



February 10, 2014

***Ex Parte Notice***

Ms. Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

**RE: WC Docket No. 13-184, Modernizing the E-rate Program for Schools and Libraries**

Dear Ms. Dortch:

On Thursday, February 6, 2014, the undersigned and Brian Ford, on behalf of NTCA–The Rural Broadband Association (“NTCA”), together with Max Huffman with INDATEL, Mark Shlanta with SDN Communications, Rob Ferris and Corey Jensen with Vision Net, and Russell Berg and Scott Hoffmann with the Wisconsin Independent Network (“Rural Representatives”), met with Jonathan Chambers, Chief of the Office of Strategic Planning and Policy Analysis, and Trent Harkrader, Patrick Halley, Lisa Hone, Soumitra Das, Mark Walker, Kate Dumouchel, and Charles Eberle of the Wireline Competition Bureau. The parties discussed proposed reforms to the Universal Service Fund (“USF”) Schools and Libraries (“E-rate”) Program.

First, we expressed support for effective and efficient modernization of the E-rate program given its significance as a “piece of the larger puzzle” in enabling schools and libraries in rural areas to obtain access to high-quality services at affordable prices. We then stated that any reform should take great care to avoid a “one-size-fits-all” approach to E-rate reform that fails to account for the very real local conditions and challenges that present actual barriers to adoption or availability in a given rural area, as well as the full cost of providing high-capacity broadband connections to schools, libraries, and other Community Anchor Institutions (“CAIs”).

In that regard, we emphasized that broadband speed service targets should be tethered to what schools and libraries realistically need and can afford, based upon what each CAI believes – based upon conditions on the ground – fits their current and reasonably foreseeable educational demands and their current budgets. This discussion included the representatives from the statewide networks outlining the substantial costs, including the cost of middle-mile transport and other significant ongoing operating expenses, that are part and parcel of delivering, maintaining, and sustaining high-capacity broadband connections to schools and libraries even once networks are installed. While rural, rate-of-return-regulated local exchange carriers (“RLECs”) and their state network partners have made tremendous progress in deploying fiber-based last-mile connections to most of the schools and libraries in their service areas (as detailed

further below) – and the deployment of such scalable and robust “Gig-Capable” networks should be a national goal – requiring or even encouraging schools and libraries to purchase capacity beyond that which they determine is currently necessary to their mission will only overwhelm both state and local educational budgets as well as the resources of the E-rate program itself. If put toward expensive capital builds where Gig-Capable facilities to a school or library already exist, this would also inefficiently limit the availability of E-rate funding that could “solve” very real issues of affordability or availability that schools and libraries may face in other areas within the same state or across the nation.

We next drilled down further into the substantial efforts across the country made by RLECs and the statewide networks they own and operate in delivering Gig-Capable networks and high-capacity broadband connections to schools and libraries. The state network representatives discussed how they each interact with local and state governmental entities (individually or on a consortium basis) in connection with the delivery of advanced telecommunications and broadband services to schools, libraries, and other governmental premises. These CAIs are among the largest potential customers in any rural community, and thus it would be difficult to foresee a circumstance where any RLEC would neglect or affirmatively decline to provide the most robust connection that is feasible and sustainable to a school, library, or other CAI. Indeed, we noted in the meetings that a survey conducted of NTCA’s membership found that:

- Of the 1,208 K-12 schools identified by NTCA members as located within their serving areas, 907 (75%) of those are already connected by Fiber-to-the-Premises (“FTTP”), and another 132 (11%) are connected by Fiber-to-the-Node (“FTTN”).
- Of those connected schools, NTCA members reported offering maximum speeds of 912 Mbps (mean) and 100 Mbps (median), while the speeds purchased by the schools were 128 Mbps (mean) and 20 Mbps (median).
- Of the 484 libraries identified by NTCA members as located within their serving areas, 224 (46%) of those are connected by FTTP, and another 64 (13%) are connected by FTTN. Only 30 such libraries (6%) are not connected at all to the telco network, although it is quite possible that they could be served by another provider (*e.g.*, a cable company).
- Of those connected libraries, NTCA members reported offering maximum speeds of 248 Mbps (mean) and 40 Mbps (median), while the average speed purchased is 13 Mbps (mean) and 6 Mbps (median).

We also discussed the attached handout which details the many Broadband Technology Opportunities Program (“BTOP”) grants that have enabled RLECs and their state network partners to deploy high-quality broadband connections to CAIs in rural areas. We discussed why modernization of the E-rate program will be successful only if carefully coordinated with other federal programs, such as the President’s broadband stimulus efforts, Connect America Fund (“CAF”) initiatives, and other high-cost funding. Specifically, NTCA urged the Commission to: (1) adopt an analytic framework, working with states and current E-rate recipients, to identify the fundamental and actual problem to be solved at each CAI location – that is, whether the

challenge is one of “Affordability” or “Availability” of robust broadband connections; and (2) ensure that any potential changes to the E-rate program are coordinated carefully with and build upon the many successes of other USF components and other federal programs that serve complementary objectives of promoting network deployment and affordable broadband access.

To the latter point, NTCA continues to urge the Commission to adopt an “anti-cannibalization” rule that presumes as a rebuttable matter that where a federal funding mechanism (such as BTOP, the Broadband Infrastructure Program, other financing programs available through the U.S. Department of Agriculture’s Rural Utilities Service, the High-Cost USF Program, or the CAF) already supports the deployment and operation of broadband network infrastructure, the “problem” to be solved in that area is one of “Affordability” of existing broadband connections rather than an “Availability” issue that would be more likely than not to result in inefficient consumption of valuable E-rate resources by a smaller pool of recipients. Under this rule, E-rate resources could only be consumed for capital construction costs of outside plant in areas where such other federal programs are *not* already at work, or where an entity could show that sufficient broadband-capable facilities are not in fact in place at a given CAI location despite the work of these other federal programs.

The rural representatives concluded by urging the Commission to obtain more data regarding the problems to be solved at each CAI location, so that its efforts to modernize the E-rate program can be driven through a “data driven” approach carefully crafted to maximize the benefits of USF resources and serve the interests of not only the school or library, but also the surrounding community. We also observed that the data in-hand thus far indicate that, in the vast majority of cases, RLECs already have sufficient connections in place to meet current and future demands even while schools today subscribe to only a fraction of available capacity. Thus, rather than consuming valuable resources by constructing redundant outside plant infrastructure, we submitted that E-rate resources in such cases could be better utilized by helping to make the price of services more affordable for schools or libraries, enabling more robust internal connections that connect classrooms in addition to administrative offices, helping schools better understand what productive uses they can make of higher-capacity services, and/or obtaining devices that will enable such productive uses. In addition to any further data it may be able to provide beyond that already submitted into the record, NTCA believes that outreach to state governments and E-rate recipients by the Commission could help in gathering the data needed to identify with relative certainty to what extent the problem to be solved at any given CAI location is in fact one of Affordability or Availability.

Thank you for your attention to this correspondence. Pursuant to Section 1.1206 of the Commission’s rules, a copy of this letter is being filed via ECFS.

Sincerely,  
*/s/ Michael R. Romano*  
Michael R. Romano  
Senior Vice President – Policy

Marlene H. Dortch  
February 10, 2014  
Page 4 of 4

Enclosure

cc: Jonathan Chambers  
Lisa Hone  
Trent Harkrader  
Patrick Halley  
Soumitra Das  
Charles Eberle  
Mark Walker  
Kate Dumouchel



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[www.recovery.gov](http://www.recovery.gov)  
[www.ntia.doc.gov/broadbandusa](http://www.ntia.doc.gov/broadbandusa)

**Organization:** Enventis Telecom, Inc.  
**Project Name:** Greater Minnesota Broadband Collaborative  
**Project Type:** Comprehensive Community Infrastructure  
**State:** Minnesota  
**Federal Award:** \$16,822,437

## ABOUT THE PROJECT

Many key community organizations located in rural Minnesota towns such as Detroit Lakes, Luverne, Hinckley, and Wabasha report limited access to low cost high-speed broadband services. **Enventis Telecom**, as part of the Greater Minnesota Broadband Collaborative, proposes to construct a brand new 428-mile fiber network that would provide middle-mile service at speeds of up to 10 Gbps and enable connections to anchor institutions and businesses across a 23-county area of the state. The project intends to expand distance learning and training opportunities throughout the state, while offering high-capacity services to community organizations in the area.

Among the anchor institutions already committed to working directly with the grantee and its partner the State of Minnesota's Office of Enterprise Technology are the University of Minnesota at Duluth, Little Falls Police Department, and St. Gabriel's Hospital.

The Greater Minnesota Broadband Collaborative also proposes to:

- Connect as many as 70 community anchor institutions with speeds between 100 Mbps and 10 Gbps, including four K-12 public schools, eight public safety entities, six libraries, nine community colleges, seven additional institutions of higher learning, 19 healthcare facilities, and 21 government buildings and centers.
- Interconnect 12 regional health clinics, enabling the use of telemedicine and electronic medical records while building a modern healthcare network that could be replicated elsewhere in the state.
- Facilitate more affordable and accessible broadband service for up to approximately 146,000 households, 28,000 businesses, and over 500 additional community anchor institutions in the area by enabling local Internet service providers to utilize the project's open network.

## ORGANIZATION'S HISTORY

Enventis has been in the business of providing advanced network services to community anchor institutions and businesses in Minnesota for over 10 years. Enventis is a wholly-owned subsidiary of HickoryTech Corporation, a diversified communications company based in Mankato, Minnesota, with operations in Minnesota and Iowa.

## PROJECT PARTNERS

- State of Minnesota Office of Enterprise Technology
- The Mayo Clinic
- University of Minnesota Office of Information Technology

Data provided in the project description is based on information supplied by the applicant. An executive summary of this application can be found on [www.ntia.doc.gov/broadbandusa](http://www.ntia.doc.gov/broadbandusa).

For press-related inquiries, contact 202-482-7002 or [press@ntia.doc.gov](mailto:press@ntia.doc.gov).  
For the general public, contact [BTOP@ntia.doc.gov](mailto:BTOP@ntia.doc.gov).

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**Organization:** Ronan Telephone Company  
**Project Name:** Montana West  
**Project Type:** Comprehensive Community Infrastructure  
**State:** Montana  
**Federal Award:** \$13,796,640

## ABOUT THE PROJECT

**Ronan Telephone Company** is proposing a new high-speed middle-mile fiber network that would expand broadband services across an underserved region of Montana with high unemployment rates and a great need for improved Internet services. Ronan's Montana West project proposes to expand broadband and high-speed wireless services to the Blackfeet and the Confederated Salish and Kootenai Native American Tribes, while improving access options in the underserved communities of St. Mary, Babb, Santa Rita, Heart Butte, Elmo, Big Arm, and Evaro, Montana. The project plans to make the economic development and recovery of these communities a chief focus of its operations by linking residents to skills training and distance learning. This investment would also improve existing bandwidth and connectivity to the Blackfeet Reservation community of East Glacier Park.

The Montana West project also proposes to:

- \* Connect up to 30 community anchor institutions, including four K-12 schools, six public safety entities, two libraries, five government facilities, three community colleges, one university, and nine healthcare providers, with the capability to serve roughly 75 additional anchor institutions.
- \* Construct 295 miles of new fiber and incorporate 434 miles of existing fiber to facilitate more affordable and accessible broadband service for approximately 31,000 households and 3,200 businesses by enabling local Internet service providers to utilize the project's open network at 17 points of interconnection. Project partner and last-mile provider Hot Springs Telephone Company plans to utilize the network to connect more than 350 rural households within its territory.
- \* Partner with Health Information Exchange of Montana, a healthcare information cooperative serving 28 rural hospitals, clinics, and healthcare providers, to facilitate telemedicine and improved healthcare delivery for rural residents.

## ORGANIZATION'S HISTORY

Ronan Telephone Company is an independently-owned local exchange carrier and Internet service provider with over 50 years experience serving Ronan, Pablo, and Mission Valley residents. It currently serves approximately 4,300 customers over 122 square miles in the northwest corner of Montana, and provides wireless services to the Blackfeet Reservation through a jointly-owned partnership with the Tribe known as Oki Communications.

## PROJECT PARTNERS

- \* Health Information Exchange of Montana

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**Organization:** NebraskaLink, LLC  
**Project Name:** Connecting Nebraska Communities  
**Project Type:** Comprehensive Community Infrastructure  
**State:** Nebraska  
**Federal Award:** \$11,547,866

## ABOUT THE PROJECT

**NebraskaLink**, a partnership between seven local telecommunications providers, proposes to deploy a high-speed, middle mile fiber-optic network across nearly the entire state of Nebraska. The proposed Connecting Nebraska Communities' nearly 2,000-mile network, including 450 miles of newly constructed fiber in western Nebraska, will serve community anchor institutions as well as at least 23 last-mile broadband providers that have expressed an interest in using the network to provide local consumer service, improving access to public safety entities, schools and community colleges, healthcare facilities, and libraries.

The project also plans to interconnect with the South Dakota Network, another BTOP grant recipient, to enhance the region's middle-mile broadband capabilities, including facilitating enhanced services for the Indian tribes of Nebraska's northeast, the Omaha and the Winnebago, that would be able to connect with the Bureau of Indian Affairs in Aberdeen, South Dakota.

Connecting Nebraska Communities also proposes to:

- \* Connect as many as 100 community anchor institutions with speeds between 100 Mbps and 10 Gbps, including 33 K-12 public schools, eight public safety entities, three libraries, nine community colleges, and four other institutions of higher learning, 34 healthcare facilities, and ten government buildings and centers.
- \* Facilitate more affordable and accessible broadband service for up to 85,000 households and 8,000 businesses by enabling local Internet service providers to utilize the project's open network.
- \* Improve public safety services in Nebraska by providing much-needed capacity for existing public safety networks and facilities, and enabling the development of the state's planned wireless public safety network.

## ORGANIZATION'S HISTORY

NebraskaLink is comprised of American Broadband Nebraska Communications, Consolidated Telephone, Great Plains Communications, Hamilton Telecommunications, Hartelco, Nebraska Central Telephone Company, and Northeast Nebraska Telephone Company. They have extensive experience engineering, managing, and installing voice, and data, and ISP services.

## PROJECT PARTNERS

- \* Nebraska Library Commission
- \* Elkhorn Valley Economic Development Council

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[www.broadbandusa.gov](http://www.broadbandusa.gov)

**Organization:** ENMR Telephone Cooperative, Inc. dba ENMR-Plateau  
**Project Name:** ENMR-Plateau Middle Mile  
**Project Type:** Infrastructure  
**State(s):** New Mexico and Texas  
**Federal Award:** \$11,252,066

### ABOUT THE PROJECT

The ENMR-Plateau Middle Mile project intends to enhance broadband capabilities for critical community anchor institutions in eastern New Mexico and west Texas by lighting a more than 1,600-mile ring of fiber and constructing 74 miles of new fiber in five communities. The project plans to connect more than 200 anchor institutions – including educational institutions, public safety organizations, healthcare facilities, and government agencies – at speeds of up to 1 Gbps. In addition, the network intends to offer wholesale services and facilitate broadband expansion to an estimated 20 communities and an area with nearly 700,000 homes, over 36,000 businesses, and 263 anchor institutions.

The ENMR-Plateau Middle Mile project also proposes to:

- Enable interconnectivity to the Telehealth network being constructed across New Mexico, Arizona, Utah, and Colorado.
- Expand distance learning opportunities for students at schools and libraries in rural areas.
- Provide an overall capacity that will allow flexibility for many types of broadband applications for both public and private entities.
- Leverage a 38 percent match to maximize use of federal funds.

### ORGANIZATION'S HISTORY

The ENMR Telephone Cooperative Inc. (ENMR-Plateau), founded in 1949, provides local phone service to rural areas in Eastern New Mexico, and operates in 25 counties in New Mexico and Western Texas covering 25,000 square miles. ENMR-Plateau provides local telephone service to approximately 10,000 residential customers and has more than 2,000 miles of fiber buried to transport high capacity services for the company and other carriers in the area. ENMR-Plateau currently has deployed wireless broadband in eight competitive markets in New Mexico offering plans up to 2 Mbps. Additionally, the company provides fiber and connectivity services to the Roswell Independent School District and Clovis Municipal Schools as well as broadband service to many rural schools in the ENMR-Plateau serving area.

### PROJECT PARTNERS

- Baca Valley Telephone
- Delcom, Inc.

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**Organization:** ENMR Telephone Cooperative, Inc. dba ENMR-Plateau  
**Project Name:** Extending the Middle Mile: ENMR-Plateau Middle Mile CCI Project  
**Project Type:** Comprehensive Community Infrastructure  
**States:** New Mexico, Texas  
**Federal Award:** \$16,460,815

## ABOUT THE PROJECT

To provide much-needed broadband capacity to critical community facilities in underserved west Texas and eastern New Mexico communities, **ENMR-Plateau** plans to construct 189 miles of new fiber and utilize 418 miles of additional existing fiber to create a middle mile broadband network spanning central and eastern New Mexico and parts of western Texas.

Expanding its \$11.2M BTOP Round One infrastructure award, ENMR plans to deploy its network into additional underserved areas with 1 Gbps middle-mile speeds. The project proposes to facilitate distance learning and education for tens of thousands of residents by significantly improving broadband connections at schools and higher education institutions. ENMR-Plateau plans to partner with both New Mexico and Texas colleges and universities, regional utility companies, and other service providers as needed to further maximize use of fiber and broadband capacity.

The Extending the Middle Mile project also proposes to:

- \* Connect as many as 287 community anchor institutions with speeds between 10 Mbps and 10 Gbps, including 55 K-12 public schools, 53 public safety entities, 12 libraries, five community colleges or other institutions of higher learning, 27 healthcare facilities, and 111 government buildings and centers.
- \* Facilitate more affordable and accessible broadband service for up to 48,000 households and 3,800 businesses by creating 39 new points of interconnection, enabling local Internet service providers to utilize the project's open network.
- \* Enable local banks, schools, and hospitals to link branch locations together, creating efficient, industry-specific statewide networks.

## ORGANIZATION'S HISTORY

ENMR-Plateau, founded in 1949 as Eastern New Mexico Rural Telephone Cooperative, is a regional telephone company in south-central and eastern New Mexico and western Texas. ENMR has a long history of deploying network services and is currently undergoing an extensive, long-term network modernization.

## PROJECT PARTNERS

- \* New Mexico State University
- \* University of New Mexico
- \* PNM Resources
- \* Public Service Company of New Mexico
- \* Tularosa Basin Telephone Company

Data provided in the project description is based on information supplied by the applicant. An executive summary of this application can be found on [www.ntia.doc.gov/broadbandusa](http://www.ntia.doc.gov/broadbandusa).

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**Organization:** ION Hold Co., LLC  
**Project Name:** ION Upstate New York Rural Broadband Initiative  
**Project Type:** Infrastructure  
**State(s):** New York, Pennsylvania, and Vermont  
**Federal Award:** \$39,724,614

### ABOUT THE PROJECT

The ION Upstate New York Rural Broadband Initiative proposes to build 10 new segments of fiber-optic, middle mile broadband infrastructure, serving more than 70 rural communities in upstate New York and parts of Pennsylvania and Vermont. The ION project plans to construct a 1,308-mile network to offer broadband speeds of one to 10 Gbps to serve more than 300 anchor institutions and immediately connect more than 100, including libraries, state and community colleges, state and county agencies, and health clinics. ION plans to extend its relationship with the New York State Office for Mental Health, along with the Basset Hospital and Healthcare System, to expand many of its telemedicine practices.

The project would enable wired and wireless last mile service providers to make broadband more readily available to 250,000 households and 38,000 businesses, and provide much-needed investments and job creation to unserved and underserved areas of the state. The project proposes to provide broadband education, training, equipment, and support to educational and healthcare entities and other community support organizations.

The ION Upstate New York Rural Broadband Initiative project expects to:

- Extend middle mile infrastructure to low-income rural areas with higher than average unemployment rates.
- Support local workforce investment boards, state and local chambers of commerce, community training facilities, and federal and state training facilities.
- Strengthen its relationship with regional and local arms of The Appalachian Regional Commission, which is a federal-state partnership that works for sustainable community and economic development in Appalachia.

### ORGANIZATION'S HISTORY

ION Hold Co., LLC has already developed and managed more than 2,200 existing miles of fiber throughout rural New York, and the Development Authority of the North Country manages a fiber route of more than 750 miles in New York. These partners have pooled their resources and knowledge of the upstate rural markets to present a comprehensive plan for improving broadband access in underserved areas of New York.

### PROJECT PARTNERS

- Development Authority of the North Country
- Sovernet Communications

Data provided in the project description is based on information supplied by the applicant. An executive summary of this application can be found on [www.broadbandusa.gov](http://www.broadbandusa.gov).

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**Organization:** Dakota Carrier Network, LLC  
**Project Name:** DCN's CCI Broadband Project  
**Project Type:** Comprehensive Community Infrastructure  
**State:** North Dakota  
**Federal Award:** \$10,781,157

## ABOUT THE PROJECT

**Dakota Carrier Network's** CCI Broadband project proposes to provide high-speed fiber connectivity to more than 175 largely rural and underserved North Dakota critical community anchor institutions, including public safety entities, schools, and government agencies. The project involves a unique combination of public and private partnerships and collaboration with multiple Round One Recovery Act broadband awardees to provide last mile service. Given the largely rural, underserved nature of the proposed service area, in which many community anchor organizations lack access to necessary last-mile broadband speeds, DCN intends to deploy 169 miles of new fiber with backhaul speeds as fast as 1 Gbps to enable last-mile service across the state. The project also proposes to enhance e-health in the state by deploying a dedicated 10 Gbps healthcare network for over 200 hospitals, clinics, and other healthcare providers to enable telemedicine, teleradiology, telepharmacy, and electronic health information exchange.

DCN's CCI Broadband Project also proposes to:

- Connect more than 175 community anchor institutions with speeds between 10 and 100 Mbps, including 27 K-12 public schools, 33 public safety entities, 79 healthcare facilities, and 36 government buildings.
- Facilitate more affordable and accessible broadband service for approximately 2,700 households and 600 businesses by enabling local Internet service providers to utilize the project's open network.
- Improve public safety by connecting or upgrading service to public safety entities statewide, including the North Dakota Department of Emergency Services E911 Public Safety Access Point and the National Guard.
- Interconnect with BTOP Round One awardee South Dakota Network, LLC to facilitate a regional middle mile network across the upper Midwest.

## ORGANIZATION'S HISTORY

DCN has over 13 years of experience engineering, managing and installing voice, data and ISP services in North Dakota, serving every community in the state with services including carrier Ethernet, private line, ATM, frame relay and high-speed Internet access.

## PROJECT PARTNERS

- BEK Communications Cooperative
- United Telephone Mutual Aid Corporation
- Dakota Central Telecommunications Cooperative
- SDN Communications
- Midstate Telephone Company
- North Dakota Department of Information Technology
- Moore & Liberty/Griggs County Telephone
- North Dakota Telephone Company
- Northwest Communications Cooperative
- Polar Communications Mutual Aid
- Inter-Community Telephone Company
- Reservation Telephone Cooperative
- SRT Communications
- Consolidated Telecom
- Red River Telephone Association

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**Organization:** Horizon Telcom, Inc.  
**Project Name:** Connecting Appalachian Ohio Middle Mile Consortium  
**Project Type:** Comprehensive Community Infrastructure  
**State:** Ohio  
**Federal Award:** \$66,474,247

### ABOUT THE PROJECT

The economically distressed rural regions of the southern and eastern Ohio foothills lack sufficient access to fiber-based broadband service. Led by **Horizon Telcom**, the Connecting Appalachian Ohio Middle Mile Consortium proposes to construct 1,960 new miles of fiber, more than doubling the fiber in the service area and bringing middle-mile speeds of up to 10 Gbps to 34 targeted counties. The project also plans to bring high-capacity services to approximately 600 regional community anchor institutions, including 25 community colleges, 15 universities, 231 K-12 schools, 34 county 911 answering points, 212 healthcare facilities, and 34 industrial parks, with the potential to reach thousands more. Horizon Telcom states that more than 80 percent of community anchors in the area currently lack fiber-based broadband, while others lack the necessary broadband speeds to match their needs. The project also proposes to interconnect with the networks of BTOP awardees OneCommunity and ComNet, providing a far-reaching solution to Appalachian Ohio's broadband needs.

The Connecting Appalachian Ohio Middle Mile Consortium also proposes to:

- » Enhance and expand broadband in a region comprised of more than 700,000 households and 37,000 businesses. The project expects to spur new or improved high-speed Internet access for these consumers by enabling local Internet service providers to connect to the new open network.
- » Supplements the Southern Ohio Health Care Network's existing 13-county Rural Health Care Pilot, which leverages funds from the Federal Communications Commission to bring telemedicine and electronic medical records adoption to small clinics and rural hospitals in the region.
- » Extend fiber connectivity to 32 (over 30 percent) of Ohio's Multi-Agency Radio Communications System towers in the region, improving public safety radio and mobile data capacity for the State Highway Patrol, Department of Rehabilitation & Correction, and the Ohio Emergency Management Agency.

### ORGANIZATION'S HISTORY

Founded in 1895 as the Home Telephone Company, Horizon Telcom has provided communications services to southern Ohio for over a hundred years. Horizon was the first provider in the state to offer rural dial-up Internet and a companion DSL service, and currently delivers voice, video, and data services to businesses and residents in southern and eastern Ohio.

### PROJECT PARTNERS

- » Ohio Academic Resources Network (OARNet)
- » Buckeye Hills-Hocking Valley Regional Development District
- » Ohio Mid-Eastern Governments Association
- » Ohio Valley Regional Development Commission
- » Ohio Mid-Eastern Regional Education Service Agency
- » South Central Ohio Computer Association
- » Southeastern Ohio Voluntary Education Cooperative
- » Southern Ohio Health Care Network

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**Organization:** Pine Telephone Company, Inc.  
**Project Name:** Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation - Rural/ Non-Remote Areas  
**Project Type:** Infrastructure  
**State(s):** Oklahoma  
**Federal Award:** \$9,472,078

## ABOUT THE PROJECT

The Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation project plans to deliver affordable wireless broadband service to underserved areas of Southeastern Oklahoma, including the Tribal lands of the Choctaw Nation and its 10 counties. The project intends to directly connect 20 community anchor institutions, including Choctaw Nation agencies, public schools, public safety agencies, fire and police departments, and a health clinic. The project's last mile network plans to offer broadband speeds ranging from 1 Mbps to 3 Mbps to as many as 7,000 households and 75 businesses. The network uses 3G universal mobile telecommunications systems (UMTS) technology over both HSDPA (High Speed Downlink Packet Access) and HSUPA (High Speed Uplink Packet Access) deployed over a 32-cell site, last mile wireless network. Backhaul services will be connected via microwave wireless links using 29 new microwave links and 289 new microwave backbone miles.

The Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation project also proposes to:

- \* Improve health care in the region by facilitating the transfer of real-time patient information among health providers.
- \* Support five public school districts serving more than 1,000 students.
- \* Enhance public safety for residents by providing free wireless broadband to first responder agencies that serve the area, and allowing them to mount communications equipment on project towers at no charge.

## ORGANIZATION'S HISTORY

Pine Telephone Company is family-owned and has built and operated communications networks in rural Oklahoma for nearly 100 years. The company currently manages a 238-mile fiber network and a 1,300-mile traditional telephone network, and has a wireless network consisting of 45 sites. Pine Telephone also is the largest provider of cellular telephone service in the area. The company is partnering with Peripheral Systems, Inc., a Small Disadvantaged Business, for security services for the project.

## PROJECT PARTNERS

- \* HealthCare Innovations
- \* Five public school districts
- \* Choctaw Nation
- \* Peripheral Systems, Inc.

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**Organization:** South Dakota Network, LLC (SDN)  
**Project Name:** Project Connect South Dakota  
**Project Type:** Infrastructure  
**State(s):** South Dakota  
**Federal Award:** \$20,572,242

**ABOUT THE PROJECT**

South Dakota Network (SDN), a partnership of 27 independent telecom providers, proposed Project Connect South Dakota to add 140 miles of backbone network and 219 miles of middle mile spurs to SDN's 1,850-mile fiber-optic network. This improvement in the network proposes to enable the delivery of at least 10 Mbps service to more than 220 existing anchor institution customers in rural and underserved areas of the state. The network also intends to connect more than 300 new anchor institutions, including public middle and high schools, libraries, universities, hospitals, clinics, public safety agencies, courthouses, government buildings, and National Guard facilities. Patients and hospitals are expected to benefit from the network through the use of telemedicine to update medical records, to conduct remote testing, and to provide diagnostic services. School children in sparsely populated areas are expected to benefit through improved participation in distance-learning programs.

Project Connect South Dakota proposes to:

- \* Provide improved services to more than 300 existing anchor institutions and more than 200 new anchor institutions.
- \* Work with Avera Health Care Systems and Sanford Lab healthcare providers to support telemedicine in rural areas.
- \* Assist the South Dakota Research Education Economic Development Network to connect the state government, state universities, and the Earth Resources Observation and Science Data Center.
- \* Provide state-of-the-art equipment and technology for use at the Mitchell Technical Institute in training students for careers in broadband applications and deployment.

**ORGANIZATION'S HISTORY**

South Dakota Network's 20 years of industry experience and current operation of a statewide network demonstrates its ability to operate and maintain the proposed middle mile network. SDN already provides broadband services to more than 200 anchor institutions.

**PROJECT PARTNERS**

- \* Alliance Communications Cooperative
- \* Armour Independent Telephone Company
- \* Avera Health Care Systems
- \* Beresford Municipal Telephone Company
- \* Bridgewater/Canistota Telephone Company
- \* Cheyenne River Sioux Tribe Telephone Authority
- \* Faith Municipal Telephone Company
- \* Golden West Telecommunications
- \* Interstate Telecommunications Cooperative
- \* James Valley Telecommunications
- \* Kennebec Telephone Company
- \* Long Lines
- \* McCook Cooperative Telephone Company
- \* Midstate Communications
- \* Mitchell Technical Institute
- \* RC Communications
- \* Roberts County Telephone Cooperative
- \* Sanford Health Care Systems
- \* Santel Communications Cooperative
- \* Splitrock Properties
- \* Stockholm Strandburg Telephone
- \* Swiftel Communications
- \* Tricounty Telephone Company
- \* Union Telephone Company
- \* Valley Telecommunications Cooperative
- \* Venture Communications Cooperative
- \* West River Telecommunications Cooperative
- \* Western Telephone Company

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**Organization:** Peoples Telephone Cooperative  
**Project Name:** East Texas Medical and Educational Fiber Optic Network  
**Project Type:** Comprehensive Community Infrastructure  
**State:** Texas  
**Federal Award:** \$28,825,356

## ABOUT THE PROJECT

The East Texas Medical and Educational Fiber Optic Network, proposed by **Peoples Telephone Cooperative**, plans to deploy broadband service to educational, healthcare, and government organizations across an economically distressed 13-county area in eastern Texas. The project plans to connect community anchor institutions, especially hospitals, in Camp, Delta, Fannin, Franklin, Hopkins, Hunt, Lamar, Rains, Red River, Smith, Titus, Van Zandt, and Wood Counties to one another and to the University of Texas Health Science Center at Tyler, which serves as the region's hub for medical care and education.

By providing expected access speeds between 5 Mbps and 100 Gbps, the network intends to enable medical simulations for remote hospitals and a variety of distance learning opportunities, including remote participation in public health graduate courses taught from Houston and other educational offerings in nursing and related medical professions.

The East Texas Medical and Educational Fiber Optic Network also proposes to:

- Nearly triple the fiber in the area by constructing 659 new miles of fiber and incorporating 221 miles of existing fiber to offer a variety of wholesale services to potential last-mile partners.
- Facilitate more affordable and accessible broadband service for over 100,000 households and 10,000 businesses by enabling local Internet service providers to utilize the project's open network.
- Provide direct connections to as many as 190 anchor institutions, including as many as 50 K-12 schools, 107 government buildings, and 23 healthcare providers, as well as seven community college campuses: North Texas Community College campuses in Mt. Pleasant and Pittsburg; the Paris Junior College campuses in Paris, Sulphur Springs, and Greenville; the Tyler Junior College campus; and the Grayson County College and the Texas A&M Commerce which links to the entire Texas A&M network.
- Provide connectivity to Region 8 Education Service Center and the independent school districts included in the 13 county area.

## ORGANIZATION'S HISTORY

Peoples Telephone Cooperative (PTC) has been providing telecommunications services for over 50 years. PTC's 24/7 network operations center currently supports voice, wireless, Internet, and business communications services; the company plans to leverage these assets in constructing its BTOP-funded network.

## PROJECT PARTNERS

- East Texas Council of Governments

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**Organization:** Hardy Telecommunications, Inc.  
**Project Name:** Hardy AnchorRing  
**Project Type:** Infrastructure  
**State(s):** West Virginia  
**Federal Award:** \$3,201,760

### ABOUT THE PROJECT

The Hardy AnchorRing project proposes to bring high-capacity broadband services to Hardy County, West Virginia, a sparsely populated region of the state with difficult terrain. The project intends to build a 117-mile aerial and underground fiber-optic network, and directly connect an estimated 35 anchor community institutions, such as public safety agencies, government offices, healthcare facilities, schools, and a college, with further connections likely in the future.

The Hardy AnchorRing project also proposes to:

- Offer sufficient capacity and speeds from 10 to 40 Gbps to allow local county, municipal, and education entities to provide regional services with greater impact and efficiency.
- Spur more affordable high-speed Internet service throughout Hardy County, potentially including more than 1,900 households and 190 businesses, by enabling local Internet service providers to connect to the project's open network.

### ORGANIZATION'S HISTORY

Hardy Telecommunications is a not-for-profit cooperative that has offered telephone services for more than 50 years in a grass roots effort to reach an area deemed unprofitable by commercial companies. A board of directors elected from the county guides Hardy's management. Currently, Hardy serves more than 1,500 customers with a 25-mile network. Community leaders, anchor institutions, schools, public safety agencies, health care providers, government agencies, and economic development organizations support the project.

### PROJECT PARTNERS

- Byers Engineering
- Peregrine Management Partners

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**Organization:** Silver Star Telephone Company, Inc.

**Project Names:** Expanding Greater Yellowstone Area Broadband Opportunities/  
Delivering Opportunities: Investing in Rural Wyoming Broadband

**Project Type:** Comprehensive Community Infrastructure

**State:** Wyoming and Idaho

**Federal Awards:** \$5,608,179 / \$5,063,623

## ABOUT THE PROJECT

**Silver Star Telephone Company** will use BTOP funding to complete key portions of its broadband network. The Expanding Greater Yellowstone Area Broadband Opportunities project proposes to close an 89-mile gap in its existing Wyoming fiber network between the continental divide at Togwotee Pass and Jackson, bringing comprehensive broadband services to 11 counties in the western part of the state. The Delivering Opportunities: Investing in Rural Wyoming Broadband project proposes to close a 38-mile network gap in northwest Wyoming over the Teton Pass to southeast Idaho, bringing broadband to five additional counties.

These projects propose to:

- Provide speeds of 1 Gbps to a significant portion of western Wyoming.
- Connect public safety entities, K-12 schools, the Brigham Young University's Teton, Idaho outreach facility, healthcare facilities, local government entities, the U.S. Forest Service, and the Grand Teton and Yellowstone National Parks.
- Connect fire, police, and other public safety entities in the region such as Teton County Emergency Management and members of WYOLINK (the Wyoming Homeland Security Communications Initiative) more effectively and efficiently.
- Spur affordable broadband access for local consumers and businesses, including as many as 10,200 households and 1,900 businesses by enabling local Internet service providers to utilize the project's open network.

## ORGANIZATION'S HISTORY

Silver Star Telephone Company has provided telecommunications services to Wyoming's Star Valley for over 50 years, and has in recent years expanded into a full-service technology company serving eastern Idaho and northwestern Wyoming. An existing borrower from USDA's Rural Utilities Service, Silver Star has robust experience with federal funding programs.

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**Organization:** Vermont Telephone Company, Inc. (VTel)  
**Project Name:** Vermont Broadband Enhanced Learning Link (VT BELL)  
**Project Type:** Comprehensive Community Infrastructure  
**States:** New Hampshire, New York, Vermont  
**Federal Award:** \$12,256,492

## ABOUT THE PROJECT

The VT BELL project is VTEL's plan to address a bandwidth and transport capacity shortage in the state's existing middle mile infrastructure in areas including Essex, Stowe, New Haven, and Berlin. Because this shortage has slowed the deployment of crucial resources necessary to promote long term educational and economic initiatives, such as distance learning networks, access to Internet2, and remote access to large databases and libraries, VT BELL proposes expanding VTel's existing fiber network to deliver up to 10 Gbps Ethernet broadband to more than 200 high schools; hospitals; colleges; universities; community colleges; rural, independent and large telephone companies; and public safety entities, including police barracks, statewide. The project also proposes to build the high speed network to Vermont's three highest peaks to enhance the Department of Public Safety's statewide microwave network for improved emergency communications in mountainous areas.

VT BELL proposes to:

- Deploy 257 new miles of fiber to its existing network and complement the project of another BTOP-funded entity, Vermont Telecommunications Authority, to provide a robust, high speed network statewide and create new interconnection points in Plattsburgh, NY and Hanover, NH.
- Spur affordable broadband access for local consumers and businesses, including as many as 64,000 households and 13,000 businesses, by enabling local Internet service providers to connect to the project's open network.
- Expand services to schools participating in the Vermont Virtual Learning Cooperative, a program that allows students across the state to participate in classes not offered in their geographic area.

## ORGANIZATION'S HISTORY

Vermont Telephone Company, which does business as VTel, is one of the largest family-owned telephone companies in America, with a traditional service area that covers southern Vermont and parts of three other states, serving approximately 50,000 Vermonters with 19,000 telephone lines.

## PROJECT PARTNERS

- CBN Connect
- New England Telehealth Consortium (NETC)

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