructed as a result of the power plant.

11) Should an EIS be done on total end use energy requirements for Minnesota? Why?

A generic EIS should be done on the future energy needs of the state to illustrate alternative ways of providing this energy, and the environmental impacts associated with massive shifts to alternative supply sources together with comparisons with continued reliance on conventional sources. A start has been made on providing this kind of information in separate packages through the various resource studies produced by the Energy, Planning and Pollution Control Agencies and the Department of Natural Resources, but it has not been fully integrated nor have definitive evaluations yet been made of the full environmental and health consequences to the state of continuing on its present course or of making large scale changes in supplying its energy needs.

In the November, 1976 Certificate of Need hearing, the PCA testified that a generic EIS covering the proliferation of construction of electrical power plants in Minnesota should be prepared. At that time Minnesota had approximately 7,000 megawatts of electrical generating facilities. Some forecasts suggested that 26,000 additional megawatts would be needed by the year 2000. Our testimony concluded that this could probably not be done without significant violations of our environmental standards. While the energy demand projections have been modified, there will still be a significant increase in construction of electrical power generating facilities due to the depletion of oil and natural gas supplies along with development of western sources of coal. Completion of an inventory of power plant sites along with a long-range energy demand forecast are needed before an EIS on future impacts of power plants can be initiated. Before major policies can be developed, information concerning future courses of action (e.g. alternatives, environmental impacts, economic impacts) must be developed. A generic EIS on power plants and energy use in Minnesota could be helpful to the Legislature in developing sound energy policies.

12) Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or other? Why? Please rank order the factors you feel should be considered in making the final decision.

The state regulatory agencies should continue to make these decisions, subject to policy direction by the Legislature. These agencies authorized by the Legislature are in a position to deal effectively and in a timely manner with the problems involved. Allowing the decisions to be made by the utilities,

as formerly was the case, would introduce a disproportionate economic bias. The problems are primarily of a technical nature and not easily subject to resolution by the political process. The paramount factor to be considered in the final decisions on size, type and location should be the evaluation and balancing of the environmental and health risks associated with the various alternatives to minimize the impacts upon the state's population and resources. In terms of priority from highest to lowest, we would rank the major factors to be considered in any given project as follows: health effects, air quality preservation, water resources impacts, economic effects, impacts on land uses, and energy production costs.

13) Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify) Should these people be funded? Why or why not?

Access by the public should continue to be ensured at all stages of both the EIS and the state regulatory processes. Funding or staff assistance should be provided to organized groups where needed to enable them to participate effectively in these processes.

Citizens and other non-utility, non-governmental interests can effectively participate in the EIS process. The Agency has emphasized citizen participation in the EIS process by holding an informational hearing in the affected area to 1) explain the governmental process, 2) identify where and how citizens can get involved, 3) have the proposer explain the proposed action to the public, 4) establish communication lines between the proposer and the public, 5) have our consultant explain how the EIS will be prepared, 6) solicit comments on the proposed action and/or the process and 7) solicit any information which may be useful to the Agency. This initial public hearing has allowed the public to feel apart of the process and allowed the Agency to identify issues to be evaluated in the EIS. After the Draft EIS is prepared, the Agency holds a public hearing in the affected area to solicit comments on the Draft EIS. The Agency then prepares a Final EIS which includes responses to issues raised in the public hearing.

14) What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

As the utilities are publicly regulated monopolies, they merely pass increased costs along to their customers, although the requirement to justify rate increases before the public service commission may be some incentive to keep costs down. A utility increases profits by selling to other utilities in the grid system. This creates an incentive to build power plants.

15) What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed?

See other responses to questions 3, 4, 5 and 9 above. The act should be changed to require that need certificates be granted provisionally, with the condition that other state agency regulations must be complied with fully for all aspects of the project, and the certificate should not become final until this has been demonstrated by the issuance of all necessary approvals and construction permits.

16) How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

Judicial review has lead to delay in some projects, because of the need for clarification of inconsistencies among existing statutes and the relative scarcity of case law on environmental statutes. Uncertainty in the process should be reduced by anticipated judicial interpretations.

Yours truly,

Sandra S. Gardebring
Executive Director

SSG/mjt

Energy and the Environment

In considering the multiple and pervasive environmental and social effects of producing, transporting and consuming energy, the MPCA Board recognizes that: 1) energy sources available to Minnesota are derived mainly from petroleum, fossil and nuclear fuels; 2) there are acute and chronic social, health and environmental effects associated with each phase of energy production and distribution, regardless of which of the fuel types are involved; and 3) undesirable effects of energy production and use are needlessly compounded when energy is wasted through inefficient production and unwise or unnecessary consumption. The MPCA Board recognizes and understands the importance of energy in meeting society's desire for a quality living standard and a growing economy. But the Board believes that the present level and rapid growth in energy consumption are excessive as compared with other industrialized and prosperous nations where per capita energy consumption is far less in the United States.

The environmental and health consequences of producing and transporting energy have been of concern to the MPCA for as long as there has been an Agency. Numerous environmental-permit hearings have been conducted to determine whether discharges from fossil and nuclear plants meet regulatory requirements. The Agency currently is preparing environmental impact statements for two large electric generating stations in Minnesota. Through participation on the Environmental Quality Council, the Agency has become involved in "need" assessments for power-generating facilities and in the siting of those facilities. The Agency also has been involved in energy considerations in other ways, including permit requirements for oil refining facilities, permit requirements for oil-fired steam facilities and in addressing the serious air quality deterioration attributable to the inefficient consumption of fuels in automobiles and other vehicles. The Agency also is concerned about the environmental consequences of imminent fuel shortages; for example, the curtailment of natural gas in Minnesota causing a switchover by industry, institutions and commercial establishments to oil and coal energy sources, both of which cause significantly more air pollution than does natural gas.

In view of the foregoing, the MPCA Board believes that a high priority must be placed on the conservation of energy. Despite urgent warnings by an impressive array of experts and concerned citizens that wasteful and unnecessary energy consumption poses serious environmental and social implications, the Board notes with dismay that energy production and consumption rates remain fundamentally unchanged. It is imperative that the Minnesota Legislature and the federal government act with dispatch to implement mandatory measures to improve the efficiency of energy production technology and to otherwise conserve energy by eliminating wasteful and needless consumption. Significant energy conservation will not be easy and will require changes in both traditional attitudes and life styles. To encourage legislative action in energy conservation, the Agency is prepared

to join those who are concerned about nuclear power, power line corridors, coal terminals, coal waste products and all other problems posed by the growth in energy consumption.

The development of alternate energy sources is essential for solution of our energy problems. Such energy sources as solar and wind offer potentially significant environmental advantages over conventional energy sources. State and federal government must encourage the development of alternate energy sources for a final solution to this problem.

With regard to the conventional energy sources -- petroleum, fossil and nuclear -- available in Minnesota today, the Agency recognizes the environmental and health hazards and related implications of each. To the extent possible, the Agency and other authorities are attempting to minimize the adverse effects of energy production, transportation and use, but those efforts are impeded by technical, economic and institutional constraints. There is abundant evidence that the operation of coal-fired power plants causes extensive air and water pollution and, the attendant facilities -- rail-haul of coal, production of coal with its associated damage to health, deaths and the spoiling of the land, for example -- pose a wide variety of other pollution problems and social conflicts. But the nuclear option poses perhaps the most disturbing technical and social problem. Beginning in the late 1960s, the problem of radioactive waste effluent limits from the Monticello nuclear power plant and continuing through the current licensing hearings for the proposed Tyrone Nuclear Center near Durand, Wisconsin, the Agency has been concerned about the use of nuclear power. The Agency has sought in the courts jurisdiction over the regulation of nuclear power plants. It has urged greater care and caution in the operation of such plants and has questioned the safety of locating near population centers where natural disasters or acts of terrorism would endanger large numbers of people. The Agency has been concerned about the shipment of radioactive materials and particularly has questioned the adequacy of federal government plans for the storage of radioactive wastes. Related to this, it should be noted that Minnesota is among the states where tests for possible radioactive waste storage sites are scheduled by the United States Energy Research and Development Administration. Frequently, the Agency has challenged the notion that rapid proliferation of nuclear power plants is prudent in view of the many unanswered questions about environmental and health risks associated with nuclear development. The Agency finds that many of its original concerns about the environmental and health consequences of nuclear power remain.

The Agency considers nuclear energy to be an energy source of the last resort. Further, the Agency believes that nuclear development in Minnesota should not be dependent on economic consideration alone.

Certainly it is clear that no additional nuclear-powered generating facility should be developed in Minnesota until suitable waste management facilities are available. At present, waste materials are in temporary storage at Monticello and Prairie Island because of the absence of any long-term waste disposal facilities.

The Agency's undiminished concern about nuclear power, however, should not obscure the Agency's conviction that the proliferation of coal-fired generating plants is approaching an environmentally intolerable level. Hence, the Agency now concludes that, until new power sources can be developed, the only practical and effective way to protect the environment from the consequences of ever-increasing power generation -- whether by nuclear fuel or coal -- is to impress upon the Legislature and the citizens of Minnesota, the urgent need for major progress in energy conservation.

With regard to the environmental and health effects of energy production, transportation and use, the MPCA Board urges the Legislature of the State of Minnesota to:

1) Enact legislation which embodies the comprehensive proposals by the Minnesota Energy Agency, and others, to temper energy consumption through statutory mandate, financial rewards or incentives, or voluntary constraint.

2) Actively encourage the development of alternate energy sources.

B2

ADMIN 1000 (Rev. 1/78)

STATE OF MINNESOTA

DEPARTMENT HEALTH

Office Memorandum

TO : Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

DATE: October 23, 1978

FROM : Warren R. Lawson, M.D.
Commissioner of Health

PHONE:

SUBJECT: Energy Processes in Minnesota

This correspondence is in response to Representative Gordon Voss' letter dated October 5, 1978, concerning the Minnesota Department of Health's (MDH) involvement in Minnesota's energy processes.

Including our District Offices, the Minnesota Department of Health has 738 employees. Only a small number are involved in the energy process. Laura Oatman is our representative on the Technical Committee to the Environmental Quality Board (EQB). She reviews all information that comes to the MDH concerning energy. Members of our Health Risk Assessment Section review Environmental Impact Statements (EIS) for proposed utilities to determine if health effects have been adequately considered. Federal funds are used in our Water Supply and Occupational Safety and Health Administration (OSHA) programs.

The MDH does not have the authority to alter size, type, or location of a utility except through our involvement with the EQB. The Department does not feel that we should have this authority. Ideally, size, type, and location decisions should be made early in the review process. The size and type of utility has to be determined first before a final location is selected. To be adequate, an EIS should include size, type, possible locations and alternative technologies. Since all of this information is necessary to write a complete Environmental Impact Statement, the EIS should be done after the siting process. After the EIS has been accepted by all concerned agencies, the permits required to build the plant may be issued. Position papers are required to be submitted under Minnesota Statutes, Chapter 116 H.13. During the planning stages, there should be an increased emphasis on the potential health impacts of the proposed facility. The MDH needs to play a greater role in this process.

When determining the environmental and health impacts of proposed facilities, the Health Department has several areas of concern including air pollution, ground water, surface water, sludge ponds and the safety of operating personnel. We are concerned with the impact of air pollutants on susceptible populations (e.g., the very young, very old, people with respiratory or cardiovascular problems). The deposition of pollutants on the soil or on plants may result in bioaccumulation. We are concerned about the impact that untreated leachate or run-off from sludge ponds and coal piles may have on ground water quality. Details of the ground water monitoring program are required along with information about how the utility plans to deal with potential breakage or seepage from ponds. Surface water concerns include: the impact that toxic or nuisance substances from cooling tower blowdown, fly ash pond overflow, etc., will have on surface water when it is ultimately discharged into the river from a holding basin; can these substances be removed by treatment plants downstream or will they place an unnecessary cost on that system; the health implications of

contaminants on consumers of drinking water; what are the present and planned uses of these waters, and will these discharges preclude the use of the water for special purposes such as recreation. The MDH is also concerned with the composition of the sludge, and the disposition of sludge ponds after their useful life. Sludge ponds offer a potential breeding area for mosquitoes and pathogenic protozoa, and these issues should also be included in an EIS. The health and safety of the personnel operating the facility need to be considered. Health implications of cooling tower drift containing dissolved solids such as sulfates, chlorides, and calcium in combination with fog conditions; the health implications of coal handling and inhalation of coal dust; and substances workers might be exposed to and inadvertently carry home to their families are examples of our concerns for worker safety. The industrial setting now and in the future should be considered because industrial growth will affect waste discharges and the resulting pollution levels in the area. The proposed facility will cause public concern with regard to health, and this should be evaluated as part of an EIS.

The final decision on the size, type, and location of a proposed utility belongs with the administrative branch of the government. Factors that should be considered in making the final decision are energy demands, health implications, impact on the environment, and economic and social factors. Public participation should begin as soon as possible. Once a utility proposes a project, hearings should be held to allow public comment. Public involvement in the energy process should not be funded because it would set a precedent that would expand to all areas of the government. The entire process is subject to some uncertainty because once a decision has been made it can be appealed and overruled in court. This adds to the length of the proceedings and may add months of delay to the energy process.

The MDH is not involved with total end use energy requirements, market forces, or municipal ownership of utilities. However, we would like to see an increased emphasis on health implications of proposed facilities, which should come as early as possible in the planning stages.

Thank you for contacting the Minnesota Department of Health on this matter. If we can be of further assistance, feel free to contact us.

B3

ADMIN 1000 (Rev. 1/78)

STATE OF MINNESOTA

DEPARTMENT OF NATURAL RESOURCES

Office Memorandum

TO : Patrick Reagan, Consultant
Science and Technology Project

DATE: October 18, 1978

FROM : Joseph N. Alexander
Acting Commissioner

PHONE: 296-6591

SUBJECT: Procedures Governing Minnesota Electrical Utilities

Representative Gordon Voss has requested me to furnish you with our Department's responses to your questions regarding electrical utilities and their administrative and regulatory processes. In recognition of the time constraints imposed by the Subcommittee on Science and Technology, and also because several of the questions presumably will be addressed by other agencies, e.g., Departments of Health and Agriculture, the Energy Agency and the Pollution Control Agency, as well as the Environmental Quality Board (EQB), I am forwarding you immediately a summary of the Department of Natural Resources (DNR) concerns and involvement in the existing process.

In the interest of expediency, and in order to clarify those questions and answers you specifically seek from our Department, I have requested Vonny Hagen, the DNR Technical Representative to the EQB, to make available her time to meet with you and discuss these related issues. Ms. Hagen's phone number is 296-4796. I believe this procedure will most efficiently provide you with the information you need within the short time that remains before the October 27 deadline.

JNA: rlh
cc: Representative Gordon O. Voss
Attachments

SUMMARY OF THE

DEPARTMENT OF NATURAL RESOURCES

PARTICIPATION IN AUTHORIZING

MINNESOTA ELECTRIC UTILITIES

Department of Natural Resources (DNR) participation in determining the need and siting of energy facilities is coordinated by the DNR Environmental Review Section. Vonny Hagen is manager of this section, and Ken Wald (Planner III) and Mary Nelson (Planner I) are responsible for matters before the Environmental Quality Board (EQB), including power plants and transmission lines.

DNR review of utilities formal applications to the EQB are initiated and coordinated by the Environmental Review Section. Each Division within the Department is provided with the proposal and the alternatives for its review and recommendations regarding the effects on its resources, management plans, operations and related interests. Specifically, the DNR confines its review of proposals to assessing impacts to the natural resources under the Department's jurisdiction or for which we have a related interest e.g., U.S. Forest Service lands, U.S. Fish and Wildlife lands, National parks and wilderness areas. Thus, in the case of a transmission line or power plant proposal for northeastern Minnesota, the project would be reviewed by the Division of Minerals for the impacts on the state's minerals programs and to mining development and operations; the Division of Forestry for the impacts to state and federal forest lands and their management plans, and to forested areas in private ownership; the Division of Waters for impacts to public waters under the regulatory authority of the DNR and for consistency with land use programs administered by the Department; the Division of Parks and Recreation for the impacts (both direct and aesthetic) to federal, state and local recreational areas and facilities and their management plans, and, the Division of Fish and Wildlife for the impacts the proposed action would have to state wildlife lands and federal wildlife areas, to fish and animals under the authority of the DNR and those under the protection of the federal government, to waters and wetlands with fish and wildlife values, to privately owned lands which have wildlife values, and to the management plans for the above.

Each Division has a designated review staff person whose function is to develop commentary and recommendations on behalf of his Director. This involves field review by field personnel where sufficient information is not contained in the documents provided, available in our central office or where verifications of the information supplied is necessary to insure adequate documentation for a supportable recommendation. Based on the information supplied by the Divisions, the Environmental Review staff prepares the Department's statement for submittal to the Hearing Examiner's office. The statement includes our evaluation of the impacts to natural resources for the proposed action and the alternatives. The statement also includes our recommendation for the option which would have the least impacts to natural resources. In those cases where natural resources would be extensively affected, the Department appears to testify at the hearing. The hearing examiner in making his recommendation weighs the information and recommendation of the impacts to natural resources together with other testimony regarding such issues as social and economic effects.

The DNR has regulatory authority over transmission lines and power plants to the extent that permits are required to cross or occupy state lands, to cross public waters or work in the beds of public waters or to appropriate waters of the state. Unless the DNR can document that a facility would be clearly in violation of Minnesota law or our rules (e.g., a power plant would require the appropriation of all the water in a river) the DNR would be unable to state that a facility must be withdrawn from EQB consideration, however, the Department could strongly voice it's objections to the proposal through the hearing procedure and by the vote of the Commissioner as an EQB member; the EQB by law has the final decision. From our perspective, it may be the authority of the DNR on these matters is diluted by the overriding authority of the EQB; however, there are also examples of a strengthening of this Department's position, notably in the case of transmission line routes which now more frequently parallel or double circuit existing lines thereby reducing impacts to natural resources.

B4

Minnesota
Environmental Quality Board
100 Capitol Square Building
550 Cedar Street
St. Paul, Minnesota 55101
Phone _____

November 3, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

This letter is in response to the inquiries made in a letter dated October 5 by Representative Voss concerning the legal process governing electric utilities in Minnesota. My comments are the following:

Question One

Q: How many personnel are employed by your agency? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other. How does your agency utilize federally funded employees?

A: This question is presumably addressed to the Power Plant Siting Program of the Environmental Quality Board. This program implements the Power Plant Siting Act (Minn. Stat. §116C.51 et seq.), which provides authority to the Board to site large electric power generating plants and to route high voltage transmission lines.

The costs of the power plant siting program are reimbursed through fees assessed to the electric utilities of the state. Thirteen staff members are funded by this program and directly support the Board in its siting and routing considerations. Also some of the Board's legal and administrative staff support is addressed to siting and routing. No federally funded employees are involved in this program.

Question Two

Q: Do you have the authority to alter size, type, location decisions of the utility or other agencies? If so, what factors and criteria do you use? If not, should you have this authority?

A: Pursuant to Minn. Stat. § 116C.57 Subd. 1 the Board has the authority to refuse to designate a site for a power plant providing that the Board "shall indicate the reasons for any refusal and indicate changes in size and type of facility necessary to allow site designation." Transmission line routing authority of Minn. Stat. § 116C.57 Subd. 2 provides that the Board "shall issue a permit for the construction of a high voltage transmission line specifying the type, design, routing, right-of-way preparation and facility construction it deems necessary with any other appropriate conditions."

Electric power site and route location decisions are made by the Board and pursuant to Minn. Stat. § 116C.61 Subd. 2 "a state agency in processing a utility's facility permit application shall be bound to the decisions of the Board, with respect to the site or route designation, and with respect to other matters for which authority has been granted to the Board in the Power Plant Siting Act."

The criteria and standards for Board decisions are derived from the siting authority policy statement (Minn. Stat. § 116C.53 Subd. 1) and from the siting considerations (Minn. Stat. § 116C.57 Subd. 4) specified in the Power Plant Siting Act. The Board's decisions must also incorporate the considerations of the Minnesota Environmental Policy Act (Minn. Stat. § 116D.02 Subd. 2).

It is important to note that the Board's responsibility is a combined one "to locate large electric power facilities in an orderly manner compatible with environmental preservation and the efficient use of resources." The siting authority policy further states that the Board shall site facilities in such a way that will "minimize adverse human and environmental impact while insuring continuing electric power system reliability and integrity and insuring that electric energy needs are met and fulfilled in an orderly and timely fashion."

The Board has exercised its broad authority in transmission line routing but has not refused to designate a power plant site based on size or type. It is conceivable that compelling evidence might be found that modification of a proposed power plant size and type could significantly minimize the human and environmental impacts of a power plant. If such compelling evidence were to exist, then the Board could refuse to site a proposed plant and indicate the modificiaton in size and type necessary for siting approval. Such action, however, could be disruptive and could result in increased delay and uncertainty in the regulatory process. Clarifica-

tion and streamlining of the Board's authority to modify size and type to minimize human and environmental impacts might be in order to assure that the authority could be exercised in an effective and responsible manner.

Question Three

Q: Can location factors affect size and type decisions? How? Should they?

A: The location, size and type of large electric power facilities are significantly interrelated. The interrelationship involves both technical siting opportunities and constraints and public acceptance of facility siting. An example of a technical factor is that the Twin Cities and a few other densely populated areas provide the best opportunities for district heating with the waste heat from power plants. The size of power plants may have a significant effect of public acceptance based on minimizing localized impacts and sharing the burdens of power plants. However, it is not clear whether the affected public would find, say, twelve 200 megawatt or six 400 megawatt power plant sites any more acceptable than a single 2400 megawatt site. Size and type modifications should be considered for their potential to improve siting decisions.

Questions Four and Five

Q: Should the type of facility be determined in a different manner than is now used? What criteria should be used? Is there any factor that should override the type of facility?

Q: Where, ideally, in the legal process should size, type, and location decisions be made?

A: In discussing the proper assignment and sequence for electric power facility size, type and location decisions, there must be a clear distinction between policy setting decisions that must be made by the Legislature and policy implementing decisions that can be made by administrative agencies. If the purposes to be served by rearranging size, type and location decisions are to effectively place moratoriums on nuclear energy or on any centralized electric power plants and associated transmission lines, then these are matters for the Legislature.

Decisions of major policy are legislative prerogatives and administrative agencies should not attempt such major policy judgments for Minnesotans. We have no "ideal" answers to

where size, type and location decisions should be made. Clearly, however, those decisions must be made final by the time the Board's siting process is completed and (see questions nine and ten) clearly they are a pre-condition to doing an EIS, given present legal requirements for EIS content.

Question Six

Q: How do you determine the "right" technology to meet end energy use requirements? Include an evaluation of temperature levels and reliability as factors in the determination of the technology?

A: The "right" technology is that which meets the criteria and standards that balance human and environmental impacts with timely, orderly and reliable meeting of electric energy needs. Mention of "temperature levels" seems to indicate questions comparing large electric power plants to "low temperature" technologies such as solar heating.

This sort of decision is clearly a matter for the Energy Agency or at a major policy level for the Legislature. Clearly the Energy Agency in making certificate of need decisions should balance such alternatives as large electric power generation, purchased power, solar energy, conservation and others.

Note that for power plants the most important reliability questions are not related to size or type, but go to the total amount of electric power capacity available at a future date to meet needs. Transmission line reliability is intimately related to location decisions. Paralleling, multiple circuiting and other routing questions are becoming even more closely related to reliability considerations because future routing practice must find ways of minimizing the proliferation of rights of way.

Question Seven

Q: How do you determine environmental and health impacts of proposed facilities? Be specific.

A: Human and environmental impacts of electric power facilities are primary considerations in the Board's evaluation and decision process. This is accomplished in three ways: (1) through an extensive public participation effort, identification of potential adverse impacts is solicited from affected citizens and others; (2) information necessary to evaluate such impacts is developed through technical studies including preparation of an environmental analysis document which is prefiled testimony

for contested case siting hearings; and (3) interagency input through review of the environmental analysis document, testimony on the ability of the permitting agencies to license the facility at alternate sites and, finally, participation in and responsibility for siting decisions by the permitting agencies' directors as Board members.

Note that the Pollution Control Agency administers the air quality permit program which is based primarily on air pollution control standards to protect human health. The Executive Director of the Agency as a Board member has ample opportunity to see that the public interest in applying pollution control to siting decisions is well served. The Board member from the Department of Health can also act to assure that important environmental health concerns are adequately treated in both the environmental analysis documents and in Board decisions.

It is important to note that health impacts are more important concerns for power plant siting than for transmission line routing. The study of potential health effects from high voltage transmission lines conducted by the Department of Health concludes that there is no convincing evidence of serious health risks associated with properly routed high voltage transmission lines.

Question Eight

Q: Are the agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate to determine health and environmental effects of a proposed facility? Why?

A: At the certificate of need stage neither a specific site nor a limited number of alternative sites have been identified. Therefore the site specific impacts of a power plant cannot be effectively addressed. Health and environmental impacts are clearly site specific and agencies must have the site location narrowed to a limited number of alternatives before their position statements can be very meaningful.

Some agencies have been hesitant to make definitive statements even at the siting decision point which is much more specific than at the need decision point. Considerable technical analysis and extensive public input are essential for site specific evaluation of impacts. The Board's power plant siting program provides the organizational setting, the interface with the affected public and the financial resources for the necessary evaluation of health, environmental and other site specific impacts.

Question Nine

Q: When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

A: The environmental impact statement should be prepared either during or immediately after the siting process. The environmental analysis developed in the siting process, with a relatively limited number of alternatives, should be sufficiently thorough to minimize the preparation time for the environmental impact statement prepared after the site, size and type are designated.

Past practice has been for the environmental impact statement to be prepared with the Pollution Control Agency acting as lead agency. This has resulted in lengthy time delays and in far too detailed environmental impact statements. There is some indication that the environmental impact statement is being used as a tool to readdress need and siting decisions, rather than to assemble the proper information for sound decisions in the permitting stage.

One improvement would be a specific deadline for environmental impact statements. The legislative deadline for the need process is six months and that for the siting process is one year. An eighteen month time period should be sufficient for preparation and review of environmental impact statements. Past experience has resulted in two, three and more years for the environmental impact statement.

Eighteen months would allow a full year for collecting air quality and other environmental monitoring data and would still allow six months for completing analysis and review. Preliminary data collection and monitoring can begin during the siting stage as soon as the Board identifies the relatively limited number of alternatives that will be proposed for review in the contested case hearing. This provides about a six month head start on the environmental impact statement, in addition to all of the environmental information developed up to the end of the siting process.

Question Ten

Q: What should an EIS cover? Size? Type? Location decisions? Alternate Technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

A: The environmental impact statement should address only permitting considerations. These should be limited to the requirements and controls necessary for licensing construction and operation of an electric power plant without reopening the size, type and location decisions.

Question Eleven

Q: Should an EIS be done on total end use energy requirements for Minnesota? Why?

A: It is difficult to see how an environmental impact statement on total end use energy requirements for the state could be relevant to specific decisions on individual proposals for electric power facilities. Such a statewide environmental impact analysis is likely to be so highly conjectural that it would be of little use.

Question Twelve

Q: Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or other? Why? Please rank order the factors you feel should be considered in making the final decision.

A: Size, type and location decisions clearly must be governmental decisions. Please refer to the answer to questions four and five concerning the importance of distinguishing between legislative and administrative decisions. On policy implementation matters legitimately within the purview of an administrative agency, the decision on size, type and location should be made final by the time the Board's siting process is completed. Of course subsequent judicial review should be available to assure that the administrative authority is legally excerised.

Throughout the decision process on size, type and location no single factor should take precedence. It must be a case-by-case decision process that balances the several public interests in electric power facilities.

Question Thirteen

Q: Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

A: "Non-utility, non-governmental people" should be and are included in the process as early as possible. The most critical point is in the siting process, where the issues become less abstract and more real as site specific proposals are considered.

This is recognized in the Power Plant Siting Act which mandates the Board to "adopt broad spectrum citizen participation as a principle of operation" pursuant to Minn. Stat. § 116C.59 Subd. 2. The power plant siting program already incorporates perhaps the most extensive public participation effort to be found in any governmental program.

Extensive efforts are made to alert the potentially affected public of electric power facility proposals. There is an advance planning effort, including a fifteen year forecast required of the utilities and an inventory of power plant study areas required of the Board for early identification of general plant location possibilities.

When individual siting applications are received by the Board there are elaborate public notice and information meeting requirements. Citizen committees are formed to evaluate utility proposals and recommend alternatives for consideration. Considerable citizen advice and assistance efforts are made, including staff contacts and development of substantive information to provide citizens a basis for evaluation.

By the time of the contested case hearing, interested members of the public are able to present their positions effectively on the record for consideration by the Board. This is accomplished by thorough interaction with the staff and by the environmental analysis document prefiled before the hearing.

The Board's practice has also been to provide the interested public an opportunity to directly address Board members when a siting decision is being considered for Board action, either alternative identification or final selection.

Funding of various interested groups for participation in the siting process is both unnecessary and unworkable. The primary thrust of the power plant siting program is to work with the public throughout the siting process. It would be redundant and duplicative to also fund various members of the public. Such funding is unworkable because there are so many different publics with widely differing positions. Funding all interested publics is impossible or at least excessively costly and confusing.

Question Fourteen

Q: What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

A: The economic setting for electric utilities is one of limited monopoly, with incentives and disincentives derived from that setting. Even the monopoly to provide electric power within a specified service area has its competitive aspects. For example there is inter-fuel competition, say, with oil and gas for heating.

One important economic fact is that the trend of the incremental cost for adding new electric power generating capacity has dramatically reversed itself in recent years. Up to the mid-1960's each new increment of generating capacity was cheaper and more efficient than the previous increment. Perhaps this was the result of economies of scale with the growth of plant size or because of other technical and financial factors. However, in the 1970's inflation, cost of capital, environmental controls and other factors have resulted in a trend to increasingly higher incremental generating capacity costs and less efficient generation plants.

In the past some analysts of the industry have contended that electric utilities promoted new capital investments in generating plant to expand the rate base and reduce generating costs at the same time. The present and the future represent quite different situations, in which there may be powerful incentives to minimize the need for new generating facilities, with the resulting regulatory struggle and costly capital outlay. Verification of the current structure of incentives and disincentives would be helpful for future policy considerations.

Question Fifteen

Q: What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed?

A: The current regulatory process is basically sound. Surely it needs fine-tuning, but clearly it does not need drastic change. The larger the change, the longer it will take for the process to run smoothly -- that is, to effectively sort out the tough decisions that must be made to accommodate the minimum number of facilities that must be built, with the least human and environmental impact.

Preparation of environmental impact statements and the permitting activities are the most time consuming aspects of the process for power plants. It is important for these post-siting phases to be accomplished expeditiously and with a minimum of uncertainty. Ideally construction should begin as promptly as possible after the six month need and the one year siting decisions, rather than be postponed for several years by subsequent decisions. This would allow need and siting decisions to be deferred as long as possible so that these decisions, establishing the framework for subsequent permitting, could be made with the latest most current information.

Reducing regulatory delay and associated uncertainty could be quite beneficial to all parties. It seems to me that in most cases even extremely tough regulatory decisions in this area may be bearable if the utilities can then proceed with a high level of certainty.

Question Sixteen

Q: How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

A: Judicial review inherently entails some level of uncertainty. This would be bearable, however, if judicial appeal would be made pursuant to the Power Plant Siting Act. That is, appeal within sixty days of the effective date of the Board's siting decision and appeal based on the siting criteria and standards required by the Act. Full public protection and increased certainty in the decision process can be attained by requiring all appeals to be made under provisions of the Power Plant Siting Act, rather than the Environmental Rights Act which has no time limit or clear standards.

Experience with the contested case hearing process has indicated increased uncertainty, primarily because of the unpredictable and lengthy time required to receive the hearing examiner's report. The nominal thirty day deadline is sometimes more than doubled and provides little assurance. This seriously affects the quality and timing of Board decisions. The one year siting application processing time places great pressures on the power plant siting staff and these pressures are only exacerbated by the uncertainty of hearing examiner delays.

Question Seventeen

Q: In light of the recent suggestion that Minneapolis buy NSP plants, should the government operate the utilities? Why?

A: Neither I nor my staff has any solid experience, data or expertise to provide an answer to this question, which involves value judgments. I would note that adding a significant number of new employees to the public payroll does not seem particularly in tune with the tenor of the time.

If you have any further questions or wish clarification, please contact me (296-6662) or Allen Jaisle (296-2641).

Sincerely,

Peter Vanderpoel

Peter Vanderpoel, Chairman
Environmental Quality Board

PV/tj

ENERGY PROCESS STUDY S-4

QUESTIONS FOR THE PUBLIC SERVICE COMMISSION & OFFICE OF CONSUMER SERVICES

Personnel Question

1. How many personnel are employed by your agency? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other. How does your agency utilize federal employees?

Certificate of Need Questions

2. Do you have the authority to alter size, type location decisions of the utility or other agencies? If so, what factors and criteria do you use? If not, should you have this authority?

3. How should the type of facility be determined? What criteria should be used? Is there any factor that should override the type of facility?

4. Can the PSC use rate factors to determine size, type, and location decisions? Should it?

5. Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Other? Why? Please rank order the factors you feel should be considered in making the final decision.

Electrical Rate Structure Questions

6. How are rate increases granted and determined for new facilities? What is the timing? How do you determine rate increase criteria?

7. How many rate increases have been granted in the last four years? Denied? Altered? Requested? Amounts before and after?

Environmental Questions

8. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

9. What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

Policy Questions

10. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

11. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

12. What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed?

13. In light of the recent suggestion that Minneapolis buy NSP plants, should the government operate the utilities? Why or why not?

14. How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

PR/jb
10/6/78

B5

STATE OF MINNESOTA
DEPARTMENT OF PUBLIC SERVICE
7TH FLOOR AMERICAN CENTER BLDG.
KELLOGG & ROBERT STS.
SAINT PAUL 55101
PHONE: (612) 296-6021

October 30, 1978

Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

Enclosed find the Minnesota Public Service Commission's response to the Energy Process Study Questionnaire.

As you know, the Minnesota Public Service Commission is the state agency charged with the responsibility to regulate the electric utilities in the state (excluding rate regulation for municipal and cooperative electric utilities).

Your survey, although aimed at evaluating the administrative and regulatory process, did not seem designed to study rate regulation. Two major areas of interest to you seem to be certification of need and environmental impact statements. Neither of these functions is a responsibility of the Public Service Commission.

This Commission has heard from consumers, special interest groups and others, that each agency involved in the "process" is presented with different, often conflicting information from the same utility company. This may or may not be true. If it is, we would welcome testimony from anyone which could establish that fact on the record in a contested case before the Commission. Perhaps another avenue for you to explore in your survey would be the extent to which information relative to utility regulation should be provided to the Commission to consider during its contested case process.

I apologize for the tardy response to your questionnaire, and I hope it did not set your timetable back too much.

I look forward to receiving a copy of your report, and if I can be of any further assistance, please do not hesitate to call or write.

Sincerely,

Richard J. Parish
Chairman

MINNESOTA PUBLIC SERVICE COMMISSION

RJP:a

cc" Rep. Gordon O. Voss

ENERGY PROCESS STUDY

Personnel Question

1. The Department of Public Service, of which the Commission is a part, consists of 139 employees, broken down as follows:

a. Non-energy related	-	77
b. Energy related:		
Financial evaluation	-	11
Rate evaluation	-	12
Engineering	-	6
Commission	-	5
Commission Support	-	17
Research	-	2
Total Energy related		53

The Department of Public Service utilizes federal employees as follows:

a. A grant has been received by the Department from the Federal Department of Energy to study conservation and rate issues.

b. Other uses of federal employees is limited to coordination and communication in the normal course of business.

Certificate of Need Questions

The Public Service Commission does not have the authority to grant certificates of need. It is presently a function performed by the Minnesota Energy Agency.

The Public Service Commission's responsibility is limited to economic rate regulation. Costs associated with the certification process, as well as site location, environmental concerns, etc., are deemed acceptable or non-acceptable expenses in the course of the contested rate case process. (Perhaps additional questions could be developed to further explore the Commission's contested rate case process).

Electrical Rate Structure Questions

Rate increases for new facilities are included in the overall rate base for each company.

The timing is determined by the frequency in which any particular company files petitions for rate increases. Commission decisions, by law, must be made within twelve months of their filing the petition.

Each company's request is studied, analyzed and decided individually. There are few criteria applicable to all electric utilities and these can be found in the Public Service Commission Rules and Regulations.

Environmental Questions

The entire area of environmental impact statements (EIS) is beyond the scope of the Commission's authority. Other state agencies (Environmental Quality Board, Pollution Control Agency) are involved and would be in a better position to respond.

The Commission does make determinations relative to the usefulness of a plant in its rate case decision-making process. If a plant is deemed to be used and useful to the company, it is included in the rate base. Projects in the planning stages have been excluded from the rate base as neither "used nor useful" to the ratepayers.

Policy Questions

10. The non-utility, non-governmental people should be involved in the process at the stage of the hearings and should be able to testify freely as to their opinions without being required to be an expert. Funding for that sort of representation perhaps is done best through the present Consumer Services Agency.

11. The only market force I see now holding down the costs is the simple inability for people to pay more, yet I know greater costs are coming.

12. The existing energy process does not allow this Commission to participate in all matters affecting our rate base, and since we have no staff, if we were allowed, we couldn't participate.

13. I think that's a political question about which volumes have been written.

14. All appeals from the orders of this Commission should by law be given priority so that the courts hear them immediately upon filing of the appeal, and if further appealed to the Supreme Court, they should take preference over all other cases because of their terrific impact. Some of this can be avoided if the legislature abolishes rates under bonds, since that seems to give some utilities the power to drag their heels. Refunds, if ordered, so long as rates are under bond, should be sent to the people before the utility is empowered to file a further case; and there probably should be some greater time interval than presently applicable as to a filing of a subsequent case.

MIN 1000 (Rev. 1/78)

STATE OF MINNESOTA

DEPARTMENT Attorney General -107-

Office Memorandum

TO : Larry Anderson
Director

DATE: 10/26/78

FROM : Karl W. Sonneman
Special Assistant Attorney General

PHONE: 0420

SUBJECT: Minnesota Power & Light Company, Floodwood-Fine Lakes Steam Electric Plants
Certificate of Need Hearing.

The Minnesota Energy Agency has scheduled a Certificate of Need hearing on the MP&L Floodwood plant for December 11, 1978. Petitions for Leave to Intervene are due November 2, 1978. MP&L will file its testimony November 17, 1978; and intervenors must file by December 1, 1978.

MP&L's Floodwood plant is designed for completion in the mid 1980's. Last year a certificate of need was issued authorizing completion of an 800 megawatt unit in November, 1984. UPA was to join MP&L in constructing the plant. This past summer, UPA withdrew from the project and MP&L has had to refile its application for a certificate of need. The plant will now be 500 megawatts, and MP&L proposes to complete it no sooner than November, 1986. Director Millhone has asked intervenors to examine the following issues: demand forecasting, taconite expansion, taconite commitments, impact of PSC rate design, MAPP reserves, economy of size, and financing.

The issue of MP&L's expansion and construction program is the dominent issue in the present MP&L rate case. The Floodwood plant has been an issue in the last two MP&L rate filings. The testimony and cross examination have been directed to the areas of financing MP&L's construction program, taconite and other large power take or pay contracts, pooling of MAPP capacity, and PSC rate design, including whether or not the construction program should be directly reflected in the rate design. Cross examination of Mr. Sandbulte during the September hearings established MP&L's load forecasts for the 1981 through 1984 period have been significantly reduced since the first MP&L rate case two years ago. MP&L may have more than 200 MW surplus power between 1981-1984 with no present firm commitment to sell this power.

It appears we are trying the same or similar issues in the MP&L rate case as will be examined in the certificate of need hearing on Floodwood. Staff is concerned over the fact that MP&L's long-term load forecasts have to be frequently revised because of relatively short notice additions and/or reductions in the demand previously estimated from large power customers. MP&L has been unable or unwilling to obtain firm commitments (possibly as take or pay contracts) from its large power customers far enough in advance to use them in planning power plant additions. MP&L appears to have failed to more closely integrate power supply planning with other members of MAPP. Unfortunately, in the rate case it is often too late to substantially affect these issues. Therefore, I have sent this memo to you for your consideration of the impact of the two agencies' decision making on each other.

KWS/bm

cc: Jerome L. Getz
Phillip Zins, Case Manager

B6

STATE OF MINNESOTA
OFFICE OF CONSUMER SERVICES
Metro Square Building
7th and Robert
St. Paul, Minnesota 55101
(612) 296-2331

October 11, 1978

Gordon O. Voss
State Representative
c/o Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Representative Voss:

This is in reply to your request for input relative to the governmental processes on governing electrical utilities in Minnesota.

It may appear a little presumptuous for this office to address those questions so soon after the legislation which established the Residential Utility Consumer Unit within the Office of Consumer Services. However, Section 45.16, Subdivision 1 and Chapter 45 were amended by the 1978 Legislature to provide for a Residential Utility Consumer Unit within the Office of Consumer Services for the express purpose of representing and furthering the interests of residential utility consumers in utility rate hearings and in matters dealing with the adequacy of utility service to residential utility consumers.

Even in the short period of time that this unit has been operational, it has become apparent that the responsibility should be broadened for effective citizen representation in the various processes that have a financial impact on the utility rate allowed by the Public Service Commissioners.

We are hesitant to propose additional responsibilities and funding so soon after the law became effective. However, we would like to share with you, for your consideration, the following concerns which pinpoint the problems as we see them:

I. Investor-owned public utilities in Minnesota are currently subject to regulation in six arenas:

1. The Minnesota Public Service Commission regulates rates that may be charged, capital structure, depreciation, service and service area and such other matters as may affect the retail customers of the utility through its rules, regulations and orders.

2. The Minnesota Energy Agency regulates the construction of new generation and transmission facilities through its Certificate of Need Program.

3. The Minnesota Environmental Quality Board regulates the construction of new generation and transmission facilities through its Plant Siting Program.

4. The Federal Energy Regulatory Commission (formerly Federal Power Commission) regulates the wholesale (sale for resale) transactions of all Minnesota gas and electric utilities. In addition, the Federal Communications Commission is authorized to regulate the interstate toll charges of the telephone utilities. Both of these agencies conduct a significant amount of activity through the promulgation of rules and regulations.

5. Any decisions of the above regulatory agencies may be appealed in the courts.

6. In addition, significant actions have been taken by the Minnesota Legislature and several municipal governments in recent years which have affected utility operations and the rates they may charge.

II. The generation cooperatives, distribution cooperatives and municipal utilities are not affected by these regulatory activities in the same way as the investor-owned utilities. The generation cooperatives (particularly UPA, CPA and Minnkota) are not subject to MPSC regulation but their wholesale rates are regulated by the FERC.

III. The Residential Utility Consumer Unit is authorized to intervene or in any other way participate in all matters pending before the MPSC which affect the distribution of utility services to residential consumers. RUCU may also intervene in court cases which arise as a result of MPSC decisions. RUCU has no current authority to intervene in any other arena of public utility regulation.

IV. The Residential Utility Consumer Unit might be better able to represent and advocate the interests of residential consumers if its authority were broadened to some extent:

1. The RUCU should be authorized to intervene in MEA Certificate of Need proceedings. The cost of utility service (here we refer primarily to electric) is rising rapidly and this increase is at least partly due to the very high construction costs of new power plants which are certified by the MEA to meet forecast demand. MEA certifies demand while the MPSC regulates price. In an unregulated competitive market, demand and supply interact to produce a price at equilibrium. In the regulated utility industry, future demand is certified and prices are set by rate regulation. With the very long lead time necessary for power plant construction, demand forecasts in the certification process have almost no relation to price. Furthermore, this certified demand becomes the justification for costly construction programs. Some utilities are now using certified future demand to justify requested price increases for current rate payers (see MPSC Docket No. E-015/GR-78-514).

   The rate case hearings conducted by MPSC are not the most appropriate place to challenge the demand forecasts and resultant construction costs of the utility companies. Residential consumer advocates are at a disadvantage if limited to this arena because the utility is armed with a Certificate of Need which has been obtained without adequate consumer participation and is presumed to be high-quality evidence in the rate case hearing.

   From conversations with employees of the MEA and the Department of Public Service, it is evident that very little interagency consideration is given to the interaction between certified demand and regulated price. In fact, the interaction falls between the agencies with neither giving it significant attention. That an interaction exists is evident from NSP's recent decision to delay the construction of certain certified plants as a result of decreased demand forecasts due to higher prices and MP&L's request for increased rates due to rapid expansion in the taconite industry. As one agency participating in both regulatory proceedings, RUCU may be able to focus more regulatory attention on the artificial price/demand interaction.

   In its recent biennial report, MEA itself referred to the need for more vigorous participation by residential consumers in its Certificate of Need Program. In the MEA Energy Policy Recom-

mendations, for Minnesota (Energy Policy and Conservation Report, Page 5), the following is included as Point 32:

> "Encourage more citizen participation in the Certificate of Need process for large energy facilities."

At a later point in the same report (Page 83) MEA notes participation by several environmental groups in the need hearings for two electric generating facilities, but mentions no citizen input as to the demand/price interaction.

2. Some attention has recently been given to the lack of public interest and/or residential consumer participation in regulatory matters before the FERC and FPC which affect all Minnesota utility users. It is suggested that the MPSC or PDS be authorized (and funded) to participate in these matters because they can have substantial impact on Minnesota consumers. Whether residential consumers would have substantial interest different than the public interest in these matters is difficult to determine since Minnesota consumer advocates have little experience in this arena of regulation. RUCU participation in this arena, to represent the specific residential interest or general interest, is a question that ought to be further explored.

V. Residential Utility Consumer Unit participation in the plant-siting process before the Minnesota Environmental Quality Board would seem unnecessary at this time. Information presented in those cases may be relevant to RUCU activities in other arenas, however.

I trust the foregoing will be helpful in the deliberations of the Subcommittee on Science and Technology. I would be happy to present more detailed information in the event the committee would like to address the issues raised in this letter.

Sincerely,

Tobey Lapakko

MS. TOBEY LAPAKKO
Director

TL/bd

ENERGY PROCESS STUDY S-2

QUESTIONS FOR THE MINNESOTA ENERGY AGENCY

Personnel Question

1. How many personnel are employed by your agency? Please break this down by research, EIS, enforcement, forecasting, need determination, policy analysis, conservation, alternative energies, other. How does your agency utilize federally funded employees?

Forecast Questions

2. Does the MEA determine its own forecast for electrical demand independent of electrical utilities? Do you rely on electrical utility data, data analysis, etc.? Why?

3. What forecasting technique or techniques do you use to determine need? Please provide the details on your forecasting technique.

4. When you determine your forecast for demand of electricity, do you know who the users will be and what the energy will be used for?

5. Do forecasts from different utilities vary in technique, variables used, and weight given to different variables?

6. What is the projected energy supply and demand for the next 50 years? In what form will the demand be met? How much electricity is used for heating or other low temperature purposes? What alternative ways are being considered for meeting energy demand? Should an EIS be done on total demand for Minnesota? Why?

Certificate of Need Questions

7. What is the projected demand for new facilities from now until 2025?

8. How do you determine need for a new facility?

9. How is the decision for determining size, type, timing, and location of new facilities lines, and substations made?

10. What factors do you weigh in these decisions and how are they weighed? (Please address the factors of cost, environment, transportation, fuel source and availability, political climate, and any others you use for each of the four decisions of size, type, timing, and location).

11. Do you have the authority to alter size, type location decisions of the utility or other agencies? If so, what factors and criteria do you use? If not, should you have this authority?

12. Can location factors affect size and type decisions? How? Should they?

13. Should the type of facility be determined in a different manner than is now used? What criteria should be used? Is there any factor that should override a type of facility?

14. Where, ideally, in the legal process should size, type, and location decisions be mad

15. Can your agency change size, type, and location decisions of utilities?

16. Who should make the final decision on size, type, and location decisions: the utility? The government? The legislature? Or other? Why? Please rank order the factors you feel should be considered in making the final decision.

Conservation Questions

17. Please explain your conservation program. What direction do you see your conservatio

program taking in the future? Should a conservation program affect the need decision or size determination? Conservation is Minnesota's energy policy: how will it affect demand in the future?

18. How do you determine the "right" technology to meet end energy use requirements? Include an evaluation of temperature levels and reliability as factors in the determination of the technology.

Environmental Questions

19. How do you determine environmental and health impacts of proposed facilities? Be specific.

20. Are the agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate for determining the health and environmental effects of a proposed facility? Why?

21. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

22. What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

23. Should an EIS be done on total end use energy requirements for Minnesota? Why?

Policy Questions

24. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

25. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

26. What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how should it be changed?

27. In light of the recent suggestion that Minneapolis buy NSP plants, should the government operate the utilities? Why or why not?

28. How is the uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

PR/jb
10/6/78

B7

MINNESOTA ENERGY AGENCY
980 AMERICAN CENTER BUILDING
150 EAST KELLOGG BOULEVARD
ST. PAUL, MINNESOTA 55101

612-296-5120

November 6, 1978

John Malinka
Science and Technology Project
Room 17
State Capitol
St. Paul, MN 55155

Dear John:

Enclosed is the Agency's response to the questionnaire created by Patrick Reagan as part of his energy process study. I have also attached memos to Representative Ken Nelson from Peter Vanderpoel and myself which outline some of the rough spots in the present process.

I am pleased that the Legislature is concerned over the present energy facility regulation process, and is willing to investigate how the decisions are made. Past experience has shown that this topic probably generates more heated controversy than any other area under legislative review. Some of the reasons for the controversy are easy to understand since the demands for energy usually impact just a few individuals. However, it is likely that an overly simplistic or quick review of the process will not uncover the more hidden problems. For example, Mr. Reagan has titled his work an "Energy Process Study." However, the questionnaire is highly biased toward electrical utilities, but some of the thornier problems are caused by construction of new facilities by private enterprise, e.g., crude oil pipelines. The questionnaire also seems to miss the points on natural gas, coal, refined products, propane and nuclear.

I mentioned these points only to illustrate my concern that Mr. Reagan's questionnaire may be given more credibility than it deserves. The questions which he raises cover a wide range of topics and issues which mostly deal with governmental operations. I am sure that the Legislature will want more than one individual's analysis, since change to existing procedures could generate impacts on governmental operations, natural resources, finance, energy and commerce. A problem

of this magnitude requires careful study over a relatively long period of time so that all of the critical points and feedback possibilities are uncovered and evaluated.

Mr. Reagan's questionnaire is a first step in gathering the data on how electric utility facilities are regulated. It could lead to a draft flowchart of the regulatory process, which could be subsequently improved and modified by agency and legislative staff, the utilities and the public. I have heard that Mr. John Helland at House Research also began a similar study which attempted to define the energy regulatory process. It may be that a joining of his work with Mr. Reagan's will give us a good starting point.

I am also concerned over the personal opinion content of the questionnaire. It is certainly worthwhile to solicit opinion and comment from individuals who have widely varying views on the subject. However, the study workscope (Reagan's memo of 9/15/78) does not provide much insight into how these opinions will be used in any conclusions and recommendations. Since the questionnaire does not seem to be designed for statistical analysis, and since the sample was not statistically based, it seems that at best the returns will be a census of the opinions of those who responded. Certainly those opinions will have some merit but their value will be unorganized and limited without further study.

I believe some careful reworking of the energy regulatory process is desirable, and that the Legislature could provide the focus for this effort. However, this will require the efforts of many people to produce something worthwhile. I would be happy to make my staff available for the design of a more complete, balanced and systematic study of the problem of energy facility regulation.

Sincerely,

John P. Millhone
Director

JPM:sc
Encs.

1. How many personnel are employed by your agency? Please break this down by research, EIS, enforcement, forecasting, need determination, policy analysis, conservation, alternative energies, other. How does your agency use federally funded employees?

   A. The following table of Energy Agency staffing provides this information:

	State	Federal	Total
Research	See alternative energy, forecasting, etc.		
EIS	1.5	0	1.5
Enforcement	0	0	0
Forecasting	4.9	5.0	9.9
Need determination	6.0	0	6.0
Policy Analysis	6.5	3.0	9.5
Conservation	16.0	21.5	37.5
Alternative Energy	3.5	2.0	5.5
Other	13.5	10.0	23.5
TOTAL	51.9	41.5	93.4

2. Does the MEA determine its own forecast for electrical demand independent of electrical utilities?

The MEA forecasts the demand for all traditional primary and secondary energy supplies including electricity. The forecasting methodology is independent of that used by utilities and other energy suppliers. However, the Agency does depend on energy suppliers, state agencies and the federal government for energy, demographic and economic data.

Energy suppliers including electric utilities are required to report data to the Agency on a quarterly and annual basis. The type of data reported is set forth in the Agency's rules governing information reporting (Electric Utility Information Reporting, 1977 addition (EA 200-213); Rules and Regulations Governing Natural Gas Utilities and Interstate Natural Gas Pipeline Companies (EA 300-311); and Minnesota Energy Agency Rules Governing Prime Petroleum Suppliers and Petroleum Pipeline Companies Information Reporting (EA 400-411)). This data is collected by the Data Systems Activity which is also responsible for designing and maintaining computer systems to store the data.

The Agency must depend upon utilities and other energy suppliers for raw energy data; it would be impractical for the state to separately meter electric, gas and fuel oil sales to consumers. It is important to realize that there are many checks and balances on the data that is reported

both on the state and national level.

3. What forecasting technique or techniques does the Agency use to determine need?

The Agency now has sophisticated forecasting methodologies which are independent of and are believed to be more accurate than those of the electric utilities. However, it should be noted that for the certificate of need proceeding which occurred in 1975 and 1976 (including those on the CU project and the NSP Sherco #3 and #4 units) the Agency had to rely largely on forecasts prepared by the electric utilities. In 1975 the Agency had neither the data or the staff needed to prepare independent forecasts.

By the end of 1976 the Agency had developed statewide energy forecasts. These were improved during 1977 and are described in the Agency's 1978 Energy Policy and Conservation Report. These forecasts are useful in assessing the need for new energy facilities on a statewide basis. However, service area forecasts are needed to adequately assess the need for new electric facilities.

Agency staff are completing peak and electrical energy forecasts by utility service areas. These forecasts will be presented as staff forecasts in upcoming certificate of need proceedings. A description of the staff peak demand model and electric sales model for Northern States Power Company is attached.

4. When the Agency determines its forecast of electricity, does it know who the users will be and what the energy will be used for?

The Agency forecasts residential, commercial and industrial electrical energy consumption separately. Within each class the Agency forecasts the weather sensitive load separately from the base load. The Agency has data on the amount of electric energy used by different types of appliances in homes, apartment buildings and mobil homes. Data is also available on the use of electricity in agriculture and for most industries. However, accurate use forecasts can only be made for the major use components in the various categories.

5. Do forecasts from different utilities vary in technique, variables used and weight given to different variables?

Yes, forecast techniques vary considerably between utilities. A good overall description of the types of forecasts used by the utilities in Minnesota can be found in the 1978 Advanced Forecast Report to the Minnesota Environmental Quality Board submitted by the Minnesota/Wisconsin power suppliers. Much more detailed descriptions are provided to the Energy Agency on an annual basis and can be made available.

6. A,B What is projected energy supply and demand for the next 50 years and what form will the demand be met?

The Energy Policy Conservation Report provides a summary of the best estimates of supply and demand for the next 17 years.

Beyond 1995 only general statements can be made about supply and demand for energy. By the turn of the century, worldwide supplies of natural gas and petroleum will be dwindling. The supply of energy at the turn of the century will clearly be a function of many political decisions made in the near future on the state, national and international levels. Solar, coal and possibly nuclear will provide a growing portion of our energy needs. The amount of energy supplied in the year 2000 by any of these or other alternatives will be affected to a large extent by decisions made during the next 10 years.

The continued rapid growth in population by third-world countries, the nuclear arms race and other global problems cast great clouds of uncertainty as one looks farther into the future.

6. C How much electricity is used for heating or other low temperature purposes?

Approximately 10 percent (3 percent space heating, 6 percent hot water and 1 percent clothes drying) of the electricity used in the State of Minnesota is used for low temperature purposes.

6. D What alternative ways are being considered for meeting energy demand?

The major alternatives being considered are direct solar,

date for alternatives. No specific weight has been prescribed for the factors listed for each of the criteria.

Political climate would not be considered unless in relationship to one of the factors explicitly listed.

11. The agency does have the authority to alter size, type, and timing decisions of the utility. (See Minn. Stat. § 116H.13 subd. 5.) The director of the agency can influence a location decision through his membership in the EQB.

The agency cannot alter decisions by other agencies, because the certificate of need process comes first. The agency can, of course, offer testimony in public hearings held by other agencies.

Location decisions on the unsited facilities may be affected by zoning ordinances, PCA permits, Fire Marshall approval, and/or environmental assessments by the EQB.

The criteria used by the agency for certificates of need have been discussed earlier.

The Agency currently is not of the opinion that it should have more authority than it does now in altering those decisions.

12. Yes. The size of certain communities may dictate the size of electric generating plants that could be used in a district heating plan. Certain locations cannot support large plants because of land, water or air constraints. These are only two examples. PCA's air quality rules, EQB's siting rules, and certain DNR rules provide ample evidence that location factors do indeed affect size and type decisions.

13. We have not learned enough about our present process to advocate a large shift in the determination of type. The agency believes that the system should be given a chance to work before we decide upon substantial modifications to it.

The agency believes that the criteria now used to determine type are appropriate.

The agency is not certain it understands the meaning of the last question. Several factors are used in determining the appropriate type of facility. It is reasonable to assume that a particular type of facility could be so bad with respect to one factor that it could not be selected no matter how good it was with respect to other factors. It is not difficult to conceive of certain types of facilities that could be economic disasters, or other facilities which might be environmental disasters.

14. The agency believes the current process is reasonable and workable. However, more information on that will be available in the next few years. One thing is clear -- size, type and location decisions should be made in contested case proceedings to allow all viewpoints to be expressed.

15. This question essentially repeats question 11. Our agency can change size and type decisions of utilities. The agency generally would not change the location decision of a utility; however, the director can influence a siting or routing decision through his membership in the EQB.

16. Minnesota has already answered this question. The legislature has determined that it shall be done by state agencies through the contested case process. The utility proposes a particular size, type, and location. The public is given an opportunity to respond to the proposal. The agency sees little evidence to support a change in that general concept.

The factors most important for location decisions probably are not the same as those most important for size and type decisions. Some of the important factors are economics, environmental effects, availability of technology, fuel availability, and the projected level of energy and/or power deficits. These factors cannot be ranked to cover all types of facilities and all situations.

17. A. Please explain your conservation program.

Attached is a description of each of the five units of the conservation division of the energy agency (Building Technical Services, Local Services, Conservation Special Services, Information and Education, and Planning and Evaluation).

17. B. What direction do you see your conservation program taking in the future?

In the short range, the conservation division will be concentrating on:

..Increasing its planning and evaluation capability,

..Moving into long-range result areas such as land use and transportation,

..Increased activity in the buildings area, including energy audits and building code interface,

..More interactions with the Public Service Commission,

..Enforcement mechanisms for our existing statutes,

..Community programs, and

..New federally mandated programs.

17. C. Should a conservation program affect the need decision or size determination? Conservation is Minnesota's energy policy: how will it affect demand in the future?

In preparing forecasts of Minnesota's energy situation to 1995 for its biennial report, the energy agency projected baseline energy use in 1995 and use with increased conservation. With stringent conservation measures in place, energy use in 1995 could be reduced to 5 percent below baseline forecasts for that year.

Conservation efforts would have to be significantly increased to reach this target.

Existing residential buildings would need to be modified to conserve from 30 to 45 percent of the heating fuels they now use. Energy use in existing commercial buildings would have to be reduced by 25 percent. New buildings would need to be built according to even stricter standards than are now in effect so that by 1980 heating fuel savings would rise from 15 percent to 35 percent in new homes, and from 60 to 70 percent in commercial buildings. In addition industries would have to double the conservation efforts set by Department of Energy targets to reach savings between 18 and 44 percent depending on the industry.

This is a reasonable level of conservation that could be achieved if prices, government supports, and consumer cooperation were all aligned.

Even with these stringent conservation measures in place, there would still be a shortfall of 100 trillion BTU of traditional fossil fuels that would have to be replaced by alternative energy sources.

These forecasts relate to total energy consumption in Minnesota in 1995. The role of electricity in this scenario is uncertain, and to a large extent contingent on the increase in use of electric space heat in new construction, and the increase in the use of electricity for industrial processes.

In the short run, it is expected that the demand for electricity may decline slightly, or remain more constant. For example, from 1976 to 1977, electricity use in Minnesota decreased 2 percent.

Further information on the effects of conservation on long-range demand is attached.

18. This question seems to be aimed at the problem of energy efficiency as measured by the second law of thermodynamics. The point being that high temperature sources (combustion) should do some work rather than be used as heat only sources. The problem is a valid one in the consideration of new technology. However, much of our existing hardware is designed to burn a fuel (oil, or natural gas) for heat only purposes. It will take many years and much education to move away from the current hardware to systems which yield a better match between heat sources and end uses. The issue is particularly relevant in the generation of electricity where use of electrical resistance space heating converts a high quality energy source to a loq quality (low temperature) end use. The agency has taken a position against electric resistance space heating.

In a more general sense, we do not "determine the right" technology except where we have specific certificate of need authority. In other areas we would simply take positions on a particular technology.

19. Rule 6 MCAR § 3.025 G specifies what the agency shall include in environmental reports for generating plants and transmission lines. Rule 6 MCAR § 2.0638, which requires utilities to submit environmental data in certificate of need applications, largely reflects the requirements of the environmental report.

The health and environmental agencies are required to appear in our hearings regarding their position on need. The environmental section of our rules provides those agencies with the environmental data needed to participate in the certificate of need process.

Beyond the certificate of need proceedings, the director is a member of the EQB. Therefore, the director routinely participates in decisions involving environmental and health impacts of proposed facilities. In addition, the agency's environmental coordinator serves as a technical representative to the EQB.

20. The agency believes that the positions expressed by other agencies regarding need, are sufficient for purposes of granting or denying a certificate of need. Environmental effects are considered as expressed in the criteria.

It is, of course, impossible for those agencies to do a detailed analysis of health and environmental effects at the certificate of need stage because the site generally is not known. However, the agencies should be able to detect problems associated with the size, type and timing of the proposed facility.

21. The legislature essentially has decided when an EIS should be done. The agency does not believe enough evidence exists to state that the time is inappropriate. The current system calls for an EIS to be prepared after the siting stage but before construction permits are issued. In addition, environmental reports are required at the siting and need stages for generating plants and transmission lines. A detailed EIS, of course, requires knowledge of size, type, and location. Those factors are not determined until the need and siting stages are completed.

22. The content of an EIS is covered by law and rule. The agency does not believe enough evidence exists to state that the current content an EIS is inappropriate.

Size and general type decisions are made at the need stage. Location decisions are made at the siting stage. Expanding the scope of the EIS to cover all possible sizes, types and locations would be possible, but an expanded EIS would be much more costly, time consuming, and difficult to use. The agency does not believe that the additional benefits of an expanded EIS, if any, would be worth the added costs.

23. This question is essentially the same as the last part of question 6 on page 3.

24. A. Where should non-utility, non-government people impact in the process? People have and will continue to impact the process at all levels. Because the regulatory processes that govern the size, type, timing, location and environmental control decisions for new facilities are

determined by rules promulgated under Chapter 15 rule making procedures, individuals should have an impact on the rule-making process. The EQB, the MEA, and other state agencies have worked to get non-government non-utility people to participate in rule-making hearings. As a result, the new rules are much better than the ones previously in effect.

People should also participate in the public hearings conducted under the rules governing each decision process. This input is particularly important at the need and siting stages because of the size, type, timing and location decisions.

24. B. Should these people be funded?

There are various approaches which could be tried, including funding, public advisors, and public legal council. One of the difficulties with funding is to decide which points of view should be funded. The state is currently using a public advisor, but the effectiveness of this approach has not yet been determined.

25. A. What market forces in the economic sense exists for utilities?

These market forces include the rapidly increasing costs of capital, fuel, new facilities, and the relative prices of fuel oil, natural gas and other alternatives.

25. B. What incentives exist for holding costs down?

The most major incentive is probably recent Public Service Commission rulings coupled with fact that stockholders want a reasonable return on their investments. The other major incentive is the fact that most rate payers are unhappy with the rapidly rising rates.

26. A. What do you feel is wrong with the existing energy process?

Refer to the Peter Vanderpoel and John Millhone letters.

26. B. What would you change about the process?

Same letter.

26. C. What is the most time-consuming aspect of the process and how should it be changed?

The EIS/permit process. Refer to the Vanderpoel and Millhone letters.

27. In light of the recent suggestion that Minneapolis buy NSP plants, should the government operate the utilities?

No. There is plenty of evidence that the government cannot operate competitively with private enterprise. In addition, the value of the plant and equipment owned by that state's electric utilities exceeds 3 billion dollars.

28. How is the uncertainty in the process effected judicial review, hearing examiner process, and opposed time constraints?

This question should be referred to the Attorney General's office.

ENERGY PROCESS STUDY S-1

QUESTIONS FOR ELECTRICAL UTILITIES

Personnel Question

1. How many professional personnel are employed by your activity? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other.

Certificate of Need Questions

2. How do you determine need for a new facility?

3. How is the decision for determining size, type, timing, and location of new facilities, lines, and substations actually made?

4. What factors do you weigh in these decisions and how are they weighed? (Please address the factors of cost, environment, transportation, fuel source and availability, political climate and any others you use for each of the three decisions of size, type, and location).

5. Can location factors affect size and type decisions? How? Should they?

6. Should the type of facility be determined in a different manner than is now used? What criteria should be used? Is there any factor that should override a type of facility?

7. Where, ideally in the legal process should size, type, and location decisions be made?

Conservation Questions

8. Please explain your conservation program. What direction do you see your conservation program taking in the future? Should a conservation program affect the need decision or size determination? Conservation is Minnesota's energy policy: how could it affect electrical demand in the future?

9. How do you determine the "right" technology to meet end energy use needs? Include an evaluation of temperature levels and reliability as factors in the determination of technology.

Environmental Questions

10. How do you determine environmental and health impacts of proposed facilities? Be specific.

11. Are the agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate for determining the health and environmental effects of a proposed facility? Why?

12. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be build? Never? A combination thereof (please specify)? Other?

13. What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

14. Should an EIS be done on total end use energy requirements for Minnesota? Why?

Electrical Rate Structure Questions

15. What forecasting technique or techniques do you use to determine need? Please pro-

vide a brief description on your forecasting technique.

16. When you determine your forecast for demand of electricity, do you know who the use will be and what the energy will be used for?

17. What is your projected demand for new facilities from now until 2025?

18. How do you determine your rate increase requests? How much capital investment do you have in plants, lines offices, maintenance equipment, etc.? What is the total operating expense for each plant, line, etc. each year? How have these costs changed? How do you expect them to change in the future? What is your total yearly budget?

19. Historically, what is your cost per kilowatt hour by plant and total for your company?

20. Do you own or plan to buy any companies involved in fuel supply, transportation, plant construction, etc.? Do you own any other companies? Please provide a copy of your state charter, articles of incorporation, and by-laws.

21. How many rate increases have you asked for in the last ten years? How many have been granted in full or fractional amounts (please specify)? Do you have a rate increase request in progress now? If yes, for how much? Do you anticipate any rate increase requests in the near future?

22. Should the Public Service Commission have input via rate determination in the size, type, and location decisions?

23. What market forces in the economic sense exist for utilities? What incentives exist for holding costs down?

Policy Questions

24. Who should make the final decision on size, type, and location decisions: the utility? An administrative agency? The legislature? Or other? Why? Please rank order the factors you feel should be considered in making the final decision.

25. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)? Should these people be funded? Why or why not?

26. What do you feel is wrong with the existing energy process? What would you change about the process? What is the most time-consuming aspect of the process and how or should it be changed?

27. In light of the recent suggestion that Minneapolis should buy NSP plants, should the government operate the utilities? Why or why not?

28. How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints? Should any of these factors be changed? If so, why? How do these factors affect uncertainty?

PR/jb
10/6/78

C1

united power association

elk river, minnesota 55330 • phone 612-441-3121

November 7, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17
State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

In response to your request for input in evaluating the administrative and regulatory process governing electric utilities in Minnesota, please find enclosed a copy of United Power Association's (UPA) response.

Once the final report is complete, we would like to receive a copy.

Sincerely,

UNITED POWER ASSOCIATION

Philip O. Martin, General Manager

POM/AJR/mz

Enclosure

UNITED POWER ASSOCIATION'S

RESPONSE TO ENERGY PROCESS STUDY QUESTIONS

United Power Association (UPA) is a generation and transmission cooperative which receives insured loans and guaranteed loans from the Rural Electrification Administration (REA). Therefore, we must abide by the many rules and regulations as set forth by REA in the conduct of our business of providing reliable and reasonable cost electricity to our 15 member systems. See Attachment A, pages H-1, H-2, and Map 1 for a listing of UPA's members, service area, and a description of UPA.

The following is a listing of UPA's responses to your questions:

PERSONNEL QUESTION

1. How many professional personnel are employed by your activity? Please break this down by research, EIS, enforcement, forecasting, need determination, cost analysis, conservation, alternative technologies, other.

Research--1

EIS--2

Forecasting--1

Cost analysis--2

Conservation--1

Alternative technologies--1

Other (Management)--3

CERTIFICATE OF NEED QUESTIONS

2. How do you determine need for a new facility?

By performing a Power Requirements Study as described in REA Bulletin 120-1. (copy attached)

3. How is the decision for determining size, type, timing, and location of new facilities, lines, and substations actually made?

By performing engineering studies such as A) optimized generation planning; B) environmental impact; C) feasibility; D) load flow; E) present worth analysis; and F) cost benefit analysis.

4. What factors do you weigh in these decisions and how are they weighed? (Please address the factors of cost, environment, transportation, fuel source and availability, political climate and any others you use for each of the three decisions of size, type, and location.)

This is a tremendously complicated process because all the factors impact on each other. At UPA, we look at the three major factors of cost, environmental impact, and reliability. The final decision is based on a weighing of these three factors. However, if all things are equal, then cost weighs more heavily on the final decision.

5. Can location factors affect size and type decisions?

Yes.

How?

In the case of generation, the requirement for cooling water and also the fuel supply will vary with the location, type and size of facility. In the case of transmission, we must consider the distance to where the power is being delivered. This will have an effect on the size and type.

Should they?

Yes.

6. Should the type of facility be determined in a different manner than is now used?

No.

What criteria should be used?

Cost, environmental impact, and reliability.

Is there any factor that should override a type of facility?

Yes, demonstrated health effects.

7. Where, ideally in the legal process should size, type, and location decisions be made?

After the need has been ascertained.

CONSERVATION QUESTIONS

8. Please explain your conservation program.

UPA, together with its fifteen member systems, is at this very moment putting together a comprehensive conservation program. Therefore, it is not available as an attachment at this time.

What direction do you see your conservation program taking in the future?

Increasing.

Should a conservation program affect the need decision or size determination?

If a conservation program is successful, it will, by the very nature of it, defer need but not necessarily affect size.

Conservation is Minnesota's energy policy; how could it affect electrical demand in the future?

Conservation is only a part of Minnesota's energy policy. Also, you need to define what it is you are trying to conserve. For example, if we follow the federal energy policy of conserving oil and natural gas, it will then increase demand for electrical energy because of the source shift factor. Therefore, before we can answer the question, we need to define what it is we are trying to conserve because this could have a large effect on the demand for electricity.

9. How do you determine the "right" technology to meet end energy use needs?

The "right" technology must first of all be demonstrated technology that is available on a competitive and reliable basis, consistent with the environmental rules and regulations. UPA uses an optimized generation mix computer program to determine our generation needs. This computer code optimizes the cost of base load, intermediate load, and peaking type generation that is required in order to fulfill our load requirements. Also, load management systems are used to change the load to fit the existing generation.

Include an evaluation of temperature levels and reliability as factors in the determination of the technology.

Based on our corporate mission of providing reliable electric service at reasonable cost to our members, we are continuously evaluating state of the art technologies to generate and transmit electricity. As a part of that evaluation, we must always be cognizant of the part of the country that we live in here in Minnesota. Since electricity becomes a vital part of staying alive in Minnesota during the coldest days of the winter, we must have a transmission system that is designed to withstand these elements so that we can provide electricity to our consumers during these severe days. Therefore, UPA is very conservative when it comes to applying new technology that is temperature sensitive.

Technologies which may be applicable in other areas of the United States, may not be applicable in Minnesota, e.g. solar plants, tidal, geothermal, etc.

ENVIRONMENTAL QUESTIONS

10. How do you determine environmental and health impacts of proposed facilities? Be specific.

As we stated, UPA receives insured loans or loan guarantees from the REA. Since federal monies are involved in the construction of new facilities, UPA is required to adhere to regulations established by REA under the National Environmental Policy Act of 1969. Such regulations specify in great detail the requirements to be followed for assessing the environmental and health impacts of proposed major facilities (i.e., high voltage transmission lines in excess of 200 kV and generating plants greater than 25 MW.). The environmental assessment required to be performed by UPA for these major facilities forms the basis for a federal environmental impact statement (FEIS) to be issued by REA and commented on by many federal and state agencies prior to the issuance of loan funds for the proposed project. The FEIS is duplicative in almost all respects to the state process. Even though both the state and federal regulations provide for a joint EIS, our experience has been that the responsible federal or state agency is reluctant to issue a single joint document and would prefer to duplicate efforts. This procedure is covered under REA Bulletin 20-21. (copy attached)

11. Are the agency position papers required to be submitted under Minnesota Statutes Chapter 116H.13 adequate for determining the health and environmental effects of a proposed facility? Why?

At the Certificate of Need stage, detail of design and location of proposed facilities are not yet available. Therefore, specific questions relating to environmental and health effects are not addressable in position papers required to be submitted by permitting state agencies. However, the position of these agencies regarding the health and environmental effects of various types of generating and transmission facilities located in various assumed settings are appropriate and may be useful for inclusion in the record of the Certificate of Need process. In other words, it is possible only to discuss environmental and health effects of proposed facilities in a generic or broad term.

It appears to us that there has been a move by various environmental organizations and even some state agencies to use the three step regulatory process (need-siting-EIS) to so delay and confuse a proposed project that eventually the project is abandoned. We believe it to be the policy of the state not to stop the construction of needed generation and transmission facilities but to establish in an orderly way after the need for such facilities has been determined where they are to be located, what the impact of such facilities will be on the people of this state and their environment, and to mitigate such impacts to the extent consistent with reasonable cost and limited resources. However, there has been a

growing tendency noted to use the sound regulatory framework established in this state to delay and halt projects for which the need has been adequately demonstrated and certified, all in the name of environmental protection.

12. When should an EIS be done? Before the Certificate of Need is issued? After the Certificate of Need, but before the siting process commences? After the siting process, but before permits are issued for plants to be built? Never? A combination thereof (please specify)? Or other?

An EIS should not be done before a Certificate of Need is issued. It would appear to us that the most logical time to prepare the EIS is coincidental with the siting process but before plant permits are issued.

13. What should an EIS cover? Size? Type? Location decisions? Alternate technologies? Alternative mechanisms to meet demand (conservation, price incentives, etc.)?

An EIS should cover the environmental impact of a type of facility at a particular location(s). The size and alternate technologies and alternative mechanisms to meet demand (conservation, price incentives, etc.) should be limited to the Certificate of Need process.

14. Should an EIS be done on total end use energy requirements for Minnesota? Why?

Yes, because firms or individuals burning fuel oil or coal for their use taken individually, will have very little environmental impact. However, when taken in total, the environmental impact is quite great. Example, in automobile emission. Also, consideration should be given to specific locations.

ELECTRICAL RATE STRUCTURE

15. What forecasting technique or techniques do you use to determine need? Please provide a brief description on your forecasting technique.

See pages H-3 through UPA-1 of Attachment B.

16. When you determine your forecast for demand of electricity, do you know who the users will be and what the energy will be used for?

See pages UPA-2 and UPA-3 of Attachment C.

17. What is your projected demand for new facilities from now until 2025?

Future facilities for UPA are discussed in pages H-8 through H-10 of Attachment B.

The 1978 Advance Forecast Report to the Minnesota Environmental Quality Board (MEQB) which was submitted by the Minnesota/Wisconsin Power Suppliers Group contains UPA's projected demand.

18. How do you determine your rate increase requests?

UPA is a cooperative electric utility which is governed by a 21-member Board of Directors composed of members of the distribution cooperatives who own UPA. Rates are set by the Board of Directors after very careful review of annual budgets prepared by UPA Management. These rates must be adequate to cover certain financial ratios that are called for in the mortgage between

UPA and REA and other lenders. As a cooperative, rates are set by the people who use the electric service. In other words, the same people who establish rates pay the rates. These rates must, however, meet certain requirements established by REA and require their approval.

How much capital investment do you have in plants, lines offices, maintenance equipment, etc?

UPA maintains investment records by individual accounts that make up electric utility plant. A summary follows:

Capital Investment Utility Plant (1977)

	Balance End of Year
Total Intangible Plant	$ 2,505
Total Steam Production Plant	34,323,946
Total Nuclear Production Plant	---
Total Hydro Production Plant	---
Total Other Production Plant	3,758,447
Total Production Plant	38,082,393
Land and Land Rights	2,911,117
Structures and Improvements	116,962
Station Equipment	12,159,638
Other Transmission Plant	26,635,424
Total Transmission Plant	41,823,141
Land and Land Rights	199,476
Structures and Improvements	---
Station Equipment	10,864,623
Other Distribution Plant	---
Total Distribution Plant	11,064,099
Total General Plant	7,439,514
Electric Plant in Service	98,411,652
Electric Plant Purchased or Sold	92
Electric Plant Leased to Others	---
Electric Plant Held for Future Use	---
Completed Const. Not Classified	---
Acquisition Adjustments	---
Other Utility Plant	---
Nuclear Fuel Assemblies	---
Total Utility Plant in Service	$ 98,411,744
Construction Work in Progress	270,065,900
Total Utility Plant	$368,477,644

What is the total operating expense for each plant, line, etc., for each year? How have these costs changed?

Although separate records of operation and maintenance expenses are maintained for generating stations (with the exception of diesel plants which are combined), transmission lines and substations and distribution substations are presently recorded as a unit. A summary follows:

Statement of Operations

	1976	1977
Operation Expense-Production excluding fuel	$ 1,205,259	$ 1,278,412
Operation Expense-Production-Fuel	4,023,315	5,029,541
-Other Pwr. Supply	14,788,174	20,091,398
-Transmission	2,436,086	2,878,980
-Distribution	224,855	246,185
-Consumer Accts.	---	---
-Cons.Serv.& Info.	---	---
-Sales	2,142	3,038
-Adm. & General	1,567,242	1,715,750
Total Operation Expense	24,247,073	31,243,304
Maint. Expense-Production	1,927,688	2,645,167
-Transmission	343,303	306,430
-Distribution	86,751	62,349
-General Plant	134,435	134,924
Total Maintenance Expense	2,492,177	3,148,869
Depreciation & Amortization Exp.	2,869,931	3,120,614
Taxes	1,566,811	2,358,461
Interest on Long-term Debt	5,075,480	13,257,340
Interest Charged to Const.-Credit	(3,434,052)	(11,278,882)
Other Deductions	137,981	174,573
Total Cost of Electric Service	$32,955,401	$42,024,282

Production Report (1,000s of $)

	Diesel Plants		Elk River Station		Stanton Station	
	1976	1977	1976	1977	1976	1977
Total Production Cost	$ 346.9	$ 330.9	$ 968.2	$ 878.5	$ 5,841.2	$ 7,565.7
Net Generation (MWH)	3,373.3	2,691.2	16,924.0	19,229.0	900,076.0	884,375.0
Average Cost, $/MWH	102.8	122.8	57.2	45.7	6.5	8.6
Production % of Investment	9.2	8.8	9.7	8.8	18.9	24.1

Transmission and Distribution (1,000s of $)

	Lines		Power Substations		Distribution Substations	
	1976	1977	1976	1977	1976	1977
Total O&M Cost	$2,283.4	$2,696.1	$ 496.0	$ 410.2	$ 311.6	$ 288.5
Miles of Line	1,930.6	2,017.8	---	---	---	---
Capacity (KVA)	---	---	1,050.1	1,150.1	583.9	611.8
Cost per Mile of Line						
O&M	1.2	1.3	---	---	---	---
Investment	14.4	14.6	---	---	---	---
Cost per KVA ($)						
O&M	---	---	0.47	0.36	0.53	0.47
Investment	---	---	11.53	10.67	17.11	18.08

How do you expect them to change in the future?

It is anticipated that these costs will increase substantially in the future.

What is your total yearly budget?

The total revenue of UPA in 1978 is expected to reach $57 million. The 1979 Operating Budget recently approved by the Board of Directors estimates a revenue of $74.9 million.

19. Historically, what is your cost per kilowatthour by plant and total for your company?

MILLS/KWH

	1973	1974	1975	1976	1977
Stanton	4.51	5.02	7.67	8.24	11.09
Elk River	14.20	19.13	36.39	106.67	103.17
Maple Lake (1)	---	---	1,980	826	891
Cambridge (1)	213	347	194	147	161
Hawick (1)	788	723	328	295	369
Milaca (1)	605	3,009	454	377	469
Pine City (1)	308	685	275	224	274
Kettle Rvr(1)	255	1,498	443	---	---
Total	11.64	11.97	15.36	17.87	21.22

(1) These are diesel peaking plants which are used infrequently; therefore, the cost per KWH is extremely high.

20. Do you own or plan to buy any companies involved in fuel supply, transportation, plant construction, etc?

No plans at this time.

Do you own any other companies?

No.

Please provide a copy of your state charter, articles of incorporation, and by-laws.

See attached Articles of Incorporation and Bylaws as amended January 12, 1976.

21. How many rate increases have you asked for in the last ten years? How many have been granted in full or fractional amounts (please specify)? Do you have a rate increase request in progress now? If yes, for how much? Do you anticipate any rate increase requests in the near future?

Not applicable since UPA rates are determined by its consumer/owners and REA.

22. Should the Public Service Commission have input via rate determination in the size, type and location decisions?

No; however, more consideration to cost must be given in the determination of size, type and location during the energy process. Therefore, a PSC member should be placed on the MEQB.

23. What market forces in the economic sense exist for utilities?

Competition between utilities to keep costs down.

What incentives exist for holding costs down?

UPA is a cooperative; as such, we are dedicated to providing electrical service at cost.

POLICY QUESTIONS

24. Who should make the final decision on size, type, and location decisions: the utility? An administrative agency? The legislature? Or other?

The utility with input from the public and governmental review.

Why?

Because the utility has the expertise to best determine the needs of its consumers and furthermore, it has the obligation to provide for the needs of its consumers. Therefore, it is in the best position to balance the cost, environmental impact, and reliability factors. However, this process should still allow sufficient governmental review to ensure the protection of the public interest.

Please rank order the factors you feel should be considered in making the final decision.

See Question 4.

25. Where should non-utility, non-governmental people impact in the process? At the EIS stage? In courts? In hearings? Other (please specify)?

In hearings.

Should these people be funded?

No.

Why or why not?

Because people who are truly interested in the decision that is being made will not require funding. Funding will only lead to a greater participation of professional or organized intervenors. Such participation does not lead to decisions which truly benefit the public but only add unnecessary costs to the project. Also, they are already funded by private organizations.

26. What do you feel is wrong with the existing energy process?

1. takes too long
2. allows too much interagency overlap
3. insufficient interagency and intra-agency communications
4. is duplicative
5. is too complicated
6. allows too much legal intervention

What would you change about the process?

These functions should be better allocated and coordinated between the different state agencies.

What is the most time-consuming aspect of the process and how or should it be changed?

The most time-consuming aspect of the process is the number of studies that are required and the time required to perform these studies. They have become a monstrosity of unnecessary detail; therefore, the process must be simplified.

27. In light of the recent suggestion that Minneapolis should buy NSP plants, should the government operate the utilities? Why or why not?

The suggestion that Minneapolis buy NSP plants has little to do with this question. The electric utility industry in the USA provides better electric service to the consumers than any other electric industry in the world today because of its makeup; i.e.,--investor-owned, public power districts, cooperatives, municipalities and state and federal government.

28. How is uncertainty in the process affected by judicial review, the hearing examiner process, and imposed time constraints?

Under the present process, a utility can never establish when construction can begin without being challenged in the courts.

Should any of these factors be changed?

Yes.

If so, why?

There should be some cutoff point in the process where more legal intervention would require posting of a bond which is commensurate with the delay costs.

How do these factors affect uncertainty?

It would eliminate the uncertainty that after a point in time there could not be any more legal challenges to the decisions made during the legal process. As it is right now, you get challenged in the county courts, state court, and federal court systems and you can be tied up in legal battles fo years and years and years. You never know when you have the legal right to go ahead with construction without further legal intervention.

GENERALIZED COMMENTS

As a cooperative electric utility, we are required to serve all who request electric service. Many times those requesting electric service are very remote from existing electric facilities. This results in the rural electric cooperatives having fewer consumers per mile of line than other electric utilities in the state. Approximately 65% of the cost of providing electric energy to the end user is contained in the cost of wholesale power. If the cooperatives are to serve their member-owners with dependable electric power at a cost they can afford, the wholesale price must be kept at an absolute minimum. Over regulation and unnecessary governmental involvement only tends to increase the cost with no offsetting benefit. We believe there should be a cost/benefit analysis made by state agencies prior to adopting positions which do little other than increase the price of electric energy. We would suggest this be called a financial impact statement. There has to be additional coordination among state agencies with a dedication of all to keep costs at an absolute minimum.

Respectfully Submitted by,

UNITED POWER ASSOCIATION

E2

COOPERATIVE POWER ASSOCIATION

November 7, 1978

Mr. Patrick Reagan
Science and Technology Project
Room 17 State Capitol
St. Paul, MN 55155

RE: Energy Process Study Questionnaire

Gentlemen:

Cooperative Power Association is pleased to have the opportunity to contribute to the study being undertaken by the Subcommittee on Science and Technology of the Legislative Coordinating Commission. Due to the short amount of time allowed for responses, not all of the questions posed have been addressed, nor are some of the responses as specific as would be desirable. However, CPA has attempted to convey to the Subcommittee as much of the requested information and views as it can, emphasizing points of greatest concern.

I hope this response will be useful in the Subcommittee's study of the Energy Process.

Sincerely,

Ted Lennick

T. V. Lennick, General Manager
Cooperative Power Association

Enclosure

WK:sia

3316 West 66th Street, Minneapolis, Minnesota 55435 612/925-4556

RESPONSE

by

COOPERATIVE POWER ASSOCIATION

to

ENERGY PROCESS QUESTIONNAIRE

2-4. As an association of rural electric cooperatives, Cooperative Power Association (CPA) must prepare a Power Requirements Study according to Rural Electrification Administration (REA) guidelines (REA Bulletin 120-1). CPA also employs an econometric model of energy requirements as a method of independent validation of the Power Requirements Study.

When CPA management determines from the Power Requirement Study that new facilities are needed, authorization is obtained from the CPA Board of Directors to make applications for appropriate certificates and permits.

For large electric power facilities, need, size, type, timing and location are all determinations made by the Minnesota Energy Agency (MEA) and the Minnesota Environmental Quality Board (MEQB). Their determinations are made according to rules promulgated pursuant to chapters 116C, 116D and 116H of the Minnesota Statutes. In order to establish need, CPA must fulfill the requirements of the state's rules.

Factors to be considered in proposing a facility are numerous and are prescribed by rule by the state. The objective of the utility is to arrive at a cost-effective and environmentally sound technology. Political climate becomes a factor in utility planning during the licensing process and is now very much of a problem for electric utilities. However, weighing political factors is not a precise science, especially when there is no concensus among the public, utilities and regulators as to type, size and location of facilities.

5. Location factors can influence size and type decisions. Factors such as water availability, air quality, distance from a railroad, fuel type and availability, compatibility with existing land use, location of the load centers or system deficiencies, and legal prohibitions or guidelines are all factors associated with location which can affect plant size or type.

When considering whether need determination should preceed or succeed site designation, thought should be given to the objectivity that would be lost from the need certification process if the site were already determined. Local residents would possibly exert undue pressure on decision-makers if they are unhappy with the siting decision. On the other hand, if need determination follows siting of a facility, need forecasting can be expected to be more accurate if it occurs later in the process and would allow utilities more

flexibility in their planning.

6-7. A comprehensive, interrelated process for addressing need and siting issues has evolved over the past 5 years which represents a great deal of effort by the Legislature, state agencies, utilities and the public. The process provides a forum for the investigation of the energy and environmental aspects of every important issue, including type. The public has access to the process and the process is predictable and finite. Furthermore, utilities, government agencies and the public are becoming more familiar with the process, its sequence and timing, and participation on all sides is becoming more extensive and effective.

8. A system-wide conservation program is currently under development at CPA which will emphasize home insulation as the most beneficial conservation measure. Each of our 19 co-ops is engaged in some form of insulation program and conservation information distribution. In the future, we anticipate spending more staff time on promoting conservation system-wide and on coupling conservation programs with peak shaving programs and a system of automated controls on certain appliances. Conservation has already had an effect on our decisions on future generation needs.

9. For energy production and transmission, technologies are determined by attempting to optimize the cost of environmentally acceptable and reliable technologies.

10. Prior to the selection of a particular technology for a proposed facility, potential impacts for all relevant environmental parameters are quantified and examined in order to select an environmentally sound technology. When necessary, models are designed or consultants hired to predict environmental effects of the alternatives being examined. When a particular technology is proposed for a facility, all potential impacts for all relevant environmental parameters are quantified as required for various permits and certificates.

Adverse health impacts are avoided by designing facilities which are capable of adhering strictly to those state and federal rules and regulations which are designed to protect the public health and welfare. Specific facility design features and the engineering, construction and operation of large electric power facilities are also governed by the National Electric Safety Code which has been adopted as the state's safety code, and by conditions of numerous construction and operating permits.

State agencies make the actual "determinations" of environmental and health impacts of proposed facilities. Existing state and federal policy, in the form of legislation protecting certain "critical" lands, for instance, or regulations limiting air, water, solid and hazardous waste emissions, go a long way in predetermining what is an acceptable facility and where.

12-14. The question of content and timing of EIS's on large electric energy facilities is a complex one which requires a thorough understanding of the interrelationship of several laws. The Minnesota Environmental Policy Act (MEPA), the Minnesota Environmental Rights Act (MERA), the Minnesota Environmental Quality Board Act, the Power Plant Siting Act (PPSA) and the Minnesota Energy Agency Act (MEAA), all influence the content and timing of EIS's on large electric energy facilities. Furthermore, these laws must be read together so that the specific dictates of the PPSA and the MEAA are followed as well as the overall objectives of the MEPA and MERA. The Minnesota Environmental Quality Board (MEQB) has been established as the agency with authority to interpret and insure proper administration of these laws.

The MEQB has established by rule (6 MCAR 3.025G) the environmental review process for large electric power facilities. The procedure outlined in these rules is intended to consider potential environmental effects of proposed facilities early in the sequential decision-making process, where they are most appropriately considered, while eliminating duplication by reducing repeated consideration of identical issues at each stage of the process.

The procedure requires that an EIS-like environmental report be prepared by agency staff at each stage of the certification process. The report must be prepared in time for the public hearings held at that stage of the process. It must examine the environmental issues relevant to the decision being made at that stage of the process. These environmental reports, and the EIS at the last stage, include a summary of previous environmental reports to give perspective to the environmental issues.

15. As mentioned earlier, CPA uses the REA method in forecasting need, backed up with an econometric model. REA forecasting procedures are based upon mathematical trending of historic consumption of electricity. These procedures are used to develop the Power Requirement Study. There are three objectives of this study:

1) Identification of types and magnitudes of system loads;

2) To provide a breakdown of system energy consumption requirements;

3) Development of estimated peak system demand for each forecast year.

The data base used to develop the forecast consists of:

1) Billing data of member co-ops;

2) The history of the number of consumers and the average electrical consumption per consumer;

3) Purchased power sales; and

4) The sales history of each member co-op.

For further explanation of the CPA forecasting technique, please refer to the "1978 ADVANCE FORECASTING REPORT TO THE MINNESOTA ENVIRONMENTAL QUALITY BOARD" submitted by the Minnesota/Wisconsin Power Supplier's Group. For a specific example of an application for a Certificate of Need, and attendant justification prepared by CPA please refer to "APPLICATION for CERTIFICATE OF NEED for LARGE HIGH VOLTAGE TRANSMISSION LINE and ASSOCIATED FACILITIES", submitted jointly by Cooperative Power Association and United Power Association. Both items should be available in the Legislative Reference Library.

16. Yes.

17. See "1978 ADVANCE FORECAST REPORT TO THE MINNESOTA ENVIRONMENTAL QUALITY BOARD" which is a fifteen year forecast. No firm projections have been made beyond the early 1990's.

18. CPA is a non-profit association of rural electric cooperatives which buys and generates electricity to sell wholesale to its 19 member distribution cooperatives. Wholesale prices are set to cover the costs of producing or buying the electricity. Wholesale power costs are rapidly increasing at present. CPA expects the wholesale price of electricity to its 19 co-op members to approximately double by the end of 1979. Another sharp increase will occur as Coal Creek Generating Station Unit 2 comes on line in 1980. After 1980, rate changes should be smaller.

23. CPA is a non-profit association of rural electric cooperatives. The major incentive that exists for holding down costs comes from the co-op philosophy. Consumer reaction to rate increases has a forceful effect on holding increases to a minimum. Rate increases experienced by CPA can be attributed to the increased cost of environmental controls, skyrocketing fuel costs, and by the increasing cost of money.

In the past five years, interest rates on REA funds have soared from 2% to 8.7%. The impact of the interest rate increase on CPA customers will be significant due to CPA's need to construct new facilities to meet its load requirements.

24-25. As mentioned earlier, comprehensive, interrelated need certification and siting processes, with thorough environmental review and broad spectrum citizen participation, have evolved over the past five years. The process represents a substantial amount of work done by the Legislature, state agencies, utilities and the public. The laws which govern the process incorporate a broad spectrum of environmental, social and economic values. This process is continually being refined by legislative adjustments and administrative rulemaking.

At this time, CPA sees no need for major jurisdictional changes. However, it would simplify the existing process if issues of a generic nature, such as type, health and safety, or construction practices, could be settled and policies established through rulemaking independent of specific projects. That way specific, needed facilities would not be

tied up unnecessarily in administrative or other legal forums and identical issues would not be reconsidered for every project.

26. As is indicated in the statement prepared for the Minnesota/Wisconsin Power Suppliers Group, many problems have been experienced by electric utility companies which have attempted to secure need and siting certification from the State of Minnesota. The problems have generally resulted in very bad publicity for utilities and government, and in added costs which must be absorbed by consumers of electricity. The problems encountered have occurred at every stage of the sequential licensing process, and each application is usually plagued with its own unique problems.

Many factors have contributed to the problems. For instance, in a public forum it is very difficult to resolve issues as complex as those surrounding energy facility need and siting certification. Complex issues are understood differently by different interests. While the energy facility need and siting certification processes invite input from all interests, they also demand resolution of the issues. Because there is often no concensus opinion, one result of a need or siting decision can be disappointment and misunderstanding.

Nobody expected that the problems encountered in the need process, and expecially in the siting process, would be as severe as they have been. Few utility or government staffs were prepared or experienced to deal effectively with the hostility that was the reaction to proposed new energy facilities. Recent projects have been going much more smoothly, largely because utilities, government and the public have learned much from experience with the complex energy need and siting certification processes. As mentioned earlier, participation on all sides is becoming more extensive and effective. For this reason, it is important not to make major jurisdictional changes in the process.

It is imperative to the utility industry and the general public to maintain a process which is predictable and finite. Increasing government regulation and public participation in the utility planning process has become a very expensive matter. While it has been determined that it is necessary to inject these social and environmental interests into the utility decision-making process, economic considerations must remain as a very important factor. It has been predicted that the utility industry will require 10% of the nation's total capital market in the fifteen year period, 1976-1990. This is a substantial amount for any one industry and if that money is not wisely invested, it means there will be just that much less money available for other important uses such as home mortgages.

As competition for money increases, interest rates go up. For REA-financed co-ops they've gone up over 400% in the past five years. Any capital expenditure which does not have a sound justification exerts an inflationary force on the nation's economy. This is because, in effect, too great a price is being paid for the "goods" received.

28. Judicial review under MERA can have the effect of undermining the procedures established under the PPSA. Suits can be brought with little

grounds, at any time, changing the forum for investigation from a public forum to the courts, effectively excluding many who have participated in good faith.

Judicial review under MERA also poses a problem because the standards for review are different under MERA than they are under PPSA.

MERA was intended to serve as a vehicle for concerned persons to obtain a civil remedy for actions which will pollute, impair or destroy protectable natural resources. MERA was enacted in 1971 when little or no other environmental legislation was in existence. The PPSA painstakingly provides access to the decision-making process and civil remedies for aggreived persons within 60 days of an action. Actions taken pursuant to PPSA and MEAA should be exempted from MERA. This would have the effect of forcing the issues before the MEA and the MEQB during the power plant siting hearings rather than waiting until the decision is made and then seeking judicial relief.

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Kandiyohi

COOPERATIVE ELECTRIC POWER ASSOCIATION
HIGHWAY 71 NORTH WILLMAR, MINNESOTA 56201

TELEPHONE
AREA CODE 612
235 - 4155

October 31, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, MN 55155

Dear Mr. Reagon:

This is in response to Representative Gordon O. Voss's letter dated October 6th in regard to the questionnaire he sent to this Cooperative. We will try to answer his questions to the best of our ability.

Under Personnel Question No. 1, this Cooperative has 32 employees in all categories. We are involved with distribution only. We do not own a transmission line, nor do we own a substation. On occasion, we are involved in some research with one employee. No one needs to be concerned about an environmental impact statement nor enforcement. We have two employees involved with forecasting and need determination. We are always involved with cost analysis, because we try to serve at cost as nearly as is possible. As far as conservation is concerned, we are enclosing with this letter a Conservation Policy that we recently drew up for the Board of Directors to consider. Alternative technologies are usually left up to our power supplier, the United Power Association of Elk River, Minnesota. We are, of course, interested in technologies, such as solar, because we want to work with the membership to their best advantage whenever we can.

Under Certificate of Need Questions, number 2, the need for new generation facilities is handled by the United Power Association. Power Requirement Studies are also required by the Rural Electrification Administration as well as UPA. In this regard, we analyze needs of each class of customers. We visit with all large commercial customers. We receive information from the State Demographer's office. We work with the County Planning Commission, City of Willmar Chamber of Commerce in regard to growth patterns and business developments in the area, as well as building trends, interest

rates, or whatever would have an effect on the number of people who are moving away or moving into the area. REA is vitally interested in the Power Requirement Study, which is updated as loan funds are needed, or as requirements from past studies have indicated that present facilities are now not sufficient after long range power requirements have been determined by us with the help of REA and with the help of UPA. As far as all necessary input is concerned, UPA then has a computerized program to come up with the needed information. Therefore, generation facilities and substations are installed by UPA. However, system improvements, such as conductor size, single phase, V-phase, 3-phase lines, distribution line protection, power factor, and all things necessary to maintain and operate a good distribution system are taken care of by our operations and maintenance engineer as well as our consulting engineer, Ulteig Engineering, Inc., of Fargo, North Dakota. Factors such as voltage, the cost of distribution facilities are always a factor. However, no investment is made until it is found to be necessary in order to provide good reliable electric service.

As far as the environment is concerned, visual pollution is considered as well as any other factor that would involve the ultimate user. Transportation, fuel sources and availablility are, of course, left up to our power supplier, UPA.

We don't believe location factors could effect the size of a plant except possible for losses if the distance is great. However, the type of a plant would be effected by the availability of fuel.

Size and location decisions, we believe, should be made by the builder, or the generation plant owner. The type to be built probably would get the politicians involved because of the concerns of people and to what extent people have been getting true facts about various types of facilities.

Under Conservations Questions, No. 8, as I stated before, we are sending to you a conservation policy, recently drawn up for this Cooperative to consider. We believe conservation is extremely important and that a conservation program should affect the need, decision. It certainly could affect electrical demand in the future if we all conserve like we should and especially conserve through load management.

Your environmental questions could best be answered by a generation facility.

As indicated above, as far as forecasting techniques are concerned, we mainly use the REA Power Requirement Study and the REA Long Range Financial Forecast. Our power supplier gets very much involved with these two studies.

Yes, we do believe that when we have determined our forecast for demand of electricity, we do know what the energy will be used for. United Power Association has recently found that it is possible that no new facilities would be needed for a number of years, like possibly after 1990, assuming conservation the way we believe it may work.

Enclosed is a copy of our by-laws and articles of incorporation.

We have asked for two rate increases during the last 10 years. Cooperatives are not under rate regulation. Therefore, our last rate increase that went into effect, as of August 1, 1978, was approved by our Board of Directors as well as REA. We have no rate increase request in progress at the present time. We do anticipate another rate increase during the next few years. However, we hope to be able to withstand inflation pressures by simply passing on increased power costs for the next few years.

Cooperatives are dedicated to providing the best possible electric service at the lowest possible cost. This is what we are dedicated to do. There are no stockholders or investors who have to be satisfied. The Board of Directors serves at no remuneration except their loss of time on their particular job and their expenses in serving on the Board.

Policy Questions 24 through 28-- We answer as follows. The final decision on size, type and location of generation facilities should be left up to the utility. The utility business is certainly not new and with the experience and know-how that has been generated over the years, any generation and transmission utility would certainly be most knowledgeable in regard to these factors.

We rank in order of importance, the following factors that should be considered in making the final decision:

The most economical size that will take care of needs for a reasonable length of time. The type would have to do with the acceptance of the general public and the politicians, but mainly, the type should be the one that conserves energy in the best way.

Location decision should be based on fuel supply, the environmental impact, the cost, the availability of land, the type of land that would have to be used, the acceptance of transmission lines, and of course, the ultimate rates for electric service and the reliability of the service itself.

Question 26- We feel the existing energy process has much to be desired, because first of all, it is extremely costly. It is very time-consuming. It involves many people who know little or nothing about the supplying of energy.Due to the desire of utilities to be efficient and to get things done, the general public is not communicated with properly in order to gain acceptance. The most time-consuming aspect of the process are the many permits and processes that have to be followed in order to be able to come up with a final decision. We do not believe the government should operate utilities. A great deal of technical know-how is required to operate utilities efficiently. If a governmental unit should take over any utility, the ultimate service would have to become more expensive or more restricted thereby lowering the standard of living and availability. Electrical utilities are an extremely high investment utilty where competition and private enterprise must be allowed to work the best way possible.

We hope that our answers, at least in part, to your questions will serve some purpose and be helpful. We are convinced that a great deal of money will be saved by the membership of this Co-op if we are allowed to set our own rates, have our own membership regulate, so to speak, through the democratic process of the operation of the cooperative.

Yours very truly,

Axel H. Johnson

Axel H. Johnson
Manager
AHJ/jvb
Enclosures

C 4

Crow Wing Cooperative Power and Light Company

823 MAPLE ST. • PHONE 218 · 829-2827 • BRAINERD, MINNESOTA 56401

October 17, 1978

Mr. Patrick Reagan, Consultant
Science & Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

We wish to acknowledge your letter of October 6th and the questionnaire relating to utility system planning.

First, we should clear the point that the Crow Wing Cooperative Power and Light Company is an electrical distribution cooperative only, and is a member of the United Power Assn. who is the supplier of electrical energy and does the generation and transmission to the load centers.

Our cooperative is not involved with voltage greater than 24,900. Generally, most new service extensions are placed underground so there is a minimum of impact on the environment.

We shall attempt to answer your questions as you list them.

Personnel Question: We have no professional personnel on the payroll at present; the engineering and accounting is performed on a contract basis by consulting firms.

Certificate of Need Questions: Numbers 2, 3, 4, 5, 6 and 7 should be answered by United Power Association. They do not apply to our cooperative.

Conservation Questions 8 and 9: Enclosed is a copy of our energy conservation program. This has been approved by the Rural Electrification Administration.

Environmental Questions 10, 11, 12, 13 and 14 pertain to the energy supplier which is United Power Assn.

Electrical Rate Structure Questions:

15. Forecasting is done by a computer using a logarith-

mic trend, based on historical data of the previous 11 years in accordance with REA Bulletin 120-1.

16. No; however, we have a trend of the various consumer categories.

17. Forecasts are made for five and ten year periods only.

18. In accordance with REA procedure, a 10-year financial forecast is made to be submitted with each loan request for system improvements.
The 1978 operating budget (revenue requirements) were $7,921,055.

19. Do not understand whether you mean production cost per KWH'r or KWH'r to plant investment ratio.

20. No.

21. Our cooperative has had four rate increases in five years and has had three rate reductions in the five years previous to the inflationary trend in 1973.

22. No way.

23. Utility companies must use long term financing because of the tremendous costs necessary to provide service. Cooperatives, such as Crow Wing Cooperative, receive 70% of financing from REA at 5% interest and 30% financing from private markets at 10.5% interest. If this trend continues, there is no way that cooperatives or private utilities can exist and maintain service as is required by law. The governments excessive and unnecessary regulation policies are depressing the bond rating of all utilities and consequently increasing the interest rates and service costs. Where are the incentives for holding costs down? May we ask you. The only recourse there is is possibly hold any plant expansion to a minimum and let the consumer accept a deteriorating quality of service.

Policy Questions:

24. Let the utility make the decisions. Please keep politics and bureaucracy out of making these decisions. You can see the present results; there are no plans for new plants in Minnesota at the present time, and it takes ten years to put a plant on the line with the necessary red tape involved. With a present growth rate of 5% compounded annually, we will require plants before the 10 years are past.

25. Possibly at the ELS stage and hearings. If the non-governmental people wish to participate, let them do their own funding. You should consider the Minnesota tax payer; he is carrying all the load he can bear with all the bureaucratic activity.

26. The Unnecessary Red Tape.

27. I have not seen any program to this date that the government could operate as efficiently as the private sector. Witness, the present postal system - another system that would be subsidized by the tax-payer.

28. Very time consuming and most expensive.

We have answered these questions as we see the problem. You may not agree with our opinion; nevertheless, from experience, this is our view point.

Regards,

Louis B. Polasik
General Manager

LBP:jjo

C5

Federated Rural Electric Association

Telephone 847-3520 Jackson and Martin Counties

JACKSON, MINNESOTA 56143

October 17, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

Thank you for returning my phone call today and discussing the Energy Process Study questionnaire. As I stated on the phone, we have a very small staff and for us to take the time to fully and completely analyze, document and supply factual honest information to all the questions, would require more time than we can commit to such an activity. We have twenty-six employees, which include the line personnel for the maintenance and construction of the line, the billing and collecting department, the accounting department and management people, therefore, you can see that we operate thin and close to the belt and can only commit a certain amount of time to replying to questionnaires.

I would like to skim through the questionnaire and make short statements and I will head these by the question number and, therefore, my answers will be short and explicit.

Under Certificate of Need questions. At the present time we are not required to secure for the State of Minnesota a Certificate of Need. We do not operate generating facilities with the exception of a small stand-by diesel plant. Our power is purchased wholesale and it appears that the question relative to the Certificate of Need is pointed at generating facilities rather than distribution lines.

I would like to comment to this extent that our determinations for new facilities is made after a detailed engineering study based on load of the customers, the distances involved, the voltage drop, and economic analysis of the voltage drop, reliability of service, that is, continuity of service related with the condition of the old existing facilities that might need to be replaced. All of this is done to provide the member-consumers of our Cooperative with reliable service at the lowest possible cost.

Conservation questions. As an electric cooperative, we have urged conservation for many, many years. We urged conservation and increased insulation in home construction twenty years ago at which time most contractors and builders and lumber yards suggested that we probably should see a psychiatrist. We believed at that time that the insulation

October 17, 1978

Mr. Patrick Reagan
St. Paul, MN

Page Two

recommendations as established were ridiculously low and that the practices and procedures that were being carried out by the builders were subject to question. We also over the years questioned manufacturers of electric motors because of their cheapness of design, and were building orders that had very low efficiency factors and were dissipating almost as much electricity in the fall of pure heat as they were in the energy delivered at the shaft.

For many years we have owned an insulation blower, made it available to the members in our area to use to insulate their homes. We promoted the construction of homes with six inch side walls and in many ways have worked with our members, 4-H clubs, F.F.A. groups and others urging the efficient utilization of electricity.

Environmental questions. Again, I believe your section on environmental questions pertains primarily to the siting of a generating plant and again, as we do not construct and operate our own generation, we do not believe that we can lend any factual information to this section.

I would like to comment briefly on question 14 and state that we still must, as a power supplier, recognize the sovereignty of our member-consumers. They still must make the final decision as to how much energy they will require and how they will use it. In as much as our service area is primarily farm people, it is also rather difficult for the farmer, if he is to supply adequate food stuff, to postpone his harvesting and his crop drying to some other time of the day or week or the month in as much as when that crop is ready to be harvested, it must be harvested. The same with the livestock feeder. He cannot convince the brood sow at what time of the day or the week that she should farrow and neither can the farmer convince the cattle that need water or are to be milked that they will have to be postponed until such time as power is available. In the farming business the use of energy is an absolute necessity if the farmer is to produce the food supplies that we need in this nation and in this world. He has become very productive because he has been able to use his initiative in developing this productivity and he has had available to him over the past many years, an adequate and reliable source of electric energy to do this work. Many times this is not recognized when we discuss energy requirements for the State of Minnesota.

Electric rate structure questions. There are many methods of forecasting loads for the determination of need. Basically we can trace past history and the projections on past history have been accurate or too little. Again, because we serve primarily farmers, their use of energy also varies with the weather and the crop conditions. For example - if we have a wet fall and the corn has a high moisture content, the farmer will use much more electricity preserving this crop so that it will be reasonable for consumption and not spoil. This is a difficult thing to forecast from year to year, however, we do know that over a period of some years the load increase has been regular and on a very continuing pattern.

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St. Paul, MN

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As to who the users will be and what the energy will be used for, again, it is primarily the farmer and some residential use in rural areas. Some years ago the analysts had written off the rural areas and said the population would decline and that the use of energy and so forth would decline in those areas. The reverse has been true. More people have moved to the more rural areas and in order for the farmer to maintain the production standards that are required and to be able to exist in the inflationary period we find ourselves in, he has had to turn to every cost cutting practice that he could find and develop. The ingenuity of the farmer in the utilization of energy has been phenomenal.

Our rate increases have been based on the actual need for our cooperative. Any so called profit, or as we call them "margins", that our association has at the end of the year, are assigned back to the member as an overcharge and is credited to his account. This excess charge is revolved over a period of years and, therefore, his electric service is strictly at the cost for operating the system. Rate increases that we have had in the recent years have been brought about by the increased cost of the generation of electricity and have not been brought about by virtue of our expenses to operate a distribution system. We anticipate that distribution system costs will increase due to increased taxes, insurance, labor costs and so forth and that our rates will have to be slightly modified to recognize this. One of the things that becomes quite obvious is that if our load would decline substantially or if it would even flatten out, the cost per kilowatt hour would increase very rapidly due to all the fixed costs that exist and must be maintained in order to provide the adequate service. However, we feel as a cooperative that we charge the customer a reasonable price with a very reasonable margin to provide some funds for construction of facilities and all of this is revolved back to him over a period of years so that in truth, he is served at wholesale.

Policy questions. I believe that the power supplier must make the final decision as to size and type and the location. The power supplier is responsible and certainly would not be constructing facilities if in his opinion they would not be required. He must recognize the competiveness of the energy business and be responsible if the supply is not adequate. We must always bear in mind that for the construction of generating facilities approximately seven or eight years of lead time are required. When a customer comes in and says that he will install a feeding arrangement for livestock and needs 50 KW of capacity, we cannot very well tell him that we will have to order it and it will be eight years before it is delivered. We must anticipate this and if we have that responsibility we must then have the right to make the final decision with that responsibility to provide adequate service to our customers.

We should also not be blinded by the fact that a very local minority can disrupt the entire process. The minority should be heard, however, after

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St. Paul, MN

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the decision has been made, then it should be a requirement that the governmental process that made that decision should help enforce that decision and see to it that it is carried out. At the present time it appears that the supplying utility is burdened with the responsibility of making proof of the needs, proof of the siting, and then supplying their own law enforcement to develop the facilities.

If we wish to destroy this nation as Russia stated many years ago that we would do, it would be my opinion that the fastest way we could do that would be the stifling of the development of an adequate energy supply for this country. Minnesota, in effect, is an energy oasis. We have a little peat and we have a little wood. All of the energy we use must be imported. It must come in by train, by wire or by a pipeline. And with all of the restrictions that are being placed on the energy facilities in Minnesota, it would appear that Minnesota in the future will have some very trying days and that the economy of this great state may suffer severely.

I realize that I have not specifically answered all of your questions, however, I explained in my conversation that we did not have an adequate staff to spend the necessary time to research all of the questions and provide you factual answers.

Cooperatively yours,

FEDERATED RURAL ELECTRIC ASSOCIATION

Marvin J. Johnson
Manager

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RUNESTONE
ELECTRIC ASSOCIATION
ESTABLISHED 1935
ALEXANDRIA, MINNESOTA 56308

"Service is Our Only Product"
PHONE (612) 763-6641

October 26, 1[illegible]

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, MN 55155

Dear Mr. Reagan:

This is in reply to Representative [illegible]'s letter of October 6th. It is refreshing to be asked for input prior to the governmental process; I compliment you for asking.

Since Runestone Electric Association is a Rural Electric Cooperative (distribution only), I will only comment on the questions that are applicable.

(1) Our professional engineering is done by an outside professional engineering firm, with the assistance of our staff, and the advisory and inspection assistance of the Rural Electrification Administration.

(2) Need for new facilities (substations, tie lines, etc.) is determined by voltage conditions, load to be served, and conditions necessary to maintain the best of reliable service to our consumers.

(3) This question is best answered by referring to #2 above. Timing for all facilities is planned to provide service to the customer, yet avoid the premature investment of capital in order to keep energy costs to a minimum.

(4) Refer to #2 above.

(5) Location factors; ecological, scenic, historical, and many others do affect our decisions, especially in whether lines shall be routed in a particular location and whether they shall be overhead or underground.

Esthetics are important to us; recently we completed a new low profile substation, with underground transmission as well as distribution that is as pleasing as such a facility can be.

(6) Refer to #5 above.

(7) In a distribution system this will rarely present a problem; the citizenry involved can reach intelligent conclusions. Legal processes will only raise the cost of the particular facility and also the cost of energy to the consumer.

(8) We are actively engaged in conservation; it is the major concern. We believe that since Minnesota is an "energy island", that we will be replacing petroleum products with electrical energy, generated with coal or lignite which is in plentiful supply.

We will be putting a maximum effort into energy conservation programs of all types, but expect electrical load and consumption to increase in spite of our best efforts.

Enclosed is a copy of our cooperative's policy on energy conservation.

(9) No comment.

(10) See #5.

(11) I believe they are. A group of people with environmental concerns do not agree; they have put power suppliers in the unfortunate position of proving a negative situation which is almost impossible and very, very expensive.

(12) EIS be made first before everything else is done.

(13) Everything.

(14) Yes - planning is essential - EIS is necessary to planning.

(15) We forecast based on our experience - growth pattern - projected use of known and new accounts and each classification of accounts and each area within our service area.

(16) To the best of our ability and with knowledge we have available.

(17) We haven't forecasted through the year 2025.

(18) Yes, we determine rate increases to provide us with monies only to meet our requirements. We finance capital investments almost 100%. Our net is set to meet our financing repayment schedule only. Depreciation reserves help

finance some of our capital investments. Costs continue to rise each year and we contemplate this trend to continue. Our budget for 1978 is (was) over 4½ million dollars. This includes investments in plant, plus operations and repayment of principal.

(19) Not applicable.

(20)We own no other companies or interest in any. By-Laws, etc. attached.

(21) Two rate increases in the last 10 years; none in progress; however, we anticipate higher wholesale power costs and consequently increased power costs to the end user is a realistic result.

(22) No.

(23) Inflation and high fuel costs are the major concerns. Incentives for holding costs down in any cooperative are obvious. Since we are consumer-owned and non-profit, the consumer's net cost is our major concern.

Since our inception it has been Runestone Electric Association's policy to furnish electric service to its members at the lowest possible cost consistent with sound business and good management practices.

(24) The utility should make the decision, with input from various other segments. It all depends on what facility you are talking about - generating plant, transmission plant, distribution plant, overhead facilities, underground facilities. That is why the utility should be the one who decides after input from others, but not <u>control</u> by others.

(25) At the EIS stage - no funding for people who want to have input. Let them do it at their own expense, (at hearings). Funding these people only adds costs and delays.

(26) Regulatory bodies and non-utility - non interested input from people - eliminate all this if input is made at the EIS stage.

(27) Minneapolis should not buy N.S.P and, furthermore, aside from the fact that the city does not have the expertise to handle this kind of operation, what can they gain? political power? Electricity is a necessity, not a political tool. America was built on the free enterprise system and works

best when it is left alone to function without government interference.

(28) Again, I say EIS is the place for all input, then everything else follows - Cerficate of Need, siting process, pertmits, etc.

Sincerely,

Joseph O. Perino
General Manager

JOP:g
enc.

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Minnesota
municipal utilities association
P.O. Box "B", 10 Central Ave., Buffalo, Minnesota 55313 612/682-4104

October 30, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

RE: Your request of October 6, 1978
for input.

Dear Mr. Reagan:

The Minnesota Municipal Utilities Association represents the Cities in Minnesota which own and operate the electric and gas utilities as a municipal enterprize rather than receive service under a franchise from the investor-owned or co-operatively-owned suppliers.

As an association, we have had little input into the development of the existing procedures for plant siting and certificate of need, and until 1976 we had little interest in them. The reasons for this were (1) the laws and regulations did not apply generally to the type and size of generating facilities that municipals typically constructed, (2) the municipals, because of size, were not able to seriously contemplate participation with the other segments of the industry in joint projects even should the others be amendible to that idea.

In 1976, the Legislature passed legislation which permitted the municipals to form municipal power agencies for the purpose of developing power supply. These MPA's would become large power suppliers to the smaller individual municipals which formed the MPA membership, much the same as Generation and Transmission Cooperatives, such as United Power Association (UPA) and Cooperative Power Association (CPA), are to the individual rural electric cooperatives. This, of course, changed the relationship between the municipals and the state agencies involved in Certificate of Need and Power Plant Siting activities.

As we started to look into the processes, it became immediately apparent to us that:

1. the processes were designed to control the activities of the large power suppliers such as N.S.P., particularly N.S.P.;

2. the processes did not, and do not take into account new power suppliers coming onto the scene;

3. the state has been and continues to be unable to deal with the law as the Legislature passed it and has at various times amended it.

Certificate of Need - We seen no reason why the Certificate of Need process needs to concern itself with the type of facility or location. It would seem to us that these issues relate more directly to siting and that logically determination of need preceeds concerns over process and location. We are finding that the Certificate of Need process as it relates to the municipal power agencies coming into existance causes considerable problems and expense as the application addresses location and type. The process also causes problems as the municipal power agencies attempt to work out joint power and transmission arrangements with the other power suppliers.

The botton line on this is that we feel that the Certicicate of Need procedure would be clearer and more pertinent if it is just that. That it deal with how a utility projects its load requirements and is an early indication as to the future necessity for generation and transmission facilities without concerning itself with a type and only generally with location as location may reflect the geographic location of load centers to be served by the facilities necessary to meet the needs.

Within the limits of my experience and knowledge, I will attempt to address the questions. Please take into account in reading my answers, the above comments on the Certification of Need process.

1. The type of facility must be determined ultimately by the people who will build it. Within certain parameters, the public and the government may affect the type of facility to be built. It goes without saying that there would be nothing useful accomplished for the State to say that the next plant, N.S.P. or someone else is to build, would have to be a geothermal unit. It is unlikely that a power supplier would be able to raise the funds outside federal financing to construct such a project if the economic feasibility of that project alone was to support the indebtedness. Certainly, the state can effect the type of facility through regulations on water availability, air quality standards, etc. Through this type of regulation, the type of facility can be affected by the state as can location. Minnesota is using this kind of regulation as to type and location at present. This is a legitimate function of the state and the only question in my mind would have to do with the severity of the criteria. Certainly, the overriding factor must be the protection of people and property.

2. Location factors do and should affect size and type decisions. Proximity to a population center or natural resource such as a wilderness preservation area should certainly affect the location and type of facility.

3. The question might better be: How is the utility responsibility going to be shared? In the past, the utilities were entirely responsible for their decisions and accepted the consequences of their actions. In the Certificate of Need process, who is responsible if the state agency does not accurately predict the demand for energy and curtailments beyond that which can be met by conservation measures? Is the utility responsible if it cannot get the necessary Certificate of Need? Is the state responsible? The same questions arise on type and location questions. If the state approves a type and location that later is shown to be wrong, who stands the loss? Who is responsible?

It seems to me that making the decisions involves all of the factors listed. Ranking as to weighing who should have the most say and what factors should receive the highest rating should reflect who will bear the most responsibility and be most effected by the decision.

4. At the siting phases, the process should be divided into two phases: (1) Need; and (2) Siting. In the Need phases, only need should be established and in the Siting phases, location and type should be addressed.

5. Basically, end use requirements is an economic question. Government regulation of the results of use, of course, affect the economics of the use. In the past, the prime source of end use energy were electricity, natural gas, propane and fuel oil. Cost and applicability determined which source was used. More recently, availability has been an added factor of great concern and solar is becoming an additional source.

   Through taxes, either punative or incentive, and regulation, the government can effect the availability and cost. I am not certain that government should go beyond that to determine the "right" technology to meet end use energy requirements.

6. Beyond my expertise.

7. The EIS should be part of the siting process. A preliminary EIS could be a part of the application on each site and type of facility. This would assure that only those sites which had a chance of being acceptable would be considered. The State should then perform a final, more detailed EIS on the preferred site or sites.

8. The Certification of Need process should address the question of conservation whether by price incentive, load management or whatever, the EIS should cover the impact of the proposed project at the proposed site using the proposed technology. Unless the government is willing to finance the use of a technology and accept responsibility for its possible failure, either technically or economically, it should not be a proposer of technology, but a regulator of technological use as it affects the health and welfare of the people and the protection of property.

9. Not qualified to answer.

10. If I understand the question correctly, the answer is a qualified no. In the first place, I do not think such a study would be meaningful. The scope of such a study would be such that, providing someone could accurately put it together, I doubt that what it might show could be implemented before the whole situation would change anyhow. Secondly, many of the decisions affecting end use energy requirements are made outside Minnesota and in an environment where the state has no control.

11. The procedures must allow for public inspection at every step in the process through hearings. Also, the courts must remain available to redress wrongs.

At first look, it may seem desireable to have a point beyond which the avenue of using the courts for nuisance suits, etc. could be shut off, however, I do not know if that could be done without shutting out some legitimate issued that the courts may be the last avenue of redress for.

The idea of a public advocate for assisting the public is conducting and addressing the issues of the process is a good one which should be expanded. Beyond that, public intervention and participation should not be funded. The government in a representative democracy is charged with protection of the public interest, it seems to me that to also fund third party activities contravenes that philosophy. If the government is not the representative of the people, who are they?

12. The only market force and incentive worth mentioning is competition. The only competition in the eleetive industry is the competition between the private and public sector. If the municipal rates get out of line with the rate of the private companies, the people in the community will soon decide to be served by the private companies and visa-versa.

In order for thepeople of Minnesota to continue to enjoy the responsible pricing of electric energy they now enjoy, it is necessary that these two sectors of the industry remain strong and viable.

13. The separation of the Certificate of Need and the Siting Process is stated earlier.

14. Reference back to question 12., the people of each subdivision of state government should be allowed to make that decision on their own. If your question is should state government or the federal government operate the utility, the answer is a qualified no. There are some good arguments for government at the state and federal level to operate a competing resource such as is done - New York State with PASNY and the federal hydro power systems. This provides utilization of resource competition. As an exclusive monopoly, I am opposed to either private industry or government monopolies.

15. People who have been through the process are better qualified to answer this question.

Sincerely,

R. G. Kirkham
Executive Director

RGK:me

cc: Joe Vumbaco, MMUA President

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MINNESOTA POWER & LIGHT COMPANY
30 WEST SUPERIOR STREET, DULUTH, MINNESOTA 55802
PHONE (AREA 218) 722-2641

K. A. CARLSON
Vice President
Environmental Affairs
and Land Management

November 3, 1978

Mr. Patrick Reagan, Consultant
Science and Technology Project
Room 17, State Capitol
St. Paul, Minnesota 55155

Dear Mr. Reagan:

Supplementing my letter to you of October 26, 1978, and in response to your recent inquiry, enclosed is a statement from the Environmental Committee of the Minnesota/Wisconsin Power Suppliers Group, the membership of which is described therein.

We realize that this is a rather lengthy statement, but nevertheless hoping that it will be helpful in your analysis. If you decided to have any legislative oversight hearings on this subject, we would be very receptive to participating in them.

Thank you for giving us this opportunity to comment.

Yours very truly,

K.A. Carlson

K.A. Carlson, Chairman
Environmental Committee
Minnesota/Wisconsin Power Suppliers Group

rt

cc Representative Gordon O. Voss

The Environmental Committee of the Minnesota/Wisconsin Power Suppliers Group (M/WPSG) consists of representation from the following public, private and cooperatively owned electric utilities serving Minnesota and Western Wisconsin:

Cooperative Power Association	Minnesota Power & Light Company
Dairyland Power Cooperative	Minnkota Power Cooperative
Interstate Power Company	Northern States Power Company
Lake Superior District Power Co.	Otter Tail Power Company
Minn. Municipal Utilities Assn.	United Power Association

We are writing to provide you with a group response to the questionnaires recently sent out from your office pertaining to the environmental process for power plants in Minnesota. Although this is on behalf of the entire M/WPSG, each of the individual utilities have retained the privilege of responding individually regarding specifics that they feel are important.

After a thorough review of the questions attached to your letter of October 6, 1978, we have concluded that the detailed and complex information necessary to address many of the questions could not be assembled in the time frame proposed. However, we felt that a general response, providing an overview of the existing statutory-regulatory structure and identifying some of the problem areas and difficulties that have arisen would be helpful to your review of the permitting process for Large Electrical Power Generating Plants (LEPGP's). That is the purpose of this letter.

At the outset, we wish to point out that the process (existing regulatory-statutory structure) is generally sound although in practice it has not worked too well. The main problems -- which are discussed in more detail in the following paragraphs -- are lack of predictability in timing "decisions"

(primarily EIS's) and the numerous opportunities to challenge "decisions" under other than power plant siting statutes.

With that as a foreword, we respectfully offer the following discussion of and experience with the regulatory-statutory processes.

An Overview of the Regulatory Process

The regulatory permitting process for Large Electrical Power Generating Plants (LEPGP's) consists of three separate and sequential steps prior to permitting or licensing. These are:

1) Certification of Need (existing time frame: Six months from receipt of substantially complete application)
2) Site Certification (existing time frame: One year after MEQB acceptance of application)
3) Site specific EIS (existing time frame: Minimum eight months depending on review. Without inadequacies, the rules provide for a time frame of about one year for preparation and formal review.)

Each of these stages require the preparation of environmental documentation by the proposer, public input (through formal hearings), and a decision by state agencies. The process is intended to assure public input and to provide a predictable process that settles issues as they arise.

A similar process exists for routing High-Voltage Transmission Lines (HVTL's) beginning with a Certificate of Need. In some cases the HVTL process has worked better than the LEPGP process and in others it has not. The individual Power Suppliers that have had experience with transmission line permitting

will provide specific comments to you in this regard. The comments in this letter, however, will be limited almost exclusively to power plant permitting.

A short discussion of the three steps in the process is provided below. More detail on the requirements for all three steps is included in Attachment No. 1. It must be emphasized that this entire process precedes the general licensing and permitting process that must be completed prior to plant start up under State and Federal regulations. In this regard, it now appears that the total of the environmental and licensing processes could take as much as seven years prior to start up of construction. Thus with 4½ to 5 years for construction, the process can require 11 to 12 years to bring a new plant into service.

Certification of Need

The first step in the environmental review and permitting process for LEPGP's and HVTL's in the State of Minnesota is that of the application for a Certificate of Need. The Certificate of Need is requested from the State Energy Agency (EA) and detailed rules specify the contents of the application and the criteria for assessment of need. The process of determining need involves 1) an application by the utility, 2) the preparation of an environmental report by the EA and 3) public hearings and a review process carried out by the EA after the public hearings. Following the hearings and review, the director of the Energy Agency may or may not issue a Certificate of Need. The Energy Agency's Findings and decision are submitted to the Minnesota Envirnomental Quality Board (MEQB) for review.

There are seven items included in the environmental report which are also specified content requirements for Minnesota EIS (MEIS) and a discussion of

each of these items is required at all three stages of the regulatory permitting process. Consideration of these items is less extensive and detailed in the early stages. These requirements are identified and discussed in Attachment No. 1.

MEQB acceptance of the Energy Agency's decision and the issues determined by the Certificate of Need prohibit those issues from being considered in subsequent environmental review. For LEPGP's these issues include need, the size of the facility, the fuel type to be used, and the expected in-service date.

The rules and regulations require that a decision on the application for a Certificate of Need be made no later than six months from the receipt of the application -- provided that the application is received substantially complete. The formal public hearing must commence no later than 80 days after the receipt of a "substantially complete" application. Although the formal review of the application is required to take place in six months, the information requirements are such that from six months to one year lead time is needed for the proposer to prepare the documentation to support the application and the environmental report. This is necessary to assure that the application is accepted as being "substantially complete" and that sufficient information is submitted to provide a basis for the environmental report. Thus the total process may range anywhere from one to two years from time of initiation of the preparation of the application to final approval of the Certificate of Need.

Site Certification

The second step in the environmental review and permitting process is an application requesting a Certificate of Site Compatibility. Under the Minnesota Power Plant Siting Act, the MEQB has the authority to evaluate and select the sites for larger electric generating facilities (50 MW and greater). Once a Certificate of Need has been obtained (or application has been made), a utility proposer may apply for a Certificate of Site Compatibility. The regulations specify in detail the content of the application and the process that must be followed. The process includes 1) receipt of the application, 2) appointment of a citizen Site Evaluation Committee, 3) preparation of an environmental report by the MEQB Power Plant Siting staff to accompany the application, 4) public hearings and 5) a site decision. These steps are described in more detail in Attachment No. 1.

When an application is submitted to the MEQB, it is reviewed and must be accepted by the Board before the regulatory review process begins. The regulations specify the content of the application. When the application is accepted, the MEQB initiates the regulatory review process. This review process includes a detailed study of the site application and public participation through public hearings and the appointment of a citizen Site Evaluation Committee. The review at this stage cannot reconsider decisions of need, fuel type or any information not related to site differentiating impacts.

The site evaluation is based on a detailed set of criteria which includes: Exclusion Criteria -- those areas designated where power plant sites shall not be located; Avoidance Areas -- those areas that shall not be approved for plant sites if there is a feasible and prudent alternative with lesser adverse

human and environmental effects; and Site Selection Criteria -- site differentiating criteria. The exclusion criteria, avoidance criteria and site selection criteria are specified in the rules.

The environmental report prepared by the MEQB staff and documenting their evaluation of the sites accompanies the proposer's application through the remainder of the process. This environmental report includes a detailed evaluation of the exclusion criteria, the avoidance criteria and the site differentiating criteria as required by the regulations. The report also provides an evaluation of any site that is introduced by any other party than the proposer (all sites evaluated are considered for designation at the siting public hearing). In addition, the environmental report at this stage must contain a continuing evaluation of the seven items in the need application which are the basis of the contents of an EIS. However, any information not related to site differentiating factors and as mentioned previously, any questions of need, size or fuel type cannot be reconsidered as a part of the site environmental report nor in the associated hearings.

Following the hearings, the MEQB reviews the record of the hearings and the hearing examiner's findings and adopts findings of fact. The findings of the MEQB must either designate a site or refuse to designate a site. In any case, the Board must give the reasons for its decision in the written findings of fact. If the Board refuses to designate a site, it must indicate the reasons for the refusal and the changes necessary to allow site designation.

Following issuance of a Certificate of Site Compatibility, the Board may require the applicant to supply such plans and information as it deems necessary to determine whether the plant, as proposed, is in compliance with the conditions of the Certificate of Site Compatibility.

The regulations require that a decision on the application for a site must be made within one year. Although formal review of the application is required to take place within one year, the information and analysis requirements are such that about one year lead time is required by the proposer for the preparation of the documentation to support the application and the environmental report. Since the proposers are reluctant to start site identification studies until a Certificate of Need has been acquired, the time from the initiation of need studies until site certification can be about three to four years.

Site Specific EIS

The final step in the environmental review process is the Minnesota Environmental Impact Statement following the designation of a site. The EIS is prepared by the Minnesota Pollution Control Agency, the designated Responsible Agency within the state. No construction can commence until a final EIS has been accepted by the MEQB as adequate.

The preparation of the EIS is initiated by an EIS preparation notice in the State Register. The draft EIS is prepared by the Responsible Agency and filed with the MEQB. Following the filing of the draft EIS, the Responsible Agency schedules public information meetings to receive comments on the draft EIS. Following these public meetings, a final EIS is prepared and filed with the Board.

The Board may review any final EIS to determine whether the procedures and policies have been adequately complied with. Failure to review a final EIS constitues its acceptance. If the Board determines that a final EIS is inadequate, it must notify the Responsible Agency and must identify in writing

the improvements or additions necessary for Board acceptance of the final EIS. The Board must make a final decision on the adequacy of the final EIS prior to any start of construction.

The draft EIS is prepared by the Responsible Agency, but the Agency can require the proposer to submit any relevant data or information that the proposer as in its possession or to which it has reasonable access. For power plants this has generally meant at least one full year of site specific environmental monitoring and an environmental report that addresses all the issues pertinent to the EIS. Alternative sites, the need for the facility, and any other issues previously determined by the Energy Agency or the MEQB cannot be reconsidered in the EIS. The environmental reports prepared at the siting and need stages and the issues previously determined are to be referenced and summarized in the EIS.

In addition to the seven content items which are common to the ER's for need and siting, the draft EIS must include: A summary sheet describing the action, major environmental impacts (adverse and beneficial), reasonable alternatives, and the federal, state, and local permits required; and a detailed description of the proposed plant including type, size and location, and the environmental setting of the action. The evaluation of the seven items which have been considered, beginning with the Certificate of Need, are intended to receive more detailed and extensive consideration with each step. The EIS consideration is intended to be the most detailed and complete.

CASE HISTORIES -- EXPERIENCE AND PROBLEMS

In order to provide a background of existing experience with the power plant environmental process, three case histories related to need, siting and EIS

will be discussed. Each of these case histories is discussed in more detail in Attachment No. 2. These histories are representative of the power plant siting problems in the State of Minnesota. The three cases illustrate the complications encountered for three different facilities and represent essentially the total history of the power plant permitting process in the State of Minnesota.

Case History on Need

One of the major problems encountered in the Certificate of Need process is illustrated by Case No. 1. It is obvious that the need process has been unpredictable. While the Energy Agency has been most rigorous in maintaining the proper time schedules, the uncertainties that are inherent in need forecasts that are being made ten to twelve years in the future create a situation where exact timing is impossible to predict. Relatively minor changes in forecast variables may result in large changes in forecasted need ten years hence. Since the whole question of need is related to an analysis of forecasts (both the proposer, the EQ and on occasion others) these uncertainties pose significant difficulties in definitively specifying the timing of need for systems.

A second problem encountered at the determination of need also involves the siting process. This is one of those chicken-versus-egg questions; i.e., should need be decided early (recognizing that this maximizes the uncertainty in the forecast) or do you select a site before the plant is shown to be needed. In either case the process raises issues and questions of public acceptance. The way the process is now designed, the proposed site for a new facility is not required at the need portion of the process; thus, public participation in the hearing process by the affected parties (site neighbors)

is not possible. Then, since need has already been determined at the time of siting hearings, it cannot be considered again, thus, to many, providing inadequate input from the affected public.

While the application for a Certificate of Site Compatibility can be made once the application for a Certificate of Need is found to be substantially complete, the proposer is reluctant to start site identification studies until the Certificate of Need has been acquired because of the large amount of unnecessary expense that could be incurred if the Certificate is not granted. This could largely be overcome under the existing process if 1) we recognize the uncertainty in forecasts and allow some time flexibility in the Certificate of Need and 2) get some progress on the inventory of candidate areas. This would assist the proposer in starting earlier on the site identification process without needing to worry that the Certificate of Need will be withdrawn. It would also allow those persons that would be affected by a site in one of the candidate areas to participate in the need process where the need is to occur in some general geographic area.

We suggest that better use of information that is already required may help to alleviate these difficulties. Section 116C.54 of the Power Plant Siting Act requires biennial reporting of the 15-year forecasts of the electrical utilities and a forecast has been prepared for the period 1978-1992 by the M/WPSG. This 15-year advance forecast gives an overall view of electrical power requirements in Minnesota, and must be updated at least every two years.

It appears to us that the forecast requirements in the Certificate of Need application could be simplified by making better use of this forecast with some supplemental information for a specific system addition. This would avoid the duplication of preparing two separate forecasts and would provide a

complete picture of the electrical power requirements for Minnesota (which should assist the director of the EA in his determination of need). If we recognize that there is uncertainty in the advance forecasts and allow some time flexibility in Certificates of Need, these problems could be resolved with the existing structure.

Case History on Siting

The second case history illustrates the two most significant problems that have been encountered with the siting process. These are 1) the legal requirement that any site other than those proposed by the applicant be selected from the inventory of candidate areas and 2) the process can continue for an indefinite period of time without a site being selected because of the numerous appeals and delays that can be used (there is not now a point in the process where the decision is final). The second problem also applies to the EIS process as shown in the third case history.

The legal requirement for an inventory of candidate areas poses a great uncertainty in the siting process. As long as an inventory has not been completed and the requirement exists that at least one of the proposed sites is included in the inventory, legal challenges can extend the siting process indefinitely. There is a real need to complete the inventory if the existing structure is going to work.

The challenge to the final siting decision in the case history presented occurred under the power plant siting laws and regulations. It is important to recognize that additional challenges to a final decision may be made under other environmental laws -- specifically the Minnesota Environmental Rights Act (MERA) and the National Environmental Rights Act (NERA). Thus, while the

court decision in the case history presented was based on rulings under the Power Plant Siting Act, additional challenges are still possible under MERA and NERA.

Some discussion of this general problem as it relates to specific transmission line siting cases will be provided by individual power suppliers.

Case History on MEIS

Problems encountered in the EIS process are illustrated by Case History 3. In this case (and in other EIS's), the time for preparation of draft EIS greatly exceeded the time frame specified by the regulations. In addition to the delay in preparation of the draft EIS, delays have occurred because of inadequacies in the final EIS and in procedural problems that have arisen with the Responsible Agency. There have been delays in completion deadlines and there have been attempts to reconsider issues. Additional procedural problems have occurred which create more delays in the EIS process.

Most of the difficulties in the EIS process could be eliminated by a more reasonable timing structure and by the Responsible Agency respecting statutory and regulatory requirements.

It should be recognized that the entire environmental process for power plants is in fact an extended EIS process. Thus, although many of the issues such as need, type, size, alternative sites and any other issues previously determined by the EA and MEQB cannot be reconsidered in the EIS, the information relative to these issues is a part of the EIS process and is intended to be summarized in the EIS document itself. Further, although permitting and licensing questions are not normally a part of the EIS process, these issues have been

NSP REGULATORY EXPERIENCE IN POWER PLANT SITING AND TRANSMISSION ROUTING

With passage of the utility-related state environmental legislation of the last five years, the regulatory process for plant siting and transmission routing for utilities has entered a new dimension. What was once largely a unilateral decision by a utility to site facilities is now a state administered public process with increasing citizen involvement. NSP has been, and continues to be, an advocate of the open planning process for the development of major power facilities. Because of the varied impacts of these facilities, we support the public process for evaluating and weighing the technical, environmental, social, and economic factors necessary to achieve reasonable and balanced decisions on projected energy facilities.

In a separate document, the Minnesota/Wisconsin Power Suppliers Group, of which NSP is a member, is submitting comments about the overall process. Our remarks are intended to summarize NSP's experience with the need, siting, routing, and permit phases, together with some thoughts for improving the process.

The regulatory and construction lead time for a fossil fuel power plant in Minnesota is now approximately 10 years. The regulatory processes - Need, Siting, EIS and Permits - now account for over five years of this time. In general, NSP has encountered the following problem areas with the present regulatory system:

1. Time delays

   - The most significant example of this has been the Environmental Impact Statement (EIS) process for SHERCO 3 and 4 which has been under consideration for over two years.

2. Non-finality of decisions

- Decisions of state agencies are subject to judicial review which lengthen the total process. This problem occurred with the Twin Cities-Forbes 500 kv line and resulted in significant delays.

3. Duplication of efforts at the state and federal levels

- On the Forbes-Winnipeg 500 kv line, the state completed an EIS, and the Federal Department of Energy also was required to prepare an EIS. This has caused a timing and scheduling problem; however, it is unlikely the state legislature could have prevented it. What it does point out is the need for close coordination among all entities involved in a project.

Summarized below are some of our experiences with the various phases of the process: (1) Need, (2) Plant Siting, (3) Plant EIS, (4) Permits, and (5) Transmission Routing.

NEED PROCESS

Planning major facilities is a complex process. It involves preparation and analysis of electrical load forecasts; on-going study of reserve requirements; economic and technical analysis of power supply alternatives; coordination of plans with members of the Mid-Continent Area Power Pool, of which NSP is a member; and coordination with other power suppliers.

Minnesota Energy Agency (MEA) rule EA502 states that any person desiring to construct large electric generating facilities and/or high voltage transmission lines shall receive a Certificate of Need prior to commencing construction of such a facility. A utility usually begins preparation of the necessary applications 6 to 12 months prior to their submittal. Once submitted, the MEA Director has six months in which to make a decision on the size, type and timing of the proposed facility.

NSP has applied for three Certificates of Need. In all three cases decisions were received in 6-9 months, as shown below:

	SHERCO 3 & 4	1986 Unit	WTC-500
Application Submitted Date	10-14-75	8-30-76	12- 5-75
Certificate of Need Receipt	4-12-76	5-24-77	6- 4-76
Elapsed Time	6 months	9 months	6 months

In December 1977, after the Certificates of Need for SHERCO 3 & 4 and the 1986 Unit had been issued, NSP advised the MEA of a revision of our forecast. Since that time the SHERCO 4 and 1986 Unit Need Certificates have been revoked and a hearing on the timing of the SHERCO 3 facility has been scheduled. In general, our experience with the Need process indicates that it has worked as originally intended in a timely manner.

PLANT SITING EXPERIENCE

The second stage in the regulatory process for a power plant is to receive a Certificate of Site Compatibility from the Minnesota Environmental Quality Board (MEQB). At least one to three years prior to submittal of an application, NSP undertakes a systematic study of certain geographic areas to select alternate locations for a projected facility. Analysis includes use of the MEQB Rules 71 - 82 and other factors as a guideline to narrow the siting study area. An application, which must include consideration of at least two sites, is prepared and submitted to the MEQB. Minnesota plant siting rules state that the MEQB will issue a decision within one year, with provision for a six month extension if necessary.

The only site for which NSP has received a Certificate of Site Compatibility is for the SHERCO 3 and 4 units. We filed an application on November 1, 1974, and approximately one year later, on November 10, 1975, we received a Certificate. This process has flowed quite smoothly in our limited experience with it.

PLANT EIS PROCESS

The next step in the regulatory process for power plants is preparation of an EIS. The MEQB administers the EIS process; however, for power plants the Minnesota Pollution Control Agency (MPCA) is designated the responsible agency and actually prepares the EIS. The MPCA has 120 days in which to prepare a draft EIS, which then is presented at public hearing. Final approval of the EIS is made by the MEQB with the public hearing and MEQB approval processes taking approximately three months.

The state Environmental Impact Statement (EIS) applies to many projects which affect the environment, including power plants and transmission lines. The purpose of an EIS as stated in 6MCAR § 3.021 is to:

> "....provide information for agencies and private persons to evaluate proposed actions which have the potential for significant environmental effects, to consider alternatives to the proposed actions, and to institute methods for reducing adverse environmental effects. An Environmental Impact Statement is not a document to justify an action, nor shall indications of adverse environmental effects necessarily require that an action be disapproved. It is to be utilized as a guide in issuing, amending, and denying permits and carrying out the other responsibilities of public agencies to avoid or minimize adverse environmental effects and to restore or enhance environmental quality consistent with the Act."

NSP's experience with the EIS process for power plants has been limited to the proposed addition of SHERCO Plant Units 3 and 4; however, the preparation of the SHERCO 3 and 4 draft EIS provides a good illustration of the delays that can occur. An example of the magnitude of the time delays is reflected in the chart listed below:

DATE	ACTIVITY
November, 1975	Designation of the PCA as the Responsible Agency for preparation of the EIS.
February, 1976	Submittal by NSP of available information (in the form of an Environmental Report) to the MPCA.
April, 1976	EIS preparation notice issued to MPCA by the MEQB.
August, 1976	Expected completion date for draft EIS.
July, 1976	Request by the MPCA for a seven month extension of the deadline for preparation of the draft EIS.

DATE	ACTIVITY
March, 1977	Additional three month extension granted to the MPCA for preparation of the draft EIS.
July, 1977	Distribution of draft EIS for comment
November, 1977	Public hearing on draft EIS.

As indicated above, 20 months after the order to prepare an EIS, the Final EIS had not been submitted to the MEQB for approval.

The problem areas encountered and resultant delays have been in the areas of: (1) the definition of an EIS, (2) the undefined time frame for EIS preparation, and (3) the adequacy of an EIS.

1. The Definition of an EIS

In our opinion there is a widespread misunderstanding of the purpose of an EIS. Some of the public and agency personnel believe an EIS is a decision document and not an objective evaluation of impacts as it is intended to be. In the SHERCO EIS process some groups opposed to the plant believed the EIS itself could conclude that the units could or could not be built. Other people thought the EIS should discuss need and evaluate alternate sites. However, both need and siting issues had been decided in previous processes. The MEQB is presently developing a program to increase public awareness and understanding of the entire regulatory process for proposed power plants which hopefully will help alleviate the confusion regarding the EIS.

2. The Undefined Time Frame for EIS Preparation

NSP's experience on the SHERCO plant confirms that the amount of time allotted for preparation of an EIS in the regulations is unrealistic. The 120 days allowed for preparation of a draft EIS may be appropriate for a small project but is inadequate for a large project. For a large power plant eight to ten months is more appropriate. In providing for a longer time period, a procedure should be established to ensure that the draft EIS is prepared in the allotted time. Currently, since there is no procedure to cover progress on EIS preparation, the MEQB has no alternative but to grant an extension to the deadline if the draft EIS is not finished in the allotted time.

3. The Adequacy of an EIS

There is also considerable confusion on the content of an EIS. The EIS regulations require that information or relevant data which the proposer has in its possession or to which it has reasonable access be made available to the responsible agency. However, the regulations do not define the term "reasonable".

In the SHERCO EIS process there have been numerous conflicts over the amount of data that needs to be included in the EIS. Agencies and intervening groups have perceived that all questions need to be answered in an EIS. We recognize the need for decision makers to have enough information to make informed, and proper decisions on the issuance of permits. However, we also realize that no document can ever answer all possible questions regarding the impacts of a generating facility. Information in an EIS should be limited

to that which is needed to answer the vital questions regarding the impact of the facility. The lack of information that is interesting but not vital to the decision making process should never justify delay in the completion of an EIS.

PERMIT ACQUISITION

Once an EIS has been approved, the next step is the issuance of permits. These include such permits as an air quality installation permit, surface and ground water appropriation permits, a National Pollutant Discharge Elimination System permit (NPDES), and a Prevention of Significant Deterioration permit (PSD). Acquisition of these and other permits normally takes 9 to 12 months after the acceptance of a Final EIS.

Delays that occur in the EIS and permit issuance stages become critical to project in service dates and cost. This is because the permits are the last items to be received before construction begins. While the permits are being processed, NSP is establishing a construction schedule and approving bids for construction materials and delivery. Delays can result in missing a summer construction season and forcing a compressed construction schedule. If the in service date is to be met time has to be made up by construction during winter and double shifting, both of which escalate the cost of the unit and the energy used in construction.

COST

NSP costs incurred for the regulatory process for SHERCO 3 and 4 through September 1978 have amounted to $1.4 million. Of this amount $430,000 was contributed to the state for preparation of a draft EIS. It is expected that an additional $600,000 will be required to complete the regulatory process for SHERCO 3.

TRANSMISSION LINE ROUTING EXPERIENCE

NSP's experience with transmission line routing under the Power Plant Siting Act and the Environmental Policy Act has been somewhat different from its experience in locating and licensing generating units. This is due, in large part, to the differences in the types of permits that are required for transmission lines versus power plants. The MEQB construction permit (Power Plant Siting Act) is the only major state permit required for the construction of a transmission line. In both the 1973 and 1977 versions of the act the legislature set time limits within which the MEQB is required to act on granting or denying the construction permit. Since the MEQB construction permit is the final permit required the EIS must be completed in the same time frame that the MEQB has to act on the permits. This time requirement coupled with the MEQB's efforts to adhere to the time limit has resulted in fairly smooth and timely preparation of EIS and decision on permits. NSP has had no experience since the law was amended in 1977 but under the 1973 law we received permits in most cases within the time limits specified (as shown in the following table):

	Twin Cities - Kettle River 345-500 kv Line	Forbes - Int'l Border 500 kv Line
Corridor		
Application Submittal	1-20-75	12-12-75
Permit Acquisition	7- 8-75	5- 7-76
Elapsed Time	6 months	6 months
Route		
Application Submittal	2- 2-76	6-24-76 *3- 3-77
Permit Acquisition	8- 4-76	2-8-77 *8-19-77
Elapsed Time	6 months	8 months 4 months

* Because of some inaccuracies in the environmental information the MEQB restudied a 15 mile long portion of this project.

Although the process has gone quite smoothly in the past, we are concerned about the increasing length of the regulatory activities. The year long MEQB process with an EIS included is but one small segment in the construction of a transmission line. Typically, regulatory plus construction time for a long (100 mile) transmission line is six to eight years.

(Need Application Preparation	8 months
* (Certificate of Need Process	6 months
(Environmental Report Preparation	1 year
MEQB Process	14 months
Land Acquisition	1½ years
Engineering	6-8 months
Construction	2-3 years
TOTAL	6-8 years

* Some overlapping of these activities occurs

Since the need for most transmission lines is based upon the operation of a transmission system, it is difficult to determine the long range need for future facilities. Often the exact year a transmission line is needed is known only 4-6 years in advance of that time. With the regulatory and construction time taking 6 to 8 years any unforseen delays can cause in service dates to be missed. Two examples of these unforseen delays are illustrated below.

On the Twin Cities to Forbes project a group of citizens petitioned to intervene under the Minnesota Environmental Rights Act on August 4, 1976, the day of the final MEQB decision. They (the citizens) claimed that the MEQB did not properly weigh environmental factors when locating the transmission line. The MEQB did not allow this intervention and the group sued the MEQB. Ultimately the case was decided in favor of the citizens by the Minnesota Supreme Court. The Supreme Court decision and the administrative steps that followed were finally completed October 12, 1978, more than two years after permit issuance. This line was scheduled to be in service by November 1, 1978.

Fortunately, the court case involved only five miles of line so construction could proceed on most of the remainder. We now expect this line to be completed in the summer of 1979 (barring any additional lawsuits). The cost to the customer because of this delay will be approximately $50,000 to stop and restart the contractor and $300,000 per month (for each month of delay) in increased project costs due to interest accumulating on the material and labor to build the line.

On the Forbes-International Border, 500 kv line major permits are required from both the state and federal governments. As noted earlier, the MEQB process was completed July 19, 1977. The federal permits were applied for in April 1977 and we hope to have these permits by January 1, 1979. In the last 1½ years the Department of Energy has written a second EIS on the project and circulated it for review. This part of the 500 kv project is scheduled to be in service by May 1980 and this in service date is in serious jeopardy. The cost to the customer, if delays result, will have two components: (1) Cost to purchase or generate energy to replace the cheaper Canadian energy. That cost is estimated to be $850,000/month for the months of April-October and $50,000 per month for the remaining months; (2) Increased project costs due to interest on the labor and material needed to build the line which will run approximately $400,000/month for each month of delay beyond May 1980.

It is unlikely the state legislature could have done anything to help resolve these problems. We bring them up only as illustrations of the types of problems encountered in building a major transmission line. These and other uncontrollable factors such as strikes, poor construction seasons, material shortages, etc., will cause projects to have longer regulatory and construction time than planned.

The long regulatory and construction process is causing us to make premature decisions on the need for some facilities. In turn, making these premature decisions may foreclose certain viable options that would benefit both the environment and the rate payer.

SUMMARY

The regulatory process for new power plants and transmission lines, with the exception of the EIS, works reasonably well. It provides for thorough environmental review, public input, and a public forum in which discussion on the various impacts of a large project can occur. It should be recognized that the process is relatively new. With the exception of the modifications listed below, we believe the procedures should be allowed to function as the legislature originally intended.

1. Our experience with the EIS process has shown that it is very time consuming. In the future, delays of the magnitude encountered in SHERCO could result in substantial cost and have the potential for jeopardizing system reliability. The Responsible Agency needs to be held accountable to complete an EIS within a reasonable time period of 8 to 10 months. An additional three months for review and hearings is an adequate amount of time for completion of the EIS and transmittal to the MEQB.

2. The permit process for acquiring major permits for power plants also has no specific time frame for completion. This creates problems for the utility in scheduling a date to begin construction and to place the plant in service. When reviewing the entire regulatory time frame, a specific period of time for permit procurement should be established.

3. As was illustrated in the 500 kv transmission project, the agency's final decisions often are not really final since they are subject to judicial review. After agency issuance of permits, there are time limits within which parties can seek judicial review. However, no such time limit applies for lawsuits brought under the Minnesota Environmental Rights Act. In order to reduce the uncertainty over possible lawsuits long after the "final" decision, the legislature should establish a 60 day time period following an Agency decision within which a suit may be brought under the Minnesota Environmental Rights Act.

4. Decisions at all stages of the process affect the cost of facilities, which in turn affect electric rates. Because the Minnesota Public Service Commission (PSC) regulates those rates, the PSC, therefore, should actively participate in the regulatory process.

In conclusion, we emphasize that we support the statement by the Minnesota/Wisconsin Power Suppliers Group. We believe the process is basically sound and with the addition of some time limits on parts of the process, orderly and timely decisions will result.

A W BENKUSKY, General Manager
Environmental & Regulatory
Activities Department
November 2, 1978

SUMMARY OF RATE REGULATION PROCEDURES

NSP's electric and gas rates are regulated by the PSC under Minn. Stat. 216B.16. Rate filings are made when needed pursuant to the Commission's comprehensive filing rules.

A rate increase request is commenced with a notice to the Commission of the increase proposed together with the new rates, supporting testimony and exhibits and back-up data. NSP's most recent electric rate case filing was about 475 pages.

The Commission's normal procedure in general rate increases is to issue an order two to three weeks after the filing setting the matter for hearing before the Office of Hearing Examiners, suspending the effective date of the rates within the three-month statutory period, and providing for a bond or corporate undertaking to insure that refunds will be made if ordered at the end of the twelve-month hearing process. In this way, the utility is given the opportunity to actually receive in revenues the amount that the PSC has determined it is entitled to after a year of hearings. Without rates under bond, there would be unreasonable regulatory lag and

potential deterioration of utility credit ratings and service. With recent inflationary trends, several courts have held that if rates under bond are not allowed, the Commission must give the utility an allowance in its rates to compensate for this attrition in earnings. Minnesota regulation addresses the problem directly and positively. A summary prepared for state legislative commissions and committees discussing this in more detail is enclosed.

Questionnaire Numbers 18-23 include inquiries about how a utility determines the need for a rate increase. NSP determines its revenues, expenses and investment for rolling two year budget periods. Cost of service studies are developed from this data to determine the anticipated rate of return for the period under study. When these studies show that the Company will be earning a rate of return significantly below the rate of return granted by the Commission for the gas or electric business, the Company prepares for a rate increase filing. This process is based on the detailed budgets prepared by the supervisors and managers who are actually responsible for the expenditures. Budgets are extensively scrutinized and reviewed by NSP's budget control personnel as well as by various levels of management,

including the chief executive officer. A rate case is based on cost data for a 12-month period called the "Test Year" which is usually coincident with the period of time that hearings are in progress and rates are collected under bond.

The questionnaire also asks about current rate increase filings. We have a gas rate increase pending before the PSC. NSP did not file an electric rate increase application during 1978 and hopes that the next request can be deferred until mid-1979. This has been possible in part by tight control of labor-related expenses. The Company will achieve its goal of no growth in number of employees during 1978. Other management efficiency initiatives and external circumstances with a positive financial impact contributed to good performance. NSP operates on the premise that costs incurred must produce a commensurate positive benefit. PSC rate determinations are by law supposed to give NSP the opportunity to earn a return commensurate with businesses with similar risks in the competitive sector. In no way are public utilities "cost plus" businesses nor do they have a guaranteed return. The Company does its best to actually earn the return set by the PSC. Since the Company came under regulation in Minnesota in 1975 and filed on a budget test

year, it has never actually earned for its investors the rate of return found by the PSC to be fair and reasonable.

As to future proceedings, these will be dictated by inflation and to some extent the in-service dates for new plants. NSP's experience has been that because no current earnings have been allowed by the PSC on construction expenditures made over the ten or more years required to build a power plant, when a plant does go on line, the rates must be adjusted at that time to provide depreciation and return on both the dollars invested in the plant and the accumulated interest on the funds used to construct the plant. The 1978 legislature amended Minn. Stat. 216B.16 to specifically authorize the PSC to consider putting some construction work in progress (CWIP) in the rate base so that current earnings and cash flow could be improved. Minnesota Power and Light Company's severe financial problem was explained to the legislature during that session. The PSC Staff, however, has recommended against inclusion of CWIP in rate base with current earnings on said investments in the pending MP&L case. The questionnaire asks what rate requests have been made and granted in the past ten years. A summary is attached.

Good regulation depends primarily on the quality of the regulators. One can have imperfect statutes but fair

regulation, and one can have a statute designed to treat all interests as fairly as possible while the regulators exercise "judgment" in ways that produce widely varying and often unfair results. The Minnesota statutes for the most part provide a reasonable framework for fair regulation. There are some problem or potential problem areas:

1. Appeals by Strangers. Minn. Stat. 216B.52(1) provides:

> "Any party to a proceeding before the commission or any other person, aggrieved by a decision and order and directly affected thereby, shall be entitled to appeal from such decision and order of the commission. The proceedings shall be instituted by serving a notice of appeal personally or by registered mail upon the commission or one of its members or upon its secretary, and by filing the notice in the office of the clerk of the district court of the county of Ramsey or of the county in which the appellant resides or maintains his principal place of business, all within 30 days after the service of the order and decision of the commission or in cases where a rehearing is requested within 30 days after service of the order finally disposing of the application for the rehearing, or within 30 days after the final disposition by operation of law of the application for rehearing. The notice shall state the nature of the appellant's interest, the facts showing that the appellant is aggrieved and directly affected by the decision, and the grounds upon which the appellant contends that the decision should be reversed or modified. Copies of the notice shall be

> served, personally or by registered mail, not later than 30 days after the institution of the appeal, upon all parties who appeared before the commission in the proceeding in which the order sought to be reviewed was made. The commission and all parties to the proceeding before it, shall have the right to participate in the appeal. The court, in its discretion, may permit other interested parties to intervene."

Similarly, the rehearing section Minn. Stat. 216B.27(1) states:

> "Within 20 days after the service by the commission of any decision constituting an order or determination, any party to the proceeding and any other person, aggrieved by the decision and directly affected thereby, may apply to the commission for a rehearing in respect to any matters determined in the decision. The commission may grant and hold a rehearing on the matters, or upon any of them as it may specify in the order granting the rehearing, if in its judgment sufficient reason therefor exists."

Under these statutory provisions, anyone affected by a rate case presumably can take an appeal even though he did not participate at the administrative level. This is an unusual procedure in Administrative Law. It can create serious problems when one can circumvent the fact finding function of the PSC and seek court review of an Order. These problems could be eliminated by making the following changes in these provisions of the Minnesota Public Utilities Act:

216B.52(1)

"Any party to a proceeding before the commission who is ~~or any other person~~, aggrieved by a decision and order and directly affected thereby, shall be entitled to appeal from such decision and order of the commission."

216B.27(1)

"Within 20 days after the service by the commission of any decision constituting an order or determination, any party to the proceeding ~~and any other person~~, who is aggrieved by the decision and directly affected thereby, may apply to the commission for a rehearing in respect to any matters determined in the decision."

7 Charitable Donations. Although the 1978 legislature amended Minn. Stat. 216B.16(9) in a way that compromised the positions of the advocates for no charitable donations in rate case expenses and the charities who wanted reasonable charitable donations as a part of the utility cost of service by splitting the difference, since that amendment, the PSC in both NSP and Minnegasco's rate cases have allowed no charitable donations. The statute seems clear as drafted that 50% of qualified donations shall be allowed if the amounts claimed are prudent. In view of the PSC orders, the legislature should clarify the issue. The following amendment could be used:

> "Subd. 9. The Commission shall allow as operating expenses 50 percent of the charitable donations of the utility which qualify under Minnesota Statutes, Section 290.21, Subdivision 3, Clause (b), except that the commission may disallow a portion of those charitable donations if the Commission finds that the amount expended is imprudent, but the Commission may not find that all expenditures for charitable donations are imprudent."

3. Used and Useful Test. The PSC has decided under Minn. Stat. 216B.16(6) that it must find that expenses or investments must be used and useful to current ratepayers before they can be considered in the costs or investments used to compute rates. This unreasonably narrow standard has precluded utilities from recovering research expenses for peat gasification and methanol production, has excluded from rate base (as construction work in progress) the preliminary design and survey expenses for plants and expenditures for specific projects not fully licensed or approved, and has excluded from rate base property acquired for future use. The term "used and useful" is a vestige from the ratemaking period when some utility property was valued at its current cost under "fair value" ratemaking. In that context, it made sense not to hypothecate utility plant at present day costs for the purpose of calculating

a rate base if the plant was not used and useful. Our statute mandates that only the original cost of public utility plant can be included in the rate base. It should then be the objective of regulation to give the utility a return on the money that it has prudently invested for the benefit of its customers, present and future. Competitive businesses surely price that way. The Commission's current practices mean that the utility investor is told that adequate utility service must be provided in Minnesota for the indefinite future as part of the public utility obligation, but:

1) you can't earn on that investment until it is shown that there is a direct usefulness to present ratepayers,

2) when you do earn on that investment, it will be at a profit margin that is lower than industrial and commercial enterprises, and

3) even though the investment is prudently made, you can never earn a return from it until it becomes used and useful.

This type of regulatory treatment is not only shortsighted and out of date, but it can adversely affect the quality, quantity, cost and risk of providing utility service in Minnesota. The statute should be amended because the PSC now feels that it is constrained legally by a used and useful standard. The prudent investment test should be the standard

in Minnesota when the PSC is bound to an original cost depreciated valuation method. The applicable change is:

Minn. Stat. 216B.16

> "Subd. 6. The commission, in the exercise of its powers under this chapter to determine just and reasonable rates for public utilities, shall give due consideration to the public need for adequate, efficient, and reasonable service and to the need of the public utility for revenue sufficient to enable it to meet the cost of furnishing the service. In setting said rates, the commission shall provide the utility a fair and reasonable return on its public utility investments prudently made, an adequate provision for depreciation of its utility property, and shall give due consideration to construction work in progress, to offsets in the nature of capital provided by sources other than the investors, and to other expenses of a capital nature. For purposes of determining rate base, the commission shall consider the original cost of utility property included in the base and shall make no allowance for its estimated current replacement value."

3. "Legislative" or Administrative Agency Posture of the PSC. Although the Commission is an administrative agency of the state and its jurisdiction over electric and gas utilities is set forth in Minn. Stat. 216B, the Commission proceedings and court review indicate a trend to far-reaching legislative and social welfare activities which to some extent are fostered by Ch. 216B, are not constrained by judicial review under Minn. Stat. 15.0425, and generally not supported by evidence in proceedings before the Commission.

These include the Commission's initial decision in NSP's 1977 electric rate case that lifeline rates be instituted (subsequently changed to the conservation rate break); the refusal to follow Minn. Stat. 216B.16(9) on charitable donations; the policy set forth in North Central Public Service Company Docket 77-221, (December 30, 1977) wherein the utility rate of return will mechanically be set at the level testified to by the lowest expert witness, unless there has been a "knock-out" scored on cross-examination of that witness; and the "Catch-22" on working capital studies which for three successive rate cases gave NSP no return for working capital requirements.

The problem to some extent stems from the Supreme Court ruling in St. Paul Area Chamber of Commerce v. Minn. Public Service Com'n, (1977) MN 251 NW2d 350, where the Commission's rate tilt in favor of the residential class was upheld as an action "in a legislative capacity balancing cost and non-cost factors." Basically, the court has said:

> "Combining this rule with that adopted above for factual determinations, we may summarize as follows:

> (a) When the Public Service Commission acts in a judicial capacity as a factfinder, receives evidence in order to make factual conclusions, and weighs that evidence as would a judge in a court trial, it will be held on review to the substantial-evidence standard.
>
> (b) When the Public Service Commission acts in a legislative capacity as in rate increase allocations, balancing both cost and noncost factors and making choices among public policy alternatives, its decisions will be upheld unless shown to be in excess of statutory authority or resulting in unjust, unreasonable, or discriminatory rates by clear and convincing evidence." 251 NW2d at 358.

This sounds good in general, but in a rate case the point at which the Commission shifts from "judicial" to "legislative" functions is not clearly delineated in its orders, and it is quite clear that legislative considerations are being imposed onto purely factual issues for social purposes.

Some of the statutory provisions that foster this thinking and which can be changed to give the PSC policy direction from the legislature at this time include:

1. Remove from Minn. Stat. 216B.03 which generally provides that rates shall not be unreasonably preferential, prejudicial or discriminatory, the sentence "Any doubt as to the reasonableness should be resolved in favor of the consumer."

Although we believe this was meant to resolve problems concerning individual customers where the applicability of a specific rate or service rule might be in doubt, it has been used in rate case determinations to move from a weighing of the available evidence for decision making purposes, to summary disregard of substantial dollar impact cost of service issues because the PSC had "doubt" as to whether the utility had carried the burden of proof. In other words, if the issue were whether the utility's cost for an item was $100 or some lesser amount, the PSC would choose zero because of "doubt" rather than analyzing the components of cost and attempting to find the proper amount based on the underlying evidence.

Under Minn. Stat. 216B.16(4), the burden of proof is always on a public utility seeking to establish a rate change, as is the burden "in all proceedings before the commission in which the modification or vacation of any order of the commission is sought, the burden of proof shall be on the person seeking such modification or vacation" under Minn. Stat. 216B.56, so no additional presumption concerning customers is really necessary.

2. In Minn. Stat. 216B.27(5) concerning rehearings, change the words "legislative powers" to "administrative

agency powers" so as to clarify the basic status of the PSC.

3. Add to Minn. Stat. 216B.08 concerning duties of the Commission a sentence which would require the Commission to have factual evidence as the basis for its decisions.

> "The Commission shall base its determinations and orders in contested cases and rulemaking upon substantial evidence presented on the record in such proceedings."

In this way, the Commission will have a firm anchor on which to exercise its duties and all parties will have the obligation to back up their proposals with the facts that are necessary to make hard decisions correctly.

Northern States Power Company (Minnesota)
State of Minnesota
GAS AND ELECTRIC RATE INCREASES
1968 - Present

Docket No.	Jurisdiction	Effective Date	Revenues Approved In Thousands Amount	Percent
ELECTRIC				
	Ind. Municipalities	01/01/68	$ 5 529	4.1
	St. Paul	03/69	1 310	4.7
	Ind. Municipalities	06/01/71	17 349	8.4
	St. Paul	01/28/72	1 700	4.6
	Ind. Municipalities	03/19/74	40 338	15.1
	St. Paul	05/15/75	7 315	16.2
ER2-1	Minn. Commission	02/02/75	38 640	10.4
E002/GR-76-934	Minn. Commission	06/02/76	32 696	7.2
E002/GR-77-611	Minn. Commission	06/20/77	$37 896	8.0
GAS				
	Ind. Municipalities	08/29/68	$ 711	5.4
	White Bear Lake	12/31/68	35	5.4
	West St. Paul, So. St. Paul, St. Paul	06/29/70	424	1.9
	Ind. Municipalities	02/02/71	2 470	6.1
	West St. Paul, So. St. Paul, St. Paul	07/03/72	2 551	10.5
	Ind. Municipalities	03/19/74	2 229	6.4
	St. Paul	08/08/74	2 100	6.4
G002/GR-76-3627(EF)	Minn. Commission	12/19/76	5 481	6.1
G002/GR-77-1015(MV)	Minn. Commission	11/17/77	$ 238	4.9

REGULATORY REVIEW AND PUBLIC PARTICIPATION

Public concern about energy development has grown dramatically in the last few years. Expression by the public of concern for how and where we build new facilities has had significant impact on Northern States Power Company in many areas. NSP was a leader among utilities in developing the open planning process for energy siting and we are convinced it helps in reaching better decisions. The first citizen plant siting task force was initiated by NSP in 1971 to help select what eventually became known as the Sherco site. Public concern about the visual impact of transmission lines has led us to use of more aesthetically designed structures and to more careful routing studies. We believe the public that does participate has something to say of importance and we ought to listen and be as responsive as practicable.

Minnesota's regulatory review process for energy facility approval and for ratemaking provides for broad public participation. It has been our experience that various segments of the "public" do take part in these procedures and contribute to the record upon which these important decisions are based.

All of the utility regulatory procedures are governed by the Administrative Procedures Act. This means that our applications for certificate of need, site compatibility, construction permit for a transmission route and rate increases all go through the relatively formal procedures of a hearing officer presiding,

sworn testimony, intervenors, cross examination of witnesses, etc. The Hearing Examiners Office has generally given broad latitude to the public in allowing statements to be made without being sworn, questions to be asked of utility witnesses and agency staff, and has made other accommodations to ensure that citizens have a chance to take part. Although this is perhaps necessary, it has at times created a sense of expectation by those participating that many times is not fulfilled when the final decision is made by the agency.

Perhaps those administering the process could do a more thorough job of explaining the different ways to participate and how one way may have more impact than another. The new public Advisor may help this situation in siting and routing by providing a better explanation of the difference between carefully prepared testimony directed at the criteria to be used in making a decision and testimony which merely vents one's anger, frustration or displeasure with the proposal. There also seems to be some perception that public participation means the same as decision making.

Many members of the public expect to see the Environmental Quality Board members at the hearing listening to the testimony on a site or route. They expect to see the Director of the Energy Agency at Certificate of Need hearings and the Public Service Commissioners at the rate hearings. I believe this contributes to the creation of a feeling of distrust about the process because the ultimate decision-makers are not there to hear what they have to say.

This past year NSP and other utilities publicly announced all of the site areas that were being considered for a plant in the late 1980's. The purpose of that effort was to seek public participation and reaction from people in those locations before an application for site certification is prepared. The result was that opposition developed at all the sites being considered but in some locations support also surfaced. Concerns were expressed that will eventually be helpful in how and where we propose a plant and although the plans for that plant have been delayed due to a revised forecast, the knowledge we gained will eventually be beneficial. On the other hand, those who will organize to oppose the plant will have been given that much more time to do it.

Finally, we need to recognize that providing for broad public participation does not necessarily mean that such will be constructive. Many of the directly affected citizens do not want to participate in a constructive manner because that will help make a decision. Many simply do not want a decision at all. Some citizens have positions that simply cannot be satisfied, i.e.; (1) we do not need any more electricity, (2) put it someplace else and (3) lower rates for me. Changing the methods of providing for public participation will not satisfy these kinds of concerns.

Each time one of these procedures is completed the public becomes better informed and understands more about how to participate. However, when constant statutory or rule changes are made it creates

confusion and misunderstanding, particularly for those who are only involved part time. Stability in these processes is needed and will help the public to know what is going to happen next and how to more effectively be a part of it.

M L Anderson, Manager
Public Affairs
November 1, 1978

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