Powering Progress:

The Value of Transmission

December 2019

PSE&G is transforming its transmission network to provide every New Jersey home and business with the clean, reliable and affordable energy they need, whenever they need it.

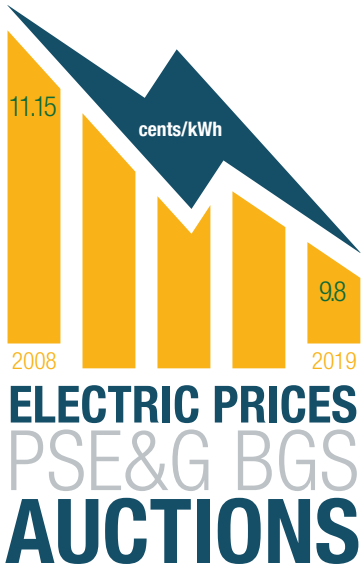
Since 2007, PSE&G has built almost 400 miles of high-voltage transmission circuits (138kV and above) to eliminate more than 200 NERC reliability violations identified by PJM. These upgrades replaced transmission lines that were designed and built 50 to 90 years ago – long before every home and office was air-conditioned and every business relied on around-the-clock energy supplies.

These new, higher-voltage transmission lines have helped reduce customer costs, improve reliability and resilience, and spur economic growth. A Rutgers University study concluded that, at their peak, PSE&G's transmission upgrades were adding $6.6 billion to New Jersey's GDP, more than $600 million in state and local taxes and creating 6,000 new jobs.

The result is an evolving grid that is flexible and increasingly responsive – encouraging the integration of new, cleaner energy sources.

Lower costs

PSE&G transmission projects like the Northeast Grid and Susquehanna-Roseland lines help New Jersey customers save on their electricity bills. These improvements have provided greater access to lower-cost power and made it easier to move that electricity around the state.



Congestion costs, which are incurred when prices climb due to the limited capacity to transmit electricity into an area, cost PSE&G customers $450 million in 2008. Those costs have disappeared as new high-voltage transmission lines have come into service, contributing to a 12% decline in wholesale electricity prices.

PSE&G
We make things work for you.

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80%

REDUCTION IN TRANSMISSION OUTAGES

Reliability

Higher-voltage transmission lines allow more power to flow throughout New Jersey. This ensures reliability during periods of extreme weather and equipment failure, greatly reducing the frequency and duration of power outages. PSE&G's transmission upgrades have led to an 80% reduction in transmission outages.

Resiliency

PSE&G's 69kv lines are part of an increasingly sophisticated grid that is responsive in real time. Smart sensors and relays can identify a developing problem and redirect the flow of electricity to keep customers online. Since Superstorm Sandy, PSE&G also has hardened its transmission network, including raising 30 stations that were in flood-prone locations to avoid potential service interruptions during severe weather.

Supporting renewables

A more robust transmission network is vital to the energy industry's shift away from older power generation resources. The increased use of smart technologies accommodates the development of new energy resources, such as offshore wind, solar and battery storage, and new ways of using electricity, like powering electric vehicles.

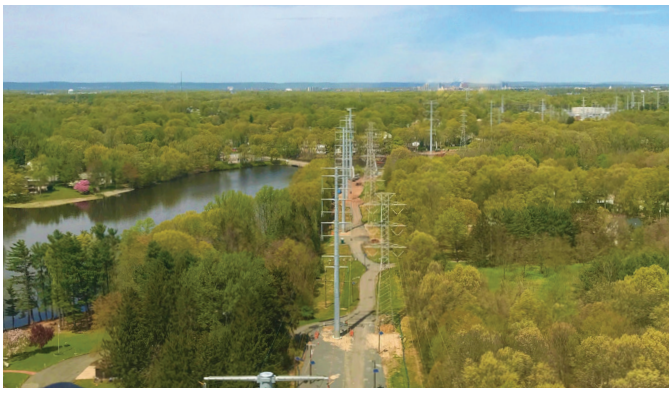
A state-of-the-art transmission system is needed to connect customers to renewables in a reliable, affordable way. Renewables often are located far from places with the greatest demand for electricity. The transmission system is an interstate network that provides access to renewable power from faraway places, like wind from the Midwest or the Atlantic Ocean.

While many wind and solar projects can be built relatively quickly, frequently in less than a year, transmission lines often take four to five years to permit and build.

Meeting New Jersey's future needs

For customers to enjoy the full benefits of the improved regional transmission system, it is necessary to improve the local lower-voltage transmission system. That's why PSE&G also is upgrading its local power system by increasing system capacity and enhancing reliability. PSE&G is replacing many of its 50-plus-year-old 26kV lines and extending 69kV transmission throughout the state.

This program will accommodate data center growth, which is forecast to nearly double throughout PSE&G's service territory by 2028. The new 69kV transmission system will be capable of carrying up to five times as much electricity as the older 26kV system, preparing PSE&G's system for the interconnection of energy storage assets and clean, distributed energy resources.



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