

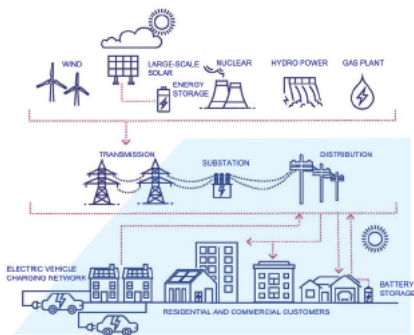
Clean Energy Made Easier In New York

Building the Grid that Serves You

Generation

Transmission

Distribution



Energy in New York State may soon be less expensive and more abundant thanks to modern technology and enlightened legislation.

(NAPS)—Reliance on electricity is growing as communities across the state transition away from pollution-producing fossil fuels to clean, sustainable power sources to combat climate change.

The Problem

Unfortunately, due to increased focus on electrifying industries ranging from public transportation and private vehicles to smart homes, commercial heating and cooling systems, and data centers, the current power grid isn't strong or big enough right now to handle that growing demand.

Also, the rise in extreme weather events such as hurricanes or snowstorms, extreme heat and cold, strain the grid and make it more prone to power outages.

An Answer

A smarter, stronger, cleaner grid will let New York meet its ambitious climate change goals and transition to more sustainable future. Because projects of this size can take years to accomplish, the state needs to make these investments today. To better understand why that is, we need to understand how electricity is generated and distributed.

How the Power Grid Works

Generation: Where the power comes from. Traditionally, it's produced in plants using fossil fuels such as oil or other forms like nuclear, hydro (water), and gas. Generators operate most efficiently and cost effectively when they are close to power sources.

New York and the nation are moving away from dirty fossil fuels that create climate change-causing pollution in favor of cleaner fuel sources such as wind and solar. These renewable energy sources, however, are intermittent. They're available only when the wind blows or the sun shines. Battery storage technology is critical to make sure enough renewable power is available when and where it's needed.

Transmission: The interstate highways of the electric system. Big lines—overhead or underground—operate at relatively high voltages and transmit large quantities of power over long distances, enabling the lowest-cost power to reach the greatest number of people.

Sub-transmission lines bring the power to a regional distribution substation where power is further reduced in voltage to be safely sent to homes and businesses. Substations use circuit breakers, switches, relay protection, and

more to correct imbalances in power supply and demand.

Distribution: If transmission is an electricity superhighway, distribution is the grid of local streets—the last leg of the journey that power makes before reaching consumers.

Conductors or cables known as distribution feeders leave the substations, carrying power to local distribution points. There, transformers further reduce the voltage to a standard consumer level of between 110 and 240 volts, safe for homes and businesses to use. (A typical household runs on 110 volts.)

Transmission plus distribution lines make up “the power grid.”

What the future may look like:

Reliability—the ability to make sure that the power goes on, and stays on, when you need it—is the top priority in the move to clean energy.

The U.S. Department of Energy says the U.S. energy grid will need to more than double between now and 2035 to accommodate increased demand and get power where it's needed.

That means more of everything—more transmission and distribution lines, more substations, and new generation facilities that produce cleaner and more sustainable power.

In New York, lawmakers in 2019 approved the Climate Leadership and Community Protection Act (CLCPA)—a nation-leading plan for moving away from fossil fuels to a low-carbon, clean-energy economy. National Grid welcomes the opportunity to work with the state and a wide range of stakeholders and customers on this important effort, and is already making the investments necessary to make sure the clean energy transition is a success.

Energy consumers care about combating climate change and transitioning to renewable energy resources. They also care about affordability and reliability.

A wide variety of programs exist to help New Yorkers manage their bills and, if they're eligible, qualify for reduced cost and no-cost assistance electric rates and in making upgrades to their homes and businesses to ensure they are best positioned to benefit for a clean energy future.

Learn More

For further information, visit, <https://www.nationalgridus.com/NY-Home/Storms/Storm-Safety>.