

November 26, 2018

Daniel P. Wolf
Executive Secretary
Minnesota Public Utilities Commission
121 7th Place East, Suite 350
St. Paul, Minnesota 55101-2147

RE: **Comments of the Minnesota Department of Commerce, Division of Energy Resources**
Docket No. ET6133/RP-18-524

Dear Mr. Wolf:

Attached are the comments of the Minnesota Department of Commerce, Division of Energy Resources (the Department) in the following matter:

Minnesota Municipal Power Agency (MMPA) Application for Integrated Resource Plan Approval, 2019-2033.

The Petitioner is:

Oncu Er
Agent for MMPA
Avant Energy Services
200 South Sixth Street, Suite 300
Minneapolis, MN 55402

The Department recommends that the Minnesota Public Utilities Commission (Commission) **accept MMPA's Integrated Resource Plan, and requests that MMPA provide further information in reply comments.**

The Department's team of Chris Davis and Michael Zajicek is available to answer any questions the Commission may have.

Sincerely,

/s/ CHRISTOPHER T. DAVIS
Analyst Coordinator

MICHAEL ZAJICEK
Rates Analyst

CTD/jl
Attachment



Before the Minnesota Public Utilities Commission

Comments of the Minnesota Department of Commerce Division of Energy Resources

On

Minnesota Municipal Power Agency's 2019-2033 Integrated Resource Plan

Docket No. ET6133/RP-18-524

I. INTRODUCTION

A. *COMPANY BACKGROUND*

Minnesota Municipal Power Agency (MMPA or the Agency) consists of municipal utilities in the following twelve Minnesota cities:

- Anoka,
- Arlington,
- Brownnton,
- Buffalo,
- Chaska,
- East Grand Forks,
- Elk River,
- Le Sueur,
- North St. Paul,
- Olivia,
- Shakopee, and
- Winthrop.

MMPA's member municipal utilities serve approximately 74,000 retail customers in Minnesota with a combined population of approximately 160,000. The Agency's record peak load of 344 MW occurred on July 17, 2017. The Agency is managed by Avant Energy of Minneapolis.

MMPA's newest member, Elk River Municipal Utility (ERMU), has a peak demand of approximately 65 MW. MMPA projects that its electrical power load will increase by approximately 20 percent with the addition of ERMU. The Agency began providing wholesale power to ERMU on October 1, 2018, under a Power Sales Agreement that runs through 2050.

B. OVERVIEW OF MMPA'S FILING

Minnesota Rules parts 7843.0100-7843.0600 require electric utilities to file proposed integrated resource plans (IRP) every two years. Minnesota Statutes § 216B.2422, Subdivision 1 defines a utility as an entity with the capability of generating 100,000 kilowatts or more of electric power and serving, either directly or indirectly, the needs of at least 10,000 retail customers in Minnesota. MMPA's first owned plant, Faribault Energy Park, is a 159-MW (159,000 kW) natural-gas-fired combustion turbine that became operational in 2005. The Company completed its first owned wind farm in 2011, the 44-MW Oak Glen Wind Farm located near Blooming Prairie, Minnesota. Since MMPA exceeds the minimum number of customers and generation capacity identified in statute, MMPA qualifies as an electric utility under this definition. The instant filing (Petition) is MMPA's fourth resource plan.

C. MMPA'S PLANNING APPROACH

MMPA applied the following steps when developing its resource plan:

- a. Forecasted customer energy and capacity needs.
- b. Assessed existing resources and how they meet projected need.
- c. Estimated future resource needs based on evaluating steps (a) and (b).¹

MMPA concluded that no capacity is needed for the next eleven years; therefore, the Agency did not evaluate resource alternatives. However, MMPA stated that it "will continue to evaluate the energy market to understand options to meet its future electric supply needs."

D. MMPA'S RESOURCE ADDITIONS SINCE LAST IRP AND RESOURCE NEEDS NOW

In the Agency's previous IRP, Docket No. ET6133/RP-13-1156, MMPA showed that it had a small capacity need beginning in 2016 that grew to approximately 160 MW in 2028. Since the Commission reviewed that IRP, the Agency procured several resources, as shown in Table 1 below.²

¹ In this IRP, MMPA projected its demand at the time of MISO's peak.

² MMPA provided the data in response to DOC IR No. 1.

Table 1: Resources Procured by MMPA Since Last IRP

Planning Year	Shakopee Energy Park	Black Oak Wind Farm	Buffalo Solar Facility	Capacity Purchases	Total Capacity
2016-17				59.6	59.6
2017-18	42.6	9.7		10.0	62.3
2018-19	42.6	9.7	3.6	5.0	60.9
2019-20	42.6	9.7	3.6	70.0	125.9
2020-21	42.6	9.7	3.6	65.0	120.9
2021-22	42.6	9.7	3.6	70.0	125.9
2022-23	42.6	9.7	3.6	75.0	130.9
2023-24	42.6	9.7	3.6	80.0	135.9
2024-25	42.6	9.7	3.6	85.0	140.9
2025-26	42.6	9.7	3.6	90.0	145.9
2026-27	42.6	9.7	3.6	90.0	145.9
2027-28	42.6	9.7	3.6	95.0	150.9
2028-29	42.6	9.7	3.6	100.0	155.9
2029-30	42.6	9.7	3.6	105.0	160.9

Table 2 below shows MMPA's projected capacity needs after the additions shown in Table 1. MMPA's projections assume that it must provide adequate capacity coincident with the peak demand of the Midcontinent Independent System Operator (MISO), annual energy savings equal to 1.3 percent of retail sales, and planning reserve margins of 8.4 percent.

**Table 2: MMPA's Projected Capacity Needs
2019-2033**

	Resources Available (MW)	MMPA Demand Coincident with MISO Peak (MW)	Capacity Surplus/(Deficit) (MW)
2019	434	413	21
2020	429	417	12
2021	434	421	13
2022	439	424	14
2023	444	428	16
2024	449	431	18
2025	454	434	20
2026	454	437	16
2027	459	440	18
2028	464	444	20
2029	469	447	22
2030	364	450	(86)
2031	364	453	(89)
2032	364	456	(92)
2033	364	458	(95)

E. MMPA'S PROPOSED (PREFERRED) PLAN

Over the next five years, MMPA does not plan to acquire additional supply-side resources, but the Agency will continue to develop and market cost-effective conservation programs for its member utilities to offer their retail customers. Over the full planning period, MMPA will continue monitoring its capacity needs and plans to conduct a detailed evaluation of resource alternatives once capacity needs become near term.

II. DEPARTMENT ANALYSIS

A. OVERVIEW OF DEPARTMENT'S ANALYSIS

Minnesota Statutes §216B.2422, subd. 2 states that, in the resource plan proceedings of a municipal power agency such as MMPA:

... the Commission's order shall be advisory and the order's findings and conclusions shall constitute prima facie evidence which may be rebutted by substantial evidence in all other proceedings.

Subdivision 4 of the same statute states:

The commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243 ... unless the utility has demonstrated that a renewable energy facility is not in the public interest.

The Minnesota Department of Commerce, Division of Energy Resources (Department) conducted its review of MMPA's IRP with the understanding that the Commission's role was advisory in this proceeding, but that the analysis in the IRP would have significant bearing on MMPA's reliability and future regulatory proceedings.

For this resource plan, the Department reviewed MMPA's:

- planning approach,
- energy and demand forecast,
- resource needs,
- supply-side resources,
- demand-side resources,
- compliance with Minnesota's renewable energy standard, and
- environmental issues.

B. ASSESSMENT OF ENERGY AND PEAK DEMAND FORECAST

1. Overview of MMPA's Energy Forecast

MMPA used linear regression modeling to provide the Agency's estimates of member system energy requirements. Separate projections were used to forecast the energy usage for three member cities independently from the other nine members due to limitations of available data for analysis, and the results were summed to produce the final forecast. The separate models and years of data used in MMPA's projections are summarized below:

- MMPA 9 - Anoka, Arlington, Brownton, Chaska, Le Sueur, North St. Paul, Olivia, Shakopee and Winthrop with monthly historical energy data from 1996 through 2017.
- East Grand Forks with monthly historical energy data from 1996 through 2017.
- Buffalo with monthly historical energy data from 2000 through 2017.

- Elk River with monthly historical energy data from 2004 through 2017.

MMPA created linear regression models for each of the four groupings above, with data constraints causing the creation of single-city models for East Grand Forks, Buffalo and Elk River. The independent variables in the model consist of:

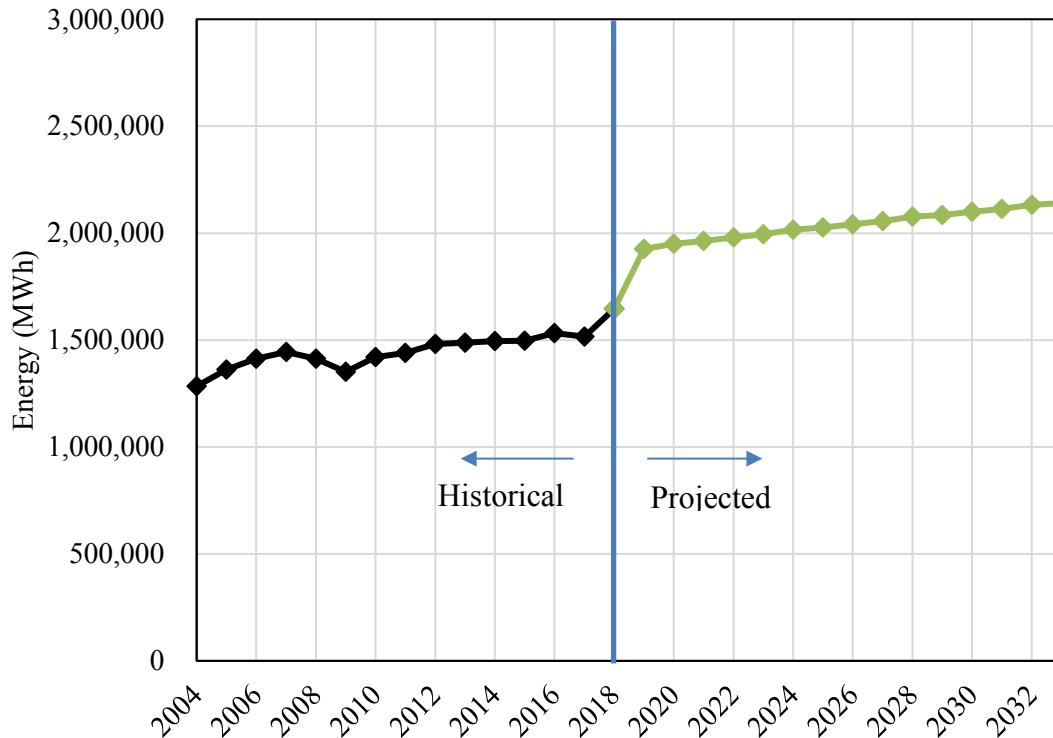
- Population – historical population for the data range listed for each city, as acquired from the Minnesota State Demographic Center and the Metropolitan Council *Historic Household and Population Estimates*. Population projections from Woods and Poole are based upon actual data from 2016, annually increased by long-term county-level growth rates.
- Income per Capita – historical income per capita and projected income per capita were obtained from Woods and Poole’s report *Minnesota State Profile 2017 State and County Projections to 2050*.
- Weather – Cooling Degree Days (CDD) and Heating Degree Days (HDD) were acquired from the Minneapolis-St. Paul International Airport weather station from all member communities with the exception of East Grand Forks, for which data was acquired from the Fargo weather station.

MMPA used each model to forecast monthly energy demand from the variables listed above, and then aggregated the results for MMPA’s total annual energy predictions. MMPA adjusted the estimates to reflect:

- a 1.3 percent energy conservation rate,
- increased energy requirements due to future load additions, and
- existing energy allocations to member cities from the Western Area Power Administration (WAPA) held constant at the 2010-2015 contract level for the projection period.

Figure 1 shows MMPA’s energy forecast adjusted for conservation, with the anticipated new load, and WAPA allocations.

Figure 1: MMPA Energy Forecast 2019-2033



MMPA's energy requirements are forecasted to increase 0.8 percent annually from 2018-2032 if the Agency achieves an energy conservation rate of 1.3 percent of retail sales, which MMPA estimates reduces the Agency's annual energy growth rate by 1.0 percent from an estimated base growth of 1.8 percent annually.

2. Overview of MMPA's Peak Demand Forecasts

MMPA projected two peaks as part of this resource plan: the coincident peak (CP) demand that MMPA experiences at the time of the MISO system peak, and the non-coincident peak (NCP), or the maximum peak demand on the MMPA system. MMPA adjusted both peak projections for a 1.3 percent energy conservation rate, WAPA allocations, 2.3 percent transmission losses, and an 8.4 percent reserve margin.

To project the NCP for the MMPA system, the Agency estimated its load factor, which allows a utility to convert forecasted annual sales into the amount of sales at its peak.³ Specifically, MMPA calculated a seven-year weather-normalized (W-N) load factor of 55.9 percent by using the average of calculated W-N load factors from 2011-2017 and applying this average to the Agency's conservation-adjusted energy projections to obtain the NCP demand. MMPA's peak demand is shown in Figure 2 below, along with its CP demand. The NCP growth rate is 1.8 percent from 2019-2033 without new conservation, and 0.8 percent with new conservation.

To project the CP for the MMPA system the Agency applied a MISO coincidence factor to the Agency's NCP projections. MMPA calculated a MISO coincidence factor of 93.9 percent by averaging the monthly summer (June through September) coincidence factors from June 2005 to September 2016. The Agency projects a coincident peak growth rate including new conservation of 0.8 percent for 2019-2033.

Table 3 below displays MMPA's forecasted energy, NCP and CP peak demand. MMPA's forecasted CP about 6.3 percent lower than its estimated NCP.

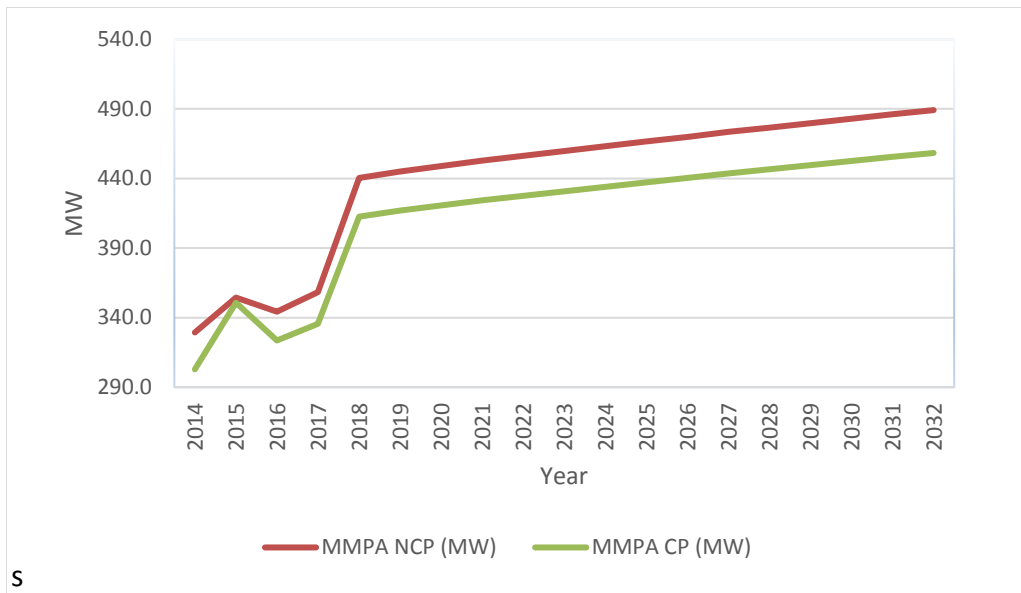
³ A higher load factor (closer to 100 percent) indicates that sales are relatively consistent throughout a year whereas a lower load factor indicates that the amount of sales at the peak is much higher than the average sales throughout the year.

Table 3: MMPA Projected Energy and Peak Demands, 2019-2033

Year	Energy (MWh)	MMPA NCP (MW)	MMPA CP (MW)	Percent Reduction for CP
2019	1,925,452	440.4	412.6	6.31
2020	1,950,524	444.9	416.9	6.31
2021	1,963,088	449.0	420.7	6.31
2022	1,979,777	452.7	424.2	6.30
2023	1,995,207	456.2	427.5	6.30
2024	2,016,234	459.8	430.8	6.30
2025	2,025,785	463.2	434.0	6.30
2026	2,040,921	466.6	437.2	6.30
2027	2,055,635	469.9	440.3	6.30
2028	2,076,571	473.4	443.6	6.29
2029	2,084,796	476.5	446.6	6.29
2030	2,099,060	479.8	449.6	6.29
2031	2,112,665	482.9	452.5	6.29
2032	2,133,062	486.2	455.6	6.29
2033	2,140,227	489.1	458.3	6.29

Figure 2 shows MMPA's forecasts of NCP and CP on one graph.

Figure 2: MMPA Projected Peaks 2019-2033⁴



3. Department's Review of MMPA's Forecasts and Recommendations

For the purposes of planning, the Department concludes that the energy and coincident and non-coincident peak forecasts presented by MMPA are satisfactory.

C. RESOURCE NEEDS

Two principal reasons for integrated resource planning are to: 1) ensure that a utility will have adequate resources to cover future demand, and 2) will be able to do so in a cost-effective manner. The first objective is necessary to ensure that service is reliable for the utility's customers and to avoid negative effects on other utilities and their customers. MMPA created its plan to meet the MISO CP, with the expectation that when MMPA has a peak at a higher level (the NCP as discussed above) any additional power MMPA requires would be obtainable from the MISO market at a competitive rate.

As shown above in Table 2, MMPA does not have a resource shortage until 2030, as MMPA recently signed a purchased power agreement (PPA) for the 170-MW Dodge County Wind Farm,⁵ and has purchased between 65 and 105 MW of MISO Zonal Resource Credits (ZRCs) for

⁴ Historical data for 2014 through 2018 presented for comparison.

⁵ Petition at 38.

2019 through 2029.⁶ With regards to long-term planning, MMPA noted that the costs of different technologies for capacity are rapidly changing and thus it is not particularly useful to create a plan for addressing the Agency's shortage at this time. The Department and MMPA discussed this issue and the Department agreed that it was not necessary for the Agency to create a long-term plan at this time. MMPA committed to monitoring the cost of generation technologies and creating a plan, evaluating the various resource alternatives, when the need becomes near term. The Department agrees with MMPA's analysis.

D. DEMAND-SIDE MANAGEMENT (DSM) RESOURCES

1. Introduction

One of the goals of resource planning is integrating demand-side resources with supply-side resources to estimate the optimal mix of resources that will meet the customers' needs in the future. Other factors have historically been used when evaluating DSM in resource planning, such as the inclusion of the least amount of energy and demand savings that would result from meeting the statutory spending requirements of the Conservation Improvement Program (CIP).

In 2007, the CIP statutes at Minn. §216B.2421 were changed to require utilities to meet an energy-savings goal equal to 1.5 percent of a utility's retail sales. In addition, Minnesota Statutes § 216B.2401 states:

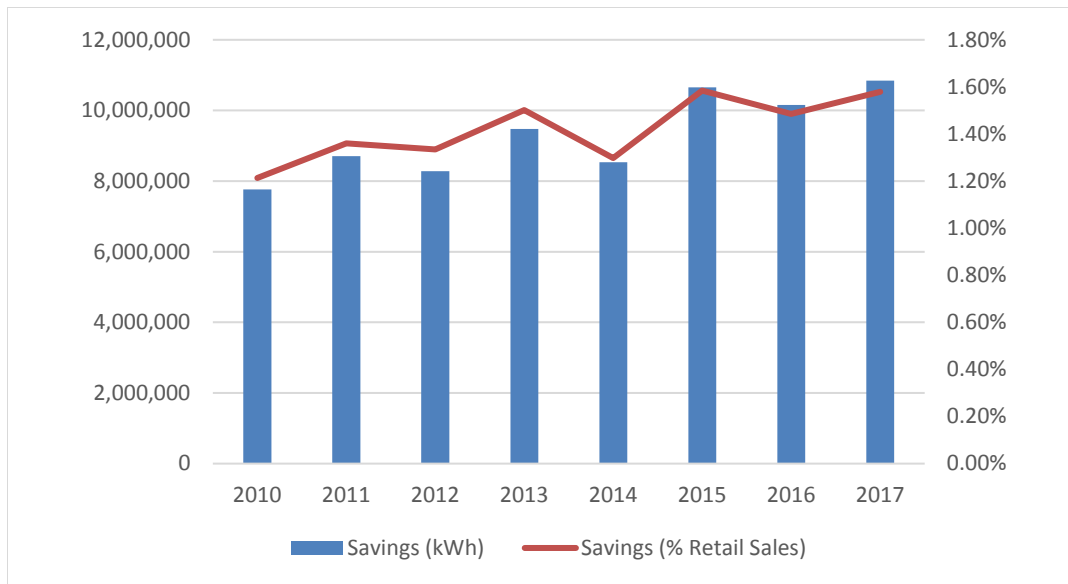
It is the energy policy of the state of Minnesota to achieve annual energy savings equal to 1.5 percent of annual retail energy sales of electricity and natural gas directly through energy conservation improvement programs and rate design, and indirectly through energy codes and appliance standards, programs designed to transform the market or change consumer behavior, energy savings resulting from efficiency improvements to the utility infrastructure and system, and other efforts to promote energy efficiency and energy conservation.

2. Historical Performance

Eight of MMPA's twelve member communities participated in the MMPA-managed CIP program from 2010 to 2013 and seven member communities participated from 2014 to 2017. The remaining five communities manage their own energy efficiency programs. On page 25 of its filing, MMPA shows the CIP energy savings of the MMPA-managed portfolio. In Figure 3 below the Department started with MMPA's numbers and added in the energy savings for Chaska for 2014-2017 since Chaska was already included in the 2010-2013 energy savings.

⁶ Petition at 32.

Figure 3: CIP Energy Savings for MMPA-Managed Portfolio Plus Chaska
2014-2017



As can be seen, the energy savings of the members included in Figure 3 met the State's 1.5 percent energy savings goal for 2015-2017. In reply comments, the Department requests that MMPA provide a similar table that shows the CIP energy and demand savings for all its members for 2010-2017, rather than only for the MMPA-managed portfolio.

3. MMPA's Planned CIP Energy Savings for IRP

MMPA assumed that the members participating in the MMPA-managed CIP programs would achieve energy savings of approximately 1.3 percent over the planning period, but would strive to achieve 1.5 percent. Since its 2013 IRP filing, MMPA added residential rebates for freezers and dehumidifiers, recycling of secondary freezers, and commercial rebates for a variety of new LED lamps and fixtures. The Agency stated that currently lighting rebates and custom equipment rebates, such as for HVAC equipment, are some of its most successful CIP programs.

4. Department Recommendation

Although the Agency assumed that its energy savings over the planning period would be 1.3 percent of retail sales, the Department supports MMPA's commitment that the Agency and its members would continue to strive to achieve energy savings approximating 1.5 percent of retail sales.

In reply comments, the Department requests that MMPA provide the historical energy and demand savings for all of MMPA's members for 2010-2017, shown both in first-year kWh saved and as a percentage of retail sales.

E. 50 PERCENT AND 75 PERCENT RENEWABLES/DSM

Minnesota Statute §216B.2422, subd. 2 states:

As a part of its resource filing, a utility shall include the least cost plan for meeting 50 and 75 percent of all new and refurbished capacity needs through a combination of conservation and renewable energy resources.

Although the statute uses the word capacity, most utilities filing resource plans comply with this requirement by considering the least cost plan for meeting 50 and 75 percent of *energy* needs through a combination of conservation and renewable energy resources. On page 39 of its filing the Agency states:

In 2033, MMPA's energy requirements of 2,140,227 MWh will be 214,776 MWh over its projected 2019 requirements. MMPA's renewable energy requirement for 2033 of 511,012 MWh is 238% of its incremental energy needs. By satisfying the RES, MMPA will meet all of its incremental energy needs through renewables. The effects of MMPA's conservation efforts are included in the base calculations.

Thus, MMPA's base case already assumes that at least 75 percent of its new energy needs will come from a combination of new renewables and conservation. Consequently, MMPA's resource plan complies with this statutory provision.

F. COMPLIANCE WITH THE RENEWABLE ENERGY PROVISION

1. Background

Prior to the 2007 Legislative Session, Minn. Stat. § 216B.1691 required utilities to make a good faith effort to obtain 15 percent of their Minnesota retail sales from eligible energy technologies by 2015, and to obtain 0.5 percent renewable energy from biomass technologies. The 2007 Minnesota Legislature amended Minn. Stat. §216B.1691 to include a Renewable Energy Standard (RES) beginning in 2010. As amended, Minn. Stat. § 216B.1691, Subd. 2 sets forth the Renewable Energy Objective in place through 2010 and requires that:

Each electric utility shall make a good faith effort to generate or procure sufficient electricity generated by an eligible energy technology to provide its retail customers or the retail customers of a distribution utility to which the electric utility provides wholesale electric service so that commencing in 2005, at least one percent of the electric utility's total retail electric sales to retail customers in Minnesota is generated by eligible energy technologies, and seven percent of the electric utility's total retail electric sales to retail customers in Minnesota by 2010 is generated by eligible energy technologies.

Minn. Stat. § 216B.1691, Subd. 2a establishes the Renewable Energy Standard utilities must meet through 2025 and specifically requires that:

...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 electric 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:

2012	12 percent
2016	17 percent
2020	20 percent
2025	25 percent

The statute no longer requires that a portion of the renewable energy generation come from biomass technologies. An eligible energy technology is defined by Minn. Stat. § 216B.1691, Subd. 1 as an energy technology that:

Generates electricity from the following 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.

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 are 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.

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 2008, and to require all electric utilities to participate in a Commission-approved REC tracking system once such a system was in operation.

The Commission subsequently adopted the use of the Midwest Renewable Energy Tracking System (M-RETS), a multi-state REC tracking system, as the REC tracking system under Minn. Stat. § 216B.1691, Subd. 4(d), and required Minnesota utilities to participate.⁸ Specifically, the Commission required utilities to complete the online registration process and sign the Terms of Use agreement with the M-RETS system administrator APX, Inc., and receive account approval from APX by January 1, 2008. In addition, the Commission directed utilities to make a substantial and good faith effort to create a system account and sub-accounts for its organization, and to register its generation units/facilities in the M-RETS system by March 1, 2008.

⁷ *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; *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)

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)

⁸ *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)

In its December 18, 2007 *Order Establishing Initial Protocols for Trading Renewable Energy Credits*, the Commission adopted a four-year shelf life for all renewable energy credits to be used for compliance with the Minnesota RES. A four-year shelf life allows a REC to be retired towards MN RES compliance in the year of generation and during the 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.

In addition to amending the RES Statute, Minn. Stat. §216B.241, Subd. 1c(b) was added to establish an energy-savings goal as part of a utility's CIP, and states:

Each individual utility and association shall have an annual energy-savings goal equivalent to 1.5 percent of gross annual retail energy sales unless modified by the commissioner under paragraph (d). The savings goals must be calculated based on the most recent three-year weather normalized average.

The attainment of the 1.5 percent energy savings goal will reduce a utility's forecasted retail sales, and consequently lower the amount of renewable generation required to meet RES obligations.

2. MMPA's Renewable Obligation

Table 4, below, summarizes MMPA's RES requirement in MWh's over the planning period. MMPA's forecasted retail sales reflect compliance with the energy-savings goals set forth under Minn. Stat. § 216B.241.

Table 4: MMPA's Renewable Energy Objective

Year	MN Retail Sales	REO/RES Percentage	RES Requirement (MWhs)
2019	1,838,999	17%	312,617
2020	1,862,945	20%	372,574
2021	1,874,945	20%	374,974
2022	1,890,885	20%	378,162
2023	1,905,622	20%	381,109
2024	1,925,705	20%	385,125
2025	1,934,827	25%	483,687
2026	1,949,284	25%	487,301
2027	1,963,337	25%	490,814
2028	1,983,333	25%	495,813
2029	1,991,189	25%	497,777
2030	2,004,812	25%	501,183
2031	2,017,806	25%	504,431
2032	2,037,288	25%	509,301
2033	2,044,131	25%	511,012

Over the planning period, MMPA's RES requirement increases from 312,617 MWhs in 2019 to 511,012 MWhs in 2033. MMPA's IRP shows that the Company expects to far exceed these requirements over the planning period, with MMPA's five existing renewable resources expected to generate 465,800 MWh per year, and MMPA's 30-year 170-MW wind power purchase agreement with NextEra starting December 2019 expected to generate 600,000 MWh per year.

G. ENVIRONMENTAL ISSUES

1. Compliance with Pending State and National Environmental Legislation

The Department generally reviews utility resource plans for compliance with pending state and national environmental legislation that affects the electric utility's operations. MMPA identified the planning uncertainties associated with possible changes to the U.S. Environmental Protection Agency (EPA) emission standards. In particular, MMPA noted that:

- the D.C. circuit court suspended the case concerning the EPA's Mercury and Air Toxics Standards (MATS) Final Rule;
- in a court filing in April 2017, the federal government said the EPA officials appointed by the new administration were reviewing the 2015 rules to determine whether the EPA should reconsider some or all of ozone rules;

- The federal government is reviewing the Clean Power Plan; and
- Through a broad executive order, the Interagency Working Group on the Social Cost of Greenhouse Gases was disbanded.

The Department concludes that MMPA's tracking of important environmental issues is reasonable.

1. Greenhouse Gas Reduction Goal

In 2013, the Minnesota Legislature passed amendments to Minnesota Statutes § 216B.2422, subd. 4. The newly amended legislation now states (new language underlined):

The commission shall not approve a new or refurbished nonrenewable energy facility in an integrated resource plan or a certificate of need, pursuant to section 216B.243, nor shall the commission allow rate recovery pursuant to section 216B.16 for such a nonrenewable energy facility, unless the utility has demonstrated that a renewable energy facility is not in the public interest. The public interest determination must include whether the resource plan helps the utility achieve the greenhouse gas reduction goals under section 216H.02, the renewable energy standard under section 216B.1691, or the solar energy standard under section 216B.1691, subdivision 2f.

On August 5, 2013, the Minnesota Public Utilities Commission issued a *Notice of Information in Future Resource Plan Filings* (Commission's Letter). The Commission Letter states, in part:

PLEASE TAKE NOTICE that the Commission expects utilities to include in their resource plans filed after August 1, 2013 an explanation how the resource plan helps the utility achieve the greenhouse gas reduction goals, renewable energy standard, and solar energy standard as listed in the above-referenced legislation. Parties should also be prepared to discuss the matter in comments.

Minnesota Statutes § 216H.01, Subdivision 1 states the following:

It is the goal of the state to reduce statewide greenhouse gas emissions across all sectors producing those emissions to a level at least 15 percent below 2005 levels by 2015, to a level at least 30 percent below 2005 levels by 2025, and to a level at least 80 percent below 2005 levels by 2050. The levels shall be reviewed based on the climate change action plan study.

On page 39 of its IRP, MMPA provided a summary of the Agency's reductions in total CO₂ emissions and emission rates (output of CO₂ per MWh sold). MMPA also provided a trade secret workbook detailing the Agency's calculations. The Department's review indicates that the Agency:

- Started with emissions from utility-owned generation,
- Add emissions from utility purchases from known resources,
- Added emissions from market purchases, and
- Subtracted CO₂ emissions from sales from MMPA-owned generation.

The Department notes that the Commission has never approved a specific methodology for evaluating progress towards Minnesota's greenhouse gas reduction goals. However, the Department believes that MMPA's approach reasonably represents changes in the Agency's CO₂ emissions over time.

Figure 4 below shows MMPA's projections of how its CO₂ emissions and CO₂ emission rates have changed since 2005 and are projected to change by 2025.

Figure 4: MMPA's 2005, 2015 and Projected 2025 CO₂ Emissions and CO₂ Emission Rates

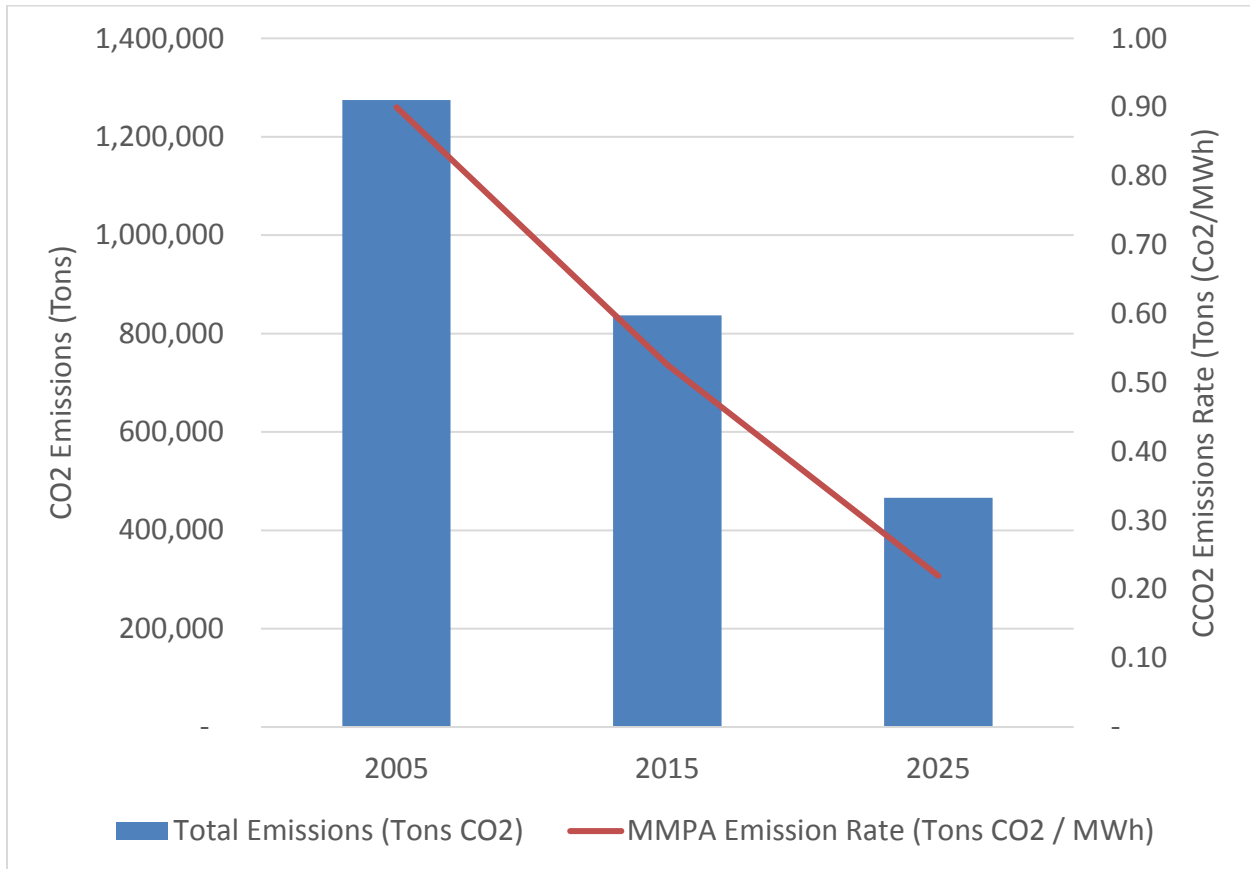


Table 5 below shows the percent reductions in the Agency's total CO₂ emissions and CO₂ emission rates compared to 2005 CO₂ levels.

Table 5: Actual and Projected Reductions in MMPA's CO₂ Emissions

	2015	2025
Total Emissions (Tons CO ₂)	34%	63%
Emission Rate (Tons CO ₂ /MWh)	42%	76%

As can be seen, MMPA has made impressive reductions in its CO₂ reductions and appears to be well on its way to reducing its emissions 80 percent below 2005 levels by 2050. The

Department notes that MMPA's reductions are occurring even though MMPA began serving Elk River in October 2018.

III. SUMMARY OF DEPARTMENT RECOMMENDATIONS

A. REQUESTS FOR MMPA'S REPLY COMMENTS

In its Reply Comments, the Department requests that MMPA:

- provide a table similar to Figure 3 that shows CIP energy and demand savings for all its members for 2010-2017; and
- provide the historical energy and demand savings for all of MMPA's members for 2010-2017, shown both in first-year kWh saved and as a percentage of retail sales.

B. RECOMMENDATIONS FOR MMPA'S INSTANT IRP

The Department recommends that the Commission accept MMPA's IRP as filed, with the expectation that the Agency will continue to strive for annual energy savings of 1.5 percent.

/jl

CERTIFICATE OF SERVICE

I, Sharon Ferguson, hereby certify that I have this day, served copies of the following document on the attached list of persons by electronic filing, certified mail, e-mail, or by depositing a true and correct copy thereof properly enveloped with postage paid in the United States Mail at St. Paul, Minnesota.

Minnesota Department of Commerce
Comments

Docket No. ET6133/RP-18-524

Dated this 26th day of November 2018

/s/Sharon Ferguson

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Generic Notice	Commerce Attorneys	commerce.attorneys@ag.state.mn.us	Office of the Attorney General-DOC	445 Minnesota Street Suite 1800 St. Paul, MN 55101	Electronic Service	Yes	OFF_SL_18-524_RP-18-524
Ian	Dobson	residential.utilities@ag.state.mn.us	Office of the Attorney General-RUD	1400 BRM Tower 445 Minnesota St St. Paul, MN 551012130	Electronic Service	Yes	OFF_SL_18-524_RP-18-524
Ed	Ehlinger	Ed.Ehlinger@state.mn.us	Minnesota Department of Health	P.O. Box 64975 St. Paul, MN 55164-0975	Electronic Service	No	OFF_SL_18-524_RP-18-524
Oncu	Er	oncu.er@avantenergy.com	Avant Energy, Agent for MMPA	220 S. Sixth St. Ste. 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_18-524_RP-18-524
Sharon	Ferguson	sharon.ferguson@state.mn.us	Department of Commerce	85 7th Place E Ste 280 Saint Paul, MN 551012198	Electronic Service	No	OFF_SL_18-524_RP-18-524
Dave	Frederickson	Dave.Frederickson@state.mn.us	MN Department of Agriculture	625 North Robert Street St. Paul, MN 551552538	Electronic Service	No	OFF_SL_18-524_RP-18-524
Thomas	Landwehr	tom.landwehr@state.mn.us	Department of Natural Resources	Box 37, 500 Lafayette Rd St. Paul, Minnesota 55155	Electronic Service	No	OFF_SL_18-524_RP-18-524
James D.	Larson	james.larson@avantenergy.com	Avant Energy Services	220 S 6th St Ste 1300 Minneapolis, MN 55402	Electronic Service	No	OFF_SL_18-524_RP-18-524
Gerald	Van Amburg	vanambur@cord.edu	Board of Water and Soil Resources	N/A	Electronic Service	No	OFF_SL_18-524_RP-18-524
Laurance R	Waldoch	larrywaldoch@gmail.com	Attorney	2597 Parkview Dr Saint Paul, MN 55110	Electronic Service	No	OFF_SL_18-524_RP-18-524
Daniel P	Wolf	dan.wolf@state.mn.us	Public Utilities Commission	121 7th Place East Suite 350 St. Paul, MN 551012147	Electronic Service	Yes	OFF_SL_18-524_RP-18-524

First Name	Last Name	Email	Company Name	Address	Delivery Method	View Trade Secret	Service List Name
Charles	Zelle	charlie.zelle@state.mn.us	Department of Transportation	MN Dept of Transportation 395 John Ireland Blvd St. Paul, MN 55155	Electronic Service	No	OFF_SL_18-524_RP-18-524