



MINNESOTA RENEWABLE ELECTRICITY STANDARD SUMMARY

A. SUMMARY: In February 2007, the Minnesota legislature adopted one of the largest markets for new renewable energy in the country. SF 4 requires Xcel Energy, the largest electricity provider in the state, to meet a renewable electricity standard of 30 percent by 2020. All other electricity providers in the state must achieve a 25 percent by 2025 renewable electricity standard. This new law preempts several existing renewable energy requirements that have been placed on Xcel Energy beginning in 1994. The first requirement, which called for 425 megawatts (MW) of wind power and 125 MW of biomass by 2002, resulted from an agreement that allowed Xcel to build temporary dry cask storage for nuclear waste at the Prairie Island nuclear plant. In 2001, the Minnesota Public Utilities Commission ordered Xcel to build or contract for an additional 400 MW of wind by 2012, which was subsequently accelerated to 2006. Also in 2001, the Minnesota legislature established a renewable energy objective (REO) for all state utilities of 10 percent by 2015. A 2003 law made the renewable energy objective mandatory for Xcel Energy, above and beyond the previous requirements. As part of the objective, the legislation also requires the utility to install an additional 300 MW of wind by 2010. The remaining electricity providers were required to demonstrate a “good faith effort” to meet the REO. Compliance with the requirements of SF 4 is mandatory for all electricity providers, and will be tracked and verified through tradable renewable energy credits administered by the Midwest Renewable Energy Tracking System (M-RETS).

B. APPLICABLE AUTHORIZING LEGISLATION/REGULATION

- 1. Part of Broader Energy package?** Yes. The original Xcel requirement was established as part of the 1994 Radioactive Waste Management Facility Authorization Law. However, the most recent update of Minnesota’s renewable electricity standard, SF 4 enacted in February 2007, was stand-alone renewable energy legislation.
- 2. Legislative/Regulatory Intent:** Not specified in the original Xcel requirement, the 2003 statute (HF 9), or the 2007 statute (SF 4).
- 3. Applicable Legislation/Regulation:**
1994 – Radioactive Waste Management Facility Authorization Law

The wind and biomass mandate sections of the 1994 law are encoded as Minn. Stat. 216B.[2423-2424](#)

5/01 – Minnesota Energy Security and Reliability Act, [SF 0772](#)

5/03 – Radioactive Waste Management Facility Authorization Law amended, [HF 9, 2003 1st Special Session, Chapter 11.](#)

2/07 – [SF 4, 1st Engrossment - 85th Legislative Session \(2007-2008\)](#)

Renewable energy standard encoded as [Minn. Stat. 216B.1691](#)

4. **Date Enacted:** Original Mandate – 1994; SF 4 enacted 02/22/2007
5. **Date Effective:** Original Mandate – 1994; SF 4 effective 01/01/10

C. RULEMAKING

1. **Implementing/rulemaking Authority:** Minnesota Public Utilities Commission (PUC)
2. **Rulemaking Completed to Date:**
 - 2/99 – PUC issues [Order Modifying Resource Plan, Requiring Additional Wind Generation, Requiring Further Filings, and Setting Standards for Next Resource Plan Filing](#), Docket No. E-002/RP-98-32
 - 6/04 – PUC issues [Order Detailing Criteria and Standards for Determining Compliance with Minn. Stat. § 216B.1691](#), Docket No. E-999/CI-03-869
 - 8/04 – PUC issues [Order After Reconsideration](#), Docket No. E-999/CI-03-869
 - 10/04 – PUC issues second [Order Implementing Minn. Stat. § 216B.1691](#), Docket No. E-999/CI-03-869
 - 10/07 – PUC issues [Order Approving M-RETS](#), Docket No. E-999/CI-04-1616
 - 12/07 – PUC issues [Order Establishing Initial Protocols for Trading Renewable Energy Credits](#), Docket Nos. E-999/CI-04-1616 and Docket No. E-999/CI-03-869

D. TARGETS AND TIMETABLES

1. **Overview:** Minnesota’s renewable electricity standard is set at 30 percent by 2020 for Xcel Energy, and 25 percent by 2025 for all other electricity providers.

2. **Schedule:**

Year	Xcel Energy Requirement (percent of total retail sales)	All Other Electricity Providers (percent of total retail sales)
2005	1 %	1 %
2010	15 %	7 %
2012	18 %	12 %
2016	25 %	17 %

2020	30 % (25% from wind, 5% from other eligible technologies)	20 %
2025	30 % (25% from wind, 5% from other eligible technologies)	25 %

3. Treatment of Existing Capacity: Existing renewable energy resources are eligible to meet the renewable energy requirements.

4. Sunset Provision: None

E. DEFINITION AND CERTIFICATION OF ELIGIBLE RESOURCES AND TECHNOLOGIES

1. Eligible Resources:

Original Xcel Energy capacity requirement

- Wind
- Biomass

Renewable electricity standard

- Solar
- Wind
- Hydroelectric with a capacity of less than 100 megawatts (all units combined)
- Hydrogen, provided that after January 1, 2010, the hydrogen must be generated from eligible renewable resources
- Landfill gas
- Biomass, which includes 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. Co-firing is permissible, but only in clean fossil plants, with credit given on a proportional basis.

For the renewable energy objective, the PUC (in Docket No. E-999/CI-03-869) determined to count as eligible all biomass generation falling within existing statutory definitions of biomass, including:

- Minn. Stats. §§ 216B.2422, “trees or other vegetation”;
- subd. 1 (c); 216C.051, subd. 7 (g) (1), ““biomass” means herbaceous crops, trees, agricultural waste, and aquatic plant matter, excluding mixed municipal solid waste, as defined in section 115A.03, used to generate electricity”;
- 216B.2411, subd. 2(c), ““Biomass” includes: (1) methane or other combustible gases derived from the processing of plant or animal material; (2) alternative fuels derived from soybean and other agricultural plant oils or animal fats; (3) combustion of barley hulls, corn, soy-based products, or other agricultural products; (4) wood residue from the wood products industry in Minnesota or other

wood products such as short-rotation woody or fibrous agricultural crops; and (5) landfill gas, mixed municipal solid waste, and refuse-derived fuel from mixed municipal solid waste.”;

- §216B.2424, subs. 1 and 6 (f) (Xcel Energy’s original capacity requirement), biomass is defined as: “Farm-grown closed-loop biomass. (a) For the purposes of this section, "farm-grown closed-loop biomass" means biomass, as defined in section 216C.051, subdivision 7, that: (1) is intentionally cultivated, harvested, and prepared for use, in whole or in part, as a fuel for the generation of electricity; (2) when combusted, releases an amount of carbon dioxide that is less than or approximately equal to the carbon dioxide absorbed by the biomass fuel during its growing cycle; and (3) is fired in a new or substantially retrofitted electric generating facility that is: (i) located within 400 miles of the site of the biomass production; and (ii) designed to use biomass to meet at least 75 percent of its fuel requirements. (b) The legislature finds that the negative environmental impacts within 400 miles of the facility resulting from transporting and combusting the biomass are offset in that region by the environmental benefits to air, soil, and water of the biomass production. (c) Among the biomass fuel sources that meet the requirements of paragraph (a), clauses (1) and (2), are poplar, aspen, willow, switch grass, sorghum, alfalfa, cultivated prairie grass, and sustainably managed woody biomass. (d) For the purpose of this section, "sustainably managed woody biomass" means: (1) brush, trees, and other biomass harvested from within designated utility, railroad, and road rights-of-way; (2) upland and lowland brush harvested from lands incorporated into brushland habitat management activities of the Minnesota Department of Natural Resources; (3) upland and lowland brush harvested from lands managed in accordance with Minnesota Department of Natural Resources "Best Management Practices for Managing Brushlands"; (4) logging slash or waste wood that is created by harvest, by precommercial timber stand improvement to meet silvicultural objectives, or by fire, disease, or insect control treatments, and that is managed in compliance with the Minnesota Forest Resources Council's "Sustaining Minnesota Forest Resources: Voluntary Site-Level Forest Management Guidelines for Landowners, Loggers and Resource Managers" as modified by the requirement of this subdivision; and (5) trees or parts of trees that do not meet the utilization standards for pulpwood, posts, bolts, or sawtimber as described in the Minnesota Department of Natural Resources Division of Forestry Timber Sales Manual, 1998, as amended as of May 1, 2005, and the Minnesota Department of Natural Resources Timber Scaling Manual, 1981, as amended as of May 1, 2005, except as provided in paragraph (a), clause (1), and this paragraph, clauses (1) to (3).”; “Notwithstanding the provisions of subdivision 1, for proposals subject to this subdivision, "biomass" includes farm-grown closed-loop biomass; agricultural wastes, including animal, poultry, and plant wastes; and waste wood, including chipped wood, bark, brush, residue wood, and sawdust.” To the extent that peat is arguably listed, however, the PUC will exclude it.

2. **Special Incentives:** Of Excel Energy's 30 percent requirement in 2020, at least 25% must come from wind energy, and the remaining 5 percent from other eligible renewable energy technologies.
3. **Exclusions:** None specified.
4. **Treatment of Self-Generation:** Eligible
5. **Rules governing Location of Generating Facilities:** Only renewable energy credits (RECs) generated within the M-RETS region may be used to comply with the annual requirements.
6. **Eligibility of Green Pricing Programs:** In an August 2004 order, the PUC reversed an earlier decision and excluded generation from voluntary green power programs from counting toward the REO.

F. COVERED UTILITIES

1. **Classes of retailers covered:** The renewable energy capacity requirements apply to all public utilities providing electric service, a generation and transmission cooperative electric association, or a municipal power agency, or a power district.
2. **Share of state sales/capacity/delivered power covered:** 100 percent of total state electric sales are covered by the renewable energy requirements.
3. **Apportionment of obligation among utilities:** The annual requirements are applied separately to each affected utility.
4. **Provisions for leaving/joining covered group:** None specified
5. **Any exemptions by customer class?** None specified

G. COST PROVISIONS

1. **Cost Cap for Retailers:** None specified. However, the PUC has the legislative authority to constrain or limit the cost of RECs administered under M-RETS.
2. **Cost Cap for Customers:** None specified, though the PUC has the authority to modify or delay the annual requirements if it determines it is in the public interest to do so. The legislation states that one consideration for modification or delay is the impact of implementing the standard on a customer's utility costs.

3. **Cost Recovery Mechanisms:** The cost of renewable energy procurement (as well as the prudent registration, annual fees, and transaction costs related to REC purchases) is recoverable in rates to consumers.
4. **Supply Contract Requirements:** Not specified
5. **Special Fund:** HF 9 requires Xcel Energy to transfer \$16 million annually to the renewable development account for each year its Prairie Island nuclear generation plant is in operation and \$7.5 million for each year thereafter if the PUC determines the utility is not making a good faith effort to move the spent fuel out of state. It then allocates up to \$6 million annually until 2018 from the renewable development account to fund renewable energy production incentives, \$4.5 million of which is for wind production incentives up to 100 MW from wind conversion systems and \$1.5 million of which may be used as production incentives for on-farm biogas recovery facilities or other renewable energy. Other renewable energy resources are also eligible for production incentive payments.

H. COMPLIANCE AND ENFORCEMENT

1. **Certification, tracking, and trading mechanism[s]:** Compliance with the renewable energy requirements is tracked and verified through the use of tradable RECs, administered by M-RETS. All Minnesota utilities must register with M-RETS by March 1, 2008. Beginning with compliance year 2009, all renewable energy generating units seeking to be used to meet the standard must also be registered with M-RETS.

Each REC must be treated the same as a kilowatt-hour of eligible energy technology generated or procured by an electric utility if it is produced by an eligible energy technology. In addition, a REC can only be used once for compliance.

Under the M-RETS operating procedures, a ‘whole certificate’ is defined as “one where none of the renewable attributes have been separately sold, given or otherwise transferred to another party by a deliberate act of the Certificate owner,” and include all environmental attributes. In a December 2007 Order, the PUC decided not to override the M-RETS policy on whole RECs, but left the door open to reconsider the issue at a future time.

Prior to the use of unbundled RECs for compliance, RECs remained bundled with energy, and ownership appeared (by default) to be passed on to the electricity purchaser. However, with the current use of unbundled RECs through M-RETS, a REC now appears to belong to the owner of the renewable energy facility (though it is not specified in statute). For utilities with existing power purchase agreements that are silent or ambiguous on the ownership of RECs, the PUC has required that they actively pursue negotiations and settlements to clarify the ownership issue, if the facilities are to be used to meet the annual requirements.

Xcel Energy cannot sell RECs to other electricity providers obligated to meet the annual requirements until 2021.

2. **Flexibility Mechanisms:** A renewable energy credit will be eligible for use in compliance with the annual requirements during the year of generation, and for four years following the year of generation.
3. **Penalties, Procedures, Powers, and Sanctions:** The PUC is required to regularly investigate whether an electric utility is in compliance with the annual requirements. If the PUC finds noncompliance, it “may order the electric utility to construct facilities, purchase energy generated by eligible energy technology, purchase renewable energy credits, or engage in other activities to achieve compliance. If an electric utility fails to comply with an order under this subdivision, the PUC may impose a financial penalty on the electric utility in an amount not to exceed the estimated cost of the electric utility to achieve compliance. The penalty may not exceed the lesser of the cost of constructing facilities or purchasing credits.”
4. **Treatment of emission allowance or reduction credits:** Not specified, but this issue may be addressed in future regulatory proceedings implementing a credit tracking system.
5. **Escape Clauses:** The PUC has the authority to modify or delay the implementation of an annual requirement, if it determines it is in the public interest to do so. The PUC, when requested to modify or delay implementation of the standard, must consider: “(1) the impact of implementing the standard on its customer's utility costs, including the economic and competitive pressure on the utility's customers; (2) the effects of implementing the standard on the reliability of the electric system; (3) technical advances or technical concerns; (4) delays in acquiring sites or routes due to rejection or delays of necessary siting or other permitting approvals; (5) delays, cancellations, or nondelivery of necessary equipment for construction or commercial operation of an eligible energy technology facility; (6) transmission constraints preventing delivery of service; and (7) other statutory obligations imposed on the commission or a utility. The commission may modify or delay implementation of a standard obligation under clauses (1) to (3) only if it finds implementation would cause significant rate impact, requires significant measures to address reliability, or raises significant technical issues. The commission may modify or delay implementation of a standard obligation under clauses (4) to (6) only if it finds that the circumstances described in those clauses were due to circumstances beyond an electric utility's control and make compliance not feasible.”

An electric utility requesting a modification or delay must file a plan to comply with its obligation in the same proceeding that it is requesting the delay.

In addition, the PUC can modify or delay implementation of an annual requirement as part of an integrated resource planning proceeding.

I. ADMINISTRATION

- 1. Administering Entities, Duties, Powers, and Contact Information:** The Minnesota Public Utilities Commission implements and enforces the renewable energy standard, and APX, Inc. administers the M-RETS credit trading system.

Minnesota Public Utilities Commission
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J. REPORTING REQUIREMENTS and PROGRAM STATUS

1. Reporting Requirements:

Retailers: Each electric utility shall report on its plans, activities, and progress with regard to achieving the REO in its filings under section 216B.2422 or in a separate report submitted to the PUC every two years. The Department of Commerce issued its first report to the legislature in January 2005: [“Report on the Progress of the Minnesota Renewable Energy Objective.”](#)

Administrative Entities: The PUC, along with the Minnesota Department of Commerce shall compile the information provided by each electric utility and report to the chairs of the House of Representatives and Senate committees with jurisdiction regarding the progress of utilities, with any recommendations for regulatory or legislative action, by January 15 of each odd-numbered year.

- 2. Cost Information:** No comprehensive study on the actual costs of the renewable electricity standard has been completed to date.