YOUR ELECTRICITY

Fuel sources
Air emissions
Minnesota ECO plan
Components of electricity
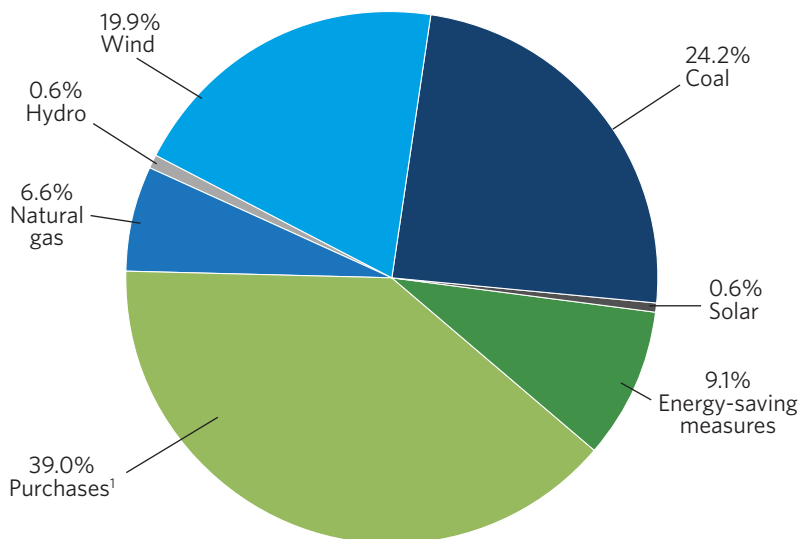
2024

Use electricity wisely

Fuels used to generate electricity have different costs and air emissions

How are your electricity needs met?

The following chart shows the primary fuel sources used to produce electricity for Minnesota customers in 2023.

19.9% Wind
0.6% Hydro
6.6% Natural gas
39.0% Purchases[1]
24.2% Coal
0.6% Solar
9.1% Energy-saving measures

[1] We purchase electricity from various fuel sources (nuclear, coal, natural gas, etc.) throughout the region.

What air emissions were produced in 2023?

How do air emissions affect the environment?

Carbon dioxide (CO_2) is the principal greenhouse gas linked to global warming. **Nitrogen oxides** (NO_x) and **sulfur dioxide** (SO_2) 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 dioxide, and smog.
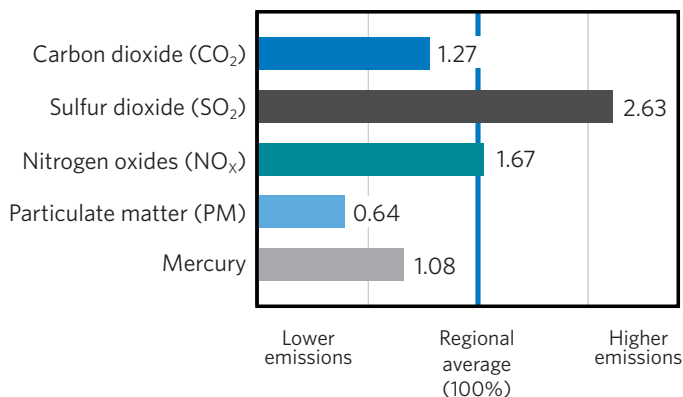
Wind and solar power produce none of these air emissions. Nuclear energy doesn't produce these air emissions but does produce both high- and low-level nuclear waste. Large hydropower may alter ecosystems and cultural resources, depending on location and design of the facility.

Statewide, electric utilities 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.[2]

[2] Pollution also is emitted from other sources, such as industrial and commercial materials, cars, trucks, and home heating.

Air emissions by fuel type (measured in pounds per 1,000 kilowatt-hours)

Fuel type	Carbon dioxide	Sulfur dioxide	Nitrogen oxides	Particulate matter-10	Mercury
Coal	2,580	5.91	3.06	0.04	0.000015
Fuel oil	3,398	1.06	12.58	1.29	0.000010
Purchases	917	0.713	0.696	0.0564	0.00000622
Natural gas	1,220	0.004	0.618	0.0340	0.000000008

How did Otter Tail Power Company compare with the regional average in 2023?

The chart below shows how our company's air emissions compare with the regional average.

Emission	Value
Carbon dioxide (CO_2)	1.27
Sulfur dioxide (SO_2)	2.63
Nitrogen oxides (NO_X)	1.67
Particulate matter (PM)	0.64
Mercury	1.08

Lower emissions — Regional average (100%) — Higher emissions

Regional emission averages are developed by the Minnesota Pollution Control Agency (MPCA).

What can you do to help reduce air emissions?

You can participate in our company's energy-conservation programs. Minnesota customer participation in these programs over the last ten years reduced the need to produce 586,060,923 kilowatt-hours of electricity in 2023.

These annual savings resulted from both new and ongoing participation in our energy-conservation programs. By not producing this electricity, we avoided the following air emissions:

Air emission	Tons
Carbon dioxide	342,543
Sulfur dioxide	551
Nitrogen oxides	340
Particulate matter	11
Mercury	0.002

Minnesota ECO incentives

The Energy Conservation and Optimization (ECO) Plan plays a key role in meeting Minnesota's future energy goals by helping customers use energy more efficiently and reducing the need for our investment in new generation facilities.

All customers

Heat pump: Install a qualified air-to-water, air-source, or geothermal heat pump and receive a $300- to $1,200-per ton rebate. Receive an additional Quality Installation rebate per ton when installed by an approved contractor.

Appliance recycling: Get $50 and eight LED bulbs when you let us pickup and recycle your old, but still functioning, fridge or freezer. Add a working, but inefficient, window air conditioner or dehumidifier to the same appointment, and you'll earn even more.

Heating and cooling rebates: Get a $20- to $75-per-kilowatt rebate for an electric heating system, such as a plenum heater, heat storage, or heat pump installed on one of our qualified low rates and subject to energy control.

Commercial and industrial customers

Rebates: Get rebates for installing qualifying high-efficiency refrigeration, lighting, motors, adjustable-speed drives, cooking equipment, compressed-air system upgrades, and more.

Custom grants: Get incentives for process improvements, chillers, and more.

CoolSavings: Receive a $6 bill credit per ton of connected air-conditioning load June through September when you allow us to cycle your system during peak periods.

Residential customers

Appliance rebates: Get a $50 rebate when you purchase a new standard sized ENERGY STAR®-rated refrigerator, freezer, clothes washer, clothes dryer, heat pump clothes dryer, or induction cooktop range. Purchase an ENERGY STAR®-rated dehumidifier or air purifier and get a $25 rebate.

House Therapy: Use our home weatherization program for income-qualified households.

Tune-up rebate: Get $150 for a qualified heat pump tune up or $75 for a qualified AC tune up and improve your system performance.

CoolSavings: Receive an $8.25 bill credit June through September when you allow us to cycle your central air conditioning during peak periods.

Lighting: Receive an in-store instant rebate on qualifying LEDs at participating retailers.

Insulation: Get rebates for 40 percent of material and installation costs (up to $2,800) for air sealing, wall insulation, and attic insulation projects on existing electrically-heated structures.

Smart thermostats: Customers with primary electric heating or cooling may receive a $35 to $150 rebate on a qualified Tier II or Tier III thermostat.

Programs may change at any time.

Learning more about electricity

Most people don't know a lot about electricity even though it's an essential part of our everyday lives. That's why we'd like to help you understand this intangible commodity.

Here's some useful information about the cost of the components of electricity and how these components contribute to your total electric service bill.

How do utilities determine the price of electricity?

The cost of electricity has three main components: generation, transmission, and distribution. The costs associated with each of these components are allotted to the various customer groups (residential, small commercial, and large commercial) based on the electrical needs of each group. Then rates are calculated based upon this allotment of costs.

The table below illustrates the 2023 cost breakdowns by component for each customer group. These cost percentages vary based on our company's average investment to serve each customer group.

|	Customer groups		
Components	**Residential**	**Small commercial**	**Large commercial**
Generation	40%	46%	70%
Transmission	19%	18%	23%
Distribution	41%	36%	7%
Total	100%	100%	100%

If you're a residential customer, for example, the following information will appear on the back of your monthly electric service statement:

The cost of electricity is composed of three main parts: generation, transmission, and distribution. For residential customers, each component's share of the total cost is:

Generation   40%
Transmission   19%
Distribution   41%

These percentages are residential group averages. Your individual use may result in percentages that vary from these averages.

Cost breakdowns are calculated and updated annually.
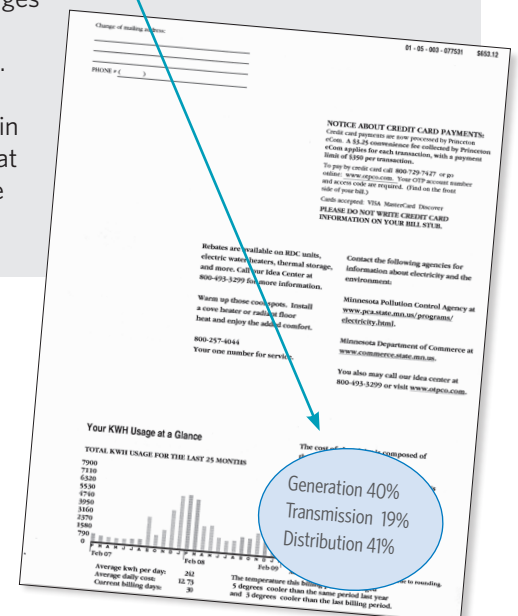
Where does electricity come from?

Generation

Various generation resources produce electricity, while transformers adjust the voltage.

Transmission

High-voltage power lines transport electricity to your community.

Electricity flows through a substation to reduce the voltage to a usable level.

Distribution

Lower-voltage power lines transport the electricity to its final destination.

Electricity enters homes and businesses through a meter that measures how much is being used.

Tail*Winds* renewable wind energy

Emission-free wind-generated electricity is part of our company's resource mix. You can provide additional support for advancing wind power through our TailWinds program.

TailWinds subscriptions are available in 100-kilowatt-hour (kWh) blocks for an additional cost of $3.39 or less per block. One 100-kWh block of TailWinds electricity is enough energy to power a typical residential refrigerator for a month.

Learn more about your electricity
Check out these resources:

otpco.com/WaysToSave or call 800-493-3299 for more information about our programs described in this brochure.

http://mn.gov/commerce or call 800-657-3710 for energy-saving tips from the Minnesota Department of Commerce.

www.pca.state.mn.us or call 800-657-3864 for information about air emissions from the Minnesota Pollution Control Agency.

Have questions?
Please call **800-257-4044** or **218-739-8877** or visit **otpco.com.**

6/2024