

December 7, 2015

VIA ELECTRONIC FILING

Mr. Daniel P. Wolf
Minnesota Public Utilities Commission
121 Seventh Place East
Suite 350
St. Paul MN 55101-2147

Re: **2015 Minnesota Biennial Transmission Projects Report**
PUC Docket No. E9099/M-15-439

Dear Mr. Wolf:

On October 30, 2015, sixteen utilities that are part of the Minnesota Transmission Owners filed the 2015 *Minnesota Biennial Transmission Projects Report* with the Public Utilities Commission. On November 20, 2015, in accordance with Minnesota Rules part 7848.1800, subpart 3, the Department of Commerce filed comments with the Commission on the completeness of the Report. No other comments were filed.

The Department of Commerce reviewed the 2015 Biennial Report to determine whether it contained the information required by Minnesota Rules part 7848.1300. The only piece of additional information the Department thought should be included in the Biennial Report was a load and capability report from a regional reliability council, required under part 7848.1300, item B. Since the Mid-Continent Area Power Pool (MAPP) no longer exists, the Department recommended that the MTO submit a copy of the Midwest Reliability Organization's (MRO) load and capability report found in the North American Electric Reliability Corporation's (NERC) 2014 Long-Term Reliability Assessment.

Accordingly, the MTO is submitting the pertinent pages for the MRO-MAPP load and capability report (pages 45 and 46) from the 2014 NERC Assessment. The entire NERC Assessment for 2014 can be found here, along with Assessments for other years:

<http://www.nerc.com/pa/RAPA/ra/Pages/default.aspx>

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The Department also recommended that the Commission follow its standard practice of establishing a comment and reply comment period. The MTO supports that recommendation. Pursuant to Minnesota Rules part 7848.1800, subparts 5 and 7, initial comments are due by January 15, 2016, and reply comments are due by March 1, 2016. The Commission has already published notice of the comment period.

Thank you very much.

Sincerely,

/s/ Alan R. Mitchell

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Email: amitchell@fredlaw.com

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

2014 Long-Term Reliability Assessment

November 2014

RELIABILITY | ACCOUNTABILITY



3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326
404-446-2560 | www.nerc.com

MRO-MAPP

Assessment Area Overview

The Mid-Continent Area Power Pool (MAPP) is an association of electric utilities and other electric industry participants operating in all or parts of Iowa, Minnesota, Montana, North Dakota, and South Dakota. Currently, the MAPP Planning Coordinator includes entities in two BAs and 13 LSEs. The MAPP covers an area of approximately 200,000 square miles and serves a population of about 3.5 million. MAPP typically experiences its annual peak demand in summer, but recently started projecting peak internal demand during the winter seasons. For this long-term outlook, MAPP is considered a summer-peaking area. However, depending on the load forecasts, MAPP may shift to a winter-peaking area in future long-term assessments. There have not been any changes to the MAPP Assessment Area footprint in the last two years, and no changes are expected in the future.

Summary of Methods and Assumptions

- Reference Margin Level**
MAPP members use a range of reserve margin targets depending on each individual member's system. However, MAPP provides a 15 percent Reference Margin Level.

- Load Forecast Method**
Coincident; normal weather (50/50)

- Peak Season**
Summer; however, recent projections indicate higher Total Internal Demand during the winter seasons.

- Planning Considerations for Wind Resources**
Historical data

- Planning Considerations for Solar Resources**
No utility-scale solar resources

- Footprint Changes**
The Minnesota Municipal Utilities Association (MMUA) and Ames Municipal Utilities (AMES) are now reported in the MISO footprint.

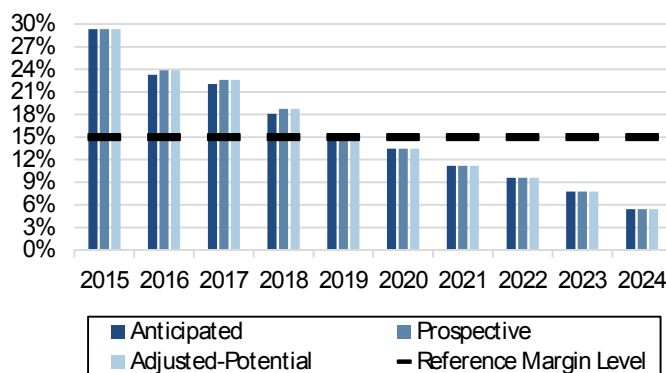
Assessment Area Footprint



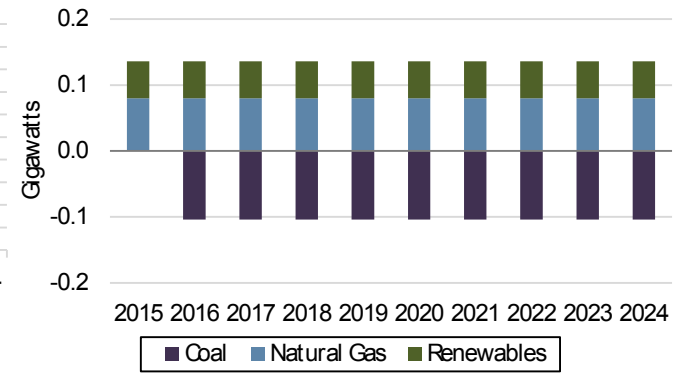
Peak Season Demand, Resources, and Reserve Margins

Demand (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Total Internal Demand	5,028	5,374	5,500	5,690	5,810	5,927	6,038	6,145	6,257	6,427
Demand Response	96	98	94	96	98	100	102	104	106	108
Net Internal Demand	4,932	5,276	5,406	5,594	5,712	5,827	5,936	6,041	6,150	6,319
Resources (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Anticipated	6,379	6,505	6,598	6,607	6,599	6,612	6,599	6,621	6,628	6,661
Prospective	6,379	6,535	6,628	6,642	6,599	6,612	6,599	6,621	6,628	6,661
Adjusted-Potential	6,379	6,535	6,628	6,642	6,599	6,612	6,599	6,621	6,628	6,661
Reserve Margins (%)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Anticipated	29.35%	23.30%	22.05%	18.11%	15.52%	13.48%	11.17%	9.60%	7.76%	5.41%
Prospective	29.35%	23.86%	22.61%	18.74%	15.52%	13.48%	11.17%	9.60%	7.76%	5.41%
Adjusted-Potential	29.35%	23.86%	22.61%	18.74%	15.52%	13.48%	11.17%	9.60%	7.76%	5.41%
Reference Margin Level	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
Excess/ Shortfall (MW)	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Anticipated	708	438	381	174	30	(89)	(227)	(326)	(445)	(606)
Prospective	708	468	411	209	30	(89)	(227)	(326)	(445)	(606)
Adjusted-Potential	708	468	411	209	30	(89)	(227)	(326)	(445)	(606)

Peak Season Reserve Margins



Peak Season Projected Generation Mix (Cumulative Change)



Demand, Resources, and Reserve Margins

The Anticipated, Prospective, and Adjusted-Potential Reserve Margins for MAPP are below the Reference Margin Level of 15 percent beginning in 2020 and remain below it through 2024. MAPP has traditionally always met its target reserve margin through the mid-term planning horizon, and beyond that time frame, Firm contracts or capacity additions may be currently unknown. The long-term resource adequacy outlook for MAPP will be updated with load projections and the execution of long-term contracts, and new capacity additions are planned.

High forecast load growth in Rochester and Minnesota, as well as the ongoing growth of oil and gas development in the Bakken Formation in western North Dakota and eastern Montana, has contributed to a Total Internal Demand annual growth rate of nearly 3 percent. With Minnesota Municipal Utilities Association (MMUA) and Ames Municipal Utilities (AMES) now submitting data through MISO, MAPP demand growth is expected to be lower in the near term, compared to what was forecast in the 2013LTRA.

Since the 2013LTRA, the Rochester Public Utilities' (RPU) Silver Lake Plant (85.2 MW) was decommissioned, while 226 MW of capacity was added, of which 146 MW were wind resources. MAPP is projecting 349 MW of imports and 1,289 MW of exports, retaining the status of a net exporting Assessment Area with a net export of 940 MW. For these transfers, Firm contracts exist for both the capacity and the transmission service. MAPP forecasts meet the various reserve margin targets without needing to include energy-only, uncertain, or transmission-limited resources.

Transmission Outlook and System Enhancements

Several transmission projects are projected to be completed during the assessment period, all of which are intended to increase the reliability of the MAPP transmission system. RPU is a joint owner of the Hampton – North Rochester – LaCrosse portion of the CAPX2020 project; this portion is expected to be in service by 2016. Although it has experienced some delays, Minnkota Power Cooperative's Center – Grand Forks line was scheduled to be completed by July 2014, which will improve reliability with additional wind resources coming online.

Long-Term Reliability Issues

The integration of variable resources presents new challenges in the Assessment Area, changing the nature of how the BPS is operated. There is expected high load growth in the northwestern North Dakota area and greater load growth projected in Rochester, Minnesota. There is some minor instability that is currently being studied, and the MAPP assessment area does not foresee any reliability or capacity issues becoming problematic during the long-term assessment period.

**STATE OF MINNESOTA
MINNESOTA PUBLIC UTILITIES COMMISSION**

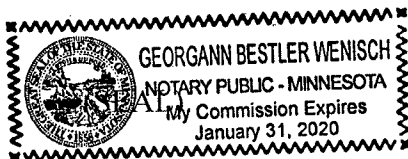
In the Matter of the 2015 Minnesota Biennial
Transmission Projects Report

AFFIDAVIT OF SERVICE

I, Mary Ann Monahan, being first duly sworn on oath say that in the City of Minneapolis, County of Hennepin, in the State of Minnesota, on the 7th day of December, 2015 served by U.S. Mail, pages 45 and 46 of the 2014 NERC Long-Term Assessment, to those persons listed on the attached service list.

Mary Ann Monahan
Mary Ann Monahan

Subscribed and sworn to before me this 7th day of December, 2015.



Georgann Bestler Wenisch
Notary Public, Hennepin County, Minnesota
My Commission Expires 1-31-2020

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