
September 10, 2018

Kenneth Johnson
Administrator
Rural Utilities Service
U.S. Department of Agriculture
Mail Stop 1516, Room 5135
1400 Independence Avenue, S.W.
Washington, D.C. 20250

Dear Administrator Johnson:

The Western Governors' Association (WGA) appreciates your response on August 2, 2018, and follow-up to its recent outreach regarding the Rural Utilities Service (RUS's) Broadband e-Connectivity Pilot Program. Thank you in particular for the additional information about the broadband availability verification process that will be used when evaluating funding applications.

Western Governors have provided comment on the RUS Broadband e-Connectivity Pilot Program, ([83 FR 35609](#), Sept. 10, 2018). I hope the Governors' suggestions are useful and encourage their incorporation into the design of the pilot program.

Community isolation, rugged terrain and "checkerboard" land ownership patterns common in western states combine to render rural broadband deployment logistically and financially challenging. Accordingly, Governors, state legislatures and industry partners seek creative, cost-effective solutions to deliver broadband to rural communities, including tribal areas. Per your request, I am including a summary of illustrative case studies describing innovative broadband deployment projects in western states. I hope this material helps inform your design of the Broadband e-Connectivity Pilot Program.

Please contact me if you have any questions or require further information about broadband deployment projects in western states. In the meantime, with warm regards and best wishes, I am

Respectfully,



James D. Ogsbury
Executive Director

Attachment



Western State Broadband Deployment Case Studies

Arizona

Arizona Broadband for Education Initiative

The Arizona Department of Education, Arizona Corporation Commission (ACC), and the non-profit Education Superhighway have formed an innovative partnership to improve internet access in rural Arizona schools. In the Fiscal Year (FY) 2018 Arizona state budget, Governor Doug Ducey designated \$3 million to help create a state matching fund for federal E-rate applications. The ACC then adjusted the Arizona Universal Service Fund (AUSF) to provide a one-time distribution of \$8 million, resulting in a total of \$11 million in available state funds. Education Superhighway assists schools and districts with the funding application process.

In 2014, the Federal Communications Commission (FCC) offered enhanced E-rate program discounts for broadband infrastructure construction projects based on a dollar-for-dollar state match up to 10 percent of the total project cost. The FCC subsequently approved the ACC's plan to have the AUSF serve as a state matching fund in this manner.

Under this system, a school will apply for federal E-rate funding for broadband projects. E-rate discounts for construction costs range from 20 to 90 percent depending on the poverty level of the school's population. This means that a school with an 80 percent discount could have all its costs covered due to the 10 percent state match and additional 10 percent federal match. By using this additional federal funding match, Arizona leveraged \$75.7 million of federal E-rate funds in 2017, serving over 100 schools in its 15 counties.

Arizona Governor's Office Developments

The Office of the Arizona Governor has been conducting a statewide review of broadband deployment in rural communities. The process has focused on particular policy areas related to broadband deployment. The six areas are: economic development; reducing/eliminating regulatory barriers; long-term funding; local community coordination; using technology to improve state services; and improving healthcare delivery options for rural communities. A stakeholder process will result in a report to the Governor with state and federal policy recommendations to spur broadband deployment. A key objective of the report is to clarify the state's role in supporting private, federal, and municipal broadband efforts.

Arizona has significant swaths of state and federal public lands that can complicate siting and permitting of broadband projects. This has led to delays in broadband deployment statewide. The report will include recommendations to improve transparency and coordination with federal agencies for broadband projects.

The final report will be delivered to Governor Ducey in October 2018.

Colorado

Town of Red Cliff

Red Cliff, a rural town in western Colorado with a population of 267, acquired broadband service through a collaborative effort among multiple public agencies. The project combined public funding from Red Cliff, Eagle County, the Colorado Department of Local Affairs, the Colorado Broadband Deployment Board, the State Internet Portal Authority and the Northwest Colorado Council of Governments. A private internet service provider (ISP) now delivers 25 Mbps down/5 up residential service for \$75/month. Businesses can access up to 100 Mbps service options. Broadband service is delivered via fiber and a microwave link at Ski Cooper.

Rio Blanco County

Rio Blanco County invested in middle- and last-mile fiber infrastructure and collaborated with private sector partners to deliver 1 Gb access to every residence and business in the towns of Meeker and Rangely. More remote residents have access to fixed wireless services. County residents voted, with 82 percent support, to use general county funds with matching state funds to finance the project. The multi-year project was a partnership between Rio Blanco County, the towns of Meeker and Rangely, the Colorado Department of Local Affairs, the White River Electric Association, the Bureau of Land Management, Mammoth Networks (ISP) and cellular carriers serving the region.

Region 10

Region 10, a non-profit organization offering public support to six counties in western Colorado, developed a broadband strategic program to deliver high-speed broadband to all communities in the region. In June 2014, Region 10 published a request for proposals to create a blueprint for implementation of a regional open access network for middle mile services. The open network gives service providers access to low-cost infrastructure, improving the business case for last mile broadband construction projects.

Through federal, state, county and municipal cooperation in partnership with the private sector, the Region 10 Broadband Network is currently providing transport and ISP services in Delta, Montrose, and Gunnison counties via a 100 Gigabit backbone. Anchor institutions in the region are benefiting from reliable, gigabit connections, while businesses and consumers are gaining access to cost-effective broadband plans through local ISPs.

Project THOR

Project THOR is an effort by the Northwest Colorado Council of Governments (NWCCOG) to create a government-owned, middle-mile transport network. The NWCCOG broadband project will create a redundant, open-access service loop that circles the five-county region. By utilizing the collective buying power of local towns and counties, NWCCOG members hope to decrease the costs that each community pays for broadband service.

Local government funds and an anticipated 50/50 matching grant from the Colorado Department of Local Affairs will finance the project. NWCCOG plans to act as a network administrator and has identified a private ISP as the network provider. The project will rely on access to fiber previously installed by the Colorado Department of Transportation.

When complete, Project THOR will include a 100 Gigabit primary ring with secondary 10 Gigabit rings that supports a series of locally owned and operated Meet Me Centers. A Scope of Work assessment was completed in summer 2018.

State Financing Rural Broadband Deployment

In the 2018 legislative session, the Colorado General Assembly passed bipartisan legislation to shift up to \$110 million over five years from the state's High Cost Support Mechanism that had supported local telephone access (Colorado's version of the federal Universal Service Fund) to the State Broadband Fund. The program provides matching grants to the private sector to fund capital construction for broadband last mile access in rural Colorado.

Hawaii

Partnership with Spectrum Providing One Hour of Free Wi-Fi

The Hawaii Department of Commerce and Consumer Affairs (DCCA), through its Cable Television Division (CATV), announced in July 2018 that the first wave of free public Wi-Fi hotspots offering one hour of free service per device, per day are active or underway at various locations throughout the State of Hawaii.

Under Decision and Order No. 366, which approved the transfer of Oceanic Time Warner Cable (OTWC) to Charter Communications, DCCA required Spectrum/OTWC to provide at least 1,000 new public Wi-Fi access points (or hotspots) in its cable franchise areas throughout the state within four years of the close of the transaction, which occurred in May 2016. With respect to these hotspots, Spectrum/OTWC is required to deploy one hundred in public parks, civic and other community centers, and other public open areas and gathering places as directed by DCCA, in consultation with Spectrum/OTWC.

While imposing this requirement, DCCA noted that free public Wi-Fi hotspots greatly enhance access to public health, education, and other online services for those that lack internet access in their homes, live in unserved areas, or have other economic barriers to internet access. In addition, such hotspots may also benefit individuals by providing seamless access to internet services without impacting monthly data quotas for mobile phones and other devices.

To date, 44 of the 100 DCCA hotspots have been designated, with Hawaii Island and Lanai Island locations identified and forthcoming. The currently designated locations include:

- Numerous bus stops around the island of Kauai (active);
- Business and community gathering places in Hana and Wailuku on the island of Maui (active);
- Shared courtyards of the Department of Taxation and Department of Labor and Industrial Relations on Oahu (by fall 2018); and
- Hard-to-serve public areas in Kalaupapa (active) and Kaunakakai (by fall 2018) on the island of Molokai.

Spectrum/OTWC to date has installed approximately 1,400 new hotspots in compliance with the state's requirements. DCCA is working to identify additional public access locations to designate

the remaining allocated hotspots throughout the State. Addresses and exact mapped locations of the state-designated and active hotspots can be viewed on the CATV Broadband [web page](#).

Idaho

Broadband Infrastructure Improvement Grant Fund

In 2015, the Idaho Legislature approved a one-time appropriation of \$2.7 million to create the Broadband Infrastructure Improvement Grant (BIIG) Fund. The BIIG Fund is designed to take advantage of the state matching provision the FCC tasked the Universal Service Administration Company with administering through the E-rate program. Public school districts, charter schools and libraries may utilize this funding to deploy new fiber, or fiber-equivalents, for high-speed broadband.

As described in the Arizona example, the E-rate program will increase an entity's discount rate for special construction charges up to an additional 10 percent to match state funding on a one-to-one dollar basis. This means an entity with an 80- or 90-percent E-rate discount could have the non-recurring costs of an approved special construction project completely funded between E-rate and the Idaho State Department of Education.

While this program is only for local education agencies, communities also benefit because vendors lay hundreds of strands during construction, which can be resold to local businesses or residential customers. The vendor can also sublease the excess fiber for use by other vendors.

Eleven applications have been approved for almost \$360,000 of BIIG Funds, which will provide almost \$3.6 million of new broadband connectivity.

Kansas

Governor's Office Receives Grant for Statewide Broadband Mapping Project

The Information Network of Kansas Board of Directors approved a \$300,000 grant request by Governor Jeff Colyer to complete a Statewide Broadband Mapping project. The project, which will be undertaken by the non-profit Connected Nation in partnership with the Governor's Office, will prepare a statewide broadband map of wireline and wireless coverage. This map will provide the Statewide Broadband Expansion Planning Task Force, created by Governor Colyer in 2018, with a snapshot of state broadband coverage. The map will enable the Task Force to identify and close broadband coverage gaps in Kansas.

Employing a data collection process in collaboration with the state's broadband service providers, Connected Nation will produce a granular statewide broadband availability map for use by the general public and the Task Force. Connected Nation will also collect public feedback on the initial draft of the map and deploy engineers into the field to validate service availability (or the lack thereof) in order to improve the map over time.

Nevada

Valley Electric Association: Beatty Project

The Valley Electric Association (VEA), a member-owned energy cooperative, serves over 45,000 people across a 6,800-square-mile footprint in southwest Nevada. VEA launched the Valley Communications Association in 2015 to bring high-speed internet access to their customers by stringing fiber along existing electricity lines.

VEA serves many small communities, including Beatty in Nye County. Beatty, an unincorporated town with a population of 1000, had been struggling for years due to poor internet access. In June of 2018, VEA completed a full-fiber buildout in Beatty, making it the first full-fiber community in Nevada. Beatty is a compact community, which made a full-fiber system economically feasible. In other areas, VEA uses wireless technologies connected to a fiber backbone to provide broadband service.

High-speed internet access is having immediate, demonstrable impacts in Beatty. Representatives from VEA shared that the Beatty medical clinic was preparing to close before the completion of the fiber buildout. The clinic now employs a full-time virtual provider that allows significantly more patients to receive medical care. Fiber access has also improved the local tourism economy, which relies on attracting visitors travelling to Death Valley National Park. The increase in broadband services across Nye County has also had positive effects on the regional housing market.

North Dakota

One Hundred Gigabit Network

The North Dakota Information Technology Department (ITD) recently signed a contract extension with Dakota Carrier Network providing for significant upgrades to STAGEnet, which serves state and local governments, K-12 education and higher education. When finished, the upgrades will position North Dakota as the first state to achieve 1-Gigabit connectivity to every school district in the state. Completion of the upgrades is anticipated in summer 2019.

ITD negotiated the contract to be cost-neutral, meaning the upgrades will not increase costs to taxpayers. State lawmakers created STAGEnet in 1999, formally recognizing the partnership between state government, K-12 and higher education and local governments under one umbrella to deliver broadband and security services. The STAGEnet effort, combined with a strong partnership with the provider community, has helped North Dakota become a leader in broadband delivery across the country.

K-20W Security Initiative

North Dakota's EduTech within the Information Technology Department recently became the first educational entity in the nation to receive formal certification from the National Integrated Cyber Education Research Center (NICERC).

Funded by the Department of Homeland Security, NICERC is a trusted source for: cyber; science, technology, engineering and mathematics (STEM); and computer science curriculum for grades K-12. This partnership means EduTech will be able to extend resources statewide to provide greater

professional development opportunities for educators, ensuring improved broadband access is coupled with necessary levels of security for all end-point users.

Oregon

Rural Broadband Capacity Pilot Program

In 2017, Governor Kate Brown approved funding of \$500,000 for grants to support broadband planning, engineering, and infrastructure deployment projects targeting rural areas lacking adequate broadband access. The program emphasizes investments that assist communities, businesses, or industries to implement cost-effective projects that positively impact select industries in Oregon.

Oregon cities, counties, ports, tribes, cooperatives, non-profits, and public-private partnerships submitted proposals. 25 applications sought more than \$4.8 million in funding. Grants will support broadband planning and infrastructure projects located in Baker, Columbia, Coos, Curry, Douglas, Morrow, Harney and Tillamook counties.

The following projects are in progress:

Organization Project Name	Grant	Brief Description
City of Baker City Elkhorn View Industrial Park Broadband	\$137,000	Baker City will deploy a fiber distribution network throughout the 65-acre city-owned industrial park.
City of Boardman Broadband Strategic Planning	\$10,000	Boardman will develop a Broadband Strategic Plan for the city.
City of Glendale City of Glendale	\$140,000	Glendale will deploy a city-wide fiber-to-the-home (FTTH) and fiber-to-the-business (FTTB) network through a public-private partnership.
Columbia County Columbia County Broadband Project	\$68,300	The county will assess its broadband needs, infrastructure, vendor resources, and strategic options including a county-wide fiber ring to provide high-speed internet services to residents, businesses, anchor institutions, and emergency services throughout the county.
Coos Curry Electric Coop Broadband Feasibility Study	\$19,700	CCEC will conduct a feasibility study for building a broadband network to provide services to rural underserved areas of Coos, Curry, and part of Douglas Counties.
Harney County Harney County Broadband	\$75,000	The county will develop a Broadband Strategic Plan in collaboration with the cities of Burns and Hines, and the Burns Paiute Tribe.
Tillamook Lightwave Port area of Garibaldi	\$50,000	TLW will expand its fiber network in the Port of Garibaldi area to deliver Gigabit services and support economic development.

Utah

Broadband Deployment to Daggett County

The Utah Education and Telehealth Network (UETN), an agency formerly known as the Utah Education Network (UEN) until the Utah Telehealth Network was brought under the UEN purview by the state legislature in 2014. UETN is responsible for accelerating broadband deployment to rural schools, libraries and communities across Utah. UETN has contracted STRATA Networks to deliver fiber-optic service to the towns of Dutch John and Manila in Daggett County, the least populous county in Utah. For now, plans include service to Manila High School in Manila, Flaming Gorge Elementary in Dutch John, and the Uintah Basin Medical Center's Manila Clinic, also in Manila. Local ISPs could potentially work with STRATA Networks in the future to take advantage of this infrastructure to improve residential service offerings. The project began in July 2018 and will be completed in the fall of 2020.

UETN issued a request for proposal valued at \$3.3 million, of which 80 percent was funded by the Universal Service Fund through E-Rate. The Utah Department of Transportation agreed to contribute \$500,000 and will install cameras along U.S. Routes 44 and 191. STRATA Networks estimated that their total project costs would be approximately \$7 million but agreed to complete the project due to the overall system redundancy benefits they will receive.

STRATA Networks will lay fiber along U.S. Route 191, which runs through the Ashley National Forest. Long ago, when the roadways were originally established, the Utah Department of Transportation did not secure an easement for portions of the road, making the Forest Service (USFS) the lead agency for environmental review of project impacts. Other entities involved in the project include the Bureau of Land Management, Bureau of Reclamation (BOR), Utah Department of Transportation, Uintah County, and Daggett County.

STRATA Networks utilized in-house personnel and the services of a third party, Horrocks Engineers, to complete significant environmental, paleontology, and archaeology studies as part of the permitting process. STRATA Networks was pleased that the entities involved were able to identify and suggest appropriate mitigation for critical avoidance areas in only ten months and allowed the project to continue.

STRATA Networks also worked closely with BOR directly during project planning. U.S. Route 191 crosses the Flaming Gorge Dam south of Dutch John. Laying fiber across the dam would have been a challenging and costly engineering effort, but BOR agreed to let STRATA Networks use the tunnel networks in the dam to lay fiber. Representatives from STRATA Networks described this access as “massively helpful.”

Washington

[Memorandum of Understanding \(MOU\) between the Governor's Office, Quileute Tribal Council, Utilities and Transportation Commission, and CenturyLink](#)

Washington Governor Jay Inslee and the state legislature authorized the Utilities and Transportation Commission (UTC) to direct \$800,000 of Qwest Performance Assurance Plan (QPAP) payment funding in the 2018 operating budget to supplement funds committed by telecommunications companies for rural broadband construction purposes. The Community Economic Revitalization Board then performed a broadband feasibility study and identified La

Push, Washington as an unserved priority area for broadband investment. The parties then signed a MOU in which:

- CenturyLink agreed to deliver new fiber-topic services to certain areas of La Push;
- the Quileute Tribe agreed to facilitate permitting, right-of-way acquisition and easements to expedite broadband deployment;
- UTC agreed to commit up to \$800,000 for construction costs and to enter into discussions with CenturyLink to devise a mutually agreeable payment plan; and
- The Governor's Office agreed to facilitate discussions and convene the parties to help advance timely delivery of broadband services.

[State Legislative Action – Telecommunications Authority to Ports](#)

Legislation enacted by the Washington state legislature in June 2018 extends existing telecommunications authority to all ports in the state to facilitate public-private partnerships in wholesale telecommunications services and infrastructure.

[State Legislative Action – Kitsap Public Utilities District Broadband Service](#)

Legislation enacted by the Washington state legislature in June 2018 allows the Kitsap Public Utilities District to provide retail broadband service to its customers, reaching communities in Suquamish, Poulsbo, Hansville and the Stavis Bay area.

[Mason County PUD-3's Fiberhood Program](#)

The Mason County Public Utility District (PUD), "PUD 3," serves over 34,000 electrical rural customers and runs a wholesale fiber optic telecommunications network that supports the operation of its electricity system. PUD-3 pre-identifies neighborhoods in their service area currently lacking broadband coverage that would make great additions to the fiber network. Residents are then responsible for committing to support the fiber network. Once 75 percent of residents in a "Fiberhood" commit to the service, PUD 3 adds to area to their construction list. The cost is borne by residents as an additional \$25 'construction adder' on their monthly bills for 12 years.

TV White Spaces

Microsoft is partnering with local ISPs to conduct TV White Spaces pilot projects in 13 states, including Arizona, Montana, North Dakota, South Dakota, and Washington. Microsoft supplies the hardware and technical expertise to launch projects while the local ISP will operate and maintain the network. Microsoft is focusing the pilot projects in areas where broadband access will have significant applications in agriculture, education, and health care. The goal of the pilot projects is to demonstrate the technology's viability and encourage other companies to offer the service. Most of the pilot projects are still in the planning and development stage.