

## General information

**Public comment period begins:** July 14, 2020

**Public comment period ends:** August 13, 2020 (4:30 p.m.)

The Minnesota Pollution Control Agency (MPCA) Commissioner has made a preliminary determination to reissue this permit.

**Name and address of Permittee:**

Northern States Power a MN Corp  
dba Xcel Energy  
414 Nicollet Mall  
Minneapolis, MN 55401-1927

**Facility name and location:**

Xcel Energy - Sherburne County  
Generating Plant  
13999 Industrial Blvd  
Becker, MN 55308-8800  
Sherburne County  
T034N, R29W, Section 035

**MPCA contact person:**

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A draft permit and supporting documentation are available for review on the MPCA Public Notices webpage at <http://www.pca.state.mn.us/publicnotices>. Additional materials relating to the issuance of this permit are available for inspection by appointment at any MPCA office (<https://www.pca.state.mn.us/about-mpca/mpca-offices>) between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. The MPCA will mail or email a copy of the draft permit upon request. Comments, petitions, and other requests must be received at the MPCA in writing on or before the public comment period end date and time identified above.

**Watershed:** NA

**Receiving water:** NA

## Description of Xcel Energy - Sherburne County Generating Plant

The Xcel Energy (Permittee) Sherburne County Generating Plant (facility) is a coal-fired electric generating plant. The facility has a total nameplate gross electrical output rating of 2,388 MW. The facility is composed of three coal-fired boilers, coal handling equipment, ash handling equipment, lime handling equipment, mercury control sorbent handling equipment, two distillate fuel oil-fired auxiliary boilers (one of which is currently inoperable), fugitive particulate matter sources (including an ash pond and an ash landfill), and five emergency engines. There are also several activities that qualify as insignificant under Minnesota Rules. Steam for electrical power generation is provided by all three boilers.

Boiler 1 (EQUI 92) and Boiler 2 (EQUI 93) are tangentially-fired boilers that discharge emissions to the atmosphere through a common 650 foot stack (STRU 1). Each of these units has a maximum rated heat input capacity of 7,111 MMBtu/hr. Construction of EQUI 92 commenced in 1976 and construction of EQUI 93 commenced in 1977. The primary fuel for these units is sub-bituminous coal, with distillate fuel oil used as an ignition and warm up fuel. The air pollution control equipment for these units includes low-NO<sub>x</sub> burner systems, separated/close coupled overfire air systems, and combustion optimization systems (for the control of NO<sub>x</sub> emissions), wet flue gas desulfurization (FGD) scrubber systems (for the control of particulate, SO<sub>2</sub>, acid gases (including acid gas HAPs), and other HAP emissions), wet electrostatic precipitators (for the control of particulate and metal HAP emissions), and sorbent injection systems (for the control of mercury emissions).

Boiler 3 (EQUI 94) is a front and rear wall-fired boiler that discharges emissions to the atmosphere through another 650 foot stack (STRU 2). This unit has a maximum rated heat input capacity of 8,531 MMBtu/hr. The primary fuel for this unit is sub-bituminous coal, with distillate fuel oil being used as an ignition and warm up fuel. The air pollution control equipment for this unit includes a low-NO<sub>x</sub> burner system (for the control of NO<sub>x</sub> emissions), a lime slurry spray dryer absorber/baghouse semi-dry FGD system (for the control of SO<sub>2</sub>, acid gases (including acid gas HAPs), and other HAP emissions), a mercury control sorbent injection/baghouse system (for the control of mercury emissions), and a baghouse for the control of particulate and metal HAP emissions.

The Permittee performs abrasive blasting cleaning operations on each boiler for routine annual maintenance.

The facility operates 38 fabric filters for the control of particulate emissions from various material-handling units. Materials processed at the facility include coal, lime, boiler fly ash and bottom ash (from Unit 3 and the Xcel - King plant), and activated carbon mercury control sorbent.

The main pollutants of concern are particulate matter (PM), particulate matter less than 10 microns (PM<sub>10</sub>), particulate matter less than 2.5 microns (PM<sub>2.5</sub>), sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), carbon monoxide (CO), volatile organic compounds (VOCs), hazardous air pollutants (HAPs), and carbon dioxide equivalent (CO<sub>2e</sub>) emitted from the three coal-fired boilers and two dual-fuel (distillate fuel oil and natural gas)-fired auxiliary boilers (construction of these two boilers is authorized by this permit). Other emissions at the facility include PM, PM<sub>10</sub>, PM<sub>2.5</sub>, SO<sub>2</sub>, NO<sub>x</sub>, CO, VOCs, HAPs, and CO<sub>2e</sub> from the #2 Auxiliary Boiler and 5 emergency engines, and PM, PM<sub>10</sub>, and PM<sub>2.5</sub> from the material handling equipment (coal, ash, lime, and mercury control sorbent) and fugitive sources.

This permit action includes a major amendment (IND20150001) to impose fuel-use restrictions on the #2 Auxiliary Boiler (EQUI 71) in order for this boiler to be classified as a "limited-use" boiler under the National Emissions Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters (40 CFR pt. 63, subp. DDDDD). The major amendment also allows the use of SO<sub>2</sub> CEMS at the control equipment inlet for EQUI 94 (Boiler 3) as an alternative to composite fuel sampling. Requirements to monitor the sulfur dioxide control equipment inlet rate for EQUI 92 and EQUI 93 (Boilers 1 and 2, respectively) have been removed from the permit, because the Permittee is able to determine compliance with all applicable SO<sub>2</sub> emission limits for these boilers by monitoring the sulfur dioxide emission rates at the Boiler 1 and Boiler 2 common stack, STRU 1.

This permit action also includes a major permit amendment application (IND20190001) for the installation of two dual fuel (distillate fuel oil and natural gas)-fired auxiliary boilers, EQUI 119 and EQUI 120. These boilers will each be equipped with low-NO<sub>x</sub> burners and flue gas recirculation systems to reduce NO<sub>x</sub> formation, and will both vent to a common stack, STRU 213. These two boilers will provide auxiliary steam to the facility and process steam to Liberty Paper, Inc. These boilers will not be used to generate steam for the purpose of generating electricity. The boilers are each subject to the requirements of 40 CFR pt. 60, subp. Db and 40 CFR pt. 63, subp. DDDDD. NO<sub>x</sub> emissions will be monitored using a NO<sub>x</sub> continuous emissions monitoring system (CEMS). The Permittee has the option to additionally install a continuous opacity monitoring system (COMS) and CO CEMS. The Permittee has accepted annual (12-month rolling sum) limitations on PM, PM<sub>10</sub>, PM<sub>2.5</sub>, NO<sub>x</sub>, and CO emissions from these boilers in order to maintain non-major modification status under Prevention of Significant Deterioration (PSD) regulations.

The permit action is for construction and operation of the facility. The permit action is the reissuance of the Part 70 Operating Permit; therefore, the draft permit has been placed on public notice.

A summary of the Potential to Emit (PTE) and Emissions Increase from Auxiliary Boilers #3 and #4 in tons per year is as follows:

Pollutant	PM	PM <sub>10</sub>	PM <sub>2.5</sub>	SO <sub>2</sub>	NO <sub>x</sub>	VOCs	CO	CO <sub>2e</sub>	Lead	Single HAP	Total HAPs
Total Facility PTE	4,894	1,507	550	13,923	22,928	369	3,072	2.18 x 10 <sup>7</sup>	2.51	57.5	123
Emissions Increase from Auxiliary Boilers #3 and #4	22.5	13.5	9.0	2.51	36.0	8.68	90.0	269,750	0.0149	3.06	3.97

PM = Particulate Matter  
 PM<sub>2.5</sub> = PM, 2.5 microns and smaller

PM<sub>10</sub> = PM, 10 microns and smaller  
 SO<sub>2</sub> = Sulfur Dioxide

NO<sub>x</sub> = Nitrogen Oxides  
 CO = Carbon Monoxide

VOCs = Volatile Organic Compounds  
 CO<sub>2e</sub> = Carbon Dioxide Equivalents as defined in Minn. R. 7007.0100  
 HAP = Hazardous Air Pollutant

The Permittee has submitted a pollution prevention progress report pursuant to Minn. Stat. § 115D.08.

The preliminary determination to reissue this Air permit is tentative.

## Procedure for public participation

As stated in Minn. R. chs. 7000 and 7001, there are three formal procedures for public participation in the MPCA's consideration of this matter. Interested persons may:

- (1) Submit written comments on the draft permit.
- (2) Petition the MPCA to hold a public informational meeting.
- (3) Petition the MPCA to hold a contested case hearing.

## Submitting written comments

To submit comments or petitions to the MPCA through the mail or email, you must state:

- (1) Your interest in the permit application or the draft permit.
- (2) The action you wish the MPCA to take, including specific references to the section of the draft permit you believe should be changed.
- (3) The reasons supporting your position, stated with sufficient specificity as to allow the MPCA to investigate the merits of the position.

## Public informational meeting

A public informational meeting is an informal meeting during which interested persons can ask questions concerning the proposed facility. MPCA staff will be present to provide information. If an interested person would like the MPCA to hold a public informational meeting, the person should include all information identified above and in addition include a statement of the reasons the person desires the MPCA to hold a public informational meeting and the issues that the person would like the agency to address at the public informational meeting.

## Contested Case Hearing

A contested case hearing is a formal proceeding before an administrative law judge empowered to advise the MPCA regarding issues of fact. As described in Minn. R. 7000.1800, persons who submit petitions for a contested case hearing must also state the issues they propose to address in a contested case hearing, the specific relief requested or resolution of the matter, and the reasons (which may be in the form of proposed findings) supporting an MPCA decision to hold a contested case hearing. Failure to comply with these rules exactly may result in a denial of the request. To the extent known, the petitioner may also submit a list of prospective witnesses to be called at a hearing, a proposed list of publications, references, or studies to be introduced at a hearing and the approximate time required for the petitioner to present the matter at a hearing. The decision whether to hold a contested case hearing will be made under Minn. R. 7000.1900.