

State of Minnesota
OFFICE OF ENERGY SECURITY

Intervenor Information Request Response

Docket Number: E002, ET2/CN-06-1115

Date Request Received: May 6, 2008

Requested By: Citizen Energy Task Force

Date of Response: May 28, 2008

Person Requesting Information: Paula Maccabee

Response submitted by: David Birkholz
Title: Planning Director
Division/Unit: OES Energy Facility Permitting
Telephone: 651.296.2878

Request No.	
3	<p data-bbox="284 766 1445 840">The Environmental Report prepared for the CapX 2020 projects (“Environmental Report”) states,</p> <p data-bbox="470 861 1339 1008">“In fact, renewable energy development impacts or benefits could be moved from the Buffalo Ridge region to somewhere else in Minnesota or to neighboring states if adequate transmission lines are developed to serve wind energy development elsewhere.</p> <p data-bbox="470 1029 1339 1207">“Under this alternative, peak-demand periods would likely increase across various parts of Minnesota, e.g. Rochester, Fargo, Alexandria and St. Cloud. An increase in localized line overloads and voltage deviations would compound and ultimately result in the increased risk of reliability outages.”</p> <p data-bbox="284 1228 1494 1449">A. Please state whether the DOC has conducted any analysis modeling locations of renewable energy other than that proposed in the CapX 2020 application to substantiate whether 1) peak-demand; 2) localized line overloads and/or 3) voltage deviations would increase in Rochester, Fargo, Alexandria and/or St. Cloud as a result of locating renewable energy somewhere other than on the Buffalo Ridge. If so, please provide copies of all documents describing such analysis and its conclusions.</p> <p data-bbox="284 1470 1526 1690">B. If no analysis has been done, please explain why the DOC would expect that location of renewable energy somewhere other than on the Buffalo Ridge would increase 1) peak-demand; 2) localized line overloads and/or 3) voltage deviations in Rochester, Fargo, Alexandria and/or St. Cloud. Please specifically explain whether the proximity of the renewable generation to load or the upgrade of local transmission facilities would affect these potential outcomes?</p>

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OES Response:

The Energy Facility Permitting (EFP) division of the Minnesota Office of Energy Security (OES) is responding to this Information Request in accordance with Minnesota Rule 7849.7090 subpart 1 which provides that EFP staff shall be available to answer questions about the Environmental Report. EFP staff member Mr. David Birkholz will be available at the evidentiary hearing to answer questions about the Environmental Report.

When a certificate of need is requested from the Minnesota Public Utilities Commission (Commission) for a high voltage transmission line project, EFP prepares an Environmental Report under the Environmental Review procedures and requirements found in Minnesota Rules 7849.7010-7110. In analyzing the impacts of the proposed project as well as reasonable alternatives and mitigation methods, the Environmental Report essentially assumes the claimed “need” for the proposed project.

The EFP division of the OES, in contrast to OES Energy Regulation and Planning division, is not a party to contested case CN proceedings, and does not take a position as to whether applicants have demonstrated that a proposed project meets the legal need criteria under Minn. Stat. § 216B.243.

- A. OES EFP has not done analysis modeling of renewable energy locations.
- B. The question results from a misreading of the Environmental Review. The ER did not suggest a causal relationship between distributed renewable generation and the localized impacts in the specified locations. The increases in peak demand, localized line overloads and voltage deviations in Rochester, Fargo, Alexandria, and St. Cloud would be a direct impact of the proposal not being employed and no other solution being implemented.

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4	<p>The Environmental Report prepared for the CapX 2020 projects (“Environmental Report”) considers an alternative to the CapX 2020 projects based on a combination of natural gas and wind generation:</p> <p>A. Please state, for each of the following objectives stated in the CapX 2020 Application whether the DOC perceives the Generation Alternative reflected in the Environmental Report as a feasible alternative to meet that objective:</p> <ol style="list-style-type: none">1) Community service reliability in the following areas – Rochester, St. Cloud, Alexandria, LaCrosse;2) Generation outlet capacity for 800 new megawatts of wind generation;3) Ability to transmit energy across the North Dakota/Minnesota and the Minnesota/Wisconsin border <p>B. It appears from Table 4-4 on p. 86 of the Environmental Report that the estimated total costs of the Generation Alternative include both the costs of new transmission and the costs of construction of gas generation.</p> <ol style="list-style-type: none">1) Please confirm whether the cost range from \$582,704,000 to \$764,474,400 includes both generation and transmission costs for the proposed alternative to the CapX 2020 projects. If not, please explain.2) In comparing its Generation Alternative to the CapX 2020 projects, did the DOC consider that the energy scenario on which the CapX 2020 projects were based included 6,325 megawatts of new electric generation? (Attachment to CapX2020 Applicants’ Response to NAWO Information Request 12, “Attachment to NAWO-IR12”)

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- 3) Please state whether a cost comparison was made including both the transmission and generation costs of the CapX 2020 projects. If that comparison was made, please state whether the generation costs to construct the energy generation facilities described in Attachment to NAWO-IR12 or on other assumptions regarding the costs of energy in the CapX2020 scenario.
- C. Table 4-5 on p. 88 of the Environmental Report describes air quality impacts and the potential to emit of various natural gas combustion facilities described as comparable to the facilities in the Generation Alternative.
- 1) Did the DOC compare the air quality impacts of the CapX 2020 projects including impacts of the generation in the CapX 2020 model? (See Attachment to NAWO-IR12) Specifically, were air quality impacts of a) base load coal plants (1600 - 2850 MW) and b) natural gas peaking plants (1200-2450 MW) included in the DOC's analysis of the impacts of the CapX 2020 projects? If not, please explain.
 - 2) Did the DOC obtain data on the actual emissions from the natural gas peaking plants in Table 4-5 in addition to the potential to emit maximum permitted emissions?
- D. The Generation Alternative described by the DOC in the Environmental Report describes a construction plan for 862 -1048 megawatts of natural gas generation as the minimum needed for redundant capacity for reliability.
- 1) On what assumption of load growth in each community identified in Table 4-4 is this construction plan based?
 - 2) Has the DOC evaluated what construction of gas peaking plants might be needed under the following assumptions as to conservation and load management: a) 1.0 percent energy savings; b) 1.5 percent energy savings; c) 1.5 percent energy savings, plus strategies in the identified communities aimed at load management to reduce peak demands? If such an evaluation has been done, provide any conclusions reached regarding the minimum natural gas capacity that would be needed for reliability under the above conservation and load management assumptions. Please also state what specific load management strategies were considered.
- E. Has the DOC evaluated any generation alternative that did not rely on natural gas peaking plants? Please explain.
- F. The Environmental Report states at p. 90 that a conservation and load management alternative would "seek to address the need of 4,000-6,000 megawatts."
- 1) Has the DOC determined that conservation and load management alone are not a feasible alternative to replace all of the CapX 2020 projects? If so, explain the nature of the analysis done to reach that conclusion.
 - 2) Has the DOC evaluated any feasible combination of energy conservation and demand-side alternatives that can replace part of the need for the CapX 2020 projects? If not, please explain.

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- 3) If the DOC has evaluated the potential of energy conservation and demand-side alternatives to replace part of the need for the CapX2020 projects, please describe the potential conservation and demand side alternatives considered, their effect upon regional demand growth and on summer and winter peak demand in the communities identified in Table 4-4 and the likely cost/savings over time for these alternatives.

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4A.

- 1) Potentially feasible, however at higher operational costs than transmission.
- 2) Potentially feasible.
- 3) Not likely feasible, as no new transmission connections would be built between the North Dakota/Minnesota export limit or the Minnesota/Wisconsin interface.

4B.

- 1) The cost ranges include estimated generation capacity and transmission costs.
- 2) No. An Environmental Report is based on a project as described in the CN application.
- 3) No. There are no generation costs included in the CapX 2020 Project.

4C.

- 1) As per the Scoping Decision, the Environmental Report did not review impacts of specific energy sources in addressing the project.
- 2) No. The EFP review was limited to potential to emit values taken from recent site permit dockets where natural gas fired electrical generation facilities were proposed.

4D.

- 1) The Environmental Report relied on the Applicant’s load growth assumptions. The alternatives in the Environmental Report evaluate alternatives to the Applicant’s claimed needs.
- 2) No, the Environmental Report assumed the range based on the Application.

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4E
No.

4F

- 1) Yes. One needs to assume conservation and load management above and beyond current levels would be required to achieve 4,000 to 6,000 MW of capacity. Since most Minnesota utilities have not achieved the levels of energy savings currently required by statute, EFP does not consider this a reasonable assumption.
- 2) EFP has addressed the issue in a broad brush fashion. Whether or not conservation and demand side management can have a significant impact on the addressed need will presumably be an item of discussion in the contested case hearing.
- 3) The Environmental Report did not take an in-depth approach to specific alternatives within the category, given the above assumption. On the other hand, OES Energy Regulation and Planning division in its advocacy role has submitted testimony concerning DSM and conservation.

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5	<p>Although it describes the Rules requiring analysis of this issue at p. 91, the Environmental Report does not identify any existing system upgrades and reconfiguration alternatives that were analyzed as a means of meeting the alleged need to which the CapX 2020 projects respond.</p> <p>A. Other than options that the CapX 2020 Applicants may have studied and rejected in the CapX 2020 transmission studies, is DOC aware of any other analysis of existing system upgrades and reconfiguration alternatives to meet the alleged need?</p> <p>B. Is DOC aware of any analysis of existing system upgrades and reconfiguration alternatives done by any party which used assumptions of load growth forecast, conservation, generation size, type or location different from those assumed in the CapX 2020 Applicants' transmission studies?</p> <p>C. Did the DOC describe or analyze any existing transmission system upgrades and/or reconfiguration alternatives to meet the need alleged by the CapX 2020 Applicants? If so, please describe any alternatives identified and impacts analyzed.</p> <p><u>OES Response:</u></p> <p>The Energy Facility Permitting (EFP) division of the Minnesota Office of Energy Security (OES) is responding to this Information Request in accordance with Minnesota Rule 7849.7090, subpart 1 which provides that EFP staff shall be available to answer questions about the Environmental Report. EFP staff member Mr. David Birkholz will be available at the evidentiary hearing to answer questions about the Environmental Report.</p>

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- A. The Environmental Report did not review options outside the Applicants’ CapX 2020 transmission studies.
- B. No, EFP is not aware of such analyses.
- C. The ER only examined the transmission system and corridor alternatives that the Applicants were required to describe in their application.