



June 26, 2012

Via E-Filing

Dr. Burl Haar
Minnesota Public Utilities Commission
121 Seventh Place East, Suite 350
St. Paul, Minnesota 55101

Re: *In the Matter of a Joint LEPGP Site Permit, HVTL Route Permit and Pipeline (Partial Exemption) Route Permit Application for the Mesaba Energy Project*
MPUC Docket No. E-6472/GS-06-668
Innovative Energy Project Statute
Minn. Stat. 216B.1694 Subd. 3

Dear Dr. Haar:

Excelsior Energy ("Excelsior") is providing this response in accordance with the recommendations made by Minnesota Department of Commerce's Energy Facility Permitting Staff ("EFP Staff") in the June 13, 2012 filing. Specifically, EFP Staff made the following recommendations:

"EFP staff recommends that the Commission:

1. Request Excelsior Energy clarify its future plans concerning the construction of the gasification island.
2. Require Excelsior Energy to file additional information specifying the differences in system components, resource requirements and potential impacts of the IGCC versus the NGCC facility."

In order to provide interested persons the opportunity to comment on this filing, Excelsior requests that the Commission adjust the comment period accordingly by extending the initial and reply comment period deadlines by one week to July 6th and July 20th, respectively, or other dates that the Commission deems appropriate.

Future plans concerning construction of the gasification island

Excelsior would plan to construct the gasification island if and when it becomes feasible to do so from economic and regulatory standpoints. At present, both regulatory and economic obstacles exist. On March 27th, 2012, the U.S. Environmental Protection Agency proposed New Source Performance Standards for greenhouse gas emissions from electric utility generating units. As proposed, these standards would require new coal-fueled electric generating units to capture and store carbon dioxide. Given the current lack of economic incentives for carbon capture and storage, this proposal is effectively a ban on new coal power plants, particularly in states like Minnesota with no geologic formations proven to be capable of storing carbon dioxide. Additionally, current natural gas prices below \$3 per million Btu

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do not signal construction of coal capacity. Future regulatory and economic trends are impossible to predict, but it is reasonable to assume that these obstacles will persist for at least the near future.

EFP Staff suggests that the extension of the duration of the site permit is limited to only a natural gas-fired plant, and that the IGCC facility would need to commence within four years of the date of issuance of the site permit (see p. 3-4 of EFP Staff’s June 13, 2012 filing): “...construction of the IGCC facility must commence within four years from the date of issuance of the LEPGP Site Permit (March 12, 2010).” However, under Minn. Statute 1694.216B, Subd. 3(b)(1), the extension of the duration of site and route permits is separate and additional to the requirement that the site and route permits be deemed valid for a natural gas-fired plant:

“site and route permits and water appropriation approvals for an innovative energy project must ***also*** be deemed valid for a plant meeting the requirements of paragraph (a) ***and*** shall remain valid until the earlier of (i) four years from the date the final required state or federal preconstruction permit is issued or (ii) June 30, 2019;” (See Minn. Statute 1694.216B, Subd. 3(b)(1). Emphasis added.)

In other words, under the statute, the permits are both valid for natural gas and their duration is extended for both IGCC and natural gas-fired plants.

Additional information specifying differences between the IGCC and NGCC facility

Minn. Statute 1694.216B, Subd. 3 does not contemplate any comparison of the integrated gasification combined cycle (“IGCC”) and natural-gas fired plant in order to deem the site and route permits valid for a natural-gas fired plant. Nevertheless, Excelsior understands and respects EFP Staff’s desire for the record to be supplemented to include a matrix table that presents this comparison. In accordance with that recommendation, Excelsior has prepared the following table, which includes all the topics identified by EFP Staff. Because Excelsior is currently planning to limit initial development of one of the two IGCC units to only the power block (i.e., as natural gas combined cycle [“NGCC”] plant), the comparison is based on a single unit. All IGCC specifications or impacts are taken from the Final Environmental Impact Statement. NGCC specifications are conservative estimates as explained in the footnotes to the table. While they are subject to change during more detailed project development and design, actual impacts would be expected to be lower due to the conservatism included in these estimates. As shown in this table, all NGCC impacts are either unchanged or lower relative to the IGCC.

Matrix Table Identifying Differences between IGCC and NGCC

	IGCC (Phase I)	Power Block Only (NGCC)
<u>Major process equipment</u>		
CTG/HRSG	Yes (2)	Yes (2)
Gasifier	Yes (3)	No
Syngas treatment & sulfur recovery	Yes (2)	No
Air separation unit	Yes (2)	No
Tank vent boiler	Yes (1)	No
Flare	Yes (1)	No

	IGCC (Phase I)	Power Block Only (NGCC)
Auxiliary boiler	Yes (1)	Yes (1)
Cooling towers	Yes (Power block & gasification island)	Yes (Power block only)
Coal and slag handling/storage	Yes	No
Emergency engines/fire pumps	Yes (4)	Yes (3)
Switchyard	Yes	Yes
Water treatment/admin buildings	Yes	Yes
<u>Infrastructure</u>		
Power Station	Yes	Yes (reduced footprint)
Rail	Yes	No
HVTL	Yes	Yes
Natural Gas Pipeline	Yes	Yes
Process Water Pipelines	Yes	Yes
Potable Water / Sewer Pipelines	Yes	Yes
<u>Effluents, emissions, and waste</u>		
Nonhazardous solid waste	< 2,600 ton/yr ¹	< 1,800 ton/yr ¹
Hazardous solid waste	~2,300 ton/yr	Negligible
Air emissions		
SO ₂	695 ton/yr	50 ton/yr ²
NO _x	1,436 ton/yr	200 ton/yr ²
PM ₁₀	266 ton/yr	200 ton/yr ²
CO	1,270 ton/yr	800 ton/yr ²
Hg	27 lb/yr	Negligible
Pb	30 lb/yr	Negligible
VOCs	99 ton/yr	70 ton/yr ²
CO ₂	5,300,000 ton/yr	2,100,000 ton/yr ³
Water discharge		
Contact process water	None	None
Cooling tower blowdown	None	None
Sanitary wastewater	3,750 gal/day	1,000 gal/day ⁴
<u>Resource requirements</u>		
Water		
Average use	3,500 gal/min	2,500 gal/min ⁵
Peak use	5,000 gal/min	3,500 gal/min ⁵
Fuel		
Coal (subbituminous)	8,550 ton/day	None
Natural gas	105 million scf/day (backup)	105 million scf/day
Land		
Power station footprint	111 acres	25 acres ⁶
Rail	107 acres	0 acres
<u>Potential impacts (from power station and rail only – HVTL, access road, and pipelines are unchanged)</u>		
Aesthetics		
Power station	4 stacks > 100 ft tall	2 stacks > 100 ft tall
Rail	Within 0.5 mi of 16 residences	No rail
Air quality and climate	See air emissions above	See air emissions above

	IGCC (Phase I)	Power Block Only (NGCC)
Geology and soils	5,700,000 cu yd cut and 3,000,000 cu yd fill	Less than 1,000,000 cu yd cut and fill ⁷
Water resources	See water use above	See water use above
Floodplains	No impacts	No impacts
Wetlands	~19 acres direct fill	< 1 acre direct fill ⁸
Biological resources	205 acres of habitat lost	25 acres of habitat lost
Cultural resources	218 acres of land disturbance	25 acres of land disturbance
Noise		
Power station operation	Imperceptible increase in noise at nearest receptor (< 3 dBA)	Imperceptible increase in noise at nearest receptor (< 3 dBA)
Rail traffic	36-56 dBA ⁹	No train noise

¹ Consists almost entirely of salt produced from the zero liquid discharge treatment of cooling tower blowdown. NGCC quantity calculated proportionately to annual water use.

² Estimates are based on natural gas emissions from Appendix A of the IGCC air permit application, except that the NO_x emission rate assumes an exhaust concentration of 2.5 ppm, based on optimized selective catalytic reduction performance. Estimates include 50 hours of startup/shutdown and are rounded up to one significant digit.

³ Based on heat input of 2,077 MMBtu/hr per CTG and a CO₂ emission rate of 117 lb CO₂/MMBtu.

⁴ Assumes 30 gal/day per person and an estimated 33 plant employees and contractors present onsite during operations.

⁵ Estimated at 70% of IGCC usage due to elimination of gasification cooling tower (consisting of 5 cooling tower cells out of 17).

⁶ Power block and switchyard occupy 20 acres according to IGCC plot plan; assume 5 acres for administration and water treatment facilities.

⁷ Minimal site grading necessary in power block & switchyard portion of the plot plan; see Figure 3.2-4 of Joint Permit Application.

⁸ Minimal wetlands underneath the power block & switchyard portion of the Phase I plot plan; see Figure 7.1-3 of Joint Permit Application.

⁹ Modeled noise impact at various receptors during train pass-by; nearest receptor is 630 ft from the rail track.

Lastly, Excelsior would like to clarify that, in contrast to EFP Staff's comments on page 3 of its June 13, 2012 filing, Excelsior has not submitted a revised air permit application based on a natural gas-fired plant. The request for confirmation that Excelsior has made in this docket was based on pre-submittal discussions with the Minnesota Pollution Control Agency.

Sincerely,



Thomas A. Micheletti
Co-President and Co-CEO
Excelsior Energy Inc.

cc: Service List

**STATE OF MINNESOTA
PUBLIC UTILITIES COMMISSION**

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CERTIFICATE OF SERVICE

Susan A. Hartinger certifies that on June 26, 2012 she served true and correct copies of **EXCELSIOR ENERGY'S RESPONSE TO EFP STAFF'S COMMENTS AND RECOMMENDATIONS** upon the parties on the attached Service List by eFiling and/or U.S. Mail as indicated on the official service list for this docket.

/s/ Susan A. Hartinger

SUSAN A. HARTINGER

SERVICE LIST

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