

Partnering to Bring Broadband to Underserved Communities in Upstate New York

Now is a critical time to address the issue of community broadband deployment in New York and simultaneously enable the transition to clean energy.

By Mark Thompson and Jeff Gasper / *National Grid, Southern Tier Network*

During the height of the COVID-19 pandemic, the importance of broadband internet connectivity became glaringly obvious for many people. As offices, schools and businesses closed and stayed shuttered for weeks and in some cases months, many people worked or learned remotely – and continue to do so.

But in parts of the U.S., there are areas where broadband connections are limited or nonexistent. Those communities, typically in rural areas, suffered during the pandemic. It is increasingly clear that the disparity between the broadband haves and have-nots needs to be addressed.

The broadband revolution, which has created boundless opportunities in education, communication and even entertainment, passed by less populated parts of New York state as well as the country as a whole. Because of the cost to private broadband companies to build connectivity to rural areas, large providers have missed many rural communities or homes.

At the same time, New York state is transitioning to newer forms of clean energy, which, in addition to the accompanying modernization of the grid, require enhanced monitoring and communications that are best served using broadband connections. Now is a critical time to address the issue of community broadband deployment in New York – and at the same time, enable the transition to clean energy.

That's why last fall, National Grid partnered with the Development Authority of the North Country (DANC) and Southern Tier Network (STN) to submit two proposals to the National Telecommunications and Information Administration (NTIA) for middle-mile infrastructure funds to expand broadband access and affordability in parts of New York, while building an improved, digital network across the state's electrical grid. The proposals, if chosen by NTIA, would be funded by money set aside by a bipartisan bill passed in late 2021, the federal Infrastructure Investment and Jobs Act.

The partnerships between DANC, STN, and National Grid bring together two different sets of expertise: DANC

and STN bring years of experience delivering critical, open-access, middle-mile broadband services to homes and businesses across their region, and National Grid owns and operates hundreds of miles of utility pole infrastructure that help deliver those critical services and provides electricity for thousands of residents of upstate New York.

In partnering with DANC and STN, National Grid hopes to address two issues with one solution – to help bridge the digital divide and enhance the electrical infrastructure in rural areas on which so many depend. DANC, a self-funded state organization, and STN, a 501(c)(3) nonprofit organization, were both created to support their regions. They are very experienced in delivering open-access, middle-mile infrastructure to drive low-cost broadband within their respective communities.

National Grid is not getting into the broadband business. But the proposed projects would use federal funds along with National Grid capital to build out shared fiber optic infrastructure in locations in upstate and western New York to provide middle-mile capabilities for internet service providers, connectivity for community anchor institutions, and communication infrastructure for the energy system.

For National Grid, the energy transition is seeing a national and regional shift to renewable energy and battery storage. As such, modernization of the grid requires digital communication to support the novel technologies and provide faster response times when issues impact it. Systems are becoming more intelligent, interconnected and consumer-centric. Electric and gas networks no longer operate on their own, but with the support of robust data networks. The expansion of these data networks is critical to ensure real-time power system and market data is available to maintain the reliability, security and safety of the electrical grid. As that transition continues, the need to harden and enhance the electrical grid and its communication network has grown – especially in rural areas.



A partnership between National Grid, the Development Authority of the North Country (DANC) and Southern Tier Network aims to close the digital divide in parts of New York state. Two proposed projects would bring connectivity to nearly 21,000 unserved households in upstate and western New York and benefit another 2,500 underserved households.

STN and DANC have been actively addressing the need for broadband service to homes and businesses in rural areas for years. But despite fairly large public investment in addressing the need for broadband and growing these networks, service to many areas with low populations is still lacking because of the economics of building and maintaining service to a handful of homes. The partnership with National Grid, if NTIA approves, helps build in rural areas as the costs are born by both broadband consumers and electric consumers who benefit from the increased connectivity.

The two projects would bring connectivity to nearly 21,000 unserved households in upstate and western New York and benefit another 2,500 underserved households. Combined, the projects will deploy more than 650 miles of fiber optic cable, using existing National Grid distribution infrastructure, across underserved regions of New York. In addition, these projects will provide resilience for tribal-owned broadband entities and National Defense facilities in these areas.

The partnerships also help address a key challenge that often occurs when delivering broadband infrastructure. Broadband projects can require extensive, make-ready support to prepare utility poles for new fiber optic cables. That support can be expensive – approximately 40 percent of the total

project cost. The make-ready costs can make it challenging for projects to be financially sustainable for broadband providers that must bear the investment in make-ready infrastructure.

This project is different in that the electric customers are directly benefiting from the new infrastructure. So is National Grid, as the pole owner and the electric utility receiving a portion of the fiber install. National Grid will help offset the make-ready costs. At the end of the day, by sharing these fiber assets, electric customers will receive infrastructure required for the power grid at a discounted rate and the installation costs will be reduced for DANC, STN and ultimately broadband consumers.

By enhancing that connectivity, the New York electrical grid will have greater capacity to integrate new renewable energy resources, respond faster to outages, and operate more efficiently. The quantity of

renewables that can be connected to the grid is limited because of the existing technology, which is used to protect the system and ensure the reliability and resilience of the power grid. Instead, modern power system protection technology with high-speed communication between electrical substations is able to support high levels of renewable energy generation.

The residents in these regions will benefit twice from the proposed project: They will at last get access to broadband service, bridging the digital divide and improving their ability to enjoy the benefits of advanced telecommunication upon which the U.S. increasingly relies, and they will receive improved electric service.

The digital revolution passed some communities by. It's time that oversight was rectified. As the energy revolution gets underway, it's important to make sure rural communities are part of the solution. No one should be left behind in the energy transition. 🙌



Mark Thompson is the director of grid modernization at National Grid and Jeff Gasper is the CEO of Southern Tier Network.

