OVERLAND LAW OFFICE
Carol A. Overland
Attorney at Law
402 Washington St. So.
Northfield, MN 55057

(507) 664-0252 overland@redwing.net **Fax: (507) 664-0155**

nfld.us/blogs/carooverland

October 24, 2005

Richard Hargis
NEPA Document Manager
M/S 922-342C
U.S. DOE – NETL
P.O. Box 10940
Pittsburgh, PA 15236-0940

RE: EIS Scoping – Initial Comment

Dear Mr. Hargis:

Enclosed for filing please find original copy of Carol A. Overland's Initial Comment on EIS scoping. I am making this Comment as an individual and not in the course of representation of any party.

Comment: Application (grant, project, whatever documentation provided information for the NOI) must be provided to the public at beginning of Comment Period. Meaningful scoping comments are difficult, if not impossible, and are thwarted where there is no project information available at the time of Federal Register publication. Notice was published on October 5, 2005, and to this date, this vague account is the most detailed information published about this project. I contacted the NEPA Document Manager, Mr. Hargis, and received a message that there was no underlying document. I contacted Michael Wadley of Excelsior and was told that there was a grant application that had been submitted, and he would check to see if that could be redacted and released. This dearth of information is not reasonable. It is impossible to guess at scoping issues or bounds, and it is not reasonable to have the public informational meeting just before the scoping meeting the first opportunity for the public to get any idea the details of the project – if anything is produced. I'm not confident. But I am assuming that the DOE is not providing this private company with a massive grant and a billion dollars of loan guarantees for a project drawn on the back of a bar napkin. On the other hand, if it is, please consider this the application of Public Energy, Inc., for a similar project and send the check to the address above!

Comment: DOE must conduct wider alternatives analysis. I am disturbed by the DOE's notion, without citation, that the DOE's environmental responsibility is lessened because this is not a federal project, and that it is a private project. THIS DEMONSTRATION PROJECT WOULD NOT GO FORWARD BUT FOR DOE FUNDING. Because DOE funding is essential, the DOE's responsibility is equal to or heightened from a project where there is a federal ownership interest. The DOE is not relieved of its environmental responsibilities under NEPA by ownership or lack thereof.

Comment: This project threatens environmental mitigation steps taken by the MEQB. In an effort to prevent bulk power transfers, increased use of coal generation, and the resultant increased mercury deposition and greenhouse gasses, the Minnesota Pollution Control Agency requested, and the Environmental Quality Board ordered, limits to the capacity of the Arrowhead transmission line.[1] The capacity limit of the line is "enforced" by a phase shifting transformer, specified for this line to provide stability, and in this case, it was limited to 800 MVA – the line will receive only the electricity the transformer provides. However, Excelsior has discovered that addition of the Mesaba project to the grid creates grid instability:

- *The studies showed that development of 345kV lines into and out of Arrowhead Substations causes the 230kV phase shifter installed to control the flows onto the Arrowhead-Weston 345kV line to become ineffective as the phase shifter is effectively by-passed.*
    - *This issue has been brought to the attention of the project developers – Minnesota Power and American Transmission Company – and is being evaluated.*

Excelsior Energy Powerpoint presentation to MAPP NM-SPG.[2] Given the grid in the area, the Arrowhead-Weston line is the logical choice, and it's difficult to imagine an alternate route.[3] The EIS must address the impact of increased mercury deposition and production of greenhouse gasses due to the bypass of the MPCA and EQB limitation.

Comment: This project threatens public safety by putting the grid at risk. In light of the above, the project puts public safety at risk by by-passing a transformer that has a grid stability function. The EIS must address public safety and risk to the grid of Mesaba interconnection.

Comment: If this project is to connect into the Blackberry substation, significant upgrades will be required. According to a Minnesota Power fax of 4/6/99, and subsequent analysis by Steve Leovy, WI-PSC staff engineer, the Blackberry to Arrowhead line and others are already in need of upgrade before this project is even considered. The EIS must examine safety and stability of this interconnection.

---

[1] See attached letter dated September 13, 2000, from Cynthia Kahrmann, MPCA; Office Memorandum dated March 13, 2000 from Commissioner Studders to Gene Hugoson, Chair, Environmental Quality Board.
[2] Excelsior Energy Powerpoint presentation to MAPP NM-SPG 10/26/04, p. 2.
[3] See MAPP map, attached.

Comment: The Swan River and Mississippi River are impaired waters due to mercury contamination. The EIS must address impact of any amount of mercury deposition into already contaminated waters.[4]

For the record, a copy of the relevant statutory language for Mesaba from the 2003 Prairie Island bill is attached.[5]

Attached also are charts and graphs from the NEC 2005 Reliability Assessment, demonstrating that there is plenty of power and no need for Mesaba generation. Links to this information are on the document.

Additional Comments will be provided prior to November 14, 2005.

If you have any questions, or require anything further, please let me know.

Very truly yours,

Carol A Overland

Carol A. Overland
Attorney at Law

Enclosures

cc: Excelsior Energy

---

[4] Attached is wind information from the Dept. of Commerce's Wind Resource Analysis Program (WRAP), available on line at: (link unavailable at this time!)

[5] The entire bill is available at:
http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=SLAW_CHAP&year=2003&session_number=1&chapter=11

OVERLAND LAW OFFICE

Carol A. Overland
Attorney at Law
402 Washington St. So.
Northfield, MN 55057

(507) 664-0252 **overland@redwing.net** **Fax: (507) 664-0155**

November 14, 2005

Richard Hargis
NEPA Document Manager
M/S 922-342C
U.S. DOE – NETL
P.O. Box 10940
Pittsburgh, PA 15236-0940

RE: EIS Scoping – Comment.

Dear Mr. Hargis:

Enclosed for filing please find original Comment regarding EIS scoping – I have also served a copy on Excelsior Energy. In making this Comment, I am representing local residents and landowners who may also be submitting individual Comments on issues of particular individual importance. Thank you for the opportunity to Comment on the Scope of the DOE's EIS.

Process related Comments:

Comment: Background information must be provided to the public at beginning of Comment period so that the public is aware of what is being proposed – there must be specifics sufficient to warrant significant DOE funding, and this information, subject to redaction of proprietary information, must be provided to the public. Meaningful scoping comments are difficult, if not impossible, and are thwarted where there is no project information available at the time of Federal Register publication. Notice was published on October 5, 2005, and to this date, this vague account within the NOI is the most detailed information published about this project. I contacted the NEPA Document Manager, Mr. Hargis, and received a message that there was no underlying document. I contacted Michael Wadley of Excelsior and was told that there was a grant application that had been submitted, and he would check to see if that could be redacted and released, but I've not received anything as of this date. This dearth of information is not reasonable. It is impossible to guess at scoping issues or bounds, and it is not reasonable to have the public informational meeting just before the scoping meeting the first opportunity for the public to get any idea the details of the project – if anything is produced.

Comment: Information presented at a public meeting explaining a project should be available on line prior to the meeting so that parties can review before the meeting and then make knowledgeable comments.

Comment: Information presented at a public meeting explaining a project should also be available in writing for members of the public to take home and review. This option was not available at either the Taconite or Hoyt Lakes meeting.

1. Atmospheric Resources:

Comment: For the issues in this section, the EIS should specify responses for the different feedstocks anticipated.

Comment: For the issues in this section, the EIS should identify and quantify emissions separately for each stage of the process and cumulative totals.

Comment: Identify primary fuel gas dilutent for NOx control.

Comment: Describe fuel gas moisturization process if used, and rate of water consumption.

Comment: What emissions levels are expected for Sulfur Dioxide, Nitrogen Oxides, Carbon Monoxide, Volatile Organics, PM_{10}, PM_{25}?

Comment: Are continuous emissions monitors planned? What will be monitored?

Comment: What is plan for monitoring for fugitive emissions? What compounds monitoring for? What are thresholds for concern and notification system?

Comment: What is plan for monitoring for fugitive particulate emissions? PM_{10}? PM_{25}?

Comment: CCPI Public Abstract states that CO_2 emissions will be 15-20% less than most existing coal fired power plants. Address what level is regarded as that of "most existing coal fired power plants" and what level is expected for the Mesaba project.

Comment: Compare individual pollutant emissions levels, including CO_2, for various planned feedstocks and natural gas.

Comment: Will selective catalytic reduction (SCR) be used for reducing NOx emissions?

Comment: What technology is available to capture CO_2? At what cost?

Comment: October 2005 NETL PowerPoint states that the project is "sequestration adaptable," and "with retrofit for capture, if greenhouse gas reductions are imposed by future regulations."

- In what way(s) is the project "sequestration adaptable."
- Quantify annual CO_2 emissions

- Compare with CO2 emissions of all power plants in Minnesota over 500MW
- What technical modifications are available to minimize CO_2 emissions?
- What technical modifications are necessary to effect sequestration?
- At what cost?
- What geological formations are appropriate for sequestration?
- Where in the upper Midwest are these formations found?[1]
- What geographic location could be utilized for sequestration?
- What area is required for sequestration of CO_2 over the life of a 1,200MW plant?[2]
- How would CO_2 emissions get to sequestration site?
- Is sequestration technically possible in the granite surrounding the site?
- What would line item additional costs be of sequestration?
- What variables determine the threshold of feasibility of sequestration?
- Define economic, health, and environmental impact of this plant's CO_2 emissions.
- What coal gasification and/or power plant projects have successfully sequestered?
- What is impact of sequestration of CO_2 emissions on an aquifer?
- If sequestered in aquifer, how remote should pumping station(s) be from water wells?

Comment: Sequestering of CO_2 emissions is not required either under statute nor expressly proposed in any project information thus far revealed. However, there is a statutory mandate that Excelsior:

> (6) shall make a good faith effort to secure funding from the United States Department of Energy and the United States Department of Agriculture to conduct a demonstration project at the facility for either geologic or terrestrial carbon sequestration projects to achieve reductions in facility emissions or carbon dioxide;[3]

DOE's EIS should address whether this good faith effort has been made and results of efforts. Proposals and applications should be included as supplement to EIS.

Comment: The EIS should incorporate the DOE's NETL Carbon Sequestration information.[4]

Comment: This project threatens prior environmental mitigation steps taken by the MEQB. In an effort to prevent bulk power transfers, increased use of coal generation, and the resultant increased mercury deposition and greenhouse gasses, the Minnesota Pollution Control Agency requested, and the Environmental Quality Board ordered, limits to the capacity of the Arrowhead transmission line.[5] The capacity limit of the line is "enforced" by a phase shifting transformer, specified for this line to provide stability, and in this case, it was limited to 800 MVA – the line

---

[1] Distribution of Underground Natural Gas Storage by Region http://tonto.eia.doe.gov/oog/info/ngs/ngmap.html
[2] Specific Sequestration Volumes: A Useful Tool for CO_2 Storage Capacity Assessment, Brennan and Burruss http://pubs.usgs.gov/of/2003/of03-452/of03-452-tagged.pdf
[3] Special Session 2003, Chapter 11, H.F. 9 http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=SLAW_CHAP&year=2003&session_number=1&chapter=11
[4] http://www.netl.doe.gov/coal/Carbon%20Sequestration/index.html
[5] See attached letter dated September 13, 2000, from Cynthia Kahrmann, MPCA; Office Memorandum dated March 13, 2000 from Commissioner Studders to Gene Hugoson, Chair, Environmental Quality Board.

will receive only the electricity the transformer provides. However, Excelsior has discovered that addition of the Mesaba project to the grid creates grid instability:

- *The studies showed that development of 345kV lines into and out of Arrowhead Substations causes the 230kV phase shifter installed to control the flows onto the Arrowhead-Weston 345kV line to become ineffective as the phase shifter is effectively by-passed.*
    - *This issue has been brought to the attention of the project developers – Minnesota Power and American Transmission Company – and is being evaluated.*

Excelsior Energy Power Point presentation to MAPP NM-SPG.[6] Given the grid in the area, the Arrowhead-Weston line is the logical choice, and it's difficult to imagine an alternate route.[7] The EIS must address the impact of increased mercury deposition and production of greenhouse gasses due to the bypass of the MPCA and EQB limitation.

Comment: Address haze caused by plant emissions.

Comment: Address anticipated ozone emissions.

Comment: Sulfur is not going into the air and is instead a solid byproduct. What is use of elemental sulfur? Where is market? How much sulfur is produced annually? Gross revenue generated?

Comment: Coal is made into slurry – is it pulverized or ground first? If so, how are particles contained?

Comment: Address wind patterns in area – where will emissions be headed, where will particulate matter from coal handling and processing land. Minnesota's Dept. of Commerce had a wind monitor in nearby Isabella, windrose and other wind data attached.[8]

2. Water Resources:

Comment: A site map and plan must be provided with bodies of water and wetlands in the vicinity clearly marked and identified.

Comment: A site map and plant must be provided with elevations and drainage flow paths clearly identified.

Comment: The Greenfield site has no water or sewer system and the nearest city is several miles from the site. Identify plan for water and sewer.

Comment: Establish cost and identify party to pay for water and sewer services to site.

---

[6] Excelsior Energy Powerpoint presentation to MAPP NM-SPG 10/26/04, p. 2.
[7] See MAPP map, attached.
[8] See Dept. of Commerce's Wind Resource Analysis Program (WRAP), Isabella site, near Hoyt Lakes, p. 41
http://www.state.mn.us/mn/externalDocs/Commerce/WRAP_Report_110702040352_WRAP2002.pdf

Comment: Is the nominal use in-plant water system separate from production system?

Comment: Identify impacts of installation of water and sewer service to area, including whether system must be installed in granite, wetlands or through/around existing roads or infrastructure.

Comment: For the water issues in this section, where applicable the EIS should specify responses for the different feedstocks anticipated.

Comment: For the issues in this section, the EIS should identify and quantify water usage separately for each stage of the process and provide cumulative totals, i.e., for gasifier, turbine condenser, fuel gas saturation, other.

Comment: Provide narrative description and quantitative flow diagram of water and waste-water within and through the process/facility.

Comment: Provide narrative description and quantitative flow diagram of water and wastewater to and from the plant.

Comment: Excelsior has identified the Canisteo Mine Pit and Hill Annex Mine Pit as sources for the 6,500 gallons per minute that the plant requires. These sources are both some distance away and present an elevation problem, as the water must go uphill to the plant.

- How would water get from these mine pits to the plant?
- How large diameter pipeline or aqueduct is necessary for this level of flow?
- Pipeline or aqueduct above ground or buried?
- Will pumps be used? If so, identify number, specifications, cost, noise level, parasitic electrical use, hours of operation.
- Environmental impact of construction through granite and/or wetlands
- Environmental impact of warm pipelines if traversing wetlands in winter
- Hill Annex is a state park – is that water available for Excelsior to use?

Comment: Provide quantitative water balance information in table form.

Comment: The EIS should identify and quantify wastewater and contamination separately for each stage of the process, including but not limited to cooling tower blowdown, process water, and demineralizer regeneration waste flow and also provide cumulative totals.

Comment: Will Mesaba utilize dry cooling to cut water usage?

Comment: There is a history of unresolved water permit violations at the plant upon which this project is based -- process wastewater levels of selenium, cyanide and arsenic were in violation of the Wabash permit, and levels of selenium and cyanide were "routinely" out of compliance.[9]

- How will wastewater treatment in Mesaba project be different to avoid this problem?

[9] Wabash Final Technical Report, p. 6.14 http://www.netl.doe.gov/coal/gasification/projects/tech-demo/docs/WabashFinal_Report.pdf

    i. Specify lessons learned from Wabash
    ii. Specify modifications necessary for each compound.
- If treatment requires ponding system, how many acres are required?
- If solution entails an evaporation system, identify increased capital and operating costs.

Comment: Some communities draw their water supplies from the Mississippi, such as Minneapolis. What is the impact of violations such as are regularly experienced at the Wabash River plant on the water supply for communities downriver from the plant?

Comment: If there were to be violations of the water permit as there are at the Wabash River facility, how will communities downriver be notified, and what is the threshold for notification?

Comment: What are expected contaminants and expected levels of contamination in the discharge water?

Comment: The project plan for the west site is to use Holman Lake for water discharge. How will discharge water get to Holman Lake?

Comment: What lakes, creeks and wetlands are between the plant and Holman Lake and what is the impact of the discharge on these waters?

Comment: Holman Lake flows into Swan River and then the Mississippi. Will the discharge raise the level of Holman Lake or otherwise have an impact on the lake, such as turbidity, or decreased oxygen levels? Will the level of the Swan River rise or will it suffer increased turbidity? What chemicals will be released with the water?

Comment: What is temperature of water at point of discharge? What is impact of discharging water with that temperature generally? In summer? In winter?

Comment: The Swan River and Mississippi River are impaired waters due to mercury contamination. The EIS must address impact of any amount of mercury deposition into already contaminated waters.[10]

Comment: Mesaba Power Point from hearing claims that for Phase II, additional water resources other than Canisteo Mine Pit and Hill Annex Mine Pit must be identified.

- Explain why additional water resources are necessary
- How long would identified supplies last?
- Identify potential additional available water resources
- Identify the means, cost, and feasibility of tapping that water.
- What is impact on community and environment if Canisteo Mine Pit and Hill Annex Mine Pit are drained by the Mesaba plant?

[10] See MPCA Impaired Waters List, Supra.

Comment: If readily available additional water supply, upon which Phase II depends, is not available, is Phase I feasible? Should Phase I proceed?

Comment: Is wastewater recycled into the system after treatment? If so, what percentage?

Comment: For wastewater not recycled into the system, identify the path through the Mississippi watershed through the Mississippi.

Comment: Address ability of area to handle this magnitude of wastewater.

Comment: Identify areas with sufficient potential for pollutant spills as to necessitate cement liners or other methods to protect groundwater.

Comment: Identify containment, pre-treatment and treatment methods for runoff, such as ponding, oil/water separators, etc.

Comment: Review Excelsior's water use and treatment plan.

Comment: Is project and anticipated water use and discharge in compliance with Itasca County Water Use Plan?

Comment: Is NPDES permit required for construction and operation?

Comment: For preferred site, Swan River and Mississippi River are already impaired waters, on the impaired waters list.[11] Many of the lakes are also impaired. All waters in the watershed must be checked against the impaired waters list and reviewed for any impacts.[12]

Comment: For alternate site in Hoyt Lakes, the St. Louis River is impaired.[13] Many of the lakes in the area are impaired.[14] All waters in the watershed must be checked against the impaired waters list and reviewed for any impacts.

Comment: Given loading in the Mississippi and recent court decision,[15] is it possible to secure a permit in the Mississippi watershed upriver of Lake Pepin?

Comment: Mesaba PowerPoint in Taconite and Hoyt Lakes stated plant uses 6,500 gallons of water per minute. Is this figure including recycled water or exclusive of recycled water.

Comment: Compare water usage with that of other types of coal gasification and pulverized coal plants.

---

[11] Upper Mississippi Basin Impaired waters list, see Excel list, lines 372-375 for Mississippi, lines 477-4799 for Swan River, http://www.pca.state.mn.us/water/tmdl/index.html#tmdl

[12] Upper Mississippi Basin, Affected Use Map http://www.pca.state.mn.us/publications/maps/tmdl-um-conv-04.pdf ; Bioaccumulative toxics map http://www.pca.state.mn.us/publications/maps/tmdl-um-biotox-04.pdf

[13] Id., lines 22-24.

[14] Lake Superior Basin Impaired waters map Bioaccumulative toxics map http://www.pca.state.mn.us/publications/maps/tmdl-ls-biotox-04.pdf ;

[15] In the Matter of the Cities of Annandale and Maple Lake NPDES/SDS Permit Issuance for the Discharge of Treated Wastewater, and Request for Contested Case Hearing, http://www.lawlibrary.state.mn.us/archive/ctappub/0508/opa042033-0809.htm

Comment: Compare extent of cooling tower usage with that of other types of coal gasification and pulverized coal plants.

Comment: Address storm-water runoff system, treatment, discharge process and flow route.

Comment: What contaminants are expected to be found in the run-off, identified by potential source where possible, and what levels are expected?

Comment: Identify the impact of discharge water and run-off on local public and private wells.

Comment: Baseline water samples must be taken in all surface water, aquifers and nearby public and private wells.

Comment: Regular water monitoring must be completed and tracked. What governmental entity will test, monitor, analyze results and enforce where necessary?

Comment: How is Excelsior held liable for permit violations?

Comment: Excelsior has no assets. How will coverage of any clean-up and mitigation costs be assured?

Comment: Where permit is "routinely" violated, as has been reported by DOE regarding the Wabash River plant, at what point is permit revoked? What action is taken when permit is violated?

3. Cultural Resources:

Comment: Consult with Minnesota Historical Society for review of historical sites in area.

Comment: Compare cultural impact of plant in pristine wooded area with impact of plant on brownfield mine site.

4. Ecological Resources:

Comment: Identify eagle nests in the area and within 5 miles of site.

Comment: Consult with Minnesota DNR for list of threatened and endangered species in the area.

Comment: Identify any land enrolled in a land conservancy or conservation program, or a conservation easement.

Comment: Calculate direct loss of habitat due to plant and infrastructure for each site.

Comment: Determine edge effect and increased competition due to corridors and infrastructure routing.

Comment: Address potential for isolation effects due to forest fragmentation.

5. Floodplains and Wetlands:

Comment: Project is assumed to have an impact on wetlands. For both sites, provide map of affected wetlands. Include topographical map.[16]

Comment: If wetlands are to be removed for project, identify replacement wetlands by specific location of replacement wetlands – upon information and belief there are insufficient wetlands.

Comment: If wetlands are to be removed and replaced, identify source, composition and quantity of replacement material.

Comment: If transmission lines are built in wetland, address concrete leachate from foundations.

6. Terrestrial Resources:

Comment: What is degree of prior disturbance to site. Compare sites.

Comment: Address uniqueness of site, and compare sites.

Comment: Address uniqueness of neighboring property, for neighbors who would want to move to find similar property, assess feasibility of finding similar property and establish costs of comparable parcels.

Comment: For preferred site and alternate site**,** if plant is built, what is impact on surrounding land use and property values?

Comment: Identify footprint for power plant buildings, other areas such as coal storage, substation, etc.

Comment: Identify topography of site and infrastructure routes. Include topographic map.[17]

Comment: For each site proposed, identify by name, address, property description and parcel number all affected landowners, including those on site and for all infrastructure options proposed.

Comment: Will land be cleared beyond infrastructure? How far? Maintained clear?

Comment: What is maintenance plan for easements?

Comment: Identify depth and type of bedrock throughout footprint of plant and along infrastructure routes (transmission, rail, road, pipelines).

---

[16] Seehttp://www.topozone.com/print.asp?z=15&n=5243238.00017469&e=474896&s=100&size=m&layer=DRG25&datum=nad83
[17] See http://www.topozone.com/print.asp?z=15&n=5243238.00017469&e=474896&s=100&size=m&layer=DRG25&datum=nad83

Comment: At what point is bedrock sufficiently near surface to have an impact on construction and/or operation? Impact on costs?

Comment: Can pipelines be installed given bedrock?

Comment: Transmission foundations are typically very deep – can transmission foundations be built given bedrock. Identify problematic locations on planned routes and cost impact.

Comment: Identify potential on-site sources for pollutant spills.

Comment: Identify areas with sufficient potential for pollutant spills as to necessitate cement liners or other means of containment to protect groundwater.

Comment: Identify necessary containment, pre-treatment and treatment methods for runoff, such as ponding, oil/water separators, etc.

Comment: Identify areas where prevention of harm to sensitive areas due to construction activity or operation is unavoidable, identifying cause/problem with specificity.

Comment: Identify any drain tile, culverts or drainage ditches in area of site and infrastructure.

Comment: Identify character and estimate valuation of forest and lakeshore property generally and properties surrounding greenfield site.

- Determine "option value" – willingness to pay for knowledge of possibility of personal recreational use in future
- Determine "existence value" – willingness to pay for satisfaction of knowing that forest is protected even though use isn't anticipated
- Determine "bequest value" – willingness to pay for satisfaction of passing on to future generations.

Comment: Identify timber value of forest generally and on properties surrounding greenfield site.

Comment: Identify any pulp and timber losses due to project, in acres and dollars.

Comment: Identify value of forest and lakeshore property as residential property.

Comment: Identify value of forest and lakeshore property as recreational and retirement property.

Comment: Identify ability to preserve forest diversity if project is built.

Comment: Review site and infrastructure plan for forest fragmentation and impact on wildlife in area.

Comment: Assess for impact on neotropical migrants and species diversity.

Comment: Right of way for infrastructure must be cleared and will be altered for life of infrastructure. What is impact of clearing?

Comment: How much total acreage for each type of infrastructure, length and width.

Comment: What changes must be made to accommodate infrastructure, such as railroad crossings for access to property, relocation of roads?

Comment: Are transmission lines in migratory paths? Will bird diverters be used?

Comment: To what extent will ROW's contribute to forest fragmentation?

Comment: Will streams and rivers be crossed? Address crossing construction techniques to minimize damage; tree clearing practices to preserve water temperature; churning of river/stream/lake bed; erosion control; access damage mitigation; landscaping; use of matting during construction; soil compaction and other means of decreased hydrolic function; reduction of plant diversity; threats to fish and other waterbound species;

7. <u>Utility and transportation (to & fro) infrastructure requirements</u>:

Comment: For infrastructure, identify all corridor sharing opportunities.

Comment: Identify environmentally sensitive areas to be traversed by roads, pipelines, transmission lines and railroad tracks.

Comment: Excelsior plans to reroute Scenic Highway 7 through lakeshore properties. How is this reroute funded? Does funding include compensation to landowners? Will land be taken by eminent domain, and if so, quantify impact on cost of reroute.

Comment: Identify methods used to construct and operate infrastructure so as not to harm sensitive areas.

Comment: Is road and rail planned by Excelsior consistent with the Itasca County Transportation Plan?

Comment: Regarding motor vehicle traffic, conduct level of service analysis, including documentation of analysis determining whether signals are necessary, using peak hour warrants.

Comment: Document service needs, proposed operational improvements and level of service anticipated at each intersection for each planned phase.

Comment: For modifications to Scenic Hwy. 7 and Highway 169, observe access management principles regarding intersections and signal placement.

Comment: For west Greenfield site, for both reroute of Scenic Hwy. 7 and for Highway 169, addition of turn lanes, right and left, widening of road to ease truck traffic, impact on public and private access roads, positioning of intersections for visibility, train crossings, with full diagram of change in footprint of road.

Comment: Does high level of traffic warrant roundabouts?

Comment: What permits are required from the MN DOT for changes anticipated?

Comment: What is source of funding for Scenic Hwy. 7 and Highway 169 changes?

Comment: To what extent will infrastructure have to be built where there currently is none. Compare sites.

Comment: What is comparative cost of new infrastructure and infrastructure upgrades for greenfield and brownfield sites.

Comment: Identify topography of infrastructure routes.

Comment: Will land be cleared beyond infrastructure? How wide are ROWs?

Comment: Identify route of trains into and out of plant (beyond site plan). Through Grand Rapids? Duluth? Provide map from each coal field to site.

Comment: Who will own rail spurs from existing line and who will pay for construction.

Comment: How will rail easements be obtained?

Comment: Impact of trains into and out of plant through Grand Rapids or other areas. In Grand Rapids, where train crossing separates north and south end of town for extended periods of time, the city is constructing a new fire station to assure emergency services due to inaccessibility to other side of town for emergency vehicles. Address increased probability of additional vehicular congestion and potential for safety impacts where areas are inaccessible due to train traffic.

Comment: Consider cost of transport of coal and recent significant market increase in rail cost.

Comment: This project threatens transmission environmental mitigation steps taken by the MEQB. In an effort to prevent bulk power transfers, increased use of coal generation, and the resultant increased mercury deposition and greenhouse gasses, the Minnesota Pollution Control Agency requested, and the Environmental Quality Board ordered, limits to the capacity of the Arrowhead transmission line.[18] The capacity limit of the line is "enforced" by a phase shifting transformer, specified for this line to provide stability, and in this case, it was limited to 800 MVA – the line will receive only the electricity the transformer provides. However, Excelsior has discovered that addition of the Mesaba project to the grid creates grid instability:

[18] See attached letter dated September 13, 2000, from Cynthia Kahrmann, MPCA; Office Memorandum dated March 13, 2000 from Commissioner Studders to Gene Hugoson, Chair, Environmental Quality Board.

- *The studies showed that development of 345kV lines into and out of Arrowhead Substations causes the 230kV phase shifter installed to control the flows onto the Arrowhead-Weston 345kV line to become ineffective as the phase shifter is effectively by-passed.*
    - *This issue has been brought to the attention of the project developers – Minnesota Power and American Transmission Company – and is being evaluated.*

Excelsior Energy Powerpoint presentation to MAPP NM-SPG.[19] Given the grid in the area, is the Arrowhead-Weston line is the logical choice. If not, identify an alternate route.[20]

Comment: The EIS must address the impact of increased mercury deposition and production of greenhouse gasses due to the bypass of the MPCA and EQB limitation.

Comment: Additional transmission infrastructure beyond Blackberry or Forbes substations that is necessary for interconnection must be identified.

Comment: Calculate and consider cost of transmission interconnection plus cost of system upgrades necessary to deliver to market.

Comment: Calculate cost of transmitting electricity market.

Comment: Have transmission reservations been made?

Comment: In the Buff Ridge proceeding, transmission line losses were assumed at 30%, in the WRAO Report, on which the Arrowhead project was based, line losses of 40% were assumed. What are estimated line losses for transmission of Mesaba energy? Show your work.

8. <u>Health and safety impacts</u>:

Comment: What are security plans for the site in light of threat of terrorism? This is a remote area where security may be more difficult to ensure.

Comment: This project threatens public safety by putting the grid at risk. In light of the above, the project puts public safety at risk by by-passing a transformer that has a grid stability function. The EIS must address public safety and risk to the grid of Mesaba interconnection.

Comment: Protection of grid – determine thermal and voltage impacts of interconnection through review of linear and AC power flow analysis, dynamic stability studies, short circuit analysis, and other studies necessary prior to interconnection, for contingency studies using standard n-1 criteria. Modeling should take into account anticipated changes in load including but not limited to addition of Mesabi Nugget plant, Poly-Met, etc.

Comment: Address availability of system reservations to deliver power to purchaser.

[19] Excelsior Energy Powerpoint presentation to MAPP NM-SPG 10/26/04, p. 2.
[20] See MAPP map, attached.

Comment: If this project is to connect into the Blackberry substation, significant upgrades will be required. According to a Minnesota Power fax of 4/6/99, and subsequent analysis by Steve Leovy, WI-PSC staff engineer, the Blackberry to Arrowhead line and others are already in need of upgrade before this project is even considered. The EIS must examine safety and stability of this interconnection.

Comment: What is plan for protection of workers from exposure to contaminated process wastewater.

Comment: What is plan for protection of workers from inhalation exposure to contaminated steam.

Comment: What is plan for protection of workers from exposure to particulates.

Comment: Impact of trains into and out of plant through Grand Rapids or other areas where there is an increased probability of additional vehicular congestion and potential for safety impacts where areas are inaccessible due to train traffic.

Comment: Identify all registered public and private airports and landing fields within one mile of preferred and alternate sites and all infrastructure routes.

Comment: Given nature of coal gasification, identify potential hazardous materials that could be released and identify the means of release.

Comment: Given nature of coal gasification, determine potential emergencies, such as gas release, chemical spill, explosion, fire, etc.

Comment: Identify First Responder and other parties responsible for releases of hazardous material, fires, medical and other emergencies.

Comment: Determine whether First Responders are volunteers, and whether full-time paid Responders are necessary, and if so, how many for a plant this size.

Comment: Identify necessary response to the different potential releases, clean up methods, and mitigation.

Comment: Address ability of local First Responders to respond and handle emergencies during construction, demonstration and operation of plant, in terms of numbers of available personnel necessary, skill levels, and equipment necessary.[21]

Comment: Address training necessary for First Responders to address potential emergencies.

[21] First Responder and emergency information: A Needs Assessment of Fire Service, June 2004 http://www.minnesotafireservice.com/faq_state_of_the_state.html ; EPCRA Program, Hazardous Materials Information http://www.epcra.state.mn.us/hazmat_info/index.html ; Minnesota Fire Department information – Taconite has volunteer fire fighters http://www.dps.state.mn.us/fmarshal/Response/MNFireDepartmentTypes91304.pdf ; http://www.minnesotafireservice.com/pub_fire_departments_in_minnesota_list.doc

Comment: Determine need for additional emergency response staff, equipment and training and identify funding source. Is cost included in project cost?

Comment: What party is responsible for determination of whether a situation warrants emergency response, notification of community and responders of the emergency, and whether an emergency has been sufficiently mitigated?

Comment: Excelsior must provide an emergency plan, including training and staffing of emergency response personnel, equipment specification and acquisition, and emergency response techniques. Source of funding must be disclosed.

Comment: What is plan for monitoring wells of local residents to assure their water supply is safe and their wells are not contaminated?

Comment: Provide maps of local aquifers and locations of local residents wells and depths, and Mesaba's proposed monitoring wells, with depths noted.

Comment: For the purposes of EMF modeling, for each transmission line show the voltage, amps, MVA, height of structures (distance of conductors from ground) and conductor specifications, including but not limited to kcmil, ACSS/ACSR, code (bird name).

Comment: The EIS must present and analyze modeling of EMF fields.

Comment: Conduct review of EMF literature, including the Bonneville Power Report (hard copy enclosed; Black on White;[22] the California report;[23] Childhood cancer in relation to distance from high voltage power lines in England and Wales: a case-control study, recently published in the British Journal of Medicine;[24] NIEHS Report on Health Effects of Exposure to Power-line Frequency Electric and Magnetic Fields;[25] etc.

Comment: The EIS must address whether EMF levels are within levels deemed safe.

Comment: Address potential for Henshaw effect regarding aerosol pollutants in light of coal grinding preparation and other particulate matter in proximity to transmission.[26]

9. Noise:

[22] PDF/e-Book: "Black on White – Voices and witnesses about Electro-Hypersensitivity – The Swedish Experience", Rigmor Granlund-Lind, John Lind, Mimers Brunn Kunskapsförlag (2004); http://www.feb.se/feb/blackonwhite-complete-book.pdf

[23] The Risk Evaluation (California EMF Program) An Evaluation of the Possible Risks From Electric and Magnetic Fields (EMFs) From Power Lines, Internal Wiring, Electrical Occupations and Appliances; http://www.dhs.ca.gov/ps/deodc/ehib/emf/RiskEvaluation/riskeval.html

[24] Childhood cancer in relation to distance from high voltage power lines in England and Wales: a case-control study, Gerald Draper, Tim Vincent, Mary E Kroll, John Swanson, BMJ VOLUME 330 4 JUNE 2005 bmj.com http://www.powerlinefacts.com/British%20Medical%20Journal%20June%202005.pdf

[25] EMF-RAPID Report http://www.niehs.nih.gov/emfrapid/html/EMF_DIR_RPT/NIEHS_Report.pdf

[26] D.L. Henshaw http://www.llrc.org/rat/subrat/rat414.htm ; http://www.uni-koeln.de/symposium2000/contrib/#3 http://www.leukaemiaconference.org/programme/speakers/day4-henshaw.pdf ; http://www.electric-fields.bris.ac.uk/CausalMechanism.htm ; http://www.electric-fields.bris.ac.uk/Technical.htm

Comment: All noise measurements and modeling should take into account day and night scenarios, and both summer, and in winter where the ground is snowcovered and no leaves on trees.

Comment: Noise measurements and modeling should include hourly levels for a typical day, and should include flaring at various times and in various seasons.

Comment: Identify train routes in Minnesota to and from plant on map. Include map of railroads in Minnesota.[27]

Comment: Identify the time in the day that the trains will be going in and out of the site.

Comment: Identify incorporated communities trains would pass through to and from Taconite and Hoyt Lakes sites, and speed and dB(A) levels of trains passing through communities.

Comment: For both Taconite and Hoyt Lakes sites, identify railroad crossings where the train whistle/horn would blow, and dB(A) levels at 50, 100, 1,000 and 5,280 feet.

Comment: For both Taconite and Hoyt Lakes sites, determine everyday operational noise levels of operating the project, including generating equipment, processing equipment, during flaring, and associated processes/traffic, at furthest perimeter (giving distance), at nearest residence (giving distance) and at one-half and one mile.

Comment: Where noise measurements are taken, Minnesota Rules require specific equipment be used and require calibration of the equipment prior to each sample taken.[28]

Comment: In the Arrowhead transmission case, the ALJ noted:

> The appropriate test for obtaining an exemption is not whether the MPCA noise limit is met. Rather, the test is whether a substantial impact will be caused by the new equipment.[29]

Although noise modeling showed levels below MPCA thresholds, noise mitigation was ordered because it was deemed annoying and of significant impact. Noise levels of construction and operation of proposed project should be examined in light of Arrowhead noise mitigation order and whether they are "annoying."

---

[27] http://www.dot.state.mn.us/ofrw/maps/statemap.pdf

[28] Minn. R. 7030.0060 http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=RULE_CHAP_SEC&year=current&section=7030.0060

[29] Findings of Fact, Conclusions of Law, Recommendation, FoF 21-25, Conclusion 4; In the Matter of an Exemption Application by Minnesota Power for a 345/230kV Transmission Line known as the Arrowhead Project, OAH Docket No. 10-2901-12620-2; MEQB Docket No. MP-HVTL-EA-1-99; see also Order of EQB, March 15, 2001. http://www.eqb.state.mn.us/Powerplant/Arrowhead/MP-HVTL-EA-1-99.html

Comment: Identify major system components and expected noise levels of each, and identify cumulative noise levels.

Comment: Establish aural impact of plant – is plant audible from Chippewa and Superior National Forests; Scenic State Park; Hill Annex Mine State Park; George Washington State Forest; and other recreational sites in the area.

Comment: Given discharge of wastewater into local waters, what will impact of plant be on suitability of these waters for recreation, from the point of discharge to the Mississippi and downstream.

10. <u>Community resources – socioeconomic cost/benefit:</u>

Comment: Is this project consistent with the County's Comprehensive Plan and land use in the area?

Comment: Is this project consistent with the City of Taconite's or Hoyt Lake's Comprehensive Plan and land use in the area?

Comment: What is the land use zoning designation(s) in the area adjacent to the plant?

Comment: Is plant consistent with area land uses? If it is not consistent, is it compatible with area land uses? If not, what is impact on area land uses?

Comment: Is annexation of the site by the City of Taconite subject to a city/township agreement?

Comment: Where will rail spurs be routed?

Comment: Who will own rail spurs from existing line, shepherd through permitting process, and who will pay for construction, and will costs be apportioned elsewhere after construction?

Comment: How will rail easements be obtained?

Comment: Where will pipeline routes be routed?

Comment: Who will own pipeline, water and gas identified separately, shepherd through permitting process, and who will pay for construction and will costs be apportioned elsewhere after construction?

Comment: How will pipeline easements be obtained?

Comment: Where will transmission lines be routed?

Comment: Who will own transmission lines, shepherd through permitting process, and who will pay for construction? Will costs be apportioned elsewhere or recoverable after construction? If recoverable in rates, from what ratepayers?

Comment: NETL October 2005 PowerPoint for Mesaba states "Sound basis for installed costs." Given Wabash Rivers construction cost overruns resulting in cost twice that estimated, what is the "sound basis for installed costs?"

Comment: What is range of expected installed cost/kW?

Comment: What is expected efficiency of plant, expressed in percentage? Compare with efficiency of advanced pulverized coal plant and circulating fluidized bed plant.

Comment: Komanoff found inverse correlation between average plant capacity performance and average unit size – as size went up, efficiency went down.[30] In history of IGCC, considering the different types and this technology specifically, show relation of average capacity performance and average unit size.

Comment: Identify components of the efficiency calculation, i.e., at what step does calculation begin, when slurry enters plant, at coal mine including transportation to plant, pre-gasification treatment, etc?

Comment: Coal costs experienced sharp increase after the 1973-1974 oil price increase. We are experiencing another oil price increase. What is price of coal assumed and projections. Have past trends in coal price been taking into account.

Comment: Coal transport costs have seen a sharp increase. What is price of coal transport used and what are projections, particularly in light of increasing rail costs?

Comment: What is current ratio of coal transport costs to coal mining costs? Is a trend suggested?

Comment: What is expected production cost per MWh?

Comment: What is anticipated output, gross and net, expressed in MW?

Comment: What is anticipated site load, or parasitic load, expressed in MW and in percentage of generation, and source of load, identified by component.

Comment: Are there expected transfers of electricity to immediate local customers prior to interconnection to grid? If so, net amount? Identify customer, i.e. Mesabi Nugget… and if so, resultant net output.

Comment: Excelsior has revealed site plans that show a reroute of Scenic Hwy. 7. What party is paying for that reroute?

[30] Komanoff, Power Plant Cost Escalation, p. 256, Figure 11.3.

Comment: Site is located in isolated area. Traffic would increase dramatically. What are expected traffic counts along Hwy. 169 and Scenic Highway 7, expressed in trips per day, projected hourly throughout the day.

Comment: What community resources would be expended on behalf of Excelsior Energy? At what cost?

- Bonding for infrastructure
- Infrastructure maintenance
- Legal fees, surveying, staff time, etc. for annexation to Taconite
- Training of emergency response personnel (fire, police, hazardous waste)
- Additional necessary responder personnel and equipment

Comment: Upon information and belief, this plant is proposed on a greenfield site to be annexed into the City of Taconite, a city with just over 300 residents and limited resources. The ability of the city to take on the obligations, including financial resources, emergency response, and apportionment of costs of hosting facility, particularly looking at incurred obligations direct and indirect in relation to the gross city budget.

Comment: What is total financial obligation and cost of this plant to the City of Taconite. Hoyt Lakes for alternate site?

Comment: This plant is proposed for a greenfield site in Itasca County, and the EIS should address the ability of the county to take on obligations associated with this plant, including bonding for infrastructure, additional bonding for realignment of Scenic Hwy. 7, and other large financial commitments and obligations on behalf of a private corporation.

Comment: What is total financial obligation and cost of this plant to Itasca County? St. Louis County for alternate site?

Comment: What monetary benefits will the community receive for hosting facility, projecting out annually and separately through construction and for life of the plant? Breakdown by jurisdiction:

- Real estate tax
- Corporate tax
- Utility personal property tax
- Host Fee Agreement
- Taxes on wages
- Sales tax
- Commercial sales in locale
- Lodging for workers
- Meals for workers
- Services for workers

Comment: Regarding "jobs, jobs, jobs," the EIS must address the socioeconomic cost/benefit issues below individually for plant, and for each separate type of infrastructure, i.e., rail,

transmission, gas pipeline, water pipeline, roads (**all references to numbers of jobs created must be expressed in Full Time Equivalent (FTE) for comparison purposes**):

- What percentage of local labor will Excelsior commit to using?
- How many FTE construction jobs are anticipated to be created per 100MW?
- Identify occupations of each and qualifications.
- What percentage of construction contracts will go to local contractors? Contractors utilizing local union labor?
- What percentage of construction jobs, by type, will go to local workers?
- Given federal funds, is this project governed by a prevailing wage provision?
- During construction, how much will be spent locally on equipment?
- During construction, how much will be spent out of the area on equipment?
- During construction, how much will be spent locally on supplies and services?
- During construction, how much will be spent out of the area on supplies and services?
- During construction, how much will be spent locally on construction materials?
- During construction, how much will be spent out of the area on construction materials?
- How many permanent FTE jobs are anticipated to be created per 100MW?
- Identify occupations of each and qualifications.
- What percentage of construction jobs will be for local workers and what percentage for out of area workers?
- For out of area workers, address anticipated lodging costs and whether lodging facilities are available within a reasonable drive.
- To what extent will local contractors be used, i.e., local trucking companies to bring in materials parts, equipment and supplies?
- To what extent will fabrication of components be accomplished locally, and to what extent is it expected to be done out of area?
- Administrative support provided locally or from out of area? Percentage of budget on administrative support?
- How much will be spent locally on maintenance, security, and other contracted services?
- How much will be spent out of the area on maintenance, security, and other contracted services?
- How much will be spent locally and out of the area on construction fuel (gas, diesel, propane?)
- How much will be spent locally on ancillary professional services such as accounting, attorneys, engineering, banking?
- How much will be spent out of the area on ancillary professional services such as accounting, attorneys, engineering, financing?
- Will banking for the Mesaba project be based locally or out of the area?
- Will insurance for the Mesaba project be secured locally or out of the area?
- Expected revenue generation when operational, Phase I and Phase II separately?
- Projected operations and maintenance costs, Phase I and Phase II separately?
- Licensing and permitting costs expected
- Estimate expected shift from one tax classification to another, i.e., seasonal to industrial, or mining to tax exempt, will there be a net gain or loss to jurisdictions? Amount?
- Will this plant site be changed to Minnesota's JOBZ status?

- What are easement costs for the various types of easements necessary, including:
    - Payouts to landowners (identify type of easement – road, service road, railway, transmission, pipeline, substation, other facility, and estimate per acre)
    - Appraisal costs
    - Legal costs – negotiations; local legal or out of area?
    - Legal costs – eminent domain; how many expected; cost of each; local legal or out of area?
    - Right of way clearing
    - Removal and salvage of existing materials
    - Contingency costs

Comment: Excelsior previously had exemption from utility personal property tax, but that was site specific to a site other than its now preferred site and required that construction begin on or before January 12, 2005. That legislative exemption has expired.

- Does Excelsior plan to secure exemption for project, on whichever site?
- Does Excelsior plan to negotiate a Host Fee Agreement with the host communities?
- What would economic benefit be to the host communities?

Here's the language of exemption that expired:[31]

> Subd. 55. [ELECTRIC GENERATION FACILITY; PERSONAL PROPERTY.] Notwithstanding subdivision 9, clause (a), attached machinery and other personal property which is part of an electric generating facility that meets the requirements of this subdivision is exempt. At the time of construction, the facility must be sited on an energy park that (i) is located on an active mining site, or on a former mining or industrial site where mining or industrial operations have terminated, (ii) is within a tax relief area as defined in section 273.134, (iii) has on-site access to existing railroad infrastructure, (iv) has direct rail access to a Great Lakes port, (v) has sufficient private water resources on site, and (vi) is designed to host at least 500 megawatts of electrical generation. Construction of the first 250 megawatts of the facility must be commenced after January 1, 2002, and before January 1, 2005. Construction of up to an additional 750 megawatts of generation must be commenced before January 1, 2010. Property eligible for this exemption does not include electric transmission lines and interconnections or gas pipelines and interconnections appurtenant to the property or the facility. **[EFFECTIVE DATE.]** This section is effective for assessment year 2003 and thereafter.

Comment: What is current level of utility personal property tax revenue received by local units of government?[32]

Comment: Calculated at current personal property tax rates, what would be level of tax revenue for various levels of local government if the plant was taxed?

Comment: In a worst case scenario, if taxpayers were liable for all loans guaranteed by DOE, what is total amount and what would be the average taxpayer's responsibility using number of taxpayers in 2005.

---

[31] http://www.revisor.leg.state.mn.us/slaws_html/2002/c377.html
[32] Net Tax Capacity chart for all counties
http://www.taxes.state.mn.us/taxes/property_tax_administrators/other_supporting_content/pay04_tab31h.pdf

Comment: If plant and infrastructure is built, looking at both preferred and alternate site, what will impact be on neighboring property values and associated tax revenue?

Comment: Excelsior had no provision in the prior utility personal property tax exemption for a Host Fee Agreement, a typical inducement to local governments to give their approval to exemptions. Does Excelsior plan on negotiation of a Host Fee Agreement with County, City and/or School District?

Comment: Document efforts made by Excelsior, for preferred and alternate sites, to notify directly affected landowners, and indirectly affected community members of the specifics of this project.

Comment: Document efforts made by Excelsior, for preferred and alternate sites, to notify state Senators and Representatives and county, city and school board officials of the specifics of this project, of consequences of exemption from utility personal property tax, and of option of Host Fee Agreements.

Comment: Area is known for scenic beauty and quiet natural setting – what percentage of local economy is tourism dollars? What is impact of plant on tourism and recreation industry?

11. <u>Aesthetic and scenic resources</u>:

Comment: Establish the extent to which this immediate area of the Greenfield site is regarded as a scenic resource, i.e., "Scenic Hwy. 7," the pristine lakes, and use as a recreational area.

Comment: Establish value of area as scenic resource, using indicators such as taxable market value and recent sales price of residential, recreational and seasonal property.

Comment: Establish impact of plant on Chippewa and Superior National Forests; Scenic State Park; Hill Annex Mine State Park; George Washington State Forest; Forest History Center and other recreational and cultural sites in the area.

Comment: Establish visual impact of plant – is plant visible from Chippewa and Superior National Forests; Scenic State Park; Hill Annex Mine State Park; George Washington State Forest; and other recreational sites in the area.

Comment: Establish impact of plant on Leech Lake Indian Reservation.

Comment: For plant and infrastructure, individually, from how far away will plant be visible on clear day in light and darkness.

Comment: What is exterior lighting plan?

Comment: What is impact (quantified) of lighting on area?

Comment: What "dark skies" modifications would make plant less visible at night.

Comment: How tall are the different stacks – identified by stage of process? What is average tree height and how much taller are different stacks than trees?

Comment: What color are stacks – again identified by stage of process?

Comment: When plant is not operating, how far away are different stacks visible?

Comment: When plant is operating, how visible, on site, are emissions in warm weather? Cold?

Comment: When plant is operating, how far away are stacks and emissions visible?

Comment: How many rows of cooling towers and how many openings in each?

Comment: When all cooling equipment is operating, from what distance are cooling towers visible?

Comment: Are stacks and cooling tower emissions visible from the nearby national parks and state parks?

Comment: Address contrast, conflict and compatibility of transmission lines and railroad tracks/trains in this relatively undeveloped landscape.

Comment: To what extent will transmission lines be visible over trees? What is typical tree height and what height is anticipated for transmission structures?

Comment: Address potential for undergrounding transmission lines to Blackberry in conjunction with construction of pipelines. Itemize cost differences and analyze for economies of scale if done in tandem.

Comment: For undergrounding option to Blackberry, address visual impacts of potheads (transition hardware) and ROW clearing for trenching.

12. Cumulative effects:
and
13. Connected actions (inc. Phase II):

Comment: Impact of MSI nugget plant in Nashwauk.

Comment: Impact of Phase II and beyond.

Comment: Impact of transmission interconnection and system upgrades to handle 1200MW of power.

Comment: NOI claims project will have benefit of economies of scale with Phase II. Komanoff reports that plant size and building multiple plants does not offer significant economies of scale and alluded to diseconomies of scale.[33] Identify such benefits and source of benefit.

Comment: Do economies of scale require Phases be built simultaneously, and if not, will any economies of scale be realized or dis-economies be avoided?[34]

Comment: Size of plant extends construction time. What is estimated duration of project from component ordering to operation?

Comment: Address dis-economies when siting in Greenfield as opposed to Brownfield, including siting twice the facility where there is currently no infrastructure.

Comment: Address potential for significant construction cost overruns as with Wabash River.

Comment: Scenic Hwy. 7 may be relocated at the Greenfield site to pass closer to proposed site for easier access. What is new route? What is cost of this realignment and who pays?

Alternatives Analysis

Comment: DOE must conduct wider alternatives analysis. I am disturbed by the DOE's notion, without citation, that the DOE's environmental responsibility is lessened because this is not a federal project, and that it is a private project. THIS DEMONSTRATION PROJECT WOULD NOT GO FORWARD BUT FOR DOE FUNDING. Because DOE funding is essential, the DOE's responsibility is equal to or heightened from a project where there is a federal ownership interest. The DOE is not relieved of its environmental responsibilities under NEPA by ownership or lack thereof.

Comment: ALTERNATIVE START UP FUEL - Upon information and belief, the Mesaba plant will require natural gas for start up. The Wabash plant uses No. 2 fuel oil for startup. EIS should evaluate use of 100% biodiesel for startup.

Comment: Alternative feedstocks – identify anticipated alternative feedstocks.

Comment: Natural gas is to be used for start ups and when other feedstocks are not available. Define upper bound of natural gas usage, in annual c.f. and in percentage of time.

Comment: Provide chart of price over last 10 years of different coals and other feedstocks anticipated.

Comment: Provide chart of transportation costs over last decade from sources of feedstock.

[33] Komanoff, Power Plant Cost Escaltion, p. 220.
[34] Id., Komanoff found duplicate units "required 8% more project time than other units." P. 224.

Comment: What incentives are there not to use natural gas if coal market alters significantly, i.e. cost of transport continues to rise, environmental rules tighten, technical problems with equipment, etc.

Comment: Is municipal waste/refuse derived waste anticipated as a feedstock?

Comment: Consider increase cost of infrastructure.

Alternatives proposed:

Identify by township and section…

1. Old natural ore mine between Coleraine and Higway 38 on Highway 61. It also has a river running through it.

2. Butler Taconite - 2 miles west of Nashwauk

3. Sherman Mine - Between Chisholm and Buhl

Mitigation

Comment: Identify mitigation strategies during transmission, pipeline and rail siting and design:

- Site selection – preferred, alternate, other or no-build
- Route for infrastructure
    i. Corridor sharing – minimize ROW & impacts
    ii. Utilize property lines
    iii. Take advantage of natural features' camouflage
- Structure type – for transmission
    i. Less obtrusive – longer span or low profile
    ii. Color and design
- Placement
    i. Avoid more sensitive areas
    ii. Along property lines

Comment: Identify mitigation strategies during construction

- Timing – build in wetlands when frozen
- Use appropriate vehicles and equipment – for wetlands, wide tired trucks, matting
- Vehicle washing to avoid proliferation of invasive plants and animal disease
- Construction over rivers avoiding spawning areas
- Erosion control during and revegetation after construction

Background information and documents

For the record, electronic links to the following background documents:

- Relevant statutory language for Mesaba from the 2003 Prairie Island bill.
  http://www.revisor.leg.state.mn.us/bin/getpub.php?pubtype=SLAW_CHAP&year=2003&session_number=1&chapter=11

- Expired 2002 Mesaba exemption from utility personal property tax
  http://www.revisor.leg.state.mn.us/slaws_html/2002/c377.html

> Subd. 55. [ELECTRIC GENERATION FACILITY; PERSONAL PROPERTY.] Notwithstanding subdivision 9, clause (a), attached machinery and other personal property which is part of an electric generating facility that meets the requirements of this subdivision is exempt. At the time of construction, the facility must be sited on an energy park that (i) is located on an active mining site, or on a former mining or industrial site where mining or industrial operations have terminated, (ii) is within a tax relief area as defined in section 273.134, (iii) has on-site access to existing railroad infrastructure, (iv) has direct rail access to a Great Lakes port, (v) has sufficient private water resources on site, and (vi) is designed to host at least 500 megawatts of electrical generation. Construction of the first 250 megawatts of the facility must be commenced after January 1, 2002, and before January 1, 2005. Construction of up to an additional 750 megawatts of generation must be commenced before January 1, 2010. Property eligible for this exemption does not include electric transmission lines and interconnections or gas pipelines and interconnections appurtenant to the property or the facility. **[EFFECTIVE DATE.]** This section is effective for assessment year 2003 and thereafter.

Attached also links to the NERC 2005 Reliability Assessment,[35] p. 55-61, and the CapX 2020 Report,[36] particularly p. 5 and 7, demonstrating that there is plenty of power and no need for Mesaba generation.

I am enclosing a hard copy by U.S. Mail of "Electrical and Biological Effects of Transmission Lines: A Review," Jack M. Lee, Jr., Ph.D., Bonneville Power Administration (December 1996); and a copy of the 2005 MAPP transmission map.

If you have any questions, or require anything further, please let me know.

Very truly yours,

Carol A. Overland
Attorney at Law

Enclosures

cc: Excelsior Energy

p.s. It may also be useful to review Economic Studies of Coal Gasification Combined Cycle Systems for Electric Power Generation, EPRI AF 642 (1978); Economic Evaluation of GCC Power Plants Based on the STEAG Combined-Cycle Design and Comparison with a U.S. Combined-Cycle-Based System, EPRI AF-1288 (1979); and An Economic Evaluation of MHD-Steam Powerplants Employing Coal Gasification, RI 7796 (1973).

[35] NERC 2005 Reliability Assessment, ftp://www.nerc.com/pub/sys/all_updl/docs/pubs/LTRA2005.pdf
[36] CapX2020 Report, p. 7 showing 16,712MW generation in MISO queue, and 6,300MW needed by 2020 (16,712 – 6,300 = 10,412!), ftp://www.nerc.com/pub/sys/all_updl/docs/pubs/LTRA2005.pdf

>>> "Carol A. Overland" <overland@redwing.net> 11/15/2005 7:41 PM >>>
Here's a lead for the sequestration aspect of the EIS

Interesting - I just found this. Excelsior's DOE-NOI says they're not doing sequestration. Excelsior said in their power point and in response to direct and specific questioning up north that they're not doing sequestration.

Statute requires they make "best efforts" to get funding for a study.

http://www.excelsiorenergy.com/News/PCOR%20Phase%20II%20Press%20Release%20050624.pdf

EXCELSIOR ENERGY ANNOUNCES CARBON DIOXIDE
STORAGE STUDY FOR MESABA ENERGY PROJECT

June 24, 2005

FOR IMMEDIATE RELEASE

Study Part of Upper Midwest Group's Development and
Demonstration of Carbon Sequestration Options for the Future

Excelsior Energy Inc., a Minnesota company developing a coal-fueled, 500 to 600 megawatt (MW) integrated gasification combined cycle ("IGCC") baseload power plant to be located on Minnesota's Iron Range (Unit I of the "Mesaba Energy Project"), today announced the U.S. Department of Energy (DOE) has funded a study for examining potential options for carbon dioxide storage for Mesaba. The study is part of a larger, $21 million project to be performed by the Plains CO2 Reduction Partnership (the "Partnership" or "PCOR"), which is led by the Energy & Environmental Research Center (EERC) at the University of North Dakota (UND). More than $14 million of funding will come from DOE; the balance from PCOR Partnership members including Excelsior.

Carbon dioxide (CO2) releases stemming from the combustion of fossil fuels in the transportation, commercial, residential, industrial and electric utility sectors are often presumed to be associated with the risk of global climate change. The Partnership conducts projects designed to evaluate the technical and economic feasibility of reducing carbon dioxide. Specifically, the Partnership is focusing on techniques to sequester CO2 in soil, plants, or underground geologic formations.

The Partnership is one of seven regional carbon sequestration consortiums funded by the DOE's National Energy Technology Laboratory (NETL), as part of its Regional Carbon Sequestration Partnership Program. This latest DOE funding represents Phase II of an effort that began in 2002. PCOR includes a diverse group of more than 40 public and private sector partners in nine upper-Midwest states and three Canadian provinces, representing expertise in agriculture, forestry, geology, engineering, economics, energy exploration and production, and the environment. More information is available on the Partnership's Internet site at: www.undeerc.org/pcor.

Starting in September 2005 and over a period of four years in Phase II, the EERC will conduct four technology validation field trials and two investigations of carbon sequestration concepts, including the Mesaba options study. The field trials will involve geologic storage of CO2 in depleted oil and gas reservoirs and unmineable coal seams, and storage in restored wetlands. Comprehensive monitoring and verification of that storage will be an essential element of the program. The Mesaba study will be performed during 2006.

"We are pleased Excelsior Energy is participating in this major effort," said Gerald Groenewald, EERC Director, "The EERC's culture of partnerships is one of the cornerstones of our philosophy, and Excelsior Energy is one of 44 partners which make truly successful programs like PCOR possible."

"This project demonstrates our ongoing efforts at Excelsior to pursue progressive, reasonable approaches to carbon management for the future," said Bob Evans, Excelsior VP-Environmental Affairs, "Mesaba's IGCC technology represents a major environmental advancement from conventional coal-fired technologies, and a viable option for achieving significant reductions in the intensity of the nation's greenhouse gas emissions."

More information about Excelsior Energy and the Mesaba Energy Project is available at Excelsiorenergy.com.

****
Contacts:
Bob Schulte
Excelsior Energy Inc.
(952) 847-2359
rschulte@excelsiorenergy.com

Ed Steadman
University of North Dakota/EERC
(701) 777-5279
esteadman@undeerc.org

--
Carol A. Overland
Attorney at Law
OVERLAND LAW OFFICE
402 Washington St. So.
Northfield, MN 55057
(507) 664-0252
(612) 227-8638 (cell)
overland@redwing.net
nfld.us/blogs/caroloverland

>>> "Carol A. Overland" <overland@redwing.net> 11/15/2005 8:55 PM >>>

Attached - Here's the first electrical results on Hoyt Lakes (MISO Study G477...), and the smaller file is the very preliminary reults for Blackberry X-2 G519 (the Taconite site)

cao

--
Carol A. Overland
Attorney at Law
OVERLAND LAW OFFICE
402 Washington St. So.
Northfield, MN 55057
(507) 664-0252
(612) 227-8638 (cell)
overland@redwing.net
nfld.us/blogs/caroloverland