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October 5, 2011

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NORTHERN STATES POWER COMPANY - MINNESOTA'S PETITION FOR RECONSIDERATION OF THE CROSS-STATE AIR POLLUTION RULE

Docket No. EPA-HQ-OAR-2009-0491

I. INTRODUCTION

Northern States Power Company - Minnesota ("NSPM"), a subsidiary of Xcel Energy Inc. ("Xcel Energy") respectfully submits this petition for reconsideration of the Cross-State Air Pollution Rule ("CSAPR"), 76 Fed. Reg. 48,208 (Aug. 8, 2011). NSPM requests that EPA reconsider its methodology for calculating allowance allocations for emissions of sulfur dioxide ("SO_2") and oxides of nitrogen ("NOx") for NSPM's High Bridge and Riverside plants, which were converted from coal to natural gas.

Reconsideration is appropriate here because EPA's final allocation methodology, which capped allocations to these plants based on their low post-conversion emissions, was presented for the first time in the final rule, denying NSPM opportunity to comment. The new approach unpredictably resulted in NSPM receiving far fewer allowances than it would have received under the previously proposed methodologies. EPA's allocation of allowances to NSPM's High Bridge and Riverside plants arbitrarily penalizes NSPM for reducing emissions at these plants before CSAPR was finalized.

In 2008 and 2009, NSPM replaced the existing coal-fired boilers at these two plants with natural gas combined-cycle units, resulting in massive emissions reductions at both power plants. In its calculation of allowances based on historical heat input, EPA utilized only the heat input after the conversion to natural gas, without providing NSPM credit for the higher historical heat input each plant had before the conversion. More important, EPA's methodology reduced the allocations to these plants to the level of emissions after the conversion, even though each plant had much higher actual emissions during EPA's 2003-2010 historical period. As a result, EPA's calculated allowance allocation is unfairly low because it does not recognize these proactive emission reduction efforts.

EPA did not explain or support this arbitrary decision. Indeed, it runs counter to the rationale EPA provides to justify its new allocation methodology:

> EPA believes that existing-unit allowance allocation under the Transport Rule should not generally advantage or disadvantage units based on the selection of fuels consumed or of pollution controls installed at a given unit in anticipation of either the Clean Air Interstate Rule or the Transport Rule, *i.e., fuel or control decisions taken from 2003 onward.* An approach that does not advantage or disadvantage units in this way avoids allocating in a way that would effectively penalize units that have already invested in cleaner fuels or other pollution reduction measures that will continue to deliver important emission reductions under this rulemaking. The approach selected in the final rule generally does not penalize such units and is thus generally fuel-neutral and control-neutral in its allocation determinations.

76 Fed. Reg. at 48,288 (emphasis added). NSPM agrees with EPA's statement that early reduction projects should not be penalized, but files this petition because EPA's final allocation method did penalize NSPM's High Bridge and Riverside projects contrary to EPA's expressed policy approach.

Xcel Energy and several other parties indicated in comments on the proposed rule that actions to convert plants from coal to natural gas should get the benefit of early action taken to reduce emissions. While EPA did not directly respond to Xcel Energy's comments on this issue, EPA stated in its response to comments that "units that are repowered (e.g. switched from coal fired to natural gas fired) and *still reporting as the same unit* would continue to receive the same allocation as prior to repowering." *See* Transport Rule Primary Response to Comments at 2649 (emphasis added). However, as explained below, the conversions done at the High Bridge and Riverside plants resulted in an administrative reassignment of unit numbers as NSPM worked with its state environmental agency to permit and implement the projects. EPA's decision to treat High Bridge and Riverside differently than other converted units merely because they did not retain the same unit number is arbitrary.

If EPA had indicated before the final rule that it was planning to reward early action by focusing on unit numbers, NSPM could have let EPA know why that was a flawed approach in relation to the Riverside and High Bridge projects. Instead, NSPM argued for early reduction credit but was not awarded that credit in the final rule because of EPA's final methodology for crediting early reductions. EPA therefore ended up penalizing NSPM's MERP project, which is a shining example of the types of early reduction actions that EPA says it encourages.

II. NSPM's METROPOLITAN EMISSION REDUCTION PROPOSAL

The conversion of the Riverside and High Bridge plants to natural gas was done as part of NSPM's Metropolitan Emission Reduction Proposal ("MERP"), which it submitted to the Minnesota

Pollution Control Agency ("MPCA") in July of 2002. *See* MPCA Review at 1.[1] The MERP was designed to achieve very substantial reductions in emissions at three of NSPM's power plants in the Minneapolis-St. Paul, Minnesota metropolitan area.

NSPM's MERP is exactly the kind of state initiative that EPA should reward through a more appropriate rulemaking design. The MERP was a voluntary project developed pursuant to state legislation that was supported by the state of Minnesota, most environmental organizations, electricity customers and, of course, NSPM. It was locally created. It occurred prior to and without the intervention of complicated federal rulemaking like CSAPR. Perhaps most importantly, because of these attributes, it achieved these important environmental goals at very reasonable cost to the people of Minnesota. As indicated in our comments on the original Transport Rule, these are exactly the kinds of state programs that EPA should recognize and reward. However, rather than rewarding NSPM and its customers for initiating and supporting these successful emission reduction projects, the final rule actually punishes the company for early reductions.

In its review of the MERP, MPCA concluded that the proposed projects would yield significant environmental and public health benefits for Minnesota. Before the projects, the High Bridge and Riverside plants, along with a third plant included in the MERP (the Allen S. King plant), represented almost half of all SO_2 released by electric utilities in Minnesota, and nearly a quarter of SO_2 emissions overall. MPCA Review at 4. The three plants were also responsible for 20% of the point source emissions of NOx in the state. *Id.* at 26. MPCA determined that the projects were not needed to comply with state or federal air quality standards, *id.* at 3, and conservatively calculated that the MERP would result in public health benefits equivalent to $200 to $500 million (in 2001 dollars). *Id.* at 4. This estimate did not account for several other important benefits of the MERP, including reduction of mercury emissions; reduced contribution to smog, regional haze, and acid deposition; and the reduced need for development of new energy generation sites and new transmission lines. *Id.* at 48.

NSPM is proud to report that the MERP was successful in achieving huge emission reductions: a 93% reduction in SO_2 emissions, a 91% reduction in NOx emissions, an 81% reduction in mercury emissions, a 55% reduction in particulate emissions, and a 21% reduction in carbon dioxide emissions. And this is just one project in NSPM's distinguished record of environmental leadership, exemplifying Xcel Energy's[2] commitment to substantially reducing emissions while at the same time reliably meeting customer demand for electricity at a reasonable cost.[3]

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[1] MPCA, Review of Xcel Energy's Metropolitan Emission Reduction Proposal, at http://www.pca.state.mn.us/index.php/view-document.html?gid=3992. Under the state statute that governed the MERP, the Minnesota Public Utilities Commission ultimately approved the MERP based in large part upon the MPCA's review.

[2] Xcel Energy is a major U.S. electricity and natural gas company with regulated operations in eight Western and Midwestern states (Minnesota, Wisconsin, North Dakota, South Dakota, Michigan, Colorado, Texas and New Mexico). Xcel Energy provides a comprehensive portfolio of energy-related products and services to 3.4 million electricity customers and 1.9 million natural gas customers. Xcel Energy's generating units are capable of producing over 16,400 MW of electricity, using a variety of fuel sources including coal, natural gas, oil, nuclear, renewables and hydropower.

[3] Xcel Energy is the nation's number one utility provider of wind energy, with over 3,100 MW of wind energy currently interconnected to its system. By 2015, the company plans to increase the wind capacity installed on its system to 5,000 MW. Xcel Energy also ranks fifth in the nation in terms of solar capacity and is a leader in energy efficiency. The company is leading the nation's utilities in reducing emissions; since 2010, pursuant to a state statute enacted in Colorado, Xcel Energy's subsidiary Public Service Company of Colorado is on a schedule

III. REQUEST FOR RECONSIDERATION

For the reasons set forth below, NSPM urges EPA to reconsider the allowance allocation methodology and to provide NSPM's High Bridge and Riverside plants allowances uncapped by the low level of post-conversion emissions.

A. EPA Reconsideration is Authorized Under Section 307(d)(7)(B).

Section 307(d)(7)(B) of the federal Clean Air Act ("CAA") provides for EPA's reconsideration of a CAA rule upon objection by a petitioner. *See* 42 U.S.C. § 7607(d)(7)(B). EPA *must* grant reconsideration when the petitioner:

> [C]an demonstrate to the Administrator that it was impracticable to raise [an] objection [during the period for public comment] or if the grounds for such objection arose after the period for public comment ... and if such objection is of central relevance to the outcome of the rule.

Id. In such a situation, reconsideration is mandatory, as the CAA commands that EPA "shall convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed." *Id.* (emphasis added). The reconsideration provision of Section 307(d)(7)(B) is applicable to the CSAPR rulemaking because the Administrator expressly determined that CSAPR is subject to the procedural provisions of CAA § 307(d). *See* 76 Fed. Reg. at 48,352.

B. EPA's Introduction of a New Emissions Allowance Allocation Methodology in the Final Rule, and its Impact on NSPM's Plants, Necessitates Reconsideration.

This petition unmistakably satisfies the standard for reconsideration. EPA did not provide an opportunity to comment on the methodology for allocation of emissions allowances presented in the final rule. Under the final rule, EPA allocates SO_2 and NOx allowances to units based on their historic heat input, capped by the unit's historic emissions. *See* 76 Fed. Reg. at 48,288. This methodology was not presented in the proposed rule or any of the subsequently issued notices of data availability ("NODAs"). It was, therefore, "impracticable to raise [an] objection" to the allowance allocation methodology during the public comment period, and reconsideration is necessary. 42 U.S.C. § 7607(d)(7)(B).

EPA claims that the final allocation methodology was a logical outgrowth of the options presented in the proposed rule and the subsequent NODAs. *See* 76 Fed. Reg. at 48,288. NSPM disagrees and is confident that a reviewing court would reject EPA's position. The D.C. Circuit has stated that, "[g]iven the strictures of notice-and-comment rulemaking, an agency's proposed rule and its final rule may differ only insofar as the latter is a 'logical outgrowth' of the former." *Envtl. Integrity Project v. EPA*, 425 F.3d 992, 996 (D.C. Cir. 2005) (stating that "[t]he test is whether a new round of notice and comment would provide the first opportunity for interested parties to offer comments that could persuade the agency to modify its rule"). A "final rule is a 'logical outgrowth' of a proposed rule only if interested parties should have anticipated that the change was possible, and thus reasonably should have filed their comments on the subject during the notice-and-comment period." *Id.* at 998. An agency's notice of proposed rulemaking must provide sufficient detail for interested parties to comment meaningfully. *Horsehead Resource Dev. Co. v. Browner*, 16 F.3d 1246, 1268 (D.C. Cir. 1994). Consequently, courts will strike down agency action that seeks to "use the rulemaking process to pull a surprise switcheroo on regulated entities." *Envtl. Integrity Project*, 425 F.3d at 998.

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to substantially re-work its Colorado generation portfolio, which will result in an 84% reduction in SO_2 and an 89% reduction in NOx emissions in a non-CSAPR state.

Here, EPA admits that the final methodology was not discussed in the proposed rule or the subsequent NODAs. EPA explains that the final methodology is Option 2, which was proposed in the NODA issued on January 7, 2011, but "modified in response to public comments." 76 Fed. Reg. at 48,288. EPA explains that it abandoned the "reasonable upper-bound capacity utilization factor and a well-controlled emission rate" factors that were proposed in Option 2. *Id.* In their place, EPA introduced a brand new factor: an allowance cap based on a unit's historic emissions, which was not discussed in any of the prior proposals. NSPM could not have anticipated that EPA would adopt into its methodology a factor that had not been considered in any of the three previous proposals.

NSPM received significantly fewer allowances under the final allocation methodology than it would have received under either of the methodologies proposed in the NODA:

SO_2 Allocations						
Plant	**Option 1 Allocation**	**Final Allocation**	**Percent Reduction**	**Option 2 Allocation**	**Final Allocation**	**Percent Reduction**
High Bridge	503	2	99.6%	522	2	99.6%
Riverside	281	2	99.3%	292	2	99.3%

NOx Allocations						
Plant	**Option 1 Allocation**	**Final Allocation**	**Percent Reduction**	**Option 2 Allocation**	**Final Allocation**	**Percent Reduction**
High Bridge	440	50	88.6%	446	50	88.8%
Riverside	246	82	66.7%	250	82	67.2%

In all cases, NSPM's final CSAPR allocation for these plants was capped at actual, post-conversion historic emissions, whereas at proposal the plants were provided significantly more allowances based on historic heat input (albeit heat input after the plants were converted to natural gas). NSPM could not have anticipated that the final rule would result in such extreme reductions in allowances, and was denied an opportunity to comment on the method of calculating these allowances.

C. The Exclusion of Historic Heat Input and Emissions Data for NSPM's Plants Prior to Their Conversion to Natural Gas is Arbitrary and Inappropriate.

The final allowance allocations to NSPM's four High Bridge and Riverside units were reduced by EPA's arbitrary and irrational decision to exclude from its allowance calculations historic heat input and emissions data that predated these plants' natural gas conversion projects.

In 2008, as part of the MERP, NSPM replaced the existing coal-fired units at the High Bridge plant with two combustion turbine units that are connected to a Heat Recovery Steam Generator to further reduce heat rate and emissions from the plant (a combined cycle unit). The units were given new unit numbers 7 and 8, but were built on the same site as the replaced coal units (units 5 and 6). In 2009, NSPM changed the Riverside plant by installing two combustion turbine units (replacing the existing coal units) that are connected to a Heat Recovery Steam Generator to further reduce heat rate and emissions from the plant.. The combustion turbine units utilize the steam turbine from units 6 and 7. As part of the project, the coal-fired boilers from units 6, 7 and 8 ceased to operate and the combustion turbine units were renamed units 9 and 10. In both cases, NSPM's customers paid the costs associated with early

action and achieved significant reductions in emissions Unfortunately, the allowance allocation methodology utilized by EPA in the final rule failed to give credit to these plants for these significant emission reductions.

EPA's methodology first calculates a unit's allowance allocation based on the average of the three highest non-zero annual heat inputs between 2006 and 2010 and then caps that allocation so that it is no higher than the highest actual emissions between 2003 and 2010. In applying this methodology to the High Bridge and Riverside plants, EPA utilized only data from those plants after they were converted to natural gas, even though they operated as coal plants during part of the time period EPA used to develop the allowance allocations. Thus, EPA used no historic heat input data from High Bridge during 2006 and 2007, but only heat inputs for 2008 through 2010. Similarly, for Riverside, EPA used no historic heat input data for 2006 through 2008, but only heat input for 2009 and 2010. Even with the use of heat input only after the plants were converted to natural gas, the initial heat input-based allocation for SO_2 in the final rule were 527 for High Bridge and 480 for Riverside. The initial heat-input based allocation for NOx were 371 for High Bridge and 338 for Riverside. However, because the actual, post-conversion emissions for both plants were extremely low as a result of the conversion to natural gas, the emissions were capped at the actual, post-conversion emissions, as set forth in the following table:

Allowance Allocation Calculation per EPA						
Plant	**Initial Heat Input Based 2012 and 2014 SO_2 Allocation (tons)**	**Initial Heat Input Based 2012 and 2014 Annual NOx Allocation (tons)**	**Annual SO_2 Maximum Historic Baseline (tons)**	**Annual NOx Maximum Historic Baseline (tons)**	**Final SO_2 Allocation (tons)**	**Final NOx Allocation (tons)**
High Bridge	527	371	2	50	2	50
Riverside	480	338	2	82	2	82

As a result, the Riverside and High Bridge plants received very few allowances, thus receiving no credit for the emission reductions achieved through the MERP. In contrast, had EPA used the heat input and annual emissions from the historical period prior to their conversion, the units would have received significantly more allowances. The following charts provide actual heat input and emissions data for the relevant period.

Actual Heat Input During Baseline Period			
Plant	**Year**	**Actual Annual Heat Input (mmBTU)[4,5]**	**Average of the 3 Highest Values**
High Bridge Pre-Conversion	2006	17,441,117	14,176,024
	2007	10,910,930	

[4] Pre-conversion heat input obtained from EPA Clean Air Markets web site, Monitoring Location Level emissions.

High Bridge Post-Conversion	2008	3,609,480	5,240,692
	2009	5,406,075	
	2010	6,706,522	
Riverside Pre-Conversion	2006	21,999,174	22,866,584
	2007	27,145,984	
	2008	19,454,595	
Riverside Post-Conversion	2009	2,561,200	4,795,977
	2010	7,030,753	

Actual Annual SO_2 and NOx Emissions During Baseline Period			
Plant	**Year**	**Actual Annual SO_2 Emissions (tons)[5]**	**Actual Annual NOx Emissions (tons)[5]**
High Bridge Pre-Conversion	2003	**3,965***	5,955
	2004	3,806	**6,070**
	2005	3,463	5,837
	2006	3,406	5,063
	2007	2,096	3,188
High Bridge Post-Conversion	2008	1	29
	2009	2	43
	2010	2	50
Riverside Pre-Conversion	2003	**14,670**	**13,344**
	2004	12,361	12,117
	2005	12,573	12,716
	2006	10,057	9,853
	2007	12,972	12,339
	2008	10,492	9,677

[5] SO_2 mass, NOx mass, and Post-conversion heat input obtained from EPA Clean Air Markets web site, Unit Level Emissions.

Riverside	2009	22[6]	44[6]
Post-Conversion	2010	2	82

* Bolded data represent the highest emission values during the baseline period.

EPA should recalculate the allowances for the Riverside and High Bridge plants using the pre-conversion heat input and emissions in the table above. This would appropriately recognize the massive emission reductions undertaken by these plants during the emissions baseline period. If EPA for some reason determines that it should use the post-conversion heat input of the plants, EPA should at the very least award the plants with the initial heat input-based allocations uncapped by post-conversion emissions.[7]

Xcel Energy and several other parties indicated in comments on the proposed rule that actions to convert plants from coal to natural gas should get the benefit of early action taken to reduce emissions. While EPA did not directly respond to Xcel Energy's comments on this issue, EPA stated in its response to comments that "units that are repowered (e.g. switched from coal fired to natural gas fired) and *still reporting as the same unit* would continue to receive the same allocation as prior to repowering." *See* Transport Rule Primary Response to Comments at 2649 (emphasis added). However, as discussed above, the conversions done at the High Bridge and Riverside plants resulted in the assignment of different unit numbers for administrative reasons. EPA's decision to treat High Bridge and Riverside differently than other converted units merely because they did not retain the same unit number is arbitrary.

It is also bad policy. Under CSAPR, NSPM would have received a much larger allocation had it left the Riverside and High Bridge plants uncontrolled on coal. EPA's approach to allocation in this rulemaking gives no credit to coal plant retirement as early action. It is a powerful disincentive to other utilities considering whether to pursue their own proactive emission reduction programs.

EPA criticized its initial proposal's emission-based allocation methodology because it "would disadvantage one of two otherwise identical existing units if it invested in emission reductions in anticipation of the Clean Air Interstate Rule or this final Transport Rule." EPA concludes that "[t]he heat-input allocation methodology selected for the final Transport Rule does not have this flaw." 76 Fed. Reg. at 48,289.

To the contrary, the final methodology *does* have this flaw. With respect to the High Bridge and Riverside plants, the final methodology does exactly what EPA says it does not: it penalizes NSPM for investing in emission reductions at its coal-fired power plants by awarding more allowances to identical coal-fired plants that did not undergo similar projects.

In sum, the final allocation methodology is arbitrary and unfair to companies like NSPM that invested in early emission reduction efforts. It also is unfair to the ratepayers who help finance such projects. This outcome is based on EPA's arbitrary and unreasonable decision to exclude pre-conversion baseline data from the allocation calculations for converted plants whose units did not retain the same unit number designation. EPA should reconsider this arbitrary and inappropriate outcome and allocate additional allowances to the Riverside and High Bridge plants by including all data on historic heat input

[6] These values include 21.2 tons of SO_2 and 8.1 tons of NOx contributed by Riverside Unit 8 in 2009.

[7] NSPM notes that this request does not impact the overall allowance allocation EPA developed for the state of Minnesota, but does impact how it is allocated within the state.

and actual emissions from these plants for all years in the baseline periods that EPA used to develop its allowance allocations. At the very least, EPA should utilize the past actual emissions of the plants to ensure that the initial heat-input based allocations are not diminished as a result of the plants' low, post-conversion emissions.

IV. CONCLUSION

For the reasons discussed above, NSPM urges EPA to reconsider the allowance allocation methodology set forth in CSAPR as applied to NSPM's High Bridge and Riverside plants, and allocate additional allowances to them as described above.

Dated: October 5, 2011

On Behalf of Northern States Power Company - Minnesota

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