

How Power Gets to You

Get to Know Your Grid



The electricity grid is a complex system with one important job: to deliver safe, reliable electricity from power plants across New Brunswick to our customers' homes and businesses. It is one of the most impressive engineering feats of the past 100 years.

Read on to learn more!

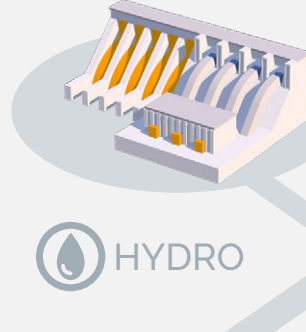
GENERATION

Our power is generated from a variety of energy sources — water (hydro), wind, nuclear, fossil fuels (coal, oil, natural gas and diesel), and biomass (organic matter), which provide electricity to over 300,000 customers across New Brunswick.



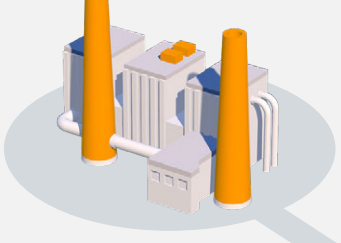
Committed to clean energy.

75% of New Brunswick's power comes from non-emitting sources - with 40% from renewable energy (e.g. wind, solar, and water).



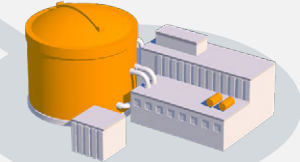
HYDRO

THERMAL
COMBUSTION



Transformers at generating stations convert the electricity to a higher voltage for transmission over long distances.

NUCLEAR



WIND



The System Operator

(Energy Control Center) coordinates and balances electricity supply and demand to ensure reliable delivery of power to you.

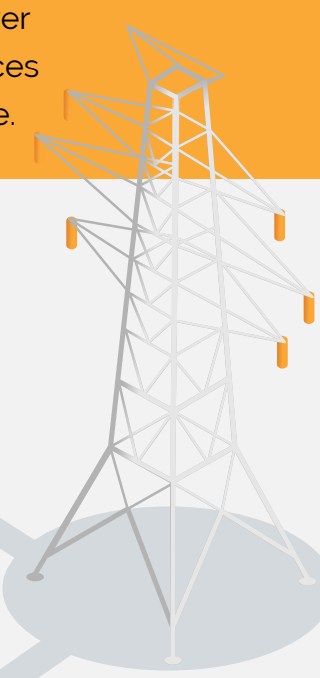
New Brunswick's electricity is generated by **14 power plants**, also known as generating stations. Electricity also comes from various privately owned renewable and natural gas powered facilities through power purchase agreements.

TRANSMISSION

After the electricity is generated, it travels from the power plant to the places it will be used. It is carried over long distances through overhead transmission lines to all parts of the province.

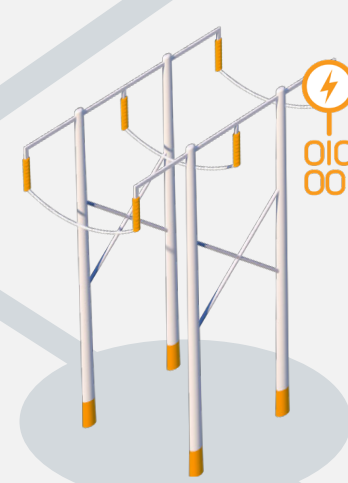
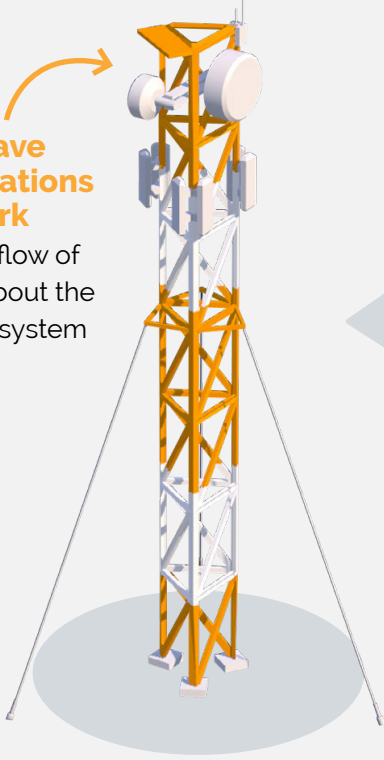


New Brunswick has more than **6,800 km of transmission lines**. Our location - uniquely placed between Quebec, New England, PEI and Nova Scotia - provides us with excellent opportunities to buy and sell electricity for the benefit of New Brunswickers.



Microwave Communications Network

enables the flow of information about the transmission system

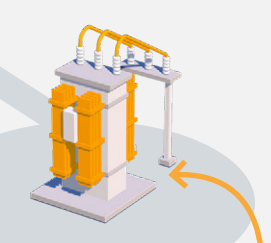
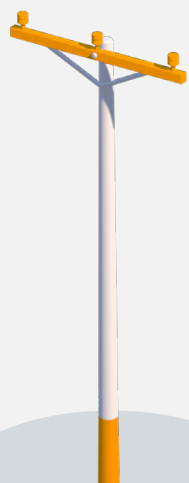
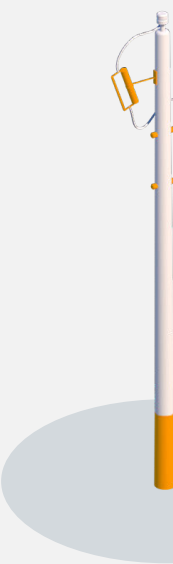


Sensors are located at key points on the transmission part of the grid to monitor where and when power might go out.

DISTRIBUTION

The distribution part of the grid takes power to homes, businesses, and industry all across New Brunswick.

New Brunswick has over **20,000 km** of distribution lines



Transformers at substations convert power to lower voltages for distribution to homes and businesses.



On an average summer day, New Brunswick uses **1,500 megawatts (MW)** of electricity. However on a very cold winter morning, this can rise to **3,200 megawatts** (often called peak demand or peak load).

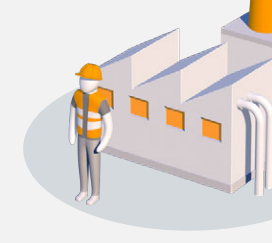
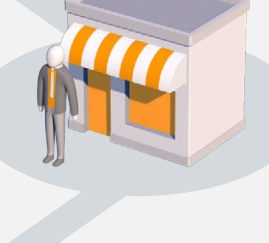
YOUR POWER

The grid has done its job when electricity gets to you so you can turn on the lights, charge your phone, watch television, or run your dishwasher.

HOMES

BUSINESSES

INDUSTRY



Some New Brunswickers already generate their own renewable power through NB Power's Net Metering and Embedded Generation programs

These programs allow customers to generate their own power to offset their consumption while remaining connected to the distribution system. This ensures they can meet their electricity demand when their generation cannot.



We all have different habits and lifestyles, so **the patterns of our lives mean a changing demand for electricity by hour, day, and season**. This is why the management of the grid is both complicated and vital for our everyday lives.

The future of energy is changing and so are we.

LEARN HOW WE ARE Building Tomorrow's Grid to Power Your Life