

Mr. Storm,

Please find attached two pdf documents outlining comments and questions for the Mesaba Energy Project draft EIS.

Could you please acknowledge receiving the documents and that you were able to open and read the files.

Thank you,
Amanda Nesheim

January 9, 2008

PUC Docket E6472/GS-06-668
DOE Draft EIS for the Mesaba Energy Project (DOE/EIS-0382D)
Comments on Draft EIS

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Dear Sirs:

Below are nine comments that were combined in one document for your convenience. The comments are separated by lines.

In section 1.2 CCPI of the draft Environmental Impact Statement (EIS) one of the bulleted items to qualify for the Clean Coal Power Initiative (CCPI) is the Global Climate Change Initiative to cut greenhouse gas intensity 18 percent by the year 2012.

With the Department of Energy (DOE) readily acknowledging global warming issues and also acknowledging in Appendix A2 of the EIS that Carbon Capture and Sequestration (CCS) is not feasible for the Mesaba Energy Project (MEP), how can the MEP qualify as part of the CCPI program? And therefore how can the DOE justify providing \$36 million in support of the program?

In the same section the DOE mentions aging power generating facilities that will have to be replaced. Yet nowhere in the EIS does it state what facilities will be shut down to validate the construction of the MEP. What power generating facilities will be shut down as suggested in section 1.2 of the EIS?

I wish to draw attention to the criteria specified in "**Minnesota Rule (MR) 7849.5220**
Subpart 1. H. a cost analysis of the large electric power generating plant at each proposed site, including the costs of constructing and operating the facility that are dependent on design and site; **Subpart 2. K.** cost analysis of each route, including the costs of constructing, operating, and maintaining the high voltage transmission line that are dependent on design and route; **Subpart 3. B.** a description of the effects of construction and operation of the facility on human settlement, including, but not limited to, public health and safety, displacement, noise, aesthetics, socioeconomic impacts, cultural values, recreation, and public services; and **Subpart 3. C.** a description

of the effects of the facility on land-based economies, including, but not limited to, agriculture, forestry, tourism, and mining.”

Each one of the above mentioned rulings pertain to a “cost analysis” being completed to satisfy requirements of an EIS. There has been no such study performed to date.

The University of Minnesota – Duluth, Labovitz School of Business and Economics (LSBE), Bureau of Business and Economic Research, completed an “economic benefit” study. The research report is titled *“The Economic Impact of Construction and Operating An Integrated Gasification Combined Cycle Power-Generation Facility on Itasca County”* and was developed for the Itasca Development Corporation. This is the study that is readily accepted as a complete cost review for the EIS.

In the very first paragraph of the Executive Summary it states; *“Mesaba One will be a privately funded power-generation facility...”* To date no private investors have been found and several million dollars of public money has been used to develop the Mesaba Energy Project (MEP). Excelsior Energy’s MEP has been selected to apply for federal loan guarantees up to \$800 million, again “public dollars” not private investment. In addition Excelsior Energy has been granted tax-free incentives.

It is noted in the second paragraph Executive Summary *“For this county-level model, Excelsior was not able to quantify what will actually be exclusively spent in Itasca County.”*

The very next paragraph acknowledges several inadequacies of the study; *“IMPLAN modeling issues associated with small study areas like county-level impacts, as noted in the IMPLAN User’s Guide, 2 include the following: A small area will have a high level of leakage. Leakages are any payments made to imports or value added sectors, which do not in turn re-spend the dollars within the region. Also important to consider: A study area that is actually part of a larger functional economic region will likely miss important backward linkages. For example, linkages with the labor force may be missing. Workers who live and spend outside the study area may actually hold local jobs.”*

The very last paragraph on page 13 states; *“Readers are also encouraged to remember the BBER was asked to supply an economic impact analysis only. Any subsequent policy recommendations should be based on the “big picture” of total impact. **A cost-benefit analysis would be needed to assess the environmental, social, and governmental impacts.**”*

Despite the cautions cited, many governmental agencies were misled by the study with information that was supplied by Excelsior Energy, including the Minnesota Department of Commerce (MDOC) and the Department of Energy (DOE) when drafting the EIS.

MR 7849.5220 clearly states in several subparts that a “cost analysis” is required in determining outcomes for the EIS. It is also clear that the MDOC and DOE have not adequately addressed the issues pertaining to MR 7849.5220 above-mentioned subparts because no cost benefit analysis has been conducted.

It is not unreasonable to request that a cost analysis be required for the MEP to be included in the EIS. The public, both in verbal and written comments brought up the issue of conducting a cost analysis study in the EIS scoping process. It is clear that those comments were ignored, but it is also clear that a cost analysis must be conducted according to MR 7849.5220.

With respect to Minnesota Rule 7849.5220 Subpart 3. E. *“a description of the effects of the facility on the natural environment, including effects on air and water quality resources and flora and fauna.”*

It is clear throughout the EIS most of the disseminating information that was considered came from Excelsior Energy’s Joint Permit Application and other agencies’ information such as the Minnesota Pollution Control Agency were ignored. The MPCA, Army Corps of Engineers and highly educated citizens submitted comments and suggestions that were not considered or included in this study. The Department of Energy and Minnesota Department of Commerce have a public duty to examine and consider all comments and suggestions put forward to come to unbiased conclusions in the EIS.

The Canisteo Mine Pit (CMP) is considered a national recreational attraction that includes, but is not limited to, a major trout fishery. Nowhere in the EIS is it discussed how closing the CMP to recreational use, (Excelsior Energy’s intentions*), will affect the tourism revenues brought into the area.

Nowhere does the EIS bring up the inherent danger of ground water contamination by the planned concentrated water discharges of the Mesaba Energy Project (MEP)**. Yet Minnesota Rule 7849.5220 Subpart 3. F. *“a description of the effects of the facility on rare and unique natural resources.”* is part of the EIS process and is ignored.

These two very important considerations need to be re-examined to determine the true effects of the MEP on not just the CMP, but the entire surrounding communities.

*Excelsior Energy’s Joint Permit Application; Supplement Part 1, page I-344.

**Wellhead Protection Plan, Part I; Wellhead Protection Area Delineation, Drinking Water Supply Management Area Delineation, Well and Aquifer Vulnerability Assessment For The City of Bovey, February 8, 2007; James F. Walsh, Minnesota Department of Health

and

Wellhead Protection Plan, Part I; Wellhead Protection Area Delineation, Drinking Water Supply Management Area Delineation, Well and Aquifer Vulnerability Assessment For The City of Coleraine, February 12, 2007; James F. Walsh, Minnesota Department of Health

Both the Department of Energy (DOE) and MN Department of Commerce (MDOC) have remarked in the draft EIS that Certificate of Need (CON) comments were not included because of the legislation passed (Minn. Stat. § 216B.1694) exempting the Mesaba Energy Project (MEP) from the CON. Yet Excelsior Energy is allowed to exert its claim for the need of 3000 to 6000 Mw of base-load power by 2015.

Why the double standard? I put forward the argument that since the MEP has been exempted from the CON that the issue needs to be fully addressed according to Minnesota Ruling (MR) 7849.5300 Subpart 5. It states; **“Matters excluded. When the Public Utilities Commission has issued a Certificate of Need for a large electric power generating plant or high voltage transmission line or placed a high voltage transmission line on the certified HVTL list maintained by the commission, the environmental impact statement shall not address questions of need, including size, type, and timing; questions of alternative system configurations; or questions of voltage.”**

Therefore, since the MPUC has **not issued** a CON, it can be argued according to MR 7849.5300 Subpart 5, that Excelsior Energy should be required to proceed with the CON regulatory process.

In the case of Minnesota Rule 7849.5300 Subpart 6. *“Draft EIS. The draft environmental impact statement must be written in plain and objective language...”*

It can be argued that the EIS was not written in plain and objective language. How can the general public decipher the ambiguous and voluminous technical data with no back-up information to which to compare or judge?

The MDOC has the legal right to request a Certificate of Need under Minnesota Rule 7849.7080:

7849.7080 APPLICANT ASSISTANCE. “The commissioner of the Department of Commerce may request the applicant for a certificate of need or for certification of a HVTL to assist in the preparation of an environmental report. Upon request, the applicant shall provide in a timely manner any unprivileged data or information to which it has reasonable access and which will aid in the expeditious completion of the environmental report.”

In the interest of the providing a complete report for the Mesaba Energy Project’s EIS, the MDOC should request a certificate of need.

It is stated in the EIS in the Summary Section, DOE Purpose and Need; *“IGCC technology meets the goals of the CCPI by utilizing an estimated 240-year domestic supply of reliable, low-cost coal in an environmentally acceptable manner.”*

Throughout the EIS the cost of coal is referred to as “low-cost”, “clean”, “affordable”, “reliable”.

The terms used to describe coal in the EIS are inaccurate. The following are just a few examples pertaining to costs of the MEP that are not in the EIS. The costs of health related costs are not included in the total cost per MW and could be attained by conducting a cost analysis study, which is required by Minnesota Rule 7849.5220. The costs of Carbon Capture and Sequestration (CCS) are not included in the total cost output. This is acknowledged in the EIS Appendix A2. The costs of transmission upgrades by other utilities are not included in the total cost. It has been demonstrated in the MPUC rulings that the cost of energy output by the Mesaba Energy Project (MEP) is not “low-cost”, therefore cannot be deemed “affordable”. Since the MEP is a demonstration project it can hardly be defined as “reliable”.

The DOE also comments on supposed 240-year supply of coal. Not all coal is attainable, and to continue to comment on a long-term coal supply is misleading and inaccurate.

I wish to draw your attention to a study performed by the German research organization Energy Watch Group*. Another study completed by the University of Stanford comes to the same conclusions. The results of these studies show that with the attainable coal reserves peaking in 2025, the cost of coal will increase dramatically as coal reserves

become harder and harder to attain making the terms “low-cost”, “affordable”, “cheap”, “clean” and other labels that favor the coal industry inaccurate and outright false.

In Appendix A2 the DOE readily admits that the proposed project’s Carbon Capture and Sequestration (CCS) plan is not economically feasible. The DOE states expectations of Integrated Gasification Combined Cycle (IGCC) plants to offer 90% carbon capture with 99% permanent sequestration at less than 10% increase in cost. The cost of electricity from the proposed MEP is currently evaluated at 10–30% higher without CCS. With CCS not only does the cost per kW increase dramatically, the efficiency of the plant is reduced by up to 30%. The DOE’s cost increase expectation of less than 10% with CCS is inaccurate.

The real cost of the MEP needs to be re-examined with the above-mentioned issues.

* The full report of Energy Watch Group can be found at:
<http://www.energywatchgroup.org/files/Coalreport.pdf>

I respectfully suggest that the Department of Energy’s (DOE) involvement in the EIS is biased and therefore the EIS cannot be relied upon to be forthcoming or accurate.

The DOE has openly and publicly supported the Mesaba Energy Project (MEP) on several occasions through different media sources. In the draft EIS the DOE openly promotes its favorable position on the MEP. It is stated in the draft EIS in the Summary Section, DOE Purpose and Need: “*DOE’s purpose in considering the Proposed Action (to provide cost-shared funding) is to meet the goal of the CCPI Program (NETL, 2006b) by demonstrating the commercial readiness of the Conoco-Phillips E-Gas™ gasification technology in a fully integrated and quintessential IGCC utility-scale application. The principal need addressed by DOE’s Proposed Action is to accelerate the **commercialization** of clean coal technologies that achieve greater efficiencies, environmental performance, and cost-competitiveness.*”

It has also supported the project with \$36 million of public money as stated in Section 2.1.1.1 of the draft EIS. The DOE also remarks that it may continue to support the project through a federal loan guarantee program, in which the MEP has qualified for the first two rounds in the application process.

In the interest of moral responsibility to the citizens of this community and beyond, this EIS should be disregarded in its entirety and a new one established without the biased influence of the DOE.

Respectfully submitted,
Amanda Nesheim

January 9, 2008

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Dear Sirs:

The Mesaba Energy Project

The draft EIS is incomplete in that it does not address the entire scope of the MEP. The intent of the entire MEP is to build a total of six IGCC plants on up to three locations.

Of particular concern as described in the initial legislation Minn. Stat. § 216B.1694, Subd. 2 Regulatory Incentives (a), (2) “once permitted and constructed, is eligible to increase the capacity of the associated transmission **facilities without additional state review.**” It is unclear in the legislation if this pertains to HVTL and/or generating facilities and could be argued either way.

Because of the lack of clarification, (...on **up to** three sites), the intent to build six facilities, and the ambiguous legislation above mentioned, the EIS should include environmental, health and socio-economic impacts of all six proposed IGCC facilities.

Innovative Energy Project

In Appendix A2 the summary conclusion states; “Carbon capture and sequestration is not considered feasible for the Mesaba Energy Project at this time.” “Without an order from the PUC that incorporates the costs associated with CCS within the power purchase agreement, the Mesaba Energy Project would not be economically viable.”

Since it has been determined that CCS is not a viable option for the MEP it cannot be considered an Innovative Energy Project nor can it qualify for the Clean Coal Power Initiative (CCPI).

5.1.2 Impacts of Commercial Operation

“The demonstration of the Mesaba Energy Project for the CCPI Program would be considered successful if the results indicate that the continued operation of the gasifier would fully meet the fuel needs of the combined-cycle unit and would be economically and environmentally feasible (i.e., the project would achieve commercially competitive performance in terms of availability, thermal efficiency, emissions, and cost of electricity). However, if the fuel needs of the combined-cycle unit would need to be met or supplemented by using natural gas for continued commercial operation, then the demonstration of synthesis gas (syngas) production by coal gasification would be considered unsuccessful.”

In reference to the paragraph above, the MPUC has found the MEP would not be the least cost resource even without factoring in transportation of CO₂ and CCS. Therefore, the project cannot be considered as economically successful.

Excelsior Energy has no definitive plans for CCS, which is commented on in Appendix A2. The DOE readily acknowledges that CCS is not environmentally or economically feasible. Therefore, this project cannot be considered environmentally successful.

The administrative law judges determined that this project would not significantly reduce emission as compared to Super Critical Pulverized Coal (SCPC) plants. Therefore, this project cannot be considered environmentally successful nor an innovative energy project.

Since the MEP cannot be found to be environmentally successful, it cannot qualify as a clean energy technology under the Clean Coal Power Initiative (CCPI).

In order for the MEP to be environmentally successful, CCS should be required at time of start up. All potential impacts should be studied, quantified and included in the EIS.

CCS and EOR

On page 5.1-8 of the draft EIS, it is mentioned that “standard industry practices result in permanent underground storage of 33 percent of CO₂ injected, employing advanced technologies could result in Enhanced Oil Recovery (EOR) with 60 percent of the CO₂ stored.” This would amount to only 1,049,400 million tons (33%) of the 3,180,000 million tons of CO₂ proposed to be captured from Phases I/II of the MEP. That’s **less than 1%** of the total 10,600,000 million tons emitted annually. And would be 1.8% or 1,908,000 million tons per year sequestered with the advanced technology of 60%.

How is this cost effective or beneficial to the environment when the vast majority of the CO₂ emitted is not sequestered?

The other factor not clearly identified in EOR/CCS is that the estimated 8.7 million barrels of oil recovered annually would be responsible for (conservatively) CO₂ emissions of 4,350,000 million tons, (approximately 1000 lbs of CO₂ per 42 gallon barrel). This clearly indicated that CCS is not the answer to reducing global warming CO₂. Any economic benefits would solely go to the oil industry.

Referring to mitigation measures of CO2 contamination mentioned on page 5.1-9 it is not clearly outlined how CO2 contamination can be prevented, located within the injection site or stopped.

How can the exact location of a CO2 leak be identified and what can be done to stop the contamination. These questions must fully be answered before any more sequestration takes place to protect valuable water resources.

5.2 Potential Cumulative Impacts

The data, particularly for the West Range site, should be re-evaluated in its entirety since the final EIS has been released for Minnesota Steel Industries (MSI). There are gross errors in the information provided for the MSI project and this EIS. To fully address potential cumulative impacts all information submitted for the MSI EIS should be included in the MEP EIS.

5.2.3 Air Inhalation Health Risk

Air emissions data and permits have been issued for MSI. Air emission for the power generation planned through the Nashwauk Public Utilities for MSI was not submitted and should be included in the overall impact. The air emissions for MEP EIS should be re-evaluated to be all inclusive. Mesothelioma and other mining related cancers from airborne sources need to be addressed as cumulative.

5.2.3.2 West Range Site

It is stated that a sub-chronic hazard index was not calculated for the MSI facility in the MSI Human Health Screening-Level Risk Assessment; therefore a cumulative sub-chronic hazard index could not be evaluated.

It is unacceptable for MSI to not disclose its sub-chronic hazard information. As a result the cumulative non-carcinogenic and carcinogenic results data are inaccurate and incomplete.

The sub-chronic hazard information from MSI needs to be included particularly since Mesothelioma and asbestos like cancers are now being documented across the Iron Range including the West Range.

5.2 Data Refinements (pg 5.2-13)

The air emissions from any new source of power generation (i.e. Nashwauk PUC) for MSI was not included in this EIS. All emissions for MSI need to be re-evaluated because of this omission.

5.2.4.1 West Range – Water Resources

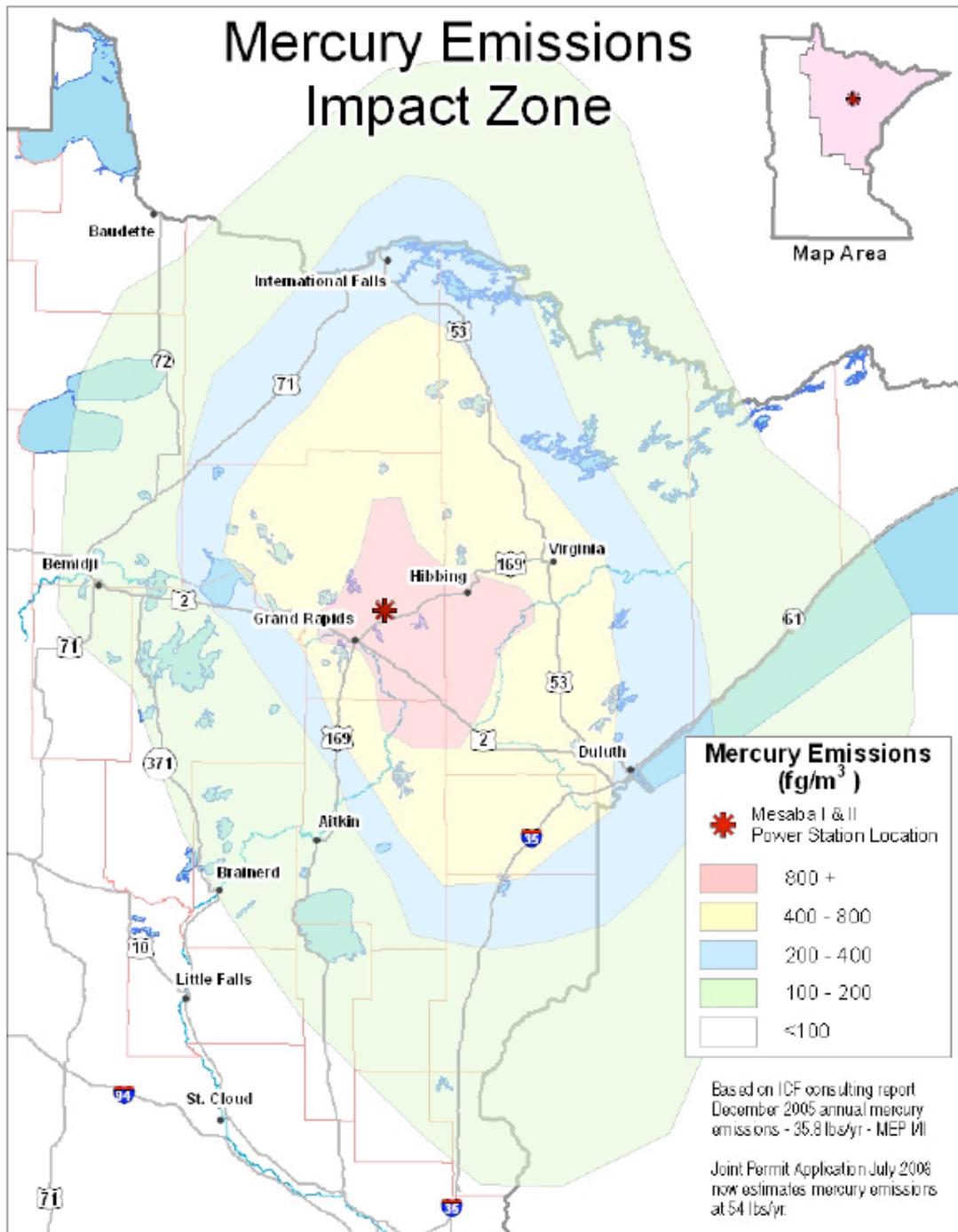
Mercury deposition is of great concern to the MN Dept. of Health, so much so that legislation has been passed to reduce mercury emissions. It is not conducive to state guidelines to be adding mercury to the environment from the many proposed industrial scale projects slated for this region. It is a known fact that minute amounts of mercury are damaging to developing fetuses and young children. And have cumulative health affects on the general population as a whole.

It is noted in Appendix D1 Tables 1 and 2 have mercury emission omissions from several sources. How can the cumulative mercury output be accurately analyzed if there are significant amounts of data missing?

With tighter restrictions on mercury emissions all sources should be included in this EIS.

5.2.4.1 Water Quality – West Range (pg 5.2-15)

It is false to say that the MEP wouldn't add any mercury to water discharges. Air emissions also have an affect on water quality. The JPA mentions Phases I & II of the MEP as emitting 54 lbs of mercury annually, with highest concentrations closest to the location of the proposed plants, (see Mercury Emissions Impact Zone below).



These emissions will greatly impact all of our water resources with those nearest becoming contaminated faster and more concentrated than they are currently. The 720 lakes identified in the Mercury Deposit Zone all need to be

tested for current levels of mercury to determine if they would be at risk to additional levels of mercury deposition. This should include MSI emissions from the operational plant and whatever power source is agree upon and built by Nashwauk PUC.

5.2.6 Wildlife Habitat

The information in this section is grossly inaccurate. It does not contain the total amount of habitat lost due to the MSI project.

In table 5.2.6-2 it states a total of 307 acres lost due to MSI. The data given in the final EIS for MSI indicated a total of 4,719 acres affected. (See Minnesota Steel Project Final EIS pg 6-10.)

This section needs to be corrected to reflect accurate information to determine habitat loss.

5.3.2 Additional Mitigation Options

5.3.2.1 Cooling Water Discharge Options at West Range Site

Zero Liquid Discharge (ZLD) should be implemented from the start of operations at the proposed West Range site. As water resources become acutely more important to our community and society it should be a requirement for the proposed MEP to utilize ZLD. It is unacceptable to not impose ZLD on the proposed MEP no matter where its proposed location.

5.3.2.2 Mitigation Options for Visibility Impacts to Class 1 Areas – Enhancement of Existing Design Basis.

The 1st paragraph mentions MEP's current design status. It also states; "Excelsior could be required to enhance its current design basis to produce further SO₂ and NO_x emission reductions to reduce modeled visibility impacts." Since it is in the public interest to reduce emissions as much as possible, the MEP should be required to enhance its current design basis to further reduce

SO2 and NOx emissions.

5.5 Relationship Between Short-Term Uses of the Environment and the Maintenance and Enhancement of Long-Term Productivity.

It is stated that the MEP would be demonstrating innovative coal power technologies that can provide the US with clean, reliable, and affordable energy.

The MEP is not innovative. The technology was introduced during WWII when Germany needed fuel. It is neither clean nor affordable. Coal is not clean. The proposed MEP would still emit over 10 million tons of CO2 annually and would add SO2, NOx, PM10, PM2.5, Hg and VOCs that do not currently exist. The administrative law judges have determined that IGCC does not significantly reduce the above mentioned emissions over a SCPC system. The MN PUC has determined that the electricity produced would be far too expensive and is not the least cost resource and as a result is not in the public interest. It should be noted that the MN PUC findings on cost do not include the necessary transmission upgrades, CCS or transport of CO2 and its related costs.

This sections states; “The Proposed Action would also support the objectives of the Mesaba Energy Project proponent to provide a source of electric power for the State of Minnesota and the national electric grid, as well as provide economic revitalization for the Taconite Tax Relief Area and Arrowhead Region of Minnesota.” There are six bullet points that outline potential long-term benefits to the region:

- The generation of 1,212 MWe to help alleviate the need within Minnesota for 3,000 to 6,000 MWe of new baseload power generation over the next 15 years (Section 1.4.1.1).

The above bullet point mentions that Minnesota will have a need of 3,000 to 6,000 MWe of new baseload power in the next 15 years, this is what Excelsior

Energy claims. Any reference to electrical need by the public was omitted in this EIS because of the legislation that was passed exempting the MEP from the Certificate of Need. Since the public was forbidden to comment on the need for electricity then Excelsior Energy should not be able to promote their claim of electrical need. Excelsior Energy has not had to prove the need for electricity so any mention of needed baseload power should be stricken from the EIS.

The next six bullet points refer to economic benefits to the region. Excelsior Energy submitted an economic benefit analysis that was conducted by UMD's Labovitz School of Business and Economics, Bureau of Business and Economic Research. The information supplied for the study came from Excelsior Energy. A true economic picture should be obtained by conducting a Cost Benefit Analysis study. This has been requested, but has not been conducted. The results of a Cost Benefit Analysis should be included in this EIS. If a Cost Benefit Analysis is not to be performed then the economic benefit study submitted by Excelsior Energy should not be referred to and any cost relationship data should be omitted.

The sixth bullet pertains to the Canisteo Mine Pit water level stabilization. The water levels could easily be stabilized by siphoning water to Trout Lake. This scenario has been studied and is ready to be implemented upon securing funds. The estimated cost of this siphoning project was approximately \$3 - 4 million, considerably less than the estimated \$2.2 billion (and rising) for the MEP.

It is not right to overlook the impacts of the Long-Term Productivity on environmental and human health, the costs of which are significant, and should be included in this summarization.

Respectfully submitted,
Amanda Nesheim