

**STATE OF MINNESOTA
BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION**

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Chair
Commissioner
Commissioner
Commissioner
Commissioner

In the Matter of Utility Renewable Energy Cost
Impact Reports Required by
Minnesota Statutes Section 216B.1691,
Subd. 2e.

MPUC Docket No.:
E-999/CI-11-852

**GREAT RIVER ENERGY
INITIAL RES RATE IMPACT REPORT**

Minnesota Laws 2011, Chapter 97, Section 15, amends Minn. Stat. §216B.1691 (the “Renewable Energy Standard “ or “RES”) by adding Subdivision 2e, which requires electric utilities, including Great River Energy (“GRE”), to submit reports to the Minnesota Public Utilities Commission (“Commission”) estimating the rate impact of GRE’s activities necessary to comply with the Renewable Energy Standard.¹ By notice issued in the above-referenced docket on September 29, 2011, as revised by a notice issued on October 17, 2011, the Commission established that the initial rate impact report (“Initial Report”) is due to be submitted to the Commission on or before October 25, 2011. This submittal is GRE’s Initial Report, and it describes the rate impacts of GRE’s RES compliance activities as well as the methodology and assumptions underlying the rate impact analysis.

¹ Minn. Stat. §216B.1691, Subd. 2e also requires that the reports be submitted to the “legislative committees with primary jurisdiction over energy policy.” Consequently, GRE will be submitting copies of this report to the Minnesota Senate Energy, Utilities and Telecommunications Committee and the Minnesota House of Representatives Environment, Energy and Natural Resources Policy and Finance Committee.

GRE's general approach to the rate impact analysis was to identify the costs incurred by GRE during calendar year 2010 that were directly attributable to compliance with the RES requirement. Once the direct costs of compliance were identified, the rate impact was calculated by dividing the costs by the total kWh sales to GRE's distribution members during the same time frame. The details of GRE's methodology and assumptions are described below. Based on this analysis, for the year 2010, the estimated wholesale rate impact of the RES requirement to GRE's members was \$22 million or \$0.002/kWh.

A. Analysis Assumptions.

1. The analysis considered the rate impacts to GRE's wholesale rates. GRE member costs, if any, were not included.
2. The analysis incorporated only those actual costs of compliance incurred by GRE during calendar year 2010. GRE did not model or otherwise include projections of future costs required to comply with the RES requirement.² The costs of compliance with the RES requirement applicable to future time periods will be included as part of GRE's integrated resource plan ("IRP") filings. GRE's next IRP filing is due to be submitted to the Commission on November 1, 2012.
3. GRE's costs of compliance were determined based on the 2010 costs of GRE's generating resources, including costs associated with both power purchase agreements and owned generating resources, that meet the definition of "eligible energy technologies" under Minn. Stat. §216B.1691, Subd. 1a., and whose Renewable Energy Credits ("RECs" or "Certificates") are tracked in the GRE

² The Commission's October 17, 2011 Revised Notice Establishing Docket and Filing Instructions states that the initial report should "include clear narrative explanations of the modeling methods and the assumptions used in developing the cost and rate impacts. Because GRE's analysis is based on actual 2010 costs and sales figures, GRE did not perform modeling as part of the analysis described in this Initial Report.

subaccounts within the Midwest Renewable Energy Tracking System (“MRETS”). A list of the relevant GRE resources appears in Appendix A. With respect to the listed resources that participate in the MISO market, the cost of the resource is a net cost that factors in the revenues received by GRE from offering the resource in the MISO energy market. For those resources that are interconnected to distribution facilities, the cost of the resource is a net cost that factors in the cost of the load that is offset and does not need to be purchased from the MISO energy market. The effect of the MISO market on the rate impact analysis is described in additional detail below.

4. Costs from generating resources that generate green pricing program energy and RECs were not included in the analysis (GRE’s Wellspring Renewable Energy Program).
5. No estimates of carbon costs were included. Carbon costs will be included in future analyses submitted as part of future IRP filings, if applicable.
6. MISO settlement charges, such as Revenue Sufficiency Guarantee (“RSG”) charges, incurred by GRE in participating in the MISO energy market were also included in the analysis, to the extent that the MISO settlement statements identify the charges to the specific generating resources listed in Attachment A.³ MISO charges that were not directly attributed to a specific generator, such as Ancillary Services charges, were not included in the analysis.
7. Financial Transmission Rights (“FTR”) savings were included in the analysis. In the MISO market, FTRs function as a partial financial hedge against congestion

³ RSG charges are assessed by MISO to a generating resource if the resource’s real time output differs from its day-ahead market commitment. Wind generating resources became subject to RSG charges on September 1, 2010, and it is expected that the market rules that impact wind generation will continue to evolve.

charges. Theoretically, FTRs may be either a cost or a credit. During 2010, the FTRs relevant to this analysis resulted in a credit to the costs of compliance.

8. Certain transmission costs are included in the analysis if directly attributable to GRE's compliance activities. To the extent that GRE's power purchase agreements require GRE to reimburse the developer for investment in transmission improvements required to obtain a MISO Generation Interconnection Agreement, the costs are included in the cost of the power purchase agreements described above. GRE constructed transmission improvements for RES compliance in the time frame between 2007 – 2009, and incurred a cost in 2010 for these actions. The costs of the transmission improvements incurred in 2010 are included in the analysis.
9. Other indirect costs that may be attributable to the effect of wind or other renewable generation within the MISO market were not included. For example, cycling of conventional resources during times of low load and significant wind generation may contribute to increased fuel and operation and maintenance costs to the conventional resources as a result of thermal stress and accelerated wear and tear. Another example is the cost of regional transmission expansion projects that serve multiple needs and provide multiple benefits. Quantifying these types of costs and attributing these costs to particular generators or particular market participants is speculative.
10. Administrative costs incurred in 2010 were included as part of the analysis, including legal fees, and MRETS fees related to verification, tracking and compliance activities.

B. MISO Market Comparison: Cost of Power Purchase Agreements and Owned Generation required to meet the RES requirement compared to MISO Market Revenue.

1. Wind and Biomass Generating Resources – MISO Transmission Interconnected

The most significant cost impact that GRE identified in the 2010 rate impact analysis is the difference in the price GRE paid for wind energy under power purchase agreements (“PPA”) as compared to the revenue GRE received from selling the wind energy into the MISO energy market. PPA costs incurred by GRE include the price for wind energy as well as deemed energy/tax benefit true-up payments, if applicable under the relevant PPA. The MISO market prices were determined as the actual Day-Ahead and Real-Time Locational Marginal Prices (“LMP”) at the MISO wind generation pricing nodes. Consequently, GRE’s offers of the wind generating resources into the MISO market resulted in revenues to GRE that were insufficient to offset the prices GRE paid under the PPAs. Another way of saying this is that, during 2010, GRE’s cost of purchasing wind generation to meet the RES requirement was higher than the revenue GRE received from offering the wind energy in the MISO market. The costs of GRE’s biomass resources were similarly compared to the MISO revenue received by selling the energy from the biomass resources in the MISO market. MISO settled wind and biomass resources resulted in a net cost to GRE of **\$20,907,000**.

2. Wind and Biomass Generating Resources - Distribution Interconnected

The cost of GRE’s wind and biomass facilities interconnected to the distribution system were compared to the cost of average load LMP, as energy from these

facilities is assumed to reduce the quantity of GRE load submitted to MISO. This resulted in a cost to GRE of **\$1,141,000**.

C. RES Rate Impact Calculation.

Generating Resource Costs	\$22,048,000
FTR Costs (negative = benefit)	(\$ 755,000)
Transmission Costs	\$ 609,000
Administrative Costs	<u>\$ 184,000</u>
Total Costs	\$22,086,000

2010 Total Member Wholesale Sales = 11,252,558,271 kWh

$\$22,086,000 \div 11,252,558,271 \text{ kWh} = \$0.002/\text{kWh}$ Wholesale RES Rate Impact

D. Conclusion.

GRE's RES compliance actions increased GRE's wholesale rate in 2010 by \$22 million, or \$0.002 per kWh. GRE's costs of compliance were determined based on the 2010 costs of GRE's generating resources, including costs associated with both power purchase agreements and owned generating resources, that meet the definition of "eligible energy technologies" under Minn. Stat. §216B.1691, Subd. 1a., and whose Renewable Energy Credits ("RECs" or "Certificates") are tracked in the GRE subaccounts within the Midwest Renewable Energy Tracking System ("MRETS"). The costs of compliance also include FTRs, transmission, and administrative costs. The costs of compliance with the RES requirement applicable to future time periods will be included as part of GRE's integrated resource plan ("IRP") filings.

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Respectfully submitted,

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Appendix A

Great River Energy's Minnesota RES Compliance Generating Resources

M-RETS ID	Facility Name
	GRE Registered
M261	Prairie Star Wind Farm (High Prairie)
M262	Trimont Wind
M341	Elk River Station
M342	Elk River Municipal Utilities Landfill
M488	West River Dairy
M491	Riverview Dairy
	Third-Party Registered; Certificates Transferred
M530	Elm Creek (Registered by Iberdrola Renewables)
M578	Ashtabula II (Registered by NextEra Energy Resources)
M471	Brewster Wind (Registered by Nobles Cooperative Electric)