

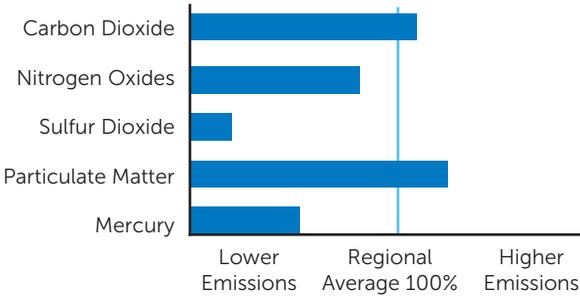
How Are Coal-Fired Plants Doing?

Statewide, coal-fired power plants in Minnesota generate 34 percent of all sulfur dioxide pollution, 17 percent of all carbon dioxide pollution, 7.5 percent of all mercury pollution and 4.7 percent of all nitrogen oxides pollution^{1,2}. All other generation sources contribute a small amount of pollution.

¹Pollution is emitted from other sources such as industrial and commercial sources, cars, trucks and home heating.

How Minnesota Power is Doing

Compared to MPCA Regional Average Emissions²



²Most recent MPCA data provided to MPUC May 2, 2023.

How Customer Conservation Helps

Minnesota Power's customer energy conservation programs have reduced our need to generate electricity by 724,875,666 kWh, a 6.7 percent savings. These savings resulted from both new and ongoing customer participation in Minnesota Power's energy conservation programs. This equates to a reduction in air emissions of:

Carbon Dioxide	405,789 tons
Nitrogen Oxides	210 tons
Sulfur Dioxide	65 tons
Particulate Matter	27 tons
Mercury	2.34 lbs

What You Can Do

You can participate in Minnesota Power's energy conservation programs. To learn more visit mnpower.com/ProgramsRebates or call **218-355-2843**.

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OUR ENERGY VISION IS YOUR CARBON-FREE FUTURE.

Together we're moving EnergyForward.

EnergyForward

ALLETE calculates and reports carbon emissions based on the GHG Protocol. Details in our Corporate Sustainability Report.

Where You Can Learn More

The Minnesota Public Utilities Commission requires electric utilities to provide customers with information on the costs, reliability and air emissions related to the fuels used to generate electricity.

Contact Minnesota Power at **218.722.2625** or **800.228.4966**, or visit www.mnpower.com

Contact the Minnesota Pollution Control Agency at www.pca.state.mn.us, or call 651.296.6300 or 800.657.3864 for additional information about air emissions.

Contact the Department of Commerce at www.mn.gov/commerce, or call **651.539.1886** or **800.657.3710** for more ideas on saving energy.

YOUR ELECTRICITY YOUR CHOICE

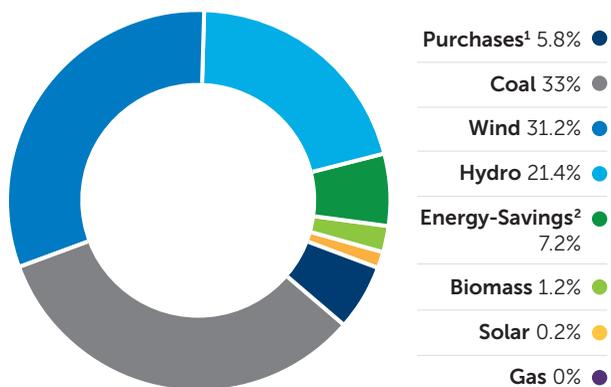
Fuel Sources
Air Emissions
Costs

2023

USE ELECTRICITY WISELY TO HELP THE ENVIRONMENT

Fuels used to generate electricity have different costs, reliability and air emissions. You can help the environment by using electricity more efficiently.

How Your Electricity Needs Are Met



¹Represents Purchases that have an "unknown" fuel designation.

²Represents first year energy savings for a ten year period through 2022.

The data represented in the chart is an average of the generation serving customers from 1/1/22-12/31/22. At the end of 2020, when additional renewable energy projects became operational, Minnesota Power reached a power supply portfolio that is approximately 50% renewable.

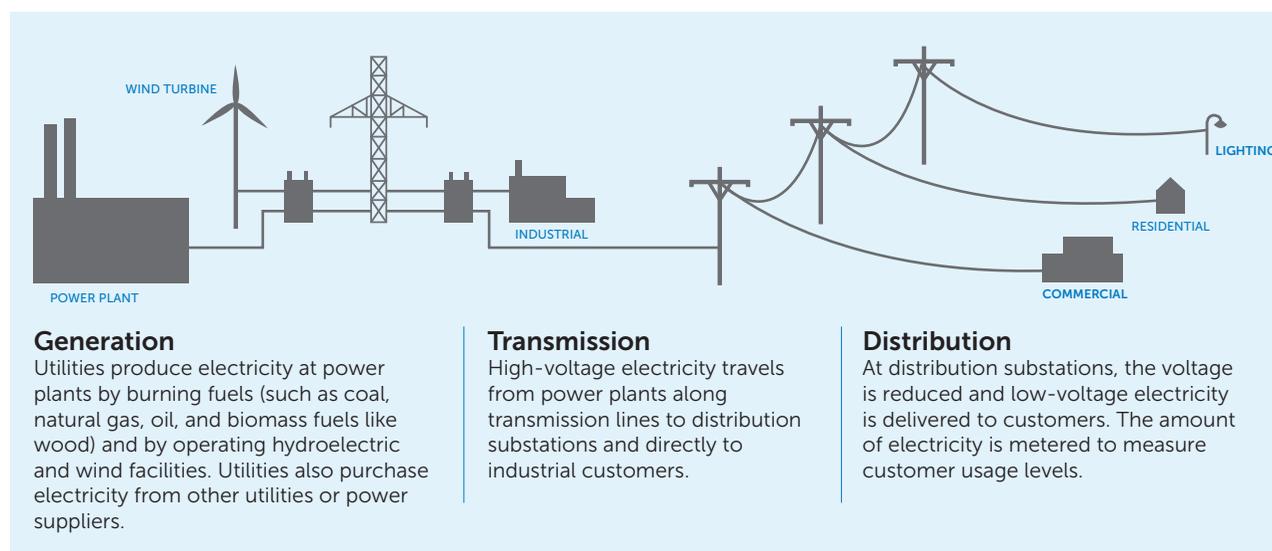
Renewable Choices

With our Renewable Source, Community Solar Garden and Solar Sense programs, you can choose how much of the energy you purchase comes from renewable sources and directly influence the amount of renewable energy on the power grid.

To learn more about our renewable energy programs, visit mnpower.com/RenewableChoices



Components of an Electric System



Electric Service Costs

Minnesota Power charges customers for the costs of providing electric service, including investments in power plants, transmission and distribution lines, and operating and maintaining Minnesota Power's electric system.

The 2022 Component Cost table shows average percentages of monthly service costs related to the generation, transmission and distribution of electricity for four major customer categories:

- Residential (Res)** Household and farm usage;
- Commercial (Comm)** Small to medium service industries and manufacturing businesses;
- Industrial (Indust)** Large manufacturing and processing facilities; and
- Lighting (Light)** Outdoor/area and street/highway lighting

The average percentages are calculated by dividing Minnesota Power's total cost to provide electric service among the generation, transmission and distribution components.

	Res	Comm	Indust	Light
Generation	50%	67%	77%	42%
Transmission	10%	15%	22%	8%
Distribution	40%	18%	1%	50%
Total	100%	100%	100%	100%

Your monthly bill also displays a pie chart showing the average percentages for your specific customer category. Individual monthly percentages may vary from the average.



Air Emissions by Fuel Type

For the year ending December 31, 2022
(measured in pounds per MWh)

	Carbon Dioxide	Nitrogen Oxides	Sulfur Dioxide	Particulate Matter	Mercury ¹
Purchases	973	0.701	0.775	0.056	0.00000622
Coal	2,310	1.041	0.292	0.152	0.00000615
Natural Gas	1,641	1.620	0.042	0.007	0.00000000
Biomass ²	4,192	6.437	1.009	0.530	0.00002077

Wind and solar power produce none of these air emissions. Large hydro power may alter ecosystems and cultural resources depending upon the location and design of the facility. Nuclear energy does not produce these air emissions but does produce both high- and low-level nuclear waste.

¹Approximately 0.17 to 2.95 percent of your total monthly electric bill represents Minnesota Power's capital and operation costs to control mercury emissions at Boswell Unit 3 and Boswell Unit 4.

²Biomass CO₂ emissions attributable to combined heat and power resource.

How Air Emissions Affect the Environment

Carbon dioxide is the principal greenhouse gas linked to global warming.

Nitrogen oxides and sulfur dioxide contribute to acid rain; nitrogen oxides also contribute to smog.

Particulate matter (sometimes called soot) contributes to asthma attacks and other respiratory illnesses.

Mercury accumulates in some fish to levels exceeding current health department guidelines. The Minnesota Pollution Control Agency is responsible for ensuring that emissions from utilities meet air quality standards for nitrogen oxides, sulfur oxide and smog.