

Minnesota Public Utilities Commission

Staff Briefing Papers

Meeting Dates: July 31 and August 2, 2007 Agenda Item # ****1**

Company: Excelsior Energy Inc.

Docket No. E-6472/M-05-1993 - Phase I

In the Matter of a Petition by Excelsior Energy Inc. for Approval of a Power Purchase Agreement under Minn. Stat. §216B.1694, and Determination of Least Cost Technology and Establishment of a Clean Energy Technology Minimum Under Minn. Stat. §216B.1693.

Issue(s) Is Excelsior Energy's Mesaba Unit 1 Project an Innovative Energy Project under Minn. Stat. §216B.1694?
Should the Commission Approve, Disapprove, Amend, or Modify Excelsior's Proposed Purchase Power Agreement with Xcel Energy?
Is the Mesaba Unit 1 Project a Clean Energy Technology That Is or Is Likely to be Least Cost Under Minn. Stat. §216B.1693?

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Relevant Documents

[The record in this proceeding is too voluminous to list here. Commissioners have the full electronic and paper record available to them. Staff earlier identified more than 80 core documents that staff suggested be part of the Commissioner's preliminary review.]

Appendix 1, provided as a separate document concurrent with these briefing papers, is a staff-annotated version of the ALJ's report, showing the parties' main exceptions.

The attached materials are workpapers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

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July 27, 2007

Statement of the Issues

- Is Excelsior Energy's Mesaba Unit 1 Project an Innovative Energy Project under Minn. Stat. §216B.1694?
- Should the Commission Approve, Disapprove, Amend, or Modify Excelsior's Proposed Purchase Power Agreement with Xcel Energy?
- Is the Mesaba Unit 1 Project a Clean Energy Technology That Is or Is Likely to be Least Cost Under Minn. Stat. §216B.1693?

Background

2003 Legislation (Minn. Stat. §§216B.1693 and 216B.1694)

Legislation giving special status and consideration to an innovative energy project (IEP) and a clean energy technology (CET) was included in Minnesota Laws, 2003 1st Special Session, Chapter 11, and have been codified in Minn. Stat. §216B.1693 (CET) and Minn. Stat. §216B.1694 (IEP). A summary of the statutes follows. The text of the statutes is provided in Attachment 1 to these briefing papers.

Innovative Energy Project, Minn. Stat. § 216B.1694

Under the IEP statute, an innovative energy project is defined as an energy-generation facility, or group of facilities which may be located on up to 3 sites:

- that makes use of an innovative generation technology utilizing coal as a primary fuel in a highly efficient combined-cycle configuration with significantly reduced sulfur dioxide, nitrogen oxide, particulate, and mercury emissions from those of traditional technologies;
- that the project developer or owner certifies is a project capable of offering a long-term supply contract at a hedged, predictable cost; and
- that is designated by the commissioner of the Iron Range Resources and Rehabilitation Board¹ as a project located in the taconite tax relief area on a site that has substantial real property with adequate infrastructure to support new or expanded development and that has received prior financial and other support from the Board.

An innovative energy project is entitled to enter into a contract with Xcel to provide 450 MW of base load capacity and energy under a long-term contract, subject to the approval of the terms and conditions of the contract by the Commission.

¹The Iron Range Resources and Rehabilitation Board (IRRRB) is now known as Iron Range Resources (IRR).

The Commission may approve, disapprove, amend, or modify the contract in making its public interest determination, taking into account:

- the project's economic development benefits to the state;
- the use of abundant domestic fuel sources;
- the stability of the price of the output from the project;
- the project's potential to contribute to a transition to hydrogen as a fuel resource; and
- the emission reductions achieved compared to other solid fuel baseload technologies.

A number of other "regulatory incentives" apply to the IEP, including:

- being exempted from Certificate of Need (but not exempted from environmental review and permitting);
- being eligible to increase capacity of the associated transmission facilities without additional state review upon notice to the Commission;
- having the power of eminent domain for approved sites and routes;
- qualifying as a "clean energy technology;"
- being considered as a supply alternative to any new or expanded fossil-fuel fired generation facility or to any PPA great than five years from such a facility prior to Commission approval of any such arrangement; and
- being eligible for a grant from the Xcel renewable development fund of \$2 million a year for five years for development and engineering costs..

Clean Energy Technology (CET), Minn. Stat. §216B.1693

Under the CET statute, the definition of a "clean energy technology" is the same as that of an "innovative energy project" under 216B.1694, subd. 1 (1). Electric energy required by this section is to be supplied by the innovative energy project, unless the Commission finds doing so contrary to the public interest.

Xcel is to supply at least 2% of its retail electric energy from the clean energy technology if the Commission finds that the clean energy technology is, or is likely to be, a least-cost resource, including the costs of ancillary services and other generation and transmission upgrades necessary.

Excelsior Petition

On December 27, 2005, Excelsior Energy, Inc. (Excelsior) submitted its *Petition for Approval of Power Purchase Agreement, Determination that Clean Energy Technology is Likely to be a Least-Cost Resource, and Establishment of the CET Minimum* under Minn. Stat. §§216B.1694 and .1693. The Petition included a proposed Purchase Power Agreement (PPA) between Excelsior and Xcel and several volumes of information. Excelsior stated that despite intensive negotiations with Xcel since late 2004, they have been unable to agree on terms, and thus no joint PPA filing was possible.

Excelsior is an independent energy development company based in Minnetonka, Minnesota. It is developing the Mesaba Energy Project Unit One and Unit Two through its wholly-owned subsidiaries MEP-1 LLC, and MEP-2 LLC, respectively. Each unit will use an Integrated Gasification Combined Cycle (IGCC) technology, which will use coal and petroleum coke feedstocks in the gasifier. Each generating unit is planned to have an installed capacity of 603 MW, with Unit One in service in 2011 and Unit Two in service in 2013. Excelsior proposes to construct and operate Mesaba One and Two on what is being called the "West Range" site in Iron Range Township; an alternative "East Range" site is located in the City of Hoyt Lakes.

Excelsior requested that the Commission make the following determinations in this docket:

- that the PPA proposed by Excelsior with Xcel for 450 MWs from Unit 1 of the Mesaba Project is in the public interest under Minn. Stat. §216B.1694, subd. 2(a) (7);
- that the clean energy technology employed by the Mesaba Project is or is likely to be a least cost base load resource under Minn. Stat. §216B.1693, and that Xcel is thus compelled to purchase the balance of the output from Unit 1; and
- that the minimum percentage of electric energy to be supplied to Xcel's retail customers from the clean energy technology by 2013 shall be at least 13%, and that it is not contrary to the public interest for Mesaba Units 1 & 2 to supply that energy.

Commission's Notice and Order for Hearing

On April 26, 2006, the Commission issued its *Notice and Order for Hearing and Order Granting Intervention Petition*. In that Order, the Commission found that the issues in the case are whether the Commission should:

- approve, disapprove, amend, or modify the terms and conditions of a proposed power purchase agreement that Excelsior has submitted to Xcel Energy under Minn. Stat. § 216B.1694;
- determine that the coal-fueled Integrated Gasification Combined Cycle (IGCC) power plant that Excelsior plans to construct in northern Minnesota is, or is likely to be, a least cost resource, obligating Xcel to use the plant's generation for at least two percent of the energy supplied to its retail customers, under Minn. Stat. § 216B.1693; and
- determine that, under the terms of Minn. Stat. § 216B.1693, at least 13% of the energy supplied to Xcel's retail customers should come from the IGCC plant by 2013.

The Commission went on to state that:

The resolution of these issues turns on numerous sub-issues; two of the most important are what contract prices are likely to be under different scenarios and assumptions and whether those prices are reasonable. . . .

The parties shall address the above issues in the course of contested case proceedings. They may also raise and address other issues relevant to the petition.

Brief Overview of the Contested Case Proceedings

The Office of Administrative Hearings assigned this matter to Administrative Law Judges Steve M. Mihalchick and Bruce Johnson. In their June 2, 2006 Second Prehearing Order, the ALJs determined that consideration of whether at least 13 percent of the energy supplied to Xcel's retail customers should come from Units 1 and 2 would be deferred into Phase 2 of this proceeding. Phase I of the proceeding took up the other issues referred by the Commission and is what is before the Commission today.

The following parties, in addition to Excelsior, intervened and filed testimony in this proceeding:

- Northern States Power Company, d/b/a Xcel Energy (Xcel);
- Minnesota Department of Commerce (DOC or the Department);
- Minnesota Power;
- minncoalgasplant.com (MCGP);
- Minnesota Center for Environmental Advocacy, Izaak Walton League of America-Midwest Office, and Fresh Energy (Environmental Organizations); and
- Minnesota Chamber of Commerce (Chamber).

The Minnesota Pollution Control Agency (MPCA) participated as a non-party consultant and prepared a report comparing the Project's air emissions with those of other technologies.

The following intervened, but did not file testimony:

- Big Stone II Co-Owners;
- Xcel Industrial Intervenors (XLI);
- Manitoba Hydro; and
- Great Northern Power Development (did not file briefs or exceptions).

The record contains pre-filed testimony from 47 witnesses. A list of witnesses and a very brief description of the issues each witness addressed is included as Attachment 2 to these briefing papers.

The parties stipulated to admission of the pre-filed testimony and waived cross-examination of all witnesses; thus no formal evidentiary hearings were held in the matter. A large number of exhibits in addition to the pre-filed testimony were entered into the record by the parties. [See the December 20, 2006 Master Exhibit List for a full listing of exhibits in this proceeding.]

Public hearings were held in Saint Paul on December 18, 2006, in Hoyt Lakes on December 19, 2006, and in Taconite on December 20, 2006. Various public exhibits were accepted into the record. The Commission also directly received a number of public comments.

Initial briefs were filed by the following parties: Excelsior, Xcel, DOC, MP, MCGP, XLI, the Chamber, Big Stone Co-Owners, and Manitoba Hydro. Reply briefs were filed by: Excelsior, Xcel, DOC, MP, MCGP, and the Chamber.

Brief Summary/Overview of the Positions of the Parties

The parties to this proceeding have raised a large number of legal, policy, analytical, and practical issues relating to this docket. It is a challenge to attempt to group the positions by issue or any other criteria. The parties' statements of the case, briefs, and exceptions are the best sources of their positions, along with the testimony and related exhibits for the factual and analytical bases for those positions.

The following chart give a very high level overview of where the parties come down on the three major findings required under the statutes.

Party	Is the Mesaba Project an IEP?	Is the PPA in the public interest?	Is it a CET that is or is likely to be least cost?
Excelsior	Yes	Yes	Yes
DOC	Yes	Not in present form, but DOC attempting negotiations to cure the deficiencies.	No
Xcel	No	No	No
MP	No	No	No
MCGP	No	No	No
Chamber	-----	No	-----
XLI	-----	No	No
Manitoba Hydro	-----	No	No

Overview of ALJ Report

In their April 12, 2007 Order, the ALJs:

- Conclude that the Mesaba Unit 1 Project is not an Innovative Energy Project within the meaning of Minn. Stat. §216B.1694, subd. 1, and therefore is not entitled to enter into a Power Purchase Agreement to provide baseload capacity and energy to Xcel.
- Conclude that even if the Project were an IEP, the PPA should be disapproved because of a number of shortcomings, including price.

- If the PPA is none-the-less approved by the Commission, conclude that it should be returned to Excelsior, Xcel, and the DOC to negotiate a modified PPA that addresses identified short-comings, and then returned to the Commission for final approval.
- Conclude that neither the IGCC technology nor the Project is or is likely to be a least-cost resource, and thus is not entitled to supply Xcel with at least two percent of its retail electric energy.

A guide to the main findings of the ALJ Report:

- #1-31: General and procedural background
- #32-99: Whether the Project qualifies as an IEP & is entitled to enter into a PPA
- #100-188: Whether the proposed PPA is in the public interest
- #189-197: Whether it is a CET entitled to supply 2% of Xcel's electrical energy.

The ALJs also included a 19 page legal memorandum at the end of their Report, analyzing a large number of issues regarding statutory interpretation. The Commission should also review the ALJs' October 25, 2006 Orders on Motion for Summary Judgement for additional legal analysis.

The following parties filed Exceptions to the ALJs Report: Excelsior, Xcel, DOC, MP, MCGP, and the Chamber.² The following filed Replies: Excelsior, Xcel, DOC, and MP.

On May 11, 2007, MCGP filed a motion to strike certain information filed with Excelsior's exceptions. Excelsior replied to the motion on May 25, 2007.

Appendix 1 to these briefing papers is an annotated version of the ALJ Report. It discusses the exceptions and replies of the parties to the report with respect to the findings required by the statutes. The Appendix does not directly address the legal memorandum.

Related (and Potentially Related) Matters

Excelsior-Phase 2, E-6472/M-05-1993

As noted earlier, the issue of whether at least 13 percent of the energy supplied to Xcel's retail customers should come from Mesaba Units 1 and 2 was deferred to Phase 2 of this docket. ALJ Bruce Johnson is assigned to this phase of the proceeding.

On April 25, 2007, Xcel filed a motion to stay the Phase 2 proceedings until after the Commission enters a final order on Phase 1. In Judge Johnson's *Order On Xcel's Energy Motion Regarding Phase 2*, he denied Xcel's motion, stating in part that:

²The Environmental Intervenors also filed Exceptions, but they were limited to correcting the members of the group and a name.

The only question remaining for Phase 2 is very narrow: If the Commission's final decision is that Excelsior's Project meets all four of those criteria [from Phase 1], whether the Commission should direct that the Project provide thirteen percent, rather than two percent, of the electric energy provided to Xcel's retail customers.

Briefs and Reply Briefs were filed recently in Phase 2. The matter is now awaiting the report of the ALJ.

Excelsior Energy Siting and Routing Docket, E-6472/GS-06-668

On June 19, 2006, Excelsior, and its subsidiaries MEP-1 LLC and MEP-2 LLC, filed their joint petition with the Commission for approval of a Large Electric Energy Generating Plant Site Permit, High Voltage Transmission Line Routing Permit, and Pipeline Route Permit for the Mesaba Energy Project, Units 1 and 2 in Docket No. E-6472/GS-06-668. On July 28, 2006, the Commission accepted the filing. On August 30, 2006, the Commission referred the matter to the OAH for a contested case proceeding.

ALJ Steve Mihalchick is assigned to this case. Excelsior has filed testimony; other parties have not done so. The Draft Environmental Impact Statement (DEIS) has not yet been submitted by the federal Department of Energy (lead agency) and DOC in that docket, but is expected to be available in the first half of August, 2007. Further procedures in the docket are effectively on hold until the DEIS is available.

Xcel Renewable Development Fund, E-002/M-03-1883

On February 23, 2005, the Commission issued its ORDER APPROVING AND DIRECTING FUND EXPENDITURES, GIVING GUIDANCE ON THE TREATMENT OF INNOVATIVE ENERGY PROJECT, REQUIRING CONSULTATIVE PROCESS, AND REQUIRING COMPLIANCE FILINGS in Docket E-002/M-03-1883. Among other things, the Commission approved a grant of \$2 million a year for five years to Excelsior Energy from Xcel's renewable development fund, pursuant to Minn. Stat. §216B.1694, subd. 2(a)(8), subject to receipt of evidence that Excelsior Energy meets the following conditions:

- is an operating entity;
- has specified a technology for the IEP;
- has obtained grant/load approval from the U.S. DOE; and
- continues to meet the criteria of Minn. Stat. §216B.1694, subd. 2(a)(8).

Staff Note: Excelsior has received the following payments for engineering and development costs from the RDF: \$2 million for 2005, \$2 million for 2006, and \$1.52 million to-date for 2007.

Xcel 2004 Resource Plan, E-002/RP-04-1752

On May 31, 2006, the Commission issued its ORDER ESTABLISHING RESOURCE ACQUISITION PROCESS, ESTABLISHING BIDDING PROCESS UNDER MINN. STAT. §216B.2422, SUBD. 5, AND REQUIRING COMPLIANCE FILING. Among other things, this order required that Xcel use a certificate-of-need-like process whenever it competes in its own

competitive procurement process. See the Xcel Baseload Resource docket, E-002/CN-06-1518 noted below.

On July 28, 2006, the Commission issued its ORDER APPROVING RESOURCE PLAN AS MODIFIED, FINDING COMPLIANCE WITH RENEWABLE ENERGY OBJECTIVES STATUTE, AND SETTING FILING REQUIREMENTS. Among many other requirements, this Order, as modified by the Commission's October 18, 2006 Order After Reconsideration, directed Xcel to:

- On or before November 1, 2006, file a certificate of need application or a signed purchase power agreement for the competitive resource acquisition process for 375 MW of baseload capacity with an in-service date of 2015; and
- By December 31, 2006, file a report detailing its plans for upgrades to its Sherco, Prairie Island, and Monticello baseload facilities. Xcel is to file any required certificates of need for those upgrades by September 1, 2007.

However, on July 20, 2007, Xcel filed a Notice of Changed Circumstances with respect to its 2004 resource plan, citing significant new requirements for renewable energy and demand-side management enacted by the 2007 Minnesota legislature. Xcel is requesting suspension of filing dates and procedural schedules on various requirements coming out of the Commission's 2004 resource plan orders, including the certificate of need for the Prairie Island Power Upate and Additional Spent Fuel Storage and certificate of need for the Monticello Power Upate.

Xcel Baseload Resources, E-002/CN-06-1518

On November 1, 2006, Xcel filed its proposal to meet its 375 MW baseload capacity needs from a long-term contract with Manitoba Hydro and competitively bid contracts with wind generation facilities. An alternative proposal was filed on December 20, 2006 by Westmoreland Power, Inc. for a circulating fluidized bed coal-fired plant at Gascoyne, North Dakota and wind facilities.

Excelsior Energy filed comments in the case which, among other things, stated that Excelsior did not file an alternative baseload proposal in the docket because its Mesaba plant has a statutory right to special consideration and is the subject of a separate proceeding.

On February 13, 2007, the Commission issued its ORDER ACCEPTING PROPOSALS AS SUBSTANTIALLY COMPLETE AND NOTICE AND ORDER FOR HEARING. The matter has been assigned to ALJ Mihalchick. Direct and rebuttal testimony has been filed. Evidentiary hearings were scheduled for August 13-17, 2007.

However, on July 20, 2007, Xcel filed with the ALJ a request for suspension of the current procedural schedule, pending the Commission's decisions relating to Xcel's concurrent Notice of Changed Circumstances the 2004 resource plan docket (and in Docket No. E-002/M-07-02 relating to the environmental improvement rider and capacity expansion at Sherco Units 1, 2, and 3.). On July 26, 2007, the ALJ granted Xcel's motion to suspend continuing the matter indefinitely pending a decision by the Commission.

Certificate of Need for Transmission Facilities Related to Big Stone II, Docket No. E-017 et al./CN-05-619 (Related routing Dkt. No. E-017 et al./RT-05-1275)

In the above proceeding, Excelsior is contending that the ALJ and the Commission must consider the “IEP Preference” in Minn. Stat. §216B.1694, subd. 2(5) and the preference for a facility that is exempt from Certificate of Need set out in Minnesota Rules, Part 7849.0120, subp. A(4). Excelsior argues that Mesaba Unit 2 is a planned facility that could meet the future demands identified in that proceeding.

In the Mesaba PPA proceeding, the Department has presented cost information related to the Big Stone generation facility as one basis for comparison with the costs of the Excelsior Project. The Big Stone Co-Owners contend that any findings should be limited to illustrate the comparative costs of an actual SCPC plant vis a vis Mesaba Phase 1. The Big Stone Co-Owners argue that the Commission and the ALJ should make no specific, direct findings with regard to the absolute costs of Big Stone II, and that no determination should be made with respect to the current or future needs or costs related to any of the Big Stone Co-owners in the Mesaba PPA proceeding.

Overview of Commission Decision Steps

The decision overview below lists the major decisions the Commission will need to make under Minn. Stat. §§216B.1694 and .1693. The issues in italics are legal/policy issues that bear on how the statutory factors may be interpreted or evaluated. This overview does not explicitly include decision options.

Preliminary Matters

Should the Commission grant MCGP's motion to strike from the record the "Case Background and Executive Overview" filed by Excelsior simultaneously with its Exceptions?

Is the Final PPA filed with Excelsior's Reply Brief properly in the record? Is the Excelsior offer on carbon sequestration filed with its Reply Brief properly in the record?

Should the Commission give deference to the ALJs with respect to the credibility of the evidence in this proceeding? Does the Commission have a duty to undertake a complete and independent review of the record?

Does the Commission need to make any findings on burden of proof issues?

Decisions Required by Minn. Stat. §§216B.1694 and .1693

- I. Is Excelsior Energy's Mesaba Unit 1 Project an Innovative Energy Project (IEP) under Minn. Stat. §216B.1694?

What significance should be given to the Commission's February 23, 2005 Order in 03-1883 finding that Excelsior was eligible for a grant from the RDF?

- A. Does it makes use of an innovative generation technology that utilizes coal as a primary fuel in a highly efficient combined-cycle configuration with significantly reduced sulfur dioxide, nitrogen oxide, particulate, and mercury emissions from those of traditional technologies?

Was the language above intended to be simply a description of IGCC technology, therefore not requiring fact-specific findings on each sub-issue?

Does the phrase "coal as a primary fuel" mean that coal needs to be used more than 50% of the time over any particular period?

What does "significantly" mean in terms of reduced emissions?

Do each of the 4 emissions need to be significantly reduced, or the emissions overall?

What generation technologies are included in "traditional technologies?"

- B. Is it a project that the developer or owner certifies is a project capable of offering a long-term supply contract at a hedged, predictable cost?

Do the words "that the developer or owner certifies" imply that the Commission is to only to look at whether a certification was made or is to look at the underlying truth of the statements?

Does "capable of offering . . ." require that the project currently offers a long-term supply contract at a hedged, predictable cost, or just to be able to do so in the future? Does the developer or owner need to show that it actually plan to do so?

- C. Has it been designated by the commissioner of the Iron Range Resources and Rehabilitation Board as a project that is located in the taconite tax relief area on a site that has substantial real property with adequate infrastructure to support new or expanded development and that has received prior financial and other support from the board?

Do the words "designated by the commissioner of the Iron Range Resources and Rehabilitation Board" imply that the Commission is to only to look at whether a designation was made or is to look at the underlying truth of the statements made by the Commissioner?

-If the Commission finds that any of the 3 criteria above (I A, B, or C) are not met, then the Project is not an IEP. The Commission may not need to make further decisions in this docket.

-If the Commission finds that all 3 criteria are met, then it needs to evaluate the PPA.

II. Should the Commission Approve, Disapprove, Amend, or Modify Excelsior's Proposed Purchase Power Agreement with Xcel Energy?

[Subd. 2 (7) provides that an IEP shall be entitled to enter into a contract with Xcel Energy to provide 450 megawatts of base load capacity and energy under a long-term contract, subject to the approval of the terms and conditions of the contract by the commission.]

*If the Project is an IEP, can Xcel be forced to enter into the contract under the "shall be entitled to enter into a contract" language, or does there need to be a meeting of the minds?*³

Does the Commission have the authority to amend the 450 MW size of the PPA?

If the Commission can amend the size, should the Commission consider approving the whole 603 MW [450 MW plus 153 MW] PPA under this statute, rather than also looking at the CET statute?

[Subd. 2 (7) also provides that the Commission may approve, disapprove, amend, or modify the contract in making its public interest determination, taking into consideration the five factors listed below in A-E.]

Is the Commission limited to considering the positive aspects of factors A-E, or is it to consider both costs and benefits?

Are the five factors the only factors that the Commission may consider in making its public interest determination, or may it also consider the factors in F?

- A. What are the project's economic development benefits to the state?
- B. Does the project use of abundant domestic fuel sources?
- C. What is the stability of the price of the output from the project?
- D. What is the project's potential to contribute to a transition to hydrogen as a fuel resource?
- E. What are the emission reductions achieved compared to other solid fuel baseload technologies?

What other solid fuel base load technologies should be considered--only coal or also biomass, nuclear, etc.?

³In its Initial Brief, Xcel suggests that forcing the PPA on it may run afoul of the Commerce Clause of the U.S. Constitution and Equal Protection provisions of the Minnesota Constitution.

Should carbon capture/sequestration be considered, and if so, how?

F. *Does the Commission have the authority to, and if so should it, consider any or all of the following additional public interest factors?*

1. Are ratepayers reasonably protected from operational risks?
2. Are ratepayers reasonably protected from financial risks?
3. What are the impacts on Xcel's financial health?
4. Is the price charged to Xcel and its ratepayers under the PPA reasonable?
5. Other?

If the Commission finds that the balance of the above factors weighs in favor of the public interest, it can approve the PPA. If not, then it can disapprove, amend, or modify the PPA.

Does the Commission need to reach issues under the CET statute if the PPA is disapproved?

III. Is the Mesaba Project a Clean Energy Technology that is or is likely to be least cost, including the costs of ancillary services and other generation and transmission upgrades necessary, under Minn. Stat. §216B.1693, and therefore should it supply at least 2% of the electrical energy supplied to Xcel customers?

It the two percent of energy requirement under 216B.1693 in addition to the 450MW PPA requirement?

A. Is the Project a Clean Energy Technology (CET)?

If the Project is an IEP, then it qualifies as a CET according to 216B.1694, subd. 2(4).

B. Is a clean energy technology a least cost, or likely to be a least cost resource for Xcel?

How should "least cost" be defined and measured?

What does "likely to be least cost" mean and how should it be evaluated?

C. Is it contrary to the public interest for the "at least 2%" of electric energy required under this statute to be supplied by the Mesaba Project?

What should be the scope of the public interest analysis?

-If the Commission finds that the Project is a CET that is least cost or likely to be least cost and it is not contrary to the public interest, then the Project should supply at least 2% of Xcel's electric energy [the approximately 153 MW additional to the 450 MW].

-If the Commission finds in the affirmative on all the statutory criteria (the project is an IEP, the PPA is in the public interest, and it is a CET that is, or is likely to be, least cost), then the Commission will need to take up the question in Phase 2 in the future, after receipt of the ALJ Report, exceptions, and replies.

Commission Decision Options

Some decision options are included in **Appendix 1** to these briefing papers. A more comprehensive set of decision options will be provided by staff at a later date.

ATTACHMENT 1

216B.1694 Innovative energy project.

Subdivision 1. **Definition.** For the purposes of this section, the term "innovative energy project" means a proposed energy-generation facility or group of facilities which may be located on up to three sites:

- (1) that makes use of an innovative generation technology utilizing coal as a primary fuel in a highly efficient combined-cycle configuration with significantly reduced sulfur dioxide, nitrogen oxide, particulate, and mercury emissions from those of traditional technologies;
- (2) that the project developer or owner certifies is a project capable of offering a long-term supply contract at a hedged, predictable cost; and
- (3) that is designated by the commissioner of the Iron Range Resources and Rehabilitation Board as a project that is located in the taconite tax relief area on a site that has substantial real property with adequate infrastructure to support new or expanded development and that has received prior financial and other support from the board.

Subd. 2. **Regulatory incentives.** (a) An innovative energy project:

- (1) is exempted from the requirements for a certificate of need under section 216B.243, for the generation facilities, and transmission infrastructure associated with the generation facilities, but is subject to all applicable environmental review and permitting procedures of sections 116C.51 to 116C.69;
- (2) once permitted and constructed, is eligible to increase the capacity of the associated transmission facilities without additional state review upon filing notice with the commission;
- (3) has the power of eminent domain, which shall be limited to the sites and routes approved by the Environmental Quality Board for the project facilities. The project shall be considered a utility as defined in section 116C.52, subdivision 10, for the limited purpose of section 116C.63. The project shall report any intent to exercise eminent domain authority to the board;
- (4) shall qualify as a "clean energy technology" as defined in section 216B.1693;
- (5) shall, prior to the approval by the commission of any arrangement to build or expand a fossil-fuel-fired generation facility, or to enter into an agreement to purchase capacity or energy from such a facility for a term exceeding five years, be considered as a supply option for the generation facility, and the commission shall ensure such consideration and take any action with respect to such supply proposal that it deems to be in the best interest of ratepayers;
- (6) shall make a good faith effort to secure funding from the United States Department of Energy and the United States Department of Agriculture to conduct a demonstration project at the facility for either geologic or terrestrial carbon sequestration projects to achieve reductions in facility emissions or carbon dioxide;
- (7) shall be entitled to enter into a contract with a public utility that owns a nuclear generation

facility in the state to provide 450 megawatts of baseload capacity and energy under a long-term contract, subject to the approval of the terms and conditions of the contract by the commission. The commission may approve, disapprove, amend, or modify the contract in making its public interest determination, taking into consideration the project's economic development benefits to the state; the use of abundant domestic fuel sources; the stability of the price of the output from the project; the project's potential to contribute to a transition to hydrogen as a fuel resource; and the emission reductions achieved compared to other solid fuel baseload technologies; and

(8) shall be eligible for a grant from the renewable development account, subject to the approval of the entity administering that account, of \$2,000,000 a year for five years for development and engineering costs, including those costs related to mercury-removal technology; thermal efficiency optimization and emission minimization; environmental impact statement preparation and licensing; development of hydrogen production capabilities; and fuel cell development and utilization.

(b) This subdivision does not apply to nor affect a proposal to add utility-owned resources that is pending on May 29, 2003, before the Public Utilities Commission or to competitive bid solicitations to provide capacity or energy that is scheduled to be on line by December 31, 2006.

HIST: 1Sp2003 c 11 art 4 s 1

216B.1693 Clean energy technology.

(a) If the commission finds that a clean energy technology is or is likely to be a least-cost resource, including the costs of ancillary services and other generation and transmission upgrades necessary, the utility that owns a nuclear generating facility shall supply at least two percent of the electric energy provided to retail customers from clean energy technology.

(b) Electric energy required by this section shall be supplied by the innovative energy project defined in section 216B.1694, subdivision 1, unless the commission finds doing so contrary to the public interest.

(c) For purposes of this section, "clean energy technology" means a technology utilizing coal as a primary fuel in a highly efficient combined-cycle configuration with significantly reduced sulfur dioxide, nitrogen oxide, particulate, and mercury emissions from those of traditional technologies.

(d) This section expires January 1, 2012.

HIST: 1Sp2003 c 11 art 2 s 4

ATTACHMENT 2

LIST OF WITNESSES
E-6472/M-05-1993 - Phase I

WITNESS	ISSUE
Blazar (Chamber)	Keeping energy prices competitive; statutory compliance and appropriate terms for any PPA
Amit (DOC)	Review the Power Purchase Agreement (PPA) submitted by Excelsior Energy (Excelsior) to Xcel; determine whether or not the Integrated Gasification Combined Cycle (IGCC) proposed by Excelsior is, or is likely to be, a least-cost resource, obligating Xcel to use the IGCC plant's generation; review, if the PPA should be approved without any modifications, should be disapproved, or should be modified.
Garvey (DOC)	List the benefits of the Mesaba Project and its IGCC technology to the Arrowhead Region and the State of Minnesota; offer an analytical public interest framework for the Mesaba project
Bodmer (Excelsior)	Costs and the benefits of the Excelsior's Mesaba IGCC power plant. Response to Amit.
Cavicchi (Excelsior)	Evaluation of Xcel's IRP; Rate impacts of PPA; and
Chen (Excelsior)	Omnibus Energy Bill (HF 9): Innovative Energy Project and Clean Energy Technology.
Cortez (Excelsior)	Comparative Capital and Operating cost of electricity of IGCC and SCPC Plants; Costs of Investor Owned Utility SCPC plant
Evans (Excelsior)	Environmental Impacts and Benefits
Gale (Excelsior)	Cost and Benefits of the IGCC project and the benefits of the PPA.
Jones (Excelsior)	Health Benefits of IGCC

WITNESS	ISSUE
Lynch (Excelsior)	IGCC technology and operation of Wabash IGCC Plant employing ConocoPhillips technology
Hamilton (Excelsior)	PPA Accounting Treatment
Meal (Excelsior)	Impact of Mesaba PPA on the credit quality and bond rating of both Xcel and its parent XEI.
Olson (Excelsior)	Benefits of fuel flexibility; Supply of petroleum coke; and fuel transportation capacity and competition.
Osterass (Excelsior)	Overview and foundation for Excelsior's original Petition; Introduction of other Excelsior's witnesses; and Supplemental information to the original filing.
Sass (Excelsior)	Power Plant and Electricity Cost Analysis
Scheller (Excelsior)	Least-cost planning modeling
Schrag (Excelsior)	Coal use, climate change and the imperative to rapidly replace pulverized coal plants with IGCC
Sherner (Excelsior)	Transmission Infrastructure
Skurla (Excelsior)	Project's economic benefit to Minnesota
Steadman (Excelsior)	CO ₂ Capture and Sequestration
Stone (Excelsior)	Excelsior energy's action plan for carbon capture and sequestration.
Weissman (Excelsior)	Natural gas price volatility and risk and why using natural gas for power generation.
Wadley (Excelsior)	Mesaba Project overview
Wolk (Excelsior)	IGCC versus SCPC facilities
Hamilton (MCEA)	Carbon dioxide emission and future government regulations applied to carbon emissions and their effect on project cost
Lange (MCEA)	Future regulation of mercury emissions in Minnesota and the effect new federal and state rules governing mercury emissions may have on the cost of Excelsior's proposal.

WITNESS	ISSUE
Anderson, E. ((MCGP)	Health impacts of Mesaba Project;
Rich (MCGP)	Cost of Carbon Dioxide Emissions and Sequestration; Air Emissions from Proposed Flares; Costs of Plant and Off-Site Safety; Evaporative Cooling Tower and ZLD Air Emissions; Cooling Water Slowdown ZLD; Costs of Cumulative Impacts in Conjunction with the MSI project; and Overstated Economic Benefits and Costs not Addressed
Anderson, D. (MN Power)	Issues related to the application of the IGCC technology to the fuels selected by the Mesaba Project; transmission issues related to the Mesaba Project; and resource planning issues related to the Mesaba Project.
Cashin (MN Power)	Environmental benefit issues related to the Mesaba Project; and air permit issues related to the Mesaba Project.
Crowley (MN Power)	Coal type and transportation
Hodik (MN Power)	Legal analysis of recent energy statutes.
Jackson, Anne (MPCA)	Comparison of air emissions from electric generating facilities.
Canter (Panzarino) (XCEL)	Evaluation of the proposed fuel supply plan for its feasibility and ability to ensure a hedged predictable price.
Clarke (XCEL)	Evaluation of environmental study offered by Mesaba
Engelking (XCEL)	Compares system impact of the Mesaba 1 PPA with Company's approved resource plan.
Gonzalez (XCEL)	Study of transmission improvements needed to supply Mesaba Unit 1's output to Xcel Energy's system.
Hervey (XCEL)	Incremental impacts on Minnesota electric rates of the Mesaba 1 purchased power agreement.
Hyde (XCEL)	Assessment of the ability of the Mesaba1 PPA to provide a least-cost resource to Xcel's system.
McDaniel (XCEL)	Accounting treatment that would be afforded the PPA, given the size and the terms.

WITNESS	ISSUE
Miao (XCEL)	Information regarding the IGCC technology
Poferl (XCEL)	Summarizes the framework of Xcel's case; Overview of Company testimony; Response to issues raised in the Mesaba 1 Petition and testimony of Thomas Osteraas.
Reed (XCEL)	Evaluates PPA and its impact in light of industry norms.
Schiro (XCEL)	Addresses Mesaba 1's transmission plan
Sheeley (XCEL)	Evaluates the economic impact study offered by Mesaba 1
Tyson (XCEL)	Analyzes impacts of the PPA on Xcel's capital structure and ability to finance debt and equity needed for utility operations.