STATE OF MINNESOTA
BEFORE THE
MINNESOTA PUBLIC UTILITIES COMMISSION

LeRoy Koppendrayer
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Marshall Johnson
Commissioner
Kenneth Nickolai
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Tom Pugh
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Commissioner

In the Matter of the Application of Northern States Power Co. (d/b/a Xcel Energy) for a Certificate of Need to Establish an Independent Spent Fuel Storage Installation at the Monticello Nuclear Generating Station

OAH Docket No. 12-2500-16407-3
PUC Docket No. E-002/CN-05-123

REPLY BRIEF
OF THE
NORTH AMERICAN WATER OFFICE

June 14, 2006

SUMMARY

The Minnesota Department of Commerce failed legally and substantively to make the case for the Applicant regarding the need for an ISFSI at Monticello. Even with the Department of Commerce carrying the heavy water, the Applicant failed with similar calumny. Provisions of Minn. Rule 7855.0600 were ignored as though they don’t even exist, and the only way the proposed facility meets any of the four criteria under Minn. Rule 7855.0120 is if the only portion of the record that is considered is the pre-filed documents and testimony of the Department and the Applicant. Unless the record
provided by Intervening Parties is simply dismissed, the record does not support the claim that without the ISFSI, the future energy supply is in peril. A reasonable and prudent alternative has been identified. The record produced by Interveners shows that society as a whole is better served by rejecting the application, and that if the clearly enunciated statutory goals and objectives of energy policy in Minnesota mean what they say about the priority status of renewable energy development, the proposed facility is not in the public interest.

Because the Department and the Applicant ignored the trial record, their Initial Briefs are so out-dated regarding the alternatives analysis that they are irrelevant. Because they chose to ignore public testimony and exhibits, their Initial Briefs fail to assess societal costs that are on the record, and that are required by rule and statute to be assessed before the proposed facility can be approved. Because they rely so heavily on the EIS, which as of this writing has yet to be approved, the Application lacks legal foundation as well as substantive merit. (For a more thorough discussion of the inadequacies and failures of the EIS, see the North American Water Office “Comment on the Adequacy of the Final EIS” sent to the Department of Commerce on April 10, 2006 and included as Attachment 1 to this filing.) In summary, Applicant’s proposed project should be rejected.

I. ME3 / MCEA BRIEF

The North American Water Office (NAWO) concurs in their entirety with the facts and argument presented in the Initial Post-Hearing Brief of Interveners ME3 and
MCEA. We would draw particular attention to the discussion pertaining to Minn. Rule 7855.0600 B and C beginning on page 6 of the ME3/MCEA Initial Brief. The provisions of this rule are in full force and effect in this proceeding.

History

The decision-making related to dry cask storage of irradiated fuel at Prairie Island began in 1987 or 1988 with the preparation of the Environmental Impact Statement which was initially declared to be incomplete by the Minnesota Environmental Quality Board. The process continued non-stop through the 1994 Session of the Minnesota Legislature with a stop in the State Appellate Courts in between. In its wisdom, and understanding that Monticello would shortly be presenting a similar set of circumstances, the 2003 Minnesota Legislature changed the procedure to reflect lessons learned during the protracted and bitter Prairie Island struggle. The procedure was changed so that the courts could get involved after the Legislature considered the matter, not in between the administrative and legislative proceedings. But the rules governing nuclear waste storage facility criteria were not changed. The provisions of Minn. Rule 7855.0600 as cited on page 7 of the ME3/MCEA Brief have not been repealed or superseded by other provisions. Yet there is no mention of those provisions, or any attempt to meet them, in the Initial Briefs of either Xcel Energy or the Department of Commerce. On the record, there is no evidence that meets the requirements of the rule. The Application must therefore be rejected.
II. **DOC BRIEF**

The Department of Commerce misconstrues the provisions of Minn. Stat. § 216B.2422 by purporting that the proposed facility does not constitute a “refurbished energy facility.” On page 7, the DoC Initial Brief states:

“Xcel also is not obligated under the preference for renewable generation facilities Minn. Stat. § 216B.2422, that conditions approval of a certificate of need for “new or refurbished energy facility” on a public interest finding. The Company does not propose a new or refurbished plant. Xcel has shown that its certificate of need proposal is in the public interest.”

Also, on page 11, the DoC Initial Brief states:

“Also, Minnesota law includes a public interest analysis pursuant to Minn. Stat. § 216B.2422, subd. 6, in the event that a utility proposes a new generation facility or a refurbished plant, which Xcel has not requested in this matter.”

A reasonable reading of pertinent statutes does not support the Department’s opinion. Refurbishment or renovation is defined by the plant property boundaries and not just to internal building equipment modifications. Minn. Stat. §216B.2421 Subd. 2 “Definition of large energy facility” states as follows:

"Large energy facility" means:

(1) any electric power generating plant or combination of plants at a single site with a combined capacity of 50,000 kilowatts or more and transmission lines directly associated with the plant that are necessary to interconnect the plant to the transmission system;
This project is “inside the fence” of existing property boundaries, at the reactor site, and is a critical part of a proposed 20-year life extension project for the plant. It is obviously needed for continued operation of the facility at the design capacity.

Minn. Stat. § 216B. 2421, subd. 1, plainly states that the definition of a large energy facility including the requirement of “at a single site” applies to Minn. Stat. § 216B.2422 and 216B.243.

In Minn. Stat. § 216B.2422 there is a definition of refurbishment. Subdivision 1. (e) says "Refurbish" means to rebuild or substantially modify an existing electricity generating resource of 30 megawatts or greater. Since the proposed storage facility will substantially modify the Monticello plant site, it thus constitutes refurbishment of the Monticello generating facility and Minn. Stat. § 216B.2422 applies to this decision. As a result, priority must be given to the alternative established in Table 3 of the NAWO Initial Brief.

The Department of Commerce also misconstrues the authority of the Public Utilities Commission in this proceeding as it pertains to casks required for decommissioning. The DoC states at page 7 of its Initial Brief:

“Also explained, in response to certain concerns raised by an opposing party, is the Department’s observation that the Commission may choose at this time to approve the additional 35 storage casks that will be required for removing all spent nuclear fuel from the cooling pool at the time of decommissioning.”
The alternative of shutting down the plant in 2010 and approving only the number of casks needed for decommissioning beginning in 2010 has not been analyzed in this record. Since it is a reasonable variant of the dry cask storage facility as proposed it must be fully examined in relation to the company’s current proposal before any decision of this type can be made. At the time of filing the application, a completeness determination was not made on the basis of permitting these additional casks. Due process requires that this proceeding be limited to what the applicant has requested.

On page 14 of its Initial Brief, the Department of Commerce mistakenly states that, “Xcel also identified six community based options involving demand-side management, wind and other DG sources that would use small generation sources.” We pointed out in our Initial Brief that these were not community based, since Xcel was assumed to be the owner.

At page 24 of its Initial Brief, the Department makes the following statement:

“The Department calculated the cost of storing an additional 30 casks, and then extending the duration of storage for 50, 100, 150 and 200 years, and beyond. Rakow Direct at 80; Rakow Rebuttal at 2-4. The present value of such added costs of such long term storage is $114 million for 100 years, and $117 million for 200 years. The reasonableness of these long term storage adjustments has not been shown. However, even if such an adjustment were made, the result would be far too small to alter the ranking of alternatives. Rakow Rebuttal at 4.”

This cost adder to the Monticello option was not part of the comparison of alternatives tables in the NAWO Initial Brief. The fact that Table 3 in the NAWO Initial Brief demonstrated an economically viable option that is also preferred by policy even
without this adder, small though it may be, further substantiates the cost effectiveness of the NAWO alternative.

On page 28, The Department States that, “DG generally means small amounts of generation, usually 10 MW of capacity or less, that are connected to a utility’s distribution system rather to its transmission system. Final EIS at 62.” No specification as to distribution or transmission interconnections needs to be a part of the DG or community based alternative. The specification sets an artificial and arbitrary limitation on this scenario. A minor point perhaps, but it is another inadequacy in the EIS.

Also on page 28 of its Initial Brief, the Department continues its denigration of DG with the following statement:

“The primary social benefit of properly sited DG is in reducing the need for transmission lines and, possibly, enhancing the reliability of the electric system. *Id.* Possible drawbacks to DG include whether DG facilities will be built when and where needed if the utility doesn’t own the units, and finding suitable sites that are inherently closer to the need or load, and therefore may be in populated areas. Depending on the fuel used, DG may have other drawbacks including noise and emissions. *See, id.*”

These are more quotes from the inadequate and unapproved final EIS. We have shown in our brief that a primary benefit of DG is the economic benefits that come with community ownership of these resources. How about the drawbacks of routine emissions from Monticello? How about the drawback of pretending that this proceeding is rationally initiating a 200 + year management program, or of facilitating an opportunity
for terrorists? The above statement is more evidence of the inadequacy in the FEIS analysis of socio-economic benefits.

On page 29 of its Initial Brief, the Department mischaracterizes, or at least creates the potential for mischaracterization of the so-called Delphi Technique, by stating, “Over a two to three week period, approximately 20 participants were identified including Mr. Michael Michaud now associated with the North American Water Office in this proceeding. Id.” (FEIS) The statement implies that Mr. Michaud endorsed the scenario and the results put forth by DoC in this proceeding.

Mr. Michaud pointed out (Exh 33, p. 8) that his renewable scenario alternative in the Delphi process was not the one that the Department chose to use in its analysis. Participation in the process should not be construed as concurrence with the results of that effort.

On page 30 of its Initial Brief, DoC states:

“None of NAWO’s concerns has been shown to be credible and of a magnitude such that it could affect the ranking of the scenarios. Id. Discussion of some of NAWO’s concerns is set forth a later section, below.”

This is patently untrue. Our concerns are credible. The Production Tax Credit (PTC) is a fact that cannot be ignored in this proceeding. The Department does its best to ignore economic benefits from CBED, but those benefits are not disputed. The new wind resource data are facts that cannot be ignored. Increased turbine production capability at
lower wind speeds is a fact that alters the results. While no one item may be sufficient to tip the scales in the comparison of alternatives, taken in aggregate they have a profound affect on the results, and do tip the scales. See Table 3 of our Initial Brief.

On page 31 of its Initial Brief, the Department states, “No party proposed a community based energy development (C-BED) generation alternative, and the Department’s analysis does not indicate viability at this time for C-BED to be considered a feasible replacement for Monticello.” The department claims that they examined 200 MW of locally owned wind. This analysis was flawed as we have shown in our brief, in that they did not consider the PTC impacts, economic development benefits, or the performance enhancements from wind that are now available.

We have already addressed the double counting issue related to the REO and C-BED in our brief.

Beginning on page 32 of the Department of Commerce Initial Brief is a section entitled “Criticisms of the North American Water Office of the Department’s distributed generation options were unwarranted.”

The Department does a good job of citing its own testimony to conclude that comments of NAWO witness Mr. Michaud were “incorrect.” We will not focus on rebutting each point the Department makes in its brief when, for example, Mr. Haase admits the use of a 20% wind capacity factor was incorrect (Exh. 40, p. 11). The issue
here is what are the facts that are available from this complete record. As we point out in our brief the factual circumstances evolved throughout the record, in both written and oral testimony of the various witnesses. The transcript record holds key elements of facts. The results of the organization of these facts as they pertain to the viability of an alternative to the proposed facility are in Table 3 of our Initial Brief.

In point of fact, Table 3 in the NAWO Initial Brief is based on the same set of assumption that Dr. Rakow used in his assessment of alternatives, with the exception of the PTC. As the record demonstrates, it is legitimate to assume that the PTC will be available and to include it in the analysis. Arguably, it makes a lot more sense to include it than not. However, because Table 3 is constructed from the same assumptions as those used by Dr. Rakow except for the PTC, if the results presented by Table 3 are thrown out, all the analysis of Dr. Rakow regarding alternatives must also be rejected.

Beginning on page 40 and on through page 46 of its Initial Brief, the Department of Commerce has a discussion of society benefits that begins, “The Department’s analysis and discussion of society benefit is set forth generally in its EIS. Review of the EIS demonstrates the likely benefit to society of granting Xcel’s proposal.”

The “limited” role of the state with respect to nuclear facilities (DoC Initial Brief, p.40) is a diversionary red herring. Federal regulations, and the appropriateness of federal regulations governing radiological, engineering, health and safety standards, and NRC criteria regarding ongoing and continued plant operations and operations of the
proposed ISFSI, are totally *not* at issue. Rather, at issue are *impacts* that occur or may occur regardless of federal standards, and the risk of impacts occurring for whatever reasons, because some component or components fail regardless of federal standards. This is why it is called an “Environmental Impact Statement,” not a “Standard Compliance Statement.”

There is a long and sordid history of devastating environmental insult caused by pollution releases within standards. Included in this history is unchallenged evidence on this record that there is no safe dose of radiation. Yet the EIS simply and dogmatically presumes, without analysis or documentation beyond blank monitoring data, that because violations of standards are not apparent, there can be no impacts.

Likewise, our collective history and experience of assessing risk has established a well-defined risk assessment protocol. But the EIS presentation of “terrorism” as a risk to be assessed in this proceeding, for example, provides no opportunity to evaluate criteria used to gauge the level or degree of impact that the terrorism risk poses. It simply concludes that the risk is “low.” Says who? What do they mean by “low?” How do decision-makers know that “low” is the correct assessment? What set of facts was used in that assessment, and would other people, using the same facts, come to the same conclusion? How was the set of facts that was used to reach the “low” risk assessment evaluated for completeness? What is the degree of confidence that the “low” assessment is appropriate? The Final EIS fails to address any of these questions, and simply substitutes someone’s opinion that the risk is “acceptable” for an evaluation of risk.
The EIS process in this matter, by statute, is now managed by the Department. The Department now therefore has the duty to simultaneously provide an independent environmental analysis (it is the responsible RGU) and also advocate in this docket for a certain position for Minnesota ratepayers. The financial interests of ratepayers and environmental protection statutes (Minn. Stat. § 116D.01 to 116D.04) are not always aligned. The ALJ and the decision-makers must recognize that the Department has the potential to be conflicted in its duties in this instance.

At the time of this writing a determination of the adequacy of the EIS as prepared by the Department has not been rendered. Minn. Stat. §116D.04, subd 2a, requires that “in order to ensure its use in the decision-making process, the environmental impact statement shall be prepared as early as practical in the formulation of an action.” At a minimum the spirit of this statute has not been met.

Two parties to this proceeding have submitted significant comments regarding the inadequacy of the draft Final EIS to the Department. (As noted, see Attachment #1 for the NAWO Comments.) The Department prepared the EIS document itself by collecting information from a lot of sources and from a lot of different staff people. Department witness sponsoring the EIS, Ms Pile, indicates her role was to pull all the information together. For example, she did not do the DG analysis, but relied on other staff to do the analysis. (Tr. Vol. 6, p. 12). Ms. Pile admits she is not an expert on DG (Tr. Vol. 6, p.15). Mr. Haase indicates his role was to do a technical analysis to choose the mix of
resources in the renewable DG scenario (Exh. 40, p.1). It remains unclear who or what is the source of the text containing technical information on DG resources in the draft EIS on P.63. Since this information has no specific authoritative source attached to it, it should automatically be given not much weight.

Because of serious concerns about the content of the FEIS, and the uncertainty of its sources, the EIS as it currently exists cannot be relied upon to inform the decision regarding any likely benefit to society of granting Xcel’s proposal.

The ALJ in this case now has to review the record and provide his determination in the matter including the socio-economic impacts of the proposed project and alternatives, without the benefit of an adequate EIS. Nonetheless, the review of the record and the formulation of a proposed action must be done in compliance with the states’ environmental policy statutes. Given that the Final EIS as drafted is subject to continuing controversy by the parties in this proceeding, the ALJ has the duty to consider the environmental and socio-economic facts in this record directly, and independently from presentations in the Final EIS, make conclusions about the appropriate way to evaluate these factors in the recommendation that will be sent to the Commission.

III. XCEL BRIEF

The findings and arguments of Xcel Energy are flawed as fatally as those of the Department of Commerce. Xcel completely fails to address the nuclear waste storage
facility criteria contained in Minn. Rule 7855.0600, and merely cites an inadequate EIS and its own unexamined pre-filed testimony and documents to support its mistaken contention that the conditions of Minn. Rule 7855.0120 have been met. Public testimony and public exhibits regarding the societal costs of granting the Application were just ignored. The Xcel discussion of alternatives is outdated by the analysis represented by Table 3 in the Initial NAWO Brief.

Looking forward, Xcel (and no doubt, the Department) will attempt to discount the alternative option identified by Table 3 in the Initial NAWO Brief as speculative. Rather, the alternative identified by Table 3 is the result of applying assumptions scrutinized on the record to facts contained in the record. Speculation, as defined by the dictionary, would more appropriately be applied to the Applicant’s position regarding the likelihood of a terrorist attack facilitated by the authorization of the Application and the Applicant’s notion regarding the impact of such an event, should it occur. Speculation would more appropriately be applied to the Applicant’s position regarding the potential for catastrophic component failure due to operator error or unchecked aging of components.

The Applicant (and the Department) appears to labor under the ridiculous presumption that in order to count as a legitimate and viable alternative to the proposed facility, Interveners are required, essentially, to produce signed Power Purchase Agreements for 600 MW of base-load electrical generating capacity (Xcel Initial Brief beginning on page 15). Rather, what needs to be shown, and what NAWO has shown, is
that applying a reasonable set of assumptions to a specified package of energy supply management options capable of simulating base-load performance, reasonably competent electric utility management conforming to statutory policy directives can reasonably be expected to cost-effectively implement the alternative package within the required period of time. The package of options with proper attributes has been specified. The assumptions have been examined and validated. The cost is competitive with or better than the cost of the proposed facility. The policy directive is clear. The time-frame for implementing the alternative package is not limiting. The only remaining issue pertains to the competence of the utility managers, and if that’s in doubt, we should probably be re-thinking this whole thing about nukes.

Xcel’s FOF numbers 113-129 are so general and cursory that they are generally hard to respond to and don’t rise to the level of detail necessary for inclusion in a decision in this matter. In many instances we have already responded in our initial brief. But a look at Xcel’s proposed finding 115 may be instructive. It reads:

“One potential alternative examined was Distributed Generation (“DG”). DG generally refers to generation sources that are connected to a utility’s distribution system rather than its transmission system. Ex. 42 (DEIS) at 63. DG poses reliability issues because production occurs at many dispersed, often privately owned, facilities. Finding enough sites is a challenge, as well as coordinating production. Id.”

In addition to regurgitating more inadequate verbiage from the EIS, Xcel now questions DG site availability as well as the challenge of coordinating production. The concern about sites simply doesn’t square with the fact that Xcel testified it is already entertaining sites for over 900 MW of C-BED capacity. The concern about coordinating
production brings into question the competence of Xcel personnel to manage a modern electric utility system, with or without nukes.

IV. CONCLUSION

The statutory requirements of Minn. Stat. § 116 C.83, Minn. Stat. § 216B.243, and Minn. Rule 7855.0120 have not been met by this Application. NAWO concurs entirely with Interveners ME3 and MCEA that the Application has failed to meet the criteria set forth in Minn. Rule 7855.0600 B and C regarding the term of storage and operation and retirement of the proposed facility. The Application is at cross purposes with Minn. Stat. § 116B (MERA) and Minn. Stat. §115D (MEPA). It violates the intent of Minn. Stat. § 216B.2422 subd 4, which specifies a preference for renewable energy development. The EIS is inadequate under Minn Rule 4410.2300 (H) because it simply ignores impacts and potential impacts despite the substantial body of evidence that documents their existence. Under Minn Rule 4410.2500 regarding incomplete or unavailable information, the EIS cannot simply ignore evidence pertaining to consequences and potential consequences of radiological releases by continuing reactor operations and by the proposed facility over the term of storage.

Evidence on the record can be rebutted and contended, but it cannot be dismissed by the ALJ and the decision-makers just because certain parties choose to ignore it as they grind their ax in service of their own perceived interests. Else the proceeding is nothing but charade and illusion of due process. Yet that is exactly what the Department
of Commerce and the Applicant expect the ALJ and the Public Utilities Commissioners to do with evidence about societal costs attached to the proposed facility. The evidence documenting these costs on the record is credible, and the documentation is authoritative. The Applicant and the DoC had every opportunity to address and rebut and contend this evidence, and chose not to do so. As a result, that evidence must stand, and in view of the higher priority alternative specified by Table 3 in the NAWO Initial Brief, the Certificate of Need Application for an ISFSI at Monticello must be denied.

Respectfully submitted,

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RE: Comment on the Adequacy of the Final EIS  
Docket No. E002/CN-05-123  

April 10, 2006

Dear Ms. Ferguson:

The Final Environmental Impact Statement (EIS) in the above captioned matter is not adequate because it fails to meet, even under the most lax and casual of all possible interpretations, the most rudimentary and basic requirements set forth in Minnesota Rule 4410.2300, Items G and H, as required by Minnesota Rule 4410.2800. Subd.4 Item A. It also fails to meet the provisions of Minn. Rule 4410.2500 regarding incomplete or unavailable information.

First, the Scoping Decision for this EIS puts great emphasis on producing a thorough and detailed analysis of alternatives as provided by Minnesota Rule 4410.2300, Item G. As delineated and documented below, the required thorough and detailed analysis of the alternatives was not done.

Second, we recognize that the Scoping Decision defers to federal authority regarding radiation release standards, security protocol and requirements, and management procedures for the prevention of nuclear accidents. The setting of these standards, requirements and procedures by federal authorities, however, is not the same as their environmental, economic, employment, and sociological impacts and related costs. The setting of standards and procedures does not eliminate impacts and costs. Rather, federal standards and procedures merely set limits and establish probabilities for impacts and costs. Actual and potential impacts and costs still exist, and the RGU as defined by state law is still required to examine those actual and potential impacts and costs to determine if they are acceptable in Minnesota. While the RGU can specify areas for particular scrutiny in its Scoping Decision, as it has done in this case, neither those specifications
not its lack of authority to set certain standards and procedures diminishes its responsibility to evaluate acknowledged actual or potential environmental, economic, employment and sociological impacts pursuant to Minnesota Rule 4410.2300, Item H.

In this EIS, any possible environmental, economic, employment, and sociological impacts and costs of routine radiation releases that will result from the operation of the proposed facility are simply denied without evaluation. There is no evaluation of the probability that security protocol is adequate. There is no evaluation of the environmental, economic, employment, and sociological impacts and costs if it is not adequate to prevent an uncontrolled and catastrophic release of radionuclides. Likewise, there is no analysis of the probability that plant management procedures actually will prevent an uncontrolled catastrophic release of radionuclides, or of the environmental, economic, employment, and sociological impacts if those procedures are not sufficient to prevent such a release.

These flaws are fatal. They are not particularly difficult to understand. Information that allows the EIS to avoid these flaws is readily available on the record. If that information is rejected and this document is deemed adequate, it will only be because decision-makers are intent on substituting their opinions and the privileges of nuclear theology for common sense, common decency, verifiable substance, and the rule of law.

1. Adequacy Comments Regarding Generation Alternatives

The Minn. Rules 4410.2800 Subp. 4, “Determination of Adequacy” outlines a decision framework that encompasses three main parameters. The Rule states that an EIS shall be determined adequate if it:

A. addresses the potentially significant issues and alternatives raised in scoping so that all significant issues for which information can be reasonably obtained have been analyzed in conformance with part 4410.2300, items G and H;

B. provides responses to the substantive comments received during the draft EIS review concerning issues raised in scoping; and

C. was prepared in compliance with the procedures of the act and parts 4410.0200 to 4410.6500.

This document fails all three tests in the context of the examination of generation alternatives. This document does not analyze all significant generation alternative issues for which information can be reasonably obtained from the hearing record. It does not respond to all substantive generation alternative comments in the hearing record. It is missing information on generation alternatives required to comply with the Environmental Policy Act and EQB Rules 4410.0200 to 4410.6500.
UNADDRESSED ISSUES

There are many issues surrounding characteristics and use of wind generation as part of a package of technologies that could replace Monticello generation that abound in the hearing record. One key wind technology issue is how much energy can be obtained from these types of resources going forward. Two major wind resource data bases developed over the course of time from the Department of Commerce Wind Resource Assessment Program are in the record. The FEIS contains no analysis or discussion of which of these databases is the appropriate one to use to calculate energy from new wind turbines that would be installed in Minnesota as part of a generation alternative that includes wind resources.

Another unaddressed issue is the appropriate amount of biodiesel and ethanol fueled generation resources that could reasonably be expected in a distributed generation scenario.

Whether the use of DG resources should be constrained as Xcel has done in its analysis to just load serving and not energy export uses is another unaddressed issue. Implicit in this issue is whether an alternative including dispersed generation is viable.

We are not providing a comprehensive list of all unaddressed issues here but offer these as examples of topics that are not even mentioned in the FEIS as drafted.

The general need to comprehensively address generation alternative issues raised in the record is driven by Minn. Rule 4410.2300, items G and H. Part G specifically requires:

“The EIS must address one or more alternatives of each of the following types of alternatives or provide a concise explanation of why no alternative of a particular type is included in the EIS: alternative sites, alternative technologies, modified designs or layouts, modified scale or magnitude, and alternatives incorporating reasonable mitigation measures identified through comments received during the comment periods for EIS scoping or for the draft EIS.”

At the least the document must explain why certain options or issues are not included in the analysis.

UNADDRESSED COMMENTS

Comments have been raised by parties in this proceeding regarding how various ownership structures of generation resources affect the economics of generation projects. Ownership structures impact both economic impacts to ratepayers and economic

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1 See Rebuttal Testimony of Jeff Haase
development opportunities for communities. These comments, as well as many other socio-economic comments have not been addressed in this draft.

The Need to address these comments is spelled out in Minn. Rule 4410.2700, Subpart 1.

“The final EIS shall respond to the timely substantive comments on the draft EIS consistent with the scoping decision. The RGU shall discuss at appropriate points in the final EIS any responsible opposing views relating to scoped issues which were not adequately discussed in the draft EIS and shall indicate the RGU’s response to the views.”

Particularly missing from the draft is an itemization of opposing views and a response to these views.

**COMPLIANCE WITH STATUTE AND RULE**

Both Minn. Stat. § 116D.04, Subd. 2a. and Minn. Rule 4410.2300, item H require an analysis of economic and social impacts. Minn. Rule 4410.2300, item H specifically mentions the need to address this matter for the generation alternatives:

“Environmental, economic, employment, and sociological impacts: for the proposed project and each major alternative there shall be a thorough but succinct discussion of potentially significant direct or indirect, adverse, or beneficial effects generated.”

This type of analysis is completely missing from this draft. This analysis is particularly germane to this matter since the opportunity for, and benefits of, Community Based Energy Development is developed throughout the hearing record.

In addition to providing an analysis of socio-economic and employment issues, Minn. Rule 4410.2300, item H indicates the FEIS must:

“identify and briefly discuss any major differences of opinion concerning significant impacts of the proposed project on the environment.”

There is no discussion or comment in this draft of the various parties’ positions on generation alternative quantitative or qualitative impacts on the socio-economic or employment environment.

**SCOPING DECISION REQUIREMENTS**

Minn. Rules 4410.2100 Subp 6a indicates that the EIS must address issues identified in the Scoping Decision document. There are specific and substantive directives in the Scoping Decision regarding the analysis of generation alternatives.

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2 See Direct Testimony of Mike Michaud.
The EQB Scoping Decision document, dated June 16, 2005, called out a special standing for the analysis of generation alternatives. The decision summary points this out:

“Therefore, most relevant technical and environmental issues—other than an analysis of generation alternatives—are either (1) addressed in detail in the CON Application or in subsequent supplements, (2) preempted by federal regulations, (3) subject to detailed review in the federal EIS, or (4) a combination of the above. For these topics, the EIS will verify, summarize, supplement and incorporate by reference available information as outlined in the attached Scoping EAW. Finally, the EIS will include an new study that will define and analyze the feasibility and impacts of generation alternatives to continued operation of the Monticello Generating Plant until 2030.”

Unlike some issues preempted by federal jurisdiction, the FEIS content regarding generation alternatives is required to be a “new study that will define and analyze the feasibility and impacts of generation alternatives.” The intent was clear that the information in the application and in supplements provided by Xcel Energy would not be sufficient to fulfill the EIS requirements. There is a burden placed on the preparation of the EIS for the development of new and therefor independent analysis of the generation alternatives. This point is emphasized further on in the scoping decision where the EQB required that

“The EIS will include a study and analysis of new data regarding the feasibility and environmental impacts of reasonable alternatives to continued operation of the Monticello Generating Plant.”

The requirement here is to develop new data regarding reasonable alternatives. This requirement has not been met in the FEIS as drafted. The only new data and analysis in the document is in the limited area of development of one new renewable DG option.

The only presentation in the document of other feasible generation alternatives is that of information provided by one party to the proceeding, the Department of Commerce. There is neither a discussion of the information or analysis of generation alternatives presented by other parties in the proceeding, nor independently developed information the other generation options provided by the Energy Facility Siting staff. This is also contrary to the intent of Minn. Stat. § 116D.04 that requires the environmental impact statement to “be an analytical rather than an encyclopedic document.”

The scoping decision contained specific requirements for analysis regarding the use of the Strategist computer model. The requirement is detailed as follows:

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3 See summary section of Scoping Decision, p.2.
4 See Scoping Decision, section III D, p7.
“In addition, the CON Application alternatives analysis is based largely on a proprietary computer model called “Strategist” developed by New Energy Associates, Inc. The Strategist model will be evaluated for possible use for the state EIS, and if used, all algorithms will be reviewed and input assumptions will be evaluated and described in detail.

Alternatively, if Strategist model details and assumptions are not adequate, a different method of evaluating alternatives will be used.”

This requirement of the EQB Scoping Decision has not been met. The document does state that it incorporates by reference “the economic analysis by the Minnesota Department of Commerce and other parties to the Certificate of Need proceeding at the PUC.” There is however no review, discussion, or independent analyses of the various issues that have surfaced in hearing regarding the strategist model and its input assumptions. The strategist modeling input assumptions have been a key issue in this proceeding, yet no evaluation as required by the EQB Scoping Decision is provided in this document.

Another requirement of the Scoping Decision is that:

“Information required by Minnesota Rules chapter 7855 for any DG alternative will be supplied within the EIS if the information is not already included within Xcel’s Petition or Xcel’s June 15, 2005 Supplement.”

There is no section of the FEIS as drafted that specifically addresses this requirement. There should be a discussion in the document of whether or not Xcel’s Petition or Xcel’s June 15, 2005 Supplement satisfies these requirements and a development of these informational requirements for at least the renewable DG alternative.

The Scoping Decision also requires that the No Build Alternative will be addressed in a certain way:

“The consequences of shutting down the Monticello Generation plant with no replacement generation will be briefly described, including the description of the ISFSI capacity likely required for decommissioning whether or not the plant continues to operate past 2010.”

The FEIS document does address the latter part of this requirement regarding ISFSI capacity, but there is no discussion of the consequences of shutting down the Monticello Generation plant with no replacement generation. Since there is a MISO market

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5 See Scoping decision section III D, p. 7.
6 Draft FEIS p. 57.
7 See Scoping Decision section III D, p. 7.
8 Ibid.
available for purchase of energy, at least this attribute of the no build alternative should be addressed to comply with the Scoping Decision requirements.

A significant deficiency exists in this draft regarding another Scoping Decision requirement, discussion of the economic feasibility of alternatives:

“The analysis of the economic feasibility will cover the same alternatives for which environmental impacts are evaluated, but will incorporate by reference the analysis of the Department of Commerce in the CON proceeding.”

This requirement has not been met since the information added to Tables 7-4 and 7-5 contains only information from Dr. Rakows’ Direct Testimony and does not consider data provided in subsequent written or oral testimony of Department of Commerce witnesses. Additionally, this requirement by the EQB should be considered a necessary but not sufficient condition for the scope of economic analysis required by Statute and Rule. As we have stated earlier, the statute and rule requires discussion and analysis of various differing positions on this topic as developed in the record.

2. Adequacy Comments Regarding Routine Radiological Releases

The EIS and the record of this proceeding affirm without controversy that Monticello routinely releases ionizing radiation. The amount of ionizing radiation that Monticello routinely releases on an annual basis, as reported by the Nuclear Regulatory Commission, is contained in Exhibit #16. In the early years of plant operation, annual releases approached and even exceeded a million Curies. Since then, several tens, if not hundreds or thousands of Curies have been released annually. Whether or not these releases are within standards is not at issue. What is at issue is whether the releases, within standards or not, cause environmental, economic, employment and sociological impacts, and if so, what are the costs of those impacts.

The EIS clearly states that no radionuclides associated with plant operations have ever been found. Monitoring protocol is described, but the monitoring program has never detected any of the radiation that is officially reported to have been released (EIS p. 33). The obvious questions therefore become: where does radiation go after it has been released? What is the environmental fate of the various radionuclides? How does each of them move through the ecosystem during the period of many years in which the radioactive decay process occurs?

The monitoring program fails to answer these questions. The EIS fails to ask these questions or to even recognize that they exist.

Nevertheless, the radionuclides are released, and that is the end of our actual knowledge about where they go and what they do for the remainder of their radioactive life. There is

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9 See Scoping Decision section III E, p. 8
monitoring data that documents where the radionuclides are not, and based on that lack of information there are computer models that show no significant concentrations. But there is no information at all, in the EIS or on the record, to justify any conclusion about where they go, or if they concentrate, or whether human receptors abide within concentration zones, or how any individual radionuclide may happen to be ingested or inhaled. Without information that defines where reported releases go, as opposed to monitoring and modeling that fails to detect them, there is no factual basis for conclusions regarding their environmental, economic, employment and sociological impacts. Yet, the EIS simply presumes that the failure of monitoring and modeling to detect releases means that there is no reason for concern.

The argument that radiation concentrations near the plant are similar to those in Minneapolis (page 43) is irrelevant because background radiation levels are irrelevant if the issue is determining the fate of radionuclides released at Monticello. In addition, because Minneapolis is also within the 50 mile radius of Prairie Island, routine releases from Prairie Island have the ability to mask Monticello release.

The groundless presumption that failure to detect releases eliminates concern about them supports the flawed conclusion in the EIS regarding impacts of routine releases, which is that they have no impacts. This conclusion is presented as an article of faith, without analytical foundation.

Nuclear theology holds that these routine releases are without biological or public health consequences, and the EIS incantation of this theology, faithfully rendered on page 33, places all life in “a sea of radiation” in which all “…tissues are constantly awash with radioactivity from the sun, the earth and products of human technology.” In the best of theological tradition, this is true but irrelevant.

The BIER VII Report of the National Academies of Science (referenced with key findings in Public Exhibit #16) on the biological effects of ionizing radiation concludes that there is no safe level or threshold of ionizing radiation exposure; that exposure to background levels causes biological damage; and that additional exposures cause additional risks.

The BEIR VII Report reaffirms the Linear-No-Threshold model for predicting health effects from radiation, meaning that every exposure causes some risk and that risks are generally proportional to dose. Further, the Dose and Dose-Rate Effectiveness Factor has been reduced, meaning that the projected number of health effects at low doses are greater than previously thought. In addition, new mechanism for radiation damage were recognized and recommended for further study, but not included in the risk estimates in the report.

Testimony submitted by Diane Rother (St. Paul Public Hearing, 2/16/06, TR p.51 Public Exhibit 15) provides evidence of the new mechanisms in which background radiation levels lose significance when compared to the exposure caused by radionuclides that have been ingested or inhaled an absorbed into body tissues. Once internalized, each ionizing
emission becomes extremely efficient at destroying cell membranes, thereby opening the
door to mutations, cancers and other diseases.

There is no discussion of any of this in the EIS. It’s as if the National Academies of Science doesn’t exist. It’s as if testimony on the record gets to be selectively ignored. It’s as if Minn Rule 4410.2300 Item H doesn’t exist, which requires that, “The EIS shall identify and briefly discuss any major differences of opinion concerning significant impacts of the proposed project on the environment.” It’s as if the provisions of the Environmental Rights Act (Minn. Stat. §116B) and the Environmental Policy Act (Minn. Stat. § 116D) don’t exist, and the provisions of Minn. Rules 4410.2500 dealing with incomplete or unavailable information are irrelevant.

The depth of the failure of the FEIS to even consider the potential for impacts due to routine releases that will occur for an additional 20 years as a result of the proposed facility is illustrated by the “Cumulative Impact Matrix” on back of the first page 31. It says these impacts will be “very low” between 2010 and 2060 because “plant ceases operation in 2030” and because the “plant’s past record accurately predicts future.” To the first point, the 20 year period of concern when controlled releases will occur is summarily dismissed. The period of concern doesn’t even count. To the second point, monitoring data that allows for a rational understanding of the plant’s past record regarding environmental pathways of controlled releases does not exist, and there is no examination at all of scientifically established factors that cause those releases to be of concern environmentally and socio-economically. The “very low” is something that somebody just made up.

Specifically to the four factors identified on page 30, the likelihood of repeated occurrence of controlled releases between 2010 and 2030 if the proposed facility is authorized is 100%. There will never be any warning to the public regarding any of the occurrences. The damage caused by the occurrences is unexamined, and conclusions in the FEIS about that damage are nothing more than unsubstantiated opinion. The potentially exposed population within a 50 mile radius includes millions of people. Translating these factors into a conclusion of “very low” impact requires a deep regression into nuclear theology and ignorance of EIS criteria sited above.

3. Adequacy Comments Regarding Security

The security issue is certainly within the scope of this proceeding, as evidenced by portions of the Application, by testimony of Applicant witnesses, and by a hollow, unquestioning regurgitation of the Applicant’s position regarding security issues in the EIS. The fact that federal authorities are responsible for setting and enforcing security requirements does not diminish the responsibility of the EIS to analyze the probability that established security requirements are adequate, and to identify potential impacts and costs if they are not.
While there is evidence on the record regarding the impacts and costs of a terrorist occurrence, there is no such analysis in the EIS, and without it, the EIS is not adequate.

The “Cumulative Impact Matrix” on the back of the first page 31 identifies “terrorism” as an issue of concern and lists the four factors to gauge its level or degree of impact. While these may be appropriate things to consider, there is no presentation about the criteria used to evaluate or score them, or about the weight each was given. For example, what factors were included in the analysis that the EIS used to determine that the likelihood of a terrorist occurrence is low? What was the process to evaluate those factors? Who made that determination? What does “low” mean? What is the probability that “low” is the correct conclusion? What are the confidence-bounds surrounding the probability that “low” is the correct conclusion? Without answers to each of these questions, the conclusion is nothing more than someone’s arbitrary opinion.

With regard to “potential severity or extent,” what percentage of available radionuclides was presumed to be released by the occurrence? What were the meteorological and other factors that would affect public exposure presumed to be? Over what period of time did the release occur? What were the dispersion mechanisms?

Presuming that there was a warning that made a difference, what assumptions were made regarding the effectiveness and efficiency of evacuation procedures? What presumptions were made regarding the availability and ability of medical personnel to treat victims? How many victims were presumed? Over what period of time would adverse health impacts be counted that were caused by exposure to released radionuclides? What evacuation zone was presumed? How long would the evacuation zone have to be abandoned? What would clean-up costs be? What would be the effect of clean-up costs on the economy of the state? Without answers to these questions, and no doubt many more, the “low” conclusion is nothing more than someone’s arbitrary and subjective opinion, and there is no way to analyze it from any sort of objective perspective. Such conjecture has no legitimate place in an EIS.

This failure is compounded by the assumptions that were acknowledged for the analysis, as found on the bottom of page 30. What was the baseline assumption regarding the preparedness of response capabilities? How do you know that the baseline is appropriate? What was used to measure and evaluate improvements? What is the probability that appropriate federal authority will adequate oversight and regulatory functions until 2230? What is the probability that local, state and federal governing structures will remain intact and stable during this time period? What criteria and process was used to determine this probability? What degree of certainty bounds the probability assessment? What a bunch of tripe.

4. Adequacy Comments Regarding Degradation and the Potential for Accidents

The EIS “analysis” of plant maintenance, the potential for accidents and their environmental, economic employment and sociological impacts and costs, has the same
set of issues that are discussed above regarding security. The fact that federal authority establishes and enforces degradation management in no way diminishes the responsibility of state authorities to analyze potential impacts and costs if degradation management proves to be inadequate. What is the probability that plant maintenance procedures will prevent a major release of radionuclides? How was this probability arrived at and what degree of confidence bounds it? Rather than repeat all the questions that were posed regarding security, suffice it to say that the EIS presentation of plant management issues that will result from authorizing the proposed facility are all subjective opinion. The EIS presents no criteria that can be evaluated.

Conclusion

The document is not an Environmental Impact Statement. It is a course and crass regurgitation of the Application, driven by unsubstantiated opinion, groundless belief, and wishful thinking. Lack of independent analysis is rampant throughout the document. Even giving the document every possible benefit of doubt regarding controversial, incomplete or unavailable information fails to salvage it. If differences of opinion occur regarding significant issues, Minnesota Rule 4410.2300 Item H still requires that the differences be identified and briefly discussed. They were not. Where there is incomplete or unavailable information, Minn. Rule 4410.2500 requires an explanation of what information is lacking and why, why it is relevant and what its potential significance is regarding reasoned choices among alternatives, a summary of existing credible scientific evidence that is relevant to evaluating potential impacts, and an evaluation of such impacts of the project and its alternatives based on theoretical approaches to research methods generally accepted in the scientific community. None of this was done, or even attempted.

If this document is deemed to be adequate by the Commissioner of the Department of Commerce, the process of public intervention and citizen participation is farce and charade. If the consequences of this document weren’t so destructive, it would be just plain silly.

George Crocker, Executive Director
North American Water Office