

BEFORE THE MINNESOTA PUBLIC UTILITIES COMMISSION
121 7th Place East, Suite 350
St. Paul, MN 55101-2147

In the Matter of Minnesota Power's
Application for Approval of its 2015-2029
Resource Plan

PUC Docket No. E015/RP-15-690

LPI COMMENT

The Large Power Intervenors ("LPI"), consisting of ArcelorMittal USA (Minorca Mine); Blandin Paper Company; Boise Paper, a Packaging Corporation of America company, formerly known as Boise, Inc.; Enbridge Energy, Limited Partnership; Hibbing Taconite Company; Mesabi Nugget Delaware, LLC; PolyMet Mining, Inc.; Sappi Cloquet, LLC; USG Interiors, LLC; United States Steel Corporation (Keewatin Taconite and Minntac Mine); United Taconite, LLC; and Verso Corporation; submit the following comments with respect to Minnesota Power's application for approval of its 2015-2029 integrated resource plan (the "Resource Plan").

I. INTRODUCTION

On November 12, 2013, the Minnesota Public Utilities Commission (the "Commission") issued its order approving Minnesota Power's 2013-2026 integrated resource plan (the "2013 Resource Plan Order").¹ In the 2013 Resource Plan Order, the Commission set September 1, 2015, as the due date for Minnesota Power's next resource plan filing.² Consistent with the 2013 Resource Plan Order, Minnesota Power filed the Resource Plan on September 1, 2015. On October 7, 2015, the Commission issued a notice of comment (the "Notice"), setting the due dates for initial comments and reply comments for January 4, 2016, and March 4, 2016, respectively. On November 4, 2015, Minnesota Power submitted a supplemental filing responding to a request by the Minnesota Department of Commerce - Division of Energy Resources. LPI is submitting this comment in accordance with the Notice.

¹ *In the Matter of Minnesota Power's 2013-2013 Integrated Resource Plan*, PUC Docket No. E015/RP-13-53, ORDER APPROVING RESOURCE PLAN, REQUIRING FILINGS, AND SETTING DATE FOR NEXT RESOURCE PLAN, (November 12, 2013).

² *Id.* at pg. 8, ordering para. 9.

II. ANALYSIS

As key stakeholders in Minnesota Power's resource planning processes, LPI appreciates the opportunity to submit the following comments in response to the Resource Plan. LPI recognizes the substantial effort of Minnesota Power's staff in preparing the Resource Plan at a time of continued, but hopefully clearing, regulatory and market uncertainty for utilities and in responding to the wide range of information requests submitted in the past three months. LPI submits this comment to address two overarching issues that the Commission should consider in choosing to accept, reject, or modify the Resource Plan - cost and flexibility. Prior to addressing these issues, this comment will provide an overview of applicable law. LPI reserves its right to raise additional issues and/or respond to other comments, as part of any reply comment.

A. **Statutory Background**

Resource plans are governed by section 216B.2422 of the Minnesota Statutes and Chapter 7843 of the Minnesota Rules. Public utilities are required to submit a resource plan every two years by July 1.³ The resource plan should propose a list of resource options the utility could use to meet its customers' needs during the next fifteen years and should include an explanation of the supply and demand circumstances that each resource option was developed to address.⁴ The utility must submit detailed information supporting its selection of the preferred plan, including (1) a complete list of resource options, (2) supporting information regarding process and analytical techniques, (3) a five-year action plan to obtain new resources, (4) a narrative discussion of why the plan is in the public interest, and (5) a nontechnical summary describing the five-year action plan and its likely impact on customer rates.⁵

³ MINN. R. 7843.0300, subpart 2. In the September 13 Order, the Commission found that "[e]nforcing the filing and comment deadlines of the rule would impose an excessive burden on [Minnesota Power] and the ratepayers by prolonging the uncertainty surrounding the future of these generators and hindering [Minnesota Power's] ability to determine its least-cost resource mix as expeditiously as possible." Furthermore, the Commission found that "varying the time frames in the rule . . . would serve the public interest" and "would not conflict with any standards imposed by law."³ Therefore, the Commission imposed an accelerated schedule for Minnesota Power's filing of the Resource Plan. Under the accelerated schedule, Minnesota Power was required to file the Resource Plan by March 1, 2013, initial comments were originally due by May 1, 2013, and reply comments were due by June 3, 2013. As noted on p.2, above, the Commission has since extended the initial comment deadline to June 3, 2013, and the reply comment deadline to July 1, 2013.

⁴ MINN. R. 7843.0400, subpart 2 and 7843.0100, subparts 6 and 9.

⁵ MINN. R. 7843.0400, subpart 3, 4.

Upon submittal of a resource plan, the Commission’s review is governed by section 216B.2422, subd. 2 of the Minnesota Statutes and Chapter 7843 of the Minnesota Rules. The Commission is obligated to review the record, which includes both the plan itself and the utility’s responses to information requests, and “approve, reject, or modify” the plan “consistent with the public interest.”⁶ In reviewing a proposed resource plan, the Commission must consider the characteristics of the available resource options and the proposed plan as a whole. In particular, the Commission must evaluate whether the resource options and plans are able to: (i) maintain or improve the adequacy and reliability of service, (ii) keep the customers’ bills as low as possible, given regulatory and other constraints, (iii) minimize adverse socioeconomic and environmental effects, (iv) enhance the utility’s ability to respond to changes affecting its operations, and (v) limit the risk of adverse effects on customers and the utility that the utility cannot control.⁷ Overall, LPI is satisfied with the general direction of the short-term action plan. LPI submits this comment to focus the Commission’s attention on (ii) and (iv); keeping customers’ bills as low as possible and enhancing flexibility.

B. Contrary to Assertions in the Resource Plan, Minnesota Power’s Industrial Rates are Not Competitive

The members of LPI compete in a global marketplace, where competition is both external and internal. Internal competition is often the most vigorous, with each plant competing worldwide for capital improvements and other operational investments. One key concern is the cost of energy, a cost that can range from 25%-30% of the overall cost of production that cannot be passed on to customers. LPI is very concerned about the ever increasing cost of energy at a time of decreased operating margins.

In the Resource Plan, Minnesota Power states “Minnesota Power has very competitive rates for residential, commercial and industrial customers, especially when compared to regional and national rates (see pages 78-79 for a detailed rate comparison).”⁸ LPI disagrees. Reviewing the referenced pages, Minnesota Power claims the 2014 average industrial rate is roughly

⁶ MINN. STAT. § 216B.2422, subd. 2.

⁷ MINN. R. 7843.0500, subpart 3. The Commission may direct the utility to address certain unresolved issues in its next resource plan. *Id.* at subpart 4.

⁸ *Resource Plan*, at pg. 37.

\$54.30/MWh.⁹ Minnesota Power concedes that this information, which is based on an Edison Electric Institute publication, is “not directly comparable with the Company’s rates presented in the 2015 Plan.”¹⁰ Reviewing the rate projections contained in Appendix L of the Resource Plan, which is a better gauge of Minnesota Power’s industrial rates, the rates for the large power class are quite a bit higher than indicated by the Edison Electric Institute. In Appendix L, Minnesota Power asserts that the average Large Power rate for 2015 is \$59.95/MWh.¹¹ This \$5.65/MWh difference is significant - for LPI that difference is a cost of more than \$36 million.¹²

To put Minnesota Power’s increasingly uncompetitive industrial rates in context, a review of rate increases since 2005 is helpful. According to a 2007 filing by Minnesota Power, the average rate for the large power class in 2005 was \$38.46/MWh.¹³ If Minnesota Power’s preferred plan is adopted, Minnesota Power states that the average rate for the large power class will be approximately \$72.02/MWh by 2019 – an increase of more than 87% over a 14-year period. LPI is very concerned about how this increase will affect LPI members, many of whom have been statutorily defined as energy-intensive trade-exposed customers.¹⁴ Whether and to what extent these rate increases will affect future operations and electric energy consumption remains to be seen. But given current market conditions, it does not appear such increases can be absorbed at historic operating levels. Even more troubling is the fact that it is not clear whether the significant estimates of rate increases is again understated.

In its initial comment in response to Minnesota Power’s application for approval of its 2013-2027 resource plan, LPI expressed concern that Minnesota Power underestimated its costs.¹⁵ In that resource plan, Minnesota Power projected rates for 2017 of \$65.65/MWh for the

⁹ *Resource Plan*, at pg. 79.

¹⁰ *Resource Plan*, at pg. 79.

¹¹ *Resource Plan*, App. L, pg. 4.

¹² Although LPI is broader than just the mining and paper industry, a review of the 2014 Advance Forecast Report contained in Appendix A of the Resource Plan reveals that the 2014 consumption for the mining and paper industries is 4,888,265 MWh, and 1,492,657 MWh, respectively, for a total of 6,380,922 MWh. *Resource Plan*, App. A, pg. 34-35. A \$5.65/MWh price difference is therefore \$5.65/MWh x 6,380,922 MWh, or \$36,052,209.30.

¹³ *In re Minnesota Power’s Petition for Approval of its Boswell 3 Environmental Improvement Plan and Boswell 3 Environmental Improvement Rider*, Docket No. E-015/M-06-1501, PETITION FOR APPROVAL OF BOSWELL 3 PLAN, pg. 16 (January 29, 2007).

¹⁴ MINN. STAT. § 216B.1696.

¹⁵ *In the Matter of Minnesota Power’s 2013-2013 Integrated Resource Plan*, PUC Docket No. E015/RP-13-53, LPI INITIAL COMMENT, pg. 18-19 (June 3, 2013).

large power class.¹⁶ Minnesota Power is now projecting 2017 rates for the large power class of \$68.29/MWh, an increase of \$2.64/MWh, or approximately 4%.¹⁷ Although not entirely clear, it appears that LPI was correct that Minnesota Power's 2013 cost estimates failed to include certain transmission costs that Minnesota Power would pay/incur in the 2013-2017 timeframe.¹⁸ Although LPI does not expect rate impact projections to be 100% accurate, significant deviations such as a 4% increase should be explained. LPI therefore requests Minnesota Power to explain in its reply comment why its prior cost projections have proven inaccurate and whether additional costs have been excluded from the projections in Appendix L of the Resource Plan.

C. Minnesota Power Should Provide Additional Information on its Decision to Issue an RFP for Up to 400 MW of Natural Gas-Fired Generation

The above increases could be compounded by a premature commitment to new generation, for which there is an unproven need. In particular, Minnesota Power notes as part of its short-term action plan that it requests approval to "Begin competitive procurement process for 200 MW - 300 MW of efficient natural gas CC generation supply for implementation by 2024."¹⁹ Generally speaking, the integrated resource planning process is designed to review the size, type, and timing of future generating needs.²⁰ Minnesota Power's request is therefore within the purview of the resource planning process, albeit a bit early given the fact that it should not take 7-8 years to construct a combined cycle facility.

In any event, LPI points out that Minnesota Power has decided to proceed without Commission approval on beginning the competitive procurement process for natural gas

¹⁶ *In the Matter of Minnesota Power's 2013-2013 Integrated Resource Plan*, PUC Docket No. E015/RP-13-53, INITIAL PETITION, App. J, Table 1, pg. 4 (February 6, 2013).

¹⁷ *Resource Plan*, App. L, pg. 4.

¹⁸ There may be other factors that changed between resource plans, including the continued delay of projected load growth for the large power class. But LPI is alarmed by this increase, especially in light of the fact that the cost projections between the two resource plans for the year 2017 for the residential class decreased (Appendix J of Minnesota Power's 2013 resource plan projected year 2017 costs for the residential class at \$11.949/MWh for the residential class and Appendix L of the 2015 Resource Plan projects 2017 costs of \$11.699/MWh for the residential class).

¹⁹ *Resource Plan*, at pg. 87.

²⁰ See e.g., *In the Matter of the Request of Minnesota Power for a Certificate of Need for the Great Northern Transmission Line Project*, PUC Docket No. E014/CN-12-1164, OAH Docket No. 65-2500-31196, DIRECT TESTIMONY AND ATTACHMENTS OF DR. STEPHEN RAKOW, at Attach. SR-2 (noting that the resource plan "DOES identify generic size, type, and timing of plants needed." And "DOES NOT identify specific power plants that would supply the deficit.") (Attach. SR-2 is attached as Exhibit A to this comment).

generation. On October 15, 2016, Minnesota Power issued a request for proposals (the “RFP”) for up to 400 MW of capacity and energy beginning in the 2022 to 2024 timeframe. The RFP is attached as Exhibit B to this comment. To LPI’s knowledge, no formal press release was issued by Minnesota Power regarding this RFP. Instead, there is only mention of the RFP in very small font at the very bottom of its website.²¹ Yet Minnesota Power appears to be working closely with the City of Cohasset on what is referred to as the Itasca Energy Center (“IEC”) project.²²

It is not clear why Minnesota Power has decided to preempt the Commission’s decision-making by soliciting bids for an alleged need that the Commission has not approved. Therefore, LPI respectfully requests Minnesota Power to detail in its reply comment (a) the justification to proceed with the RFP, including but not limited to updated load forecasts to support up to 400 MW of capacity and energy (100 MW - 200 MW greater than set forth in the short-term action plan of the Resource Plan) by 2022 to 2024 (up to 2 years sooner than set forth in short-term action plan of the Resource Plan) and a discussion on why Minnesota Power believes the Commission should make any decision now for a need that allegedly doesn’t arise until 2024; (b) how many bids it has received; (c) the particulars of each bid received (*e.g.*, bidder name, size of proposed resource, type of proposed resource, timing of proposed resource, location of proposed resource, etc.); and (d) alternatives Minnesota Power is considering, such as demand response program enhancements, in lieu of any generating resource.

D. Any Resource Plan Approved by the Commission Must Retain Maximum Flexibility for Minnesota Power to Address Clean Power Plan Compliance

As detailed in Appendix E of the Resource Plan, there are myriad environmental regulations that could impact Minnesota Power’s generating fleet, requiring additional capital investment. Fortunately, it appears Minnesota Power is in a solid position to meet many of these environmental regulations. The Resource Plan states “Minnesota Power is in a better position than many utilities regarding these rules due to its significant level of voluntary reduction efforts implemented over the past decade such as the AREA Plan and BEC3 retrofit.”²³ To be sure, Appendix E contains a figure showing minimal or no investment for CSAPR, IB MACT,

²¹ <http://www.mnpower.com/>.

²² <http://www.scenicrangenewsforum.com/minnesota-power-energy-project-developer-has-yet-to-be-selec/>.

²³ *Resource Plan*, App. E, pg. 16.

NAAQS, and MATS/Minnesota mercury regulations.²⁴ However, three significant regulations have less certainty. Namely, Effluent Limit Guidelines, Coal Combustion Residual, and the Clean Power Plan (“CPP”).²⁵

Of these three regulations, significant near term decisions could be made regarding the CPP and discussions are well underway. Members of LPI are also working closely with the Minnesota Pollution Control Agency (“MPCA”) led stakeholder working group. This effort will lay the groundwork for the State’s compliance with the CPP and development of a state implementation plan (“SIP”). Whether and to what extent the SIP will impact Minnesota Power’s generating fleet remains to be seen. MPCA’s initial analysis suggests that, depending on the approach taken in the SIP, Minnesota is already on-target or close to on-target to meeting CPP obligations according to forecasts based on existing utility resources and commitments.²⁶ This early analysis supports managing regulatory uncertainty related to CPP by taking a cautionary approach for near-term resource decisions. The State will must finalize its SIP no later than September 2018, after which appropriate resource decisions for compliance can be made. To provide the greatest amount of flexibility during these stakeholder discussions and SIP development, LPI encourages the Commission to refrain from modifying Minnesota Power’s proposed short-term action plan.²⁷

III. CONCLUSION

LPI appreciates the opportunity to participate in this docket and the efforts of all parties to date on discovery and other issues. Although the short-term action plan appears to stay the course, LPI emphasizes that skyrocketing electric energy costs are an increasing concern that should be closely tracked and inform all resource planning analysis and decisions. On this point, LPI requests Minnesota Power to provide more information on its RFP for natural gas-fired generation and for the Commission to refrain from significantly modifying the short-term action

²⁴ *Id.* at pg. 17.

²⁵ *Id.* at pg. 16.

²⁶ See *Update: Forecast Numbers, Projected Clean Power Plan Compliance*, presentation by Peter Ciborowski, Minnesota Pollution Control Agency, December 11, 2015, which is attached as Exhibit A to this Comment. Under a rate-based approach to the SIP, MPCA’s analysis suggests that all utilities subject to the CPP—including Minnesota Power—would be in compliance without the need for any additional unit retirements or renewable energy investments.

²⁷ Except as appropriate to gain more information on the natural gas-fired generation RFP.

plan given the impending CPP SIP. LPI reserves the right to supplement this comment and provide additional analysis in reply comments, depending on the positions taken by other parties.

Date: January 4, 2016

Respectfully submitted,

STOEL RIVES LLP

/s/ Andrew P. Moratzka

Andrew P. Moratzka

Sarah Johnson Phillips

Emma J. Fazio

33 South Sixth Street, Suite 4200

Minneapolis, MN 55402

Tele: 612-373-8822

Fax: 612-373-8881

Attorneys for Large Power Intervenors

Update: Forecast Numbers, Projected Clean Power Plan Compliance

Peter Ciborowski

Minnesota Pollution Control Agency

December 11, 2015

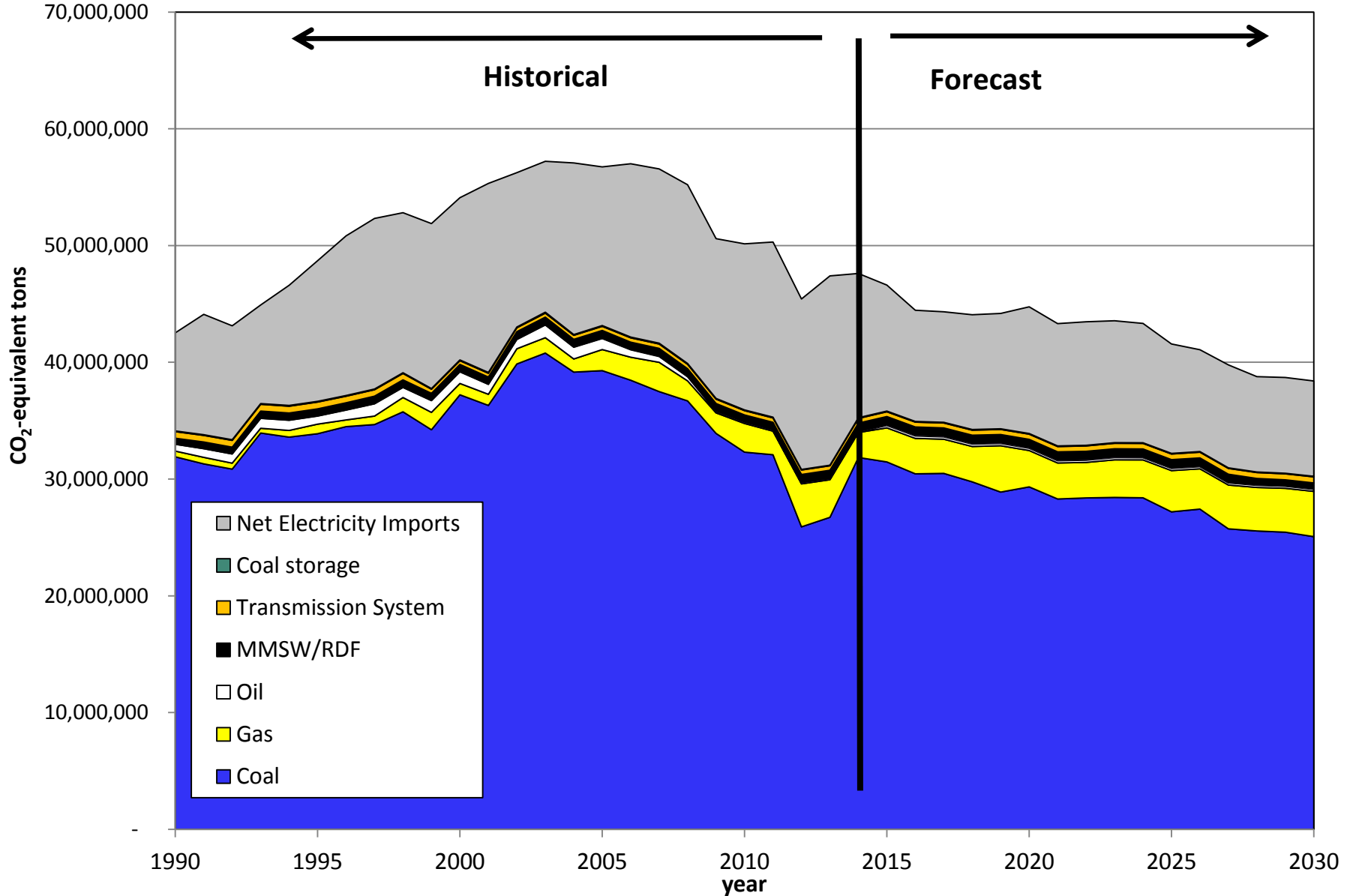


Minnesota Pollution Control Agency

Clean Power Plan forecast values extracted from MPCA 2014 electric power sector forecast

- CO₂ from affected units
 - MWH from affected units
 - MWH from eligible nuclear capacity expansions
 - MWH from eligible wind, solar, hydroelectric and biomass-based generation from renewable energy tracking under Minnesota's RES and SES (and the RPS's of neighboring states)
 - MWH from eligible new Manitoba Hydroelectric Board hydroelectric generation
 - MWH of eligible energy efficiency savings under MN energy efficiency resource standard (EERS) and antecedent retail sales forecasts
- MPCA technical support document with a description of forecast methods and with results from 2014 forecast can be found at:
 - http://www.environmental-initiative.org/images/files/CSEO/Electric_Power_Sector_GHG_BAU_Projections_Technical_Support_Document.pdf

Historic and MPCA-forecasted Greenhouse Gas Emissions from Electric Power



Principal Sources of Data for Forecast

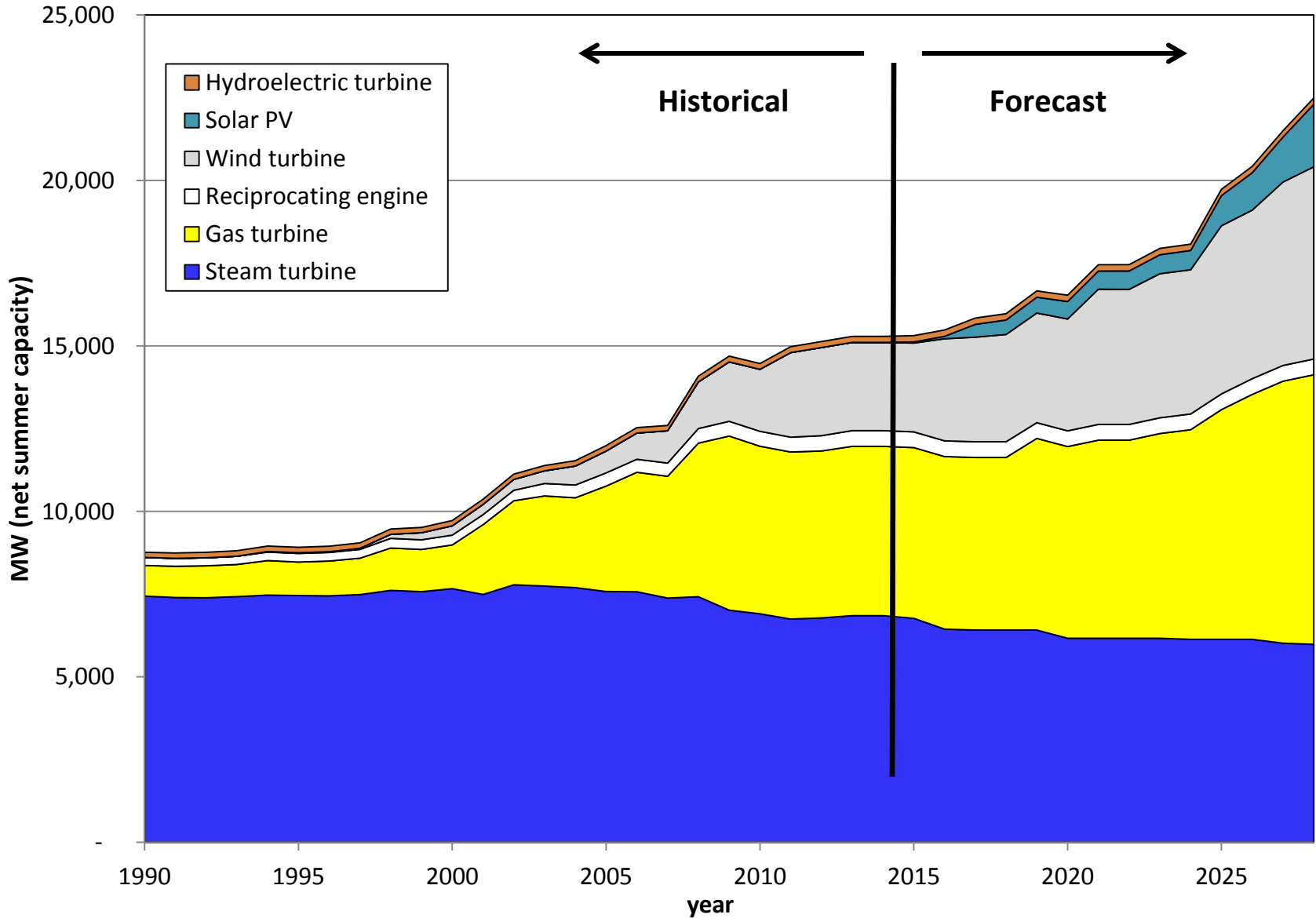
- In-state generation
 - thermal units Electric Utility Annual Reports
MPCA GHG emission inventory
EIA forms 923, 860
- Net Imports*
 - retail sales Electric Utility Annual Reports
 - T&D losses historical data, MPCA GHG EI
 - wind, solar, hydro RPS and SES compliance
assessment, EIA form 923 and
FERC Form 1
 - emission rate EIA *Annual Energy Outlook*

*net imports = retail sales plus T&D losses minus in-state net generation

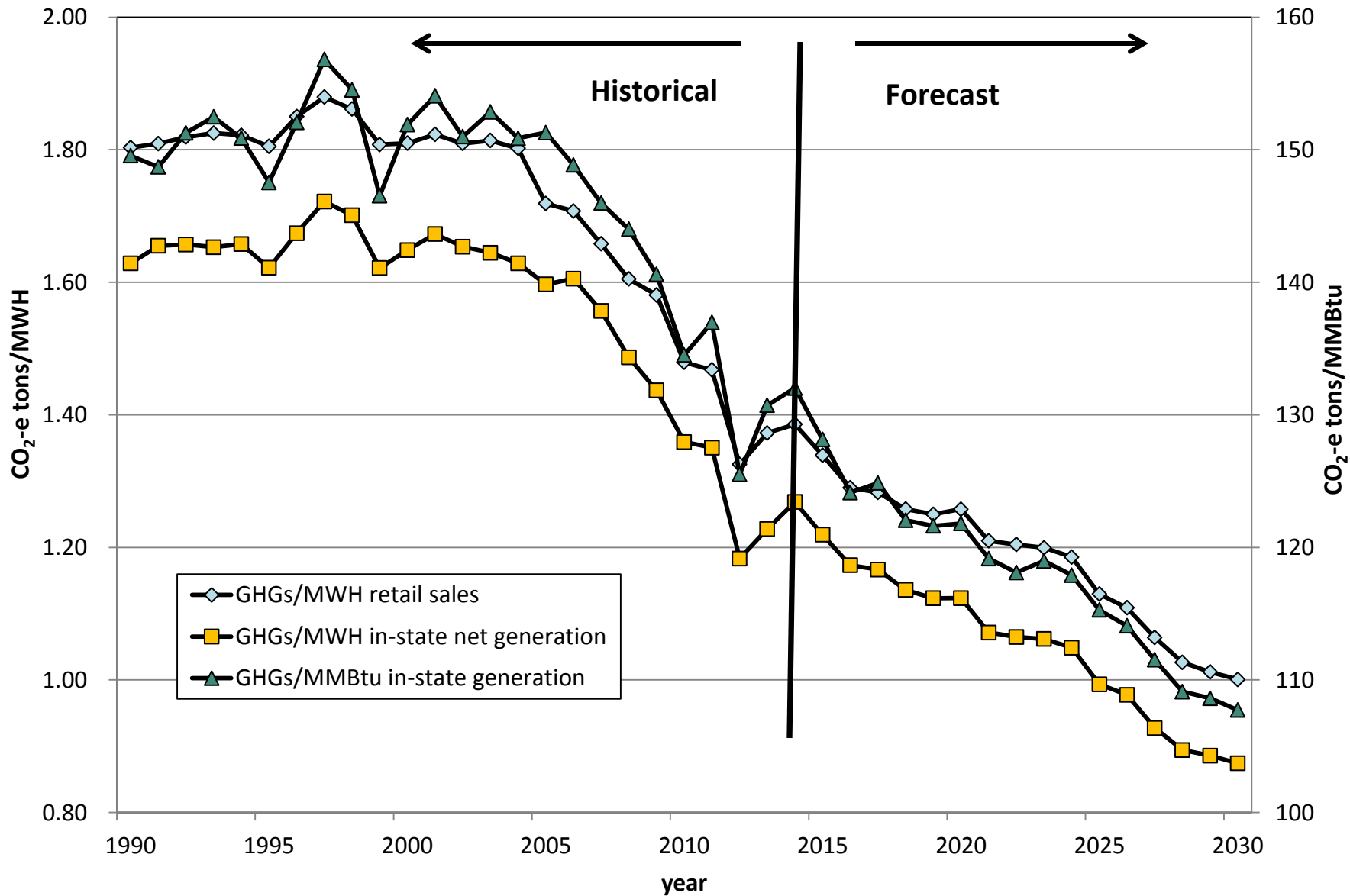
Basis of Changes to Forecast

- Updated Electric Utility Annual Reports
 - XCEL, Ottertail Power, Minnesota Power, Interstate Power, SMMPA
- Most recent Integrated Resource plans
 - GRE, MMPA, Minnkota, MRES
- Revised RPS and SES analysis for:
 - adjusted retail sales (WAPA exemption), sales for resale
 - large new MHEB eligibility in Wisconsin
 - Southern Minnesota Energy Cooperative
 - local practice in assigning exemptions and capacity to states and in definition of shelf life
 - roster of new and proposed facilities or capacity
 - RPS eligibility of SES-excess generation
 - implications of 'behind-the-meter' solar PV

Historic and MPCA Forecasted Installed Electric Generating Capacity in Minnesota



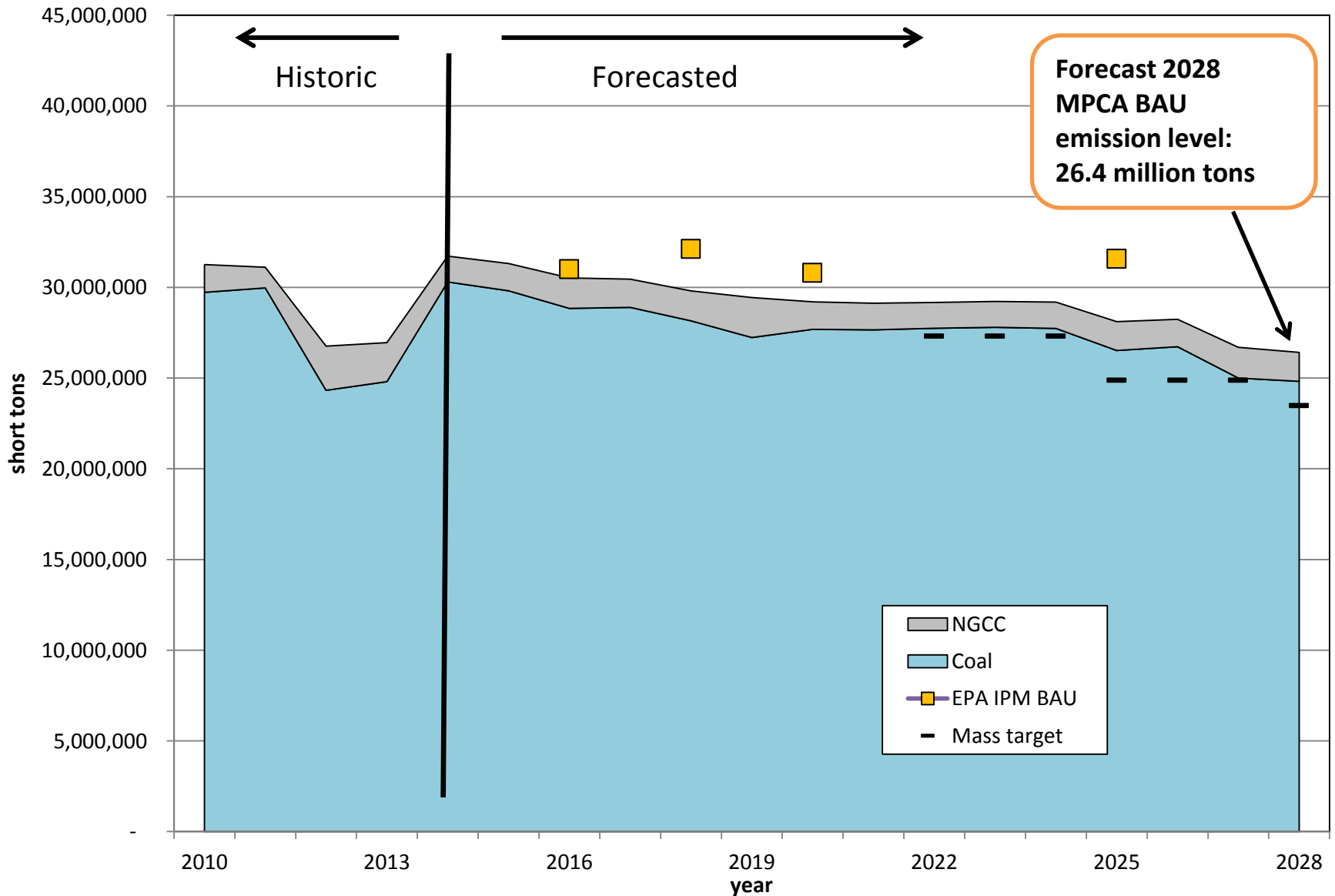
Historic and MPCA Forecasted Emissions Intensity in the Minnesota Electric Power Sector



CPP Compliance Work: Timing and Status

- Work current to October 1, 2015
- XCEL amendment to its 2015 IRP and revised EUAR are scheduled for early February 2016
 - On a mass basis, we would expect that the particulars of those 2016 filings will lower forecasted XCEL emissions at 2029 by at least 5 million tons (and probably more)
 - In a rate basis, all utilities that would be regulated by the MPCA under Section 111d are forecast to be in compliance without the need for any additional unit retirements or RE investments beyond what was assumed before XCEL's Sherco retirement announcement.

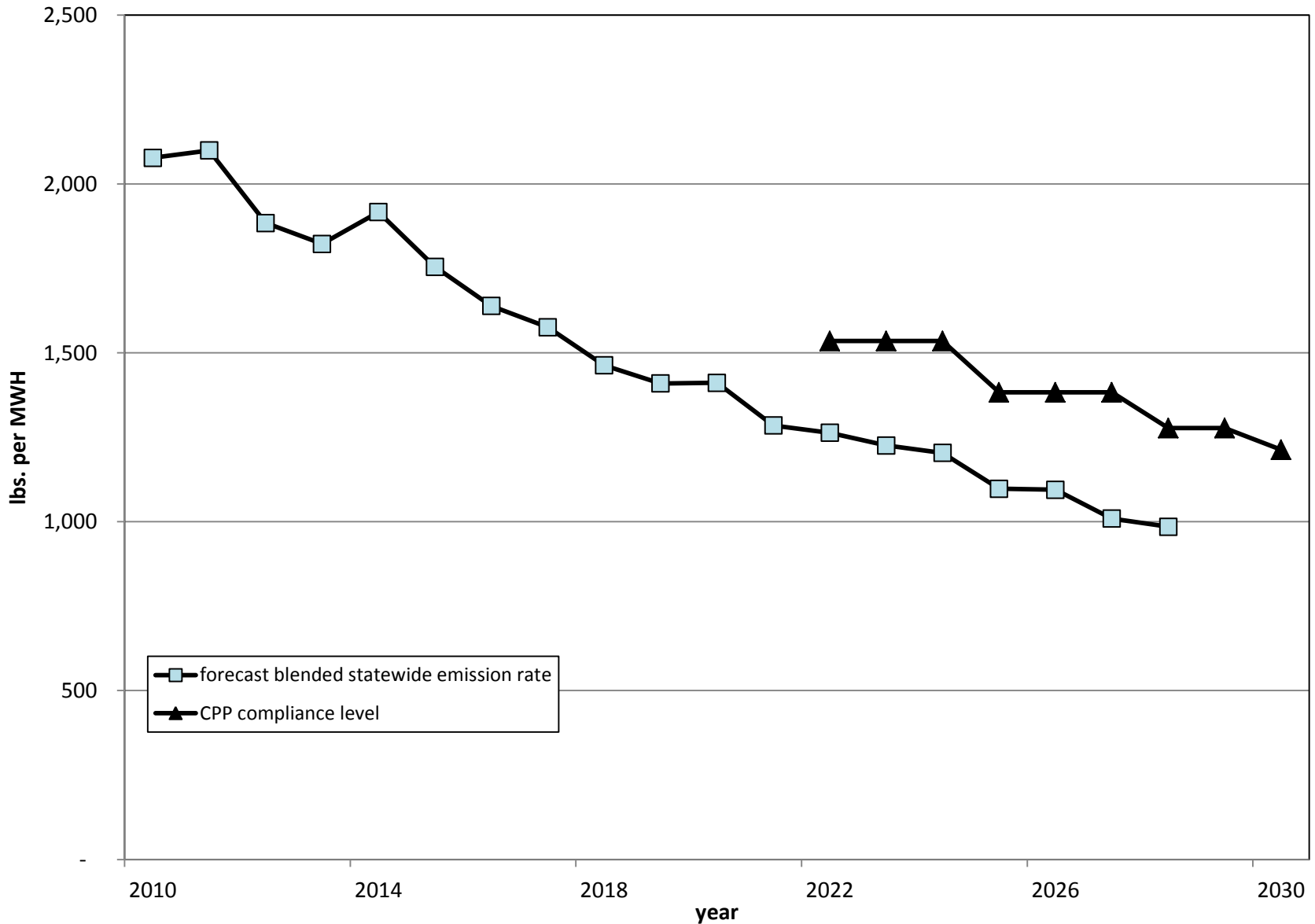
MPCA Historic and Forecast In-state CO₂ Emissions from CPP-Covered Generating Units



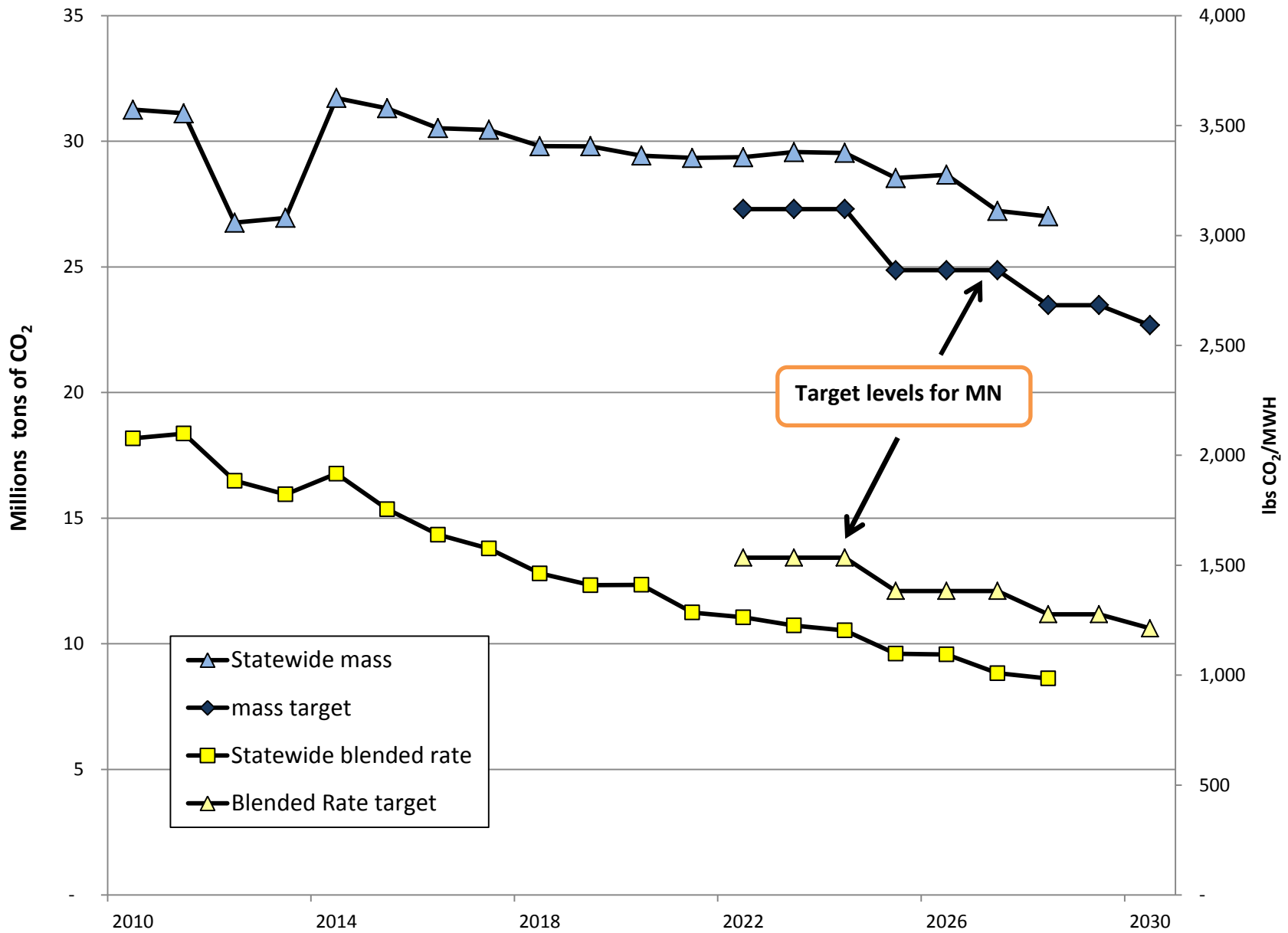
Available Compliance Resources under CPP

	year capacity installed or added	generation for years	banking of post 2021 credits	special conditions
domestic hydroelectric	2013 and later	2022 and later	yes	
foreign hydroelectric	2013 and later	2022 and later	yes	
domestic wind	2013 and later	2022 and later	yes	
foreign wind	2013 and later	2022 and later	yes	PPA required
domestic solar	2013 and later	2022 and later	yes	grid connection
domestic geothermal	2013 and later	2022 and later	yes	
domestic biomass	2013 and later	2022 and later	yes	approved feedstock
domestic WTE	2013 and later	2022 and later	yes	biogenic part; limits derived from effects on recycling and composting
domestic waste heat	2013 and later	2022 and later	yes	
domestic NGCC	2013 and later	2022 and later	yes	with heat rate better than standard; for incremental generation above 70% capacity factor
in-state nuclear	2013 and later	2022 and later	yes	
in-state CHP	2013 and later	2022 and later	yes	excess after thermal uses
in-state energy efficiency, load management and T&D improvement	2013 and later	2022 and later	yes	
out-of-state nuclear	2013 and later	2022 and later	yes	not available from neighboring states with mass-based systems
out-of-state CHP	2013 and later	2022 and later	yes	
out-of-state DSM: energy efficiency	2018 and later	2022 and later	yes	
out-of-state DSM: load management	2018 and later	2022 and later	yes	
out-of-state T&D improvement	2013 and later	2022 and later	yes	
CEIP credits	9/18 or date of p	2020, 2021	no	

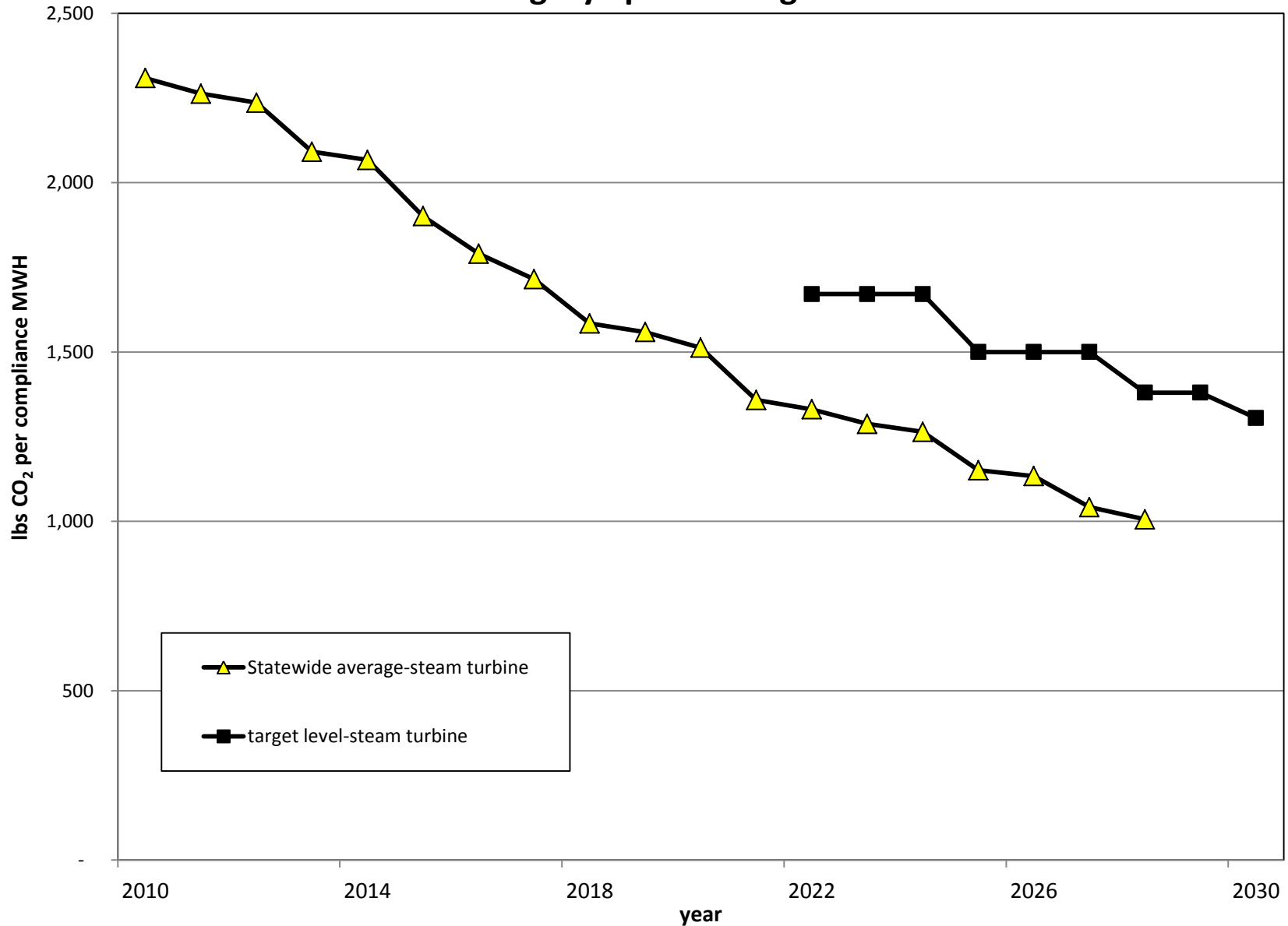
MPCA Forecasted Average Blended Emission Rate for Minnesota (CPP-covered Units only) and CPP Compliance Levels



MPCA Forecast Mass Emissions and Emission Rates for Affected Units



MPCA Forecast Emission Rates for Affected Steam Turbines and Category Specific Target Levels



Compliance Resources at 2028 (million MWH)*

* without GS-ERCs

Next Steps to Update the Forecast

- Roll-in new forecast values for XCEL Energy from amended 2015 Electric Utility Annual Report (early February)
- Include performance degradation effects for wind and solar and DSM lifetime effects

Request for Proposals

for

Up to 400 MW of Capacity and Energy

issued by

Minnesota Power



Issue Date: October 15, 2015
Proposals Due: January 5, 2016

Complete Information on this RFP can be found at:

<http://RFP.mnpower.com>

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* * * * *

1.0 BACKGROUND

Minnesota Power (MP), a division of ALLETE, Inc., has issued this Request for Proposals (RFP) and is seeking power supply proposals for up to a nominal 400 MW of natural gas-fired capacity and unit-contingent energy, beginning in the 2022 to 2024 timeframe.

Minnesota Power's resource strategy calls for a more balanced and flexible fleet of generation resources with the capability to meet customers' needs reliably and cost effectively in an environmentally responsible manner while still managing the inherent variability of the business cycles that affect large industrial customers.

The 2015 Integrated Resource Plan (IRP) that was recently filed with the Minnesota Public Utilities Commission (MPUC) indicates the need for a large, efficient natural gas-fired generating facility in the 2021 to 2024 timeframe. The IRP is designed to provide Minnesota Power customers with a safe, reliable, and affordable power supply while also reducing emissions. A natural gas combined cycle resource provides an efficient, less carbon-intensive option than MP's existing thermal generation portfolio to support the reliability of the company's power supply by increasing low-cost dispatchable energy and decreasing emissions.

Proposals must reflect all of the costs and characteristics of the resource delivered to MP's load zone and accept the curtailment, congestion and losses for delivery to MP's MISO load node. All potential agreements may be subject to MPUC approval.

All proposals must be received by the contact designated in Section 3.3 by the Proposal Submittal Deadline date shown in Section 3.1. MP reserves the right in its sole discretion to modify this schedule for any reason.

In combination and/or in competition with submitted resource proposals, MP intends to consider self-build natural gas-fired resource alternatives as potential power supplies to meet its resource needs. In connection with this RFP, MP has retained the services of an independent third party consultant (Sedway Consulting, Inc.) to work with MP in the quantitative evaluation of all proposals and self-build resources. However, MP will make the final decision (subject to MPUC review, as applicable) in MP's sole discretion.

* * * * *

2.0 ELIGIBLE PROPOSALS – MINIMUM REQUIREMENTS

Proposals must meet the general minimum eligibility requirements described below. MP will screen all proposals for compliance with these requirements. Proposals that fail to meet one or more of the general minimum eligibility requirements may be disqualified from further consideration.

2.1 Eligible Power Supply Requirements

1. Offers must provide MISO accredited or creditable capacity (including Zonal Resource Credits) of no less than 200 MW and up to a maximum of 400 MW of Summer and/or Winter capacity, be available to start delivery in the 2022 to 2024 timeframe, and be operated by a MISO market participant,
2. Offers must be based on a natural gas-fired, non-intermittent, firm resource with an availability guarantee of no less than 96% for the summer months (June through August) and winter months (December through February), and 75% for the remaining shoulder months.
3. Offers must deliver capacity and energy to the MP load zone (currently at the MISO MP.MP CPNode)

2.2 Eligible Project Structures

Minnesota Power will consider the following proposal types:

1. Power Purchase Agreements (“PPA”)
2. Tolling Agreements (“TA”)
3. Asset Purchase
4. Self-build Generation

The term for all contracts must be for a minimum of 20 years with an option to purchase the facility after 20 years at net book value. MP also has a preference for options for purchase at years 10 to 15.

2.3 Power Delivery Requirements

All proposals must provide for firm transmission service with delivery to the Minnesota Power load node (as determined by MISO), currently MP.MP. The cost of obtaining firm transmission service, any interconnection equipment, congestion costs, and losses up to the point of delivery shall be the responsibility of the respondent and must be included in the proposed pricing. Respondent shall be responsible for all operational related costs, penalties, and charges assessed by MISO.

One of the goals of this RFP is to determine the overall cost to MP's retail customers of the selected resource(s), recognizing that the cost of interconnection and delivery of power from the chosen resource(s) to MP's native load is an element of cost that must be taken into account. Network upgrade costs that are assessed to the project will be the responsibility of the respondent. Bidders will also be responsible for procuring transmission service and any associated third-party transmission costs needed to deliver power from the project to the Minnesota Power load zone. All pricing should reflect those costs (to the extent applicable) at the time of submittal. To the extent that network upgrades are required as a

consequence of adding the proposed project to the MISO transmission system, the network upgrade costs will be included in Minnesota Power's economical evaluation of the proposal.

2.4 Firm Fuel Transportation Service

Gas-fired generation resources must be served through firm transportation service by at least one major natural gas pipeline. For each pipeline the proposal must indicate the most applicable fuel pricing hub(s), pipeline tariffs and receipt points, negotiated rates, reservation rates, any local distribution company (LDC) charges, backup fuel capability, and any other fuel-related cost (as applicable). For evaluation purposes, the evaluation team plans to use the same fundamental fuel price forecast for estimates of natural gas commodity pricing for each bid.

The natural gas must be supplied at a rate, compression, and pressure sufficient to run the facility at full output (including duct firing and any other capacity enhancements) on a continuous basis and still comply with all operating requirements of the pipeline or LDC system.

For natural gas pipeline capacity, provide appropriate transportation details including the Maximum Daily Transportation Quantity and any other terms, conditions, or limits necessary for Minnesota Power to understand the deliverability of fuel and total cost of firm gas transportation. If an existing facility has existing firm pipeline contracts, the main terms of these contracts should be provided with the proposal if the respondent wishes to transfer these contracts to Minnesota Power. This information must be provided in Exhibit C: PPA/TA Data and/or Exhibit D: Asset Purchase Data and/or Exhibit E: New Build Cost Buildup (as available and applicable).

2.5 Environmental

The gas-fired resource must be in compliance with all applicable environmental rules and regulations.

To the extent applicable, all environmental attributes, including emission reduction credits and/or allowances, related to the power being purchased should be conveyed to MP. This includes, but is not limited to, any and all credits in any form (emissions credits, offsets, financial credits, etc.) or baseline emissions associated with both known and unknown pollutants, including but not limited to SO₂, NO_x, Hg, and CO₂. Any and all environmental liabilities, including compliance with known and future or unknown regulations or laws will be the sole responsibility of the generation producer/PPA seller.

For Asset Purchase proposals, the Seller will retain all pre-closing and known future environmental liabilities and obligations associated with the real and personal property transferred with or as part of a Sale of the Plant. This includes both on and off-site liabilities. The Buyer will assume all post-closing environmental liabilities and obligations.

2.6 Firm Pricing

Proposals must include pricing that is firm and not subject to any revisions during Minnesota Power's evaluation and negotiation process. Bidders may propose escalation rates that are either fixed or, if appropriate and defensible annually indexed to the Gross Domestic Product Implicit Price Deflator (GDPIPD). Such indexing is not acceptable for demand or capital pricing but for elements of a bidders pricing proposal that will be impacted by the GDPIPD. The GDPIPD will be adjusted annually as published by the U.S. Department of Commerce, Bureau of Economic Analysis. Formulaic mechanisms will not be subject to revisions during MP's evaluation and negotiation process.

All pricing should be provided in Exhibit C and/or Exhibit D and/or Exhibit E in terms of US dollars as of the date the term of the contract begins and not subject to a currency exchange rate adjustment. All PPA/TA information should be provided in Exhibit C: PPA/TA Data, all Asset Purchase information should be provided in Exhibit D: Asset Purchase Data, and a cost buildup for new build projects should be provided in Exhibit E: New Build Cost Buildup; (all data as available and applicable). Any and all environmental liabilities, including compliance with known and future or unknown regulations or laws will be the liability and sole responsibility of the generation producer/PPA Seller. Minnesota Power will receive all associated allowances or credits, if any. Seller agrees to transfer any Financial Transmission Rights or Auction Revenue Rights associated with the asset to the Buyer.

Respondents are strongly encouraged to provide their 'best and final' pricing with their initial submittal. Minnesota Power does not anticipate an opportunity in the schedule for respondents to refresh or update their pricing before the final selection(s) are made (if any). Respondents Proposal and pricing shall remain valid until October 31, 2016.

2.7 Credit Rating

A bidder must have a credit rating for its senior unsecured debt of **BBB** or higher (for Standard & Poor's) or **Baa2** or higher (for Moody's). If a bidder is unrated or does not meet this minimum credit rating requirement, the bidder must demonstrate the capability to supply performance assurance in the form of a corporate guarantor that meets the requirement, a letter of credit and/or cash. The amount of performance assurance shall be no less than \$100/kW of the proposed capacity of the proposal. This performance assurance will remain in place from contract execution through the term of the contract unless otherwise negotiated based upon the expected financial exposure related to the bid.

2.8 Legal Certifications

A bidder must certify that:

1. There are no pending legal or civil actions that would impair the bidder's ability to perform its obligations under the proposed PPA;
2. the bidder has not directly or indirectly induced or solicited any other respondent to submit a false or sham proposal;
3. the bidder has not solicited or induced any other person, firm, or corporation to refrain from submitting a proposal; and
4. the bidder has not sought by collusion to obtain any advantage over any other respondent.

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3.0 SCHEDULE AND RFP INSTRUCTIONS

3.1 Overview of Process

The schedule below represents MP's expected time-line for conducting this resource solicitation. MP reserves the right to modify this schedule as circumstances warrant and/or as MP deems appropriate.

Minnesota Power RFP Schedule

Event	Anticipated Date
Release of RFP	October 15, 2015
Notice of Intent to Bid Due	November 16, 2015
Proposal Submittal Deadline	5:00 pm CST on January 5, 2016
Selection of Bid(s)	February 15, 2016
Complete Negotiations	Second Quarter 2016

After proposals are submitted, Sedway Consulting will review and quantitatively evaluate all conforming proposals. An MP e-mail address (MPGasRFP@mnpower.com) has been set up to collect all communications and questions from potential respondents as well as a web site (<http://RFP.MNPower.com>) to download the RFP and Exhibits and provide uniform communications, including updates and other details as may be provided throughout the bidding process. Phone calls and verbal conversations with respondents regarding this RFP are not permitted before the submittal date.

Proposals will be opened in private by Sedway Consulting on a confidential basis. One original copy of each proposal will be retained by Sedway Consulting for a review and comprehensive quantitative evaluation and one original copy of each proposal will be retained by Minnesota Power for a comprehensive qualitative evaluation.

Each respondent should expect to receive a confirmation email from Sedway Consulting that his/her offer submission has been received. If a confirmation email is not received within 24 hours following the Offer Submission Deadline, a respondent should contact the independent evaluator at: Alan.Taylor@sedwayconsulting.com or (303) 581-4172.

Proposals will be reviewed by Sedway Consulting for completeness and offers that do not include the information requirements of this RFP may be notified by Sedway Consulting and allowed to cure the deficiency. During the evaluation process, respondents may be contacted for additional data or clarifications by Sedway Consulting.

3.2 Exhibits

Respondents to this RFP are encouraged to fill out and sign **Exhibit A: Notice of Intent to Bid**.

Respondents to this RFP are required to sign **Exhibit B: Non-disclosure Agreement (NDA)** in its present form.

Respondents to this RFP area also required to complete **Exhibit C: PPA/TA Data** and/or **Exhibit D: Asset Purchase Data** and/or **Exhibit E: New Build Cost Buildup** (as available and applicable).

Respondents to this RFP are required to complete **Exhibit F: General Information** (as applicable).

All correspondence concerning the submittal process for this RFP must be sent via e-mail to MPGasRFP@mnpower.com.

Phone inquiries regarding this RFP will not be entertained before the submittal deadline. Individual questions submitted by a respondent to MP and Sedway Consulting before the submittal deadline will be answered and responses sent back via email to the respondent as soon as practical. Responses to frequently asked or broadly applicable questions may be placed on the RFP Website for the benefit of all respondents, with any identifying information redacted from the question.

3.3 Deadline and Method for Submitting Proposals

All proposals submitted in response to this RFP must be received by MP at the address below no later than the Proposal Submittal Deadline shown in Section 3.1. Sedway Consulting and Minnesota Power will not evaluate proposals as part of this RFP process if submitted after this date and time. Minnesota Power does not anticipate an opportunity in the schedule for respondents to refresh or update their pricing before the final selection(s) are made (if any). Multiple proposals submitted by the same respondent must be identified separately. Financial statements, annual reports, and other large documents should be referenced via a web site address. Each proposal must contain the following:

1. A signed **Exhibit B: Non-disclosure Agreement (NDA)** in its present form
2. Three hard copies of each proposal
3. A flash drive with:
 - a. **Exhibit C: PPA/TA Data** and/or **Exhibit D: Asset Purchase Data** and/or **Exhibit E: New Build Cost Buildup** (as applicable)
 - b. **Exhibit F: General Information**
 - c. A PDF file of the entire proposal

All proposals should be sent to the address below:

Minnesota Power
Attn: 2015 Gas-Fired RFP Response /Eric Palmer
30 W. Superior St.
Duluth, MN 55802

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4.0 PROPOSAL ORGANIZATION

The proposal must include an executive summary, proposal limitations, relevant company data and experience, the technical proposal, along with the appropriate Exhibits. Some information may not be known at the time proposals are due. However, partial information and estimates are better than nothing at all, so respondents are encouraged to submit as much information as possible.

4.1 Executive Summary

Please provide a one page executive summary of the proposal in the form of a cover letter. Include the facility's location, age or development status, size, the primary contact's name, email, and phone number, and an overview of the major features of the proposal. The Executive Summary must be signed by an officer of the respondent who is duly authorized to commit the firm to carry out the proposed power supply transaction should Minnesota Power accept the proposal (this does not have to be the primary contact). A Table of Contents should be the first page and immediately precede the Executive Summary.

4.2 Proposal Limitations

Please describe in reasonable detail any existing regulatory, legal, economic, operational, or systematic conditions that might affect the respondent's ability to deliver capacity and energy as offered.

4.3 Company Data, Financing Plan, and Experience

Please include information on the respondent's corporate structure (including identification of any parent companies), the project's financing plan, the respondent's most recent credit rating, quarterly report containing unaudited consolidated financial statements that is signed and verified by an authorized officer of respondent attesting to its accuracy, a copy of respondent's annual report for the prior three years containing audited consolidated financial statements and a summary of respondent's relevant experience. Please describe any current litigation or environmental fines from the last three years that could potentially affect the facility or its operation. All financial statements, annual reports and other large documents may be referenced via a web site address.

Proposals shall include a list of projects with a brief description of Respondent's experience in the areas of development, financing, permitting, ownership, construction, and operation of all utility-scale power generation facilities.

Please provide a list of projects with a brief description of the experience as it relates to utility-scale power generation.

Please provide a list of projects with a brief description of the Operator's experience as it relates to utility-scale power generation (in and outside MISO).

4.4 Technical Proposal

Proposals shall include a detailed technical description of proposed Project. Please review the technical description provided in this section such that it matches up with the technical and cost information provided in the Exhibits. The technical description shall include, but not be limited to the following items as known and applicable:

1. Project name, size, and location

2. Commercial operation date and expected facility life
3. Development and construction schedule Gantt chart (if new)
4. Site characteristics including zoning, site control, site map (white and aerial backgrounds), and any potential environmental or other sensitive issues
5. Description of all the permits needed and plan to acquiring those permits including timing and any expected contingencies or local consultants required
6. Site layout (white background)
7. Community Outreach Plan and evidence of community support
8. Labor source
9. Full description of proposed technology, reliability, redundancies, automatic generation control, engineering and design status (e.g. FEP-1, FEP-2, PDR, etc), operating capabilities, and heat rate efficiencies
10. List of other equipment including auxiliary boiler, energy storage, evaporative cooling, chillers, and duct firing
11. Description of emission control equipment and any ASTM studies
12. Natural gas supply and firm transportation arrangements, backup fuel capability and characteristics if applicable
13. Full description of the interconnection and firm transmission, deliverability to the delivery point, congestion, losses, the overall risk of transmission, and estimated network upgrade costs (see below)
14. Description of operating flexibility including start times (hot/warm/cold) and ramp rates, minimum down time, minimum output, heat rates at less than full capacity, reactive power, voltage regulation, frequency control, other potential ancillary services, different operational modes, and the current market for those ancillary services
15. Scheduling process and flexibility
16. Environmental, emission and/or any other operating constraints
17. Water supply, usage and discharge
18. Schedule of major maintenance
19. Key terms of a Long-term Service Agreement (LTSA)
20. Key features and terms for Original Equipment Manufacturer spare parts and Long-term Parts Agreement (as applicable)
21. Description of control systems and building enclosure

22. Discuss any other owners and the dispatch rights/preference arrangements
23. An allowance for multiple offers into MISO markets
24. “Best Practices” construction, operation, and maintenance
25. An option to purchase after year 20 at net book value
26. Other future options and/or the capability to expand
27. Capacity size options between 200 – 400 MW

Any fuel “formula” provided must be in sufficient detail for Sedway Consulting and Minnesota Power to understand all the formula components for estimation of the total cost of fuel (and backup fuel), in \$/MMBtu, for the Delivery Term (See Exhibit C and D).

Firm gas transportation is to be provided by the respondent and the pertinent details on the firm gas transportation arrangement. If firm gas transportation is not indicated, then the respondent should explain the reason. Details should include maximum daily quantity transportation volume, and any transportation demand rate information necessary to understand the total cost of firm gas transportation on a monthly and annual basis.

Describe the firm transmission arrangements including all transmission providers involved and the transmission services provided (terms and any ancillary services required and appropriate congestion cost). Respondents will have the responsibility to secure and provide all firm transmission services necessary for firm delivery of capacity to the Minnesota Power MISO load node, MP.MP.

For Purchase Power Agreement and Tolling Agreements, specific operational information and pricing should be provided as indicated in Exhibit C: PPA/TA Data, all asset purchase proposals shall provide the specific information requested in Exhibit D: Asset Purchase Data, and all new build projects shall provide the specific information requested in Exhibit E: New Build Cost Buildup; (as available and applicable). All respondents to this RFP are required to complete Exhibit F: General Information (as applicable).

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5.0 PROPOSAL EVALUATION AND CONTRACT NEGOTIATIONS

5.1 Initial Proposal Review

An initial review of the bids will be performed by Sedway Consulting. Proposals will be reviewed for completeness and proposals that do not meet or include the information requirements of this RFP may be notified and allowed to cure the deficiencies. Respondents may also be contacted for additional data or clarifications by Sedway Consulting. In general, more certain information and development progress is better than less certain or unknown information.

5.2 Proposal Quantitative Evaluation

Sedway Consulting will quantitatively evaluate all conforming proposals' ability to meet both capacity and energy needs and the corresponding costs. During the quantitative evaluation process, Sedway Consulting may or may not choose to initiate more detailed clarification discussions and a more thorough quantitative evaluation with one or more respondents. Discussions with a respondent shall in no way be construed as commencing contract negotiations.

5.3 Proposal Qualitative Evaluation

Minnesota Power will evaluate and consider both the Quantitative Evaluation developed by Sedway Consulting and the qualitative aspects of all conforming proposals' ability to meet both capacity and energy needs. In general, more certain information and development progress is better than less certain or unknown information.

In evaluating Proposals, Minnesota Power may generally consider the following criteria (in no particular order and without limiting consideration of other factors):

1. Sedway Consulting's Quantitative Evaluation
2. Price certainty, price volatility, and risk of price increases
3. Integration into Minnesota Power's system
4. General location of the facility
5. Site characteristics including zoning, permits required, and any potential environmental issues or other sensitive issues
6. Site control
7. Respondent's development, financing, construction, operating, maintenance, and ownership experience as it relates to utility-scale power generation
8. EPC contractor's experience as it relates to utility-scale power generation (if applicable)
9. Operator's experience as it relates to utility-scale power generation (in and outside MISO)
10. Respondent's or Guarantor's financial condition and creditworthiness
11. Transmission interconnection, deliverability to the delivery point, congestion, losses, and overall risk of transmission

12. Natural gas supply and firm transportation arrangements
13. Operating flexibility including fast start times (hot/warm/cold) and higher ramp rates, minimum down time, minimum output, major maintenance, more efficient heat rates at less than full capacity, reactive power, voltage regulation, frequency control, scheduling flexibility, different operational modes, other potential ancillary services, and the current market for ancillary services
14. Construction schedule
15. Water supply, usage and discharge
16. Status of engineering and design (e.g. FEP-1, FEP-2, PDR, etc.)
17. Other power equipment enhancements including an auxiliary boiler, energy storage, evaporative cooling, chillers, and duct firing
18. Emission control equipment and emission rates
19. Quantity and complexity of network upgrades required (network upgrade costs will be included in quantitative evaluation of the proposal)
20. Labor source
21. Schedule of major maintenance
22. Long-term Service Agreement
23. Original Equipment Manufacturer spare parts and Long-term Parts Agreement
24. Control systems
25. Other owners and dispatch rights/preference, allowance for multiple offers into MISO
26. “Best practices” or similar construction, operation, and maintenance
27. Environmental and any other operating constraints
28. Technology, engineering design, redundancy, and overall reliability
29. Backup fuel capability
30. Current litigation
31. Community support
32. Tax treatment and impact on Minnesota Power’s balance sheet
33. An option to purchase after year 20 at price based on net book value (preference for options for purchase at years 10 to 15)
34. Age, remaining life, and term

35. Capacity size options/limits from 200 – 400 MW and future option to expand
36. Overall completeness, clarity, and quality of the Proposal
37. Compliance of proposals with the specifications and requirements described in the RFP
38. Other data as may be requested prior to commencing further discussions

5.4 Contract Negotiations

Based on the Quantitative Evaluation and Qualitative Evaluation, Minnesota Power may or may not select candidates for further discussions. Minnesota Power will contact any selected respondent in writing to confirm interest in commencing contract negotiations. All PPA negotiations will use Minnesota Power's standard PPA as a starting point. Minnesota Power's commencement of and participation in negotiations shall not be construed as a commitment to execute a contract. If a contract is negotiated, it will not be effective unless and until it is fully executed with the receipt of all required regulatory approvals.

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6.0 RESERVATION OF RIGHTS

Nothing contained in this RFP shall be construed to require or obligate Minnesota Power to select any proposals or limit the ability of Minnesota Power to reject all proposals in its sole and exclusive discretion. Minnesota Power further reserves the right to withdraw and terminate this RFP at any time prior to the submittal deadline, selection of bids or execution of a contract. All contracts will be contingent on MPUC approval.

All proposals submitted to Minnesota Power pursuant to this RFP shall become the exclusive property of Minnesota Power and may be used for any reasonable purpose by Minnesota Power. Minnesota Power and Sedway Consulting shall consider materials provided by respondent in response to this RFP to be confidential only if such materials are clearly designated as "Confidential." Respondents should be aware that their proposal, even if marked "Confidential", may be subject to discovery and disclosure in regulatory or judicial proceedings that may or may not be initiated by Minnesota Power. Respondents may be required to justify the requested confidential treatment under the provisions of a protective order issued in such proceedings. If required by an order of an agency or court of competent jurisdiction, Minnesota Power may produce the material in response to such order without prior consultation with the respondent.