

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

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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**

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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").<sup>1</sup> In the 2013 Resource Plan Order, the Commission set September 1, 2015, as the due date for Minnesota Power's next resource plan filing.<sup>2</sup> 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.

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<sup>1</sup> *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).

<sup>2</sup> *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.<sup>3</sup> 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.<sup>4</sup> 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.<sup>5</sup>

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<sup>3</sup> 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."<sup>3</sup> 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.

<sup>4</sup> MINN. R. 7843.0400, subpart 2 and 7843.0100, subparts 6 and 9.

<sup>5</sup> 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.”<sup>6</sup> 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.<sup>7</sup> 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).”<sup>8</sup> LPI disagrees. Reviewing the referenced pages, Minnesota Power claims the 2014 average industrial rate is roughly

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<sup>6</sup> MINN. STAT. § 216B.2422, subd. 2.

<sup>7</sup> 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.

<sup>8</sup> *Resource Plan*, at pg. 37.

\$54.30/MWh.<sup>9</sup> 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.”<sup>10</sup> 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.<sup>11</sup> This \$5.65/MWh difference is significant - for LPI that difference is a cost of more than \$36 million.<sup>12</sup>

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.<sup>13</sup> 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.<sup>14</sup> 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.<sup>15</sup> In that resource plan, Minnesota Power projected rates for 2017 of \$65.65/MWh for the

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<sup>9</sup> *Resource Plan*, at pg. 79.

<sup>10</sup> *Resource Plan*, at pg. 79.

<sup>11</sup> *Resource Plan*, App. L, pg. 4.

<sup>12</sup> 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.

<sup>13</sup> *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).

<sup>14</sup> MINN. STAT. § 216B.1696.

<sup>15</sup> *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.<sup>16</sup> 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%.<sup>17</sup> 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.<sup>18</sup> 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."<sup>19</sup> Generally speaking, the integrated resource planning process is designed to review the size, type, and timing of future generating needs.<sup>20</sup> 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

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<sup>16</sup> *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).

<sup>17</sup> *Resource Plan*, App. L, pg. 4.

<sup>18</sup> 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).

<sup>19</sup> *Resource Plan*, at pg. 87.

<sup>20</sup> 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.<sup>21</sup> 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.<sup>22</sup>

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.”<sup>23</sup> To be sure, Appendix E contains a figure showing minimal or no investment for CSAPR, IB MACT,

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<sup>21</sup> <http://www.mnpower.com/>.

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

<sup>23</sup> *Resource Plan*, App. E, pg. 16.

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

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.<sup>26</sup> 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.<sup>27</sup>

### **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

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<sup>24</sup> *Id.* at pg. 17.

<sup>25</sup> *Id.* at pg. 16.

<sup>26</sup> 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.

<sup>27</sup> 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,

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# Update: Forecast Numbers, Projected Clean Power Plan Compliance

Peter Ciborowski

Minnesota Pollution Control Agency

December 11, 2015

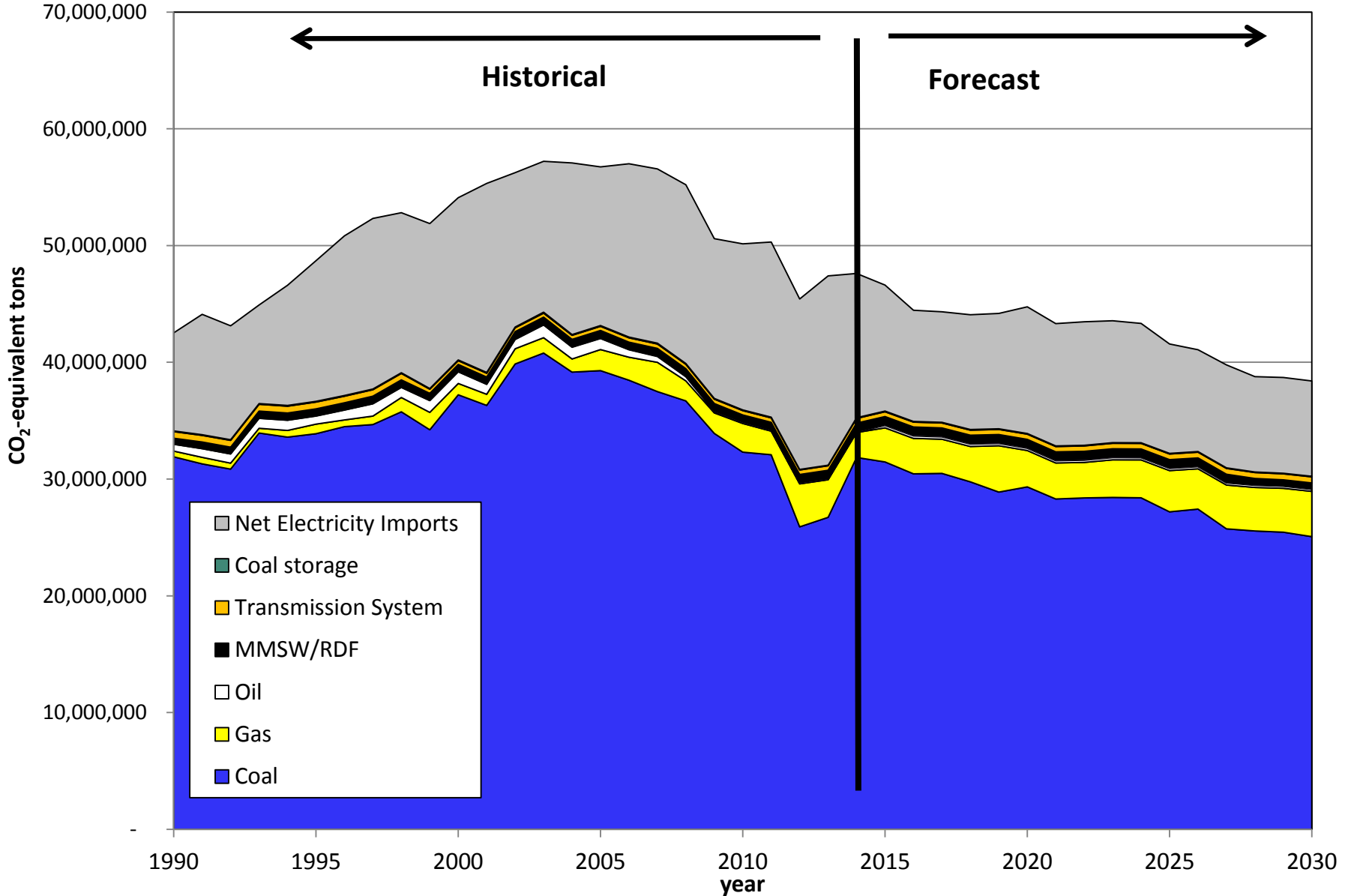


**Minnesota Pollution Control Agency**

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

- CO<sub>2</sub> 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](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

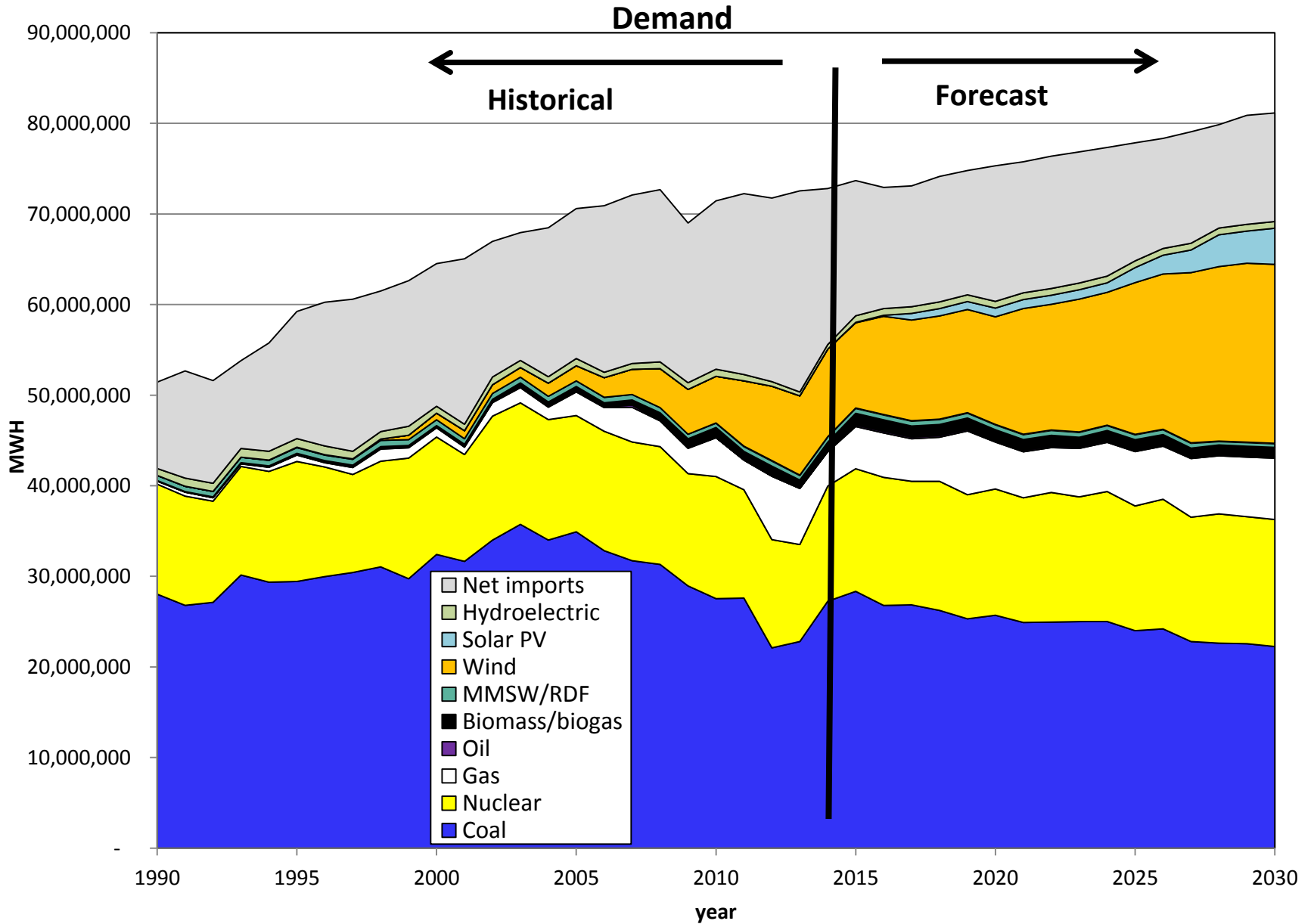
- In-state generation
  - thermal units Electric Utility Annual Reports  
MPCA GHG emission inventory  
EIA forms 923, 860
- Net Imports\*
  - retail sales Electric Utility Annual Reports
  - T&D losses historical data, MPCA GHG EI
  - wind, solar, hydro RPS and SES compliance  
assessment, EIA form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

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

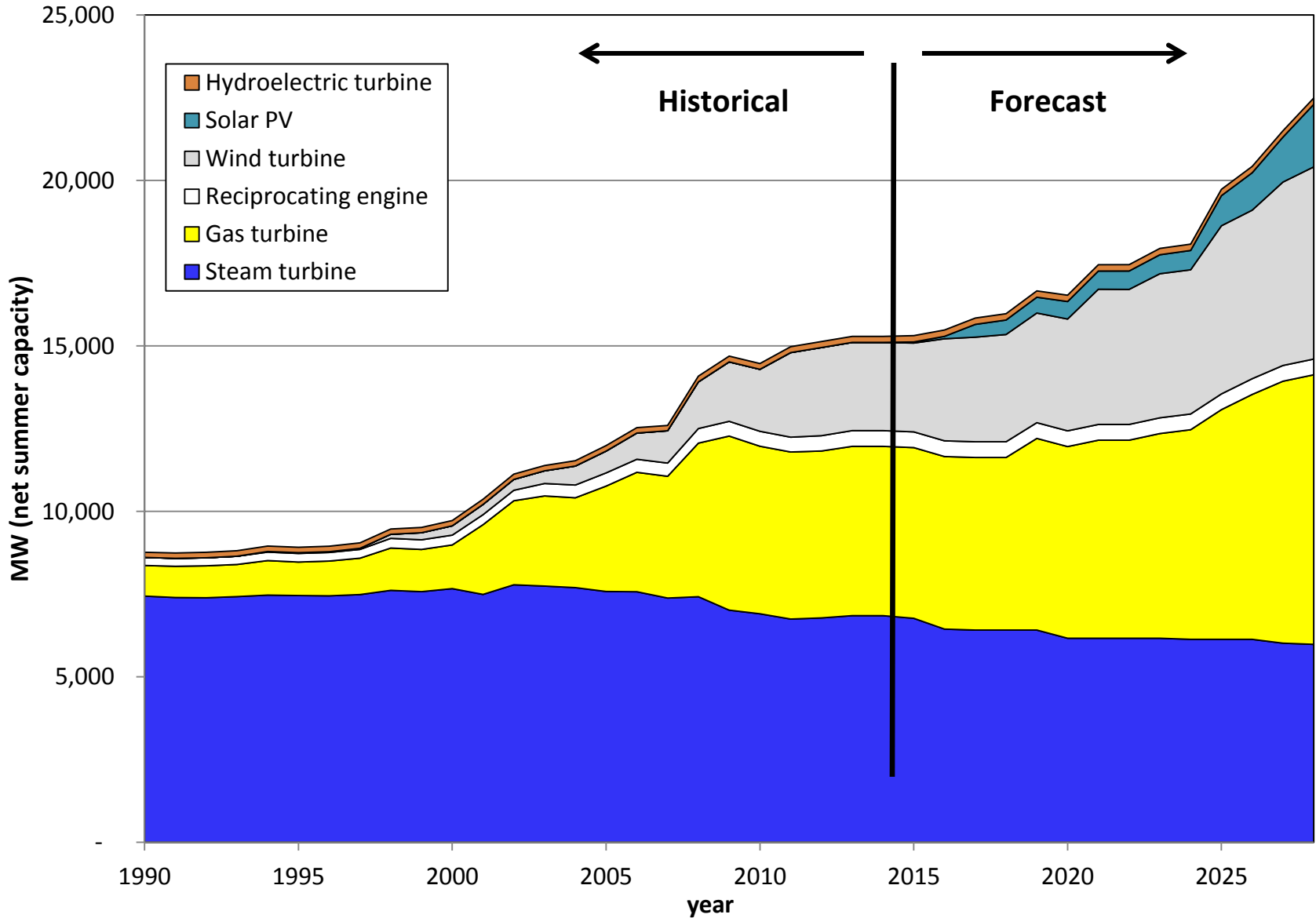
# Basis of Changes to Forecast

- 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

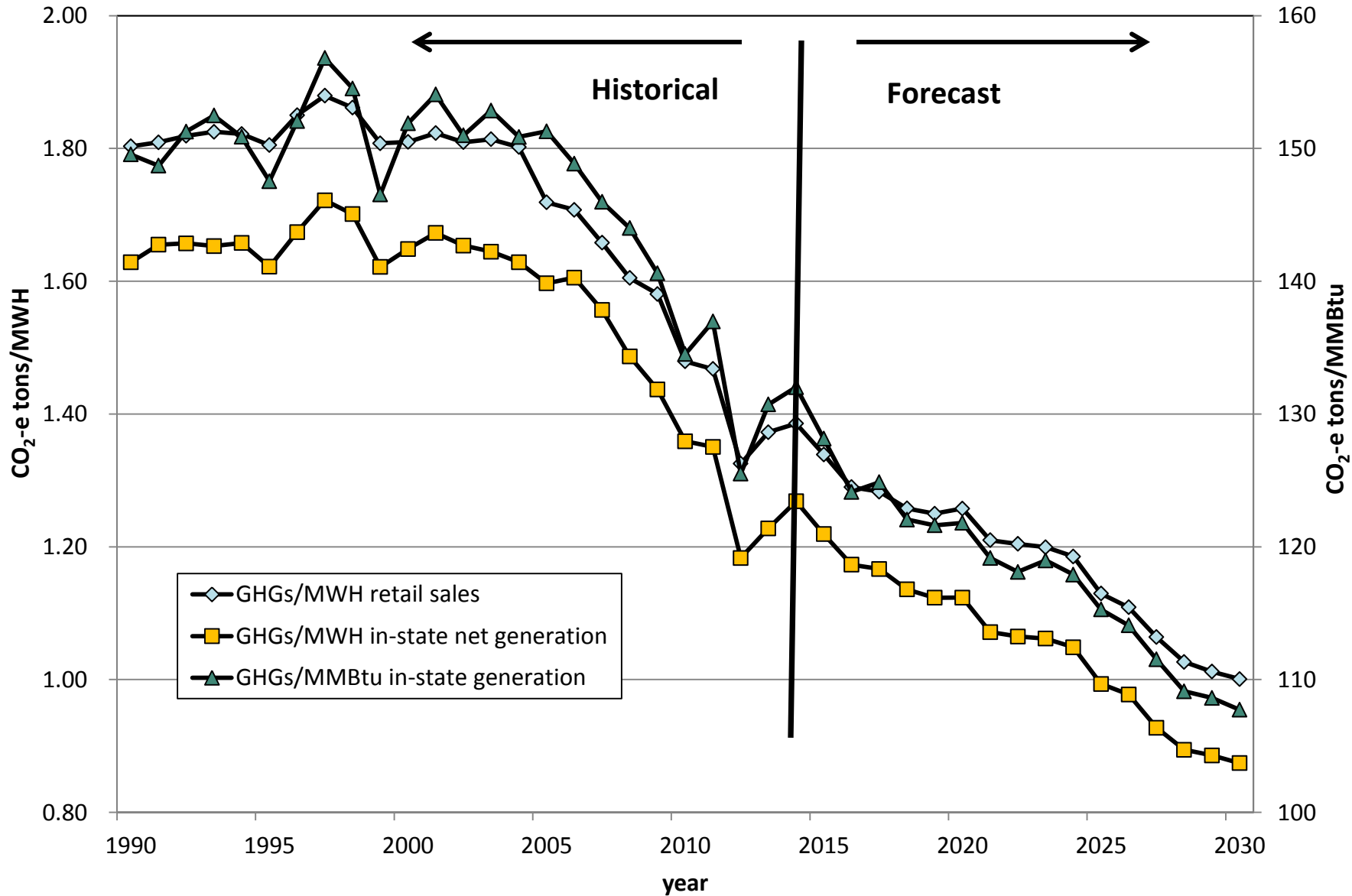
# Historic and MPCA Forecasted Electric Generation to Service Minnesota



# Historic and MPCA Forecasted Installed Electric Generating Capacity in Minnesota



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

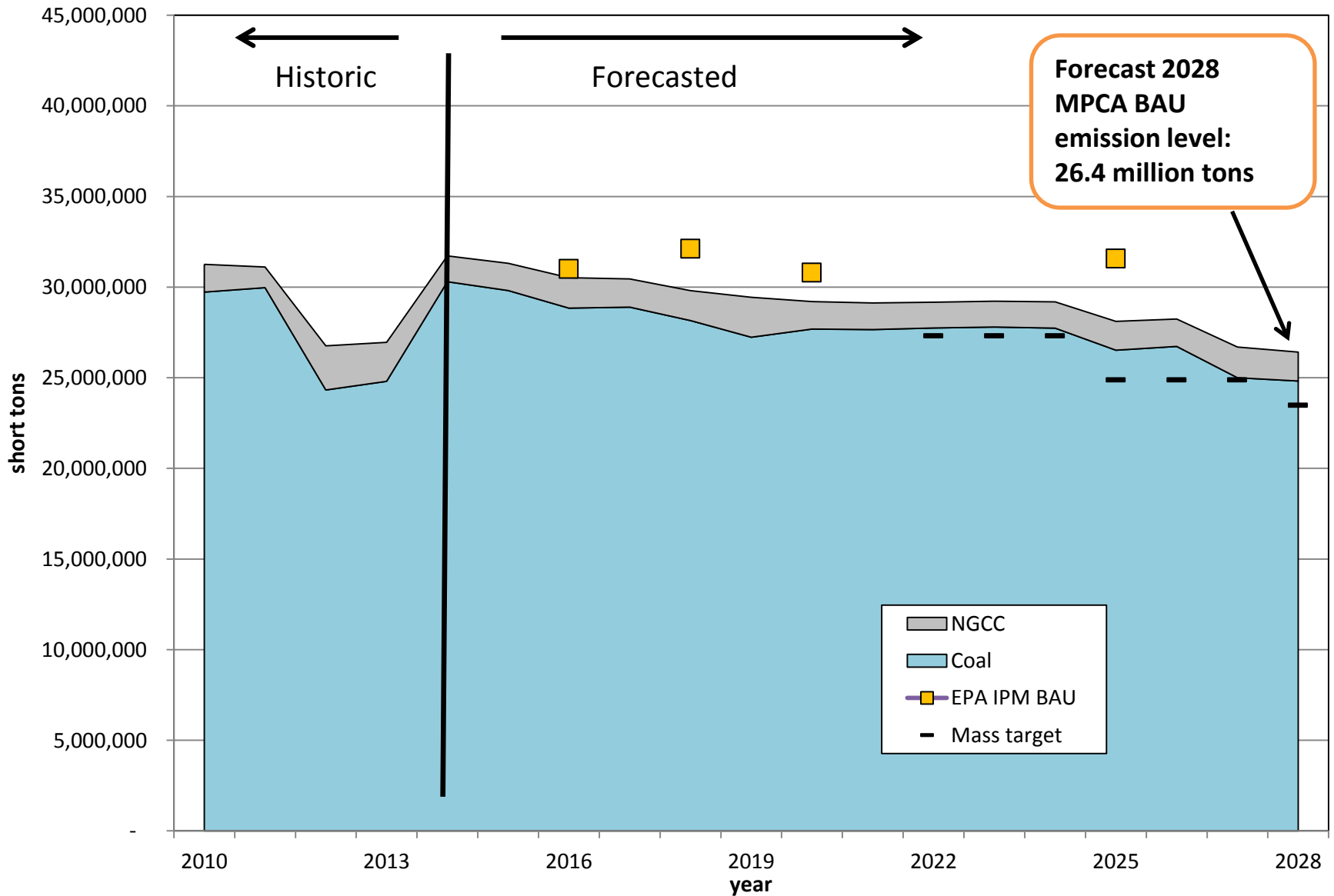




# CPP Compliance Work: Timing and Status

- 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.

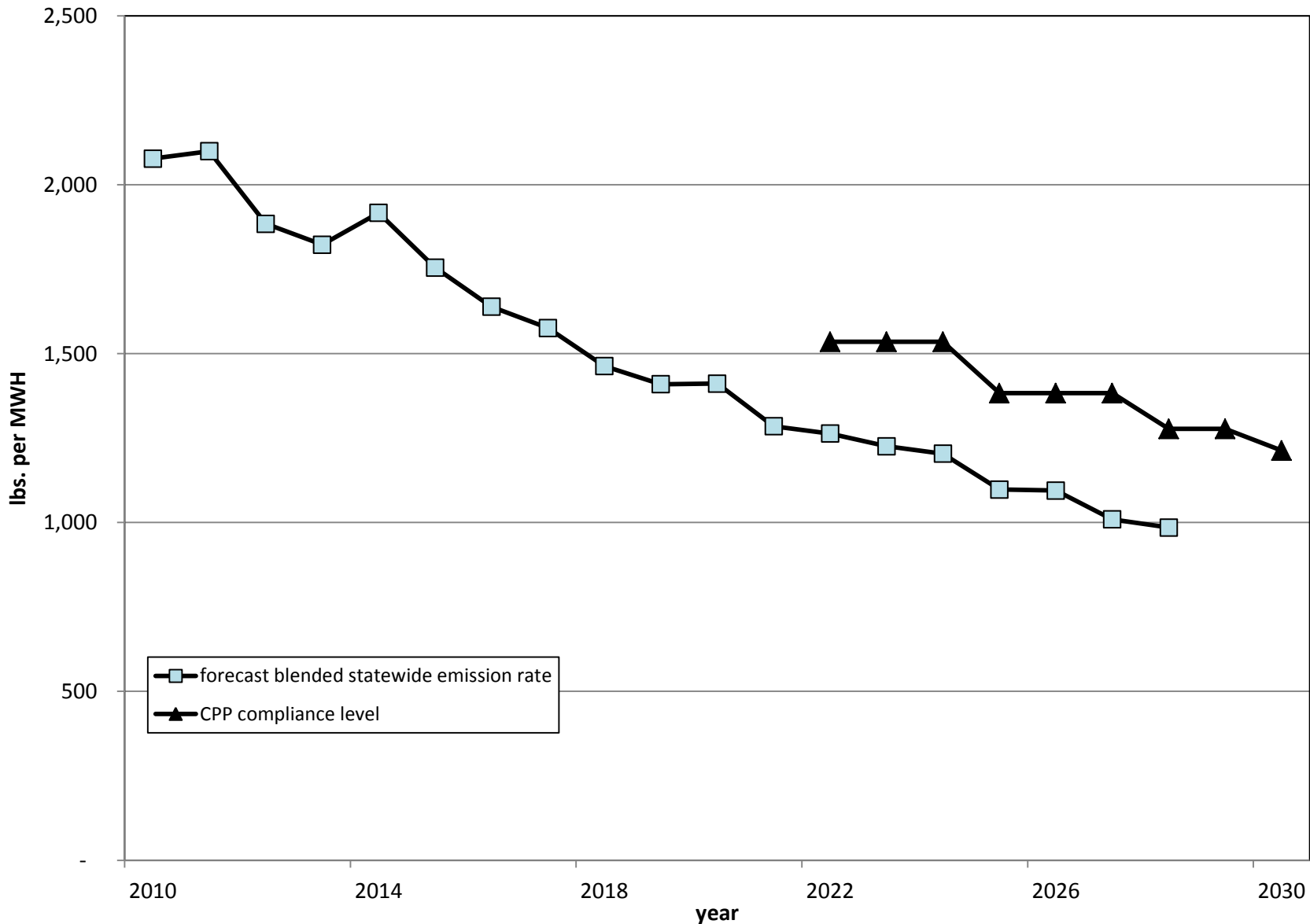
# MPCA Historic and Forecast In-state CO<sub>2</sub> Emissions from CPP-Covered Generating Units



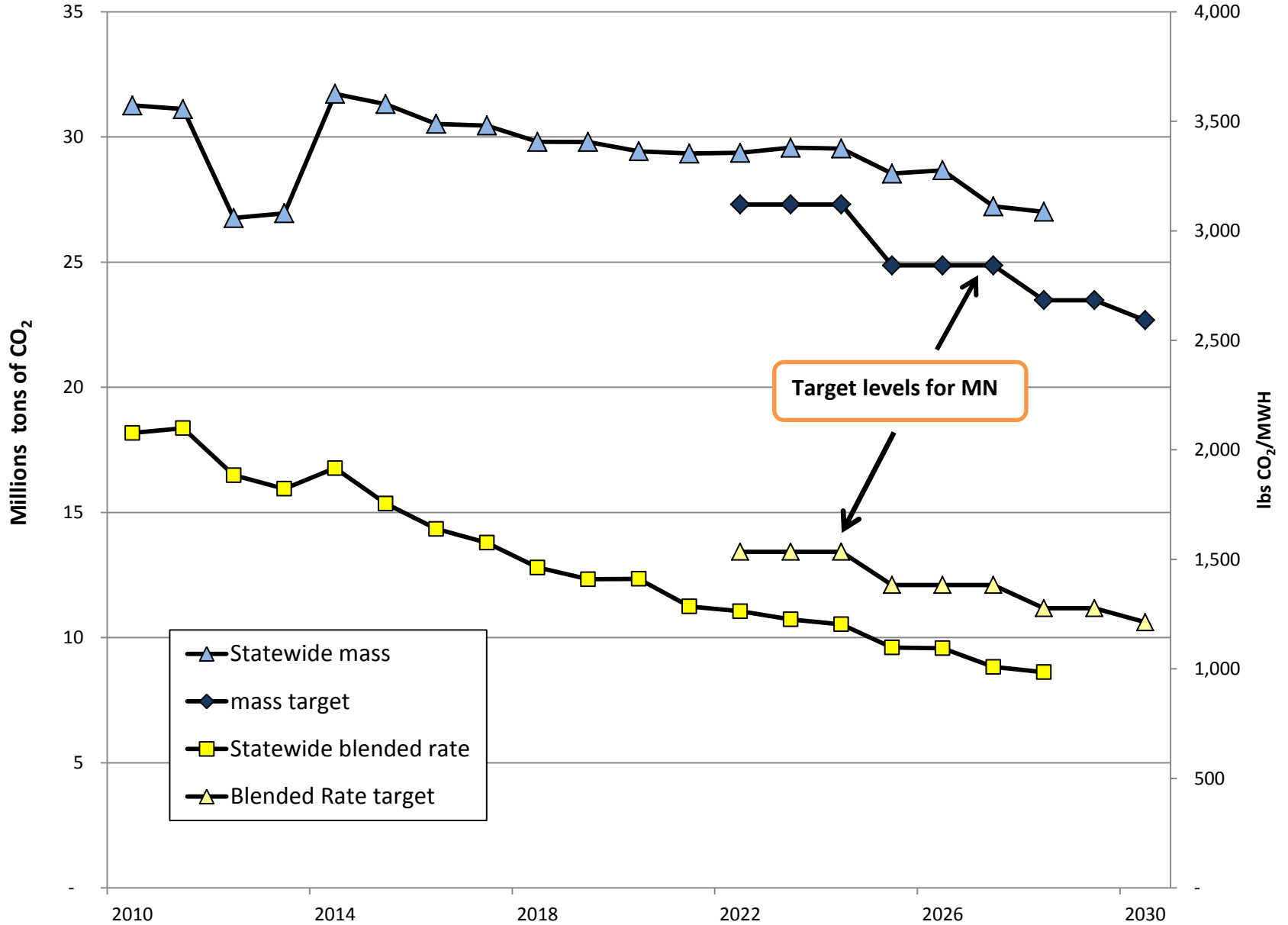
# Available Compliance Resources under CPP

	<b>year capacity installed or added</b>	<b>generation for years</b>	<b>banking of post 2021 credits</b>	<b>special conditions</b>
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	

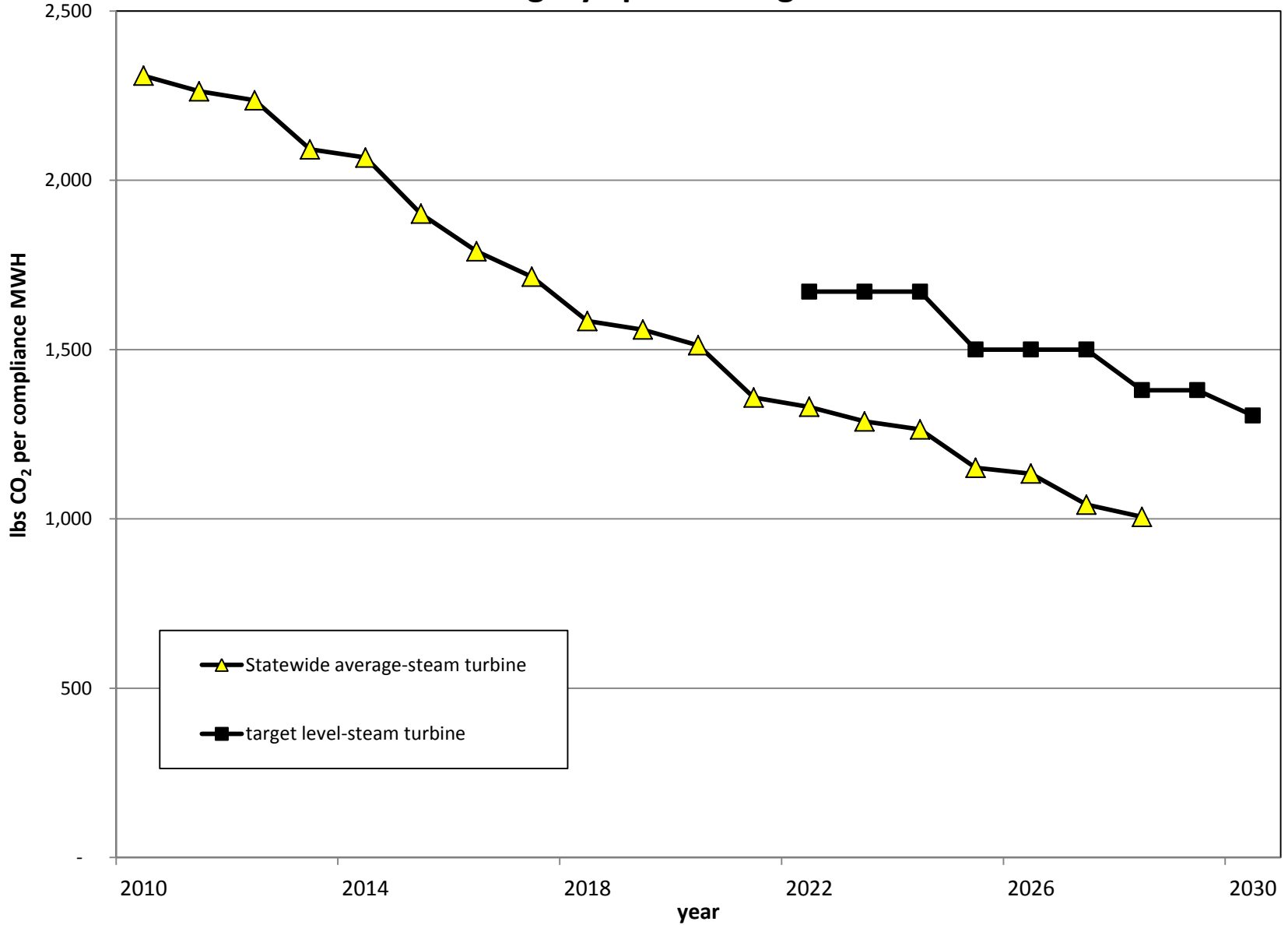
# MPCA Forecasted Average Blended Emission Rate for Minnesota (CPP-covered Units only) and CPP Compliance Levels



# 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