

Staff Briefing Papers

Meeting Date	October 3, 2019	Agenda Item: 3B
Company	All Electric Utilities Subject to Minnesota Statute §216B.1691	
	E-002/M-18-78 In the Matter of Commission Consideration and Determination of Compliance with Renewable Energy Standards	
Docket No.	E-999/PR-18-12 In the Matter of Renewable Energy Certificate Compliance filing for year 2017	
	E-015/PR-02-1240 In the Matter of the Green Pricing Verification Filing Process	
Issues	What action should the Commission take on the RES plans filed by electric utilities for compliance years 2016 and 2017?	
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Relevant Documents	Date
Filed in 18-78	
Otter Tail Power Company, Report	May 7, 2018
East River Electric Power Cooperative, Inc., Report & Attachment A	May 16, 2018
Southern Minnesota Municipal Power Agency (SMMPA), Attachment A	May 18, 2018
Minnkota Power Cooperative & Northern Municipal Power Agency, Attachment A	May 18, 2018
Dairyland Power Cooperative, Modified Report	May 21, 2018
Missouri River Energy Services, Report	May 22, 2018
East River Electric Power Cooperative, Inc., Report	May 22, 2018
Basin Electric Power Cooperative, Report	May 23, 2018
Central Minnesota Municipal Power Agency, Report	May 29, 2018
Northwestern Wisconsin Electric Company, Report	May 30, 2018
Minnesota Municipal Power Agency, Report	May 30, 2018
Great River Energy, Report	May 30, 2018
L & O Power Cooperative, Report	May 31, 2018
Xcel Energy, Report	June 1, 2018
Minnesota Power, Report	June 1, 2018
Xcel Energy, Re-filing of non-public data to public	June 25, 2018
Minnesota Municipal Power Agency, Re-filed report in .xls format	June 26, 2018
Department of Commerce, Legislative Report	May 30, 2019
Filed in 18-12	
Southern Minnesota Energy Cooperative	April 16, 2018
Heartland Consumers Power District	May 14, 2018

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The attached materials are work papers of the Commission Staff. They are intended for use by the Public Utilities Commission and are based upon information already in the record unless noted otherwise.

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Attachments

Attachments to this report include:

Attachments 1: Historical REC Purchases and Sales (TRADE SECRET and Public Versions)

I. Statement of the Issue

What action should the Commission take on the RES plans filed by electric utilities for compliance years 2016 and 2017?

II. Background

The current docket represents the Commission’s process to document its responsibilities to regularly investigate compliance with Minnesota’s RES, [Minnesota Statute §216B.1691](#).

In 2001, Minnesota’s Renewable Energy Objective (REO) statute, Minnesota Statute §216B.1691, was passed. Modifications have been made over the years, with significant changes in 2003¹ and 2007² and clarifications in 2010³.

The following renewable energy goals were established for the end of the year indicated:

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

¹ In 2003, legislation required utilities to file reports with the Commission and that the Commission detail the standards and criteria for judging a utility’s good faith effort to meet the objective. The Commission began setting those criteria in the June 1, 2004 order, which set reporting requirements for utilities to demonstrate their efforts to comply with the statute.

² Significant modifications were made to the statute in 2007 that included the addition of a Renewable Energy Standard (RES) to accompany the already existing REO and established renewable energy goals for years 2012-2025. Changes were also made to eligible energy technologies that included a higher threshold for hydroelectric capacity of 100 MW or less and biomass generation was modified to include landfill gas and anaerobic digester systems (please see Minnesota Statute §216B.1691, Subd. 1 (a)(5).)

³ Amendments were made in 2010 that clarified the definition of total retail electric sales that barred power supplied by a federal power marketing administration or other federal agency to be regarded as RES compliance. Please see Minnesota Statute §216B.1691, Subd. 1 (c).

For utilities that owned a nuclear generating facility as of January 1, 2007, their requirements are:

2012	18 percent
2016	25 percent
2020	30 percent. ⁴

The statute currently requires all 16 utilities subject to the RES to file with the Commission a report demonstrating its compliance with the statute and its plans for future compliance.⁵

Beginning in 2008, the Commission established its process for receiving the biennial reports and fulfilling its statutory duty to investigate compliance with the statute.⁶ The Commission required utilities to file a report with specific content to satisfy the reporting requirements.⁷ The Commission made findings of compliance in its 2008, 2010, 2012, 2014, and 2016 biennial compliance dockets. This docket represents the Commission's sixth biennial renewable energy compliance docket.

Finally, in 2013, the Minnesota Legislature established the Solar Energy Standard (SES) under Minnesota Statute section 216B.1691, subd. 2f. The SES requires public utilities to obtain at least 1.5 percent of their total Minnesota retail sales from solar energy by the

⁴ Minnesota Statute §216B.1691, Subd 2 a(a) and 2 a(b).

⁵ Based upon the statutory definition of an electric utility, the following entities are subject to the RES:

- 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 Energy Cooperative (SMEC)
- Southern Minnesota Municipal Power Agency (SMMPA)
- Xcel Energy

⁶ "Making findings on compliance status is the most effective way to ensure individual utility compliance and to achieve the statewide renewable energy goals set by the Legislature." See also Order Paragraph 6 requiring biennial compliance filing from each of the 16 utilities subject to the RES. ORDER SETTING FILING REQUIREMENTS AND CLARIFYING PROCEDURES, Docket E-999/CI-03-869, Issued November 12, 2008, pages 7 and 9, respectively.

⁷ Beginning in 2012, utilities were asked to use a standard reporting format that was created by Commission staff in coordination with Department staff.

end of 2020, with a goal of obtaining 10 percent of Minnesota retail sales from solar energy by 2030. It also included and small solar carve-out of at least 10 percent of 1.5 percent SES from small solar facilities that are 40 kW or less. Utilities have been filing annual status reports on their path to compliance⁸; however, full compliance is not required until 2020 and will be folded into this report and review process. Below is a table from the Department depicting the estimated amounts of solar capacity needed to meet the 2020 SES requirement, found on pages 12 - 13 of their report.

	Otter Tail	Minnesota Power	Xcel
MN retail sales (MWh)	2,584,490	8,997,352	29,739,386
Excluded Sales	69,172	5,973,804	75,306
Annual solar generation (MWh)	96	17,646	603,516
Est. solar capacity (MWs) needed to meet 2020 SES	30	30	226
Est. solar energy needed to meet 2020 SES (MWhs)	40,000	50,879	437,907
Est. solar capacity (MWs) needed to meet Small Solar carve-out	3	4	31
Est. solar energy (MWhs) needed to meet Small Solar carve-out	4,000	5,088	43,791

III. Biennial and Annual RES Reports

REC retirements are completed by May 1 every year and compliance reports are due on June 1, with many reports filed between April and June. There are no disputes present with these dockets. Following the close of the PUC-issued comment period, no party submitted comments.⁹

RECs retired for year 2016 are listed below from the Department’s summarizing table that demonstrates utility compliance with retiring the equivalent of 17% retail sales or 25% for Xcel Energy:¹⁰

⁸ For Annual Reports on Progress in Achieving the Solar Energy Standard, please see docket numbers 19-276; 18-205; and/or 17-283.

⁹ The open comment period was issued May 31 and closed July 8, 2019.

¹⁰ Department of Commerce Comments at 3 (June 15, 2017) in Docket No. 17-12.

2016 RES Compliance

Utility	2016 MN Retail Sales MWhs	RES Req. %	RES Req. MWhs	RECs Retired
Basin	677,850	17.0%	115,235	115,235
CMPA	305,978	17.0%	52,017	52,017
Dairyland Power	825,797	17.0%	140,386	140,386
East River Electric	468,668	17.0%	79,674	79,780
GRE	10,825,756	17.0%	1,840,379	1,840,383
Heartland	429,149	17.0%	72,956	72,956
L&O Power Coop	276,222	17.0%	46,958	46,958
Minnesota Power	8,988,865	17.0%	1,528,108	1,528,108
Minnkota	1,517,523	17.0%	257,979	257,979
MMPA	1,471,030	17.0%	250,076	250,076
Missouri River Energy Services	1,489,325	17.0%	253,186	253,186
NW Wisconsin*	536	17.0%		
Otter Tail Power	2,545,813	17.0%	432,789	432,789
SMEC	869,228	17.0%	147,769	147,778
SMMPA	3,061,890	17.0%	520,522	520,522
Xcel	30,289,190	25.0%	7,572,298	7,572,298
Total	64,042,820		13,310,329	13,310,451
*The Commission has permitted Northwestern Wisconsin to file its RPS compliance filing for Wisconsin to meet its Minnesota RES obligations. For 2016, NW Wisconsin had Minnesota retail sales of 536 MWh's. NW Wisconsin retired RECs equivalent to 14.48 % of its retail sales towards its RPS compliance in Wisconsin. In 2016, NW Wisconsin had renewable energy sales equivalent to 22% of its total 2016 MWh sales.				

As can be seen in docket 18-78, at the request of the Department, Xcel Energy filed multiple reports with the only modification being the reclassification of information related to their Renewable*Connect program from trade secret to public. The information contained in the reports are the same.¹¹

After reviewing and verifying compliance, the Department recommends the Commission find that all utilities are in compliance with the 2017 RES requirement.

¹¹ Specifically, subscriptions to Renewable*Connect – Government was made public so the Department could communicate overall trends in voluntary purchases to the public. Please see Xcel Energy’s June 25, 2018 cover letter for more details.

Table 1: 2017 RES Compliance

Utility	2017 Minnesota Retail Sales (MWhs)	Total RECs Retired (for MN Retail Sales)	Percent
Basin Electric	648,716	77,846	17.0%
Central MN Municipal Power Agency	315,168	37,823	17.0%
Dairyland Power Cooperative	810,828	97,300	17.0%
East River Power Cooperative	425,078	51,106	17.0%
Great River Energy	10,859,935	1,303,193	
Heartland Power District	646,112	77,535	17.0%
Interstate Power & Light (IPL)	486,176	58,523	17.0%
L & O Power Cooperative	245,674	29,481	17.0%
Minnesota Municipal Power Agency (MMPA)	1,434,696	172,164	17.0%
Minnesota Power	9,208,645	1,105,038	17.0%
Minnkota Power Cooperative	1,534,364	184,124	17.0%
Missouri River Energy Services (MRES)	1,273,126	152,776	17.0%
Northwestern Wisconsin Power ⁶	519	(see footnote 6)	
Otter Tail Power Company	2,383,370	286,004	17.0%
Southern Minnesota Electric Cooperative	331,761	39,812	17.0%
Southern MN Municipal Power Agency	2,887,780	346,534	17.0%
Xcel Energy	<u>30,300,578</u>	<u>5,454,104</u>	<u>25.0%</u>
Total	63,792,007	9,476,076	

In the Department’s chart above, nearly 9.5 million RECs were retired in 2017 for compliance.¹²

Taking another table from the Department’s legislative report, we can see below that many utilities have sufficient resources – owned renewable energy generation, banked RECs, or purchased RECs – to comply with future RES requirements.¹³ SMEC, the utility with compliance until 2019, intends to purchase adequate RECs to meet future compliance.

¹² Department of Commerce Report - *Minnesota Renewable Energy Standard: Utility Compliance*, January 15, 2019 at 10 (May 30, 2019). Northwestern Wisconsin Electric retired 24,367 RECs towards its compliance in Wisconsin.

¹³ *Id.* at 11.

Utility	Compliance through year
Basin Electric	2030
Central MN Municipal Power Agency (CMMPA)	2028
Dairyland Power Cooperative	2030
East River Power Cooperative	2025
Great River Energy	2039
Heartland Power District	2045
L&O Power Cooperative	2025
Minnesota Municipal Power Agency (MMPA)	2020
Minnesota Power	2053
Minnkota Power Cooperative	2025
Missouri River Energy Services (MRES)	2020
Northwest Wisconsin	See footnote 6
Otter Tail Power Company	2034
Southern Minnesota Electric Cooperative (SMEC)	2019
Southern MN Municipal Power Agency	2040
Xcel Energy	2040

New projects that were reported to be operational in the coming year (2017):

- Dairyland Power Cooperative reported they are finalizing negotiations for several solar projects with developers. Some of these projects may come on-line before the end of 2018.
- Xcel Energy has three solar projects with various capacity values. These include community solar gardens, small solar – RDF projects, and Solar*Rewards Incentive Installations.

Reported Concerns with Meeting the RES Requirements

Several utilities expressed having no obstacles now or in the future with meeting RES compliance. However, other utilities provided obstacles they have confronted or will encounter with future RES compliance. Those that were noted are:

- Added costs of renewable development, transmission deliverability issues, and siting difficulties. Transmission improvement projects will help mitigate the impacts of the obstacles. (SMMPA)
- State and federal policies, along with regulatory decisions, as well as the practices and strategies of certain interest groups, may artificially create cost shifts among consumers particularly if renewable energy projects are not

required to pay their fair share of utility infrastructure including generation, transmission, and distribution costs. If this is permitted, then other consumers will unfairly pay higher rates, having a detrimental effect on all impacted consumers, but elderly and lower-income groups will have a particularly difficult time absorbing these added costs. Proposed solution: Renewable energy projects should pay their fair share of utility infrastructure including generation, transmission, and distribution costs and PURPA should be reformed at the federal level. (East River Electric Power Coop, Inc.)

- Otter Tail has consistently added renewable energy to its resource portfolio, but the utility has concerns regarding the small solar portion of the SES. (Otter Tail Power)
- Increasing costs of wind energy contracts and transmission upgrades are potential obstacles, along with uncertainty of future transmission congestion and generation interconnection queue study processes. Proposed solution: Great River Energy has addressed these obstacles through robust resource planning processes, including risk analysis, in advance of investment decisions. Great River Energy has also mitigated future price risk by taking advantage of federal tax incentives. (Great River Energy)
- Artificially low prices of renewable power due to federal and state tax subsidies for renewable development. Proposed solution: Elimination of cost shifts involved with renewable tax subsidies and reforming PURPA. (L and O Power Cooperative)
- In 2020, the Renewable Portfolio Standard (RPS) increases the overall RES and has a 24% wind requirement as part of the 30% RES, as well as an additional 1.5% solar obligation. The 2030 SES 10% goal will substantially increase the solar need, and will necessitate the addition of solar resources in the future. (Xcel Energy)
- Minnesota Power knows of no new large hydro project sites in Minnesota. Even if sites existed, hydro development is realistically limited to expansions at existing impoundments due to anticipated resistance to the construction of new dams. There is obtainable and expandable hydro in the Province of Manitoba, but current Minnesota law does not allow renewable generation from hydro units of 100 MW or larger to apply towards Minnesota's RES. (Minnesota Power)
- Accessibility to reasonably priced biomass now and in the future is dependent on several factors outside the utility control. (Minnesota Power)
- Concerns regarding adequate transmission and integration costs will continue for wind development in general as the penetration of wind power increases throughout the region. Minnesota Power executed a unique solution for its customers to provide transmission access. (Minnesota Power)

- The penetration of intermittent resources such as solar and wind are reaching levels that their impacts on the system, power supply and market are starting to be felt in Minnesota Power's region. (Minnesota Power)

Efforts Taken to Protect Ratepayers

Some efforts that utilities have taken to mitigate against undesirable economic impacts to ratepayers include: long term sales contracts with regional utilities to offset surplus from long-term renewable wind contracts (Minnkota Power Cooperative, Inc.); long term contracts to control costs of renewable energy (Dairyland Power Cooperative); effective long-term planning and portfolio evaluation (Great River Energy; Missouri River Energy Services; Minnesota Power); purchasing in a group with other entities to increase economies of scale when procuring renewable resources as well as purchasing RECs when it was less costly than owning or procuring via power purchase agreements (Central MN Municipal Power Agency); support legislative and regulatory reforms to let markets dictate power supply development, not government (L and O Power Cooperative); timing an RFP in late 2016 allowed Xcel Energy to acquire low cost wind energy where the projects also qualified for the PTC tax benefits (Xcel Energy); long-term PPA contracts where the terms of these contracts, including price, are locked in (Minnesota Municipal Power Agency); financing generation projects using tax free municipal bonds and lock in low interest rates for a period of 20 years or more, which controls costs and minimizes volatility (Minnesota Municipal Power Agency).

REC Prices and Availability

As with the previous biennial process, staff has compiled an attachment listing the prices for REC purchases and sales. Tracking REC prices can be useful because it may assist the Commission and stakeholders in knowing whether there is a functioning REC market, whether utilities are relying on decoupled REC purchases to meet RES requirements, and how many surplus RECs are in the market.

IV. Staff Analysis

No issues have been raised or are being contested in these dockets.

Finding of Compliance

Staff agrees with the Department that the utilities have retired the correct number of RECs for years 2016 and 2017. Staff also believes, based upon the reports of each utility, that the utilities have reasonable plans to comply in the future. Utilities are in compliance of the RES goals and on track with meeting future RES requirements. SMEC, which is in compliance until 2019, noted that it intends to purchase adequate RECs to meet future compliance and plans to have renewable generation operational in year 2019.

Impacts to Ratepayers

Staff shared above the many efforts taken by utilities to mitigate effects to ratepayers. Many concerns were focused on the pricing of renewable energy projects and staff agrees that any generation project will have an impact on rates and ratepayers.

Future Reporting

In the last biennial report (2014-2015), staff suggested modifications to the report and the Commission agreed. At that time, utilities only listed their REC purchases and sales and the prices of those RECs, but not the type of REC. Staff suggested that tracking the type of RECs, such as solar, that are purchased or sold would aid the Commission in this docket and other dockets where REC pricing has come up. Most utilities were helpful in supplying this information and staff has clarified the template for the next biennial report.

REC Prices and Availability

REC prices help the Commission understand how utilities are managing their REC portfolios. As noted in the attachments, the sale of RECs reported by the utilities range from between \$0.45 to \$29.00 per REC, while purchased RECS range from \$0.45 to \$0.80. Staff observed while reviewing the reports that trade secret designations among the utilities vary. A majority of utilities supply the information for public use, while a few provide aspects of the report, such as REC pricing, as trade secret.

V. Decision Options

I. Compliance with the 2016 and 2017 Renewable Energy Standard

- A. Find that the utilities enumerated above and subject to Minnesota Statute §216B.1691 have complied with the 2016 and 2017 standards of 17% percent of annual retail sales (25% for Xcel) OR
- B. Make some other finding.

II. Future Compliance

- C. Find that the utilities subject to Minnesota Statute §216B.1691 have submitted what appear to be reasonable plans to meet the renewable energy standards for 2018-2019 OR
- D. Make some other finding.