

STATE OF MINNESOTA
Minnesota Pollution Control Agency

In the Matter of:

Xcel Energy – Northern States Power Company
Sherburne County Generating Station

ADMINISTRATIVE ORDER BY CONSENT

The Commissioner of the Minnesota Pollution Control Agency (MPCA) and Xcel Energy – Northern States Power Company (Xcel) enter into this Administrative Order by Consent for the Sherburne County Generating Station (Sherco), Becker, Sherburne County, Minnesota, pursuant to Minn. Stat. § 116.07, subd. 9 (2010).

FINDINGS OF FACT

BACKGROUND

1. On July 6, 2005, the U.S. Environmental Protection Agency (EPA) published regulations to address visibility impairment in our nation's largest national parks and wilderness ("Class I") areas (70 FR 39103). This rule is commonly known as the "Regional Haze Rule". 40 CFR §§ 51.300-51.309.
2. The Regional Haze Rule (Rule) requires that Minnesota establish and achieve visibility goals for each of its Class I areas by 2018. The Rule regulates the emission of pollutants that contribute to regional haze. The MPCA has determined that the key contributing pollutants are particulate matter (PM, measured as PM₁₀), sulfur dioxide (SO₂), and nitrogen oxides (NO_x).
3. The Rule regulates certain older stationary sources that could contribute to visibility impairment in Class I areas and requires Best Available Retrofit Technology (BART) emission limits on contributing pollutants for these sources.
4. The Rule requires that Minnesota submit a Regional Haze State Implementation Plan (SIP) to U.S. EPA that identifies the older sources that cause or contribute to visibility impairment in its Class I areas. The Regional Haze SIP submittal must also include a schedule for implementation of BART limits and other control measures.
5. The Rule includes 40 CFR Part 51, Appendix Y "*Guidelines for BART Determinations Under the Regional Haze Rule*" which provides direction for determining which sources may need to install BART and for determining BART.
6. To satisfy the Rule, the MPCA determined what constitutes BART for each BART-eligible unit and established emission limits consistent with its determination of BART. BART limits take into consideration the technology available, the costs of compliance, the energy and the non-air quality environmental impacts of compliance, any pollution control equipment in use or in existence at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.
7. To identify the BART-eligible emission units, MPCA used the following criteria:

- a. One, or more, emission(s) units at the facility fit within one of the twenty-six (26) categories listed in the 40 CFR Part 51, Appendix Y *Guidelines*;
 - b. The emission unit(s) were in existence on August 7, 1977 and began operation at some point on or after August 7, 1962; and
 - c. The sum of the potential emissions from all emission unit(s) identified in the previous two bullets was greater than 250 tons per year of the visibility-impairing pollutants: sulfur dioxide (SO₂), nitrogen oxide (NO_x), and PM₁₀.
8. The MPCA requested BART analyses from BART-eligible electric generating facilities that were found through modeling to be subject-to-BART, unless the facility was scheduled for future emissions reductions and all of the following criteria were met:
 - a. The MPCA had sufficient information about planned emission reductions at the time facilities were notified that they were subject to BART;
 - b. Public Utility Commission (PUC) approvals for the reductions were in place; and
 - c. The MPCA determined that planned emission reductions likely represented presumptive BART emissions levels as described in the *Guidelines*.
9. In July 2005, EPA determined that the Clean Air Interstate Rule (CAIR) provided more emission reductions of NO_x and SO₂ than would be required under BART, and thus states could choose in their Regional Haze SIPs to let participation in CAIR substitute for BART for electric generating facilities for these pollutants. The MPCA originally pursued this option.
10. In May 2009, EPA published a proposed rule to stay application of CAIR in Minnesota. See Stay of Clean Air Interstate Rule for Minnesota; Stay of Federal Implementation Plan To Reduce Interstate Transport of Fine Particulate Matter and Ozone for Minnesota (74 FR 22147). In November 2009, EPA finalized the stay of CAIR in Minnesota. See Administrative Stay of Clean Air Interstate Rule for Minnesota; Administrative Stay of Federal Implementation Plan To Reduce Interstate Transport of Fine Particulate Matter and Ozone for Minnesota (74 FR 56721). Thus, the MPCA decided it could no longer determine that CAIR would substitute for BART for electric generating facilities.
11. The MPCA submitted a Regional Haze SIP to U.S. EPA on December 30, 2009, which identified the BART-eligible and subject-to-BART sources and gave the MPCA's determination of what constitutes BART and associated emission limits.
12. On August 8, 2011, EPA promulgated the Cross State Air Pollution Rule (CSAPR), also known as the Transport Rule. This trading program rule replaced CAIR, and Minnesota was covered by the rule. See Federal Implementation Plans: Interstate Transport of Fine Particulate Matter and Ozone and Correction of SIP Approvals (76 FR 48208).
13. On December 19, 2011, the MPCA placed on public notice a Supplemental Regional Haze SIP that proposed to determine that participation in CSAPR would substitute for source-specific BART determinations for power plants.

14. On December 30, 2011, EPA proposed that CSAPR provided more emission reductions of NO_x and SO₂ than would be required under BART, and thus states could choose in their Regional Haze SIPs to let participation in CSAPR substitute for BART for electric generating facilities for these pollutants. *See* Regional Haze: Revisions to Provisions Governing Alternatives to Source-Specific Best Available Retrofit Technology (BART) Determinations, Limited SIP Disapprovals, and Federal Implementation Plans (76 FR 82219).
15. Under 40 CFR 51.308(e)(4), a state that opts to participate in the trading program in lieu of source-specific BART may also adopt provisions for a geographic enhancement to the program, to address the requirement under 40 CFR 51.302(c) related to BART for reasonably attributable visibility impairment. In addition, EPA has said that states may also include in their SIPs provisions applicable to a specific source even if there is no such reasonable attribution for that source (76 FR 82224).
16. MPCA is choosing to include in the SIP a source-specific BART requirement applicable only to Sherco.
17. As is required for all SIP conditions, the MPCA must make BART emission limits enforceable. The MPCA is making the BART emission limits applicable to the Sherco facility enforceable through this Administrative Order.

THE FACILITY

18. Xcel Energy – Northern States Power Company owns and operates Sherco. Sherco has two emission units, Unit 1 and Unit 2, which are BART-eligible. Unit 1 (690 MW net, operational beginning in 1976) and Unit 2 (683 MW net, operational beginning in 1977) are tangentially fired and discharge emissions to the atmosphere through a common 650 foot stack, identified as SV001.
19. The MPCA determined that Sherco Units 1 and 2 are subject to BART. *See* RESULTS of Best Available Retrofit Technology (BART) Modeling to Determine Sources Subject-to-BART in the State of Minnesota at <http://proteus.pca.state.mn.us/publications/aq-sip2-07.pdf>.

BEST AVAILABLE RETROFIT TECHNOLOGY (BART)

20. The MPCA requested a BART analysis from Xcel for Sherco. Xcel submitted the analysis in October 2006. *See* Best Available Retrofit Technology (BART) Analysis For Sherburne County Generating Plant Units 1 and 2 <http://www.pca.state.mn.us/index.php/view-document.html?gid=2231>
21. After the Administrative Stay of the Clean Air Interstate Rule, the MPCA requested updated BART information from the facility. This was received in November 2008. <http://www.pca.state.mn.us/index.php/view-document.html?gid=2234>

22. After considering the five statutory factors as documented in the MPCA's BART determination memorandum dated October 26, 2009, the MPCA determined that BART for Units 1 and 2 is represented by the emission limitations set forth in this Order. These limitations are based on:
- a. Installation of sparger tubes and lime injection in the existing scrubber to control SO₂ emissions;
 - b. Low NO_x burners and overfire air on Unit 1 and additional computerized combustion controls on Unit 2 to control NO_x emissions; and
 - c. Existing wet electrostatic precipitators to control PM emissions.

ORDER

NOW, THEREFORE, IT IS ORDERED AND AGREED:

Xcel Energy will install and operate control equipment in order to meet the following requirements, which the parties agree represent BART for Sherco.

I. BART Emission Limitations and Compliance

A. BART for Nitrogen Oxides (NO_x)

1. Emission Limitations

a) NO_x emissions from SV001 shall not exceed 0.15 lb/MMBtu on a 30-day rolling average basis.

2. Compliance with the NO_x emission limits above will be determined through use of a continuous emission monitor in accordance with 40 CFR 75.10 and Minnesota Rules 7017.1002 through 7017.1180, as applicable.

a) The 30-day rolling average shall be calculated from the daily averages, with each daily average calculated from the valid hourly averages in each day. Biased data shall be used, following Appendix A to 40 CFR 75, but not substituted data.

B. BART for Sulfur Dioxide (SO₂)

1. Emission Limitations

a) SO₂ emissions from SV001 shall not exceed 0.12 lb/MMBtu on a 30-day rolling average basis.

2. Compliance with the SO₂ emission limits above will be determined through use of a continuous emission monitor in accordance with 40 CFR 75.10 and Minnesota Rules 7017.1002 through 7017.1180, as applicable.

a) The 30-day rolling average shall be calculated from the daily averages, with each daily average calculated from the valid hourly averages in each day.

Biased data shall be used, following Appendix A to 40 CFR 75, but not substituted data.

C. BART for Particulate Matter (PM)

1. Emission Limitations

a) PM₁₀ emissions, including filterable plus organic and inorganic condensables, from SV001 shall not exceed 0.09 lb/MMBtu, based on an averaging period consistent with the particulate matter test reference methods stated below.

2. Compliance with the PM emission limit above will be determined through:

a) Operation of a continuous opacity monitor in accordance with Minnesota Rules Parts 7017.1190 to 7017.1220, as applicable;

b) Maintaining opacity for SV001 at less than or equal to 20 percent using a 3-hour average.

c) Performance testing at a frequency consistent with that required under EPA's Mercury and Air Toxics Standards Rule (40 CFR Part 63, Subpart UUUUU), or at least every 3 years. Particulate matter testing shall be conducted according to Minn. R. 7017.2001 to 7017.2060, using US EPA Method 201A or Method 5, and Method 202.

D. Compliance Deadline for BART

1. Initial compliance with these limits shall be demonstrated no later January 1, 2015.

II. Recordkeeping and Reporting Requirements

A. Recordkeeping Requirements

1. CEMS and COMS data shall be recorded and retained at the facility available for review by the MPCA or EPA inspectors

2. Retain onsite at the stationary source an operation and maintenance plan for all air pollution control equipment, keeping copies of the O & M Plan available for use by staff and MPCA or EPA staff.

3. Retain all records at the facility for a period of five (5) years from the date of monitoring, sample, measurement or report. Records which must be kept at this location include all calibration and maintenance records and all electronic recordings for continuous monitoring instrumentation.

B. Reporting Requirements

1. Excess Emission Reports

a) Excess emissions/downtime reports shall be submitted 30 days after end of each calendar quarter. The Excess Emissions Report (EER) shall indicate all periods of monitor downtime, monitor bypass and all periods of exceedances of the limit. The EER must be submitted even if there were no excess emissions, downtime or bypasses during the quarter.

2. Compliance Certification

a) A compliance certification report is due 30 days after end of each calendar year (for the previous calendar year). It is to be submitted on a form approved by the Commissioner. This report covers all deviations from the BART NO_x, SO₂, and PM limits experienced during the calendar year.

General Conditions

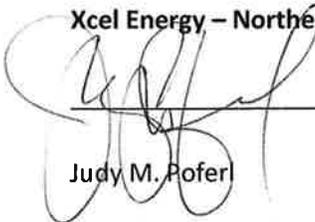
- 23. Nothing in this Order shall relieve Xcel of its obligation to meet permitting requirements for any physical or operational change at Sherco.
- 24. This Order by Consent is not transferable or assignable to any person without the express written approval of the MPCA.
- 25. This Order by Consent is effective upon the date that it is signed by the MPCA Commissioner or his designee.
- 26. The terms of this Order by Consent may be amended by the written agreement of the parties.
- 27. By their signatures below, the signatories to this Order represent that they have authority to enter into and bind their respective parties.

RESERVATION OF AUTHORITY

Nothing in this Order shall prevent the MPCA from taking action to enforce the requirements of this Order, or from requiring additional action by the Regulated Party if necessary to ensure compliance with the Regional Haze rule and other MPCA rules and statutes.

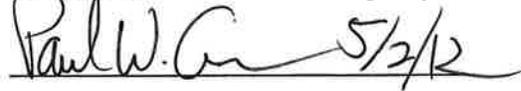
IT IS SO ORDERED AND AGREED.

Xcel Energy – Northern States Power Company



Judy M. Poferl
President and CEO

Minnesota Pollution Control Agency



Paul W. Aasen
Commissioner