Electric System Components

The cost to create and deliver electricity is composed of three general functions: generation, transmission and distribution. **Dakota Electric Association** purchases generation and transmission services from **Great River Energy** and provides distribution services directly to our members.

GENERATION

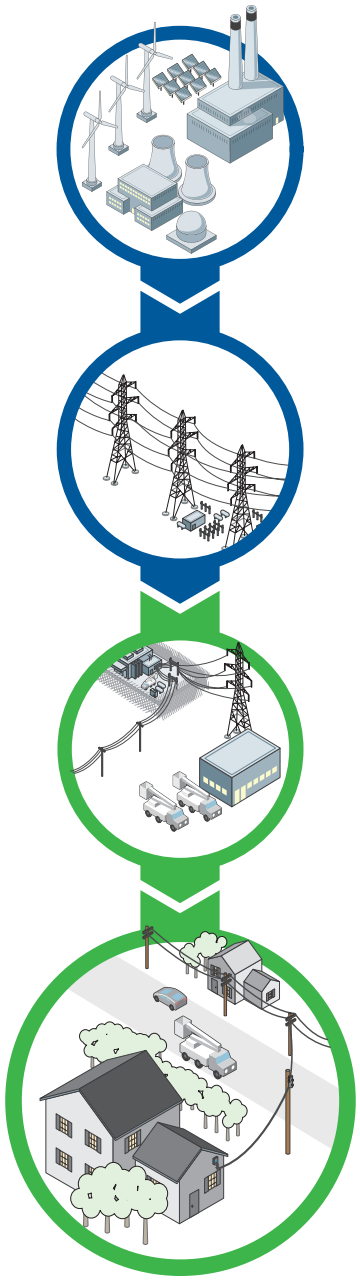
The generation function consists of generating plants, fuel and labor to operate these plants. Generation facilities are the first link in the chain in providing electricity to consumers.

TRANSMISSION

The transmission function moves electricity from generating plants over long distances to local service areas, such as your town or neighborhood. This function consists of costs for high voltage lines and labor to operate and maintain these facilities. Transmission lines typically consist of large steel or wood structures and wires.

DISTRIBUTION

Dakota Electric provides all of the services that make up the distribution function to its member-consumers. Distribution is the final link in the chain built to deliver electricity to your home or business. Dakota Electric's distribution plant includes substations, poles, wires, transformers and meters. These facilities convert and deliver high voltage power from the transmission system into voltage that is usable for homes and businesses. Service and labor expenses incurred by Dakota Electric include the operation and maintenance of facilities, as well as billing and member services.



2024 Component Cost by Category

	Residential	Small General	General	Irrigation
Generation	51%	49%	66%	51%
Transmission	16%	16%	20%	2%
Distribution	33%	35%	14%	47%
Total	100%	100%	100%	100%

Amounts may not equal 100% due to rounding.

2025

YOUR ELECTRICITY

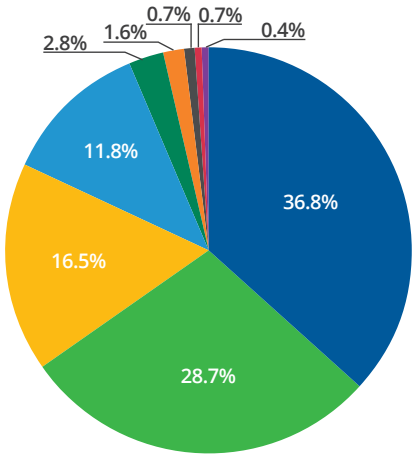
Fuel sources, costs and emissions

How the electrical delivery system works, provides information about fuel sources, and meets the needs of Dakota Electric Association® and its members.

For more information, contact Great River Energy at www.greatriverenergy.com. Great River Energy is Dakota Electric Association's wholesale power supplier.

Energy Sources

How are your electricity needs met by Dakota Electric Association®? This pie chart shows the primary fuel sources used to produce your electricity in 2024.



36.8%	Coal	1.6%	Gas
28.7%	Market	0.7%	Hydro
16.5%	Renewables	0.7%	Solar
11.8%	Conservation	0.4%	Wellspring Residential
2.8%	Wellspring C&I		

The above percentages are based on 2024 data.

Energy Conservation

Annual member participation in Dakota Electric Association's energy conservation programs reduced the need to produce roughly 262,000 megawatt-hours of electricity in 2024, an 12.58% savings. These annual savings resulted from both new and ongoing member participation in conservation programs. By not producing this electricity, the following approximate amounts of air emissions were avoided:

Carbon Dioxide (CO2)	292,769,439 lbs.
Sulfur Dioxide (SO2)	206,360 lbs.
Nitrogen Oxides (NOx)	198,274 lbs.
Particulate Matter (PM)	9,175 lbs.
Mercury (Hg)	0.5 lbs.

The above numbers are based on 2024 data.

Save Energy

For ideas on saving energy, contact the Minnesota Department of Commerce at www.mn.gov/commerce, or call 651-539-1886 or 1-800-657-3710.

Air Emissions by Fuel Type

The following table shows the average emissions for each primary fuel source used in producing your electricity in 2024. All data is reported in units of pounds per 1,000 kilowatt-hours of electricity.

(Fuel Type)	Carbon Dioxide	Sulfur Dioxide	Nitrogen Oxides	Particulate Matter	Mercury
Coal	2,229	1.4	1.4	0.050	0.0000000
Natural Gas	1,530	0.0078	0.69	0.004	0.000000
Oil	2,644	0.02	21.2	0.16	0.0000199
Market	920	0.90	0.71	0.06	0.0000062

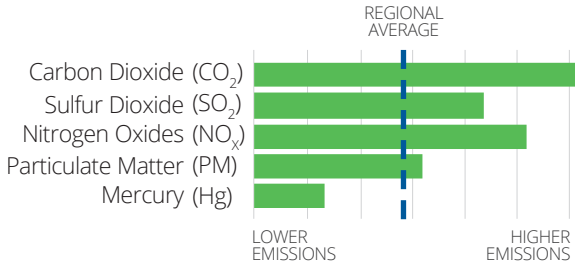
The above numbers are based on 2024 data.

Purchases come from various fuel sources throughout the region — nuclear, coal, natural gas, etc. Although nuclear energy is part of the region's generating sources, Dakota Electric Association and Great River Energy do not directly purchase nuclear-based electricity for sale to members.

Nuclear energy does not produce these air emissions, but it does produce both high- and low-level nuclear waste.

Wind and solar power generation do not produce any of these air emissions. However, large hydropower may alter ecosystems and cultural resources depending on the location and design of the facility.

The following chart compares the 2024 average emissions associated with the power plants producing your electricity with the emissions associated with regional power plants. The regional average is developed by the Minnesota Pollution Control Agency.



The above chart is based on 2024 data.

Great River Energy, Dakota Electric's wholesale power provider, has transformed its power supply. These changes will reduce Great River Energy's carbon dioxide emissions by more than 80% by 2032. Learn more at https://greatriverenergy.com/electricity-sources/.

How Do Air Emissions Affect The Environment?

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

Sulfur dioxide and nitrogen oxides 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 sulfur dioxide, nitrogen oxides and smog.

Where Are Air Emissions Generated?

Statewide, coal-fired power plants in Minnesota generate: 34% of all sulfur dioxide pollution, 17% of all carbon dioxide pollution, 7.5% of all mercury pollution and 4.7% of all nitrogen oxides pollution. All other generation sources contribute a small amount of pollution. Pollution is emitted from many places, such as industrial and commercial sources, cars, trucks and home heating.

For more information about air emissions contact the Minnesota Pollution Control Agency at https://www.pca.state.mn.us or call 651-296-6300 or 800-657-3864.

Renewable Energy

Dakota Electric offers the option of supporting wind or solar energy through our Wellspring Renewable Energy® program.

Wellspring wind energy costs an additional $0.45 per month for each 100 kilowatt-hour block you purchase. Wellspring solar energy costs an additional $0.75 per month for each 100 kilowatt-hour block you purchase. You determine how many blocks to purchase. The price is subject to change.

For more information on Wellspring Renewable Energy or energy-saving programs, contact Dakota Electric at www.dakotaelectric.com or call 651-463-6212.