

Minnesota Public Utilities Commission
Staff Briefing Papers

Meeting Date: August 14, 2008 **Agenda Item # _____

Company: Excelsior Energy

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

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.

- Issues:
1. Does the Mesaba project incorporate a “clean energy technology” that “is or is likely to be a least-cost resource, including the cost of ancillary services and other generation and transmission upgrades necessary” and is therefore entitled to supply Xcel with at least thirteen percent of the electric energy that Xcel Energy provides to its retail customers?
 2. Should the Commission place a deadline on negotiations between Excelsior and Xcel?

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Relevant Documents

Initial Brief Minnesota Department of Commerce June 22, 2007
Initial Brief Excelsior Energy June 22, 2007
Initial Brief Xcel Energy June 22, 2007
Initial Brief Minnesota Power June 22, 2007
Initial Brief MGCP June 22, 2007
Reply Brief Minnesota Department of Commerce July 16, 2007
Reply Brief Excelsior Energy July 16, 2007
Reply Brief Xcel Energy July 16, 2007

Order Resolving Procedural Issues, Disapproving
Power Purchase Agreement, Requiring Further Negotiations,
And Resolving To Explore The Potential
For A Statewide Market For Project Power
Under Minn. Stat. § 216B.1694, Subd. 5 (Phase 1) August 30, 2007

Findings of Fact, Conclusions of Law, and Recommendation
(ALJ Report) Office of Administrative Hearings September 14, 2007

Excel Energy Inc.’s Exceptions to the Proposed Finding of Fact,
Conclusions of Law, and
Recommendations of the Administrative Law Judge October 4, 2007

DOC Reply to the Exceptions of Excelsior Energy October 15, 2007

Xcel Energy’s Reply to the Exceptions of Excelsior Energy October 15, 2007

Order Denying Petitions for Reconsideration and
Other Post-Decision Relief and
Reconsidering Order on Own to Require Further Filings (Phase 1) November 8, 2007

Excelsior Energy’s First 60-day Progress Report on
Power Purchase Agreement Negotiations January 8, 2008

Xcel Energy’s First Status Report on
Power Purchase Agreement Negotiations January 8, 2008

Excelsior Energy’s Second 60-day Progress Report on
Power Purchase Agreement Negotiations March 10, 2008

Xcel Energy’s Second Status Report on
Power Purchase Agreement Negotiations March 10, 2008

Order Denying Request for Indefinite Stay April 23, 2008

Xcel Energy’s Third Status Report on
Power Purchase Agreement Negotiations May 8, 2008

Excelsior Energy’s Third 60-day Progress Report on
Power Purchase Agreement Negotiations May 8, 2008

Order Denying Reconsideration June 17, 2008

Xcel Energy’s Fourth Status Report on
Power Purchase Agreement Negotiations July 7, 2008

Excelsior Energy’s Fourth 60-day Progress Report on
Power Purchase Agreement Negotiations July 7, 2008

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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Background

On December 27, 2005, Excelsior Energy Inc. filed a petition stating that lengthy negotiations with Xcel had failed to produce a mutually agreeable power purchase agreement and asked the Commission to approve, amend, or modify the agreement it proposed. The petition also asked the Commission to find that the Mesaba Project it proposed to build was a “least cost resource” under Minn. Stat. § 216B.1693 and that Xcel should be required to buy 13% of its retail load from the Project, under the Clean Energy Technology provisions of Minn. Stat. § 216B.1693. The Commission referred the case to the Office of Administrative Hearings, listing three issues to be addressed:

- (1) whether the Commission should approve, disapprove, amend, or modify the proposed power purchase agreement submitted by Excelsior;
- (2) whether the Commission should determine that the Mesaba Project would be, or was likely to be, a least cost resource under Minn. Stat. § 216B.1693, obligating Xcel to use the plant’s generation to supply at least two percent of its retail sales; and
- (3) should the Mesaba Project be determined to be a least cost resource, whether the appropriate purchase obligation for Xcel was 13% of retail sales, as Excelsior maintained.¹

The Commission emphasized the importance of determining with as much precision as possible the probable cost to Xcel ratepayers of the power produced by the Mesaba Project:

Further, the Commission encourages the Administrative Law Judge and the parties to develop as much contract price information as possible, using different scenarios and assumptions. Price is a critical issue in this case, and it is one of the most difficult to develop, since no one has had extensive commercial experience with the coal gasification technology Excelsior proposes to use in the power plant under development.

The resolution of these issues [the ones referred, set forth above] turns on numerous sub-issues; two of the most important are what contract prices are likely to be under different scenarios and whether those prices are reasonable.

Notice and Order for Hearing and Order Granting Intervention Petition, this docket, (April 25, 2006), p. 4.

¹ In the ALJ Second Prehearing Order in this proceeding dated June 2, 2006, he acknowledged that the three issues the Commission identified were the ultimate issues in this proceeding. That Order bifurcated this matter into two phases, with Phase 1 addressing the Commission’s first two issues and Phase 2 addressing only the third. The ALJ issued his report in Phase 2 on September 14, 2007.

At the May 15, 2007, prehearing conference, the parties to the case stipulated to the admission of pre-filed testimony and waived cross-examination in Phase 2; therefore, no formal evidentiary hearings were held. The parties submitted sworn testimony from 47 witnesses and hundreds of pages of exhibits. The Administrative Law Judges conducted three public hearings, which were held in Hoyt Lakes, Taconite, and St. Paul. The parties submitted initial and reply briefs to the Administrative Law Judges.

On June 22, 2007, Excelsior, Xcel, Minnesota Power, MGCP, and the Department of Commerce filed initial post-hearing briefs; Excelsior and Xcel also filed proposed findings of fact and conclusions, and Excelsior filed an Offer of Proof Regarding Evidence Excluded from the Phase 2 Record, consisting of the written testimony of Douglas H. Cortez and Andrew D. Weissman.

By letter dated June 26, 2007, the ALJ incorporated into the Phase 2 hearing record all of the public comments and public exhibits that had been received into the Phase 1 record.

On July 16, 2007, Excelsior, Xcel, and the Department of Commerce filed post-hearing reply briefs, and the OAH hearing record for Phase 2 closed.

On August 30, 2007, the Commission issued Findings, Conclusions and an Order in Phase 1 addressing the issue of whether it should approve, amend, or modify the terms and conditions of a proposed power purchase agreement that Excelsior has submitted to Xcel Energy under Minn. Stat. § 216B.1694.21 Specifically, the Commission found and concluded:

- a. That the Mesaba Project is an Innovative Energy Project under Minn. Stat. § 216B.1694.22;
- b. That the terms and conditions of the proposed power purchase agreement submitted by Excelsior are not in the public interest;
- c. That the terms and conditions of the proposed contract result in unreasonably high prices, which translate into unreasonably high rates;
- d. That the terms and conditions of the proposed contract expose Xcel and its ratepayers to unreasonable operational risks;
- e. That the terms and conditions of the proposed contract expose Xcel and its ratepayers to unreasonable financial risks;
- f. That the terms and conditions of the proposed contract could have collateral negative consequences for Xcel's financial health; and
- g. That the potential benefits of IGCC technology reflected in the considerations set forth in Minn. Stat. § 216B.1694, subd. 2 (a) (7) do not offset the high price and significant ratepayer risks of the proposed contract's terms and conditions.

On September 14, 2007, the Administrative Law Judge (ALJ) filed his Phase 2 Findings of Fact, Conclusions, and Recommendations, together with a Memorandum (the ALJs' Report). The Project and its technology do not satisfy the requirements of Minn. Stat. § 216B.1693 (a) because the Project is not nor likely to be, a least cost resource, including the cost of ancillary services and other necessary generation and transmission upgrades, to provide 13% of the electric energy that Xcel supplies to its retail customers.

The ALJ also found it would be contrary to the public interest for the Mesaba Project to supply 13% of Xcel Energy's retail load starting in 2012.

On October 4, 2007, Excelsior Energy filed Exceptions to the Proposed Finding of Fact, Conclusions of Law, and Recommendations of the Administrative Law Judge.

On October 15, 2007, the Minnesota Department of Commerce and Xcel Energy filed replies to the exception of Excelsior Energy.

On November 8, 2007, the Commission issued its Order Denying Petitions for Reconsideration and Other Post-Decision Relief and Reconsidering Order on Own Motion To Require Further Filings in Phase 1 of this proceeding. In this Order the Commission reaffirmed its decisions made in its August 30, 2007 Order by denying all petitions for reconsideration and other post-decision requests for relief filed in the case. However, the Commission did reconsider the August 30th Order on Its Own Motion. In its reconsideration, the Commission required a progress report from the parties on the status of power purchase agreement negotiations within 60 days of the date of the Commission November 8, Order on Reconsideration.

On January 8, 2008, both Excelsior Energy and Xcel Energy filed progress reports on the status of negotiations on a power purchase agreement between the parties.

On February 14, 2008, Excelsior Energy requested a stay of Phase 2 proceedings pending implementation of Phase 1 Orders. On February 25, 2008, responses to the Excelsior's request were filed by Xcel Energy and Minnesota Power (MP).

On March 10, 2008, both Excelsior Energy and Xcel Energy filed Status Reports regarding their negotiations of a Power Purchase agreement (PPA) as ordered by the Commission in its November 8, 2007 Order on Reconsideration.

On March 10, 2008, both Excelsior Energy and Xcel Energy filed the second set of progress reports on the status of negotiations on a power purchase agreement between the parties.

On April 23, 2008, the Commission issued an Order Denying Request for Indefinite Stay of Phase 2.

On May 8, 2008, both Excelsior Energy and Xcel Energy filed Status Reports regarding their negotiations of a Power Purchase agreement (PPA) as ordered by the Commission in its November 8, 2007 Order on Reconsideration.

On June 17, 2008, the Commission issued an Order Denying Reconsideration of its April 23, 2008 Order Denying Excelsior's Request for Indefinite Stay of Phase 2.

On July 7, 2008, both Excelsior Energy and Xcel Energy filed Status Reports regarding their negotiations of a Power Purchase agreement (PPA) as ordered by the Commission in its November 8, 2007 Order on Reconsideration.

Issue 1: Does the Mesaba project incorporate a “clean energy technology” that “is or is likely to be a least-cost resource, including the cost of ancillary services and other generation and transmission upgrades necessary” and is therefore entitled to supply Xcel with at least thirteen percent of the electric energy that Xcel Energy provides to its retail customers?

The ALJ concluded the following in his September 14, 2007 Report: The issue in Phase 2 is whether the Commission should exercise its statutory discretion to raise that percentage from 2% to 13%. As previously noted, the questions that must be addressed in Phase 2 are: (1) whether anything has occurred since the ALJs’ issued their Phase 1 report on April 12, 2007, that makes it more likely that Excelsior’s Project will be a least-cost resource to supply 2% or more (specifically 13%) of the electric energy supplied to Xcel’s retail customers; and (2) whether any evidence in the Phase 2 record that was not admitted in Phase 1 increases that likelihood. The ALJ concludes that no event has occurred since the Phase 1 Report to make it more likely that the Project is likely to be a least-cost resource for any percentage of Xcel’s retail load, and that the evidence in the Phase 2 record tends to establish that it is even less likely that the Project is a least-cost resource to supply 13% of Xcel’s retail electric energy than to supply 2%. (ALJ Report at page 42)

On October 4, 2007, Excelsior Energy filed exceptions to the ALJ’s September 14, 2007 Report. Excelsior excepted the ALJ’s Report in the areas identified below. The page number references to those areas in the attached Staff Annotated ALJ Report has been provided:

Legal interpretation and application of Minn. Stat. § 216B.1693

Generic Technology (pp 13-16 of Annotated Report)

Termination Date (pp 31-34 of Annotated Report)

Treatment of environmental values including PM_{2.5} (pp 22-27 of Annotated Report)

Analysis of project cost data (pp 16-21 of Annotated Report)

Carbon Dioxide capture and sequestration issues (pp 27-31 of Annotated Report)

Staff Comments

As the ALJ pointed out, Minn. Stat. § 216B.1693(b) clearly indicates that whatever percentage the electric energy supplied by the Project the Commission might consider appropriate must not be contrary to the public interest.² Minn. Stat. § 216B.1693(a) indicates that the electric energy

² The record in this proceeding indicates that the 13% requirement requested by Excelsior corresponds to 13% of what Xcel’s retail load will be in 2012 which approximately corresponds to the entire output of the proposed Mesaba Unit 2. 13% of Xcel’s current retail load in 2013 will be approximately 644 MW, about

supplied by the Project must be least cost for “the utility that owns a nuclear generating facility,” and Minn. stat. § 216B.1693(d) indicates that the electric energy supplied by the Project must be a least cost resources for Xcel during the period from the date following enactment-from May 30, 2003, until January 1, 2012.

Staff has provided an annotated version of the ALJ report which incorporates the exceptions of Excelsior and the replies of Xcel and the DOC. In the event the Commission accepts the ALJ’s Report in its entirety, it is not necessary for the Commission to individually accept each of the ALJ’s findings in the report which were contested by Excelsior.

Commission Options

1. Adopt the ALJ’s Report in its entirety.
2. Adopt the ALJ’s Report with modifications.
 - a. Some or all of the modifications recommended by Excelsior
 - b. Any other modifications the Commission deems appropriate.

Issue 2: **Should the Commission place a deadline on negotiations between Excelsior and Xcel?**

Excelsior Status Report:

From the First Status Report Dated January 8, 2008: On November 27, 2007, the Co-CEO’s of Excelsior, Tom Micheletti and Julie Jorgensen, met with Dave Dave Sparby and Karen Hyde of Xcel. Following the meeting, one phone call between representatives of Excelsior and Xcel has occurred, the purpose of which was to schedule a meeting regarding the power purchase agreement. A meeting has been scheduled for Janaury 16.

Excelsior’s last contact with the DOC was on October 26, 2007, in response to Excelsior’s inquiry about the DOC’s efforts to arrange a meeting with Xcel, which were without success.

From the Second Status Report Dated March 10, 2008: The parties have met on two separate occasions since the filing of Excelsior’s January 8, 2007 report to the Commission. On January 16, 2008, Tom Osteraas and Renee Sass of Excelsior met with Betsy Engelking and Jeff Klein of Xcel and Mike Krikava of Briggs and Morgan, and on February 25 Tom Osteraas and Renee Sass of Excelsior met with Jeff Klein and Chris Clark of Xcel and Mike Krikava with Briggs and Morgan. During each of those meetings, the parties discussed three broad issues. First, the

41 MW more than the output of Mesaba Unit 1. As such, the ALJ concluded that it does appear that in both Phases 1 and 2, Excelsior intended to request power supply entitlements nearly equal to the entire net output of Mesaba Units 1 and 2, as currently planned.

parties discussed Excelsior's carbon capture and sequestration plan and Excelsior's position that capture at levels that do not require a water gas shift reaction will be the most economical way to advance the technological capability to actually capture carbon dioxide from a large coal-fueled power plant.

Second, the parties have discussed the need to review and update the key terms and conditions in the proposed power purchase agreement to reflect the current status of the Project and to explore whether the parties can close the gap between them on key points. Third, the parties have discussed whether there is a way to bring greater price certainty to the power purchase agreement and in that regard have discussed whether the front end engineering and design (FEED) work could be accelerated from when it would ordinarily be done, following regulatory certainty on the power purchase agreement. The parties expect to continue to explore whether there are alternative ways to accelerate the FEED work in order to expedite greater price certainty to the power purchase negotiation process.

Finally, the Department of Commerce has not been involved in any of the meetings held during the past 60 days, but the parties expect that there will be opportunities for the DOC to become involved in the discussion during the upcoming 60 days.

From the Third Status Report Dated May 8, 2008: The parties continued discussions following the second report and met in person on May 1, 2008. The subjects discussed included: (1) Excelsior's efforts to update the target pricing for the Project; (2) development of a term sheet identifying differences in major terms and conditions for a PPA; (3) the relationship to the PPA negotiations of future resource plan filings expected by fall of 2008; (4) new or changed circumstances that might stimulate negotiations, such as Excelsior's discussion with other potential buyers of power from the Project; and (5) opportunities for carbon sequestration.

From the Fourth Status Report Dated July 7, 2008: The parties met July 7, 2008 and continued their discussions regarding updated cost information.

Xcel Status Report:

From the First Status Report Dated January 8, 2008: Negotiations were initiated with an in-person meeting of Xcel Energy and Excelsior Energy executives, which occurred November 27, 2007. Tom Micheletti and Julie Jorgensen, principals from Excelsior, and David Sparby (Acting CEO of NSP) and Karen Hyde (Vice President, Resource Planning and Acquisition) from Xcel Energy participated in this meeting.

The parties discussed several ideas and agreed to schedule further discussions between the organizations. The next in-person meeting is scheduled for January 16, 2008. Xcel Energy has not formally requested any assistance of the Department of Commerce to date.

From the Second Status Report Dated March 10, 2008: Representatives of both parties continued discussions consistent with our first report. A second in person negotiation session was held. We discussed the appropriate confidentiality provisions to govern the negotiations given the parties' previous confidentiality agreement and the Protective Order issued in the docket. The parties set forth a plan to formalize agreement on this issue to facilitate complete reporting to the Commission, but also providing sufficient protection of trade secret information.

The parties also discussed how increased project price certainty could be developed, including funding possibilities Excelsior might have to complete the front-end engineering and design study, which would provide greater price information.

The parties also discussed Excelsior's process to update estimated cost information to current levels from the originally filed numbers. Excelsior indicated its effort to update these continues.

The parties discussed whether to proceed to discuss more definitive terms and conditions prior to having the updated pricing information. Related to terms and conditions, the parties discussed that the issue of additional off-takers or purchasers from the plant could help assist in resolution of certain terms and condition issues, for instance, helping to resolve imputed debt and other credit rating agency concerns

From the Third Status Report Dated May 8, 2008: An in-person negotiation session was held and representatives of both parties continued discussions consistent with the second report. The discussion included Excelsior's schedule for an updated target price for the project, other potential buyers of power from the project, and carbon sequestration and other issues of which represent fundamental differences relating to terms and conditions between the parties.

From the Fourth Status Report Dated July 7, 2008: At the last meeting, Excelsior Energy and Xcel Energy agreed to schedule our next negotiation session following the Commission consideration of Phase 2. Excelsior Energy's procedural filings delayed the consideration of Phase 2 by the Commission. The parties have scheduled an inperson negotiation session for July 7, 2008.

Staff Comments

In the Commission's November 8, 2007 Order Denying Petitions for Reconsideration and Other Post-Decision Relief and Reconsidering Order on Own to Require Further Filings, the Commission required progress reports at 60-day intervals on the Commission ordered negotiations. The first reports were filed on January 8, 2008. Based on the first reports, the Commission may want to determine if it is necessary to impose a deadline on negotiations at this time.

Finally, if the Commission were to place a deadline on the current set of negotiations and closed the current process down, there is nothing that preclude Excelsior and Xcel from continuing voluntary negotiations on their own initiative.

Commission Options

1. Impose a deadline on negotiations between Excelsior and Xcel.
2. Do not impose a deadline on negotiations between Excelsior and Xcel.

Staff Annotated ALJ Report for Commission Briefing

MPUC Docket No. E-6472/M-05-1993
OAH Docket No. 12-2500-17260-2

STATE OF MINNESOTA
OFFICE OF ADMINISTRATIVE HEARINGS

FOR THE MINNESOTA PUBLIC UTILITIES COMMISSION

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

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**FINDINGS OF FACT,
CONCLUSIONS OF LAW,
AND RECOMMENDATION**

Phase 2 of this matter is before Administrative Law Judge Bruce H. Johnson on the record submitted by the parties in lieu of an evidentiary hearing. The following parties have appeared in this matter:

Byron E. Starns, Leonard, Street and Deinard, 150 South Fifth Street, Suite 2300, Minneapolis, MN 55402, and Thomas Osteraas, Excelsior Energy, 11100 Wayzata Boulevard, Suite 350, Minnetonka, MN 55305, on behalf of Excelsior Energy, Inc.

Christopher B. Clark, Assistant General Counsel, 414 Nicollet Mall, Suite 2900, Minneapolis, MN 55401, and Michael Krikava, Briggs and Morgan, P.A., 2200 I.D.S. Center, 80 South 8th Street, Minneapolis, MN 55402, on behalf of Northern States Power Company d/b/a Xcel Energy.

Valerie Means, Assistant Attorney General, 445 Minnesota Street, Suite 1400, St. Paul, MN 55101, on behalf of the Department of Commerce.

David R. Moeller, Minnesota Power, 30 West Superior Street, Duluth, MN 55802, on behalf of Minnesota Power.

Carol Overland, Overland Law Office, PO Box 176, Red Wing, MN 55066, on behalf of minncoalgasplant.com (MCGP).

Kevin Reuther, Attorney at Law, Minnesota Center for Environmental Advocacy, 26 East Exchange Street, Suite 206, St. Paul, MN 55101, on behalf of the Minnesota Center for Environmental Advocacy, Izaak Walton League of America—Midwest Office, Wind on the Wires, and Minnesotans for an Energy Efficient Economy (the Environmental Organizations).

Robert S. Lee and Andrew P. Moratzka, Mackall, Crouse & Moore, PLC, 1400 AT&T Tower, 901 Marquette Ave, Minneapolis, MN 55402 on behalf of Xcel Industrial Intervenors.

Todd J. Guerrero and David Sasseville, Lindquist & Vennum, 4200 IDS Center, 80 South 8th Street, Minneapolis, MN 55402-2274 on behalf of Big Stone Unit II Co-Owners.

Richard J. Savelkoul, Felhaber, Larson, Fenlon & Vogt, 444 Cedar Street, Suite 2100, St. Paul, MN 55101 on behalf of the Minnesota Chamber of Commerce.

Eric F. Swanson and David M. Aafedt, Winthrop & Weinstine, P.A., 225 South Sixth St, Suite 3500, Minneapolis, MN 55402 on behalf of Manitoba Hydro.

John E. Drawz, Fredrikson & Byron, P.A., Suite 4000, 200 South Sixth Street, Minneapolis, MN 55402-1425, on behalf of Great Northern Power Development, LLP (Great Northern).

NOTICE

Notice is hereby given that, pursuant to Minn. Stat. § 14.61, and the Rules of Practice of the Minnesota Public Utilities Commission and the Office of Administrative Hearings, exceptions to this Report, if any, by any party adversely affected must be filed within 20 days of the mailing date hereof with the Executive Secretary, Minnesota Public Utilities Commission, 350 Metro Square, 121 - 7th Place East, St. Paul, Minnesota 55101 or by electronic filing. The Commission may modify the Date for filing exceptions. Exceptions must be specific and stated and numbered separately. Proposed Findings of Fact, Conclusions and Order should be included, and copies thereof shall be served upon all parties. If desired, a reply to exceptions may be filed and served within ten days after the service of the exceptions to which reply is made. Oral argument before a majority of the Commission will be permitted upon request. Such request must accompany the filed exceptions or reply.

The Minnesota Public Utilities Commission will make the final determination of the matter after the expiration of the period for filing exceptions as set forth above, or after oral argument, if such is requested and had in the matter.

Further notice is hereby given that the Commission may, at its own discretion, accept or reject the Administrative Law Judges' recommendation and that said recommendation has no legal effect unless expressly adopted by the Commission as its final order.

STATEMENT OF THE ISSUE

Whether the Mesaba Project incorporates a “clean energy technology” that “is or is likely to be a least-cost resource, including the costs of ancillary services and other generation and transmission upgrades necessary” and is therefore entitled to supply Xcel with at least thirteen percent of the electric energy that Xcel Energy provides to its retail customers.

The Administrative Law Judge concludes that the Mesaba Project neither is nor is likely to be a least-cost resource to provide or 13% percent of the electric energy that Xcel Energy provides to its retail customers through 2013.

Based upon the record created in this proceeding, the Administrative Law Judge makes the following:

FINDINGS OF FACT

Background

1. Excelsior Energy, Inc., is an independent energy development company based in Minnetonka, Minnesota, that is incorporated under the laws of the State of Minnesota. Excelsior Energy, Inc., and its subsidiary, MEP-I LLC (jointly, Excelsior or Excelsior Energy), is proposing to license, construct, own, and operate the Mesaba Energy Project Units 1 and 2 (collectively, the Mesaba Project or the Project). Mesaba Unit 1 is a solid fuel IGCC power plant located in northeastern Minnesota with an initial capacity installation of 603 MW(net).¹ Mesaba Unit 2 is an identical IGCC power plant that Excelsior plans to build adjacent to Unit 1 in a second phase. Excelsior plans to construct Mesaba Unit 2 to approximately the same specifications as Mesaba Unit 1 and operate it in the same way. Mesaba Unit 2 will also have an initial capacity of approximately 603 MW(net).²

2. The Mesaba Project will be located in the Iron Range, either in Iron Range Township northeast of Grand Rapids, Minnesota or in Hoyt Lakes, Minnesota. Both Mesaba Units 1 & 2 will be located on the same site.³

3. Northern States Power Company d/b/a Xcel Energy (NSP, Xcel Energy, or Xcel) is engaged primarily in the business of generating, transmitting, and distributing electrical power and energy in the states of Minnesota, Wisconsin, North Dakota and South Dakota. Xcel Energy owns the two nuclear generation facilities currently located in Minnesota.

¹ (P2) XE-2084 at Finding 17.

² *Id.*; (P2) EE-1310; (P2) XE-2084 at Finding 17.

³ (P2) EE-1020 at p. 10.

4. As of 2002, Xcel Energy provided service to slightly more than half of Minnesota's almost two million non-farm residential electric customers. It served an even higher proportion of Minnesota's commercial electric customers.⁴ Its Minnesota service areas cover a large portion of the southern half of Minnesota.

5. A combined cycle (CC) plant uses a gas-fired combustion turbine generator to generate electricity, plus it uses excess heat from the combustion in the combustion turbine to create steam to power a steam turbine generator. This combination is considered highly efficient because it uses more of the heat energy from the burning of the gas. It is now a fairly standard configuration. The gas used is usually natural gas (thus, an NGCC), but other gases can also be used.⁵

6. An Integrated Gasification Combined Cycle (IGCC) plant integrates gasification with a combined cycle plant. The gasification process converts coal or other feedstock to a synthesis gas (syngas) comprised primarily of carbon monoxide and hydrogen. The gasification takes place in a gasifier. That is a large vessel capable of containing the high-temperature partial combustion process that breaks down the feedstock and any other ingredients fed into the gasifier, usually water or steam and air or oxygen, into carbon, hydrogen, and oxygen, and then recombines those elements into syngas and other compounds. The syngas is then transported to and burned in a nearby combined cycle gas combustion turbine generator/steam turbine generator combination.⁶

7. Mesaba Unit 1 will integrate ConocoPhillips E-Gas gasification technology with advanced F-class combustion turbines. This is an IGCC plant that will include two operating "gasification trains" or "gasification islands" (a gasifier and its supporting apparatus), a standby gasification train, two combustion turbines, and a single steam turbine. The spare gasification train is included in order to increase the percent of the time the Mesaba Project is able to operate, its "availability," to about 92 percent, a very high number. It also provides a backup and the possibility of creating extra syngas that could be sold as a fuel or chemical feedstock. The two or three gasifier trains will feed syngas to the "combined cycle," or "power island," section. There, the syngas will be burned in the two gas combustion turbine generators and the excess heat from those gas turbines will be used to heat water to steam to drive the single steam turbine generator. High pressure steam produced in the gasification trains will also be integrated into the combined cycle, again making efficient use of heat energy that would otherwise be wasted.⁷

⁴ Minn. Dept. of Commerce, *2002 Utility Data Book*, at 26 and 33. Available at http://www.state.mn.us/mn/externalDocs/Commerce/Utility_Data_Book,_1965-2000__030603120425_UtilityDataBook65thru02.pdf.

⁵ *ALJ Findings of Fact, Conclusions of Law, and Recommendation*, issued in this matter on April 12, 2006, (Phase 1 Report) at Finding No. 3, included in the Phase 2 record as (P2) XE-2094.

⁶ (P2) XE 2094 at Finding No. 4.

⁷ (P2) XE 2094 at Finding No. 7.

8. Gasifiers can be designed to process a wide variety of hydrocarbon fuels, including biomass. The gasifiers for the Project have been designed to operate on subbituminous Powder River Basin (PRB) coal, but will also have the flexibility to receive petroleum coke or bituminous coal fuel as market conditions dictate. The expected net plant output is 603 MW when operating on PRB coal fuel. The net heat rate (a measure power plant thermal efficiency) for the plant when operating on PRB coal is estimated at 9390 btu/kWh on a higher heating value basis. The heat rate will be substantially lower with petroleum coke or bituminous coal fuels, or on natural gas.⁸

9. The Mesaba Project can also run on natural gas, bypassing the gasifiers and operating as a typical NGCC plant. The Mesaba Project will be operated in this mode for startup, as back-up when required, and for significant time periods during at least its first three years of operation.⁹

10. During the Mesaba Project's initial three-year ramp-up period, the Project is likely to consume unusually high amounts of natural gas on the theory that higher fuel costs during the shakedown period will facilitate major cost savings later on, when the facility will run on low-cost fuel.¹⁰

Relevant Statutes

11. The Legislature enacted both the Clean Energy Technology statute, Minn. Stat. § 216B.1693, and the Innovative Energy Project statute, Minn. Stat. § 216B.1694, in its 2003 Special Legislative Session as part of the 2003 Omnibus Energy Bill.¹¹ Minn. Stat. § 216B.1693 provides:

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-

⁸ (P2) XE 2094 at Finding No. 8.

⁹ (P2) XE 2094 at Finding No. 9.

¹⁰ Commission's August 30, 2007, Order at p. 18.

¹¹ Act of May 29, 2003, ch. 11, art. 4, 2003 Minn. Laws 1st Spec. Sess. 1661.

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.

12. Minn. Stat. § 216B.1694, provides in relevant part:

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.

13. In its 2007 regular session, the Legislature enacted an amendment to the Renewable Energy Objectives statute, Minn. Stat. § 216B.1691,¹² and also enacted the Global Warming Mitigation Act, Minn. Stat. §§ 216.01H *et seq.*¹³

14. Minn. Stat. § 216B.1691, as amended, provides in pertinent part:

216B.1691 RENEWABLE ENERGY OBJECTIVES.

Subdivision 1. **Definitions.** (a) Unless otherwise specified in law, "eligible energy technology" means an energy technology that: generates electricity from the following renewable energy sources: (1) solar; (2) wind; (3) hydroelectric with a capacity of less than 100 megawatts; (4) hydrogen, provided that after January 1, 2010, the hydrogen must be generated from the resources listed in this clause; or (5) biomass, which includes, without limitation, landfill gas, an anaerobic digester system, and an energy recovery facility used to capture the heat value of mixed municipal solid waste or refuse-derived fuel from mixed municipal solid waste as a primary fuel.

¹² Act of February 28, 2007, 2007 Minn. Laws ch. 3, § 1.

¹³ Act of May 25, 2007, 2007 Minn. Laws, ch. 136, art. 5.

(b) "Electric utility" means a public utility providing electric service, a generation and transmission cooperative electric association, a municipal power agency, or a power district.

(c) "Total retail electric sales" means the kilowatt-hours of electricity sold in a year by an electric utility to retail customers of the electric utility or to a distribution utility for distribution to the retail customers of the distribution utility.

* * *

Subd. 2a. Eligible energy technology standard.

* * *

(b) An electric utility that owned a nuclear generating facility as of January 1, 2007, must meet the requirements of this paragraph rather than paragraph (a). An electric utility subject to this paragraph must generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota or the retail customer of a distribution utility to which the electric utility provides wholesale electric service so that at least the following percentages of the electric utility's total retail electric sales to retail customers in Minnesota is generated by eligible energy technologies by the end of the year indicated:

(1)	2010	15 percent
(2)	2012	18 percent
(3)	2016	25 percent
(4)	2020	30 percent.

Of the 30 percent in 2020, at least 25 percent must be generated by wind energy conversion systems and the remaining five percent by other eligible energy technology.

15. Minn. Stat. § 216H.03, subd. 3 provides in pertinent part:

216H.03 FAILURE TO ADOPT GREENHOUSE GAS CONTROL PLAN.

Subdivision 1. **Definition; new large energy facility.** For the purpose of this section, "new large energy facility" means a large energy facility, as defined in section 216B.2421, subdivision 2, clause (1), that is not in operation as of January 1, 2007, but does not include a facility that (1) uses natural gas as a primary fuel, (2) is designed to provide peaking, intermediate, emergency backup, or contingency services, (3) uses a simple cycle or combined cycle turbine technology, and (4) is capable of achieving full load operations within 45 minutes of startup for a simple cycle facility, or is capable of achieving minimum load operations within 185 minutes of startup for a combined cycle facility.

Subd. 2. **Definition; statewide power sector carbon dioxide emissions.** For the purpose of this section, "statewide power sector carbon dioxide emissions" means the total annual emissions of carbon dioxide from the generation of electricity within the state and all emissions of carbon dioxide from the generation of electricity imported from outside the state and consumed in Minnesota. Emissions of carbon dioxide associated with transmission and distribution line losses are included in this definition. Carbon dioxide that is injected into geological formations to prevent its release to the atmosphere in compliance with applicable laws, and emissions of carbon dioxide associated with the combustion of biomass, as defined in section 216B.2411, subdivision 2, paragraph (c), clauses (1) to (4), are not counted as contributing to statewide power sector carbon dioxide emissions.

Subd. 3. **Long-term increased emissions from power plants prohibited.** Unless preempted by federal law, until a comprehensive and enforceable state law or rule pertaining to greenhouse gases that directly limits and substantially reduces, over time, statewide power sector carbon dioxide emissions is enacted and in effect, and except as allowed in subdivisions 4 to 7, on and after August 1, 2009, no person shall:

(1) construct within the state a new large energy facility that would contribute to statewide power sector carbon dioxide emissions;

(2) import or commit to import from outside the state power from a new large energy facility that would contribute to statewide power sector carbon dioxide emissions; or

(3) enter into a new long-term power purchase agreement that would increase statewide power sector carbon dioxide emissions. For purposes of this section, a long-term power purchase agreement means an agreement to purchase 50 megawatts of capacity or more for a term exceeding five years.

* * *

Subd. 7. **Other exemptions.** The prohibitions in subdivision 3 do not apply to:

(1) a new large energy facility under consideration by the Public Utilities Commission pursuant to proposals or applications filed with the Public Utilities Commission before April 1, 2007, or to any power purchase agreement related to a facility described in this clause. The exclusion of pending proposals and applications from the prohibitions in subdivision 3 does not limit the applicability of any other law and is not an expression of legislative intent regarding whether any pending proposal or application should be approved or denied; * * *

Procedural History

16. On December 27, 2005, Excelsior filed a Petition asking the Commission to open a contested case proceeding, and in so doing, to require the ALJs to recommend findings and conclusions on the following general issues:¹⁴

a. Whether the Commission should approve, amend, or modify the terms and conditions of a proposed power purchase agreement that Excelsior had submitted to Xcel Energy under Minn. Stat. § 216B.1694;

b. Whether the Commission should 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 Energy 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

c. Whether the Commission should determine that, under the terms of Minn. Stat. § 216B.1693, at least 13% of the energy supplied to Xcel Energy’s retail customers should come from the IGCC plant by 2013.

17. The Commission considered Excelsior’s petition and procedural comments on April 6, 2006, and on April 25, 2006, issued an Order finding that it had jurisdiction over Excelsior’s petition under Minn. Stat. §§ 216B.1693 and 216B.1694 and referring the matter to the Office of Administrative Hearings for a contested case proceeding. In that Order, the Commission delineated the issues to be addressed in the contested case proceeding—namely whether the Commission should:

1) approve, 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;

2) 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

¹⁴ Excelsior’s Petition requested the Commission to require the ALJs to recommend findings and conclusions on nine specific findings, which the Commission subsequently aggregated into the following three. See (P2) EE-1002 and Commission Order of April 25, 2006, in MPUC Docket No. E-6472/M-05-1993 (Commission Order of April 25, 2006) at p. 1.

3) 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 2013.¹⁵

18. The Second Prehearing Order entered on June 2, 2006, acknowledged that the three issues the Commission had identified were the ultimate issues in this proceeding. That Order bifurcated this matter into two phases, with Phase 1 addressing the Commission's first two issues and Phase 2 addressing only the third. It also established schedules for both Phase 1 and Phase 2.

19. In the Sixth Prehearing Order dated August 9, 2006, the ALJs modified the schedules for both Phase 1 and Phase 2, establishing the following schedule for Phase 2:

Discovery on All Phase 2 Issues	January 22, 2007, to hearing
Prehearing Conference on Phase 2	February 23, 2007
Petitioner's Supplemental Testimony	March 6, 2007
Other Parties' Direct Testimony	April 3, 2007
Dispositive Motions (7 days to reply)	May 1, 2007
Rebuttal Testimony (all parties)	May 1, 2007
Surrebuttal Testimony (all parties)	May 14, 2007
Public Hearings	to be determined
Evidentiary Hearing at PUC at 9:00 a.m.	May 21-25, 2007
Deadline for Written Public Comment	June 22, 2007
Initial Briefs and Proposed Findings	June 22, 2007
Reply Briefs	July 6, 2007
ALJ Report to PUC	August 3, 2007

20. At a November 16, 2006, prehearing conference, the parties stipulated to the admission of the pre-filed testimony and waived cross-examination of all witnesses for the evidentiary hearing in Phase 1, which had been scheduled to commence on November 20, 2006.

21. Public hearings were held on December 18, 2006, in St. Paul, on December 19, 2006, in Hoyt Lakes, and on December 20, 2006, in Taconite.

22. The hearing record for Phase 1 closed on January 19, 2007, and on April 12, 2007, the ALJs issued findings of fact, conclusions of law, and a

¹⁵ Commission Order of April 25, 2006 at p. 1.

recommendation to the Commission regarding the two issues that had been addressed in Phase 1.

23. On April 25, 2007, Xcel filed a Motion and Memorandum Regarding Phase 2, seeking to stay Phase 2 proceedings until after the Commission entered a final order on Phase 1. Xcel also requested that if the ALJ¹⁶ denied the stay, denial be certified to the Commission for its consideration pursuant to Minn. R. 1400.7600. On May 8 and 9, 2007, the Chamber and MCGP responded by concurring with Xcel Energy's motion, and Excelsior responded by objecting to the motion.

24. By letter dated May 3, 2007, the ALJs notified the parties that they were dividing responsibility for pending contested cases involving the Mesaba Project, with the undersigned ALJ presiding over these Phase 2 proceedings and ALJ Mihalchick presiding over the pending siting and routing proceeding associated with the Mesaba Project.

25. On May 10, 2007, the undersigned ALJ entered an Order denying Xcel's motion to stay and, if not, for certification of that motion to the Commission. The ALJ concluded that a number of factors tended to support going ahead with a Phase 2 evidentiary hearing. First, four key issues of law and fact bearing on Phase 2 proceedings had been addressed by the ALJs in the Phase 1 report and had been presented to the Commission for adjudication: (1) whether the Mesaba Project qualifies as "clean energy technology"; (2) whether the Mesaba Project "is or is likely to be a least-cost resource"; (3) whether the Mesaba Project qualifies as a "innovative energy project"; and (4) if all of that is so, whether having the Mesaba Project supply at least two percent of the electric energy provided to Xcel's retail customers would be contrary to the public interest. The ALJ ruled that only question remaining for Phase 2 was a very narrow one—namely, if the Commission's Phase 1 decision was that Excelsior's Mesaba Project met all four of those criteria, whether the Commission should direct that the Mesaba Project provide thirteen percent, rather than two percent, of the electric energy provided to Xcel's retail customers. The ALJ also denied Xcel's request for certification to Commission, citing the little time members had to become informed and deliberate about the underlying issues. Finally, the ALJ scheduled a prehearing conference for 3:00 p.m. on Tuesday, May 15, 2007, to discuss matters relating to the impending evidentiary hearing.

26. At the May 15, 2007, prehearing conference, the parties stipulated to the admission of the pre-filed testimony and exhibits from the Phase 1 record, and waived cross-examination of witnesses in a Phase 2 evidentiary hearing, which had been scheduled to begin on May 21, 2007.¹⁷ During that prehearing conference, Excelsior

¹⁶ Administrative Law Judges Steve M. Mihalchick and Bruce H. Johnson jointly had presided over Phase 1. However, by letter dated May 3, 2007, the ALJs advised parties that Judge Johnson alone would be presiding over Phase 2 and that Judge Mihalchick would alone be presiding over the associated site and route permit proceedings.

¹⁷ See Transcript of May 14, 2007, prehearing conference at pp. 14-19.

also indicated that it would be filing an Offer of Proof.¹⁸ The ALJ then made some modifications of the Phase 2 schedule that had been established in the Sixth Prehearing Order. The Phase 2 evidentiary record would remain open for documentary evidence until June 4, 2007.¹⁹ Initial post-hearing briefs any offers of proof would be due on June 22, 2007; reply briefs would be due on July 16, 2007, and the ALJ's Phase 2 report would be issued on or before August 15, 2007.²⁰

27. On June 5, 2007, Excelsior transmitted to the ALJ the documents that the parties had agreed would comprise the Phase 2 hearing record.

28. On June 22, 2007, Excelsior, Xcel, Minnesota Power, MGCP, and the Department of Commerce filed initial post-hearing briefs; Excelsior and Xcel also filed proposed findings of fact and conclusions, and Excelsior filed an Offer of Proof Regarding Evidence Excluded from the Phase 2 Record, consisting of the written testimony of Douglas H. Cortez and Andrew D. Weissman.

29. By letter dated June 26, 2007, the ALJ incorporated into the Phase 2 hearing record all of the public comments and public exhibits that had been received into the Phase 1 record.

30. On July 16, 2007, Excelsior, Xcel, and the Department of Commerce filed post-hearing reply briefs, and the OAH hearing record for Phase 2 closed.

31. On August 30, 2007, the Commission issued Findings, Conclusions and an Order addressing the issue of whether it should approve, amend, or modify the terms and conditions of a proposed power purchase agreement that Excelsior has submitted to Xcel Energy under Minn. Stat. § 216B.1694.²¹ Specifically, the Commission found and concluded:

a. That the Mesaba Project is an Innovative Energy Project under Minn. Stat. § 216B.1694;²²

b. That the terms and conditions of the proposed power purchase agreement submitted by Excelsior are not in the public interest;²³

c. That the terms and conditions of the proposed contract result in unreasonably high prices, which translate into unreasonably high rates;²⁴

¹⁸ *Id.*

¹⁹ *Id.* at p. 22.

²⁰ *Id.* at pp. 22-25.

²¹ Commission's Order of August 30, 2007, in MPUC Docket No. E-6472/M-05-1993 (Commission's August 30, 2007, Order).

²² Commission's August 30, 2007, Order at pp. 9-13.

²³ Commission's August 30, 2007, Order at pp. 13-15.

²⁴ *Id.* at pp. 15-17.

d. That the terms and conditions of the proposed contract expose Xcel and its ratepayers to unreasonable operational risks;²⁵

e. That the terms and conditions of the proposed contract expose Xcel and its ratepayers to unreasonable financial risks;²⁶

f. That the terms and conditions of the proposed contract could have collateral negative consequences for Xcel's financial health;²⁷ and

g. That the potential benefits of IGCC technology reflected in the considerations set forth in Minn. Stat. § 216B.1694, subd. 2 (a) (7) do not offset the high price and significant ratepayer risks of the proposed contract's terms and conditions.²⁸

However, the Commission directed Excelsior and Xcel to continue negotiating the terms of a potential PPA, with the Department's assistance.

32. In the Commission's Phase 1 Order, it did not specifically address issues relating to any potential power supply entitlements available to Excelsior or corresponding power purchase obligations of Xcel under Minn. Stat. § 216B.1693 (or the CET Statute).

Mesaba Project's Qualification as Clean Air Technology

33. Minn. Stat. § 216B.1693(a) directs the Commission to determine whether "*clean energy technology*" (also Clean Energy Technology or CET) is "likely to be a least-cost resource." If that is the case, that paragraph requires Xcel to "supply at least two percent of the electric energy provided to retail customers from clean energy technology." Minn. Stat. § 216B.1693(c) goes on to define "Clean Energy Technology" as "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." The ALJs previously concluded that statutory test of "clean energy technology" is virtually the same as the three-part test of "innovative energy project" (also Innovative Energy Project or IEP) in Minn. Stat. § 216B.1694, subd. 1(1) and that both provisions have the same meaning.²⁹ Since the Commission has found that the Mesaba Project is an Innovative Energy Project under Minn. Stat. § 216B.1694,³⁰ the Project also necessarily qualifies as a Clean Energy Technology under Minn. Stat. § 216B.1693(c).

²⁵ *Id.* at pp.17-19.

²⁶ *Id.* at p. 19.

²⁷ *Id.* at p. 20.

²⁸ *Id.* at pp. 20-23.

²⁹ (P2) XE-2094 at p. 74.

³⁰ Commission's August 30, 2007, Order at pp. 9-13.

34. Minn. Stat. § 216B.1693(d) provides that “[t]his section expires January 1, 2012,” after which the legal entitlements and obligations of the CET Statute no longer have the force and effect of law.”³¹

Project-Specific Nature of the CET Statute

35. It is Excelsior’s position that Xcel must purchase power from an IGCC power producer if IGCC-produced power in general can be shown to be a least-cost resource for Xcel. However, Minn. Stat. § 216B.1693(b) makes the electric energy supply entitlement in paragraph (a) project-specific by providing that the electric energy *must* be supplied by the Innovative Energy Project described in Minn. Stat. § 216B.1694, subd. 1, unless the Commission finds doing so contrary to the public interest.

36. Among potential IGCC power producers, only the Mesaba Project qualifies as an IEP. Therefore, if the Commission finds that it is not contrary to the public interest for the Project to supply the power described in Minn. Stat. § 216B.1693(a), the entitlement to supply that power becomes exclusive and specific to the Mesaba Project.³²

37. On the other hand, if the Commission should find that it is contrary to the public interest for the Mesaba Project to supply that power, the CET Statute then becomes non-specific and its entitlements theoretically become available to other qualified IGCC power producers. However, in that event, Excelsior would no longer have standing to maintain its Phase 2 petition because it would no longer have the potential “injury in fact” required to continue this proceeding.³³

Exceptions:

In Paragraph 37, the ALJ concluded that if the Commission finds that the Mesaba Project is shown not to be a least cost supplier, the CET Statute then becomes non-specific and its entitlements theoretically become available to other qualified IGCC power producers. However, in that event, Excelsior would no longer have standing to maintain its Phase 2 petition because it would no longer have the potential “injury in fact” required to continue this proceeding.

Excelsior:

The ALJ Erred In Concluding That The CET Statute Requires An Analysis Of A Specific Project, Rather Than IGCC Technology.

In his Proposed Findings, the ALJ erred in determining that the CET Statute requires that the Mesaba Project, rather than IGCC technology generally, be determined “likely

³¹ See discussion in attached Memorandum at pp. 27-29.

³² See further discussion in attached Memorandum at pp. 30-31.

³³ See further discussion in attached Memorandum at p. 32.

to be a least cost resource.” The language of the CET Statute, however, explicitly directs the Commission to consider IGCC technology:

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*.

In contrast, the CET Statute refers to a specific project only when describing the preferred source of the CEM energy: “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.” Accordingly, the Commission should conclude that with respect to cost the CET Statute refers to consideration of generation technologies, and not specific projects.

Xcel: Statutory terms are to be construed according to the ordinary meaning of the terms used, and the decision maker must apply the plain meaning of the statute. It would be improper to disregard the words of a statute under the guise of capturing its spirit. The ALJ correctly applied these canons of statutory construction to determine that Minn. Stat. § 216B.1693 requires consideration of a specific plant. The plain language of the Clean Energy Technology statute requires a cost analysis “including the costs of ancillary services and other generation and transmission upgrades necessary[.]” This language requires consideration of an actual project because, as the record abundantly demonstrates, IGCC costs are highly variable depending on the type of technology selected and the location of a proposed facility. Given this cost variability for IGCC technology, a least cost determination cannot be made without reference to a specific project at a specific location.

The ALJ also correctly found that, if generic technology is to be considered, Excelsior lacks legal “standing” to pursue that claim. While Excelsior maintains that the statute was intended for its benefit and that this should confer legal standing to advance generic claims, the ALJ’s analysis correctly applies the law to this situation. The ALJ determined that in the event that Excelsior’s Project is not least cost, it would be left to advocate on behalf of some other generic IGCC power producer. In such an event, Excelsior has no “injury in fact” required for standing to petition the Commission.

DOC: It is important to note that the Commission issued its Order Resolving Procedural Issues, Disapproving Power Purchase Agreement, Requiring Further Negotiations, and Resolving To Explore the Potential for a Statewide Market for Project Power Under Minn. Stat. §216B.1694, Subd. 5, on August 30, 2007. The Commission made the finding and conclusion that:

Since the Commission finds that the terms and conditions of the power purchase agreement at issue do not meet the public interest standard of Minn. Stat. § 216B.1694 subd. 2 (a) (5) for reasons of price, it is impossible to find the Mesaba

Project to be a least cost resource under Minn. Stat. § 216B.1693 and unnecessary to make further determinations under that statute.

As such, Excelsior's exceptions are moot relative to Phase 2.

Commission Options

- A. Accept the ALJ's finding with respect to Project-Specific Nature of the CET Statute.
- B. Do not accept the ALJ's finding with respect to Project-Specific Nature of the CET Statute.

Xcel's Retail Electric Energy Requirements

38. The testimony of Elizabeth Engleking establishes that Xcel will be providing 35,440,000 MWh of energy to its Minnesota retail customers in 2012, that 97.5 MW of generation capacity will be required to meet 2% of that retail energy demand, and that 603 MW will be required to meet approximately 13% of that demand.³⁴

39. In the following year 2013, Xcel will be providing 36,040,000 MWh of energy to its Minnesota retail customers, and 644 MW of generation capacity will be required to meet 13% of that retail energy demand.³⁵ Mesaba Unit 1's net generation capacity alone would therefore be insufficient to provide 13% of the energy Xcel expects to supply to its retail customers in 2013.³⁶

40. The total net generation capacity of both Mesaba Units 1 and 2 is approximately 1200 MW, and that total net generation capacity would be sufficient to supply 24% of the energy that Xcel expects to provide to retail customers in 2013.³⁷

The Mesaba Project's Costs

41. The reasonableness of the cost of the energy supplied by the Project can be ascertained by comparing those costs to alternative baseload facilities of similar sizes. If the Project's cost of electricity is lower or similar to the prices of energy and

³⁴ More precisely 12.4% of that demand. XE-2082 at pp. 6-7.

³⁵ *Id.*

³⁶ *Id.*

³⁷ *Id.* at p. 8; see also Findings No. 1.

capacity of the alternative baseload facilities one can conclude that the Project is a least-cost resource are reasonable.³⁸

42. Department witness Eilon Amit compared the Project's cost of electricity with those of Big Stone II, Comanche Unit 3 (an Xcel Energy plant in Colorado), and Sherco 4.³⁹ Dr. Amit calculated the average annual and levelized costs of electricity for Excelsior's two alternative sites.

Table 1: Cost (Price) Comparison Including Emission Costs, Excluding Transmission Costs

Alternative	Average Annual Price (\$/MWh)	Levelized Price (\$/MWh)
Excelsior		
West Site (603 MW)	\$104.33	\$ 96.04
East Site (598 MW)	\$114.25	\$104.91
Big Stone II Supercritical	\$ 81.91	\$ 73.02
Sherco 4 Supercritical	\$ 74.90	\$ 72.54 ⁴⁰

Dr. Amit also calculated the cost of electricity for a 450 MW output at both sites. Those costs are about 25 percent higher than the costs shown for full capacity output at the two possible sites.

43. Before the MISO had determined what transmission upgrades would be required to connect the Project to the transmission grid, Dr. Amit made following estimates of the PPA's costs including transmission:

Table 1: Cost (Price) Comparison Including Emission and Transmission Costs

Alternatives	Levelized Price With Emissions, No Transmission Cost (\$/MWh)	Levelized Transmission (\$/MWh)	Total Levelized Costs (\$/MWh)
Excelsior Energy			
West Site (603 MW)	96.04	9.21	105.25
East Site (598 MW)	104.91	9.21	114.12
Big Stone II	73.02	2.74	75.76
Sherco 4	72.54	2.79	75.33 ⁴¹

³⁸ Adapted from Phase 1 Finding No. 179. (P2) 2094 at Finding No. 179; see also (P2) DOC 3000 at 21.

³⁹ (P2) DOC 3000 at 21-27; (P2) DOC 3018 at 3; (P2) DOC 3020.

⁴⁰ Adapted from Adapted from Phase 1 Finding No. 180. (P2) 2094 at Finding No. 180; see also (P2) DOC 3023 at 3. The Comanche 3 estimated price is trade secret and has not been restated here. It is available in the nonpublic versions of the cited exhibits. It is not greater than the Big Stone II price.

44. Subsequently, Excelsior Energy was allowed to file a determination from the MISO that fewer transmission upgrades would be necessary to connect either site to the transmission grid than originally anticipated, reducing the estimated cost from \$180 million to \$50 million, in 2006 dollars. Based upon this new information, Dr. Amit revised his levelized transmission cost figures from \$9.21/MWh down to \$2.58/MWh. That change reduces his total levelized cost estimates for the West and East Sites. It would cause Table 1 to be revised as follows:

Table 2: Cost (Price) Comparison Including Emission and Transmission Costs

Alternatives	Levelized Price With Emissions, No Transmission Cost \$/MWh	Levelized Transmission \$/MWh	Total Levelized Costs \$/MWh
Excelsior Energy			
West Site (603 MW)	96.04	2.58	98.62
East Site (598 MW)	104.91	2.58	107.49
Big Stone II	73.02	2.74	75.76
Sherco 4	72.54	2.79	75.33 ⁴²

The levelized costs calculated by Dr. Amit provide a reasonable basis for comparison. They demonstrate that power produced by Mesaba Unit 1 at the Project’s preferred West Site would cost Xcel Energy and its ratepayers about 30 percent more than capacity and electricity from other comparable sources.⁴³

Exceptions

In paragraph 44 the ALJ concluded that the record demonstrates that the Project’s preferred West Site would cost Xcel energy and its ratepayers about 30 percent more than capacity and electricity from other comparable sources.

Excelsior:

The ALJ Erred In Concluding That The Project Is Not Likely To Be A Least Cost Resource Under The CET Statute.

In his Proposed Findings, the ALJ finds that “the power produced by Mesaba Unit 1 at the Project’s preferred West Site would cost Xcel Energy and its ratepayers about 30 percent more than capacity and electricity from other comparable sources.” The ALJ

(Footnote Continued From Previous Page)

⁴¹ Adapted from Adapted from Phase 1 Finding No. 181. (P2) 2094 at Finding No. 181; see also (P2) DOC 3018 at 3, corrected in (P2) DOC 3024 at 1.

⁴² Adapted from Adapted from Phase 1 Finding No. 182. (P2) 2094 at Finding No. 182.

⁴³ Commission’s August 30, 2007, Order at p. 16.

bases his conclusion on comparative cost tables developed by the Department of Commerce (“Department”) in Phase 1 of this proceeding that purport to compare the projected levelized costs of the Project to calculations based on cost assumptions relating to one actual SCPC plant in Colorado (Comanche), one proposed SCPC plant in South Dakota (Big Stone II), and one hypothetical SCPC (Sherco 4).

In relying on the Department’s comparative cost tables, the ALJ failed to recognize that there is no foundation or testimony whatsoever by any party even suggesting, much less confirming, that the cost assumptions for the three alternative SCPC plants cited by the Department are legitimate and reasonable estimates of the likely total costs to ratepayers for those SCPC plants. Indeed, no utility in this proceeding has testified or provided any other foundation to support a conclusion that the costs for Big Stone II, Sherco 4 and Comanche included in the Department’s comparative cost tables would be sufficient to allow a utility to develop, engineer, construct and operate any of Big Stone II, Sherco 4 or Comanche. In addition, the Department itself does not testify that the costs used for Comanche, Sherco 4 and Big Stone II represent the expected actual total installed costs that ratepayers will bear with respect to any of those facilities. Instead, the Department merely calculates the cost of energy from those facilities based upon the unsubstantiated cost assumptions supplied, without any foundation, by the utilities. As such, the ALJ’s reliance on the Department’s analysis was misplaced.

In stark contrast, the substantial and uncontroverted record evidence provided by Fluor Enterprises, Inc. (“Fluor”) demonstrates that the cost of energy and capacity from an IGCC technology is comparable to a utility-owned SCPC. No Minnesota utility has built a baseload coal plant in over 25 years, whereas Fluor has constructed more coal plants in the United States than any other engineering and construction firm. The Fluor cost evidence is the only evidence in the record supported by testimony from credible and competent experts that directly estimates the likely total installed costs that ratepayers will bear in connection IGCC technology and an alternative SCPC plant. The ALJ erred in overlooking this evidence.

Accordingly, the ALJ’s finding that “the levelized costs calculated by Dr. Amit provide a reasonable basis for comparison” is not supported by any evidence in the record of this proceeding. The fact is that no party provided testimony or submitted any evidence in this proceeding to allow the ALJ or the Commission to conclude that the Department’s cost estimates for the alternative SCPC plants were reasonable, appropriate and adequate to cover all of the expenses and provide an acceptable rate of return to those utilities. As such, the ALJ’s reliance on the Department’s cost comparisons is arbitrary and capricious and cannot be upheld.

Finally, contrary to the ALJ’s Proposed Findings, the record in this proceeding together with new State laws passed during the 2007 session of the Minnesota Legislature combine to further confirm that IGCC technology is likely to be a least-cost resource for Xcel ratepayers. In light of the recently enacted moratorium on the construction of new pulverized coal plants in Minnesota, the Mesaba Project provides the only economically viable coal-fueled generation alternative available to Xcel’s ratepayers in order to

partially mitigate further dramatic increases in natural gas consumption for power generation that are planned in Minnesota. The ALJ in Proposed Finding 47 and in his Memorandum at page 38 makes findings that Xcel can meet all of its energy needs through at least 2013 without any additional natural gas-fired generation. Even if these ALJ findings could ensure that no new gas generation is built, Xcel's MERP conversions and recently approved Calpine Mankato and Invenergy gas projects still expose ratepayers to significant gas price risk.

At page 37 of his Memorandum the ALJ notes that "the future price of natural gas is subject to innumerable variables, and what the prices of natural gas will be during the next four to five years cannot be known with any degree of certainty." Notwithstanding these observations, Proposed Finding 49 says:

Enactment of the GWMA [Global Warming Mitigation Act] will not cause the price of natural gas to increase between now and 2012 or 2013 to the point where the Mesaba Project is likely to be a least-cost resource in comparison with the power that Xcel obtains from its existing natural gasfired facilities. Nor is that likely to occur in the more distant future.

This is an astonishing finding, conspicuously missing any citation to anything in the record of this proceeding. Substantial and uncontroverted expert testimony establishes that even ignoring the effects of the GWMA, it is completely foreseeable that natural gas prices are likely to rise to levels that will have a crippling effect on the economy of Minnesota, in large part due to the ever increasing use of natural gas for power generation. No party disputed the voluminous expert reports and testimony offered in this proceeding by Andrew Weisman, a leading national natural gas expert. The likely cost impacts of increasing gas consumption for power generation simply cannot be ignored. The ALJ notes in footnote 119 in his Memorandum that the Project's ability to mitigate gas consumption for Xcel ratepayers is no different than a hydro or renewable plant of similar size's ability to mitigate gas consumption. Again, there is nothing in the record suggesting that Xcel is proposing a new 600 MW baseload hydro contract, or a 600 MW baseload renewable project.

The central question in Phase 2 has to do with cost. In light of the discussion above and Excelsior's Phase 1 pleadings demonstrating the cost of IGCC to be competitive with a state-of-the-art SCPC, the record evidence can only support a conclusion that IGCC technology as reflected in the Project is or is likely to be a least-cost resource. Levelized cost calculations based on cost assumptions for conventional coal plants that no party in this proceeding stands behind cannot be used to justify comparative cost findings that ignore detailed cost assumptions that the most experienced builder of coal plants in the United States stands behind. It was, therefore, arbitrary and capricious for the ALJ to find that capacity and energy from the Project is not likely to be a least-cost resource for Xcel and its ratepayers.

Xcel: Excelsior repeats its argument that only its evidence on project cost was worthy of consideration and that only cost data supplied by its consultant and project

consortium member – Fluor – should have been accepted. This argument has been rejected multiple times and is not persuasive. The ALJ thoroughly analyzed the record as well as the Commission’s decision in the Phase 1 Order and correctly found that the Department’s cost analysis (which shows Excelsior’s proposal is at least 30% more expensive than alternatives) is supported by the record. Excelsior’s arguments offer nothing new and the ALJ’s findings on cost estimates in Phase 2 is supported by the record and entirely proper.

Excelsior’s natural gas argument is also unpersuasive. Excelsior has repeatedly presented its claim that the potential overuse of natural gas was an added reason for its project. The Phase 2 Report demonstrates that the ALJ thoroughly analyzed Excelsior’s argument and found that there were “several major weaknesses in Excelsior’s position.”

First, the ALJ determined that the future price of gas is uncertain because it is “subject to innumerable variables.” Second, the ALJ found that reducing 600 MW of gas-generated power in Minnesota would not impact the national natural gas market. Third, the ALJ found that Xcel Energy could meet incremental demand with less expensive alternatives than the Project. All of these findings are amply supported by the record. The ALJ’s careful analysis and rejection of Excelsior’s natural gas argument demonstrates that the ALJ did take Excelsior’s evidence into account but found it unpersuasive.

Commission Options

- A. Accept the ALJ’s finding regarding The Mesaba Project’s Costs.
- B. Do not accept the ALJ’s finding regarding The Mesaba Project’s Costs.

Impact of the GWMA on Least Cost Analysis

45. In its 2007 session, the Legislature enacted the Global Warming Mitigation Act (GWMA). A goal of the GWMA is to reduce greenhouse gas emissions by at least 15% below 2005 levels by 2015.⁴⁴ There is no incremental goal to achieve a specific reduction on or before January 1, 2012, or in 2013.

46. Among other things, the GWMA imposes a temporary moratorium on the construction of new coal-fired generating plants in Minnesota. That moratorium also extends to the importation of electric energy from out-of-state coal-fired plants that would “contribute to statewide power sector carbon dioxide emissions.”⁴⁵ Both the Mesaba Project and the proposed Bigstone II SCPC plant in South Dakota are

⁴⁴ Minn. Stat. § 216H.03, subd. 2a(b), 2007 Minn. Laws, ch. 136, Art. 5, § 2.

⁴⁵ Minn. Stat. § 216H.03, subd. 3, 2007 Minn. Laws, ch. 136, Art. 5, § 3.

specifically exempted from the moratorium. Also exempt from the moratorium are facilities using natural gas as a primary fuel.⁴⁶

47. Elizabeth Engleking offered testimony in Phase 2 analyzing the cost impact of Mesaba Units 1 and 2 on Xcel generation system. Her analyses compared Xcel's present value revenue requirements (PVRR) with Mesaba Units 1 and 2 included as resources in Xcel's system in comparison with the revenue requirements if Xcel relies on various other available resources to meet its incremental demand for power through 2013. None of those other available resources were additional natural gas-fired power resources. Rather, her testimony established that Xcel can meet any incremental baseload demand between now and January 1, 2012, or 2013 with energy produced from a combination of renewable and hydro sources at a cost that is between \$2.3 and \$2.5 billion less than any power the Project could supply even if it were able to produce power during that period.⁴⁷ The new Minn. Stat. § 216H.03 will therefore not require Xcel to obtain power from Excelsior's Mesaba Project or from additional natural gas-fired resources anytime in the near future.

48. Contrary to Excelsior's assertion, the exclusion of natural gas-fired plants from the GWMA's temporary moratorium does not "virtually [guarantee] that almost all of the incremental energy demand growth that cannot be met with renewable energy will have to be met with yet more natural gas-fired generation."⁴⁸ Nor will the GWMA increase within the foreseeable future the cost of electricity produced by Xcel's gas-fired generating plants to such an extent that the Mesaba Project becomes a least-cost resource by comparison.

49. Enactment of the GWMA will not cause the price of natural gas to increase between now and 2012 or 2013 to the point where the Mesaba Project is likely to be a least-cost resource in comparison with the power that Xcel obtains from its existing natural gas-fired facilities. Nor is that likely to occur in the more distant future.

50. The Phase 2 record contains no reliable evidence establishing that enactment of the GWMA will drive Xcel's cost of operating its own natural gas-fired plants to such a high level that power supplied by the Mesaba Project is likely to be a least-cost resource by comparison.

Even if the Commission looks somewhat beyond 2012 or 2013, the Project's IGCC-produced power is not likely to be a least-cost resource in comparison with power produced by natural gas-fired plants.

Impact of the Project's Particulate Emissions on Least Cost Analysis

51. In their Phase 1 report, the ALJs found that "[t]he particulate matter emissions of "other traditional solid fuel baseload technologies (ranging from 18% to

⁴⁶ See further discussion in attached Memorandum at p. 34.

⁴⁷ (P2) XE-2082; (P2) XE-2083.

⁴⁸ Excelsior's Initial Brief at p. 4.

73%) are generally higher than *the Project's* estimated particulate emissions.”⁴⁹ They also found that “[i]n comparison with traditional solid fuel baseload technologies, the Project’s emissions of ... particulates will be significantly reduced.”⁵⁰ [Emphasis supplied.]

52. In Phase 2, Excelsior seeks to quantify reduced particulate matter as a monetary benefit of IGCC power or as a corresponding cost of traditional solid fuel baseload technologies. Citing a report from its contractor, ICF Consulting (ICF),⁵¹ Excelsior asserts that the externalized cost of the adverse health effects of the PM_{2.5} emissions of an SCPC plant are approximately \$105 million per year greater than those associated *with IGCC technology*, and that that fact alone makes the Project more likely to be a least-cost resource in comparison with SCPC coal plants.

53. ICF Consulting’s report does not purport to compare the externalized cost of the adverse health effects of the PM_{2.5} emissions of an SCPC plant with those associated with the Mesaba Project. The fact that the externalized cost of the adverse health effects of the PM_{2.5} emissions of an SCPC plant may be approximately \$105 million per year greater than those associated *with IGCC technology in general* does not establish that the Mesaba Project more likely to be a least-cost resource in comparison with SCPC coal plants.

54. On the other hand, Dr. Amit reached a contrary conclusion in Phase 1 testimony that compared the Mesaba Project itself with “three actual supercritical plants in different stages of construction or design by Minnesota utilities.”⁵² His comparisons included the externalized cost of the adverse health effects of the PM_{2.5} emissions, and he concluded that, when one accounts for emission costs, including those attributable to particulate matter, by using the externality values set by the Commission, power supplied by the Mesaba Project is not a least-cost resource.⁵³ Dr. Amit’s Project-specific comparisons are more persuasive than the generalized, hypothetical comparisons in the ICF Consulting report.

Exceptions:

The ALJ found in paragraph 54 that the evidence provided by the DOC which compared the external cost of adverse health effects of the PM2.5 emissions, and concluded that when one accounts for emission costs, including those attributable to particulate matter, by using externality values set by the Commission, power supplied by the Mesaba project is not a least cost resource. The DOC’s project-specific comparisons are more persuasive than the generalized, hypothetical comparisons in the ICF report.

Excelsior:

⁴⁹ Phase 1 Report Finding No. 72. (P2) XE-2094 at Finding No. 72.

⁵⁰ Phase 1 Report Finding No. 74. (P2) XE-2094 at Finding No. 74.

⁵¹ (P2) EE 1011.

⁵² Commission’s Phase 1 Order at p. 16.

⁵³ (P2) DOC 3017 and (P2) DOC 3023.

The ALJ Misconstrues Material Record Evidence On Fine Particulate Matter (PM2.5).

Fine particulate matter (PM2.5) is particulate matter smaller than 2.5 microns. PM2.5 is different in kind and produces different human health consequences from particulate matter larger than 10 microns (PM10). The scientific community has in recent years demonstrated that PM2.5 causes significant and quantifiable negative health impacts. As a result, the U.S. Environmental Protection Agency has issued regulations and ascribed significant externality values to PM2.5. Excelsior retained the same expert firm that models PM2.5 emissions for the U.S. EPA, ICF Consulting, to model the relative externality costs of PM2.5 associated with the Mesaba Project and a SCPC plant. This evidence is material to the relative costs of IGCC versus SCPC technology and the ALJ's incorrect findings are material to the determination of the relative costs of the Mesaba Project and IGCC technology as compared to SCPC technology. Nearly every statement in these three proposed findings is directly contradicted by the record evidence. First, contrary to what the ALJ emphasized with italics, ICF Consulting *did not* compare fine particulate emission from a SCPC plant with "those associated with IGCC technology in general." ICF plainly, clearly and unambiguously compared the fine particulate emissions from *the Mesaba Project itself* with those from a SCPC plant located in central Minnesota. The ICF report could not be clearer on this point. Page 1-1 of the ICF report says:

In order to quantify benefits associated with reduced emissions of mercury and PM 2.5 and its precursors, ICF Consulting (ICF) was engaged by Excelsior Energy to model the levels of fine particulate matter and mercury to which populations downwind of *the proposed new integrated gasification and combined cycle (IGCC) Power Station* would be exposed, and to compare them to exposures that would be experienced by populations downwind of a comparably sized supercritical pulverized coal (SCPC) plant located in the central part of the state.

At page 2-4, in discussing the air modeling methodology that ICF uses in advising the Federal Environmental Protection Agency and that ICF also employed in conducting the work for Excelsior, the ICF report says:

The single-plant scenarios are designed to allow assessment of the impacts of *Excelsior's planned new IGCC Power Station located near the city of Taconite in northern Minnesota*, and comparison of those impacts to an Alternative SCPC plant located in central Minnesota (on the property of Xcel Energy's existing Sherburne Country Generating plant near Becker, Minnesota).

References throughout the ICF report are always to "the proposed IGCC Power Station," meaning Excelsior's planned new IGCC Power Station located near the city of Taconite in northern Minnesota.

Second, contrary to the ALJ's finding 54, Dr. Amit *did not* "include[] the externalized cost of the adverse health effects of the PM_{2.5} emissions" or give those emissions any consideration at all in his comparison of the two technologies. Dr. Amit considered only PM10 emissions, which are an entirely different type of emission.

The conclusion in the ALJ's finding 54 that, "Dr. Amit's Project-specific comparisons are more persuasive than the generalized, hypothetical comparisons in the ICF Consulting report" is wrong both because Dr. Amit did not make Project-specific comparisons of PM_{2.5} emissions, and because ICF did not make generalized, hypothetical comparisons. Because (a) ICF *did* make Mesaba Project-specific comparisons, (b) Dr. Amit did not make such comparisons, and (c) no other party in this proceeding disputed the validity of ICF's quantification of the PM_{2.5} emission health benefits of the Project, the Commission should include ICF's cost impacts in reaching its determination that IGCC technology as reflected in the Mesaba Project is likely to be a least-cost resource over the life of the Project because costs associated with controlling PM_{2.5} will be placed upon SCPC plants by regulation that are not reflected in any of the cost comparisons relied on by the ALJ. The record of this proceeding also includes extensive evidence describing the adverse human health impacts of PM_{2.5}, and the Commission cannot ignore expert, uncontroverted record evidence documenting hundreds of millions of dollars of human health impact cost advantages of the Mesaba Project over an alternative SCPC.

Finally, in his Memorandum at page 39, the ALJ says:

[E]ven though the Project's particulate matter emissions may be less than those associated with current technology in conventional SCPC coal plants, emission control technology continues to improve, and whether the Project's control of particulate matter will be more effective than that of future SCPC plants is a matter of speculation.

The record evidence directly contradicts the ALJ's misguided conclusion. It is common knowledge that there is a direct correlation between emissions of SO₂ and NO_x and fine particulate (PM_{2.5}) emissions.

Therefore, if the Project's SO₂ and NO_x emissions, together, are expected to be materially lower than projected SO₂ and NO_x emissions from even future, generic conventional coal technologies, one must conclude that the Project's control of fine particulate matter will be more effective than that of future SCPC plants. On this subject the record demonstrates that no speculation is required. Finding 67 of the ALJs' Phase 1 report presented a comparison of the percentages by which other actual or hypothetical, future facilities varied from the Project's emissions, as follows:

<u>Plant</u>	<u>NO_x</u>	<u>SO₂</u>	<u>PM</u>
Wabash	+150%	+265%	+26%
Existing PC with BACT controls	+36%	+284%	+48%
Desert Rock SCPC	+12%	0.0030	+18%
SWEPCO Hempstead USC PC	+24%	+289%	+18%
EPA “generic” subbituminous SC	+1%	+139%	+28%
EPA “generic” subbituminous IGCC	-30%	-58%	-29%
EPA “generic” subbituminous USC	-9%	+233%	+16%

Because the EPA’s estimated SO₂ emissions from a future, generic subbituminous ultrasupercritical pulverized coal plant are projected to be 233% more than the Project’s SO₂ emissions, the Project’s control of fine particulate emissions will necessarily be much more effective than that of even the cleanest future conventional plant. The ICF report confirms that the Project’s more effective fine particulate emission control will translate directly into hundreds of millions of dollars of human health benefits.

Xcel: Excelsior first argues that the ALJ misconstrued material evidence on the treatment of particulate matter (“PM”) and specifically claims that the ALJ incorrectly analyzed the project’s potential to reduce emissions of PM_{2.5}. This argument ignores the ALJ’s findings concerning the project’s overall environmental profile and the conclusion that:

even though the Project’s particulate matter emissions may be less than those associated with current technology in conventional SCPC coal plants, emission control technology continues to improve, and whether the Project’s control of particulate matter will be more effective than that of future SCPC plants is a matter of speculation.

The Commission could clarify one minor issue in the Phase 2 Report regarding PM_{2.5}. This minor discrepancy on how PM_{2.5} was analyzed by the Department changes nothing in the overall analysis or result and does not support Excelsior’s argument about the appropriateness of the ALJ’s finding that the project is not a least-cost resource.

First, the ALJ’s overall findings (as well as the Commission’s discussion in the Phase 1 Order) already found that the project’s emission levels are not enough to make the proposed project a least-cost resource. The Phase 2 record did not produce any new evidence to prompt a different result now.

Second, Excelsior’s argument that PM_{2.5} should be quantified is not supported by the record or the Commission’s most recent order on treatment of environmental externalities. The Commission’s most recent Notice of Updated Environmental Externality Values (dated July 12, 2007) continues to quantify values for PM₁₀, not PM_{2.5} as Excelsior claims it should. The Department’s analysis of Excelsior’s proposal correctly applied the Commission-approved externality values to PM₁₀ as well as the other authorized values. The Department’s overall analysis as well as evidence in the

record from Xcel Energy showed that Xcel Energy's generation system would be substantially more expensive with Excelsior's project included instead of lower-cost alternatives such as using wind as a resource. On the basis of this analysis, Excelsior's project was properly found not to be least-cost.

Even if the Commission assigned a hypothetical externality value to PM_{2.5}, the record contains no evidence that this additional consideration would make the Project a least-cost resource at some point in the future. To the contrary, the ALJ found that "whether the Project's control of particulate matter will be more effective than that of future SCPC plants is a matter of speculation."

Excelsior argues that NO_x and SO₂ are "precursors" of particulate matter emissions. Excelsior further points out that SO₂ levels from the most modern traditional coal plants are greater than the project's assumed SO₂ emissions. But Excelsior ignores the fact that NO_x levels from modern traditional coal plants — the other so-called "precursor" to particulate matter — are lower than the Project's NO_x emissions. The ALJ reviewed the entire record, weighed all competing claims, and did not just focus on any one precursor" in reaching his decision. The record supports the ALJ's approach.

DOC: The DOC indicated that if there is a desire to consider the specifics of the exceptions, the DOC notes the following concerning the exception to the ALJ's finding of fact paragraphs 52-54, which recommend a Commission finding that Dr. Amit's project-specific comparisons are more persuasive than the generalized, hypothetical comparisons in the ICF Consulting Report submitted by Excelsior. As to particulate matter less than 2.5 microns (PM_{2.5}), the DOC thoroughly detailed in testimony its analysis of the appropriate externality value to be used in this matter. As such, the ALJ's conclusion is properly guided since until the externality is monetized by a Commission Order. The appropriate values to use are those established and set by prior Commission Order. Excelsior's argument does not support reversal of the ALJ's findings.

Commission Options

- A. Accept the ALJ's finding regarding the impact of the Project's particulate emissions on least cost analysis.
- B. Do not accept the ALJ's finding regarding the impact of the Project's particulate emissions on least cost analysis.

Impact of Carbon Capture and Sequestration on Least Cost Analysis

55. The MPCA compared the Project's carbon dioxide emissions with three other existing facilities and with EPA's three types of future "generic" plants. Again, the MPCA presented its comparisons as percentages by which the other actual or

hypothetic facilities varied from the Project's emissions. The MPCA employed pounds of CO₂ per million BTUs as the unit of comparison:

<u>Plant</u>	<u>CO₂</u>
Wabash	-9.5%
Existing PC with BACT controls	+10.3%
Desert Rock SCPC	+2.8%
SWEPCO Hempstead USC PC	+0.5%
EPA "generic" subbituminous SC	-4.2%
EPA "generic" subbituminous IGCC	-17.0%
EPA "generic" subbituminous USC	-13.3% ⁵⁴

56. The MPCA's analysis establishes that carbon dioxide emissions from other technologies are expected to be lower than the expected carbon dioxide emissions from the Project.⁵⁵

57. Excelsior Energy plans to configure Units I and II to allow for the installation of additional equipment that can capture up to 30% of the potential carbon in its selected feedstock possibly as early as 2014, with the possibility of adding a longer term option later for up to 90% removal, if and when DOE demonstrates such the feasibility of such removal. However, it would install the additional equipment only if it is required by law. Excelsior Energy would expect the Final PPA to be amended to allow it to be compensated at a reasonable cost of capital for its investments and to be made whole on all other costs associated with the its carbon capture and sequestration plan (CCS Plan).⁵⁶

58. Based on information provided by Excelsior and analyzed by the Department, the cost of equipment needed to capture some CO₂ at the Project is approximately \$472.3 million in 2011 dollars. The cost of a pipeline necessary to transport captured CO₂ from the plant to depleted petroleum wells in Alberta, Canada, where it could possibly be used to enhance additional oil production and be stored, is approximately \$635.4 million in 2011 dollars. Therefore, the total estimated cost to capture and sequester CO₂ would be \$1.1077 billion in 2011 dollars.⁵⁷ From that data, Dr. Amit estimated the levelized cost of the additional equipment needed to capture CO₂ and the pipeline to transport it to the nearest site for geological storage at an additional \$50.02 MWh for either of the proposed sites.

59. As Dr. Amit states, "After accounting for transmission costs, AFUDC costs and sequestration costs, the least cost of Excelsior plants (West Site 603 MW) is

⁵⁴ Phase 1 Report Finding No. 145. (P2) XE-2094 at Finding No. 145.

⁵⁵ Phase 1 Report Finding No. 145. (P2) XE-2094 at Finding No. 146.

⁵⁶ (P2) EE 1067 at 1-2.

⁵⁷ (P2) DOC 3014 at 21.

significantly more expensive than any of the alternative baseload plants.”⁵⁸ If anything, the cost estimates for the Project are low; they will quite likely exceed the cost of comparable sources by even more than 30 percent.⁵⁹ Dr. Amit compared the Project’s costs with those of the Bigstone II Project, which is also exempt from the GWMA moratorium. He concluded that the Project’s leveled price per MWh would be significantly higher than that of the Bigstone II project.⁶⁰

60. An additional cost associated with carbon capture is the reduced operational efficiency of the Project. Excelsior Energy suggests that capture of 30% of the carbon produced by the Project will result in at least a ten percent loss of plant efficiency.⁶¹ Thus, the revised cost of the Project with carbon capture ability would be divided over significantly lower capacity and output, resulting in significantly greater payments by Xcel Energy and its ratepayers for the energy provided.

61. Xcel’s expert witness, Ms. Engleking, concluded that the present value revenue requirement (PVRR) for Xcel’s generation system would be \$2.5 billion greater using the Project as a resource than with the alternative energy resources in Xcel’s current, approved resource plan.⁶² Ms. Engleking’s analysis also factored in carbon emissions as an externality. Thus, the Project’s IGCC technology’s ability to capture carbon will not contribute significantly to the likelihood that it will be a least-cost resource in comparison with conventional coal-fired technology, particularly between now and 2012 or 2013.

62. Excelsior concedes that its estimates of the cost of carbon capture are based on uncertain assumptions; and they do not account for the 70% of the Project’s CO₂ emissions that will be released into the atmosphere.⁶³ Additionally, the nearest locations that are geologically favorable for sequestration of captured carbon are in north central North Dakota, southwestern Manitoba, and southeastern Alberta, and pipelines would have to be built to pump the carbon dioxide to those locations for sequestration. As a result, and because the Project currently has only the *potential* to capture and sequester carbon, the estimates of Dr. Amit and Ms. Engleking of the costs of emissions, including carbon, as externalities represent reliable approaches to comparing the cost of Project’s carbon emissions to those of conventional coal plants.

63. All the Project now has is the unrealized potential to capture and sequester carbon. Excelsior’s own expert witness, Mr. Cortez, indicated that the favorable financial implications of the Project’s carbon capture potential are likely to be most meaningful only when viewed over the very long term of the Project’s life cycle—during a time frame when the CET Statute will no longer place Xcel under any legal

⁵⁸ (P2) DOC 3018 at 3.

⁵⁹ Phase 1 Finding No. 186; (P2) 2094 at Finding No. 186.

⁶⁰ Phase 1 Findings Nos. 179-183; (P2) 2094 at Findings Nos. 179-183.

⁶¹ (P2) XE-2094 at Findings Nos. 180-182; (P2) EE 1091 at 20; MCGP 5000 at 8.

⁶² (P2) EX-2082 at 2.

⁶³ (P2) EE-1068.

obligation to purchase the a percentage of its retail power from the Excelsior or any other IGCC power producer.⁶⁴

Exceptions: *In Paragraph 63 the ALJ concluded that all the Project has is the unrealized potential to capture and sequester carbon. Excelsior’s own expert witness, Mr. Cortez, indicated that the favorable financial implications of the Project’s carbon capture potential are likely to be most meaningful only when viewed over the very long term of the Project’s life cycle— during a time frame when the CET Statute will no longer place Xcel under any legal obligation to purchase the a percentage of its retail power from the Excelsior or any other IGCC power producer.*

Excelsior:

The ALJ’s Findings About Carbon Capture And Sequestration Are Not Supported By Substantial Evidence.

There are two fundamental flaws in the ALJ’s findings about carbon capture and sequestration. First, the ALJ inexplicably continues to cite preliminary cost estimates that Excelsior provided to Dr. Amit in response to information requests from Dr. Amit long before Excelsior had prepared and filed its Plan for Carbon Capture and Sequestration in this proceeding. The appropriate record evidence concerning Excelsior’s view of possible carbon capture and sequestration (“CCS”) costs is in Excelsior’s CCS Plan, which contains the most detailed, thorough cost estimates of CCS in the record. Excelsior’s CCS Plan estimates costs for the capture equipment and pipeline that are less than half of the \$1 billion figure that the ALJ erroneously attributes to Excelsior in Proposed Finding 58. In addition, Excelsior has never suggested that Alberta, Canada would be the likely destination for sequestration, yet the ALJ indicated that a pipeline to Alberta would be necessary in Proposed Finding 59. Excelsior has always been clear, and its CCS Plan reflects, that North Dakota (hundreds of miles closer than many oil fields in Alberta) is the most likely sequestration site.

Second, the ALJ wrongly implies in Proposed Finding 62 that Dr. Amit’s cost comparisons relating to carbon dioxide fairly and properly analyzed the comparative carbon dioxide costs of the Project and an alternative conventional coal plant. Proposed Finding 62 says, “because the Project currently has only the *potential* to capture and sequester carbon, the estimates of Dr. Amit and Ms. Engelking of the costs of emissions, including carbon, as externalities represents reliable approaches to comparing the cost of [the] Project’s carbon emissions to those of conventional coal plants.” This statement suggests that Dr. Amit appropriately compared the likely cost of carbon capture and sequestration from the Project with the likely costs of carbon capture and sequestration from an alternative conventional coal plant. In Phase 1 Dr. Amit compared costs of the Project *with* Excelsior’s preliminary estimates of

⁶⁴ (P2) EE-1091 at p. 16.

possible carbon capture and sequestration costs (instead of Excelsior's updated estimates from Excelsior's CCS Plan) to Dr. Amit's view of the costs of a SCPC plant without any carbon capture and sequestration. Such a comparison is unwarranted, unfair, and unreasonable.

The Commission should reject the Proposed Findings concerning carbon capture and sequestration since they do not reflect the substantial record evidence on this issue. Any findings on comparative cost advantages relating to carbon capture and sequestration should be based upon the uncontested testimony of national expert Douglas Cortez and Xcel's own admissions that ratepayers will realize huge cost savings from IGCC compared to SCPC technologies once carbon capture and sequestration are required from coal plants.

Xcel: Excelsior contends that the ALJ relied on the wrong carbon sequestration costs and improperly considered the Department's cost comparisons. Excelsior is incorrect. The Commission already considered carbon capture cost information that the ALJ relied upon and determined that carbon sequestration would be prohibitively expensive.

Excelsior's assertion that the Phase 2 Report did not consider updated costs that are included in its Carbon Capture and Sequestration Plan has no merit because these costs are substantially similar to the costs in the record upon which the ALJ relied. Consequently, the cost estimates for adding carbon capture and sequestration are supported by the record.

Finally, Excelsior criticizes the Department's analysis of carbon costs as "unwarranted, unfair and unreasonable" and suggests the Department did not consistently apply carbon costs to the project. Excelsior's criticism ignores page 18 of the Phase 2 Report, which expressly found that given the Project only has a potential to sequester carbon, it was appropriate to assign carbon externality costs both to Excelsior and the alternatives. Thus, the Department's analysis and the ALJ's application of this issue were appropriate.

Commission Options

- A. Accept the ALJ's finding regarding the impact of carbon capture and sequestration on least cost analysis.
- B. Do not accept the ALJ's finding regarding the impact of carbon capture and sequestration on least cost analysis.

Mesaba Project Eligibility to Supply 13% of Xcel's Retail Load

64. Excelsior earlier proposed that 450 MW of its proposed PPA be reviewed under Minn. Stat. § 216B.1694. It proposed that an additional 153 MW (West Range

Site) or 148 MW (East Range Site) be reviewed and approved pursuant to Minn. Stat. § 216B.1693, the Clean Energy Technology Statute.⁶⁵ It is most appropriate to determine cost and pricing on a per Megawatt-hour basis. In order to do so, the costs of the Project should be determined on the total cost and total output of the Project.

65. If the Commission were to find that the Project qualifies for the statutory minimum of two percent, the Legislature contemplated that the Commission would have the discretion to raise the 2 percent floor to a higher percentage⁶⁶ However, to raise the percentage from 2% to 13%, the Commission would first have to conclude that the Project was likely to be a least-cost for 13% of Xcel's retail energy needs and also find that supplying 13% of Xcel's retail energy is not contrary to the public interest.⁶⁷

66. The Commission found and concluded in its Phase 1 Order that the power Excelsior proposes to supply under the PPA using Mesaba Unit 1 would currently cost approximately 30% more than power from comparable facilities over the life of the PPA.⁶⁸ Therefore, using power supplied by its Unit 1, the Mesaba Project and its technology is not likely to be a least-cost resource for Xcel within the meaning of Minn. Stat. § 216B.1693.

67. With the exception of Xcel, the parties, most notably Excelsior and the Department, relied in Phase 2 on evidence they submitted in Phase 1 regarding the cost of energy produced by the Project,⁶⁹ and in the absence of any evidence to the contrary the "inside battery limits costs" of Mesaba Units 1 and 2 are approximately the same.

68. The 603 MW(net) capacity of either Mesaba Unit 1 or Unit 2 would be sufficient to supply approximately 12.4% of the power required by Xcel's Minnesota retail customers in 2012.⁷⁰ Since the Commission has not approved a PPA for 450 MW, Excelsior would only need one Mesaba Unit to supply approximately 12.4% of Xcel's 2012 retail load. The cost of that single unit would also have to include "the costs of ancillary services and other generation and transmission upgrades necessary" in addition to the Unit's "inside battery limits costs."⁷¹

69. In their Phase 1 report, the ALJs found that the Mesaba Project is not likely to be a least-cost resource to provide 2% of the electric energy that Xcel provides to its retail customers.⁷² The issue in Phase 2 is whether the Commission should exercise its statutory discretion to raise that percentage from 2% to 13%. No event has occurred since the Phase 1 Report to make it more likely that the Project will be a least-cost resource for any percentage of Xcel's retail load. Rather, the evidence in the

⁶⁵ Order on Motion for Summary Disposition of Xcel Industrial Intervenors at 7.

⁶⁶ Excelsior's Reply Brief at pp. 1-2.

⁶⁷ See further in attached Memorandum that follows at pp. 32-33.

⁶⁸ Commission's August 30, 2007, Order at p. 16.

⁶⁹ For example, (P2)

⁷⁰ See Finding No. 38.

⁷¹ Minn. Stat. § 216B.1693(a).

⁷² Phase 1 Finding No. 198; (P2) 2094 at Finding No. 198.

Phase 2 record tends to establish that it is even less likely that the Project is a least-cost resource to supply 13% of Xcel's retail electric energy than to supply 2%.

70. Excelsior's current plans for the Mesaba Project are for the construction period of the Mesaba Unit 1 to occur between 2008 and 2011 and for Unit 1 to be completed and operating at full capacity in 2012.⁷³ A realistic timetable for the Mesaba Project being able to provide electric energy to Xcel's retail customers is 2014.⁷⁴ Even if the Mesaba Project were found to be a least-cost resource, the Project will be incapable of providing electrical power to supply 13% of Xcel's retail customers before that potential statutory power supply entitlement expires on January 1, 2012.

Exceptions:

In paragraph 70, the ALJ found that even if the the Mesaba Project were found to be a least-cost resource, the Project will be incapable of providing electrical power to supply 13% of Xcel's retail customers before that potential statutory power supply entitlement expires on January 1, 2012.

Excelsior:

The ALJ Erred In Concluding That Xcel's Obligation Under The CET Statute Expires At The End Of 2011.

In his Proposed Findings, the ALJ erroneously concludes that "[e]ven if the Mesaba Project were found to be a least-cost resource, the Project will be incapable of providing electric power to supply 13% of Xcel's retail customers before that potential power supply entitlement expires on January 1, 2012." The Proposed Findings make clear that the ALJ is interpreting the CET Statute, which states, "[t]his section expires January 1, 2012," to mean that Xcel's obligation to purchase at least 2 percent of its retail energy from IGCC under the CET Statute expires at the end of 2011. Upholding such a restrictive interpretation would essentially repeal the CET Statute since the statute contemplates the long-term supply of clean coal energy for Xcel.

Minnesota Statutes § 645.16 states, "[t]he object of all interpretation and construction of laws is to ascertain and effectuate the intention of the legislature." The object that the CET Statute was intended to achieve was to help pave the way for a better energy future in Minnesota by encouraging the long-term deployment of IGCC technology. This goal is at odds with the ALJ's interpretation, which effectively finds that any obligation to purchase power under the CET Statute would terminate on January 1, 2012. Even in 2003 when the IGCC statutes were being passed, the earliest expectation for the commercial operation date of the Project was 2010.

Therefore, under the ALJ's interpretation the legislature intended to provide an offtake

⁷³ (P2) EE-1110.

⁷⁴ (P2) EE-1307 at p. 6-7.

arrangement for two years, and two years only, by enacting nation-leading incentives to spur therapid development of multiple units of IGCC baseload power generation, at an expected cost in 2003 of more than one billion dollars for each unit. Such an interpretation is absurd, and is inconsistent with Minnesota Statutes § 645.16, which states that “[e]very law shall be construed, if possible, to give effect to all its provisions.” The only reasonable interpretation is that the CET deadline sets the date by which the Commission must set the CEM percentage. The Commission should confirm the same on review of the ALJ’s Proposed Findings.

Xcel: Excelsior argues that the statutory expiration date of January 1, 2012 violates the Legislature’s intent. The plain language of the statute, however, supports the ALJ’s conclusion and applies the plain meaning of the statute itself – it expires for all purposes on January 1, 2012. The Phase 2 Report demonstrates that the ALJ thoroughly analyzed this issue and determined that the statute is unambiguous and therefore it would be improper to consider legislative intent. By the express terms of the statute, Xcel Energy’s obligation, as modified by the sunset provision, expires January 1, 2012. Therefore, any requirement that Xcel Energy purchase after the statute’s expiration cannot be read into the statute.

Commission Options

- A. Accept the ALJ’s finding regarding Mesaba Project eligibility to supply 13% of Xcel’s retail load.
- B. Do not accept the ALJ’s finding regarding Mesaba Project eligibility to supply 13% of Xcel’s retail load.

71. These Findings are based on all of the evidence in the record. Citations to portions of the record are not intended to be exclusive references.

72. To the extent that the Memorandum that follows contains additional findings of fact, including findings on credibility of witnesses, the same are hereby incorporated into these findings.

73. The Administrative Law Judge adopts as Findings any Conclusions that are more appropriately described as Findings.

Based on these Findings of Fact, and for reasons set forth in the following Memorandum, the Administrative Law Judges make the following:

CONCLUSIONS OF LAW

1. The Minnesota Public Utilities Commission and the Administrative Law Judges have jurisdiction over this matter pursuant to Minn. Stat. §§ 216B.08,

216B.1693, 216B.1694, and 14.50, Minn. R. 1400.5100-.8400, and to the extent not superseded by those rules, Minn. R. 7829.0100-.3200.

2. The Commission gave proper notice of the hearing in this matter, has fulfilled all relevant substantive and procedural requirements of law or rule, and has the authority to take the action proposed.

3. Since the Project is an Innovative Energy Project under Minn. Stat. § 216B.1694, subd. 2(a)(4) and is therefore also as a Clean Energy Technology under Minn. Stat. § 216B.1693.

4. The Project and its technology do not satisfy the requirements of Minn. Stat. § 216B.1693(a) because the Project is not likely to be, a least cost resource, including the costs of ancillary services and other necessary generation and transmission upgrades, to provide 13% of the electric energy that Xcel supplies to its retail customers.

5. It would be contrary to the public interest for the Project to supply 13% percent of Xcel Energy's retail load starting in 2012.

6. The Administrative Law Judge adopts as Conclusions any Findings which are more appropriately described as Conclusions.

7. The bases and reasons for these Conclusions are those expressed in the Memorandum that follows, and the Administrative Law Judge incorporates that Memorandum into these Conclusions.

Based on the foregoing Conclusions, and for reasons set forth in the following Memorandum, the Administrative Law Judges make the following:

RECOMMENDATION

IT IS HEREBY RESPECTFULLY RECOMMENDED that the Public Utilities Commission **DENY** Excelsior Energy's Petition asking the Commission to determine that, under the terms of Minn. Stat. § 216B.1693, 13% of the energy supplied to Xcel Energy's retail customers should come from the Units I and II of the Mesaba Energy Project by 2013.

Dated: September 14, 2007

s/Bruce H. Johnson
BRUCE H. JOHNSON
Administrative Law Judge

MEMORANDUM

I. The Scope of Phase 2 Proceedings

A. Issues submitted to and adjudicated by the Commission in Phase 1 cannot be revisited in Phase 2.

On April 12, 2007, the ALJs issued findings of fact, conclusions of law, and a recommendation to the Commission after completing Phase 1 of this proceeding.⁷⁵ Their report addressed the first two of the three issues that the Commission had referred to them—namely, whether the Commission should:

- 1) approve, 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; and
- 2) 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;⁷⁶

Minn. R. 1400.8300 provides in relevant part:

Once a judge has issued a report, unless that report is binding on the agency, the judge loses jurisdiction to amend the report except for clerical or mathematical errors. Unless the report is a final order, binding on the agency, petitions for reconsideration or rehearing must be filed with the agency.

Thus, when the Phase 1 Report was transmitted to the Commission, the undersigned ALJ lost jurisdiction to reconsider or modify any of the findings and conclusions contained in the ALJs’ Phase 1 report. What remained for determination in Phase 2 was the third issue that the Commission referred—that is, whether the Commission should:

- 3) 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 2013.⁷⁷

The Commission’s August 30, 2007, Order made a final determination of the first issue that the Commission referred for a contested case proceeding—namely, whether the Commission should “approve, amend, or modify the terms and conditions of a proposed

⁷⁵ (P2) XE-2094.

⁷⁶ Commission Order of April 25, 2006, at p.1.

⁷⁷ *Id.*

power purchase agreement that Excelsior has submitted to Xcel Energy under Minn. Stat. § 216B.1694.” Only the Commission has the authority to reconsider its determinations regarding interpretation and application of that statute. It appears, however, that the Commission’s Phase 1 Order did not address the second issue in Phase 1—whether, under Minn. Stat. § 216B.1693, the Mesaba Project qualifies as a Clean Energy Technology and is or is likely to be, a least-cost resource for supplying at least two percent of the energy supplied to Xcel’s retail customers. However, the ALJs also submitted that issue to the Commission for final determination, since the undersigned ALJ cannot revisit the prior proposed findings of fact or conclusion relating to that second issue unless in the absence of a remand by Commission for further proceedings.

The Commission’s August 30, 2007, Order has the effect of further narrowing the scope of what may be addressed in Phase 2 and what evidence is relevant in Phase 2. In that Order, the Commission found that the Mesaba Project is an Innovative Energy Project under Minn. Stat. § 216B.1694.⁷⁸ Since the statutory test of what is an Innovative Energy Project is functionally identical to the test in Minn. Stat. § 216B.1694 for what is Clean Energy Technology,⁷⁹ the Mesaba Project necessarily qualifies as a Clean Energy Technology under Minn. Stat. § 216B.1693(c). The parties may therefore not relitigate in Phase 2 whether the Mesaba Project qualifies as a Clean Energy Technology.

In the absence of a remand from the Commission, the parties also may not revisit whether the Project is likely to be a “least-cost” resource to provide 2% of the electric energy that Xcel supplies to its residential customers and whether it would be contrary to the public interest for the Project to do so.

B. Issues to be Determined in Phase 2 and Burden of Proof.

Minn. R. 1400.7300, subp. 5, provides that in a contested case proceeding:

[t]he party proposing that certain action be taken must prove the facts at issue by a preponderance of the evidence, unless the substantive law provides a different burden or standard.

Minn. Stat. § 216B.1693 does not provide a different standard. Therefore, Excelsior bears the burden of proving by a preponderance of the evidence that (1) the Mesaba Project is likely to be a least cost resource to provide 13% of the electric energy that Xcel supplies to its retail customers between during the relevant period;⁸⁰ and (2) if so, whether it would be contrary to the public interest for the Commission to determine that

⁷⁸ Commission’s August 30, 2007, Order at pp. 9-13.

⁷⁹ Phase 1 Report at p. 74.

⁸⁰ As discussed above, the ALJ concludes that the outer terminus of that period is July 1, 2012; the Commission suggests that it might extend until as late as December 31, 2013. (Commission Order of April 25, 2006, at p.1.) Excelsior argues that it is anytime during the Project’s useful life. (Excelsior’s Initial Brief at p.2)

the Mesaba Project should provide 13% of the retail electric energy that Xcel will supply to residential customers by 2013.

C. Evidence presented by Excelsior in its Offer of Proof is inadmissible in this Phase 2 proceeding.

In the Order on Phase 2, the ALJ clearly indicated that the Phase 2 evidentiary hearing would not be an opportunity for parties to supplement the record with additional evidence relevant to the four issues that were previously addressed in Phase 1.⁸¹ That record is closed until or unless the Commission directs it to be reopened.

The Phase 2 evidentiary record for prefiled testimony closed on May 14, 2007, when all parties were required to file their written surrebuttal testimony. During the May 15, 2007, prehearing conference, the parties waived their right of cross-examination at the impending Phase 2 evidentiary hearing and stipulated to determination of Phase 2 issues on a written record.⁸² In addition to the prefiled testimony already introduced in Phase 2, the parties were given until June 4, 2007, to come to agreement about which exhibits previously admitted into evidence in Phase 1 would also become part of the Phase 2 hearing record.⁸³ During that prehearing conference, Excelsior also requested leave to file an offer of proof on June 22, 2007, when its initial Phase 2 brief was due.⁸⁴ The parties had not yet identified the documents they sought to have included in the hearing record, and the ALJ had made no exclusionary rulings on or before May 15, 2007. It was therefore unclear at the time what Excelsior precisely meant as an offer of proof. On June 5, 2007, Excelsior transmitted to the ALJ the documents that the parties had agreed would comprise the Phase 2 hearing record.

On June 22, 2007, Excelsior filed its Offer of Proof Regarding Evidence Excluded from the Phase 2 Record (Offer of Proof), consisting of written expert testimony from Donald H. Cortez and Andrew D. Weissman.⁸⁵ In effect, that testimony supplemented prefiled testimony that Messrs. Cortez and Weissman had given in Phase 1, but Excelsior had not previously offered it as Phase 2 prefiled testimony. Excelsior's stated reason for making the Offer of Proof was:

Prior to the ALJ's Order on Phase 2, Excelsior had assumed that all of the testimony and evidence in Phase 1 would be incorporated as part of the record for Phase 2 and that Phase 1 witnesses could be called to

⁸¹ *Id.*

⁸² *Id.*

⁸³ *Id.* at pp. 19-22.

⁸⁴ See Transcript of May 14, 2007, prehearing conference at pp. 16-20

⁸⁵ Both presented prefiled testimony in Phase 1, and that testimony has, in fact, been incorporated into the Phase 2 hearing record. See Exs. (P2) 1090 through (P2) 1103 and (P2) 1111 through (P2) 1114.

testify in Phase 2 under paragraph 8 of the Second Prehearing Order dated June 2, 2006, without having filed testimony in Phase 2.⁸⁶

Paragraph 8 of the Second Prehearing Order provided:

8. Witnesses shall be allowed ten minutes to summarize their prefiled testimony. For good cause shown, witnesses will be permitted to respond to any new matters not addressed in prefiled testimony through direct examination by counsel.

The ALJ has never ruled that Phase 1 evidence would generally be inadmissible in Phase 2.⁸⁷ Rather, in the May 10, 2007 Order on Phase 2, the ALJ implicitly ruled only that neither Phase 1 evidence nor new evidence submitted in Phase 2 would be admissible for the purpose of reconsidering, altering, or amending Phase 1 findings. However, it was clear that Phase 1 evidence having a tendency to prove or disprove facts material to Phase 2 issues would be admissible in Phase 2. The fact that Phase 1 exhibits comprise most of the evidence in the Phase 2 hearing record shows that the parties clearly understood that to be the case. The primary purpose of paragraph 8 of the Second Prehearing Order was to permit parties to call live witnesses “to summarize their prefiled testimony” previously submitted in Phase 2. Since Excelsior offered no *updated* prefiled testimony from Messrs. Cortez and Weissman in Phase 2, Excelsior’s only *right* under the paragraph 8 of the Second Prehearing Order would have been to present a summary of their Phase 1 testimony to the extent that testimony is relevant to Phase 2 issues. That kind of summary testimony from Messrs. Cortez and Weissman would have been repetitious.

The Second Prehearing Order does not give parties leave to update or supplement prefiled testimony with oral testimony on new or additional matters, except “for good cause shown.” Even when a party makes such a showing, Minn. Stat. § 14.60 requires that “[e]very party or agency shall have the right of cross-examination of witnesses who testify, and shall have the right to submit rebuttal evidence.” During the May 15, 2007, prehearing conference, Excelsior did not make a showing of good cause to support a request to supplement the Phase 2 record with additional testimony. Yet, when Excelsior filed its Offer of Proof, it expressly indicated that supplementation of the Phase 2 record was its purpose when it stated that “significant relevant events since the filing of Phase 1 testimony have created a need to present new matters and information set forth in [Excelsior’s] Offer of Proof.”⁸⁸ In short, Excelsior now seeks to introduce supplementary testimony from Messrs. Weissman and Cortez to support its Phase 2 contentions. The parties jointly waived their right to cross-examine witnesses and agreed to submit Phase 2 to the ALJ on a written record. Although the opposing parties may have waived their right to conduct oral cross-examination of Messrs. Cortez and

⁸⁶ Offer of Proof at p. 1.

⁸⁷ The ALJ made no exclusionary rulings on evidence in either the Phase 2 Order or at the May 15, 2007, prehearing conference.

⁸⁸ See Excelsior’s Offer of Proof at p. 3.

Weissman, they did not waive their right to present rebuttal evidence to what is, in effect, written supplemental direct testimony.

In summary, the ALJ concludes that the written testimony of Messrs. Cortez and Weissman contained in Excelsior's Offer of Proof is not admissible either to revisit Phase 1 issues that have been referred to the Commission issues or to supplement their prefiled testimony on the Phase 2 record. If the Commission should conclude that the written testimony of Messrs. Weissman and Cortez is not repetitive but necessary for resolving either Phase 1 or Phase 2 issues, it may wish to remand proceedings to the ALJ for inclusion of that evidence in the record and to provide opposing parties with an opportunity to present rebuttal evidence.

II. Whether the Project Is Likely to Be a Least-Cost Resource for Xcel after January 1, 2012, Is Immaterial.

A. The power supply entitlement in Minn. Stat. § 216B.1693 expires on January 1, 2012.

Excelsior argues that "it is not necessary that the Commission find that IGCC technology is currently a least-cost resource; rather the only finding required is that IGCC technology is or is likely to be a least-cost resource over the life of an IGCC plant."⁸⁹ Implicit in that view is that, once established by the Commission, Xcel's legal obligation under Minn. Stat. § 216B.1693(a) to purchase a percentage of its retail electric power from a clean energy technology extends throughout the life of the plant. However, Minn. Stat. § 216B.1693(d) provides that "[t]his section expires January 1, 2012." Excelsior interprets that to mean that Section (d) merely sets the date by which the Commission must determine the percentage of retail energy that Xcel is obligated to purchase from Excelsior.⁹⁰ On the other hand, Xcel and Minnesota Power argue for a literal interpretation of Minn. Stat. § 216B.1693(d).⁹¹

Excelsior's interpretation of the expiration provision is based on what it argues was the Legislature's intent—that is, "to help pave the way for a better energy future in Minnesota by encouraging the long-term deployment of IGCC technology."⁹² It seeks to establish that intent in two ways: First, it cites a 2003 letter from the Governor to the Senate and letters after enactment from Representatives Sviggum and Beard and Senator Tomassoni as evidence that the Legislature intended to create long-term incentives for deployment of IGCC power in Minnesota that continued well beyond January 1, 2012. Second, it seeks to apply the eight statutory factors for ascertaining legislative intent found in Minn. Stat. § 645.16, as well as Minn. Stat. § 645.17's presumptions in ascertaining legislative intent.

⁸⁹ Excelsior's Initial Brief at p. 2.

⁹⁰ Excelsior's Reply Brief at p. 5.

⁹¹ In Finding No. 191 of the Phase 1 Report (Ex. (P2) XE-2094), the ALJs noted the existence of legal issues relating to the expiration date in Minn. Stat. § 216B.1693(d). However, since none of the parties raised that issue in Phase 1, the ALJs did not address it then.

⁹² *Id.*

First, the communications by the Governor and members of the Legislature that Excelsior relies on are either irrelevant, inadmissible to establish legislative intent, or both. In his May 23, 2003 letter, the Governor communicated to members of the Senate a number of objections he had to H.F. 9, which the House had passed the day before and had sent to the Senate for its consideration.⁹³ The third paragraph of the Governor's letter stated:

The coal-gasification plant technology proposed for the Excelsior Energy project will provide base-load power with clean emissions, helping pave the way for a better future. The project also provides economic development opportunities in a region of the state that has suffered significant job losses. The project has merit and it should be encouraged, but not at the expense of true renewable initiatives.”

The Governor's letter sheds no light on his position on whether there should be an expiration date for the proposed Minn. Stat. § 216.1693 and, if so, what that expiration date should be. Moreover, even if the Governor's letter is taken as an expression of his desire for a long term power supply entitlement in Minn. Stat. § 216.1693 extending into the indefinite future, the Legislature passed a bill on the following day that included the explicit expiration date in Minn. Stat. § 216.1693(d), and the Governor subsequently signed that amended version of the bill into law. Excelsior also relies on some more recent statements by legislators, including some bill authors, as to what the Legislature may have intended when it passed H.F. 9. However, comments and statements of legislators, including authors, *made after a statute has been passed* “are inadmissible for the purpose of construing a statute.”⁹⁴

Second, the problem with Excelsior's interpretation of Minn. Stat. § 216B.1693(d) is that the question of legislative intent does not arise where, as here, the statute is unambiguous. “[I]f the words of the statute are 'clear and free from all ambiguity,' further construction is neither necessary nor permitted.”⁹⁵ One simply gives the statute effect according to the meaning of its plain language.⁹⁶ It is only when it becomes necessary to construe an ambiguous statute that one seeks “to ascertain and effectuate the intention of the Legislature.”⁹⁷ In other words, a condition precedent to applying the provisions of Minn. Stat. §§ 645.16 and 645.17 to ascertain legislative intent is that the language of the statute first be found to be ambiguous. There is nothing ambiguous about “[t]his section expires January 1, 2012.” The Legislature commonly places that

⁹³ Ex. (P2) EE1012.

⁹⁴ *Krueth v. Independent School District No. 38*, 496 N.W.2d 829, 834 (Minn. App. 1993). The logic behind the principle is that the political environment changes from session to session and from year to year. What the Legislature's current intent with regard to the meaning of a statute can be materially different from what the Legislature's intent may have been in 2003 at the time the statutes were enacted.

⁹⁵ *Owens v. Water Gremlin Co.*, 605 N.W.2d 733, 736; (Minn. 2000)

⁹⁶ *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility's Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. § 216B.1691*, 700 N.W.2d 533, 536 (Minn. App. 2005).

⁹⁷ Minn. Stat. § 645.16 (2006).

specific language in statutes to alert the public of the date on which a statute ceases to have the force and effect of law. In practical effect, that language tells the Revisor of Statutes when to remove the statute in its entirety from published versions of Minnesota Statutes—in this case on January 1, 2012—unless the Legislature has subsequently acted to change or remove the expiration date.⁹⁸ Here, the Legislature has not subsequently changed or removed the expiration date in Minn. Stat. § 216B.1693(d); the entire section therefore ceases to have the force and effect of law on January 1, 2012.

Finally, Excelsior argues that any interpretation of Minn. Stat. § 216B.1693(d) other than its own would defeat the purpose of the statute, undermine the legislative intent behind the law and eliminate the intended effect of the statute, “which is to encourage the development of IGCC plants to serve Minnesota’s need for base load power.”⁹⁹ In other words, Excelsior argues that there is no reasonable explanation for having the statute and the entitlement and obligation that it creates expire on January 1, 2012. The ALJ also disagrees with that analysis. In its Phase 2 argument, Excelsior proposes that Minn. Stat. § 216B.1693 evidences a legislative “intent to enable clean energy technology to establish to establish a foothold in Xcel’s generation portfolio”¹⁰⁰ In the ALJ’s view that proposition is only partly correct. First of all, by enacting Minn. Stat. § 216B.1693, the Legislature did not *guarantee* clean energy technology a foothold in Xcel’s generation portfolio; it only provided clean energy technology *an opportunity* for such a foothold if other statutory conditions could be met. Second, the plain language of Minn. Stat. § 216B.1693(d) indicates that Legislature only offered an opportunity for a foothold in Xcel’s generation portfolio that would be available until January 1, 2012, about eight and one-half years from the date of enactment. If Excelsior or other potential IGCC providers could not avail themselves of the opportunity before then, it would be necessary for them to return to the Legislature and seek reenactment. That is a legislative intent that is consistent with the plain meaning of Minn. Stat. § 216B.1693(d).

⁹⁸ See THE OFFICE OF REVISOR OF STATUTES, MINNESOTA REVISOR’S MANUAL WITH STYLES AND FORMS (2002 Ed.) § 4.7(e), (also available at http://www.revisor.leg.state.mn.us/revisor/pubs/bill_drafting_manual/Cover-TOC.htm).

⁹⁹ Excelsior’s Reply Brief at p. 5.

¹⁰⁰ *Id.* at pp. 1-2.

B. What may be a least-cost resource for Xcel after January 1, 2012, is immaterial.

The legal consequence of a statute expiring is that the statute is removed from the body of Minnesota Statutes and no longer has legal force and effect. The Commission has no existing inherent or other statutory authority to compel Xcel to purchase electric power from Excelsior to supply a percentage of Xcel's retail customers that would obligate Xcel to continue such purchases beyond January 1, 2012. Therefore, any entitlement of a clean energy technology and corresponding obligation of Xcel expires on that date. Minn. Stat. § 216B.1693(d) also necessarily establishes January 1, 2012, as the end point for determining when a clean energy provider "is likely to be a least-cost resource."

Excelsior suggests that it is only necessary for it to establish that IGCC technology in some form would be a least-cost resource for Xcel at any some between now and the end of an IGCC Project's useful life in order to satisfy Minn. Stat. § 216B.1693(a).¹⁰¹ First, there is nothing in the language of the CET Statute itself suggesting that the possibility of an IGCC project being a least-cost resource at some indeterminate future date has any bearing on the entitlement the Legislature created in that statute. Second, there is evidence in the record indicating that the farther into the future that one attempts to project costs and the continued viability of technology, the more speculative such projections become. Since no statutory entitlement or obligation exists after January 1, 2012, one can reasonably infer that the Legislature intended to keep such speculation to a minimum by requiring the Commission to focus on what is likely to be a least-cost resource on or before that date. Therefore, evidence of what may or may not be a least-cost resource after January 1, 2012, is immaterial and irrelevant.¹⁰²

¹⁰¹ The ALJ could find no evidence in the record establishing what the Project's useful life is. Presumably, it is in the range of 25 to 30 years.

¹⁰² In its April 25, 2006, Order, the Commission framed the issue in Phase 2 as whether it should 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." Minn. Stat. § 216B.1693(d) appears to preclude consideration of what may be a least-cost resource in 2013. However, using that date for purposes of determining when status of a least-cost resource is germane yields the same result, since Excelsior itself estimates that the Project would be unable to supply the power required by 13% of Xcel's retail customers before 2014.

III. The Power Supply Entitlement in Minn. Stat. § 216B.1693 is, in the first instance, specific to the Mesaba Project.

A. The Legislature intended the CET Statute’s power supply entitlement to be specific to the Mesaba Project unless contrary to the public interest.

Excelsior frames the ultimate issue in Phase 2 as whether “IGCC technology is or is likely to be a least-cost resource over the life of an IGCC plant.”¹⁰³ In other words, it contends that the CET Statute requires the Commission to determine whether IGCC power in the abstract is likely to be a least-cost resource without reference to any specific project at any particular location or particular time frame. It then argues that if the Commission should find that to be the case, Xcel would be obliged to purchase at least two percent of its retail load from some entity generating power from IGCC technology—again, without reference to who that supplier might be or when the IGCC power may be available. Excelsior then suggests that since it is the only IGCC power producer in a position to take advantage of the entitlement, the Commission should find that the Project should have the benefit of the entitlement.

First of all, the CET Statute does not, as Excelsior suggests, direct the Commission to determine whether *IGCC power* is likely to be a least-cost resource. The CET Statute directs the Commission to determine whether “*clean energy technology*” is “likely to be a least-cost resource.” There is no evidence in the record establishing that any other IGCC power producer would necessarily qualify as clean energy technology. Moreover, even if other IGCC projects were to qualify as clean energy technology, Minn. Stat. § 216B.1693(b) gives the Mesaba Project a statutory preference to supply Xcel’s retail customers:

(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.
[Emphasis supplied.]

Excelsior argues that “the CET Statute refers to a specific project only when describing the preferred source of the CEM energy.”¹⁰⁴ However, “shall be supplied” is mandatory language, and the statutory preference is therefore a mandatory preference and not a discretionary one. In other words, the supplier of clean energy technology under Minn. Stat. § 216B.1693(b) must, in the first instance, be an Innovative Energy Project unless contrary to the public interest. It is therefore necessary to consider what kind of project meets that qualification. Among other things, the innovative energy project statute, Minn. Stat. § 216B.1694, subd. 1, requires that an innovative energy project be “a proposed energy-generation facility or group of facilities which may be located on up to three sites”:

¹⁰³ Excelsior’s Initial Brief at p. 2.

¹⁰⁴ Excelsior’s Reply Brief at p. 3.

(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.

Neither IGCC technology generally nor any specific IGCC project other than the Mesaba Project meets that statutory requirement. Therefore, the governing legislation begins by being project-specific, since the Commission must first consider whether the Mesaba Project “is or is likely to be likely to be a least-cost resource” for Xcel. The Commission can only consider another IGCC power producer if the Mesaba Project fails to qualify as a clean energy technology or if giving the entitlement to the Mesaba Project would be contrary to the public interest.

B. If the Mesaba Project itself is not eligible to supply 13% of the electric power to Xcel’s retail customers, then Excelsior no longer has standing to argue that some other IGCC power producer should be entitled to do so.

In the federal system, the doctrine of standing is an aspect of the “case and controversy” requirement in Article III, Section 2, of the U. S. Constitution. It requires that the “parties ... *continue to have* a personal stake in the outcome of the lawsuit.”¹⁰⁵ [Emphasis supplied.] The Minnesota Supreme Court has similarly held that a party to an administrative proceeding must demonstrate a particularized interest in the proceeding, and that “[s]tanding may be conferred by statute or it may exist by reason of judicial recognition of a particular relationship between a person and an actionable controversy.”¹⁰⁶ Specifically, a party has standing to maintain a petition for Commission action only if that party would potentially suffer an “injury in fact” as a consequence of the Commission’s decision.¹⁰⁷ A party may not rely on someone else’s particularized interest to establish standing.

Excelsior’s Phase 2 argument appears to be that IGCC technology generally is likely to be a least-cost resource for Xcel at some future time; therefore, the Commission should require that 13% of Xcel’s generation portfolio for retail customers be supplied by some provider of IGCC-produced electric power. However, that provider may only be some IGCC power supplier other than the Mesaba Project if the Commission determines that the Mesaba Project itself is an ineligible power supplier because it not a least-cost resource for Xcel or because allowing it to provide power to Xcel’s retail customers would be contrary to the public interest. However, in that event, Excelsior would no longer have the potential “injury in fact” necessary for standing to petition the Commission to determine that some other IGCC power producer be required to provide 13% of the energy supplied to Xcel’s retail customers.

¹⁰⁵ *Lewis v. Continental Bank Corp.*, 494 U.S. 472, 477 (1990); see generally *Association of Data Processing Service Organizations, Inc. v. Camp*, 397 U.S. 150 (1970).

¹⁰⁶ *Matter of Sandy Pappas Senate Committee*, 488 N.W.2d 795, 797 (Minn.1992).

¹⁰⁷ *Id.*

IV. The Mesaba Project Is Not Likely To Be a Least-Cost Resource to Provide 13% of the Energy Supplied to Xcel's Retail Customers by 2013.

A. The Commission has authority to determine that the Mesaba Project is entitled to supply 13% of the electric energy to Xcel's retail customers.

Minn. Stat. § 216B.1693(a) provides that if the Commission finds that the Project qualifies as a clean energy technology and is a least-cost resource, then Xcel must supply “*at least two percent* of the electric energy provided to retail customers” from electric energy supplied by the Project. [Emphasis supplied.]

(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. [Emphasis supplied.]

The figure of 2% is clearly the statutory floor for Excelsior's power supply entitlement if the Project meets the clean energy technology, innovative energy project, and least-cost resource requirements and if the Commission concludes that supplying that much power to Xcel is not contrary to the public interest. Although Minn. Stat. § 216B.1693 does not explicitly give the Commission further directions about what to consider in determining what the appropriate percentage should be, some criteria can be inferred from other provisions of the CET Statute. Minn. Stat. § 216B.1693(b) clearly indicates that whatever percentage the Commission might consider appropriate must not be contrary to the public interest. Minn. Stat. § 216B.1693(a) indicates that the electric energy supplied by the Project must be a least-cost resource for “the utility that owns a nuclear generating facility,” i.e., Xcel, and Minn. Stat. § 216B.1693(d) indicates that electric energy supplied by the Project must be a least-cost resource for Xcel during the period from the date following enactment—from May 30, 2003, until January 1, 2012.

What is less clear is the origin and significance of Excelsior's 13% request. Excelsior has not elaborated about why it believes it should be entitled to provide 13% of the electricity supplied to Xcel's retail customers. The Department argues that it resulted from an erroneous proposal to the Commission by Excelsior.¹⁰⁸ Xcel argues that 13% of what its retail load will be in 2012 roughly corresponds to the entire output of Mesaba Unit 2.¹⁰⁹ 13% of Xcel's current retail load in 2013 will be approximately 644 MW, about 41 MW more than the output of Mesaba Unit 1. Therefore, it does appear

¹⁰⁸ Department's Initial Brief at p. 17.

¹⁰⁹ Xcel's Initial Brief at p. 4.

that in both Phases 1 and 2, Excelsior intended to request power supply entitlements nearly equal to the entire net output of Mesaba Units 1 and 2, as currently planned.¹¹⁰

B. Enactment of the GWMA does not affect least-cost resource analysis under Minn. Stat. § 216B.1693(a).

In its 2007 session, the Legislature enacted the Global Warming Mitigation Act (GWMA),¹¹¹ which is codified as Minn. Stat. § 216H.01 *et seq.* New Minn. Stat. § 216H.02, subd. 1,¹¹² establishes a goal for the state to:

[r]educe statewide greenhouse gas emissions across all sectors producing those emissions to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050.

The legislation requires the Commissioner of Commerce, in consultation with other state agency heads, to submit to the legislature a climate change action plan to meet that goal by February 1, 2008.¹¹³ Minn. Stat. § 216.02, subd. 6, further requires the state, “to the extent possible, with other states in the Midwest region, develop and implement a regional approach to reducing greenhouse gas emissions from activities in the region, including consulting on a regional cap and trade system.” The Act goes on to require the Commissioner “to coordinate “Minnesota regional activities” directed to that end and to report progress to the legislature in February of 2008 and 2009. “[U]ntil a comprehensive and enforceable state law or rule pertaining to greenhouse gases that directly limits and substantially reduces, over time, statewide power sector carbon dioxide emissions is enacted and in effect,” the GWMA imposes a temporary moratorium on the construction of new coal-fired generating plants in Minnesota.¹¹⁴ The moratorium also extends to the importation of electric energy from out-of-state coal-fired plants that would “contribute to statewide power sector carbon dioxide emissions.”¹¹⁵ Both Excelsior’s Project and the proposed Bigstone II SCPC plant in South Dakota are specifically exempted from the moratorium.¹¹⁶ Additionally, although the GWMA moratorium applies generally to other “large energy facilities,” Minn. Stat. § 216H.03, subd. 1, also excludes facilities using “natural gas as a primary fuel” from that definition. Excelsior contends that the latter exclusion “virtually [guarantees] that almost all of the incremental energy demand growth that cannot be met with renewable energy will have to be met with yet more natural gas-fired generation.”¹¹⁷

¹¹⁰ The ALJ notes that the evidence establishes the Excelsior is scheduled to complete neither Mesaba Unit 1 nor Mesaba Unit 2 prior to January 1, 2012, when the CET Statute’s power supply entitlement expires.

¹¹¹ 2007 Minn. Laws, ch. 136, Art. 5.

¹¹² 2007 Minn. Laws, ch. 136, Art. 5, § 2.

¹¹³ Minn. Stat. § 216H.02, subd. 2; *Id.*

¹¹⁴ Minn. Stat. § 216H.03, subd. 3, 2007 Minn. Laws, ch. 136, Art. 5, § 3.

¹¹⁵ Minn. Stat. § 216H.03, subd. 3, 2007 Minn. Laws, ch. 136, Art. 5, § 3.

¹¹⁶ *Id.*

¹¹⁷ Excelsior’s Initial Brief at p. 4.

Excelsior's basic premise is that the moratorium on new coal-fired power supplies will result in such increases in demand for natural gas-fired power generation in Minnesota that the Mesaba Project's IGCC-produced power will become a least-cost resource for Xcel. Excelsior first cites estimates that statewide consumption of natural gas is expected to increase by 55,000,000 MMBtu between 2004 and 2011.¹¹⁸ Then, based on the assumption that a gas-fired plant requires 32,000,000 MMBtu of natural gas to generate 600 MW of electric power, Excelsior argues that construction of the Mesaba Project will reduce natural gas demand statewide by 2011 in an amount nearly equal to the entire projected increase in statewide demand between 2004 and 2011.¹¹⁹ Arguing, then, that the Mesaba Project will exert downward pressure on the price of natural gas, Excelsior asserts that the Project will not only provide Xcel with less expensive power, it will also "reduce pressure on the price paid for natural gas by Xcel" for its own natural gas-fired generation plants.¹²⁰

There are several major weaknesses in Excelsior's position. First and perhaps most important, the future price of natural gas is subject to innumerable variables, and what the price of natural gas will be during the next four to five years cannot be known with any degree of certainty. During Phase 1, Excelsior and Xcel relied on different natural gas forecasts when they developed economic modeling to compare the cost and price of power produced by Mesaba Project. Excelsior's forecasts were not demonstrably more accurate and reliable than Xcel's. The Phase 2 record contains no evidence concerning the future price of natural gas that was not already part of the Phase 1 record,¹²¹ and there is therefore no reliable evidence to support Excelsior's assertion that enactment of the GWMA will drive the cost to Xcel of operating its own natural gas-fired plants to such high levels that the Mesaba Project's power will be least-cost by comparison. Nor is there any evidence that it would be less costly for Xcel to replace power supplied by its own natural gas-fired plants with power from the Mesaba Project.

Second, contrary to Excelsior's assertion, reducing 600 MW of gas-generated power in Minnesota by 2011 will not measurably impact the price everyone in the country, including Minnesotans, pays for natural gas. The State of Minnesota does not constitute a discrete natural gas market. Natural gas is a commodity in a national market, and its supply, demand, and price depend on what occurs nationally and not just in Minnesota.

¹¹⁸ (P2) EE1004, at p. 18.

¹¹⁹ The ALJ notes that there is nothing special about 600MW power generated by an IGCC plant in comparison with 600 MW of power generated by some other resource. Thus, for example, 600 MW from a hydro plant or renewable generators would also displace the 32,000,000 MMBtu required to produce 600MW of power in a gas-fired plant.

¹²⁰ Excelsior's Initial Brief at p. 6.

¹²¹ In its Offer of Proof, Excelsior has tendered additional written opinion evidence on natural gas pricing from Mr. Weissman, but the ALJ has ruled that evidence to be inadmissible in Phase 2, as untimely filed and therefore depriving opposing parties of the opportunity to present rebuttal evidence.

The evidence also does not support the need for Xcel to rely on additional natural gas-fired power generation to meet its needs between now and 2013. Xcel's position, which is supported by the Phase 2 testimony of Elizabeth Engleking, is that it can meet any incremental demand between now and January 1, 2012, with energy produced from a combination of renewable and hydro sources that is less expensive than any power the Mesaba Project could supply.¹²² The GWMA also would not prevent Xcel from purchasing power on the grid from a coal-fired facility whose emissions would not contribute to Minnesota's statewide carbon dioxide emissions. In other words, the only new evidence offered by any party in Phase 2 established that Xcel will not require additional natural gas-produced power at least through 2013, and that the Project is not likely to be a least-cost resource for Xcel anytime during the next six years.¹²³

A final major weakness in Excelsior's argument is that it assumes that by 2013 the Mesaba Project will be exclusively fueled by coal. Yet the Commission has found that the Project itself is likely to use substantial amounts of natural gas as a fuel during its ramp-up period:

* * * The Commission concurs with the ALJs shifting all risks associated with fuel costs to Xcel and its ratepayers is unreasonable and inconsistent with the public interest.

This is especially true of natural gas costs, which are high and volatile. The terms and conditions of the proposed contract contain generous provisions increasing capacity payments to account for Mesaba's anticipated heavy reliance on natural gas during the three-year "ramp-up" period. These provisions permit Mesaba to consume unusually high amounts of natural gas for a baseload facility on the theory that higher fuel costs during the shakedown period will facilitate major cost savings later, when the facility will run on low-cost solid fuel.

Once the ramp-up period has ended, however, even with the contract's financial penalties for burning natural gas, Xcel would still pay roughly double the normal capacity cost of natural-gas-fired generation when Mesaba ran on natural gas. [Citation omitted.]

In other words, the Mesaba Project is likely to begin using unusually high amounts of natural gas when it initially becomes operational in 2014 and during a ramp-up period of at least three years thereafter. That fact alone would make the Mesaba Project as vulnerable to high natural gas costs as natural gas-fired power plants during the immediate future.

Finally, the moratorium established by the GWMA is a temporary one that is in effect only until there are Minnesota laws on the books dealing with regulating carbon emissions. After that occurs, there will be no legal barrier to constructing new

¹²² (P2) XE-2082; (P2) XE-2083.

¹²³ (P2) EX-2082; (P2) XE-2083.

Minnesota coal-fired generating plants. Although one cannot know with certainty when a system of carbon regulation will become law, it is reasonable to assume that that will occur sooner rather than later. Excelsior concedes that “a realistic timetable” for the Mesaba Project to be able to provide 13% of the electric energy required by Xcel’s retail customers “is 2014.”¹²⁴ In other words, even if Xcel’s natural gas costs were to rise significantly within the next four and one-half years, Excelsior would still not be in a position to provide Xcel with an alternative source of power until after the statutory entitlement to supply Xcel with a percentage of its retail load expires.

D. The Project’s relatively low particulate emissions do not increase the likelihood that it will be a least-cost resource to provide 13% of the electric energy supplied to Xcel’s retail customers.

Excelsior argues that the health benefits to society of IGCC’s reduced emissions of fine particulate matter (PM_{2.5}) justify a finding that IGCC is likely to be a least-cost resource, even if the direct costs of constructing an IGCC plant are higher than those of constructing a traditional coal plant.¹²⁵ Citing a report from its contractor ICF Consulting,¹²⁶ Excelsior asserts that the externalized cost of the adverse health effects of the PM_{2.5} emissions of a SCPC plant are approximately \$105 million per year greater than those associated with IGCC technology, and that that fact alone makes the Project more likely to be a least-cost resource in comparison with SCPC coal plants.

First of all, the ICF Consulting report does not conclude that IGCC technology Project would create a health care benefit for Minnesotans; the report only concludes that the adverse health effects of an IGCC power plant would be less than those attributable to a hypothetical SCPC plant. In fact, operation of both Mesaba Units 1 and 2 will emit additional PM_{2.5} into the State’s atmosphere because energy supplied by the Mesaba Project will not be replacing energy now being supplied from any existing conventional coal plant in Minnesota. In other words, constructing and operating the Project without having it replace an existing conventional coal plant will actually diminish air quality in the state, not improve it. Moreover, even though the Project’s particulate matter emissions may be less than those associated with current technology in conventional SCPC coal plants, emission control technology continues to improve, and whether the Project’s control of particulate matter will be more effective than that of future SCPC plants is a matter of speculation.

In their Phase 1 Report, the ALJs made the Project-specific finding that the Project’s estimated particulate emissions would be generally lower than “[t]he particulate matter emissions of “other traditional solid fuel baseload technologies.”¹²⁷ However, as discussed above, the entitlement in Minn. Stat. § 216B.1693(a) is, in the first instance, specific to the Mesaba Project. The ICF report that Excelsior relies on is not Project-specific evidence. It only states that IGCC technology *in general* reduces

¹²⁴ (P2) EE-1307 at p. 6-7.

¹²⁵ Excelsior’s Initial Brief at p. 6.

¹²⁶ (P2) EE 1011.

¹²⁷ Phase 1 Finding No. 72.

fine particulate matter (PM_{2.5}) more than traditional coal plant. On the other hand, Dr. Amit reached a contrary conclusion in Phase 1 testimony that provided Project-specific comparisons. He compared the Mesaba Project with “three actual supercritical plants in different stages of construction or design by Minnesota utilities.”¹²⁸ His comparisons included the externalized cost of the adverse health effects of the PM_{2.5} emissions, and he concluded that, when one accounts for emission costs, including those attributable to particulate matter, by using the externality values set by the Commission, power supplied by the Mesaba Project is not a least-cost resource.¹²⁹ Dr. Amit’s project-specific evidence is more relevant and reliable than the generalized, hypothetical evidence in the ICF Consulting report.

E. The Project’s potential to capture and sequester carbon does not increase the likelihood that it will be least-cost resource to provide 13% of the electric energy supplied to Xcel’s retail customers within the foreseeable future.

Excelsior also suggests that IGCC technology’s ability to capture carbon contributes significantly to it being a least-cost resource in comparison with conventional coal-fired technology. First of all, analyses performed by the MPCA establish that the CO₂ emissions from the Project are expected to be higher than those of conventional coal technologies.¹³⁰ Although the Project’s IGCC technology has the potential to capture and sequester carbon, Excelsior has no current plans to install the necessary equipment, and it has indicated that it does not intend to do so “until it is required by law.”¹³¹ Thus, the Mesaba Project now only has the unrealized potential to capture and sequester carbon—potential that is unlikely to be realized by January 1, 2012, or even sometime in 2013. Excelsior’s earliest estimate for when the Project could be equipped to capture 30% of the Project’s CO₂ emissions is 2014.¹³² Excelsior’s own expert witness, Mr. Cortez, indicated that the favorable financial implications of the Project’s carbon capture potential are likely to be most meaningful only when viewed over the very long term of the Project’s life cycle.

Excelsior provides some estimates of the internalized costs for equipping the Project to capture and sequester carbon 30% of the Project’s carbon emissions; however, it concedes that those estimates are based on uncertain assumptions; and they do not account for the 70% of the Project’s CO₂ emissions that will be released into the atmosphere.¹³³ Because of that and because the Project today still has only the *potential* to capture and sequester carbon, estimating costs of emissions, including carbon, as externalities is still the more reliable approach to comparing the cost of

¹²⁸ Commission’s Phase 1 Order at p. 16.

¹²⁹ (P2) DOC 3017 and (P2) DOC 3023.

¹³⁰ Phase 1 report at Finding No. 146.

¹³¹ Phase 1 report at Finding No. 152.

¹³² (P2) EE-1067 at p. 2.

¹³³ (P2) EE-1068. For example, the nearest locations that are geologically favorable for sequestration of captured carbon are in north central North Dakota, southwestern Manitoba, and southeastern Alberta, and pipelines would have to be built to pump the carbon dioxide to those locations for sequestration.

Mesaba Project's carbon emissions to those of conventional coal plants. Dr. Amit took that approach when he compared the Project's costs with those of the Bigstone II Project, which is also exempt from the GWMA moratorium. He concluded that the Project's levelized price per MWh would be significantly higher than that of the Bigstone II project. Similarly, Xcel's expert witness, Ms. Engleking, concluded that the present value revenue requirement (PVRR) for Xcel's generation system would be \$2.5 billion greater using the Project as a resource than with the alternative energy resources in Xcel's current, approved resource plan.¹³⁴ Ms. Engleking's analysis also factored in carbon emissions as an externality. In short, a preponderance of reliable evidence establishes that the Project's mere potential to incorporate technology to capture and sequester carbon in the future does not make the Project more likely to be a least-cost resource.

F. Excelsior has failed to prove by a preponderance of the evidence that the Project is likely to be a least-cost resource to provide 13% of the energy supplied to Xcel's retail customers.

In their Phase 1 report, the ALJs found and concluded that the Project was not likely to be a least-cost resource to provide 2% of the electric energy that Xcel provides to its retail customers. However, the Commission's Phase 1 Order only explicitly addresses issues raised by application of Minn. Stat. § 216B.1694 to Excelsior's proposed PPA with Xcel. That Phase 1 Order does not explicitly address application of Minn. Stat. § 216B.1693—including whether the Mesaba Project is likely to be a least-cost resource to provide 2% of the energy supplied to Xcel's retail customers. However, the Commission found that:

Mesaba's power prices would depend upon the costs to construct and operate the plant and would fluctuate over time with inflation, fuel costs, and operation and maintenance expenses. Power prices would also depend upon whether Excelsior eventually installs carbon capture and sequestration equipment, which is projected to cost over a billion dollars and to reduce the plant's efficiency by approximately 10%.¹³⁵

The Commission then went on to find:

Buying this unneeded baseload capacity would force [Xcel] to forgo the less expensive supplies it proposes to secure in its resource plan, at an estimated additional cost of \$30.80 per megawatt hour during the three-year period (ALJ Finding 175). These additional costs would translate into unnecessary rate increases of \$5.00 to \$7.00 per month for residential customers and \$2,700 to \$3,900 per month for commercial and industrial

¹³⁴ (P2) EX-2082 at 2.

¹³⁵ Commission's August 30, 2007, Order at p. 15, incorporating Findings 185-187 in the Phase 1 Report).

customers during the first year of the contract as initially proposed, with declining rate impacts thereafter (ALJ Finding 115).¹³⁶

Based on those findings, the Commission concluded that “[u]nnecessary rate increase of this magnitude are unreasonable on their face.” Implicit in those findings and that conclusion is that the Mesaba Project is not likely to be a least-cost resource to provide 2% of the energy supplied to Xcel’s retail customers.

The issue in Phase 2 is whether the Commission should exercise its statutory discretion to raise that percentage from 2% to 13%. As previously noted, the questions that must be addressed in Phase 2 are: (1) whether anything has occurred since the ALJs’ issued their Phase 1 report on April 12, 2007, that makes it more likely that Excelsior’s Project will be a least-cost resource to supply 2% or more (specifically 13%) of the electric energy supplied to Xcel’s retail customers; and (2) whether any evidence in the Phase 2 record that was not admitted in Phase 1 increases that likelihood. The ALJ concludes that no event has occurred since the Phase 1 Report to make it more likely that the Project is likely to be a least-cost resource for any percentage of Xcel’s retail load, and that the evidence in the Phase 2 record tends to establish that it is even less likely that the Project is a least-cost resource to supply 13% of Xcel’s retail electric energy than to supply 2%.

B.H.J.

¹³⁶ *Id.* at p. 17.