SIERRA CLUB

Anne Jackson, P.E.
Environmental Analysis and Outcomes Division
Minnesota Pollution Control Agency

Via electronic mail
MPCA.ACErule@state.mn.us

RE: Sierra Club's Comments Regarding ACE Implementation in Minnesota

Sierra Club offers these comments in response to MPCA's February 3, 2020 request for comments concerning implementation of the Affordable Clean Energy ("ACE") rule in Minnesota.

Introduction

Sierra Club urges MPCA to move forward with a bold plan to reduce greenhouse gas emissions pursuant to its existing authority under state law, as EPA's ACE rule is not designed to achieve meaningful emissions reduction measures and is even projected to increase emissions in many states – including Minnesota. ACE is also currently the subject of a federal lawsuit and may not survive the court challenge. Sierra Club and others have argued that ACE is not only substantively inadequate, but applies an unreasonably narrow interpretation of the Clean Air Act that is totally incompatible with the Act's text, history, structure, congressional intent, and jurisprudence.

As MPCA has clear authority under existing state law to establish its own carbon dioxide emission regulations for power plants, it would be a better use of the Agency's resources to focus on developing a strong state rule rather than attempting to shoehorn a strong program into the current EPA's narrow (and in our view, illegal) interpretation of the Clean Air Act set forth in ACE.

While Sierra Club prefers that MPCA move forward with developing a strong program under its existing authority, rather than through an ACE implementation plan, Sierra Club would also support an effort by MPCA to ultimately submit a stringent state-level program to EPA for approval as a state plan under ACE, assuming a court decision does not remand the rule back to EPA before plans are due in 2022. If EPA were to approve the plan, it would become federally enforceable under the Clean Air Act, such that citizens, EPA, and the state itself may directly sue power plant owners in federal court for regulatory violations. On the other hand, if EPA were to reject state plans (including one submitted by MPCA) that go beyond ACE's basic requirements – as it has indicated it may do – those regulations would still remain valid as a matter of state

law. Indeed, section 116 of the Clean Air Act, 42 U.S.C. § 7416, expressly preserves states' authority to issue emission control requirements that are more stringent than parallel requirements issued by EPA under various sections of the statute, including section 111, ACE's governing provision. Thus, while a denial of MPCA's state plan would set the clock running for EPA to promulgate a federal plan under ACE for the state, any such federal plan would simply be additive to the requirements under Minnesota state law and could not undermine or undo them.

Finally, regardless of the path that MPCA decides to take, MPCA should center equity and environmental justice considerations in its formulation of specific policies to reduce power plant emissions. This will require close engagement of impacted communities throughout the process. These points are discussed in more detail below.

I. MPCA Should Focus on Using its State Regulatory Authority to Reduce Greenhouse Gas Emissions from Power Plants.[1]

Fossil fuel-fired power plants are the nation's largest stationary source of climate-disrupting carbon dioxide pollution. Without deep, immediate, and mandatory reductions in power plant carbon emissions, we will be unable to avoid the most devastating impacts of climate change. Unfortunately, ACE falls dramatically short of the mark. Rather than utilizing the most effective and sensible means of reducing power plant emissions – shifting generation from fossil-fired units to zero-emitting sources like wind and solar – ACE relies entirely on a limited set of measures that marginally improve the operational efficiency of existing coal plants, while ignoring gas and oil plant emissions altogether.

EPA itself projects that ACE will do virtually nothing to reduce carbon pollution, cutting sector-wide emissions by approximately one-half of one percent in the coming years. In fact, EPA predicts that ACE will actually *increase* emissions in many states throughout the country by encouraging fossil plants to run more frequently than before. Regrettably, Minnesota is one of those states: EPA's modeling scenarios conclude that ACE will increase not only Minnesota's carbon dioxide pollution in 2030 compared to no regulation at all, but also its nitrogen oxide and sulfur dioxide emissions, which form smog and soot (respectively).[2]

Fortunately, Minnesota has the opportunity to step in where the federal government has abdicated its responsibility to address the climate emergency. Rather than limit itself to a

[1] Sierra Club's comments regarding the state's regulatory authority focus on the electric sector because only the electric sector is within the scope of ACE, and are not meant to imply that it is Sierra Club's position that MPCA should only regulate emissions from the power sector.

[2] *Compare* EPA, *IPM State-Level Emissions: Illustrative ACE Scenario* (July 2019), https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-26724, *with* EPA, *IPM State-Level Emissions: EPAv6 November 2018 Reference Case* (July 2019), https://www.regulations.gov/document?D=EPA-HQ-OAR-2017-0355-26720 (showing greater CO_2, SO_2, and NO_x emissions in Minnesota in 2030 under ACE than under a reference case scenario).

program based solely on ACE's on-site heat rate efficiency improvements for coal plants, MPCA can secure meaningful emissions reductions by enacting strong greenhouse gas rules pursuant to state law. There is no doubt that MPCA has clear authority to establish such a program under existing Minnesota law. The Minnesota Administrative Procedure Act provides authority to its state agencies to adopt rules pursuant to the authority delegated to it by law.[3] Accordingly, the MPCA's establishing regulations empower it to adopt rules and standards for the prevention, abatement, and control of air pollution.[4] MPCA's rules may apply to any matter relevant to the prevention, abatement, or control of air pollution in furtherance of the purposes of Chapter 116.[5] MPCA may, "without limitation," promulgate rules and standards relating not only to the sources of emissions, but to the overall quality, composition, and effect on the ambient air of such emissions.[6] Further, MPCA has comprehensive enforcement authority to implement an emissions limitation program, with statutory authority to perform inspections,[7] request compliance information,[8] order immediate abatement of pollution in emergency circumstances,[9] and to bring civil and criminal enforcement actions to recover penalties and fines.[10]

Following promulgation of a robust emission reduction program, MPCA could submit the rule(s) to EPA as a formal state plan under ACE or could simply continue to rely on its own enforcement authority. If EPA were to disapprove of the plan, it would only place the federal enforceability of the program in jeopardy – the regulations would remain enforceable through state regulatory instruments without fear of federal preemption. As noted above, the Clean Air Act explicitly preserves states' authority to adopt laws that go above and beyond federal emission control requirements under section 111.[11] EPA reaffirmed this principle when finalizing ACE, even as it made the dubious suggestion that it might lack authority to approve more stringent state-level requirements in federally-enforceable plans.[12]

If EPA were to move forward with a federal ACE plan for Minnesota, power plant owners would have to comply with both state regulations and the federal ACE plan. Accordingly, a stringent

[3] Minn. Stat. § 14.05.
[4] Minn. Stat. § 116 et seq.
[5] Minn. Stat. § 116.07(subd. 4)(a).
[6] *Id.*
[7] Minn. Stat. § 116.091.
[8] *Id*.
[9] Minn. Stat. § 116.11.
[10] Minn. Stat. §§ 115.071, 116.11, 609.671, 645.24.
[11] 42 U.S.C.A. § 7416; *see also Phipps v. Clark Oil & Ref. Corp.*, 396 N.W.2d 588, 593 (Minn. Ct. App. 1986), aff'd, 408 N.W.2d 569 (Minn. 1987); *see Bell v. Cheswick Generating Station*, 734 F.3d 188, 191 (3d Cir. 2013), *Merrick v. Diageo Americas Supply, Inc.*, 805 F.3d 685, 690 (6th Cir. 2015).
[12] Repeal of the Clean Power Plan; Emission Guidelines for Greenhouse Gas Emissions From Existing Electric Utility Generating Units; Revisions to Emission Guidelines Implementing Regulations, 84 Fed. Reg. 32,561 (July 8, 2019) ("Though the EPA lacks the authority to approve certain measures, thereby rendering them federally enforceable, nothing precludes states from implementing or enforcing such requirements as a matter of state law.").

state-level plan developed by MPCA would still secure major environmental benefits, regardless of EPA's action.

Furthermore, by federal regulation, state plans submitted under section 111(d) of the Clean Air Act must already be adopted into state law or regulations before they can be submitted to EPA for approval.[13] Thus, MPCA can develop a strong pollution control program now and decide later whether to submit it as a formal state plan under ACE without expending unnecessary resources. Additionally, given the extended timeline for state plan submissions,[14] MPCA may have an opportunity to submit its program to EPA under a new administration -- one that does not share the current agency's cramped interpretation of the Clean Air Act and that is more committed to fighting the threat of climate change.

II. EPA's Statement That "More Stringent" ACE Plans Will Not Be Approved Should Not Deter MPCA From Submitting a Bold Plan to the Agency.

As noted above, in the final ACE rule, EPA implies that it may lack authority to approve state plans that impose more stringent requirements that those included in EPA's section 111(d) emission guideline.[15] It is unclear what this means in the context of ACE, given that the rule does not, in fact, provide a minimum level of stringency that state plans must satisfy. How a plan can be "more stringent" than a rule that lacks a specified level of stringency in the first place, EPA does not say. Presumably, EPA is signaling here that it will disapprove any state plans that do not follow its limited interpretation of the section 111's term "best system of emission reduction" ("BSER")[16] – that is, state plans that rely on emission reduction measures apart from the seven heat rate improvement "candidate technologies" that constitute ACE's "best system."[17] This position relies on the agency's strained reading of section 111 – adopted for the first time in ACE – that the Act "unambiguously" limits the "best system" to "control technologies or techniques that can be integrated into an individual source's design or operation."[18] Sierra Club and other environmental groups – along with numerous states, power companies, and industry trade groups – are vigorously challenging this interpretation in federal court.

ACE thus appears to categorically exclude plans that reflect the actual, integrated nature of the electric grid, such as those based on shifting generation from fossil to renewable sources or on reducing utilization of fossil units. It also purports to reject state plans that include mass-based emission limits – that is, those based on a source's annual tons of carbon dioxide emitted rather than its carbon emissions for each megawatt-hour of electricity generated.[19] Sierra Club and

[13] 40 C.F.R. § 60.27a(g)(2)(ii) (2019).
[14] 84 Fed. Reg. 32,581 (July 8, 2019).
[15] 84 Fed. Reg. 32,560 (July 8, 2019).
[16] 42 U.S.C. § 7411(a)(1).
[17] See 40 C.F.R. § 60.5740a(a)(1)-(2) (2019).
[18] 84 Fed. Reg. 32,524, 32,526 (July 8, 2019).
[19] 84 Fed. Reg. 32,555 (July 8, 2019).

other organizations have sued EPA over its legal interpretation of section 111 embodied in ACE and are currently litigating these and related matters in the U.S. Court of Appeals for the D.C. Circuit.[20]

Setting aside whether EPA's interpretation of BSER will survive court challenge, EPA's interpretation of Section 111(d) as disallowing state plans that are more stringent than a corresponding EPA emission guideline is totally inconsistent with the structure and purpose of the Clean Air Act. Under the statute's cooperative federalism framework, federal law sets the substantive baseline for emission reductions, and states are permitted to do more to protect public health if they so choose. Section 116 of the Clean Air Act makes clear that, under section 111, states are fully permitted to adopt more aggressive pollution control programs than what EPA establishes.[21] The notion that Congress saw it fit to include such a provision in the Clean Air Act but intended to *prohibit* EPA from approving such state programs as federally enforceable section 111 plans defines both the statutory framework and basic common sense.

Moreover, it is unclear what EPA would even deem to be a "more stringent" plan relative to ACE's federal emission guideline. Rather than set a quantitative emission limit based on EPA's designated "best system" that each state plan must reflect, ACE requires states merely to "evaluate" the applicability the seven best system "candidate technologies" to each affected source and then to derive a unit-specific "tailored" standards of performance for each plant.[22] ACE conspicuously lacks a minimum, quantitative level of stringency that these "tailored" standards of performance must reflect – they are left entirely to each state's discretion so long as the state has properly "evaluated" the best system technologies – and so it is impossible to say what a "more stringent" state plan might possibly look like.

EPA has asserted that programs premised on reducing the operation of particular sources are not appropriate under section 111.[23] Accordingly, the agency may well reject any state plan that is premised on the emission reductions that are available at coal plants and other fossil fuel-fired by reducing those sources' utilization and/or shifting generation from those sources to zero-emitting options such as wind and solar. But again, this should not deter Minnesota from moving forward with a strong plan that strictly limits the total mass emissions or the operational capacity of its coal plants, or from submitting such a plan to EPA under ACE.

However, EPA has made clear that, under at least some circumstances, state plans under ACE are not only permitted but are actually *required* to include mandatory retirement dates for certain affected sources covered under their plans.[24] If MPCA develops a bold state-level pollution

[20] *See* https://www.sierraclub.org/press-releases/2019/08/sierra-club-and-allies-launch-lawsuit-against-trump-s-dirty-power-plan
[21] 42 U.S.C. § 7416 (1977).
[22] 84 Fed. Reg. 32,537 (July 8, 2019).
[23] 84 Fed. Reg. 32,555 (July 8, 2019).
[24] *See* 84 Fed. Reg. 32,558 (July 8, 2019).

control program and decides to formally submit it to EPA as an ACE plan, it should strongly consider including mandatory, near-term retirement dates for affected units covered under the plan. Should EPA reject Minnesota's plan as "too stringent," its legal standing in doing so would be questionable, and the plan would remain enforceable under state law in any event.

III. MPCA Should Begin a Public Stakeholder Engagement Process to Develop Greenhouse Gas Reduction Policies That Are Centered in Equity and Environmental Justice.

Given the pressing crisis presented by climate change, Sierra Club urges MPCA to commence a public engagement process to discuss options for using MPCA's existing authority to develop a state-based greenhouse gas emissions reduction rule in the near future.

Inclusive and accessible stakeholder engagement is critical to crafting a greenhouse gas reduction policy that equitably reduces adverse impacts of fossil fuel-fired energy generation. As adverse climate and air quality impacts are disproportionately felt by low-income communities and communities of color, MPCA should prioritize efforts to foster meaningful input from these communities. Partnerships with trusted community leaders must play a significant role in developing this engagement strategy. Proceeding in this collaborative manner is necessary to identify and remove barriers to engagement, ensuring that all impacted stakeholders have the opportunity to make their voices heard.

MPCA can address significant barriers to stakeholder engagement by committing to host meetings in impacted communities, provide notice of meetings well in advance, schedule meetings at accessible times and dates, provide translators, and provide plain language and translated fact sheets. Input from community partners will provide invaluable insight on further meeting best practices and specific priority issues to address. MPCA can build credibility by co-hosting meetings with community leaders, improving community buy-in and attendance. Debriefing after meetings with community partners and interested stakeholders provides a further valuable opportunity to develop relationships and improve engagement strategy. Encouraging and supporting community partners to hold their own stakeholder meetings should be considered as well, allowing partners to work as force multipliers in MPCA's effort to engage and inform community members. If exploring this option, MPCA should prioritize attending community-led meetings to show its support for partners and investment in the community.

An additional round of community meetings should follow the release of a draft plan, prior to formal public hearings. A statewide plan will be technical, complex, and lengthy – meaningful engagement in this context requires MPCA put stakeholders on even footing with agency witnesses. Participation in the public hearing process requires that interested stakeholders be prepared to offer written or oral testimony, to question agency witnesses, or be questioned themselves if offering oral testimony. Informational meetings engaging stakeholders on critical elements of the proposal ensure both MPCA and impacted non-technical stakeholders are prepared to meaningfully engage in the public hearing process.

Conclusion

In issuing ACE, EPA has not only adopted a rule that will do nothing (or, in some areas, worse than nothing) to curb dangerous power plant emissions; it has erected a series of legally bogus roadblocks that are designed to discourage states from taking aggressive regulatory action to counteract EPA's failure. Minnesota should not accede to EPA's flawed approach, and should move forward with a robust public stakeholder engagement process to develop its own bold, Minnesota-specific plan to meaningfully reduce greenhouse gas emissions.

Thank you for the opportunity to submit these comments. Please do not hesitate to contact me with questions or concerns.

Respectfully submitted,

/s/ Jessica Tritsch
Minnesota Senior Campaign Representative
Sierra Club
2300 Myrtle Avenue, Suite 260 - South entrance
St. Paul, MN 55114
(612) 259-2449 direct
jessica.tritsch@sierraclub.org

March 6, 2020

Thomas J. Braun
D. 612.373.8835
thomas.braun@stoel.com

VIA EMAIL

Minnesota Pollution Control Agency
520 Lafayette Road
St Paul, MN 55155

Re: Response to Request for Public Input on Implementing the ACE Rule in Minnesota

Dear Sir or Madam:

I write to you on behalf of the Minnesota Large Industrial Group ("MLIG") and in response to the request for public input made by the Minnesota Pollution Control Agency ("MPCA") during its February 2, 2020, webinar on the implementation of the U.S. Environmental Protection Agency's ("EPA") Affordable Clean Energy Rule ("ACE Rule") in Minnesota. MLIG is an ad hoc consortium of large industrial end-users of electricity in Minnesota, together consuming more than 6.5 billion kWh of electricity each year. Cost and access to reliable electricity play a significant role in determining competitiveness for companies in the energy-intensive and trade-exposed industries represented within MLIG. As a result, MLIG members have a substantial stake in the effect of the ACE Rule.

Provided below are MLIG's comments related to MPCA's request for public input on the four options for achieving compliance with the ACE Rule that MPCA presented during the webinar and how MPCA should administer the public engagement process.

As an initial matter, MLIG believes that MPCA should wait until next year to begin the process of studying the various options for achieving compliance with the ACE Rule because some of the variables that could affect the scope and impact of an ACE Rule implementation plan will be solved over the remainder of the year. For instance, Xcel Energy and Minnesota Power, the two Minnesota utilities with coal plants subject to the ACE Rule, will formally submit respective resource plans later this year.[1] MPCA already relies, and will likely continue to rely, on the information contained in those resource plans in weighing the various options for ACE Rule

[1] *In the Matter of Xcel Energy's 2020-2034 Upper Midwest Integrated Resource Plan*, MPUC Docket No. E-002/RP-19-368, Revised Notice of Comment Period (Dec. 6, 2019) (ordering Xcel to submit an updated and amended filing by April 1, 2020); *In the Matter of Minnesota Power's Petition for Approval of the EnergyForward Resource Package*, MPUC Docket No. E-015/AI-17-568, Order Approving Affiliated-Interest Agreements with Conditions at 29 (Jan. 24, 2019) (extending the deadline for Minnesota Power to file its next integrated resource plan to October 1, 2020).

compliance, and it would be shortsighted and inefficient to make decisions that may need to be revisited after more accurate information and data is available. This issue is underscored by the fact that MPCA's presentation slides from the February 2, 2020, webinar cite incorrect retirement dates for Minnesota Power's Taconite Harbor Energy Center Units 2 and 3 after Minnesota Power recently stated that it would keep those facilities on standby for two years longer than previously planned. Minnesota Power will likely document that change, and potentially others, in the resource plan that will be finalized in October and it would be prudent for MPCA to review the final versions of those plans before initiating the process of developing an implementation plan.

Waiting until next year to begin the process of studying the various options for ACE Rule compliance will also ensure MPCA knows who will lead the federal and state governments as the ACE Rule implementation process moves forward. The elections in November could mean many different things for the ACE Rule, including the way in which it is interpreted and implemented, depending on who is elected president and which party controls Congress and the Minnesota Legislature. Were MPCA to decide to defer to the EPA-developed plan it would do so without knowing which party would be leading EPA during the time EPA develops the plan. Similarly, were MPCA to decide to prepare a plan for EPA approval, it would do so without the benefit of knowing which party would be leading EPA at the time MPCA will seek EPA's approval of the plan. Thus, waiting until next year to initiate the process of studying the various options for ACE Rule compliance will provide MPCA the opportunity to make a well-informed decision.

With respect to the four options for ACE Rule compliance that MPCA outlined during the webinar, MLIG believes Minnesota would be best served by the no regrets strategies outlined in either the "Do nothing" or "ACE compliance" options. As MPCA noted during the webinar, Minnesota will achieve compliance with the ACE Rule without taking any actions above and beyond the emissions reductions already planned by Xcel Energy and Minnesota Power. MPCA should recognize and affirm the efforts already made by the utilities and the costs already borne by industry and other ratepayers that helped achieve compliance by foregoing any additional requirements that would add additional costs.

In addition, any ACE Rule implementation plan, regardless of whether it is developed by EPA or MPCA, will have little applicability or relevancy in Minnesota because compliance will already be achieved as a result of early action on emissions issues by the government, utilities, and ratepayers. Over the course of the last two decades, utilities, and the ratepayers that support them, have spent billions of dollars on significant investments in alternative resources, technologies, and processes that reduced emissions and positioned the utilities for compliance with future emissions-related rules.[2] Now is the time to reap the benefits of those investments, save MPCA staff time

[2] *See, e.g., In the Matter of Minnesota Power's Petitions for Approval of its Boswell Energy Center Unit 4 Environmental Retrofit Project and Boswell 4 Environmental Improvement Rider*, MPUC Docket No. E-015/M-12-920, Order Approving Boswell Energy Center Unit 4 Retrofit Project and Authorizing Rider Recovery at 8-9 (Nov.

(continued . . .)

and resources, and reward the utilities and ratepayers for their early actions by either deferring to EPA or simply memorializing the planned reductions in an implementation plan.

MPCA should avoid pursuing the "ACE Compliance w/strengthening" or "Bold Plan" options. Going further than the "ACE compliance" option would likely require utilities to incur additional costs that would be passed on to and further burden industry and other ratepayers. MPCA would also have to devote significant staff time and resources to the effort. As MPCA stated during the webinar, staff are already spending significant time on other new programs, including Clean Cars Minnesota, and may become overburdened if forced to engage in additional rulemaking. Perhaps most importantly, were MPCA to use the ACE Rule as the basis for an emissions trading program or similar "bold" initiative, MPCA would be setting itself up for a conflict with EPA and others over its interpretation of the ACE Rule and the legality of its implementation plan. The ACE Rule is clear that EPA determined "the [best system of emission reduction ("BSER")] for CO2 emissions from existing coal-fired [electric generating units ("EGUs")] is heat rate improvement, in the form of a specific set of technologies and operating and maintenance practices that can be applied at and to certain existing coal-fired EGUs." Simply put, EPA did not provide states with the authority to select any other standard of performance or evaluate an alternative BSER, such as emissions trading, and MPCA would run the risk of preparing an implementation plan that EPA would not approve if MPCA pursues the "ACE Compliance w/strengthening" or "Bold Plan" options. Moreover, Minnesota law provides the Minnesota Public Utilities Commission, not the MPCA, with broad authority over public utilities and the services they furnish. Thus, were MPCA to pursue either the "ACE Compliance w/strengthening" option or "Bold Plan" option, MPCA could set itself on a course for a conflict with EPA over the scope of the ACE Rule and the MPUC over the scope of its jurisdiction.

Finally, MLIG believes that public engagement is an integral piece of the ACE Rule implementation process and encourages MPCA to continue to host webinars and/or stakeholder meetings. MLIG requests that MPCA hold monthly or quarterly meetings to provide updates on

---

5, 2013) (approving Minnesota Power's petition for the approximately $350 million retrofit project); *In the Matter of Otter Tail Power Company's Petition for an Advance Determination of Prudence for its Big Stone Air Quality Control System Project*, MPUC Docket No. E-017/M-10-1082, Order Granting Advance Determination of Prudence and Setting Reporting Requirements at 7 (Jan. 23, 2012) (granting Otter Tail Power Company's request for an advance prudence determination related to an approximately $490 million project (split amongst the various owners and jurisdictions) receiving formal cost recovery approval in MPUC Docket No. E-017/M-13-648 with the total cost equaling less than the initial prudence determination); *In the Matter of the Application of Minnesota Power for Authority to Increase Rates for Electric Service in Minnesota*, MPUC Docket No. E-015/GR-09-1151, Findings of Fact, Conclusions and Order at 70 (Nov. 2, 2010) (approving Stipulation and Settlement Agreement, allowing Minnesota Power to recover up to $223 million for environmental retrofits related to Boswell Energy Center Unit 3); *In the Matter of the Petition of Northern States Power Company d/b/a Xcel Energy for Approval of a Rate Rider to Recover Costs for Emissions Reduction Proposal*, MPUC Docket No. E-002/M-02-633, Order Approving Xcel's Proposed Plan, Subject to the Terms of a Settlement Agreement and Additional Conditions and Clarifications at 22 (March 8, 2004) (referring to the Settlement Agreement filed with the MPUC on December 11, 2003).

its analysis of the public comments received in response to this solicitation, current thinking with respect to the four compliance options, and, potentially, selection of a compliance option and progress on the preparation of an implementation plan. In addition, MPCA should provide opportunities to submit comments in advance of decision points, such as prior to selection of an ACE Rule compliance option.

Thank you for the opportunity to submit these comments.

Regards,

Thomas J. Braun

105450105.4 0064592-00015

Xcel Energy®
RESPONSIBLE BY NATURE®

414 Nicollet Mall
Minneapolis, Minnesota 55401-1993

March 6, 2020

Ms. Anne Jackson
Minnesota Pollution Control Agency
Environmental Analysis and Outcomes Division
520 Lafayette Road North
St. Paul, MN 55155-4194

Re: Northern States Power Company, d/b/a Xcel Energy
Comments on the MPCA's implementation of the Affordable Clean Energy Rule (ACE)

Dear Ms. Jackson,

Northern States Power Company (NSP), doing business as Xcel Energy, appreciates the opportunity to provide the following comments to the Minnesota Pollution Control Agency (MPCA) on its proposed approach to implementing the EPA's Affordable Clean Energy (ACE) rule. Xcel Energy recognizes the level of effort and resources required of the MPCA to develop a workable and approvable state plan. We appreciate the opportunity to partner with MPCA in this effort to create a plan that meets the fundamental requirements of the ACE rule.

Xcel Energy's Carbon Vision and Upper Midwest Resource Plan

On December 4th, 2018 Xcel Energy announced a new corporate goal to reduce CO_2 emissions 80 percent below 2005 levels by 2030, and provide 100 percent carbon-free electricity by 2050, to our customers across all eight states Xcel Energy serves. Xcel Energy was the first electric utility in the United States to establish such aggressive targets, though many have since made similar commitments of their own. Xcel Energy has already reduced carbon emissions from the electricity provided to customers approximately 44 percent relative to 2005, putting us over halfway to achieving our 2030 goal and already exceeding the 2025 goal of the Next Generation Energy Act.

In July 2019 we filed an Upper Midwest Resource Plan that proposes to reduce CO_2 emissions over 80 percent by 2030. Our plan does this by accelerating the retirement of our remaining coal units, adding over 4,000 megawatts of solar, replacing retiring wind resources, relicensing one of our nuclear units, adding gas generation to enable coal retirement and reliably integrate renewables, increasing energy efficiency and demand response, and enabling electrification of other sectors. If the Commission approves this plan, Xcel Energy will no longer have a coal unit in operation in the Upper Midwest after 2030 – less than six years after the date when ACE compliance must be demonstrated.

Our expected CO_2 reductions thus go well beyond the reductions that would be achieved under the ACE rule. In our view, the ACE rule fails to recognize the fundamental transition already well underway in the power sector, with a significant economically driven shift from coal to gas and renewables, and coal units increasingly operating more flexibly and at lower levels in order to follow load net of renewable generation. The rule's requirements for heat rate improvement may in fact be difficult to achieve under today's flexible coal unit operations – despite the fact that total CO_2 from our coal units will decline dramatically while they are still in operation and be reduced to zero by 2030. Please consider our comments with this broader context in mind. We believe it is possible for MPCA to submit an approvable state plan while continuing to partner with utilities to achieve even greater carbon reduction and advance the state's Next Generation Energy Act goals.

MPCA Plan Options

MPCA has presented four potential plan approaches – Do Nothing, ACE Compliance, ACE Compliance with Strengthening, and a Bold Plan – and has requested feedback from stakeholders on what their preferred approach is. We believe the best path forward is the second, "ACE Compliance." This approach has the advantage of retaining state authority to develop a plan and is the only option that is clearly approvable by EPA, providing greater certainty for both the state and regulated unit owners. The "ACE Compliance with Strengthening" option is essentially a description of the system transition already occurring via the integrated resource planning process: fuel switching, generation shifting, coal unit closures, renewable preference for replacement resources, etc. Xcel Energy, in its comments on the proposed ACE rule, urged EPA to provide flexibility for states to achieve compliance through just such measures. Our arguments were rejected. It is reasonable to expect that EPA would reject them again, disapproving of an "ACE Compliance with Strengthening" plan. This would result in greater uncertainty and ultimately a federal plan. However, the "strengthening" measures need not be incorporated into an ACE plan (e.g. via administrative orders) in order for MPCA to be confident these changes will occur. In fact, the Commission will likely have reached its decision on our Upper Midwest Resource Plan before the July 2022 date when ACE plans are due to EPA; at that time, MPCA will know the committed and approved retirement dates of all four remaining Xcel Energy-owned coal units subject to this rule. MPCA need not incorporate coal unit retirements or other "strengthening" measures into its ACE plan, incurring the risk of disapproval and a federal plan, in order to be confident those retirements will occur. The "Bold Plan," likewise, would presumably be rejected by EPA, resulting in a federal plan.

Xcel Energy looks forward to working with the agency to develop an approvable state plan that ensures that only those measures necessary for ACE compliance are part of the federally enforceable plan, while continuing to pursue substantial additional CO_2 reductions.

Compliance Demonstration

Xcel Energy appreciates MPCA's willingness to consider creative, unit-specific compliance demonstration approaches given the variability in the operating ranges of these units and projected changes in operation due to increased renewable generation. Of primary concern is a one-size-fits-all approach to compliance demonstration. Achieving a specific percent reduction in CO_2 lb/MWh (net or gross MWh) will be challenging given that efficiency gains from heat rate improvements have varying effectiveness across the operating range, with most of them historically showing their maximum improvement potential at baseload operation. Showing compliance via a CO_2 lb/MWh limit based on a percent reduction at a prescriptive operating condition (baseload), coupled with a total annual mass limit over all hours of operation based on forecasted capacity factors, would be a preferred approach. Additionally, Xcel Energy believes

that compliance demonstration relying on a parametric monitoring component would be an approvable methodology, perhaps by using a CO_2 lb/MWh reduction requirement at a prescribed operating condition, with all hours of operation demonstrating compliance with a prescribed parametric monitor operating condition.

Emissions Monitoring

Real time continuous emission monitoring system (CEMS) data is the primary method for compliance demonstration in calculating CO_2 lbs/MWh. As noted by the Electric Power Research Institute (EPRI) and others[1], flow measurement uncertainty impacts the accuracy of such measurements resulting in a significant error band, when daily calibration drift, and potential bias adjustment factors are factored in. For most units, the EPA's list of candidate technologies for BSER standard setting have expected heat rate improvement potentials of less than 1%, which is less than the CEMS measurement uncertainty, therefore measurement and verification of actual unit heat rate improvements (CO_2 emission reduction) will be a real challenge. Sources with CEMS for certain pollutants, such as NOx, have the ability to adjust emissions based on monitored results real-time. Sources will not have the capability to adjust CO_2 performance. This reinforces the point above: even though an emission rate limit may be required to be set for a high load condition, it is important that parametric monitoring or an overall CO_2 mass reduction be included as compliance demonstration options to show the benefits of the implementation of heat rate improvement.

Remaining Useful Life

Given the expected unit retirement dates of Xcel Energy's remaining Upper Midwest coal units subject to the ACE rule – Sherco 2 (2023; approved), Sherco 1 (2026; approved), A.S. King (2028; proposed), and Sherco 3 (2030; proposed) – the implementation of any of the targeted heat rate improvement technologies would likely not be prudent from a customer cost impact perspective. Substantial investments in heat rate improvement would need to be recovered over a very short remaining useful life – from two years in the case of Sherco 1, to six years in the case of Sherco 3 – which would, in our view, impose an unreasonable cost for little to no environmental benefit. For this reason, we recommended that the MPCA consider shutdown commitments when evaluating the cost-effectiveness of heat rate improvement options, and subsequent emission limits. Maintaining operational flexibility is imperative to being able to rely on Xcel Energy's Upper Midwest Resource Plan to seek meaningful CO_2 reductions. This approach would also provide many of the "strengthening" measures being sought through the third plan option, without incurring the uncertainty of a plan disapproval and risk of a federal plan.

Thank you for the opportunity to provide comment on the Agency's approach to implementing the ACE rule, and we look forward to continued engagement with the MPCA on the development of the final state plan. If there are any additional questions, please feel free to contact me at (612) 330-7879.

[1] – EPRI study partnering with RMB Consulting and Research, Inc. on the impacts CEMS bias has on heat rate calculations. (http://www.rmb-consulting.com/scotspaper.htm)

Sincerely,

Richard A. Rosvold

Richard A. Rosvold
Director, Environmental Services

Enclosures:

cc: Amanda Smith (MPCA)
Jeff Lyng
Jon Bloomberg
Nicholas Martin
Patrick Flowers
David Hillesheim