



REPORT TO THE MINNESOTA LEGISLATURE

**PROGRESS ON COMPLIANCE BY ELECTRIC UTILITIES WITH
THE MINNESOTA RENEWABLE ENERGY OBJECTIVE AND
THE RENEWABLE ENERGY STANDARD**

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The Minnesota Office of Energy Security (OES) offers the following report on the progress of Minnesota's electric utilities in complying with the Minnesota Renewable Energy Objective (REO) and the Renewable Energy Standard (RES) contained in Minn. Stat. §216B.1691.

I. INTRODUCTION

The OES provides this report in compliance with Minn. Stat. §216B.1691, subd. 3(b) which requires a biannual report to the Legislature on “the progress of utilities in the state, including the progress of each individual electric utility, in increasing the amount of renewable energy provided to retail customers,” along with the compilation of the following information from each utility:

- The status of the utility's renewable energy mix relative to the objective and standards;
- Efforts taken to meet the objective and standards;
- Any obstacles encountered or anticipated in meeting the objective or standards; and
- Potential solutions to the obstacles.

This RES Report is divided into the following sections:

- Legislative History,
- RES Reporting Requirements,
- 2009 RES Compliance,
- Ability to Comply with 2010 RES Requirements,
- Obstacles and Potential Solutions for Meeting Future RES Requirements, and
- Summary and Conclusions.

II. LEGISLATIVE HISTORY

A. *ADOPTION OF A RENEWABLE ENERGY OBJECTIVE*

The Minnesota Renewable Energy Objective (REO) contained in Minn. Stat. §216B.1691 was first enacted by the Minnesota Legislature in 2001. As originally enacted the Statute required electric utilities to “make a good faith effort” to obtain ten percent of their Minnesota retail energy sales from eligible energy sources by 2015, and to obtain 0.5 percent of their renewable energy from biomass technologies. Northern States Power Company, d/b/a Xcel Energy had a stronger provision since it was mandated to meet a ten percent renewable energy standard.

In 2003, the Legislature amended the statute to require the Minnesota Public Utilities Commission (Commission) to supervise and facilitate utilities' good faith efforts to meet their REO obligations. Specifically, the REO Statute was amended to require the Commission to issue an Order by June 1, 2004, and as necessary thereafter, to:

- Detail criteria and standards for measuring a utility’s efforts to meet the REO, and for determining whether a utility has met the good faith requirement;
- Detail criteria and standards that protect against undesirable impacts on the reliability of the utility’s system and against undesirable economic impacts to a utility’s ratepayers, and that consider technical feasibility;
- Provide a weighted scale that determines how energy generated by different technologies counts toward a utility’s objective and that grants multiple credits for technologies and fuels the Commission finds in the public interest to encourage; and
- Consider the establishment of a program for tradable renewable energy credits.

The Commission correspondingly solicited comments from interested parties on these matters and issued a series of Orders setting forth the criteria for measuring an electric utility’s good faith efforts in meeting the REO Statute, and beginning the process to establish a system to verify and track the amount of renewable energy delivered to the electrical system.¹

B. ADOPTION OF A RENEWABLE ENERGY STANDARD

During the 2007 Legislative session, Minn. Stat. §216B.1691 was amended to:

- 1) Establish a Renewable Energy Standard (RES) with specified mandated renewable energy goals beginning in 2010;
- 2) Amend the definition of an eligible energy technology;
- 3) Require the Commission to establish a trading system for renewable credits; and
- 4) Establish criteria under which the Commission may waive or extend the deadline for meeting the RES targets.

¹ *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. §216B.1691*, Docket No. E999/CI-03-869, Initial Order Detailing Criteria and Standards for Determining Compliance with Minn. Stat. §216B.1691 and Requiring Customer Notification by Certain Cooperative, Municipal, and Investor-Owned Distribution Utilities. (June 1, 2004).

In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. §216B.1691, Docket No. E999/CI-03-869, Order after Reconsideration (August 13, 2004).

In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. §216B.1691, Docket No. E999/CI-03-869; *In the Matter of a Commission Investigation into a Multi-State Tracking and Trading System for Renewable Energy Credits*, Docket No. E999/CI-04-1616, Second Order Implementing Minn. Stat. §216B.1691, Opening Docket to Investigate Multi-State Program for Tracking and Trading Renewable Credits and Requesting Periodic Updates from Stakeholder Group; (October 19, 2004).

1. The Renewable Energy Standard

Consistent with the earlier REO, the RES Statute requires that a utility generate or procure at least one percent of its retail electric sales from an eligible energy technology beginning in 2005. However, unlike the REO, the RES mandates that electric utilities procure this level of energy. Beginning in 2010 for Xcel, and 2012 for all other utilities, the RES statute added Minn. Stat. §216B.1691, subd. 2(a) and (b) to require the following:

(a) Except as provided in paragraph (b), each electric utility shall generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers in Minnesota, or the retail customers of a distribution utility to which the electric utility provides wholesale service, so that at least the following standard percentages of the electric utility's total retail electric sales to retail customers in Minnesota is generated by eligible energy technologies by the end of the year indicated:

- 1) 2012 – 12 percent
- 2) 2016 – 17 percent
- 3) 2020 – 20 percent
- 4) 2025 – 25 percent

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

- 1) 2010 – 15 percent
- 2) 2012 – 18 percent
- 3) 2016 – 25 percent
- 4) 2020 – 30 percent

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

2. Changes in 2007 to the Definition of “Eligible Energy Technology”

Minn. Stat. §216B.1691, subd. 1 defines an eligible energy technology as one that:

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

These revisions in 2007 increased the maximum capacity of hydroelectric facilities eligible for RES compliance from 60 to 100 megawatts, along with including landfill gas and anaerobic digester systems in the definition of eligible biomass. In addition, the revision allowed Xcel to count in its RES compliance the biomass and wind generation from the earlier Prairie Island Legislative mandates.²

3. The Use of Renewable Energy Certificates to Meet RES Requirements

The 2003 amendment to Minn. Stat. §216B.1691, subd. 4, provided that the Commission “may establish a program for tradable credits for electricity generated by eligible energy technology.” As noted above, the Commission began the process of establishing a system to verify and track renewable energy delivered to the electrical system with its Order in October 2004. Such a system is a necessary foundation for trading renewable energy credits, to ensure both that renewable energy is delivered to the electrical system and that renewable energy is counted only once, rather than, for example, being counted toward compliance in Minnesota and in other states. The OES worked with other parties to establish the Midwest Renewable Energy Tracking system (M-RETS) to accomplish both tasks.

The 2007 amendment to Minn. Stat. §216B.1691, subd. 4 required the Commission to establish a program for tradable Renewable Energy Credits (RECs) by January 1, 2008, and to require all electric utilities to participate in a Commission-approved REC tracking system once such a system was in operation. In an October 2007 Order, the Commission approved the use of the M-RETS as the REC tracking system under Minn. Stat. §216B.1691, subd. 4(d), and required Minnesota utilities to participate.³ Specifically, the Commission required utilities to complete the online registration process and sign the Terms of Use agreement with the M-RETS system

² In 1994, as part of the Legislative authorization for additional storage for spent nuclear fuel at Xcel’s Prairie Island nuclear facility (<https://www.revisor.mn.gov/laws/?doctype=Chapter&year=1994&type=0&id=641>), Xcel was required to obtain 825 MW of wind energy (Minn. Stat. §216B.2423) and 125 MW of biomass energy (Minn. Stat. §216B.2424).

³ *In the Matter of a Commission Investigation into a Multi-State Tracking and Trading System for Renewable Energy Credits*, Docket No. E999/CI-04-1616, Order Approving Midwest Renewable Energy Tracking System (M-RETS) Under Minn. Stat. §216B.1691, Subd. 4(d), and Requiring Utilities to Participate in M-RETS (October 9, 2007).

administrator, APX, Inc., and receive account approval from APX by January 1, 2008. In addition, the Commission directed each utility to make a substantial and good faith effort to create a system account and sub-accounts for its organizations, and to register its generation units/facilities in the M-RETS system by March 1, 2008.

In its December 18, 2007 *Order Establishing Initial Protocols for Trading Renewable Energy Credits*, the Commission adopted a four-year shelf life for RECs.⁴ A four year shelf life means that the REC is eligible for use in meeting the RES requirements in the year of generation and for four years following the year of generation.

Finally, in its December 3, 2008 *Third Order Detailing Criteria and Standards for Determining Compliance under Minn. Stat. §216B.1691 and Setting Procedures for Retiring Renewable Energy Credits*, the Commission directed utilities to begin retiring RECs equivalent to one percent of their Minnesota annual retail sales for the 2008 and 2009 compliance year by May 1st of the following year. Upon retirement, RECs are transferred into a specific Minnesota RES retirement account and, once retired, are not available to meet other state or program requirements, thus addressing the statutory prohibition against double counting the RECs and promoting the environmental benefits of renewable energy. The Commission further directed the utilities to submit a compliance filing demonstrating their compliance with the RES by June 1st.

4. Criteria for Waiving or Extending the RES Requirements

The RES Statute was amended to include criteria under which the Commission may find it to be in the public interest to modify or delay implementation of the RES requirements. Among the factors the Commission must consider in such cases are:

- 1) The impact on customer's utility costs, including the economic and competitive pressure on the utility's customers;
- 2) The effects on electric system reliability;
- 3) Technical advances and concerns;
- 4) Rejection or delays in obtaining site and route permits;
- 5) Delays, cancellations or non-delivery of necessary equipment for construction of a facility;
- 6) Transmission constraints; and
- 7) Other statutory obligations imposed on the Commission or utility. [Minn. Stat. §216B.1691, subd. 2b]

Upon a petition by a utility, the Commission may modify or delay compliance with an RES standard under numbers (1) to (3) only if it finds that implementation would cause significant rate impacts, require significant measures to address reliability, or raise significant technical

⁴ *In the Matter of a Commission Investigation into a Multi-State Tracking and Trading System for Renewable Energy Credits*, Docket No. E999/CI-04-1616, Order Establishing Initial Protocols for Trading Renewable Energy Credits (December 18, 2007).

issues. For the remaining items, Minn. Stat. §216B.1691, subd. 2b allows modification or delay in a utility's compliance with a standard only if the Commission "finds that the circumstances described in those clauses were due to circumstances beyond an electric utility's control and make compliance not feasible." To date, no utility has requested a modification or delay in the implementation of the RES requirements.

III. RES REPORTING REQUIREMENTS

A. ENTITIES SUBJECT TO THE RES REQUIREMENTS

Minn. Stat. §216B.1691, subd. 1(b) defines an electric utility as "a public utility providing electric service, a generation and transmission cooperative electric association, a municipal power agency, or a power district."

Based on the statutory definition of an electric utility, the Commission determined that the following entities are subject to the RES Statute:

- Basin Electric Power Cooperative,
- Central Minnesota Municipal Power Agency (CMMPA),
- Dairyland Power Cooperative,
- East River Electric Cooperative,
- Great River Energy (GRE),
- Heartland Consumer Power District,
- Interstate Power and Light,
- L&O Power Cooperative,
- Minnkota Power Cooperative,
- Minnesota Municipal Power Agency (MMPA),
- Minnesota Power,
- Missouri River Energy Services,
- Northwestern Wisconsin Electric Company,
- Ottertail Power Company,
- Southern Minnesota Municipal Power Agency (SMMPA), and
- Xcel Energy.

The definition of an electric utility contained in Minn. Stat. §216B.1691, subd. 1(b) was amended in 2007 to include a power district. Consequently, Heartland Consumer Power District is now subject to the RES requirements. In its November 12, 2008 Order in Docket No. E999/CI-03-869, the Commission found that East River Electric Power Cooperative and L & O Power Cooperative were required to file separate RES reports.⁵ Prior to this Order, L& O and East River's RES compliance reporting was aggregated with the reporting from Basin Electric.

⁵ *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility's Good Faith Efforts in Meeting the Renewable Energy Objectives Under Minn. Stat. §216B.1691*, Docket No. E999/CI-03-869, Order Setting Filing Requirements and Clarifying Procedures, (November 12, 2008).

Finally, given its limited presence in Minnesota, the Commission granted Northwestern Wisconsin Electric Company the discretion to report its renewable energy compliance information as provided to the Wisconsin Public Service Commission.⁶

B. DETERMINATION OF MINNESOTA RES ELIGIBLE GENERATION

Minn. Stat. §216B.1691, subd. 1 defines the types of renewable generation eligible for meeting the RES requirements, while Minn. Stat. §216B.1691, subd. 2(d) directs the Commission to “issue necessary orders detailing the criteria and standards by which it will measure an electric utility’s efforts to meet the renewable energy objectives of subdivision 2 to determine whether the utility is making the required good faith effort.”

The Commission set forth the criteria for determining compliance with the RES Statute after taking comments from affected parties in a number of Orders.⁷ Among the resources the Commission has determined to be ineligible for meeting the RES are resources used for green pricing, resources that do not meet the statutory definition of eligibility, and generation assigned to compliance for other regulatory purposes such as another state’s Renewable Portfolio Standard Requirements (RPS).

In determining the total retail sales upon which to base the calculation of RES compliance, the Commission clarified in its March 19, 2010 Order that it interprets Minn. Stat. §216B.1691, subd. 1 to require the inclusion of generation supplies from the Western Area Power Administration in the total retail sales of utilities who aggregate and sell those supplies to members or customers.⁸

In addition to excluding ineligible generation from the reporting, a number of utilities have Power Purchase Agreements (PPAs) with renewable generators in which the ownership of the environmental attributes is unknown or silent.⁹ The M-RETS operating procedures define a renewable energy credit or REC as “representing all of the attributes from one MWh of electricity generation from a renewable generating unit registered with the M-RETS tracking system or a certificate imported from a compatible certificate tracking system and converted to an M-RETS Certificate.” The renewable attributes associated with one MWh include all environmental attributes, credits, benefits, emissions reductions, offsets, and allowances attributable to the renewable energy generation. The purpose of requiring registration of a

⁶ Commission’s November 12, 2008 Order in Docket No. E999/CI-03-869.

⁷ Please see footnote 1.

⁸ The Western Area Power Administration (WAPA) is a federal power marketing administration providing hydroelectric power from large hydro facilities to municipal utilities, rural electric cooperatives and at least five Native American tribes within Minnesota. In most cases, the power is received directly by entities not subject to the RES; however in a handful of cases, WAPA-eligible entities have pooled their WAPA allocations with the power supplies of their utility providers who are subject to the RES. *In the Matter of Detailing Criteria and Standards for Measuring an Electric Utility’s Good Faith Efforts in Meeting the Renewable Energy Objectives under Minn. Stat. §216B.1691*. Order Clarifying Criteria and Standards for Determining Compliance Under Minn. Stat. §216B.1691, Docket E999/CI-03-869, March 19, 2010.

⁹ Such PPAs were entered into prior to the existence of RECs; all PPAs considered by the Commission in the time since RECs have been discussed address the ownership of RECs.

“whole certificate,” that is one with all the environmental attributes, is to help ensure compliance with the statutory prohibition against double counting the environmental benefits, and to ensure that ratepayers receive the benefits of the renewable energy for which they are paying through their rates.

Four companies report having some PPAs for which the assignment of the RECs is not known: Great River Energy, Interstate Power & Light, Otter Tail Power Company, and Xcel Energy.

In a September 9, 2010 Order, the Minnesota Public Utilities Commission determined that Xcel owned the RECs for PPAs entered into pursuant to Minnesota’s wind and biomass statutory mandates, unless the generator could otherwise demonstrate that the PPA at issue states that REC ownership belongs to the seller; and determined that, for PPAs entered into pursuant to the 1978 Public Utility Regulatory Policies Act (PURPA), the generators own the RECs.¹⁰ Xcel reports only one PPA being disputed by the generation owner, while an additional two PPAs remain in negotiation to settle REC ownership issues.¹¹

IV. 2009 RES COMPLIANCE

On June 1, 2010, utilities subject to the Minnesota RES filed their compliance reports with the Minnesota Public Utilities Commission (Docket No. E999/PR-10-267). Table 1, below, summarizes utility compliance with the 2009 requirements; all of the utilities subject to the Minnesota RES have demonstrated compliance with the 2009 RES requirements.

¹⁰ *In the Matter of Xcel Energy’s Petition for a Determination of Entitlement to Renewable Attributes of Energy Purchases Pursuant to Renewable Energy Requirements*, Docket No. E002/M-08-440, Order Determining Ownership of Renewable Energy Credits for Power Purchase Agreements Made Pursuant to State Wind and Biomass Statutes and the Federal Public Utility Regulatory Policy Act (September 9, 2010).

¹¹ Xcel Compliance Filing in Docket E002/M-08-440 (December 8, 2010).

Table 1: 2009 RES Compliance

Utility	2009 Minnesota Retail Sales (MWhs)	Total RECs Retired (1% of MN Retail Sales)
Basin Electric	348,345	3,483
Central MN Municipal Power Agency (CMMPA)	272,980	2,730
Dairyland Power Cooperative	797,439	7,975
East River Power Cooperative	354,758	3,556
Great River Energy	10,827,753	108,278
Heartland Power District	496,686	4,967
Interstate Power & Light	834,609	8,346
L & O Power Cooperative	253,654	2,537
Minnesota Municipal Power Agency (MMPA)	1,290,712	12,908
Minnesota Power	6,417,331	64,173
Minnkota Power Cooperative	1,870,797	18,708
Missouri River Energy Services (MRES)	1,013,479	10,135
Northwestern Wisconsin Power ¹²		
Otter Tail Power Company	2,135,195	21,352
Southern MN Municipal Power Agency	2,835,655	28,357
Xcel Energy	<u>31,060,532</u>	<u>310,606</u>
Total	60,809,925	608,111

V. ABILITY TO COMPLY WITH 2010 RES REQUIREMENTS

The RES requirements increase in 2010 from one percent of Minnesota retail sales for all utilities to fifteen percent of Minnesota retail sales for Xcel Energy, and seven percent of Minnesota retail sales for all other utilities. Since utilities may retire RECs towards RES compliance from up to four prior years, many utilities banked unretired RECs in anticipation of meeting the higher 2010 requirements. In addition, utilities may purchase excess RECs from other utilities to meet their RES requirement. Actual compliance by utilities will not be known until utilities report the required information in May, 2011. However, to estimate the ability of the utilities to comply with the 2010 requirements, the OES reviewed the number of unretired RECs for each of the utilities, along with their year-to-date 2010 generation, and calculated the total available RECs as a percentage of 2009 Minnesota sales. Table 2 summarizes the results of the OES review.

¹² According to Northwestern Wisconsin's Jurisdictional Annual Report filed in Docket No. E999/PR-10-4, the Company had a total of 547 MWh of Minnesota retail sales in 2009 which would require retirement of 5 RECs.

Table 2: Estimate of 2010 RES Compliance

Utility	2009 Minnesota Generation (MWh)	Unretired RES + 2010 YTD RECs (MWh)	REC Balance as % of 2009 Generation
Basin Electric	348,345	600,401	63%*
Central MN Municipal Power Agency (CMMPA)	272,980	53,372	20%
Dairyland Power Cooperative	797,439	110,231	14%
East River Power Cooperative	354,758	See Basin*	See Basin*
Great River Energy	10,827,753	1,694,982	16%
Heartland Power District	496,686	55,121	11%
Interstate Power & Light	834,609	80,909	10%
L&O Power Cooperative	253,654	See Basin*	See Basin*
Minnesota Municipal Power Agency (MMPA)	1,290,712	412,862	32%
Minnesota Power	6,417,331	2,137,718	33%
Minnkota Power Cooperative	1,870,797	233,322	12%
Missouri River Energy Services (MRES)	1,019,479	135,686	13%
Otter Tail Power Company	2,135,195	965,724	45%
Southern MN Municipal Power Agency	2,835,655	452,004	16%
Xcel Energy	<u>31,060,532</u>	<u>5,297,796</u>	<u>19%</u>
Total	60,815,925	12,860,128	21%

*Both East River and L&O Power rely on Basin for their REC purchases. Basin's percentage is calculated as a percentage of the combined retail sales for Basin, East River and L&O.

The information above indicates that all utilities have sufficient resources to meet 2010 RES requirements.

VI. OBSTACLES AND POTENTIAL SOLUTIONS FOR MEETING THE RES REQUIREMENTS

The OES sought utility comment on obstacles the utilities have encountered or anticipate encountering to meeting the RES requirements. Transmission constraints continue to be the concern most frequently cited by utilities. In addition to the lack of available transmission in areas with significant wind resources, utilities expressed concerns with long lead times for development, the size of the Midwest Independent System Operator's (MISO) queue, and transmission costs as concerns. Utilities also expressed concern with the short-term renewal of the Production Tax Credit (PTC), and the difficulty of project planning in the face of uncertainty of the PTC. The public power agencies also cited the lack of eligibility for various tax incentives as a challenge to their ownership of renewable resources.

The development of the CAPX2020 transmission lines over the next several years is anticipated to reduce transmission constraints. Proposed changes by MISO to the cost allocation for new transmission assets are likely to favor a more regionalized approach to transmission planning and construction, and are expected to reduce the interconnection costs directly assigned to new wind projects.

VII. SUMMARY AND CONCLUSION

While there are certainly obstacles utilities face in meeting their RES requirements, the OES concludes that utilities appear to have complied with their 2009 obligations, and are on track to comply with 2010's goals. The OES notes that the official determination as to whether utilities are complying with Minn. Stat. §216B.1691 is the responsibility of the Commission; the OES provides this report to the Legislature and to the Commission to use as needed.