

Middle Mile Broadband: Electric Companies Are Critical To Closing the Digital Divide



The COVID-19 pandemic has changed daily routines for millions of Americans across the country. The sudden transformation to working and learning from home not only has reinforced the value of electricity, it also has highlighted the importance of access to affordable, reliable broadband.

Today, a deep inequity around broadband access exists across the country. The Federal Communications Commission (FCC) estimates that there are nearly 21 million Americans who do not have access to high-speed internet.¹ A recent study by BroadbandNow Research, however, concludes that the digital divide is much greater than that and is, in reality, closer to 42 million Americans.²

This digital divide is keenly visible in the parking lots of community internet hotspots that have become the new classrooms and workspaces for people living in underserved and unserved communities. In addition, rural hospitals, already strained by the effects of the pandemic, are further constrained by the lack of high-speed service needed to provide telehealth appointments and to send and receive data-dense medical files.

The importance of increasing access to broadband and making it universally available can be compared to the electrification of the United States, and policymakers are looking to electric companies to help bridge the gap. In order to provide multiple benefits to customers, electric companies are working with the communities they serve and with broadband providers to forge ahead with creative new partnerships designed to benefit everyone.

Key Points

- As regulated service providers, electric companies are well-positioned to help close the digital divide.
- By leveraging their existing infrastructure, electric companies can provide broadband “middle mile” networks linking major carriers to last mile providers, such as internet service providers (ISPs) and anchor institutions.
- Electric companies long have incorporated telecommunications equipment and fiber technology into their operations—particularly in rural areas—to support communications and to provide real-time monitoring and controls for generation and transmission operations.
- Allowing electric companies to provide the middle mile broadband infrastructure is a win-win for all stakeholders, particularly the residents of underserved and unserved areas.

¹ Federal Communications Commission, “2019 Broadband Deployment Report Shows America’s Digital Divide Narrowing Substantially,” May 29, 2019, <https://docs.fcc.gov/public/attachments/DOC-357699A1.pdf>.

² Busby, John and Julia Tanberk. “FCC Reports Broadband Unavailable to 21.3 Million Americans, BroadbandNow Study Indicates 42 Million Do Not Have Access.” BroadbandNow.com. Feb. 3, 2020. <https://broadbandnow.com/research/fcc-underestimates-unserved-by-50-percent>.

Our Policy Platform

Policymakers can help people living in underserved and unserved areas gain access to reliable, cost-effective broadband by:

- Ensuring that electric companies are eligible and incentivized to participate in federal broadband grant programs.
- Creating a dedicated grant program to allow electric companies and other eligible entities to offset the costs of building out middle mile infrastructure to rural underserved or unserved communities.
- Developing a grant program to allow electric companies and other eligible entities to invest in a fixed wireless broadband approach in places where fiber buildout remains a challenge, thus leveraging electric infrastructure to extend wireless service into the homes of underserved and unserved Americans.
- Providing states flexibility to build out permanent rural broadband infrastructure.

The Role of Electric Companies

Electric companies long have incorporated telecommunications equipment and fiber technology into their operations—particularly in rural areas—to support their communications infrastructure and to provide real-time monitoring and controls for generation and transmission operations.

Substantial investments in telecommunications technology are needed to make the energy grid smarter, stronger, cleaner, more reliable, and more secure. Building out electric companies' telecommunications network supports secure communications for mission-critical applications, facilitates additional smart grid tools and distributed energy resources, and makes the grid more resilient and more efficient. As regulated service providers, electric companies are well-positioned to help close the digital divide, as they have a physical connection to nearly every home and business within their service territory.

Now, with the formation of partnerships, needed changes to state initiatives and laws, and the support of local communities, many electric companies are helping to get affordable and reliable broadband to underserved and unserved communities, particularly as they upgrade the energy grid and install more fiber to support their critical communications network.

Electric companies can install new fiber within their existing networks with enough capacity to support their needs and can lease additional capacity to others. This ability to install and to lease additional fiber has helped to lower broadband deployment costs in historically high-cost underserved and unserved communities.

Under this arrangement, the electric company provides the “middle mile” infrastructure—the segment that connects a local access point to the major carriers and the broader internet—which the ISP will use to build out “last mile” broadband services to homes and businesses.

Installing middle mile infrastructure typically is cost-prohibitive for ISPs in these areas, but partnering with electric companies allows both entities to build needed infrastructure cost-effectively and to reduce costs both for electric customers and new internet customers.

State-Level Broadband Partnerships Benefit Customers

Alabama

Two broadband laws were recently passed in Alabama. One expanded eligibility for electric providers to participate in state funding programs for middle mile and other broadband projects (SB 90; Act 2019-326). The other clarified that electric providers may install, operate, and maintain broadband systems, or partner with affiliates or third parties to do so, within their electric easements and rights-of-way (HB 400; Act 2019-326). As a result, Alabama Power has been partnering to make its infrastructure available to other broadband providers to facilitate the expansion of high-speed broadband access and other connectivity solutions throughout its service territory, including expansion of broadband to rural underserved and unserved areas. One such partner includes C Spire, a Mississippi-based telecommunications and technology services company, which has launched a campaign to bring high-speed internet services to metro Birmingham, Jasper, and other areas around the state.

Arizona

Arizona Public Service (APS) has announced support for rural broadband as part of its four-year, three-phase Strategic Fiber Program to install about 250 miles of additional fiber on its transmission system. This program will provide critical communications, and the surplus capacity can be leased to third-party carriers to support rural broadband efforts for underserved communities such as Payson and Flagstaff. These communities have experienced severe outages that have affected credit card/ATM purchases, cellular service, and internet services. As an added benefit, the revenue received from leasing arrangements will be returned to electricity customers by reducing a fee known as the “transmission cost adjustor” on their bills.

Mississippi

In 2019, Entergy Mississippi, C Spire, and the Mississippi Public Service Commission celebrated the completion of an \$11-million, all-fiber infrastructure project that paves the way for advanced broadband internet services in rural areas of Mississippi. The 18-month project spans more than 300 miles in

15 counties and will help accelerate efforts to use broadband infrastructure to advance the state’s economy, education, and healthcare system and to meet the growing 21st-century voice and data communications needs of customers and businesses. C Spire installed fiber optic cable and other related broadband communications infrastructure for Entergy along five routes near 21 small towns, cities, and communities in rural, hard-to-reach parts of the state, including the Delta, North and Central Mississippi, the Pine Belt, and Southwest Mississippi.

Virginia

With the approval of the Virginia State Corporation Commission, and innovative state laws, Appalachian Power (APCo) is helping to bring affordable broadband to rural Grayson County. APCo is installing more than 200 miles of middle mile fiber to upgrade its energy grid within and near the county, delivering new benefits that include smart meters for customers, as well as equipment and technology that will pinpoint and correct faults on circuits, shortening outages. Through a partnership with the county, the ISP, GigaBeam Networks, will lease fiber capacity to provide last-mile connectivity to the county’s schools, libraries, public safety agencies, and residents. The project will enable Gigabit speeds, with approximately 60% of customers connecting via Fiber To The Premise and the remainder via Fixed Wireless.

Dominion Energy is partnering with Prince George Electric Cooperative (PGEC) to bring broadband to underserved and unserved customers in rural Surry County, Virginia. The partnership marks the first time an investor-owned electric company has joined with an electric cooperative to expand broadband access in the Commonwealth of Virginia. By utilizing fiber capacity for both operational needs and broadband access, Dominion Energy is reducing broadband deployment costs for ISPs, such as PGEC and its wholly owned subsidiary, RURALBAND. Dominion Energy will provide middle mile infrastructure, and RURALBAND will lease fiber and provide last mile fiber-to-the-home services. The project will require between \$16 million and \$18 million in investment, including federal and state grants.

Customers Benefit in Various States Through Broadband Partnerships (cont.)

Similarly, Dominion Energy, Northern Neck Electric Cooperative, and the Counties of King George, Northumberland, Richmond, and Westmoreland have entered into an agreement to advance a regional broadband partnership that aims to deliver fiber-optic broadband service to unserved households and businesses in Virginia's Northern Neck Region. The middle mile fiber that the company is deploying on the Northern Neck will be leveraged by All Points Broadband to connect these homes and businesses. The fiber infrastructure also will provide the capacity to improve electric company efficiency and reliability for customers across the four-county region.

West Virginia

In West Virginia, with the passage of state legislation allowing electric companies to submit broadband feasibility studies, the West Virginia Broadband Enhancement Council gave Appalachian Power (APCo) the green light to embark on a project that will enable the electric company to lay more than 400 new miles of fiber to support the deployment of broadband in Logan and Mingo Counties. This new fiber will help APCo integrate communications capabilities into its energy grid, and it then will lease portions of its fiber to an ISP, GigaBeam Networks. State and local leaders long have appreciated APCo's engagement as an economic development partner in West Virginia, and officials have recognized this broadband project as an extension of that important work.

Common Sense Partnership

High-speed internet is no longer a matter of convenience—it is a matter of necessity. Bringing high-speed broadband access to underserved and unserved communities through expanding energy infrastructure that either is already, or soon-to-be, installed is a common-sense approach that maximizes these assets and reduces costs for customers.

Electric companies have an obligation, and are privileged, to provide their communities and customers with affordable, reliable, secure, and clean energy. It is with that same spirit of service that electric companies stand ready to help provide the critical telecommunications infrastructure their communities need and deserve.

A Coordinated Federal Approach Is Needed

Some states are taking an active role in helping their residents bridge the digital divide through innovative partnerships that bring together stakeholders focused on a common goal. However, a coordinated approach is needed at the federal level to help close the gap faster. Such an approach should provide appropriate incentives that recognize electric companies' valuable role in providing middle mile service.

Allowing electric companies to provide the middle mile infrastructure provides a cost-effective solution to communities. It also gives ISPs additional opportunities to broaden their service offerings to customers, while the revenue generated from leasing dark fiber helps to lower costs for electricity customers. This is a win-win for all stakeholders, particularly, the residents of underserved and unserved areas who will be able to start and grow their businesses, educate their children, and access life-saving medical care in their communities and homes.

About EEI

The **Edison Electric Institute** (EEI) is the association that represents all U.S. investor-owned electric companies. Our members provide electricity for about 220 million Americans, and operate in all 50 states and the District of Columbia. As a whole, the electric power industry supports more than 7 million jobs in communities across the United States. In addition to our U.S. members, EEI has more than 65 international electric companies with operations in more than 90 countries, as International Members, and hundreds of industry suppliers and related organizations as Associate Members.

Organized in 1933, EEI provides public policy leadership, strategic business intelligence, and essential conferences and forums.

For more information, visit our Web site at www.eei.org.

Contacts

Rich Ward
Senior Director,
Government Relations
202-508-5454

Jennifer Jura
Director, External Affairs
202-508-5029

Aryeh B. Fishman
Associate General
Counsel, Regulatory
Legal Affairs
202-508-5023

January 2021



Edison Electric Institute
701 Pennsylvania Avenue, NW
Washington, DC 20004-2696
202-508-5000 | www.eei.org



/EdisonElectricInstitute



@Edison_Electric



Edison Electric Institute