COORDINATING FUTURE INVESTMENTS IN BROADBAND

HEARING

BEFORE THE

SUBCOMMITTEE ON LIVESTOCK, RURAL DEVELOPMENT, AND CREDIT

OF THE

COMMITTEE ON AGRICULTURE HOUSE OF REPRESENTATIVES

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WITNESSES

COORDINATING FUTURE INVESTMENTS IN BROADBAND

TUESDAY, JULY 29, 2014

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON LIVESTOCK, RURAL DEVELOPMENT, AND CREDIT,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:05 a.m., in Room 1300 of the Longworth House Office Building, Hon. Eric A. "Rick" Crawford [Chairman of the Subcommittee] presiding.

Members present: Representatives Crawford, Rogers, Conaway, Thompson, Gibson, Costa, McIntyre, Scott, Vela, Lujan Grisham, Enyart, Nolan, and Courtney.

Staff present: DaNita Murray, Mike Dunlap, Nicole Scott, Skylar Sowder, John Konya, Andy Baker, Liz Friedlander, and Riley Pagett.

OPENING STATEMENT OF HON. ERIC A. "RICK" CRAWFORD, A REPRESENTATIVE IN CONGRESS FROM ARKANSAS

The CHAIRMAN. Good morning. This hearing of the Subcommittee of Livestock, Rural Development, and Credit to coordinate future investments in broadband, will come to order.

Good morning, and welcome to this hearing to review broadband deployment in rural America. In this modern age, it is surprising to know that there are some parts of the country where the live video feed from this hearing is not viewable by our rural constituents due to a lack of broadband access. In a time when commerce, leisure, and a transparent government rely on robust networks, we still find communities which are not connected through high-speed broadband. There are many communities still struggling to recover from a poor economy to attract new businesses and to connect new, critical services not otherwise offered in remote areas. The key to unlocking these opportunities lies in greater access to services which are readily available in larger rural communities and in urban areas.

It is important to note that broadband can add tremendous educational opportunities to small communities. The ability to access online courses, study materials, research, and online lectures afford students some of the most efficient and cost-effective avenues for not only continuing their education but turning their curiosity into careers. And these opportunities are supported through several programs which provide resources to local facilities such as schools and libraries.

However, none of these opportunities can exist if the community itself is not connected with a robust high-speed network. Getting the most rural areas connected, much like the Rural Electrification Act accomplished for telephone service, remains a priority of this Committee. When the farm bill was reauthorized this year, several provisions were included to continue making these critical investments in small towns and cities. I know in my district I too often visit towns and communities who have been waiting patiently for years for full access to the information superhighway. I know a lot has been done to bring access to rural communities, but it is my goal and the goal of this Committee to be able to do more than just tell people to wait a little longer.

With us today we have representatives from USDA and industry who are on the front lines of expanding broadband service. The loan and grant programs provided through USDA and reauthorized in the 2014 Farm Bill are specifically designed to target the most rural and unserved areas in the country.

While the focus of this hearing is on the deployment of broadband through RUS programs, these programs are not operated in a vacuum. In the discussion today I believe it will be helpful to review those changes in the recent farm bill in light of the FCC's changes to how rural telecom companies receive assistance. The efforts by the FCC to reform the USF have a direct impact on smaller rate of return carriers who both rely on USF support to provide service and RUS loans to expand their coverage areas.

As the FCC transitions into providing telecommunications access beyond traditional voice service, a careful coordination among the responsible agencies is critical to ensure funds are not wasted and the taxpayers receive the greatest return on these investments. Coordination across government programs is a major challenge in our nation made up of the various states, counties and towns, each with their unique needs and approaches. The same approach to deploying service does not work well in all geographic areas. The Committee maintains the technology-neutral approach to broadband, and today we look forward to learning more about the various approaches being taken to address the unique challenges in each area of rural America.

Among the questions I believe our witnesses can help us answer include, how are the current programs facilitating the expansion of broadband network? How are providers taking advantage of emerging technology? What are the roles of the various types of providers in pushing farther into unserved areas? And how are the elements of USF reform and USDA loan programs coming together to ensure efficient use of resources?

I look forward to the testimony from our witnesses today to help the Committee understand the barriers to broadband deployment and how USDA is coordinating across related agencies to ensure the most effective deployment of broadband possible.

[The prepared statement of Mr. Crawford follows:]

PREPARED STATEMENT OF HON. ERIC A. "RICK" CRAWFORD, A REPRESENTATIVE IN CONGRESS FROM ARKANSAS

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The CHAIRMAN. Now I would like to recognize the gentleman from California, the Ranking Member, Mr. Costa for 5 minutes for an opening statement.

OPENING STATEMENT OF HON. JIM COSTA, A REPRESENTATIVE IN CONGRESS FROM CALIFORNIA

Mr. COSTA. Thank you very much, Mr. Chairman, and I want to thank the Members of the Subcommittee that are here. The title of this morning's hearing, *Coordinating Future Investments in*

Broadband covers how we provide access to broadband throughout America, the breadth and width, especially to our rural areas that many of us represent as we try to take advantage of the new technologies for all regions of America, and the panel, we look forward to your testimony this morning as well as to those here in the audience.

Rural America comprises ¾ of the nation's land area and is home to more than 50 million people. We don't think about it that way too often. We have almost 320 million people in the country, and obviously the urban areas of America get the focus most of the time. But rural America, think about it: ¾ of the land area and 50 million people. Since the Great Depression, the landscape of rural America has changed dramatically, and our nation's policies related to that part of the country have changed with it. Even as manufacturing in service sectors have replaced agricultural production as the dominant economic force in much of rural America, common needs for our rural communities remain and therefore, again, the importance of this Subcommittee hearing today.

The fact is: where you live, those 50 million people, should not determine what kind of services are available to you. The U.S. Department of Agriculture operates a number of programs that are designed to expand access, in this case, to broadband in rural areas, and funding was contained in the farm bill that this Committee made some changes to that we passed earlier this year. It was also part of a continuing effort in the farm bill that we did 5 years ago, and it was also part of an effort that we provided funding in the stimulus package back in 2009 to provide connections in two different ways to telecommunications companies throughout the country.

Whether it is in my home State of California or whether it is across the country, Federal programs and private sector service providers have made great progress in connecting rural America. I want to highlight a few of the California figures that illustrate why this issue of rural broadband is so important, and like many Members, we all say, "All politics are local." So let me give you the perspective in terms of my own district.

In 2008, a report by the California Broadband Task Force showed that California led the nation in broadband penetration with 96 percent of Californians having access to the technology. According to the California Public Utilities Commissioner's most recent statistics revised in June of this year, 2014, the fixed broadband availability number now has risen to 97+ percent. But this figure is also misleading. The same statistics show that over 250,000 rural Californians still lack access to broadband, even though the system has been significantly expanded. However, just because broadband is available, it doesn't mean that our constituents can use it, in this case, my constituents. For example, in Merced County, in my district, has a little more than 75,000 households, broadband is available to 99 percent of those households, but the California Public Utilities Commission says in Merced County there is only 51 percent adoption rate, even though they have a 99 percent penetration. What that tells me is that despite the relative success of putting wires in the ground, the Federal Government, broadband providers, and public institutions still have a lot of work

to do in bridging the divide between the haves and the have-nots when it comes to broadband, particularly in rural America.

Why does this divide remain and what are we doing to fix the problem? I look forward to the testimony of our witness. Despite the great work done in the 2014 Farm Bill on a bipartisan level, and I want to commend my colleagues again for that effort. What is disappointing is that I don't think that here with this Committee or with the Department of Agriculture—and this is just a gripe I have had for several years now—that we address one of the biggest issues and that is our Rural Development programs and the definition of what is *rural.* And I will be on my soap box for 30 seconds here.

The fact is: my Congressional district, like many Congressional districts, are very productive in terms of their agricultural nature. But many of our communities are not only rural but they are in many instances poor and disadvantaged. All too often, communities in my district and across the country are prevented from taking advantage of these programs because we have a one-size-fits-all as it relates to the rural definitions.

Despite the clear need, I think that we need to focus on the eligibility for Rural Development programs, whether it is in rural housing, health or essential community facilities, largely because the criteria we use to define *rural communities*—the cross cut across the country is not evenly divided.

I appreciate the opportunity, Mr. Chairman, to hear from the witnesses on both panels about what we can do to ensure that everyone in our country, no matter where they live, where they work, where they go to school, has access, which is so important in the 21st century, to broadband and takes advantages of these services so that we can economically compete on a level playing field. So thank you very much for giving me the time for the opening statement. I look forward to the testimony and questions that we will have an opportunity to ask.

The CHAIRMAN. I thank the gentleman for his opening comments. I would request that other Members submit their opening statements for the record so the witnesses may begin their testimony and to ensure that there is ample time for questions. Without objection, so ordered.

Our first panel is seated, and we are pleased to welcome the Administrator of Rural Utilities Service in the United States Department of Agriculture here in Washington, Mr. John Padalino. And I want to thank you, Mr. Padalino, for taking the time to be here. I know that you are on the cusp of a new career. We will certainly miss your leadership. You have done a fantastic job in your 5 years of service, and we wish you all the best in your new challenge.

Having said that, we welcome your comments, and you are recognized for 5 minutes, Mr. Padalino.

STATEMENT OF JOHN C. PADALINO, ADMINISTRATOR, RURAL UTILITIES SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Mr. PADALINO. Well, thank you, Mr. Chairman, Ranking Member Costa, and Members of this Subcommittee. Thank you for the op-

portunity to testify this morning regarding future investments in broadband.

As Administrator of the Rural Utilities Service, I am proud to lead an amazing group of people who are honoring their predecessors in the Rural Electrification Administration by continuing to encourage growth and development in rural areas through investments in infrastructure.

The history of rural electrification and rural broadband has many parallels. In the 1930s it took a series of Acts and appropriations to establish a public system for financing, designing, and planning rural electrification. Likewise, in the 21st century, it will take a sustained focus from Congress and the Executive Branch to ensure that rural residents have the same access to broadband as their urban and suburban counterparts. This is why the Rural Utilities Service is as relevant in the 21st century as the Rural Electrification Administration was in the last.

Access to affordable broadband is important for economic development, education, healthcare, energy and the environment, government performance, civic engagement, and public safety. Schools can engage in distance learning. Medical providers can use remote medical diagnostics and monitoring. Farmers can efficiently manage their crops by using advances in agricultural technology. Yet, rural America faces challenges in accessing this critical service. Rural areas remain behind non-rural areas in broadband access. A 2012 study showed that 14.5 million rural Americans living in 6.5 million rural households, nearly ¼ of the rural population, lack such access.

Rural areas also remain behind non-rural areas in adopting available broadband. For example, Mississippi has a 26 percent gap between urban and rural broadband adoption. In addition, rural broadband deployment is costly, especially in remote, frontier areas. It is estimated that the cost of reaching 250,000 housing units in those extremely rural areas will cost $13.4 billion or an average of $53,600 per unit.

We cannot address this with loan dollars alone which is why the Rural Gigabit pilot established by this Congress in the 2014 Farm Bill is so exciting. The Recovery Act also allowed the Rural Utilities Service to explore and advance broadband in hard-to-reach areas. It has expanded the capacity of our rural communities beyond what they could do alone.

Investment in rural broadband must focus on three things: connectivity, more work needs to be done to connect both the un- and under-served; capacity, investments must focus also on increasing the broadband speeds for those who do have access to entry-level service; and creativity, we must look at levering existing successes in rural areas by supporting rural telecommunication providers and partnering with our rural electric cooperatives in the areas where the large price-cap carriers are not investing in broadband.

Since 2009 the Rural Utilities Service has invested over $5.5 billion in broadband that will connect over 1.4 million rural subscribers to new or improved service. The Rural Utilities Service is focused on increasing capacity by insuring that the Recovery Act funded projects through the Broadband Initiative Program are com-

pleted on time and on budget. Today almost 200,000 rural subscribers are receiving this service with over 59,000 miles of fiber and over 1,200 wireless access points currently deployed.

USDA and the Rural Utilities Service have been strong advocates for rural consumers with the Federal Communications Commission. In the last 2 years, Secretary Vilsack and I have met with former Chairman Julius Genachowski and current Chairman Tom Wheeler, each time stressing the importance of the Rural Utilities Service and the Federal Communications Commission working together, and we provided recommendations on how to improve the Federal Communications Commission's implementation of much-needed reforms through the Connect America Fund.

The Rural Utilities Service telecommunication programs with a combined loan portfolio of over $4.5 billion helped deliver affordable and reliable advanced telecommunications services to rural communities, services that are comparable to those in urban and suburban America. We have a strong record of supporting infrastructure upgrades, and together we can offer even greater returns for our nation, including healthier, more educated communities, and expanded markets for businesses.

Mr. Chairman, I appreciate your continued interest and that of the Committee in broadband programs. At this time I am happy to answer any questions you might have. Thank you.

[The prepared statement of Mr. Padalino follows:]

PREPARED STATEMENT OF JOHN C. PADALINO, ADMINISTRATOR, RURAL UTILITIES SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Chairman Crawford, Ranking Member Costa, and Members of this Subcommittee, thank you for the opportunity to testify this morning regarding Future Investments in Broadband.

The mission of the Rural Utilities Service (RUS) is to fund basic infrastructure services, including electric, telecommunications, and water and waste facilities in order to benefit rural America. RUS infrastructure investments deliver reliable, affordable electricity to power our homes and industries, broadband to expand access to education, healthcare, business and social services in rural areas, and clean, safe water to support healthy rural communities and meet the growing needs of rural America.

As Administrator of RUS, I am proud to lead an amazing group of people who are honoring their predecessors in the Rural Electrification Administration by continuing to encourage growth and development in rural areas through investments in infrastructure.

The history of rural electrification and rural broadband has many parallels. In the 1930's it took a series of Acts and appropriations to establish a public system for financing, designing, and planning rural electrification. Likewise, in the 21st Century, it will take a sustained focus from Congress and the Executive Branch to ensure that rural residents have the same access to broadband as their urban and suburban counterparts. The 1930 Census showed that ninety percent of urban dwellers had access to electricity while only ten percent of rural residents had similar access. Claiming lack of profitability, private utilities declined to extend lines that would provide electricity to rural areas.

The predecessor to RUS, the Rural Electrification Administration (REA), was established by Executive Order signed by President Roosevelt on May 11, 1935. The agency was created under authority from the Emergency Relief Appropriation Act of 1935 a work relief bill that authorized $100 million for rural electrification. A year later, Congress passed the Rural Electrification Act fully establishing a long term program to make loans available for the generation, transmission, and distribution of electric energy in rural areas.

As the nation headed into World War II, it was estimated that thirty-eight percent of rural Americans had no telephone service. Commercial credit was not available because loans to rural systems were not financially feasible. Referring to providing modern communications in rural America, the REA Administrator stated in

1939 that "Government assistance will be required if the job is ever to be completed." REA's programs were successful in extending utility service—electric and telephone—to persons in rural areas. By 1953 more than 90 percent of all farms in the United States had electricity. In 1976, 90 percent of all farms had telephone service. At that time, our investments in electric infrastructure and reliable telephone service for those who live and work in rural areas improved the quality of life for those Americans and strengthened the local economies.

The building of the rural electric infrastructure has facilitated the use of diverse energy sources, including renewable energy sources such as wind and solar power, and more. The modern business model for energy services is likely to be a consumer-driven platform where existing and rapidly advancing communications and electric technologies are shifting the electric utility delivery marketplace from a commodity-centric model to a consumer-centric model. Similarly, the telecommunications industry made a paradigm shift from the central switch of the telephone company to today's demand for ubiquitous broadband delivered through the network and ordered up on smart devices. Not surprisingly, the challenges faced during the electrification of rural America resurfaced as private broadband entities citing lack of end-users and profitability have not fully-expanded broadband infrastructure into rural areas.

As a result, RUS is as relevant in the 21st Century as REA was in the last century. RUS is actively positioning rural America—through broadband investments—to compete in the global economy, benefit from Internet-based educational opportunities, and take advantage of telemedicine resources.

For example, in Arkansas RUS funded a telemedicine network through the Distance Learning and Telemedicine program that has permitted numerous patients, who previously would have been transported to Little Rock, to receive local treatment at the direction of a remote specialist.

Recently a patient who underwent surgery returned to the local hospital 2 weeks later with a life-threatening blood clot in their lungs. Utilizing the telemedicine network, a specialist in Little Rock was connected to the patient and family, virtually at the patient's bedside. The patient was able to be continuously monitored and receive the best possible care without having to be transported to Little Rock. The patient remained at the local hospital and made a full recovery.

Rural Utilities Service and Broadband

The broadband loan and grant programs at RUS are intended to accelerate the deployment of broadband services in rural America. "Broadband" refers to high-speed Internet access and advanced telecommunications services for private homes, commercial establishments, schools, and public institutions. Currently in the United States, residential broadband is primarily provided via mobile wireless (*e.g.,* "smartphones"), cable modem (from the local provider of cable television service), or over the telephone line (digital subscriber line or "DSL"). Other broadband technologies include fiber optic cable, fixed wireless, satellite, and broadband over power lines (BPL).

Broadband access enables a number of beneficial applications to individual users and to communities. These include e-commerce, telecommuting, voice service (Voice-over-Internet Protocol or "VoIP"), distance learning, telemedicine, public safety, and others. It is becoming generally accepted that broadband access in a community can play an important role in economic development.

Telecommunications Programs

Since 1995, RUS has been in the forefront of meeting rural consumers' demand by requiring broadband capable technology in all telephone loans in order to play a major role in closing the urban rural digital divide. Today, RUS is focused on funding and providing broadband to rural America through the traditional telecommunications program, the broadband program and the Broadband Initiatives Program (BIP) funded through the American Recovery and Reinvestment Act of 2009 (Recovery Act). Through Recovery Act investments alone, RUS awarded over $3.4 billion in funding for broadband projects and has helped extend broadband access in rural areas. As a result of the Recovery Act BIP program, over 59,566 miles of fiber and 1,281 wireless access points have been deployed to serve over 168,703 households, 12,539 businesses, and 1,786 critical community facilities across rural America.

Broadband and Rural America

Access to affordable broadband is viewed as particularly important for the economic development of rural areas because it enables individuals and businesses to participate fully in the online economy regardless of geographical location. For example, aside from enabling existing businesses to remain in their rural locations, broadband access could attract new business enterprises drawn by lower costs and

a more desirable lifestyle. Essentially, broadband potentially allows businesses and individuals in rural America to live locally while competing globally in an online environment.

Bobcat Company in Gwinner, North Dakota is a perfect example of the need for rural broadband infrastructure to compete in the global economy. RUS provided several infrastructure loans to Dakota Central Telephone Company (Daktel), and most recently a BIP loan and grant to assist with addressing the challenge of rapidly expanding the access and quality of broadband services. Bobcat is a large manufacturing employer in rural North Dakota. The company has one of the most extensive compact equipment distribution networks in the world and uses Daktel's fiber network to link to other company locations around the world.

Given the large potential impact broadband may have on the economic development of rural America, concerns have been raised over a "digital divide" between rural and urban or suburban areas, with respect to broadband deployment. While there are many examples of rural communities with state-of-the-art telecommunications facilities, recent surveys and studies have indicated that, in general, rural areas tend to lag behind urban and suburban areas in broadband deployment. For example, according to the Federal Communications Commission's Eighth Broadband Progress Report, released in August 2012, of the 19 million Americans who live where fixed broadband is unavailable, 14.5 million live in rural areas.

The 2013 Department of Commerce report, *Exploring the Digital Nation: America's Emerging Online Experience,* found that while the digital divide between urban and rural areas has lessened since 2007, it still persists with 72% of urban households adopting broadband service in 2011, compared to 58% of rural households.

The comparatively lower population density of rural areas is likely the major reason why broadband is less deployed than in more highly populated suburban and urban areas. Particularly for wireline broadband technologies—such as cable modem, fiber, and DSL—the greater the geographical distances among customers, the larger the cost to serve those customers. Thus, there is less incentive for companies to invest in broadband in rural areas than, for example, in an urban area where there is more demand (more customers with perhaps higher incomes) and less cost to wire the market area.

The terrain of rural areas can also be a hindrance, in that it is more expensive to deploy broadband technologies in mountainous or heavily forested areas. An additional cost factor for remote areas can be the expense of "backhaul" (*e.g.,* the "middle mile"), which refers to the installation of a dedicated line that transmits a signal to and from an Internet backbone, which is typically located in or near an urban area.

As a result, the economic impact on rural America of not having broadband is significant. For example, an economic study from Oregon State University in 2014 provided data showing the impact on rural Oregon communities with increased broadband adoption between 2008 and 2011. There was positive impact on changes in median household income and total employment (analysis limited to non-metro counties) over a short period of time.

Conclusion

Broadband deployment is increasingly seen as providing a path towards greater regional economic development. From our long history of working with companies in rural America and providing capital for broadband infrastructure, we know that many rural areas, due to factors such as low population density and high costs associated with difficult terrain, have difficulty attracting the investment required for a sustainable broadband operation.

To meet the goal of increasing economic opportunity in rural America, RUS programs finance rural telecommunications infrastructure. RUS telecommunications programs, with a combined loan portfolio of $4.6 billion, help deliver affordable and reliable advanced telecommunications services to rural communities—services comparable to those in urban and suburban areas of the America. Infrastructure investments offer returns for rural America—building, deploying, and using broadband increases access to health care and education, expands markets for businesses, and increases the quality of life for rural Americans. None of this can happen without expanding broadband connectivity and capacity in rural America.

I thank the Committee and its Members for their continued interest in broadband programs.

The CHAIRMAN. I thank the gentleman for your testimony. I would also like to make a correction. Obviously, I mispronounced your name. My apologies, Mr. Padalino. I said Mr. Padalino. So that is probably not the first time that has ever happened.

Mr. PADALINO. It is not the first time. My grandfather did say never let them get your name wrong, but out of due respect, I did not correct you.

The CHAIRMAN. I appreciate that. My apologies. Thank you for your opening comments. I recognize myself for 5 minutes.

In a report dated May 2014, the GAO cited a high number of failed projects. In the details of that report they seem to refer interchangeably to rescissions and defaults. Do you agree that the two outcomes should be in the same category? And can you explain how those should be viewed?

Mr. PADALINO. Thank you for that question. I don't agree that they should be considered in the same category. A rescission is markedly different than a default. A rescission is a project where we have obligated funds to the project, and for some reason, the project applicant couldn't meet the conditions to have the loan closed. And over a certain amount of time the agency will make a decision or maybe even at the request of the applicant to rescind the funds. The funds come back to the government, either go back to Treasury or are turned around for future loans. So that is a rescission. A default is where a project is underway, advances have been made by the agency, and for some reason the loan applicant cannot make a repayment. And they are talking about monetary defaults in this situation, and those are markedly different.

When I read the GAO report—thinking about rescissions, I thought, that is good government. That is us doing our job at the Rural Utilities Service to make sure that an applicant comes up with the needed working capital, that comes up with the needed conditions to make sure that that loan can close, and if that can't happen, we will rescind the money and turn that money back around.

On defaults: this is a new program. It has only been in place a little over 10 years thanks to Congress in the 2002 Farm Bill amended in the 2008 and again in the 2014. And as I noted in my opening remarks, the history of rural electrification, the history of rural broadband has a lot of starts and stops. We have learned lessons from the farm bill program, from the Recovery Act program, and have implemented those in our regulations. In some ways, we have been ahead of the GAO in looking at our program.

The CHAIRMAN. In that same report, concerns were raised that USDA may not have a process in place to ensure that approved loans were not rescinded because of a lack of working capital on hand which often resulted in wasted effort by RUS and tied-up funds which could have otherwise been used on projects elsewhere.

Can you explain why this would be the case and what USDA is doing to address that concern now?

Mr. PADALINO. Yes, thank you. The 2008 Farm Bill had a ten percent equity requirement, and that is the requirement that really ensures that there is working capital available. It provided the Secretary discretion to have additional requirements if, in the agency's discretion, we felt that more cash was needed to ensure that during the time of construction, enough working capital was available when there are negative cash flows to make sure that construction can go to completion and can get through the first few years of service. Out of the 2008 Farm Bill, when we published the interim

rule in 2011 and then the final rule in 2013, as an agency, we added an additional cash requirement from those lessons learned from the early days of broadband. That additional requirement, cash requirement, focuses on start-up operations, on operations that have had negative cash flows for the 2 years prior to submission of a loan application. We feel that that is a strong signal that we are looking at cash flow, at the working capital issue. That is the number one issue when it comes to either a project being rescinded or even a default.

The CHAIRMAN. Okay. The FCC has pursued several major changes to the Universal Service Fund, and I have mentioned this in my opening statement. How has that impacted investments through RUS programs, and can you share your insights on how those changes might influence the approach taken by RUS borrowers when considering plans for expansion of services?

Mr. PADALINO. Whenever I am asked about—I would just like to note that on one hand it is good policy to shift from a telephone-based support mechanism to a broadband base support mechanism. When the FCC issued their Order, their Transformation Order, in 2011, what we saw is demand for RUS investment almost come to a halt. It really has chilled investment in rural areas because the Order, while well-meaning, had a lot of undetermined business, undecided business in there where an investor, a small company in rural areas, cooperative-owned company in rural areas, they just didn't want to make future investments not knowing what the regulatory policy was going to be. So far the FCC has implemented some of the reforms that they said were to be determined in that 2011 Order, but more remains and even some of the reforms that have been issued have caused some detrimental effects to rural areas.

The CHAIRMAN. Thank you. I have run out of time. I would like to recognize the Ranking Member, the gentleman from California, Mr. Costa, for 5 minutes.

Mr. COSTA. Thank you very much, Mr. Chairman. Mr. Padalino, what tools would you describe—and I know in your testimony you listed some of them—that you think are available that we should be focused on with regards to the Rural Utilities Service to get the rural areas connected across the country to some of those areas that I represent, for example?

Mr. PADALINO. Well, thank you for that question. The available tools that we have in the loan programs we have the Traditional Infrastructure Loan Program available to communications providers who are focusing on communities 5,000 or less, the Broadband Loan Program focused on——

Mr. COSTA. So that would include as I discussed with you earlier—I don't know if there is such a definition, mom-and-pop telephone companies anymore. But we do have these smaller companies that really are a reflection of some that have been owned in a family for 50 or 100 years or longer that have 20,000 connections or whatever the number may be. This would provide support for them because I have seen that example successfully utilized.

Mr. PADALINO. Yes, two of the providers in your district are owned by a parent company, but those two providers are those rural local exchange carriers who have taken advantage of the In-

frastructure Loan Program for the last 60 years since Congress established it in 1949. It has been a great tool. It has been a great resource for our rural telecommunications providers out there. The Broadband Loan Program tried to expand the reach so we could go beyond the rural local exchange carriers into that price-cap territory where the big providers just weren't providing broadband service.

We also have the Community Connect Grant Program that really focuses on communities that are wholly unserved, provides grant funds so we can establish a broadband system and network in that community, also together with the community center so people can learn to use the broadband once it is available. We have the Distance Learning Telemedicine Program in Arkansas. I visited Baptist Health in Little Rock where there is a floor on the hospital that doctors are available 24/7 that is providing medical services to rural clinics across the state. Those are the tools that we have available.

We also have to provide technical assistance. Just in the past few months, we have done a number of broadband workshops across the country where we focus on areas that are unserved or underserved receiving broadband—

Mr. COSTA. To that point, and I used that in my statement, what is the technical assistance that you provide for lower income communities so that we can improve the adoption rates as the example I used in Merced County? But I know those adoption rates are a problem throughout the country.

Mr. PADALINO. Well, part of my perspective at the Rural Utilities Service has been to look what we did back in the REA early days where we not only provided the access to funding to build the electric systems but we had road shows essentially that went out and taught people how to use the electricity once they had it. We had people who walked you through all the different appliances that would be available, and the broadband workshops are focused on an economic development perspective from the theme of: "You have broadband, now what," to make sure that if a community that doesn't have broadband receives loan funds or a grant to build a broadband system, that they have a plan to use that broadband so more and more people will adopt it.

Mr. COSTA. It is our understanding that no broadband loans will be awarded until the new regulations implementing the latest farm bill are developed. When do you expect these new regulations to be released so that the broadband loans can be expanded?

Mr. PADALINO. The 2014 Farm Bill was passed in February, signed into law in February. We have been hard at work with the regulations, and we expect that they will be published in calendar year 2015.

Mr. COSTA. And then the loan program can proceed following that?

Mr. PADALINO. Yes, Congressman, as soon as the—

Mr. COSTA. So we are to tell our constituents that until 2015, you are not going to be able to proceed with any of the loan programs?

Mr. PADALINO. We won't be able to process the loans, but there is a lot of front-end work that folks can take a look at the statute already and see what the requirements are, see what the service

area requirements are in the statute that is out there and that we are happy to talk to them in general about broadband but we won't be able——

Mr. COSTA. Let me get to one other technical question here because it deals with the Recovery Act funding. Under the Broadband Initiative Program projects must be completed by June 2015. All the funding will expire by 2015. Given that 85 percent of the projects are not yet completed, do you expect that any projects still not completed by June 2015, how many would you estimate and what steps can the Rural Utilities Service provide to ensure that these projects will be completed after that date?

Mr. PADALINO. Sure. Thank you for that question. We are focused on all the projects that are within construction. We have 255 active projects right now.

Mr. COSTA. Two-hundred and fifty-five?

Mr. PADALINO. Seventy-five percent of the funds have been disbursed already. We work with each awardee almost on a weekly basis via telephone or site visits. We are constantly engaged with each awardee. We expect all the projects will be completed as proposed. Throughout the 4 or 5 years of the Recovery Act, we have seen projects that fall in and out of being at risk of not be in completion, and one issue or another may arise. We work with the awardee to try to resolve that issue, and we so far have been successful with that and we plan to continue those steps going through the next year. June—

Mr. COSTA. Go ahead.

Mr. PADALINO. June of 2015 is our contractual requirement that they be substantially complete, and by the end of September by statute the funds will be no longer available.

Mr. COSTA. Thank you. My time has expired.

The CHAIRMAN. I thank the Ranking Member and recognize the gentleman from New York, Mr. Gibson, for 5 minutes.

Mr. GIBSON. I thank the Chairman and the Ranking Member for putting this together. And Mr. Padalino, I just want to say how much we appreciate your service. Our district has really benefitted from your leadership. We have had conference calls together. We have worked on a number of issues, and I just greatly appreciate you and your team. We want to wish you the best, going forward, and I know that the continued outstanding service will be with your successor.

So just a couple things. First of all, just a testimonial how important the telemedicine aspect is to rural areas. I will tell you that one of the pilot hospitals, Margaretville, has two doctors. They happen to be a married couple. And what a huge difference the telemedicine pilot project made. And they were actually able to deliver their first baby since the 1970s with this. It is a very small hospital in rural America. And then also, after Hurricanes Irene and Lee, they saved two lives. A tree came down on the chest, and they were able to consult with the broadband capacity with experts from fairly nearby, about an hour's drive, hospitals and made a huge difference, saved lives.

And finally on this score, this couple was able to take their first vacation in 4 years because they were still accessible, and they actually consulted on a medical procedure from Bali. We are able to

keep a couple in this hospital which allows us to keep this going. So I just want to underscore how important these programs that you are leading, how important they are to rural America.

In your comments you talked about—which I really want to affiliate and associate myself with. You certainly didn't show any prejudice to any particular approach, whether it be big company or small company. But you did note that a lot of the small companies are very aggressive on this score, and I would concur. I mean, these family-owned businesses, they live in our communities. They see firsthand every day the impact on education, on healthcare delivery, on job creation, on quality of life that access to high-speed broadband can make a difference, and conversely, when you don't have it, what the impacts are. As I look at this issue, again, I am happy to see anyone advance rural broadband from any perspective, and we work together on the Committee here. We played a role in the recent farm bill and some of the reforms to bring transparency and effectiveness.

Looking at the FCC's program and your program, I am interested in ways we can continue to build out capacity and empower our smaller companies. My read of the initial rules, or I should say the rules coming out on the FCC, is that my smaller companies and the rural co-ops are going to get a better access to some of the Connect America funds. That is my read of it, and I am encouraged. I would be curious to know if that is your read. And then, going forward, I am interested in also, might there be ways so we can improve some of the programs under the RUS so we can get these smaller companies in the rural co-ops to find this profitable?

One of the ideas that I had—well, actually, it was I think Senator Gillibrand and I concur is that we could tweak the program a little bit, provide for—if you bring ten percent non-Federal money, then you would get a ten percent grant, and the balance, the 80 percent, would be in the low-interest loan. I am curious to know your feedback on that. Sorry I went on so long.

Mr. PADALINO. Well, thank you for your compliments, Congressman, and to get right to your questions, FCC recently announced the rural broadband experiments is Phase II of the Connect America funding, and they are trying to make, for price-cap areas, they have established a budget of $100 million to make that money available for a 10 year recurring basis to a wide variety of providers, including electric cooperatives, to compete for that money, to say we can put the best project out there in those areas. And I agree with you that the electric co-ops were started by community members, the telephone co-ops were, even the for-profit telecommunication companies are locally owned, and I really believe that local people in rural areas are the best resource for advancing that.

And some of the tweaks we can think about is how we can leverage our rural electric providers out there, the rural electric cooperatives. You know, they have a much larger footprint than some of our smaller rural telecommunications companies, and how can we build a partnership between those rural telecommunications and rural electric cooperatives, together with the FCC, combine the support mechanisms from the FCC with the low-cost loans? I am interested in that proposal that you talked about, about bringing

in private investment. The Administration recently announced the Rural Opportunity Investment Fund. There is going to be a source of private money there, and with a solution like that we can leverage more and more resources to advance the cause of broadband.

Mr. GIBSON. Thank you. Thank you very much, and good luck to you, going forward, too. Thanks, Mr. Chairman.

The CHAIRMAN. You bet. The gentleman's time has expired. I now recognize the gentleman from Minnesota for 5 minutes, Mr. Nolan.

Mr. NOLAN. Thank you, Mr. Chairman. I just want to join my colleagues in commending the Administrator for the terrific job that you are doing, and I want to commend my Chairman and Ranking Member for conducting this hearing. As one who lives in the remote areas of northern Minnesota on a farm where the Little Pine and the Big Pine River come together, I was an early beneficiary of the advantages of broadband which greatly enabled me to expand and conduct my international business as an exporter of American goods and services.

And I am of the view that expansion of broadband to rural areas may be singularly the most important thing that we can do to expand business opportunities in rural areas for small business. And it is no secret that most new jobs and economic development in this country occur from the small business sector, and in essence, what broadband does for rural areas, it puts them in the same position that a big, multi-national corporation would be sitting in Manhattan or Minneapolis or Los Angeles when it comes to their communications with the rest of the nation, the rest of the world in making readily available to them all the knowledge, information, and services that are out there.

So I just want to commend you for what you are doing and the Chairman for conducting this important hearing and lend my support and my encouragement to all that you are doing. Keep up the good work, and keep pushing and you have a lot of people here who believe in what you are doing and want to help in any way and every way we can to help facilitate that. Thank you.

Mr. PADALINO. Well, thank you, Congressman. The Rural Utilities Service is really a gem in the Federal Government. It is the only Federal agency that directly finances infrastructure. We hear a lot of talk about building infrastructure banks, green banks, all kinds of banks, but we have one that Congress established 80 years ago. It is the Rural Utilities Service, and we have been hard at work providing infrastructure investments from our water and waste systems to our electric systems. We are trying to build a new, energy-efficient rural America, and of course, advance the cause of broadband. So thank you for your remarks.

The CHAIRMAN. The gentleman yields back. With that I just—before we conclude this panel, Mr. Padalino, I wanted to expand on a point that the Ranking Member brought up, the current projects under way, funding expires June 2015. Just to clarify, if a project that is currently under way is not completed by 2015, what would then be the disposition of those projects?

Mr. PADALINO. If a project ends up at the end of September, September 30, 2015, without being complete, they will no longer have funds available from RUS. So whatever funds remain undrawn

won't be available anymore. They could still complete their project with some other financing, but those Recovery Act provided dollars will revert back to the Treasury.

The CHAIRMAN. Okay. Thank you. And again, we do want to thank you for taking time out to come. Ranking Member?

Mr. COSTA. Just to follow up, if the gentleman would yield. Now, it seems rather abrupt. I guess I am trying to understand. Let us say one of these rural telephone companies has a loan or a grant. They can be either. And let us pick a number for discussion purposes. It is a $1 million grant for improvement for access. And they have let the contracts to the improvements and they have spent half of it or 60 percent of it but they are not complete. And June 2015 runs around, and all of a sudden, they are left—even though they have let the contracts for the other $400,000 because it is not completed?

Mr. PADALINO. Our focus has been to ensure that doesn't happen. We have been—over the last few years, we asked in early September—or January 2012, all the awardees, where are you at with your construction? Do you need to amend your timelines so we can understand where you are at? We have numerous webinars. We are about to send out another letter reminding awardees that you are about a year out from completion. We need to know where you are at. We stay at the local level through our general field representatives that are very engaged with the borrowers through site visits, phone calls. We require numerous reports——

Mr. COSTA. So let me make a suggestion. I think that is all good, but the Members of this Subcommittee, and maybe it is something staff could work with the Members of the full Committee, but it would be nice if we had a listing of—I don't know if the number is 255 or whatever you stated earlier—these projects that are currently ongoing so that we could know those that are in our respective Congressional districts, and we could help complement your efforts to say, "Look. You are on a timeline here, and you need to do everything you can to expedite it so that you are able to complete the project," because that would—certainly we would like to know. I don't think any of us would like to find a situation where next March we have our local telephone company calling us and saying, "We are ⅔ done with our project, but we are not going to complete it until August, and they are telling us now we are going to run out of their money. What can you do to help us?"

The CHAIRMAN. If the gentleman would yield, clarification between grants and loans? If we could have that as well on those 255 projects that you mentioned because that clarification would be helpful as well. And if you could make a distinction? I understand a grant is obviously different than a loan, but are we going to see that funding unavailable for loans that have already been made as well, or can they reapply at some point if in fact they didn't meet that timeline?

Mr. PADALINO. I thank you for your offer, and we really appreciate the assistance and will be happy to work with the staff on providing that information.

[The information referred to is located on p. 53.]

Mr. PADALINO. Just a couple quick clarifications. On those 255 active projects, 44 of those have been fully complete. We have over

about 140 of them that are partially complete which means they are providing broadband in all or part of their service territories, but there is just some remaining punch list items to be completed. Again, 75 percent of the funds have been disbursed. Over 90 percent of the proposed miles of fiber and proposed wireless access points have been deployed. Where many of these projects are is at the last phases of the project where they are doing the cut-overs, connecting subscribers to those services. But we really appreciate the offer of support, and I am happy to work with your staff.

The CHAIRMAN. All right. Thank you. The gentleman yields. With that, Mr. Padalino, again, we want to dismiss you with our thanks for your service and with our best wishes for your future, and we appreciate you. Thank you so much.

Mr. PADALINO. Thank you.

The CHAIRMAN. We will now move into our second panel, and as our panel takes position, I will go ahead and introduce those individuals. Comprising panel two, Mr. Lang Zimmerman is the Vice President of Yelcot Communications in Mountain Home, Arkansas. He is testifying on behalf of the National Telecommunications Cooperative Association. Mr. David Cohen, the Vice President for Policy, at USTelecom based here in Washington, D.C. Mr. Robert L. Hance, President and CEO, Midwest Energy Cooperative, Cassopolis, Michigan, testifying on behalf of the National Rural Electric Cooperative Association, and Mr. Christopher Guttman-McCabe, Executive Vice President, CTIA—The Wireless Association here in Washington, D.C.

Welcome. Gentlemen, we appreciate you being here, and with that, I will introduce our first panelist, Mr. Lang Zimmerman who, as I said, is Vice President of Yelcot Communications in Mountain Home, Arkansas, which is, I am proud to say, in my Congressional district. Mr. Zimmerman and to all our panelists, I will just remind you. You see the lights in front of you? Green means you are good to go, and it is just like when you are driving. If you see a yellow light, go like heck because it is fixing to stop. And when you see the red light, that means stop. And we will take your expanded comments and your written comments, but for the sake of time, we would just ask that you limit your oral presentation to 5 minutes. And with that, I am pleased to recognize Mr. Lang Zimmerman for 5 minutes.

STATEMENT OF LANG ZIMMERMAN, VICE PRESIDENT, YELCOT COMMUNICATIONS, MOUNTAIN HOME, AR; ON BEHALF OF NTCA—THE RURAL BROADBAND ASSOCIATION

Mr. ZIMMERMAN. Chairman Crawford, Ranking Member Costa, and Members of the Subcommittee, thank you for the invitation to participate in today's discussion. My name is Lang Zimmerman, and for the past 29 years I have served as Vice President of Yelcot Telephone Company, headquartered in Mountain Home, Arkansas, and my remarks today are on behalf of Yelcot as well as NTCA—The Rural Broadband Association and their several hundred small community-based members that provide a variety of communications services throughout the rural far reaches of the nation.

We believe our industry is uniquely qualified to participate in today's discussion because we are small businesses on the front lines

deploying high-speed, sustainable broadband to rural America. Yelcot is a carrier of last resort and has always operated under the premise that if someone wants service in our service area, then we do whatever it takes to serve them. Because of this commitment, and with the aid of key Rural Development programs and Universal Service support, rural Arkansans throughout the Yelcot service area, and indeed throughout the markets of all the NTCA members, have access to reasonably comparable services at reasonably comparable rates as mandated by current and longstanding law.

Small, rural telecom members of NTCA provide access to voice, video, wireless and broadband Internet services as well as enhanced emergency preparedness. Most importantly, they connect rural Americans to the entire world. In rural America, that translates into economic development that produces jobs.

Broadband has become essential to delivering healthcare, educational opportunities, and securing the public safety. And much of the business world is already demanding higher broadband speeds to help it interact with and sell to customers near and far. Broadband and other services provided by the rural telecom industry serve as an incubator for small business ideas in rural America to be implemented and to flourish.

Yelcot's top priority has always been to provide every one of our consumers with the very best communications and customer service possible at affordable rates that stimulate adoption. The entrepreneurial spirit of Yelcot is representative of our approximately 1,000 small, rural counterparts in the industry who together serve about five percent of the U.S. population across approximately 40 percent of the nation's geographic land mass.

USDA's Rural Utilities Service, RUS, plays a crucial role in rural broadband deployment through its telecom loan portfolio that finances networks upgrades and deployment in rural areas. RUS lending and USF support are inextricably linked as 99.2 percent of RUS telecom infrastructure borrowers like Yelcot receive high-cost USF support. The presence of high-cost recovery is crucial to the ability of RUS borrowers to repay our RUS telecom and broadband loans. RUS programs have helped rural providers deploy modern networks in many rural areas where the market would otherwise not support the investment. Reliable access to capital helps rural carriers meet the broadband needs of consumers at affordable rates.

Yelcot has first-hand experience working with RUS, and I can testify to the benefit of having an experienced lender available to finance projects at a fair rate. Yelcot and our rural consumers continue to benefit from the RUS Telecommunications Infrastructure Loan Program, which has financed upgrades of our network to the fiber era. In the past few years, with the help of RUS, Yelcot companies have added over 130 miles of buried fiber cable, replaced ten central offices with four soft switches and added or replaced over 50 remotes.

Unfortunately, applications for RUS telecom loans are down dramatically at a time when customers everywhere are clamoring for faster broadband. Why would an experienced lender such as RUS want for loan applications when demand for networks is high?

Look no further than the state of rural telecom regulation which includes an opaque and unpredictable USF capping mechanism originally tossed out after years of lost investment, a requirement for customers to purchase landline voice service in order for their line to receive U.S. support and plans to increase rural telephone rates to $20.46 in Arkansas while the monthly rate in Washington, D.C. will remain at $14.10.

We appreciate the support of those Members of Congress who have contacted the FCC regarding the state of rural telecom regulation. In particular, I would like to thank you, Chairman Crawford, for signing a letter to the FCC regarding the outdated requirement for customers to purchase landline voice service in order for their line to receive USF support.

The benefits that some rural communities are already experiencing will only be possible for all if robust broadband is available and affordable. Rural telecom providers and lenders such as RUS must have regulatory certainty before they can make greater investments in the networks of the future. The key to regulatory certainty is a USF remade for the broadband era, including a broadband-oriented support mechanism for small carriers that gives rural consumers options in selecting services that best fit their needs.

Thank you again for the opportunity to testify, and I look forward to answering any questions you may have.

[The prepared statement of Mr. Zimmerman follows:]

PREPARED STATEMENT OF LANG ZIMMERMAN, VICE PRESIDENT, YELCOT COMMUNICATIONS, MOUNTAIN HOME, AR; ON BEHALF OF NTCA—THE RURAL BROADBAND ASSOCIATION

Introduction

The Rural Telecommunications Industry

Thank you for the invitation to participate in today's discussion on coordinating future investment in broadband. For the past 29 years I have served as Vice President of Yelcot Telephone Company, which is headquartered in Mountain Home, AR. My remarks today are on behalf of Yelcot Telephone Company, as well as NTCA—The Rural Broadband Association and their several hundred small community-based members that provide a variety of communications services throughout the rural far reaches of the nation.

We believe our industry is uniquely qualified to participate in today's discussion because we are small businesses leading the way in deploying high-speed, sustainable broadband to rural America. Yelcot, similar to about ½ of the nation's small, community-based rural providers, is a commercial company. Family or commercially-owned rural providers are consumer-centric because they are locally owned and operated. Likewise, in the cooperative structure that makes up the other ½ of small rural providers, the consumers are also the owners, so every choice is viewed from both an owner and a consumer perspective—the two are truly one and the same.

Yelcot is a carrier-of-last-resort and has always operated under the premise that if someone wants service in our service area, then we do whatever it takes to provide the would-be customer with that service. Ever since Yelcot began operating in 1957, we've been proud to serve as the only provider to some of the most rural areas of Arkansas, while other carriers avoided investments in such areas and chose to serve only the most profitable and densely populated towns. Because of this commitment, and with the aid of key rural development programs and Universal Service support, rural Americans throughout Yelcot's service area, and indeed throughout the markets of NTCA members, are enjoying universal voice service, access to mobile, video, and broadband Internet services, and enhanced emergency preparedness.

Small, rural telecom providers connect rural Americans to the world. Moreover, these rural network operators have been at the forefront of the broadband and Internet Protocol ("IP") evolution for years, making every innovative effort to deploy

advanced networks that respond to consumer and business demands for cutting-edge services. In rural America, that translates into economic development that produces jobs, not only in agriculture, energy and other industries with a strong rural presence, but in the healthcare sector, and just about any other retail industry that requires broadband to operate in this day and age. Broadband has become essential to delivering healthcare and securing the public safety. And much of the business world is already demanding higher broadband speeds to help it interact with and sell to customers near and far. Broadband and other services provided by the rural telecom industry serve as an incubator for small business ideas in rural America to be implemented and to flourish.

Fixed and mobile broadband, fixed and mobile voice, video, and Internet Service Provision are among the numerous telecom services that rural Americans can access thanks to the rural industry commitment to serving sparsely populated areas. Broadband-capable networks facilitate greater interconnection of the community's resources and can enable citizens' participation in the global economy, blue-ribbon education, first-rate healthcare, cutting-edge government services, robust security and more efficient energy distribution and use.

The rural telecom industry has always been at the forefront of technological innovation, being the first segment of the industry to completely convert to digital switched systems, provide wireless options to their hardest to reach customers, offer distance learning and telehealth applications, provide cable-based video, then satellite video, and now IP video to their markets, and it was a member of the RLEC community that first deployed an all-fiber system. The rural industry continues to lead in the deployment of broadband capable infrastructure.

Yelcot Telephone Profile

Yelcot's top priority has always been to provide every one of our consumers with the very best communications and customer service possible at affordable rates that stimulate adoption. Yelcot has several lines of business, including ILEC, CLEC, ISP and Cable TV. While our headquarters are in Mountain Home, we in fact serve over 7,946 customer lines across our 826 square mile rural service area that is spread across northern Arkansas. This constitutes about 9.6 customers per square mile. We employ a total of 52 people and in 2013 our annual operating revenue was about $13.8 million. Our service area is rural and sparsely populated, requiring great effort to get advanced services to our customers.

The entrepreneurial spirit of Yelcot is representative of our approximately 1,000 small rural counterparts in the industry, who together serve 5% of the U.S. population across approximately 40% of the nation's geographic land mass. Like the vast majority of our rural colleagues, Yelcot has been an early adopter of new technologies and services. In 2006, Yelcot upgraded its network to ADSL2+ (Fiber-to-the-node). Yelcot currently has 10 Megabit broadband service available to 60% of our ILEC service area and 1.5 Megabit broadband available to 98% of our service area. We can provide gigabit service where our fiber-to-the-premises facilities are located. This fiber connection allows for nearly limitless amounts of bandwidth. We know our customers will require more and more bandwidth and have built a network that will supply it.

RasorNET

Yelcot's reach extends beyond our service area to an exciting partnership with Ritter Communications, South Arkansas Telephone, and New Wave Communications to build RasorNET, a fiber backbone that delivers 10 gigabit Ethernet transport, enhanced wireless backhaul, and connections to other fiber backbones around the country. RasorNET greatly enhances the online experience for all of Arkansas by providing robust connectivity between major metropolitan areas and rural communities in Arkansas. Only fiber connections will meet the astronomic wired and wireless broadband demands of the near future, and we're thrilled to help meet those consumer needs through RasorNET and the fiber connections Yelcot delivers to the end user.

Rural Broadband Benefits the Entire U.S. Economy

A series of recent studies confirms that significant benefits flow from rural broadband investment to broader urban and statewide populations. The rural telecommunications industry supported $14.4 billion of economic impact in 2009, with $9.5 billion occurring in urban areas, and more than 70,000 jobs, 45% of which were placed in urban areas.[1] In Colorado, rural telecom helped create 428 jobs, adding

[1] Kuttner, Hanns, *The Economic Impact of Rural Telecommunications: The Greater Gains,* Hudson Institute, at 6, 8 (2011).

over $21 million per year to state payrolls.[2] North Dakota saw an additional $18 million in Federal tax revenue and $31 million in state tax revenue arising out 1,100 direct jobs and 800 secondary jobs generated by rural telecommunications activity.[3] The converse holds true, however, from adverse changes—"reforms" that cut investment in rural broadband hurt state economies. In Kansas, for example, potential cuts in Federal rural telecom programs led to projections of $1.4 million in personal income tax and $1.3 million in retail sales tax losses.[4] A personal income loss of $14.1 million was projected for 2012 alone in New Mexico from the same proposed cuts.[5] Studies examining the impact of rural communications activity—including purchasing, employment figures, and projected tax revenues—confirm rural communications to be a powerful generator of urban economic growth and Federal and state tax revenue. In short, rural broadband is an investment with real benefit and returns for the nation as a whole.

To not have access to high-speed Internet in this day and age is unimaginable to most people, yet millions of Americans live in areas—mostly in rural territory served by carriers other than small, rate-of-return providers—where there is no robust broadband that enables meaningful access to the countless economic and educational opportunities available through the Internet. These people have small business ideas that need broadband to succeed and they need jobs that small businesses can provide. Yet, as important as it is to deliver broadband to the unserved, it's just as vital that those already receiving broadband remain served—the benefits that flow from broadband are ongoing. If a network is built but then becomes unsustainable or the services over it unaffordable or of poor quality, such developments deny the benefits of broadband for small businesses and all consumers.

Rural Utilities Service Financing

RUS Role in Rural Telecom Deployment

USDA's Rural Utilities Service (RUS) plays a crucial role in rural broadband deployment through its telecom loan portfolio that finances networks upgrades and deployments in rural areas. RUS has been lending for broadband capable plant since the early 1990s. RUS lending and Universal Service Fund (USF) support are inextricably linked as 99.2% of RUS Telecommunications Infrastructure borrowers receive high cost USF support. The presence of high cost recovery is crucial to the RUS telecom and broadband loan calculus. RUS programs have helped rural providers deploy modern networks in many rural areas where the market would otherwise not support investment. Reliable access to capital helps rural carriers meet the broadband needs of rural consumers at affordable rates.

Unfortunately, the success, momentum, and economic development achieved from the RUS's telecommunication programs were put at risk as a result of the regulatory uncertainty arising out of USF reforms that are discussed in greater detail below. It will be all the more important to continue providing RUS with the resources it needs to lend to the rural telecom industry as demand for financing will inevitably increase when reforms are improved and small carriers are given certainty, hopefully through a program like the Connect America Fund that is designed to promote broadband investment. As Congress continues to grapple with where to best direct scarce resources, it's important to note that the RUS Broadband Loan Program and the traditional Telecommunication Infrastructure Loan programs are funded with loans that must be paid back with interest—creating a win/win situation for rural broadband consumers and taxpayers. Rural providers look forward to building on an already successful partnership with RUS.

Yelcot has first-hand experience working with RUS and I can testify to the benefit of knowing that an experienced lender is available to finance projects at a fair rate. Yelcot and our rural consumers continue to benefit from the RUS Telecommuni-

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[2] Shields, Martin, Cutler, Harvey, and Marturana, Michael, *The Impacts of Colorado Telecommunications Association Members on the Colorado Economy,* Regional Economics Institute, Colorado State University, at 9 (Oct. 26, 2011).

[3] McKee, Gregory, *The Effect of Changes in Universal Service Funding on the Economic Contribution of Rural Local Exchange Carriers to the North Dakota State Economy,* Department of Agribusiness and Applied Economics, Agricultural Experiment Station, North Dakota State University, at 16–19 (Dec. 2011) ("Like other RLECs, North Dakota RLECs buy many specialized products and services not available in state economies. National and international markets typically provide these products and services.").

[4] *Kansas Rural Local Exchange Carriers: Assessing the Impact of the National Broadband Plan,* W. Frank Barton School of Business, Center for Economic Development and Business Research, Wichita State University, at 11, 12 (2011).

[5] Peach, James, Popp, Anthony V., and Delgado, Leo, *The Potential Economic Impact of the National Broadband Plan on the New Mexico Exchange Carriers Group,* Office of Policy Analysis, Arrowhead Center, New Mexico State University, at 18 (2011)).

cations Infrastructure Loan program, which has financed upgrades of our network to the fiber era. In the past few years, with the help of RUS, Yelcot companies have added over 130 miles of buried fiber cable, replaced ten Central Offices with four soft switches and added or replaced over 50 remotes.

Originally, a large Tier 1 provider was the only upstream transport provider in one of our service areas, charging $220.00 per Mb. The Tier 1 provider would not upgrade their equipment, effectively capping the upstream transport in that service area at 145 Mb. In another Yelcot service area, there were few upstream transport options, and those were costly at $150.00 per Mb. In 2009 Yelcot began an extensive fiber project that took 4 years to complete. This project allowed us the opportunity to connect with other upstream providers, as well as providing a redundant upstream route. Yelcot now pays $8.12 per Mb, and has over 30 times the original capacity.

Thanks to these lower costs and increased capacity, Yelcot has recently doubled almost all of our subscribers' bandwidth with *no price increase* whatsoever.

The Farm Bill Reauthorization

During the most recent farm bill reauthorization process, we appreciated this Committee's efforts to make sensible changes to the RUS Broadband Loan Program to ensure transparency, while avoiding program performance delays and additional burdensome requirements on borrowers. It is essential that small, rural providers are able to access the RUS program without delay. Efforts to dramatically rewrite the program, such as those proposed by the bill that the Senate initially passed, would have resulted only in keeping broadband investment on the sidelines and denying rural areas much-needed access to broadband.

The multi-year rule implementation delay that resulted from the 2008 Farm Bill and the regulatory uncertainty arising out of the FCC's efforts to reform Universal Service initiatives have left the Broadband Loan Program and subsequent investment at a standstill. We hope the most recent farm bill changes to the program do not result in another multi-year implementation delay. Thankfully, it appears that the final farm bill left RUS with discretion in administering the program that grants sufficient leeway to make it function more smoothly than the initial Senate farm bill would've allowed. Further, it is important that Congress not tie RUS's hands by putting limited funds toward projects that would offer a few people more bandwidth than they need while others still lack reasonable broadband speeds. It is time to get the Broadband Loan Program back to work for rural consumers.

The IP Evolution and Universal Service

The FCC's Universal Service Fund Reforms

Applications for RUS telecom loans are down dramatically at a time when everyone is clamoring for faster broadband. According to a May 2014 GAO report, RUS received 29 applications for loans in Fiscal Years 2011–2013, compared to 130 in the first 3 full years of the program.[6] Why would an experienced lender such as RUS want for customers when demand for networks is high? Look no further than the state of rural telecom regulation.

For some rural areas, FCC rules still require customers to purchase landline voice service in order for their line to receive USF support. The customer is effectively denied the option of cutting the landline-voice cord and purchasing only broadband. All the while, the FCC continues to design new caps for the legacy USF that was intended to support voice telephony. The last attempt to cap USF was thrown out after pressure from Congress highlighted the regulatory uncertainty and lost investment produced by the FCC's opaque, unpredictable mechanism. Scarce resources are being put toward developing new caps, while small, rate-of-return providers await a broadband-oriented mechanism such as the Connect America Fund (CAF) that larger price-cap carriers already have access to. The price-cap providers' CAF is in year 4 of development—a good indication that greater emphasis should be placed on finishing a similar fund for small carriers as soon as possible.

The situation grew more desperate on March 20, 2014, when the FCC announced that the "local rate floor," to which small, rural carriers must increase their local voice telephone rates by July 1, 2014 to avoid losing certain Universal Service support, would increase from $14 to $20.46. The agency later agreed to push the compliance date back to 2015 and phase in the increase, but the underlying methodology that produces the rate floor remains flawed. The rate floor is meant to guarantee compliance with a statutory directive to ensure "reasonable comparability" in

[6] U.S. Government Accountability Office. (2014). *Telecommunications: USDA Should Evaluate the Performance of the Rural Broadband Loan Program.* (GAO Publication No. GAO–14–471). Retrieved from *http://www.gao.gov/assets/670/663578.pdf.*

rural and urban rates. "Reasonable comparability" does not mean the rates should be exactly the same, but does allow the FCC to work with state stakeholders on a methodology that reflects inherent differences in the deployment and operation of rural and urban networks, as well as the simple fact that the rural customer can call much fewer people through local service than the urban customer. If not addressed promptly, the rate hike will likely lead some consumers to "cut the cord" on voice service, which would drastically increase their broadband rates due to the aforementioned lack of a CAF for small providers that supports broadband-capable networks.

Such outdated rules that undermine consumer freedom and inhibit technological evolution present an obstacle to the technology transition that consumers and industry are making and the FCC is working to expedite and facilitate in other contexts. Universal Service support should not be tied to a limited service, but available instead to advanced networks that provide consumers with access to a variety of essential, high-quality services from which each consumer may choose. The FCC should move forward immediately to adopt and implement a carefully tailored update of USF that will provide sufficient and predictable support for broadband-capable networks in areas served by smaller rural carriers. Over 130 Members of Congress—including Chairman Crawford and other Agriculture Committee leaders—along with dozens of organizations that serve rural America encouraged the FCC to act through a series of letters earlier this year.[7]

The broadband revolution presents major opportunities for small businesses to innovate and grow, but the business (or entrepreneur with an idea) must have broadband access to take full advantage. Markets will ensure many consumers realize the full benefits of innovation at the lowest possible prices, but in rural areas there are often no such markets to speak of. Though small, rural providers have been leaders in broadband investment even under the current statutory and regulatory regime, further law and policy changes will be necessary to ensure high cost rural areas remain served while providers edge out into unserved areas.

The Role of the Communications Act and Potential Reforms

The delivery of voice and nearly every other telecom service is undergoing transformative change through the IP Evolution—that is, telecom and information services are increasingly converging as IP applications that run over broadband. This phenomenon has rendered the current legal regime outdated, as it regulates the same service differently based on the technology platform the service rides on.

IP, wireless, and other technological advances are changing the marketplace in ways unimagined even a few years ago, but technology alone will not miraculously solve the high costs of rural broadband deployment. Indeed, the IP Evolution that is already occurring under existing regulatory frameworks will be promoted and sustained only through careful, focused statutory and policy updates that are guided by the Communications Act's core principles of consumer protection, competition, Universal Service, and public safety. Similarly, NTCA's IP evolution petition filed with the FCC in late 2012 called for a careful regulatory approach to the transition that considers what rules make sense in this broadband age if we're to remain true to those same core principles. Given the challenges to serving rural areas, the answer won't be the legal and regulatory *status quo,* nor will it be complete deregulation.

The Communications Act's timeless goal of making advanced nationwide and worldwide wired and wireless networks available and affordable for all Americans[8] is as important as ever in an increasingly interconnected and competitive broadband-based economy. This Universal Service mandate, which builds upon decades of national policy, has been—and remains—essential in enabling small rural providers to deploy and upgrade cutting-edge networks over time where no other carrier or entity could find a business case to do so.

A faithful and disciplined approach to the core Communications Act principle of Universal Service must ensure that, even in the event of any statutory or regulatory update, those areas served through support from Federal and state USF mechanisms not only "become" served in the first instance, but that they "remain" served, and that consumers and businesses everywhere can make full use of advanced communications services at affordable rates. Further, Congress should ensure that specific, predictable and sufficient support will continue to be provided to help ensure

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[7] *See* U.S. House letter led by Representative Gardner and U.S. Senate letter led by Senators Thune and Klobuchar, both sent to FCC Chairman Wheeler on May 6, 2014. *See also* rural organizations letter sent to Chairman Wheeler on March 5, 2014.

[8] 47 U.S. Code § 254(b).

reasonably comparable services at reasonably comparable rates in rural, high-cost areas, as mandated by current law.

Congress should also consider an express directive to the FCC to ensure that all who use our nation's networks—by whatever service or technology—are responsible to contribute to the universal well-being and availability of those networks on an equitable basis. USF is still funded by assessing interstate and international long distance telephone service. The pool of assessable telecommunications service revenues is shrinking even as overall communications-related revenues grow. As a result, the USF program effectively has an artificial funding ceiling that lowers a bit each day due to the failure to broaden the contribution base and to stem the incentives (and abilities) that are in place today which encourage or allow entities to avoid contributing. This *de facto* cap on the USF program will handicap severely our nation's ability to fulfill the statutory core principles of Universal Service, competition, and public safety, unless changes are made. Indeed, broadening the contribution base to include the information services that USF already supports has previously received bipartisan backing in the U.S. House.[9]

Rural Broadband Experiments

The FCC recently adopted a report, Order and further notice of proposed rulemaking for rural broadband experiments. The Order implements a $100 million budget funded by unused Connect America Fund support. Hundreds of NTCA member companies—including Yelcot Telephone—and other entities have already expressed initial interest in participating in these rural broadband experiments, consistent with their decades-long commitment to solving the communications needs of rural communities. This small, rate-of-return carrier commitment to service was highlighted by the FCC's decision to only accept applications to deploy networks in locations served by price-cap carriers. We are interested in seeing the precise rules that will govern these experiments, and we are hopeful that they will help further the mission of Universal Service consistent with applicable law.

Conclusion

Entrepreneurial small rural carriers have leveraged private capital, Universal Service support, intercarrier compensation, and public-private partnerships to lead the ongoing IP Evolution. These small businesses play an essential role in deploying broadband to rural areas, and the services enabled by broadband are essential to the startup, operation, and growth of other rural small businesses. Rural America has a bright future powered by smart technologies that promote affordability, sustainability, and efficiency in the operation of rural industry and the delivery of essential services such as healthcare, education, and public safety—all key to rural population growth. The benefits that some rural communities are already experiencing will only be possible for all if robust broadband is available and affordable. Rural telecom providers and lenders such as RUS must have regulatory certainty before they can make greater investments in the networks of the future. The key to regulatory certainty is a broadband-oriented support mechanism for small, rate-of-return carriers that gives rural consumers options in selecting the services that best fit their needs.

The CHAIRMAN. Outstanding. Right before the red light. That was perfect. Thank you, Mr. Zimmerman.

I am pleased to recognize now Mr. David Cohen, Vice President of Policy, USTelecom, Washington, D.C. Mr. Cohen, you are recognized for 5 minutes.

STATEMENT OF DAVID COHEN, VICE PRESIDENT, POLICY, UNITED STATES TELECOM ASSOCIATION (USTELECOM), WASHINGTON, D.C.

Mr. COHEN. Chairman Crawford, Ranking Member Costa, Subcommittee Members, thank you for the opportunity to present the progress being made in bringing broadband to rural American.

It is timely and appropriate to review how the Rural Utilities Service and the Federal Communications Commission can coordinate to extend and improve broadband availability.

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[9] *See* H.R. 5828 § 102(a), 111th Cong., 2d Sess. (2010).

I am David Cohen, and I serve as Vice President of Policy at USTelecom. Our association represents innovative broadband companies including some of the largest companies in the U.S. economy as well as small cooperatives and family-owned providers. We share the determination to bring broadband services to all Americans.

Our members have spent enormous sums and made great progress in bringing broadband to rural areas. Seventy-eight percent of Americans living in rural areas have access to wired broadband. However, more can and should be done.

The FCC's Universal Service Fund, USF, and the Telecom Loan Programs of RUS are complementary elements in building out rural broadband.

As the FCC continues modernizing USF, coordination with RUS is necessary. The FCC should remain cognizant that RUS has a large portfolio of loans to borrowers that derive a significant portion of their revenues from USF. USF must also ensure a predictable level of future support so that carriers can confidently plan, borrow, and invest in facilities.

In 2011 the FCC adopted the landmark USF Order which changed USF from supporting voice service to supporting broadband. The FCC created a two-phase Connect America Fund, CAF, for price-cap companies serving rural America including AT&T, CenturyLink, Frontier, Windstream and others but did not replace the legacy USF mechanism for smaller, rate-of-return companies. The FCC noted the amounts of traditional USF for price-cap carriers had not provided sufficient funding to deliver broadband. As a result, 85 percent of the 18 million Americans lacking adequate broadband live in price-cap areas. CAF Phases I and II were designed for those areas that had historically been under-funded by USF.

To spur immediate build-out, the FCC provided interim support of over $500 million to price-cap carriers willing to take on broadband service obligations to which companies added hundreds of millions of dollars of their own. Consequently, almost a million more rural Americans will be connected to broadband.

CAF Phase II, the permanent mechanism for price-cap areas is expected to begin in 2015. It will offer price-cap companies a fixed amount of money to meet vigorous broadband service obligations. The FCC provided price-cap carriers an initial opportunity to access CAF II funds. The FCC wisely rejected calls by some to jump in front of the line and overturn that FCC decision to make the most efficient and cost-effective use of the limited funds to build out rural broadband.

The FCC anticipates in asking price-cap carriers whether to accept the obligations and funding by the end of this year. Where price-cap companies don't elect funding, the FCC will conduct an auction open to all those willing and able to undertake the broadband obligations.

It is important to distinguish between CAF Phase II and the FCC's Rural Broadband Experiments Program. The FCC allocated $100 million for experiments to explore how to structure the auction and to engage interest in deploying new networks. The program drew 1,000 expressions of interest. Of the 690 that

USTelecom sampled, 78 percent asked for more than the support available. So while many would-be providers may make facile representations about being able to provide broadband service in rural areas, even under the very informal expressions of interest process almost four out of five proposed to do so above the FCC's reserve prices.

The FCC has made less progress in establishing a USF program for rate-of-return carriers. The program doesn't support rural lines where the customer gets broadband from the rural carrier but voice from someone else. To plan, borrow and invest in broadband, small companies need a USF that supports broadband-only lines and has some certainty as to future revenues.

The FCC hasn't adopted a plan that allows small companies in RUS to determine which future loans and investments are feasible. The rural telecom industry has proposed such a plan which the FCC should seriously consider.

In conclusion, the targeted assistance offered by RUS coordinated with the FCC's USF program remain essential to a healthy rural economy. Thank you for your commitment which we share to accelerate rural development by making broadband available to rural America.

[The prepared statement of Mr. Cohen follows:]

PREPARED STATEMENT OF DAVID COHEN, VICE PRESIDENT, POLICY, UNITED STATES TELECOM ASSOCIATION (USTELECOM), WASHINGTON, D.C.

Chairman Crawford, Ranking Member Costa, Members of the Committee, thank you for giving me the opportunity to appear before you today to present the progress being made by our member companies in bringing ubiquitous high-speed broadband service to rural Americans. Immense benefits accrue to rural areas where broadband service is present, including enabling rural development, distance learning and remote health care. It is timely and appropriate that the Subcommittee take time to review how the Rural Utilities Service (RUS) and the Federal Communications Commission (FCC) are coordinating to extend and improve broadband availability in difficult to serve low-density rural areas.

My name is David Cohen and I serve as Vice President of Policy at USTelecom. Our association represents innovative broadband companies ranging from some of the largest companies in the U.S. economy to some of the smallest cooperatives and family-owned telecom providers in rural America. Our members offer a wide range of communications services on both a fixed and mobile basis, and the overwhelming majority of them offer advanced broadband services including voice, video and data. Rural America relies on our members' wireline networks for service to consumers and to make the connections to cell towers to enable wireless communications. The customers who rely on our networks include residential consumers, businesses large and small, and government entities at the local, state and Federal levels. What unites our diverse membership is our shared determination to deliver broadband services to all Americans—regardless of their location.

Investment in broadband network infrastructure has created jobs, spurred innovation, and revolutionized the way Americans learn, work, communicate, and shop. That investment is particularly important in rural America because broadband can overcome barriers such as distance and remoteness that can impede development. Our members have spent enormous sums and made great progress in bringing broadband to rural America. Today, according to a report by the Commerce Department's National Telecommunications and Information Administration reflecting mid-2013 data, 78 percent of Americans living in rural areas have access to wired broadband. But we are not here to rest on our laurels; more can and should be done to increase the availability and performance of broadband in rural areas.

The FCC and RUS Should Continue to Coordinate Efforts to Bring Broadband to Unserved Areas

The High-Cost Universal Service Fund (USF) administered by the Federal Communications Commission (FCC) and the Broadband and Infrastructure Loan Pro-

grams of the Rural Utilities Service (RUS) are key complementary elements in deploying cutting edge communications services to rural America. As the FCC modernizes the USF program to conform to developments in technology and in the marketplace, coordination between it and RUS is necessary to continue the progress that has been made to build out broadband facilities in rural areas. The FCC should remain cognizant that RUS has a sizeable portfolio of loans to borrowers that derive a significant portion of their revenues from USF. Future USF mechanisms must ensure reasonable predictability as to the level of future support so that carriers can confidently plan, borrow and make long-term investments in building out fixed cost facilities designed to last for decades.

USF for Areas Served by Price Cap Companies

In 2011 the FCC adopted its landmark USF/ICC Transformation Order, designed to evolve its high-cost Universal Service regime from supporting voice service to supporting broadband. In that Order, the FCC created a two-phase Connect America Fund (CAF) for the larger, price-cap companies such as AT&T, CenturyLink, Windstream and Frontier, and reformed but did not replace the legacy USF mechanism for smaller, rate-of-return companies such as Smithville in Chairman Crawford's district and Kerman in the district of Ranking Member Costa. The FCC noted that at the time it adopted its Order, more than 83 percent of the approximately 18 million Americans lacking access at or above the FCC's broadband speed benchmark lived in areas served by price-cap carriers. The FCC's National Broadband Plan explained that while the old system of funding for such carriers supported phone service to lines served by price-cap carriers, the amounts did not provide an incentive for the costly upgrades necessary to deliver broadband to these customers.

CAF Phase I and CAF Phase II are essential vehicles for providing necessary support to price-cap service areas that historically have been under-funded because of inadequate USF support. By targeting funding to the locations served by price-cap carriers, CAF Phase I incremental support and CAF Phase II are instrumental to achieving the Commission's broadband deployment goals.

To spur immediate build out in price-cap company areas, the FCC offered additional funding under its CAF Phase I program to price-cap carriers that elected to take on the obligations associated with the funding. Not only did price-cap companies accept over $500 million in CAF Phase I funds, they kicked in hundreds of millions of dollars of their own capital to bring broadband to rural areas. Construction is well underway pursuant to that funding and, according to the FCC, almost a million more rural Americans are already or soon will be receiving broadband service.

The FCC has not yet implemented CAF Phase II, the permanent CAF mechanism for areas served by price-cap companies. Implementation is expected early in 2015. The FCC has consistently and wisely rejected calls by some to jump in front of the line and overturn the FCC's considered decision to make the most efficient and cost-effective use of the limited funds available in order to accelerate the availability of broadband to rural Americans. The FCC has done this by providing price-cap carriers with an initial opportunity to expand and upgrade service by accepting CAF Phase I and CAF Phase II funds.

CAF Phase II will offer price-cap companies a fixed amount of money, determined for each state by a cost model, to meet vigorous broadband service obligations. Under the current CAF Phase II structure, a company electing to participate in a particular state would receive 5 years of CAF support (for an investment amortized for up to 25 years) and be obligated to provide broadband speeds at 4 Mbps downstream and 1 Mbps upstream. The FCC is considering increasing the speed requirement to 10 Mbps downstream which, because of the additional costs involved in providing faster service, should be accompanied by a longer funding term and greater program flexibility. USTelecom supports the adoption of the higher speed requirement if accompanied by modifications to the terms of support including the provision of funding for 10 years. The FCC has committed to making this determination soon and price-cap carriers will be electing whether to accept the state-level obligation and funding by the end of this year. In states in which price-cap companies do not elect funding, the FCC will conduct a competitive bidding process open to all those willing and able to undertake the broadband obligations. Winners in the competitive bidding process will receive support for 10 years.

The FCC's Rural Broadband Experiments

It is important to distinguish between the CAF Phase II mechanism and the Rural Broadband Experiments program recently adopted by the FCC. That program is budgeted at a one-time amount of $100 million and will be used by the FCC to explore how to structure the CAF Phase II competitive bidding process in price-cap

areas and to gather valuable information about interest in deploying next generation networks in high-cost areas. USTelecom shares the Commission's goal of ensuring cost-effective and universal broadband connectivity in rural America. The FCC's Rural Broadband Experiments program drew more than a thousand "expressions of interest" from potential participants. Those participants will now be able to submit formal applications for funding. USTelecom reviewed a random sample of 690 of the more than 1,000 expressions of interest filed for the Rural Broadband Experiments. The results of USTelecom's review suggest that most of the substantive expressions of interest sought levels of funding substantially greater than the CAF Phase II model-based support for the proposed service area. The results show that 78 percent of the sampled expressions of interest asked for more than the CAF II support available and that on average the requested amount for this group was almost ten times more than the available support. Overall, the 227 expressions of interest reviewed under USTelecom's streamlined approach sought almost four times the CAF Phase II support available, asking for $2.4 billion in support for Census tracts identified as having $620 million in available support. So while many would-be providers may make facile representations about being able to provide broadband service in rural areas, even under the very informal "expressions of interest" process, almost four out of five proposed to do so at funding levels above the reserve prices set by the FCC.

USF for Rate-of-Return Companies

In contrast to the CAF program to provide support in areas served by price-cap carriers, the FCC has made less progress in establishing a high-cost Universal Service program to provide support to smaller rate-of-return carriers serving rural areas. The current program does not provide support to rural lines where the customer subscribes to broadband service from the rural local exchange carrier but obtains voice service from another carrier, usually a mobile provider. Also, the amount of funding provided to rate-of-return companies is based on legacy mechanisms developed to support voice services. In order to plan, borrow and invest in long-term broadband facilities, rate-of-return companies need a high-cost USF mechanism that is designed for the new broadband world, supports broadband-only lines and incorporates a reasonable amount of certainty as to future revenues. While the FCC's recent repeal of its Quantile Regression Analysis (QRA) limitation on support that could be provided to individual carriers was a major step in the right direction, the FCC is still developing a plan that small rural carriers, and RUS, can quantify and evaluate to determine which future loans and investments are feasible and whether past loans and investments can be repaid. The rural telecom industry has proposed a plan that would carefully transition from the current mechanisms to new broadband mechanisms and operate within the established budgetary limitations. The FCC should give this plan serious consideration.

USTelecom members appreciate the strong support the Agriculture Committee has provided for RUS telecommunications programs since their inception in 1949. RUS endures because it is a public-private partnership in which the borrowers are the conduits for the Federal benefits that flow to rural telecom customers—the true program beneficiaries. The targeted assistance offered by the RUS broadband and telecommunications loan programs—thoughtfully coordinated with the FCC's high-cost programs—remain essential to a healthy and growing rural economy and contribute to the provision of universal communications services comparable to those found in urban areas.

In closing, let me again thank the Subcommittee for holding this timely hearing. We share the Subcommittee's commitment to accelerating rural development by making broadband services available to rural American homes, businesses, schools, libraries and healthcare institutions and we look forward to our continued work together to address this constantly evolving challenge.

The CHAIRMAN. Thank you, Mr. Cohen. Next I am pleased to recognize Mr. Robert L. Hance, President and CEO of Midwest Energy Cooperative, Cassopolis, Michigan, testifying on behalf of the National Rural Electric Cooperative Association. Mr. Hance, you are recognized for 5 minutes.

STATEMENT OF ROBERT L. HANCE, PRESIDENT AND CHIEF EXECUTIVE OFFICER, MIDWEST ENERGY COOPERATIVE, CASSOPOLIS, MI; ON BEHALF OF NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Mr. HANCE. Chairman Crawford, Ranking Member Costa, Members of the Subcommittee, good morning. My name is Bob Hance. Thank you for the opportunity to testify before this distinguished Subcommittee to coordinate future investments in rural broadband.

I am the President and CEO of Midwest Energy Cooperative, an electric cooperative serving more than 35,000 members in southern Michigan, northern Indiana, and Ohio.

I am also testifying on behalf of the National Rural Electric Cooperative Association. NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide energy to over 42 million people in 47 states. Electric cooperatives own and maintain 2.5 million miles of the nation's electric distribution lines, covering 75 percent of the U.S. landmass.

In the 1930s, rural electric cooperatives like Midwest Energy answered the call of rural America to bring electricity to the countryside. Electricity was a vital and transformative product that larger investor-owned utilities were unwilling and unable to provide to rural America. Today, Midwest Energy and other rural electric cooperatives are again answering the call to develop the next transformative utility, robust broadband. I am proud to discuss with you Midwest Energy's rural broadband initiative offered through our telecommunications subsidiary, Midwest Connections.

According to a recent NTIA study, only 23 percent of rural residents have wireline broadband at a speed of 50 Mbps compared to 98 percent of urban residents. The National Broadband Map and anecdotal evidence from our members suggests that in the Midwest service area, 50 Megabits is even less available. Significant gaps in the availability of broadband in rural America strand our members on the wrong side of the digital divide.

In response to member demand, Midwest began investigating the opportunity to provide this valuable service. It became clear that although billions have been spent in rural telecommunications, little infrastructure exists in rural areas to provide broadband. Midwest explored satellite and broadband over power line solutions, but they all failed to provide reliable and scalable service. Ultimately, Midwest designed a 243 mile fiber ring through utility substations and facilities for the immediate purpose of fostering a smarter grid for our members. Leveraging this key asset provides us a unique opportunity to deploy high-speed, next-generation broadband solutions where one currently does not exist.

Midwest and other rural electric cooperatives need your support to compete for the billions of dollars available to provide broadband in high-cost areas. Midwest and more than 100 other electric cooperatives filed expressions of interest in response to a request by the Federal Communications Commission. The overwhelming response prompted the FCC to move forward with conducting rural broadband experiments. Any company interested in providing robust broadband may bid for financial support. The Commission is actively considering whether or not to similarly extend the oppor-

tunity to compete to areas covered by unsuccessful experiment applications.

Rural electric cooperatives like Midwest are championing an inclusive competitive process. The FCC will consider the comments of industry, consumers, and legislators in conjunction with its experience in the rural broadband experiments to allow competition in rural areas for building broadband networks.

The FCC is poised to award almost $20 billion of Connect America funding to support high-cost areas. This is a once-in-a-generation opportunity to deploy broadband in rural communities who deserve to be full participants in our modern economy. Midwest and NRECA appreciate the efforts of the FCC to create an inclusive environment where all eligible providers have an opportunity to compete for support in offering creative solutions and to close the gap between broadband available in urban and rural areas.

In conclusion, cooperatives like Midwest Energy are well-suited to build and maintain broadband networks. We aren't asking for preferential treatment, just an opportunity to compete. We do not seek to exclude anyone from the conversation, but we do believe that a narrow view of the solution may condemn our communities to the wrong side of the digital divide.

I want to repeat this last point. Midwest advocates for an inclusive opening of opportunity to provide broadband to service rural counties. The *status quo* approach is exclusive and limits opportunity to those who have always received high cost support. Given the current lack of broadband in rural areas, Midwest strongly believes that if the Commission and Congress do not open the playing field to competition, rural America may never have the chance to experience the educational opportunities, employment prospects, and advanced healthcare that broadband delivers to those lucky enough to live in low-cost, high-population centers.

Thank you for the opportunity to testify before this distinguished Subcommittee. I welcome any questions.

[The prepared statement of Mr. Hance follows:]

PREPARED STATEMENT OF ROBERT L. HANCE, PRESIDENT AND CHIEF EXECUTIVE OFFICER, MIDWEST ENERGY COOPERATIVE, CASSOPOLIS, MI; ON BEHALF OF NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION

Chairman Crawford, Ranking Member Costa, and Members of the Subcommittee:

Good morning. My name is Bob Hance. Thank you for the opportunity to testify before this distinguished Subcommittee to discuss coordinating future investments in rural broadband.

I am the President and CEO of Midwest Energy Cooperative, an electric cooperative serving more than 35,000 members in Southern Michigan, Northern Indiana and Ohio. I've worked in the electric cooperative business since 1974.

I am also testifying on behalf of the National Rural Electric Cooperative Association (NRECA). NRECA is the national service organization for more than 900 not-for-profit rural electric utilities that provide electric energy to over 42 million people in 47 states or 12 percent of electric customers. Electric cooperatives own and maintain 2.5 million miles or 42 percent of the nation's electric distribution lines, covering 75 percent of the U.S. landmass and serve an average of 7.4 consumer owners per mile.

In the 1930s, rural electric cooperatives, like Midwest Energy, answered the call of rural America to bring electricity to the countryside. Electricity was a vital and transformative product that larger investor-owned utilities were unwilling and unable to provide to rural America. Today, Midwest Energy and other rural electric cooperatives are again answering the call to develop the next transformative utility, robust broadband, in rural America. I am proud to discuss with you Midwest Ener-

gy's rural broadband initiative, offered through our telecommunications subsidiary, Midwest Connections.

According to a recent NTIA study, only 23 percent of rural residents have wireline broadband at a speed of 50 Mbps compared to 98 percent of urban residents.[1] The National Broadband Map and anecdotal evidence from our members suggests that in the Midwest service area, 50 Mbps is even less available.[2] Significant gaps in the availability of broadband in rural America strand our members on the wrong side of the digital divide. Without robust access to broadband, these Americans cannot take advantage of the educational opportunities or employment prospects that most Americans now take for granted. Our members are clamoring for access to the same level of broadband access as urban Americans. For example, professors from both the University of Notre Dame and Western Michigan University live within the Midwest service territory. They enjoy robust broadband at work, but when they come home they lose the ability to work because they lack sufficient broadband service.[3] We've heard similar complaints from members who work at the Kellogg World Headquarters in Battle Creek, the Whirlpool World Headquarters in Benton Harbor and at Pfizer's large manufacturing facility in Portage.[4] The modern world demands reliable, affordable access to broadband.

In response to member demand, Midwest began investigating the opportunity to provide this valuable service. It became clear that although billions have been spent in rural telecommunications, little infrastructure exists in rural areas to provide broadband. Midwest explored satellite and broadband over power line solutions, but they all failed to provide reliable, scalable service. Ultimately, Midwest designed a 243 mile fiber ring through utility substations and facilities for the immediate purpose of fostering a smarter grid for our members.[5] Leveraging this key asset provides us a unique opportunity to deploy a high-speed, next-generation broadband solution where one currently does not exist. Construction has begun and will continue to roll out slowly.

Rural electric cooperatives, like Midwest, provide service to more than 42 million Americans. We serve the lowest population density by mile.[6] Electric cooperatives grew out of a need to serve communities where no other utilities saw adequate financial incentive. We are closely connected to our members and we leverage that relationship to be as responsive as possible to their needs. Today, our members tell us that need is broadband.

Across Co-op Nation, many electric cooperatives are pursuing and implementing plans utilizing different models to deploy broadband to rural America. Through the Recovery Act broadband programs delivered by the Rural Utilities Service and the National Telecommunications and Information Administration, 13 cooperatives in nine states received funding for system designs that included fiber to the home, middle mile, microwave and wireless technology.

Co-Mo Connect, a subsidiary of Co-Mo Electric Cooperative in Tipton, Missouri is currently in phase two of a four phase fiber to the home broadband project to provide service to the consumer members in its service territory. When complete, Co-Mo's system will include 4,000 miles of fiber across its 2,300 square mile territory which will pass 31,500 homes and businesses, averaging 7.8 customers per mile. Co-Mo Connect offers tiered subscription packages with symmetrical speeds ranging from 5 Mbps to 1 Gbps of symmetrical service at competitive prices ranging from $39.95–$99.95.[7] When determining how to best implement a triple play service offering, Co-Mo partnered with another Missouri provider, Big River Telephone to provide voice service. On the video side, Co-Mo is working with another cooperative

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[1] *Broadband Availability: Beyond the Rural/Urban Divide.* (2013). Available at *http://www.ntia.doc.gov/files/ntia/publications/broadband_availability_rural_urban_june_2011_final.pdf.*

[2] *See* the National Broadband Map. *http://www.broadbandmap.gov/speed*.

[3] Midwest sent a Call to Action to its members to gauge the interest in deploying broadband. Within days, Midwest received more than 600 responses. One member noted: "We need to finish the job of providing broadband to rural areas even when it doesn't fit a profit model. The expense to not providing national coverage to all populations is far more costly. Let rural electric cooperatives that are poised to deliver a high-speed broadband solution do what they do so well; provide service to rural America."

[4] There are many other significant educational institutions and world class employers in and near Midwest's service territory. The economic viability of rural areas depends on the extension of broadband.

[5] The Executive Summary for Midwest's fiber project is attached as *Exhibit A.*

[6] Cooperatives serve an average of 7.4 members per mile compared to Municipal electric companies who serve 48 customers per mile and Investor-Owned Utilities that serve an average of 34 customers per mile.

[7] A full description of Co-Mo's project and service packages can be found at: *http://co-mo.net/Co-Mo_Connect/Internet.html*.

in Missouri to share equipment and transport expenses. Eventually, Co-Mo intends to collaborate with other cooperatives in Missouri and surrounding states to purchase the necessary video equipment and content necessary to provide an even more competitive video service offering. This collaborative effort would allow this group of cooperatives to share the costs of specialized equipment and therefore keep the cost of service more reasonable for its members. Co-Mo Connect has been successful in obtaining affordable access to capital for the first two phases of their project, but because each phase decreases in density it seeks access to the FCC Connect America Fund to support the more rural and costly portions of its territories.

Another example of a cooperative bringing broadband to its members is Northeast Rural Services, a subsidiary of Northeast Oklahoma Electric Cooperative. Northeast Rural Services is building a fiber to the home system throughout its service territory. It is utilizing a Rural Utilities Service Broadband Loan to finance the system which will provide triple play services and broadband speeds up to 1 Gbps.

Midwest, and other rural electric cooperatives need your support to compete for the billions of dollars available to provide broadband in high cost areas. Midwest and more than 100 other electric cooperatives filed Expressions of Interest in response to a request by the Federal Communications Commission to identify if there is interest and ability for non-traditional providers to deploy broadband in rural, high cost areas.[8] The overwhelming response prompted the FCC to move forward and conduct Rural Broadband Experiments. Any company interested in providing robust broadband may bid for support at or below what is the support available to the price-cap carrier serving eligible Census blocks.[9] The Commission is actively considering whether or not to similarly extend the opportunity to compete to areas covered by an unsuccessful Experiment Application. Rural electric cooperatives like Midwest are championing an inclusive process. The FCC will consider the comments of industry, consumers and legislators in conjunction with its experience in the Rural Broadband Experiments to determine whether or not to exempt areas where there is a demonstrated competitor from the Right of First Refusal program described in the 2011 *Transformation Order.*[10] Given the small budget for the Experiments, there could be many communities potentially eligible to compete for Federal support if those communities are exempted from the Right of First Refusal and set for a competitive auction.

The FCC is poised to award almost $20 billion Connect America funding to support the high cost areas served by the price-cap companies. This is a once in a generation opportunity to deploy broadband in rural communities who deserve to be full participants in our modern economy. Midwest appreciates the efforts of the FCC to create an inclusive environment where all eligible providers have an opportunity to compete for support in offering creative solutions and to close the gap between broadband available in urban and rural areas.

The areas that Midwest and other electric cooperatives serve are struggling. For the first time in our history, rural America lost population. Since 2011, net job growth in non-metro areas has been near zero.[11] At least one of the contributing factors is the lack of essential services—like broadband. This notion concerns Agriculture Secretary Tom Vilsack who stated:

> Unless we respond and react, the capacity of rural America and its power and its reach will continue to decline. Rural America, with a shrinking population, is becoming less and less relevant to the politics of this country, and we better recognize that, and we had better begin to reverse it.[12]

In conclusion, cooperatives like Midwest Energy are well suited to build and maintain broadband networks. We have a wealth of experience in building regulated

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[8] Attached as *Exhibit B* is Midwest's Expression of Interest, filed on March 14, 2014. Other Expressions of Interest can be found at *www.fcc.gov.* A map developed by NRECA documenting the areas where a rural electric cooperative submitted an Expression of Interest is attached as *Exhibit C.*

[9] *Connect America Fund, ETC Annual Reports and Certifications,* WC Docket Nos. 10–90, 14–58, Report and Order and Further Notice of Proposed Rulemaking, FCC 14–98 (July 14, 2014). Price-cap carriers are generally the largest carriers providing local telephone service, like AT&T, CenturyLink and Version.

[10] *See Connect America Fund, A National Broadband Plan for Our Future, Establishing Just and Reasonable Rates for Local Exchange Carriers, High-Cost Universal Service Support, Developing an Unified Intercarrier Compensation Regime, Federal-State Joint Board on Universal Service, Lifeline and Link-Up, Universal Service Reform—Mobility Fund,* WC Docket Nos. 10–90, 07–135, 05–337, 03–109, CC Docket Nos. 01–92, 96–45, GN Docket No. 09–51, WT Docket No. 10–208, Report and Order and Further Notice of Proposed Rulemaking, FCC 11–161 (Nov. 18, 2011).

[11] *See* USDA ERS Publication *Rural America at a Glance,* 2013 edition.

[12] *See http://bigstory.ap.org/article/usda-chief-rural-america-becoming-less-relevant.*

utility networks. We aren't asking for a preferential treatment, just an opportunity to compete. We do not seek to exclude anyone from the conversation, but we do believe that a narrow view of the solution may condemn our communities to the wrong side of the digital divide. I want to repeat this last point: Midwest advocates for an inclusive opening of opportunity to provide broadband service to rural counties. The status quo approach is exclusive and limits opportunity to those who have always received high cost support. Given the current lack of broadband in rural areas, Midwest strongly believes that if the Commission and Congress do not open the playing field to competition, rural America may never have the chance to experience the educational opportunities, employment prospects and advanced healthcare that broadband delivers to those lucky enough to live in low cost, high population centers.

Thank you for the opportunity to testify before this distinguished Subcommittee. I welcome any questions you may have.

EXHIBIT A

Midwest Energy Cooperative

Executive Status Update Summary of Project Connect-Rural-Michigan

Midwest Energy Cooperative's ("Midwest") board of directors has charged senior management with developing a coalition of allies and appropriate state and Federal officials to bring high-speed broadband service to unserved and under-served portions of rural Michigan, in part, by accessing Federal funding from the Connect America Fund ("CAF") and similar funding which, to date, have only been available to more traditional incumbent entities who have declined to accept much of the available funds as inconsistent with their business plan. The result is that high-speed broadband service is today only available in more populated areas—and large portions of rural America remain unserved or under-served.

While Midwest's focus is on its service territory in rural Michigan, its goal is to act as a catalyst to bring high-speed broadband to unserved and under-served rural America. To date, Midwest views its allies as including the Utilities Telecom Council ("UTC"), United States Department of Agriculture—Rural Utilities Service ("RUS"), the Michigan Electric Cooperative Association ("MECA"), Michigan Public Service Commission ("MPSC"), the American Farm Bureau Federation ("AFBF") and other similarly situated rural electric cooperatives throughout the country.

Midwest is proceeding with the deployment of a 243 mile fiber communications ring through utility substations and facilities to foster a smarter grid. Not only will this fiber ultimately help member consumers manage their energy use, it will provide the critical infrastructure required to support broadband deployment.

To date, Midwest has taken the following actions to bring high-speed broadband to rural Michigan and rural America:

- Power System Engineering (*www.powersystem.org*) was retained in 2012 to assist in the necessary technical analyses associated with our fiber communications ring; and Pulse Broadband, Inc. (*www.pulsebroadbandinc.com*) was retained in 2013, along with a host of other contractors, to assist with financial modeling, provisioning of services and deployment of fiber-to-the-premises ("FTTx");
- Orjiakor lsiogu, former MPSC Chairman and former Chair of the National Association of Regulatory Utility Commissioners ("NARUC") Taskforce on Federalism & Telecommunications, has been retained to assist in necessary policy analyses and licensing guidance;
- The national law firm, Dykema (Albert Ernst and Shannon Heim) has been retained to assist with legal input and regulatory compliance;
- Midwest's fiber communications ring represents a $9.5 million investment by the cooperative. Another $53 million is required to deploy FTTx off that ring to rural un- and under-served southwest Michigan. Midwest has now been advised by the U.S. Department of Agriculture, Rural Utilities Services, that electric loans can now be used to invest in fiber deployment to the home, thus providing a low-cost matching source for CAF application—assuming smart grid application. Still, access to CAF will help expedite a solution for residents of Midwest's rural service footprint;
- With respect to advancing the notion that CAF be availed to others, the Midwest team has met with senior representatives of the RUS, NRECA, MECA, the MPSC, FCC, NARUC, Pokagon Band of Potawatomi, AFBF and member organizations, and the Michigan Governor's office in both Lansing, MI and Washington, D.C. We have done this solely and in tandem with UTC and its Rural

Broadband Council ("RBC"), a group consisting of more than 100 of the nation's rural electric cooperatives;

- Over the past year, Midwest and its allies have met several times with FCC Commissioners and staff, their Office of Strategic Planning, Wireline Bureau and IP Transitions Team;
- Midwest and its partners have also met with key Members of Congress as well as the United States Government Accountability Office (GAO). The GAO has released a series of reports on rural broadband deployment efforts based, in part, on discussions with Midwest and others (*http://www.gao.gov/products/GAO-14-409*);
- On December 10, 2013, in coordinated filings, Midwest and UTC requested that the FCC initiate proceedings which will transition access to CAF funds to the country's rural electric cooperatives and other entities serving rural America. On January 30th, the FCC issued an Order that includes rural experiments, inviting interested parties to file expressions of interest ("EOI") by March 7, 2014. On March 7, 2014, Midwest filed an EOI to FCC along with over 100 rural electric cooperatives. All total, 1,000+ EOIs were filed with the FCC. The FCC will now evaluate the EOIs, set a budget for rural experiments, provide application guidance, evaluate applications and begin funding projects late third quarter;
- On February 12h, 2014, Midwest and its partners secured a resolution from NARUC supporting broader access to CAF by utilities and other critical infrastructure industries;
- Midwest received its permanent competitive local exchange carrier ("CLEC") license in March 2014 and a code of conduct waiver from the MPSC in June 2014. Its application for an eligible telecommunications carrier ("ETC") license is in process;
- A soft launch of Midwest's full project is underway, deploying roughly 21 miles of its communications ring through two Midwest substations. In addition to assessment of smart grid potential, Midwest is building 86 miles of fiber to 951 homes and businesses in the area. Even absent a strong marketing push, our overall take rate is 26% thus far. Service plans range from 25–100 Mbps down and 10–50 Mbps up for residential and 25–100 Mbps of symmetrical service for business. Midwest's service is scalable to a gigabit. Voice-over-Internet Protocol ("VoIP") will be provided by Big River Telephone and video is being evaluated;
- In June 2014, the FCC issued a Report and Order, Declaratory Ruling, Order, Memorandum Opinion and Order, Seventh Order on Reconsideration, and Further Notice of Proposed Rulemaking (WC Docket No. 10–90), which should make it easier for utilities to gain access to Federal funding for rural broadband under CAF; and
- On July 11, 2014, the FCC issued an Order detailing the process by which entities may apply for a rural experiment. Applications are due on October 14, 2014. We will be participating in rural experiment workshops and plan to be active in commenting on the FNPRM. Additionally, Midwest intends to apply for rural experiment funding while continuing to push for equal access to CAF going forward.

This Executive Status Update Summary will be updated periodically to keep interested parties advised as to progress. Questions should be directed to either Midwest President and Chief Executive Officer Bob Hance at 269–445–1091 (*bob.hance@teammidwest.com*) or Midwest Vice President, Regulatory Compliance and Community Development Dave Allen at 269–445–1081 (*dave.allen@teammidwest.com*).

EXHIBIT B

Date: Monday, February 24, 2014
From: Robert L. Hance—President & CEO, Midwest Energy Cooperative
To: The Honorable Marlene Dortch—Secretary, Federal Communications Commission
Subject: Expression of Interest—Midwest Energy Rural Broadband Experiment, WC Docket No. 10–90

Background

Midwest Energy Cooperative is a *member-owned* electric utility serving more than 35,000 residential, agricultural, commercial and industrial customers in southwestern and southeastern Michigan, northern Indiana and Ohio. We also provide propane services under the name Midwest Propane and telecommunications services

as Midwest Connections. In the past, Midwest Connections has provided dial-up and satellite Internet as well as broadband over power lines (BPL). We are now fully committed to a next generation fiber solution as we have found other platforms to be less-reliable and of insufficient capacity and speed.

Midwest Energy is one of roughly 840 distribution cooperatives across 47 states providing service to 42 million Americans and 18.5 million businesses, homes, schools, churches, farms, irrigation systems and other establishments. As an industry, we own and maintain 42% of the nation's distribution lines. That said, only 12% of Americans are customers of ours. Whereas publicly owned utilities (municipals) average 48 consumers per mile and investor-owned utilities average 34 customers per mile, electric cooperatives serve an average of 7.4 members per mile. These are the folks in need of a broadband solution.

Our Project

Plans to advance from automated meter reading (AMR) to the deployment of automated metering infrastructure (AMI) provided us the opportunity to explore a smarter grid for our members. In 2012, we contracted with Power System Engineering, Inc. (*www.powersystem.org*) to help us design and engineer a high-speed communications ring through substations and facilities. The total cost of this 243 mile Midwest-owned network is $9.5 million. Plans are in place to at least finance the roughly $6 million portion of the ring that serves our southwest district through an already-approved United States Department of Agriculture—Rural Utilities Service (USDA–RUS) work plan loan.

Recognizing the significant potential of this asset, Midwest Energy contracted with Pulse Broadband (*www.pulsebroadbandinc.com*) to help us design a fiber-to-the-premises (FTTx) product. Utilizing the communications ring as a middle mile backbone, Pulse Broadband designed a portion of the 1,800 mile bi-directional FTTx open network using gigabit passive optical network (GPON) electronics. At the appropriate time, they will assist us in engineering the remainder of our network. Midwest Energy's system is scalable, possessing the potential for a gigabit of service to every home or business in our proposed footprint. Initially, the following plans will be offered:

Residential High-Speed Internet Packages

Basic:	Up to 20 Mbps downstream and 10 Mbps upstream $49.95/month
Advanced:	Up to 50 Mbps downstream and 20 Mbps upstream $59.95/month
Ultra:	Up to 100 Mbps downstream and 25 Mbps upstream $99.95/month

Business High-Speed Internet Packages

Basic:	Up to 20 Mbps downstream and 20 Mbps upstream $79.95/month
Advanced:	Up to 50 Mbps downstream and 50 Mbps upstream $129.95/month
Ultra:	Up to 100 Mbps downstream and 50 Mbps upstream $199.95/month

Unlimited Local and Long Distance Telephone within the U.S., Canada, Dominican Republic, Bahamas, U.S. Virgin Islands, Puerto Rico and Guam. International calling plans and other features are also available.

Residential:	Includes three-way calling, caller ID (number), call ID blocking, call return, call forwarding, call waiting and voice mail. $39.95/month
Business:	Includes three-way calling, caller ID (name and number), call forwarding, hunting and voice mail. $49.95/month

Voice services will be provided through Big River Telephone (*www.bigrivertelephone.com*) and video service is under consideration. Midwest Energy will offer members a $10 double-play discount for bundling their Internet and telephone services with us.

Midwest Energy serves neither cities nor villages in its proposed service footprint. In these areas, incumbent Frontier (DSL) and Comcast (cable) provide voice, data and video. Rural townships in southwest Michigan are mostly devoid of anything other than satellite and Mobile WiFi (MiFi). Bloomingdale Communications, a first and second round stimulus recipient, has deployed fiber in the northern-most, and most-dense, portion of our service area. Our discussions with them have uncovered no plans to expand beyond their existing boundaries.

Timetable

Midwest Energy is "shovel-ready" with its project. We have secured a temporary CLEC license from the Michigan Public Service Commission and will pursue an

ETC license and other certifications when our permanent CLEC is granted in March. We have "socialized" our intent with numerous state and Federal agencies and regulatory bodies in an effort to be transparent and to learn what is necessary to operate in this complex arena.

Already, Midwest Energy has deployed roughly 21 miles of our communications ring through two substations serving areas adjacent to both Schoolcraft and Edwardsburg, Michigan. In addition to assessment of smart grid potential, Midwest is evaluating the FTTx potential of laying 72 miles of fiber to 953 homes and businesses in the area. The capital requirements for our soft launch are $4,367,452–$1,482,500 in transmission costs and the balance in FTTx costs. Our first two "beta" customers are receiving service from Midwest Energy. One is testing a 100 Mbps plan and the other is evaluating 20 Mbps.

Midwest Energy's soft launch project allows us to better gauge member interest and service requirements before full deployment. Full deployment may take up to 3 years, or more, depending upon the level of support we receive from potential granting agencies. That said, when our permanent CLEC license is secured, we plan to add new customers at a planned, but much more aggressive, pace.

Project Area

Our full deployment area includes *eligible* portions of Cass, St. Joseph, Kalamazoo, Van Buren and Berrien Counties in Michigan. In this area, we estimate there are roughly 24,000 homes and 2,500 businesses. Midwest Energy serves no cities or villages and instead focuses on rural townships. As such, member density in this area is below nine per mile. We believe there to be 80 critical community facilities and public safety entities, made up of ten schools, seven libraries, 23 medical/healthcare providers, ten public safety entities, one community college, five community support organizations and 24 governmental facilities. Additionally, we have one Native American Tribe—The Pokagon Band of Potawatomi. We are confident many of these entities will provide project endorsement letters during the application phase of FCC's rural experiments. One such letter from Mno-Bmadsen, the Pokagon Band of Potawatomi's economic development arm, is attached as an example of partnerships we are developing.

Southwest Michigan is defined by agriculture—particularly seed corn production—and serves as a rural residential haven for those that work and study at Notre Dame, Western Michigan University and area community colleges. Additionally, those that work at Fortune 500 companies like Kellogg, Whirlpool and Pfizer tend to live in our proposed service footprint. Though we were severely impacted by a recent downturn in the recreational vehicle industry, efforts to foster an entrepreneurial environment are bearing fruit and area unemployment figures have moderated somewhat.

Midwest Energy's Midwest Connections intends to provide service to an area encompassing portions of five counties in southwest Michigan totaling 1,668.09 square miles. We will work closely with Pulse Broadband to determine the eligibility of the 42 Census tracts, 169 Census block groups and 8,484 Census blocks within our proposed service footprint.

Cass County, Michigan—490.06 square miles to be served
- **11 Census Tracts**
- **46 Census Block Groups**
- **2,319 Census Blocks**

Berrien County, Michigan—138.98 square miles to be served
- **5 Census Tracts**
- **20 Census Block Groups**
- **789 Census Blocks**

Kalamazoo County, Michigan—146.99 square miles to be served
- **8 Census Tracts**
- **21 Census Block Groups**
- **928 Census Blocks**

St. Joseph County, Michigan—374.42 square miles to be served
- **7 Census Tracts**
- **30 Census Block Groups**
- **1,974 Census Blocks**

Van Buren County, Michigan—517.64 square miles to be served
- **11 Census Tracts**
- **52 Census Block Groups**
- **2,474 Census Blocks**

Project Need

Our service area—often referred to as "Michiana" is losing population. While the volatile nature of the recreational vehicle industry in nearby Indiana has created a home-based entrepreneurial boom; many have chosen to leave southwest Michigan. Seniors are flocking to where health care is abundantly available and the home-bound have diminishing options in rural America. Workers are moving closer to their employers. Young people are seeking entertainment options and basic services like broadband. Parents, concerned for their children's educational opportunities, are abandoning schools that are limited in services they provide. Rather than placing further stress on urban infrastructure, one solution might be to provide broadband where it either doesn't exist or exists in limited scope. If workers can be productive at home, that is good for America. If young people can innovate, we all benefit. America's future truly depends on closing a digital divide that exists on both a micro (urban *versus* rural) level and a macro (U.S. *versus* the world) level as well.

Within Midwest Energy's proposed footprint, residents, schools, libraries, farmers, first-responders, healthcare providers and the Pokagon Band of Potawatomi are seeking an affordable, reliable and high-speed option. This has provided us tremendous opportunity to leverage our investment. For instance, USDA–RUS has stepped up to the plate in helping us finance the cost of our communications ring. Merit Networks, Inc., a nonprofit, member-owned organization formed in 1966 to design and implement a computer network between public universities in Michigan, continues to seek a partnership with Midwest Energy. They view us as being a catalyst in helping them reach schools and libraries in the region. The Pokagon Band of Potawatomi's economic development arm—Mno-Bmadsen—is evaluating partnership opportunities that can help us extend service to their members and we're actively engaged with both Michigan Farm Bureau and the American Farm Bureau to help bring broadband to America's farmland. There is little scarcity in leveraging opportunities for this project and we are exploring them all.

The Ask

Midwest Energy continues to refine its project requirements. As mentioned, we are financing our communications ring for smart grid applications through a USDA–RUS work plan loan. Should we fully deploy our ring, the cost will be $9.5 million. It is $6.075 million if construct communications in only our southwest district. Our FTTx capital expenditure requirements are, roughly, $54.2 million. Given the 24,000 homes and 2,500 businesses passed, we will need approximately $2,045 per passing to fully fund this project. That said, our financial model continues to be refined and we'll have solid, defensible numbers to present in our application. These numbers will be in the form of a one-time capital expenditure. We are not seeking an ongoing subsidy from the FCC. Midwest Energy will, of course, review FCC financial models to ensure our numbers are both reasonable and appropriate.

In recent financial modeling, Midwest Energy assumed a 40% take rate for residential and 30% take rate for commercial. This translates into 10,350 customers. Applying standard price points for triple-play, projected net income goes positive in year 4 at a fifty percent equity injection. Midwest believes fifty percent equity funding is needed to protect company asset-to-equity ratios. That said, we'll apply only for what is eligible and what is required to be successful in providing up to a gigabit of service for rural southwest Michigan.

Total Estimated Project Cost:	$63.7 million
Midwest Energy Investment:	$9.5 million
Ideal FCC Investment:	$27.1 million (one-time capital expenditure)
Additional Amount to be Financed:	$27.1 million

Leveraging Opportunities:

FCC Rural Experiment s (one-time capital investment only)
Connect America Fund (unclaimed CAF)
Merit Networks, Inc. (assistance and dark fiber swap)
Lynx Network Group (dark fiber swap)
Pokagon Band of Potawatomi (financial)
Regional Economic Development Groups (financial)
Michigan Farm Bureau & American Farm Bureau (philosophical)
E-Rate Program (grant opportunity)
USDA Community Connect Program (grant opportunity)

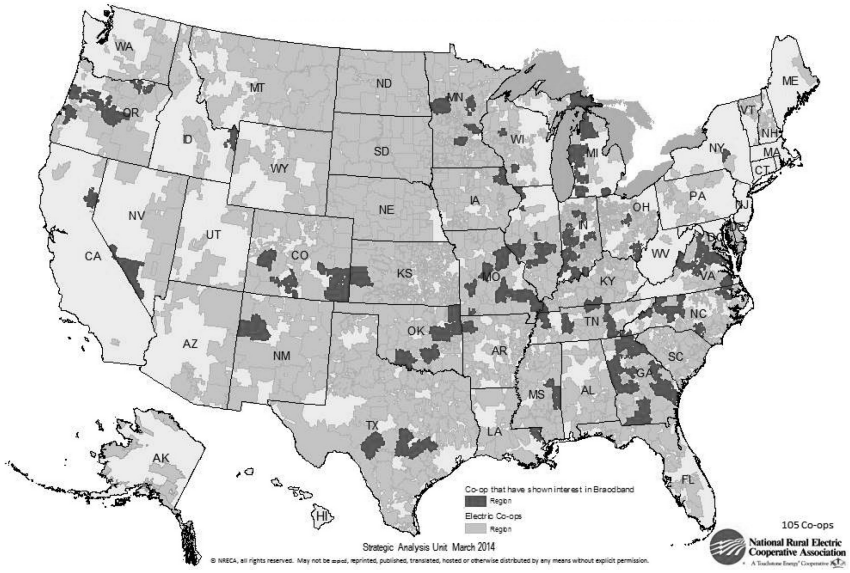
Total Customers Served: 26,500 (estimated—minimum)
Square Miles: 1,668.09 square miles

For More Information:

Mr. DAVID H. ALLEN,
Vice President, Regulatory Compliance,
Midwest Energy.
(269) 445–1081 (direct).
dave.allen@teammidwest.com.

EXHIBIT C

Co-ops Expressing Interest in FCC Rural Broadband Experiments



The CHAIRMAN. Thank you, Mr. Hance, and we move now to our last panelist, Mr. Christopher Guttman-McCabe, Executive Vice President, CTIA—The Wireless Association here in Washington. Mr. Guttman-McCabe, you are recognized for 5 minutes.

STATEMENT OF CHRISTOPHER GUTTMAN-MCCABE, EXECUTIVE VICE PRESIDENT, CTIA—THE WIRELESS ASSOCIATION, WASHINGTON, D.C.

Mr. GUTTMAN-MCCABE. Thank you, and good morning, Chairman Crawford, Ranking Member Costa, and Congressman Thompson. I appreciate the opportunity to participate in today's hearing.

My name is Christopher Guttman-McCabe, and I serve as Executive Vice President at CTIA—The Wireless Association.

Today, American wireless users sit at the epicenter of the wireless broadband revolution. Driven by vibrant competition, massive investment, and successful light-touch regulation, the U.S. wireless industry has deployed fourth-generation wireless technology at a rapid pace and now offers this world-class service to 95 percent of the American people. In fact, despite being home to just five percent of the world's wireless subscribers, the United States claims 45 percent of the world's 4G users.

As a result of the near ubiquitous deployment of 4G technologies, a growing number of Americans have chosen to abandon traditional telephone service and go wireless-only. In fact, during the second 6 months of 2013, two in every five U.S. households did not have a landline telephone but did have at least one wireless telephone. And nowhere, Mr. Chairman, is this more true than in Arkansas, where almost ½ of the adult population lives in wireless-only households.

Similarly, an estimated 45 million Americans use their wireless device as their primary on-ramp to the Internet. As wireless networks have become more ubiquitous, reliable, and robust, they have become building blocks upon which other segments of the economy rely to innovate and drive more efficient outcomes in their respective fields. This is certainly true in agriculture.

Whether through the use of GPS-assisted technology or terrestrial wireless sensor technology, wireless is helping to provide farmers with real-time feedback on a number of different crop and site variables. This data helps to drive increased efficiency and improve yields. Onboard telematics powered by wireless guide farm equipment to reduce time in the field and cut fuel costs while simultaneously reducing maintenance costs and time lost to repairs.

Just as many of us rely on mobile apps to check a sports score or bank balance, agricultural professionals are using apps to perform a variety of tasks, including to access farm and field information, check market prices, track cattle, and even help consumers locate locally grown farm products.

Commercial wireless networks stand behind each of these activities. Wireless is an increasingly important part of rural communities and not only for those involved in agriculture. Rural consumers and businesses of all sizes benefit from access to competitive services and world-class devices as CTIA's members invest to bring cutting-edge wireless service to rural America.

While we are excited about helping U.S. agriculture and rural America thrive, we are just scratching the surface of what is possible. But building on these advances requires the right policies here in Washington. America's farmers may not know that they care about the intricacies of spectrum allocation, the challenges of tower siting, or the impact of FCC regulation, but they do. This is true because the ability to deliver the sorts of services on which the farming and agriculture community is relying depends on the wireless industry having access to spectrum and the ability to build the networks needed to put it to use, without the burdens of unnecessary regulation.

Spectrum is the key input into the wireless business. For us, it is the oxygen that fuels everything else. For this reason, ensuring that a sufficient, predictable supply of spectrum for commercial use is at the top of CTIA's agenda. Thanks to Congress' work in the 2012 Middle Class Tax Relief and Job Creation Act, there are two upcoming auctions that will bring additional spectrum to market for CTIA's members.

Congress must encourage the FCC to do everything necessary to ensure that these critical auctions are successful and on schedule.

Once spectrum has been auctioned, it must be put to work. That means that networks must be deployed. To facilitate this, the FCC must complete work on its wireless infrastructure proceeding which is flowing from the 2012 law that authorized the auctions.

Finally, policymakers must continue to support a light-touch regulatory regime for wireless. Wireless is different than the other communications and broadband technologies. Wireless has benefited from a comparative lack of regulation over the last 20 years, and the results validate the efficacy of this approach. Our world-leading environment is no accident. Regulators thus should not try to prejudge how the wireless industry will evolve or impose upon it rules designed for wireline networks in a monopoly environment. Similarly, policymakers should not bias the FCC's Universal Service Programs or the Rural Utilities Service Loan Programs in favor of any particular technology. Consumer preference, not government fiat, should guide network deployment decisions.

Thank you again for the opportunity to participate in today's hearing. I look forward to working with the Subcommittee to advance the deployment of wireless service across all of America. Thank you.

[The prepared statement of Mr. Guttman-McCabe follows:]

PREPARED STATEMENT OF CHRISTOPHER GUTTMAN-MCCABE, EXECUTIVE VICE PRESIDENT, CTIA—THE WIRELESS ASSOCIATION, WASHINGTON, D.C.

Chairman Crawford, Ranking Member Costa, and Members of the Subcommittee, thank you for the opportunity to participate in today's hearing. My name is Christopher Guttman-McCabe and I serve as Executive Vice President at CTIA—The Wireless Association®. CTIA represents the wireless carriers, equipment vendors, and software and content developers that drive America's global leadership in wireless broadband.

Today, American wireless users sit at the epicenter of the wireless broadband revolution. Driven by vibrant competition, massive investment,[1] and successful light-

[1] In 2013, U.S. wireless carriers invested approximately $34 billion in their networks. See *CTIA, U.S. Invests Four Times More in Networks* (March 13, 2014), available at *http://www.ctia.org/resource-library/facts-and-infographics/archive/us-investment-networks* ("CTIA

touch regulation, the U.S. wireless industry has deployed 4G LTE technology at a rapid pace and now offers this world-class wireless broadband service to 95 percent of the American people. In fact, despite being home to just five percent of the world's wireless subscribers, the U.S. claims 45 percent of the world's 4G users.[2]

As a result of the near ubiquitous deployment of 3G and now 4G technologies and the convenience of wireless networks, a growing number of Americans have chosen to abandon traditional telephone service and go "wireless-only." In fact, the Centers for Disease Control's National Health Interview Survey recently released data finding that for the second 6 months of 2013, two in every five households (41.0%) did not have a landline telephone but did have at least one wireless telephone.[3] And nowhere, Mr. Chairman, is this phenomenon more true than in Arkansas, where almost 50 percent of the adult population lives in a "wireless-only" household.[4] Similarly, an estimated 45 million Americans use their wireless device as their primary on-ramp to the Internet.[5]

As wireless networks have become more ubiquitous, reliable, and robust, they have become platforms not only for telephone service and Internet access, but also building blocks upon which other segments of the economy rely to innovate and drive more efficient outcomes in their respective fields. This is certainly true in agriculture.

Whether through the use of GPS-assisted technology or terrestrial wireless sensor technology, wireless is helping to provider farmers with real time feed-back on a number of different crop and site variables.[6] This data helps to drive increased efficiency and improve yields.[7] Onboard telematics powered by commercial wireless broadband networks guide farm equipment to reduce time in the field and cut fuel costs, while simultaneously reducing maintenance costs and time lost to repairs.[8] And just as many of us rely on mobile apps to check a sports score or bank balance, agricultural professionals are using apps to perform a variety of tasks, including to access farm and field information, check market prices, track cattle, and even help consumers locate locally grown farm products and farmers markets.[9] Commercial wireless broadband networks stand behind each of these activities.

Wireless is an increasingly important part of rural communities, and not only for those involved in agriculture. Rural consumers and businesses of all sizes benefit from access to competitive services and world-class devices. CTIA's carrier members, large and small, are investing to bring cutting-edge wireless service to rural communities. In addition to the widespread deployment of LTE described above, these initiatives include AT&T's planned deployment of fixed wireless service that uses advanced technology, dedicated spectrum, and professional home installations to provide a consistent and reliable high-speed broadband experience,[10] and efforts by smaller carriers like Bluegrass Cellular in Kentucky to deploy its wireless Internet

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March 2013 Wireless Facts") (citing Didier Scemama, *et al., 2014 Wireless Capex: BRICs & Europe to Pick Up the Slack, Bank of America Merrill Lynch, Global Telecom Equipment,* at Table 2 (Jan. 13, 2014); Glen Campbell, *2014: The Year Ahead, Bank of America Merrill Lynch, Global Wireless Matrix 4Q13,* at Tables 1 and 2 (Jan. 8, 2014) ("Global Wireless Matrix").

[2] According to the Informa Telecoms & Media Group's WCIS database, the U.S. and its territories accounted for 45% of global LTE subscribers as of the first quarter of 2014. The United States is home to 112 million LTE subscribers, while the next nine countries *combined* are home to 111 million.

[3] *http://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless201407.pdf*, at Table 1.

[4] *http://www.cdc.gov/nchs/data/nhsr/nhsr070.pdf*, at 5, column 2, showing data for Jan.–Dec. 2012, with Arkansas at 49.0 percent.

[5] Maeve Duggan and Aaron Smith, "Cell Internet Use 2013," Sept. 2013, Pew Research Center, at *http://www.pewinternet.org/files/old-media//Files/Reports/2013/PIP_CellInternetUse 2013.pdf*, and U.S. Census, American FactFinder, at *http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=bkmk*.

[6] *https://www.youtube.com/watch?v=pldvLV0xjmg*, and *http://sourcetech411.com/2013/06/the-use-of-wireless-sensor-networks-in-precision-agriculture/*.

[7] *http://www.businessinsider.com/sc/wireless-farming-is-helping-feed-the-world-2014-7*.

[8] *https://www.youtube.com/watch?v=YbYjUH2uKXQ*.

[9] *http://www.farmmanagement.pro/mobile-agriculture-apps-offered-in-2013/*, *http://www.agweb.com/article/nutrient_deficiency_app_available/*, *http://eprretailnews.com/2014/07/09/morrisons-became-the-first-supermarket-to-launch-free-app-for-cattle-farmers-aimed-at-simplifying-livestock-management-099876543212323456/* and *http://www.picktnproducts.org/*.

[10] Statement of John T. Stankey, Group President and Chief Strategy Officer, AT&T, before the Senate Commerce Committee, July 16, 2014. Available at *http://www.commerce.senate.gov/public/?a=Files.Serve&File_id=d2db74ae-73d4-4116-8d2f-25def1182f14*, at 4. The referenced deployment is predicated on regulatory approval of AT&T's proposed acquisition of DIRECTV, a transaction on which CTIA takes no position.

GetSetGo™ branded broadband product and services [11] to markets like Clarksville, Tennessee and Hopkinsville, Owensboro, Danville and Richmond, Kentucky, and CellCom of Green Bay, Wisconsin working to make wireless telehealth solutions for diabetics available across Wisconsin.[12]

While we're excited about the contributions the wireless industry can make to helping U.S. agriculture and rural America thrive, we're just scratching the surface of what's possible. But building on these advances requires the right policies here in Washington. America's farmers may not know that they care about the intricacies of spectrum allocation, the challenges of tower siting, or the impact of FCC regulation, but they do. This is true because the ability to deliver the sort of services on which the farming community is relying and will continue to rely is dependent on the wireless industry having access to spectrum, and the ability to build the networks needed to put it to use, without the burden of unnecessary constraint or cost imposed through the regulatory process.

Spectrum is the key input into the wireless business. For us, it is the oxygen that fuels everything else. For this reason, ensuring that there is a sufficient, predictable supply of spectrum for commercial use is at the top of CTIA's agenda. Thanks to Congress' work in the 2012 Middle Class Tax Relief and Job Creation Act, there are two upcoming auctions that will bring additional spectrum to market for CTIA's members.[13] These auctions are critical to meeting the burgeoning demand for wireless broadband, which Ericsson [14] and Cisco [15] suggest will continue, and to maintaining the United States' position as the world's leader in advanced wireless services. Congress therefore must encourage the Federal Communications Commission to do everything necessary to ensure that these auctions are successful and on schedule.

Once spectrum has been auctioned, it must be put to work. That means that networks must be deployed. To facilitate the deployment of wireless network infrastructure, industry needs a predictable, expedited process for seeking siting approvals. This is true for the construction of towers, as well as for the process of deploying antennae on existing towers or structures and for the use of small cell technologies. New cell sites can expand the available coverage area for consumers, and increase a network's ability to provide the kinds of services consumers want and expect. To support these efforts, the Federal Communications Commission must complete work on its Wireless Infrastructure proceeding,[16] which flowed from the 2012 law authorizing the auctions. Additionally, because towers have to connect to the larger network, Congress and the Federal Communications Commission must continue to work to remove barriers to the deployment of fiber infrastructure.

Finally, with the right spectrum and siting policies in place, policymakers must continue to support a light-touch regulatory regime for wireless. Wireless has benefited from a comparative lack of regulation over the last twenty years, and the resulting deployment and consistent technological advancement validate the efficacy of this approach. Regulators thus should not try to prejudge how the wireless industry will evolve or impose upon it rules designed for wireline networks in a monopoly environment.[17] Similarly, policymakers should not bias the FCC's Universal Service programs or the Rural Utilities Service loan programs in favor of any particular technology. Consumer preference, not government fiat, should guide network deployment decisions. Vibrant competition and regulatory humility will produce the best outcomes for consumers.

Thank you again for the opportunity to participate in today's hearing. CTIA looks forward to working with the Subcommittee to advance the deployment of wireless service across all of America.

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[11] The GetSetGo™ wireless Internet service initial product offering uses an LTE WiFi router that integrates WiFi 802.11 b/g/n and Ethernet ports in an easy and simple-to-use package. The company projects that GetSetGo customers will experience download speeds of 5 to 12 Mbps and 2 to 5 Mbps for uploading data.

[12] *http://www.nsightnews.com/Press-Releases/cellcom-partners-with-telcare-to-offer-diabetes-management-solution.html.*

[13] These include the AWS–3 auction scheduled for late 2014 and the broadcast incentive auction scheduled for mid-2015.

[14] Ericsson, Ericsson Mobility Report on the Pulse of the Networked Society, Interim Report (Feb. 2014), available at *http://www.ericsson.com/res/docs/2014/ericsson-mobility-report-february-2014-interim.pdf* and [**Editor's note:** this footnote was incomplete as submitted].

[15] Cisco, *Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2013–2018,* at 10 (Feb. 5, 2014) ("Cisco Report"), available at *http://www.cisco.com/c/en/us/solutions/collateral/service-provider/visual-networking-index-vni/white_paper_c11-520862.pdf.*

[16] *Acceleration of Broadband Deployment by Improving Wireless Facilities Siting Policies,* WT Docket No. 13–238.

[17] *http://www.ctia.org/docs/default-source/fcc-filings/140718-ctia-open-internet-comments.pdf?sfvrsn=0.*

The CHAIRMAN. Thank you, Mr. Guttman-McCabe, and we will start our round of questioning. I first recognize myself for 5 minutes. Let me start with Mr. Zimmerman.

In your view, are the various agencies such as USDA and the FCC coordinating sufficiently in their efforts and in such a way that might result in a comprehensive and effective plan for the deployment of broadband in rural America?

Mr. ZIMMERMAN. I missed the first part of your question. What was that again?

The CHAIRMAN. Do you believe that the agencies such as USDA and FCC are coordinating sufficiently in their efforts——

Mr. ZIMMERMAN. Okay. I can't say how the agencies work back and forth. The one thing I do know is that the RUS is making things that will help us as far as loan programs to make the availability of more broadband, but the regulation that we have on the FCC side makes it very hard for us to plan and take on these loans because we are afraid of not being able to pay them.

The rate floor in particular, jumping to $20.46 while my local rates are $14, that would be almost a 50 percent rate increase that they wanted us to do within a 3 month—they gave us 3 months to get it done. That is just unreasonable for people to have to get done. It makes it harder for us to keep people on the network if they keep jacking up the rates that the people have to pay to be on the network, and it is for a voice service that a lot of them don't want and makes the broadband fees higher and higher and unaffordable in rural areas where they are trying to expand it more.

So that is sort of the side we have been having trouble with.

The CHAIRMAN. Okay. And I have heard this before, so basically there is a template for—that doesn't allow the consumer to make the choice between broadband and voice, that they just kind of are packaged up together, is that correct?

Mr. ZIMMERMAN. That is right. They make the Universal Service support to the company based on the voice side only, not the broadband. And people have gone, the voice has gone to wireless if it is available. And it is not available in all areas as we know, but if it is, that is where the voice traffic has migrated to, to tie the support to these rural areas to get broadband to voice is just an antiquated part of the system, and it is a detriment because people will not pay the added expense of having a telephone line. They don't want it, and in most places they don't need it.

The CHAIRMAN. Okay. Thank you. Mr. Cohen, your testimony highlighted the differences in large and small telecom providers and mentioned several of the FCC reforms which impact them separately. Do you feel that the FCC is sufficiently taking into account the impact on smaller providers?

Mr. COHEN. The FCC is taking into account the impact on small providers, but unfortunately, their timing is behind that of the impact on large providers so that there is a Universal Service mechanism designed and implemented for the large providers. As I mentioned in my testimony, at the beginning of 2015, they will be able to elect whether to receive CAF II funding. After that the remaining CAF II funding in the areas not elected will be open to all comers.

On the small-company side, the small companies, as Mr. Zimmerman mentioned, are still dealing with the Universal Service mechanism that was made and designed for the voice era, and now we are in the broadband era. And so the FCC needs to both address the issue of broadband-only lines, as Mr. Zimmerman pointed out, and ensure that they receive support but also modernize the Universal Service program for small companies so that he can have a predictable source of revenue from Universal Service which will enable them to plan, borrow from RUS and other lenders, and invest in broadband to extend and improve the availability of that service in rural America.

The CHAIRMAN. Thank you, Mr. Cohen. Mr. Hance, your cooperative and others like it pretty much are the tip of the spear in broadband, and that is kind of how you want to lead the charge. How do you choose which areas make the most sense for you to serve?

Mr. HANCE. The best way to answer that question is to say each of the co-ops are taking their own projects under their own advisement, and the way most of us are approaching it and not speaking for everyone is trying to concentrate on those areas where we have the highest concentration of meters. It is hard to say in the landscape that we serve. We, at our system, serve about nine members per mile line. In our most dense areas it might be up towards 15. So we concentrate on those areas where we have the best opportunity to get the most dense first, with the idea that we will reach out to all of our members eventually.

The CHAIRMAN. Thank you. Mr. Guttman-McCabe, you mentioned the shift away from landline subscriptions to wireless solutions. Can you talk a little bit more about how the wireless and backhaul networks are connected and what it takes to expand both wireline and wireless coverage?

Mr. GUTTMAN-MCCABE. Certainly, Mr. Chairman, and at the core of my testimony is the notion that the country is evolving pretty significantly as we speak. More and more people are moving to wireless only. More and more people are using wireless as their access point to the Internet. We are hearing more stories about mHealth, mobile health and mobile education, and part of our concern is that we are not entirely sure that the government programs are aware or at least take into consideration this evolution. At the same time that the FCC is reforming its USF fund, its Universal Service Fund, it is significantly reducing the amount of money that goes to mobile broadband. And for us, yes, there certainly is an integration between the use of mobile broadband and backhaul, but we believe that whether it is the RUS programs or the Connect America Fund Phase II that there needs to be some technology neutrality that allows consumers in essence to make the choice. If there is enough need or desire in an unserved market for wireless service, then the providers in those areas should be able to get access to these funds, particularly as we see this evolution. I am fearful that we are going to continue to miss what is becoming just such a tremendous tidal wave of change in the United States towards mobile use. Mobile broadband doubled in size for the fourth year in a row, mobile broadband usage, the amount of megabits of usage and it is sort of outpacing all the predictions of 5 years ago

of where it was going to be. And I am fearful that some of the programs that we are talking about today, whether it is the RUS Loan Program or the Connect America Fund Phase II or even the Mobility Fund where the Commission is contemplating taking a mobility fund that went from north of a billion down to $500 million. They are contemplating reducing that even further. And I am sure you have areas, particularly road miles in your districts, that aren't served that could use some—the carriers in those areas could use some support. Our carriers are working hard to get their large and small markets, but having a technology-neutral program, set-up programs, would really help to facilitate both again the intersection of broadband backhaul from the wired constituents as well as wireless broadband service from my constituents.

The CHAIRMAN. Thank you. I now recognize the Ranking Member for 5 minutes.

Mr. COSTA. Yes. Thank you, Mr. Chairman. Mr. Guttman-McCabe, I listened carefully to your final comments, sir. Are you saying that you think that the Connect America Fund creates an unlevel playing field as it relates to——

Mr. GUTTMAN-MCCABE. Certainly at least as it is being considered. There are some concerns we have with some of either the latency requirements or the requirements on the size or the amount of capacity that a company that receives the funds has to deliver that doesn't recognize the technology differences with a mobile network.

Mr. COSTA. And you can substantiate that?

Mr. GUTTMAN-MCCABE. Well, I mean, certainly we have put on the record some of those concerns, and again, we are putting them on again on the record very soon.

Mr. COSTA. Mr. Cohen, can you clarify what you think you believe that the Connect America Fund should play in providing subsidies for broadband as we try to expand deployment throughout rural America?

Mr. COHEN. Yes, the Connect America Fund is designed to provide support for areas that make no economic sense without some support. Congress has indicated to the FCC that they wanted the budget for that fund unlimited. The FCC limited that budget to $4.5 billion per year. The FCC is very carefully allocating those funds. They are ensuring that they go to provide the type of services that——

Mr. COSTA. And so your assessment, how do you think that is all working?

Mr. COHEN. Well, right now we are still in the implementation stage of the portion of the fund for price-cap areas, and that is moving along, and we will see over the next 12 months how CAF II is implemented which will provide that election for the price-cap carriers and then the subsequent auction. The areas served by——

Mr. COSTA. So a lot of time——

Mr. COHEN.—the small companies, the rate-of-return carriers, unfortunately the Connect America Fund has not really been designed for them for broadband.

Mr. COSTA. And so then you think that is a gap?

Mr. COHEN. Absolutely. The FCC needs to promptly move along and support broadband-only lines and develop a predictable broadband-oriented program for small companies.

Mr. COSTA. And you talked a lot about in your testimony the price-cap carriers——

Mr. COHEN. Yes.

Mr. COSTA.—and how it is across the country impacting on a state-by-state basis. So if a state's service area goes to an auction process, this can pretty much go to any geographical area?

Mr. COHEN. Yes. The price-cap carrier in a particular state presumably by the end of the year, which the FCC has indicated that is their schedule——

Mr. COSTA. Are you concerned that there may be cherry-picking as a result of that?

Mr. COHEN. Well, no. The price-cap companies will be offered an election to elect the state as a whole their entire service area in a state to receive support. If they decide not to elect that funding, that area is opened up to an auction, and various providers of any sort can bid to provide service in particular areas in the state.

Mr. COSTA. Do you think the FCC should reconsider how Phase II should work and whether or not those who are participating in the right of first refusal or whether or not that should be skipped altogether?

Mr. COHEN. The FCC made the considered decision to accelerate broadband to rural consumers who have waited in many instances a very long time for it by providing for the right of first refusal which allows the price-cap carriers that have facilities in these rural areas to add onto those facilities and improve those facilities to be able to provide broadband. But they also provided a competitive opportunity for others in areas where the price-cap companies do not elect to accept the CAF II money and the obligations to anybody else to apply in the auction, to bid in the auction.

Mr. COSTA. Do you think the FCC has dragged its feet in this area? I hear it has taken over 3 years.

Mr. COHEN. Certainly the process has taken longer than anybody, including the FCC, has anticipated. But it appears that we are now reaching the conclusion of the process, and money should be flowing next year.

Mr. COSTA. So are you hopeful?

Mr. COHEN. I am very hopeful that the Commission will continue their prompt implementation of the CAF II Program, and rural consumers will soon be receiving the benefits of broadband service.

Mr. COSTA. The ultimate goal, universal broadband?

Mr. COHEN. Absolutely.

Mr. COSTA. Thank you.

The CHAIRMAN. I thank the gentleman. Now I recognize the gentleman from Pennsylvania for 5 minutes. Mr. Thompson, you are recognized.

Mr. THOMPSON. Mr. Chairman, thank you so much. Thanks for putting this Subcommittee hearing together, incredibly important issue. Recently I had the opportunity to be with a group, a coalition of folks who, every 2 years, publish the *Why Rural Matters* study, it is just a great study. And it was interesting to see the fact that we are actually growing the number of youth in rural American

with this last biannual report. They have been doing it for some time now, about 13 years or more. But this past report that covers the past 2 years shows rural youth increasing proportionately higher than in urban America. And between that and the economic impact, I mean, the importance of this hearing is so significant, obviously, providing access to broadband. To all four of the witnesses, thank you, gentlemen, for your respective areas of leadership and expertise.

I want to start with Mr. Zimmerman. In your testimony, you at one point discussed how rural telecom has been at the forefront of innovation, specifically in terms of converting to digital systems and now to wireless networks. With technology costs evolving so quickly, what kinds of impacts, either challenges or benefits, has this continued technological innovation had on rural access, development, and infrastructure and also any thoughts on what we may see for future innovations?

Mr. ZIMMERMAN. Yes, sir. One of the big changes is to be able to get the increasing levels of broadband out to the rural areas. We have been able to get DSL speeds which is basically 1.5 Meg to 98 percent of our territory. That is increasingly being seen as not enough or insufficient, and one of the things that we struggle with is to be able to upgrade these networks. And one of the bottlenecks have been we are geographically isolated, and the way to get to the backbone of the Internet has basically been through larger carriers such as AT&T or Century to get traffic out of those rural areas to the backbone, and a lot of times we had trouble getting the capacity we needed. So we have gone out on our own with the help of RUS to build some fiber networks of our own so we could connect to the backbone ourselves. So that has been one of the best things that we have been able to get done and one of the things we continue to work on to expand the capacity because the needs keep going up.

Mr. THOMPSON. I know it is a crystal ball, but innovation continues, obviously in particular this area. I open up this question to the panel. Any thoughts of what innovations we may see next coming out that will help to increase cost-effective access?

Mr. GUTTMAN-MCCABE. Well, I guess I will dive first, Congressman. You know, we are seeing deployment of LTE which is our fourth-generation technology happening at a rate that far surpasses the other evolution or introductions of our technologies. And what that is doing is opening up the doors to a range of services that I don't think any of us could contemplate. I wrote a law review article on telemedicine 18 years ago. I wouldn't have guessed that most of the evolution in telemedicine would be in mobile health and that some of the technologies to deal with long-term health problems would be happening in rural areas.

One of our rural providers, one of our regional providers serves through Wisconsin and some of the really rural areas in there, and they are one of the leaders on putting together mobile health solutions for diabetics.

So we are seeing these sort of capabilities that are flowing from next-generation technologies, next-generation networks that we couldn't have thought, whether it is—I did a search on apps for ag-

riculture, and I just saw the top 14 apps of 2014 and it is pretty staggering what those apps can do.

And so whether it is across agriculture or education or mobile health or banking, I mean, this sort of can go on and on. The things that are happening in the mobile broadband space are really life-altering and pretty staggering considering where we were 5 years ago.

Mr. THOMPSON. And just to follow-up to one of your testimony, you had stated in your testimony—because consumer preference, not government fiat should guide the network deployment decisions. You know, what actions do you think just—we are just about out of time—what actions do you think should be taken to ensure that we allow the markets to work their will?

Mr. GUTTMAN-MCCABE. If we look at USF as an example, setting a framework or parameters that don't out of the gate foreclose mobile access would be key. So if you choose latency or sort of the total capability in terms of the amount of megabits that can be delivered in a month and those are not capable on wireless networks, you foreclosed wireless providers, large, small, urban, rural, from getting access to those funds. That is a simple one, recognizing that wireless is different, that there are significant benefits to the ability to have mobility, benefits to having greater capacity and greater throughput of a landline service as well, but there are real benefits to mobility and consumers are making that choice all the time.

Mr. THOMPSON. Thank you. Thank you, Mr. Chairman.

The CHAIRMAN. The gentleman's time has expired. I thank the gentleman, and I recognize the gentlelady from New Mexico, Ms. Lujan Grisham for 5 minutes.

Ms. LUJAN GRISHAM. Thank you, Mr. Chairman. Good morning, everyone. Mr. Zimmerman, as a representative from a very rural state, I certainly understand the challenges in providing services to rural areas, and I experienced these firsthand. My notes say Secretary of Health, but I served in state government for 17 years and was responsible for aging and disability services and then also all of the public health services. And part of the problem in getting out our direct services and providing access was certainly making sure that we had broadband Internet access, and it is something that rural and frontier states still really struggle with today. And I am just going to sort of give you some facts. We know that 77 percent of rural counties face a serious shortage of health professionals and an even greater shortage of medical specialists. This means that 51 million Americans that live in rural America must travel greater distances, face longer waits, and usually spend more money than people in urban areas for the same care.

So in New Mexico, to combat this trend, a gentleman by the name of Dr. Sanjeev Aurora, a professor at the University of New Mexico, created a project, a program called ECHO, and it stands for the Extension for Community Health Outcomes. And what it does is it provides specialty care to rural residents by connecting their primary care docs with specialists. In this way folks with very specific and significant disease issues can get access using telehealth or telemedicine.

Now it was created in 2003. Since then it has expanded to more than 30 universities across the country, and it currently provides

assistance to thousands of clinics all over the world. But it is continuing to provide directly—its impact is focused in New Mexico, this model. The problem is, it is still, after 2003, there are several areas that we cannot reach. We don't have the broadband needed to attach a project or a program like ECHO to, say, Indian Country or the most remote rural communities.

Higher broadband speeds are needed for telemedicine, as you know, because, two things. Only 51 percent of the population has access to broadband download speeds of at least 25 Megabits as compared to 94 percent of the urban population. But frankly, more importantly, in telemedicine, if you don't have broadband, you cannot view most of the diagnostics that are really enhanced and needed in order to have that relationship between your medical practitioners between a rural and frontier area and your urban area where you are connecting the health professionals for the benefit of the rural patient.

How can policymakers better support small, rural providers in not only deploying broadband in rural communities but also making sure that that service can support projects like the one I described to you, New Mexico ECHO, and telemedicine in a broader fashion?

Mr. ZIMMERMAN. Well, one of the oddities of this whole process was that many of the rate-of-return carriers like myself were able to get a high level of coverage at a basic speed like I mentioned earlier before of 1.5, and then when the 2011 Order came out, the talk was that the urban areas should have 100 meg up and 100 down and that the rural areas should only be able to do 4 meg down and 1 meg up. And that was just a terrible thing to tell people in the rural areas, that you should be happy with what you have now but the urban areas are going to get the big, fast speeds. And that has been a big issue for us all along, that small companies have done a good job of getting some basic coverage out there to which we continue to beef up, and it seems like the regulation going on now is more towards the price-cap carriers to let them get some areas that are not covered caught up with. But we don't think areas like rural New Mexico where my aunt lives in Ruidoso or Arkansas, where I live, should be left out——

Ms. LUJAN GRISHAM. Ruidoso is a big city, sir, big, huge city.

Mr. ZIMMERMAN. Big city?

Ms. LUJAN GRISHAM. Yes, sir.

Mr. ZIMMERMAN. Well, my other aunt lives in Artesia. That is a little bit smaller.

Ms. LUJAN GRISHAM. I don't know. Until you have been to Huerfano or Pie Town, I am not sure. You are still talking about big cities.

Mr. ZIMMERMAN. Okay. Okay. Well, I thought I had a shot there.

Ms. LUJAN GRISHAM. And I appreciate that, but where I am struggling, Mr. Chairman, and with the panel—I appreciate everyone's presence today—is that what we are currently using isn't enough to incentivize and develop broadband high-speed access in the places that we really need it. And without it, not only are we not investing appropriately in the ag community but broader in things like—and we are spending those and paying for those in USDA, appropriations and grants—but telemedicine can't be con-

nected where we want it to because it can only do the counseling services, Mr. Chairman. It can't do the diagnostic aspects unless we find a way to have broad-based coverage.

I really challenge us to find those appropriate incentives and balances to make this really accessible across the country.

The CHAIRMAN. I thank the gentlelady.

Ms. LUJAN GRISHAM. I yield back.

The CHAIRMAN. And the gentlelady yields. I am pleased to recognize the gentleman from Alabama, Mr. Rogers, for 5 minutes.

Mr. ROGERS. Thank you, Mr. Chairman. Mr. Zimmerman, you indicated in your earlier testimony that you are currently using 10 Gigabyte network. In the recent farm bill, a provision was included to create a pilot program to accomplish that same goal. Do you still think we need that pilot program to go forward?

Mr. ZIMMERMAN. Absolutely.

Mr. ROGERS. Also under the Recovery—tell me why.

Mr. ZIMMERMAN. Well, I think that is where the backbone needs to be. We have big areas of Arkansas that need to be connected that have been connected through a B Top Grant to connect the 4 year and 2 year colleges and the health centers, and that is where the 10 gigabyte network is to connect the big data centers.

As far as getting out into rural mom-and-pop homes, we don't need 10 gigabytes out there whatsoever. But to be able to get these isolated parts of Arkansas or perhaps Alabama, to get them the network capacity to feed the entire neighborhood or the entire district, you need to have a big pipe going out of there that needs to be able to have that capacity.

Mr. ROGERS. I like that perhaps Alabama part.

Mr. ZIMMERMAN. Perhaps. Not necessarily.

Mr. ROGERS. I think it should be Alabama, perhaps Arkansas. That would be good.

Mr. ZIMMERMAN. Okay.

Mr. ROGERS. In the Recovery Act, USDA obligated $3.4 billion at a rate of over $17,000 per line. Can you share your experiences expanding networks and how that basic average compares to the cost you have faced connecting these networks?

Mr. ZIMMERMAN. What was the top number you had?

Mr. ROGERS. It was $3.4 billion.

Mr. ZIMMERMAN. No, I meant per line.

Mr. ROGERS. It was $17,000 per line.

Mr. ZIMMERMAN. Okay. That must be in rural Alaska somewhere because that is really, really high. Obviously the cost to maintain what is called the local loop from our office to somewhere way out in the county is going to be high. In Arkansas, probably in the $80 to $150 per loop cost, and again, we have rates of about $14. People would never pay that kind of rate to pay $80 to $130. So it has always been—there has been support to make the rural customers have comparable services at comparable rates, and that has been in the law since the Communications Act of 1934. So it is very important.

Mr. ROGERS. Well, talking about making these connections, geographic challenges such as hard soil and rough terrain can inhibit the build-out of these networks. How do you overcome those in your experience?

Mr. ZIMMERMAN. Rock hammers.

Mr. ROGERS. What was that?

Mr. ZIMMERMAN. Rock hammers. If when we put in fiber, we don't want to put it up in the air because we have tornados, we have ice storms, and utilities up in the air are very, very vulnerable to weather. So we have gone in and buried these fibers. In north Arkansas, the rock is about 6″ to 18″ above the surface, and you have to rock tile that thing in and it is a very expensive project to do.

Mr. ROGERS. How hard is it to maintain given that difficulty?

Mr. ZIMMERMAN. Luckily being buried and put in conduit, it is pretty protected there. And we have networks that we can trace where the problem is if something gets cut. We had a funny thing happen in Mountain View, Arkansas. A farmer had a dog die. Took his backhoe out to bury the dog, cut our fiber, and we couldn't find where it was. And you have those kind of strange things happen to buried fiber, but it is not as vulnerable as something up in the air.

Mr. ROGERS. He really wanted to bury that dog if he had to use a rock hammer.

Mr. ZIMMERMAN. That is right.

Mr. ROGERS. Thank you, Mr. Chairman. I yield back.

The CHAIRMAN. I thank the gentleman. I appreciate the panel for being here today. We are going to close and wrap up. Before we do, I want to thank Ms. Lujan Grisham. She is filling in for the Ranking Member who has departed to participate in another committee hearing.

And just in closing before we dismiss, I just want to again thank you. And it seemed like the recurring theme in your oral testimony was the USF issue and bringing that sort of modernizing that, bringing it into the modern age. That is safe to say? I think all four of you referred to that in some detail in each of your opening comments. And so we will work hard on that among the other issues that you have detailed. We appreciate you being here.

I would also like to say that under the rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any questions posed by a Member of the Subcommittee on Livestock, Rural Development, and Credit. The hearing is now adjourned.

[Whereupon, at 11:38 a.m., the Subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUPPLEMENTARY INFORMATION SUBMITTED BY JOHN C. PADALINO, ADMINISTRATOR, RURAL UTILITIES SERVICE, U.S. DEPARTMENT OF AGRICULTURE

Mr. COSTA. So let me make a suggestion. I think that is all good, but the Members of this Subcommittee, and maybe it is something staff could work with the Members of the full Committee, but it would be nice if we had a listing of—I don't know if the number is 255 or whatever you stated earlier—these projects that are currently ongoing so that we could know those that are in our respective Congressional districts, and we could help complement your efforts to say, "Look. You are on a timeline here, and you need to do everything you can to expedite it so that you are able to complete the project," because that would—certainly we would like to know. I don't think any of us would like to find a situation where next March we have our local telephone company calling us and saying, "We are ⅔ done with our project, but we are not going to complete it until August, and they are telling us now we are going to run out of their money. What can you do to help us?"

The CHAIRMAN. If the gentleman would yield, clarification between grants and loans? If we could have that as well on those 255 projects that you mentioned because that clarification would be helpful as well. And if you could make a distinction? I understand a grant is obviously different than a loan, but are we going to see that funding unavailable for loans that have already been made as well, or can they reapply at some point if in fact they didn't meet that timeline?

Mr. PADALINO. I thank you for your offer, and we really appreciate the assistance and will be happy to work with the staff on providing that information.

Per Mr. Costa and Mr. Crawford's requests at the hearing, I am attaching two items that should be useful and informative. The first is a 2011 BIP award report (*Advancing Broadband—A Foundation for Strong Rural Communities,* January 2011). Though it is from 2011, it contains all the relevant info on the awards, which is what Mr. Crawford was looking for, and it contains a good description of each. In addition, I am also attaching an excel sheet that lists out the projects, total award, total project budget, and status.

ATTACHMENT 1

United States Department of Agriculture

Broadband Initiatives Program | Awards Report

Advancing Broadband—A Foundation for Strong Rural Communities

January 2011

Contents

Message from the Administrator

The U.S. Department of Agriculture's (USDA) Rural Utilities Service (RUS) is the Federal leader in delivering key utilities systems—telecommunications, electricity, water and wastewater, and now 21st century high-speed broadband services—to remote underserved and unserved communities in rural America. Now, in expanding 21st century high-speed broadband services to farms, schools, public safety facilities, and other institutions in rural communities, the impact of RUS initiatives will be experienced more broadly across the country.

Beginning in 1935, RUS's predecessor, the Rural Electrification Administration, helped bring electricity to rural America and was the driving force behind telephone service being introduced in the same remote areas, starting in 1949.

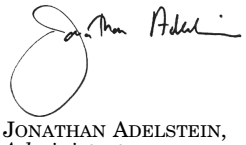
Since 1994, RUS required federally funded telecommunications projects to be broadband capable. In 2002, Congress created a broadband loan program to pave the way for an Internet infrastructure of the future. With the American Recovery and Reinvestment Act of 2009, RUS assumed a leading role in stimulating the economy, creating jobs, and bringing opportunity to rural Americans by investing more than $3.5 billion to expand broadband networks that will close the digital divide be-

tween rural and urban communities. The Recovery Act also invested $3.27 billion in rural water and waste disposal systems to further bolster rural infrastructure.

RUS is applying its extensive technical skills, program experience, and financial expertise gained over 75 years to the new challenge of deploying the most advanced broadband capability in rural communities. USDA Secretary Tom Vilsack has recognized broadband as a pillar of his strategy to revitalize rural America. Since passage of the Recovery Act, in collaboration with the U.S. Department of Commerce and other Federal agencies, RUS has ensured valuable resources are distributed effectively and efficiently, as Congress intended.

In September 2010, RUS completed the awards phase of the Broadband Initiatives Program (BIP). This report summarizes the BIP awards made to advance congressional directives and confirms the Obama Administration's commitment to improving rural connectivity and enhancing the quality of life for rural families and businesses. These investments in broadband will connect nearly 7 million rural Americans, along with more than 360,000 businesses and more than 30,000 critical community institutions like schools, healthcare facilities, and public safety agencies, to new or improved service.

These investments not only will benefit rural areas, but also will contribute to our economic growth as a Nation. Through this program, RUS is generating urgently needed jobs to construct these new networks. Once built, they will provide the platform for economic development and job creation for years to come.



JONATHAN ADELSTEIN,
Administrator,
Rural Utilities Service.

Investing in Rural America

Rural areas with dispersed populations or demanding terrain generally have difficulty attracting broadband service providers because the fixed cost of delivering broadband service can be too high. Yet broadband is a key to economic growth. For rural businesses, broadband gives access to national and international markets and enables new, small, and home-based businesses to thrive. Broadband access provides rural residents with the connectivity they need to obtain healthcare, education, and many essential goods and services.

The Recovery Act authorized RUS to issue loans and grants to projects that extend broadband service to unserved and underserved rural areas. The funding provided by the Recovery Act is increasing the availability of broadband and stimulating both short- and long-term economic progress. RUS completed two BIP funding rounds, making a significant investment in projects that will enhance broadband infrastructure in scores of rural communities.

This represents a critical investment, designed to rebuild and revitalize rural communities. Without this funding, many communities could not cover the costs of providing broadband service to homes, schools, libraries, healthcare providers, colleges, and other anchor institutions.

Project Type	Number of Projects	Grants	Loans	Total Awards
Infrastructure	297	$2,233,862,109	$1,191,844,578	$3,425,706,687
Satellite	4	$100,000,000	$0	$100,000,000
Technical Assistance	19	$3,384,202	$0	$3,384,202
Total Awards	**320**	**$2,337,246,311**	**$1,191,844,578**	**$3,529,090,889**

Infrastructure Awards

RUS awarded $3.4 billion to 297 recipients in 45 States and 1 U.S. territory for infrastructure projects. Eighty-nine percent of the awards and 92 percent of the total dollars awarded are for 285 last-mile projects ($3.25 billion), which will provide broadband service to households and other end users. Four percent of the awards and 5 percent of the total dollars awarded are for 12 middle-mile projects ($173 million) that will provide necessary backbone services such as interoffice transport, backhaul, Internet connectivity, or special access to rural areas.

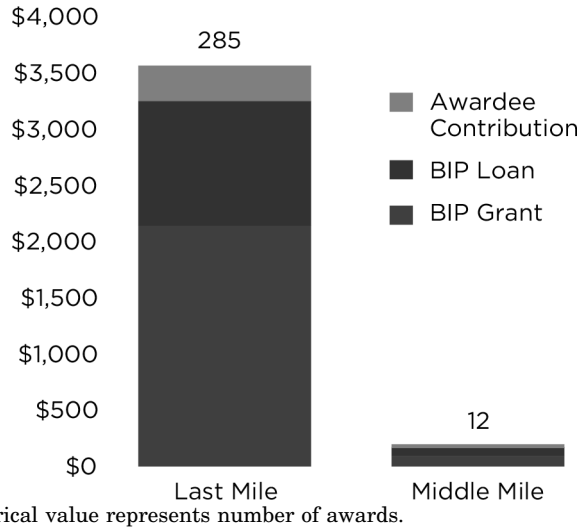
The projects funded will bring broadband service to 2.8 million households, reaching nearly 7 million people, 364,000 businesses, and 32,000 anchor institutions

across more than 300,000 square miles. These projects also overlap with 31 tribal lands and 124 persistent poverty counties.

The projects will create more than 25,000 immediate and direct jobs. Although the long-term impact these projects will have on fostering job creation in these communities is difficult to estimate, the projects are expected to contribute to the long-term economic development opportunities in each rural community where a broadband project is launched. Data provided by the U.S. Department of Education show that more than 1 million K–12 students attend school within areas served by BIP awards. More than 100 colleges and technical schools are located in areas served by BIP awards. Data provided by the U.S. Department of Health and Human Services show that nearly 600 rural healthcare facilities are located in areas served by BIP awards. Sixtyfive (11 percent) of these facilities will receive broadband for the first time as a result of BIP.

BIP Awards and Awardee Contribution

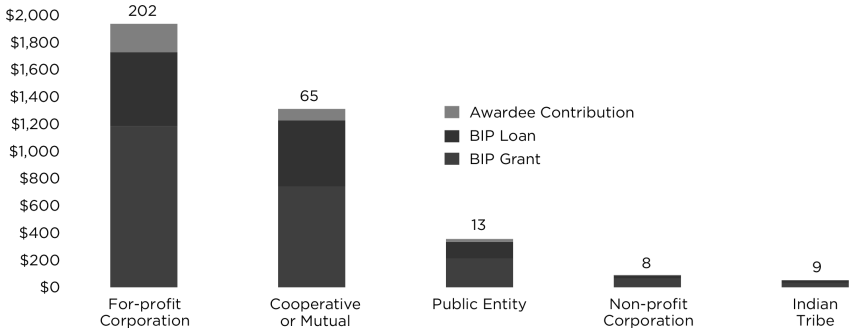
in millions



Numerical value represents number of awards.

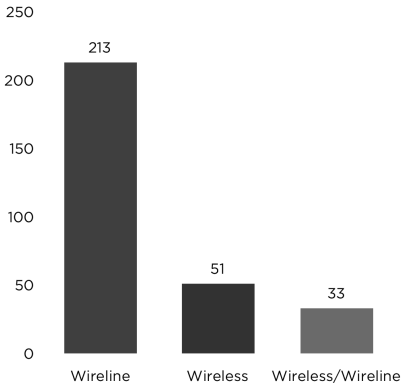
BIP Awards and Awardee Contribution by Entity Type

in millions



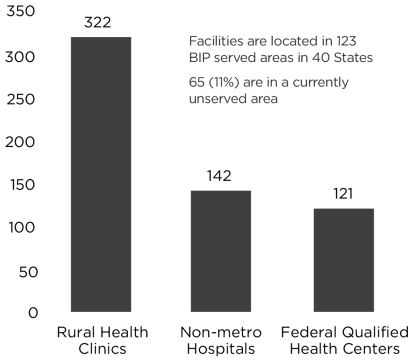
Numerical value represents number of awards.

BIP Technology Type
number of projects



Numerical value represents number of awards.

BIP Awards Serve Nearly 600 Rural Healthcare Facilities
number of facilities

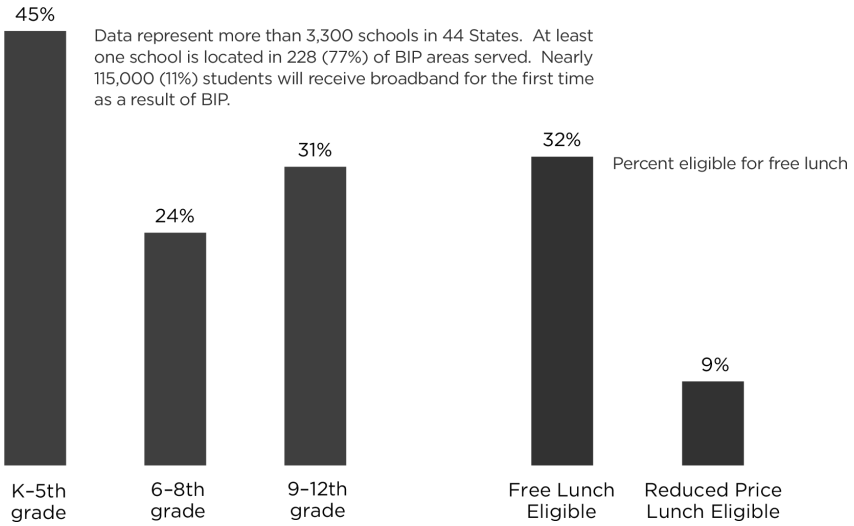


Numerical value represents number of awards.

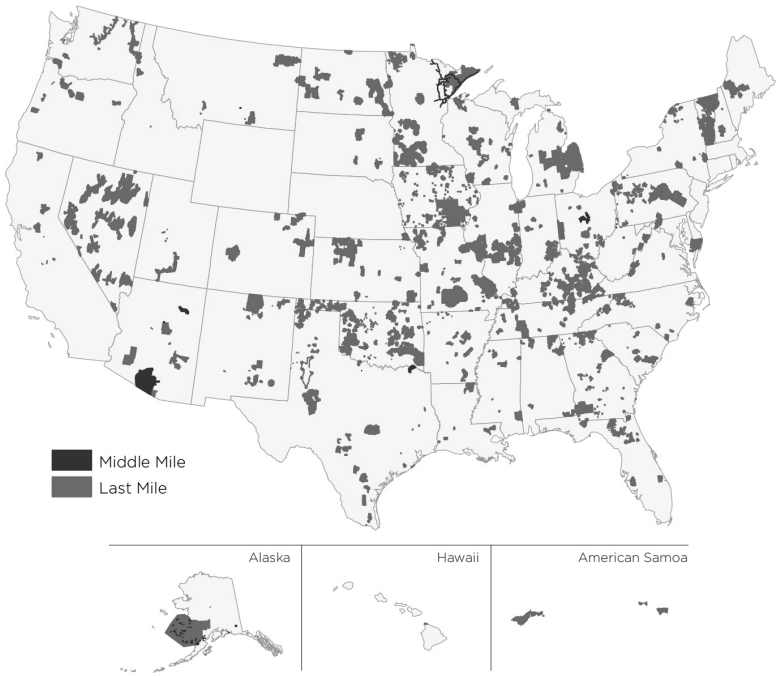
Source: U.S. Department of Health and Human Services.

More Than 1 Million K–12 Students Attend School Within Areas Served by BIP Awards

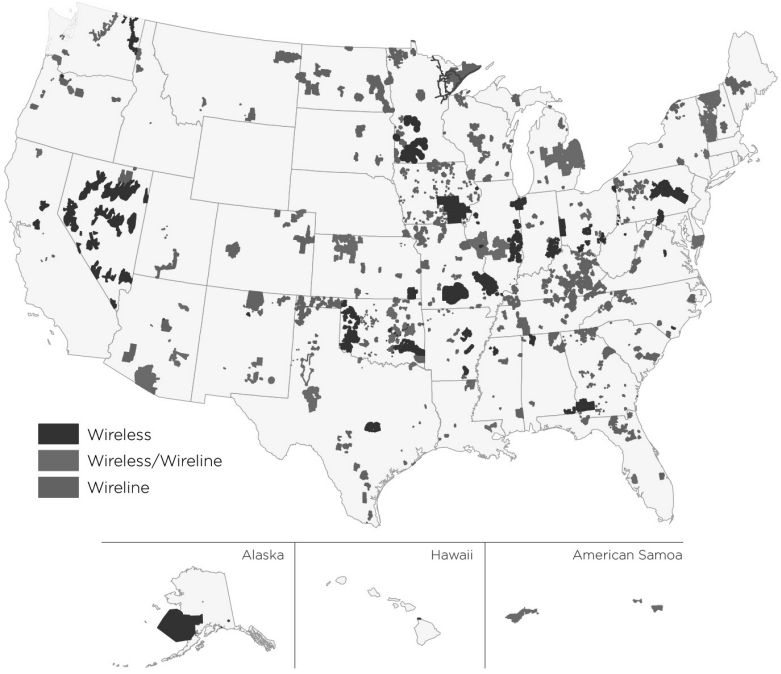
percent of school children



BIP Awards by Project Type



BIP Awards by Technology Type



Satellite Awards

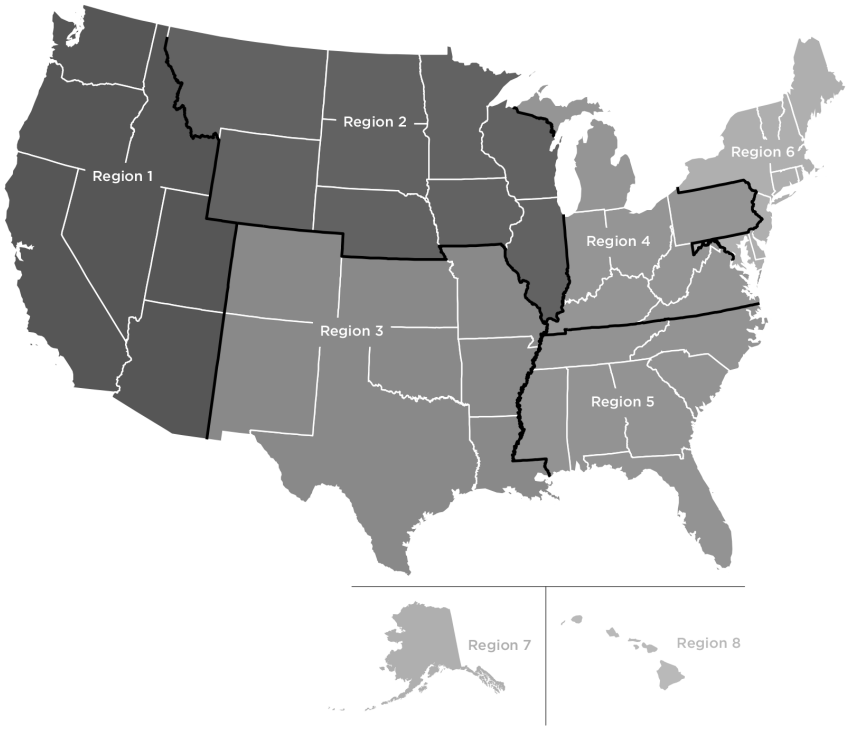
RUS funded additional BIP awards through the Satellite Grant Program.

The Satellite Grant Program made $100 million available through four broadband satellite providers to connect rural premises left unserved by other technologies. These broadband satellite providers are expected to reach nearly 424,000 premises and 10,000 commercial subscribers across the country. Through this funding, these subscribers will receive broadband satellite premises equipment, installation, and activation at no cost to them, as well as discounted service for at least 1 year.

Satellite Awardees

Awardee Name	Regions
EchoStar XI	Regions 4–6
Hughes Network Systems	Regions 1–8
Spacenet, Inc.	Regions 7–8
WildBlue Communications	Regions 1–3

BIP Satellite Regions



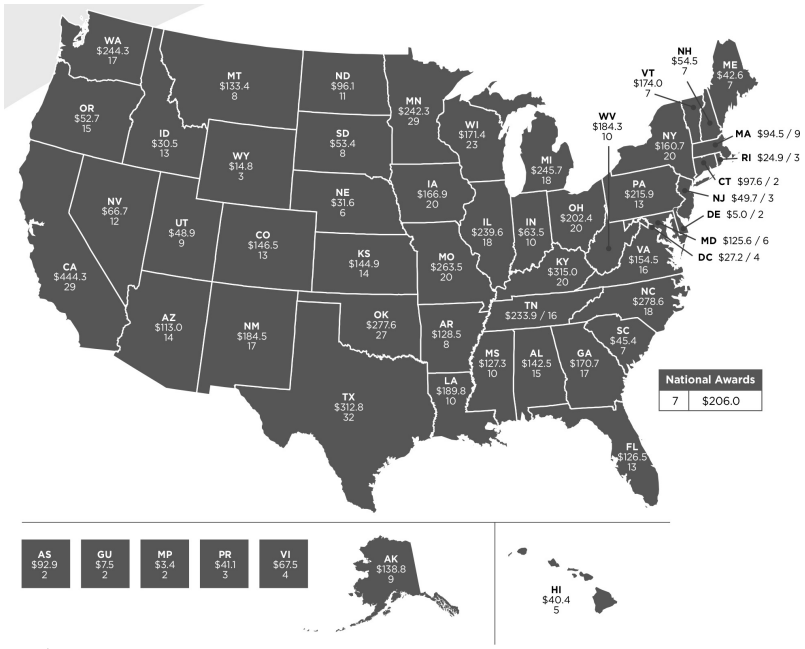
Technical Assistance Awards

RUS funded additional BIP awards through the Technical Assistance Grant Program.

The Technical Assistance Grant Program provides $3.4 million to 19 technical assistance projects to create regional broadband development plans in 13 States. Some of the projects will cross Native American tribal areas. The Technical Assistance Grant Program will provide funding of up to $200,000 to infrastructure award recipients and Indian tribes. These technical assistance grants will support planning efforts that will lay the groundwork for the future development of broadband infrastructure and increased broadband access in rural areas.

Technical Assistance Awardees

Awardee Name	State
Central Council of the Tlingit & Haida Indian Tribes of Alaska	Alaska
Ute Mountain Ute Tribe	Colorado
Shoshone-Bannock Tribes	Idaho
Mille Lacs Band of Ojibwe	Minnesota
Northeast Service Cooperative	Minnesota
Arizona Nevada Tower Corporation	Nevada
Confederated Tribes of the Goshute Reservation	Nevada, Utah
Consolidated Electric Cooperative	Ohio
Benton Ridge Telephone Company	Ohio
Pioneer Long Distance, Inc.	Oklahoma
Cherokee Nation	Oklahoma
Kaw Nation-Kaw Enterprise Development Authority	Oklahoma
Warm Springs Telecommunications Company	Oregon
County of Orangeburg	South Carolina
Lower Brule Sioux Tribe	South Dakota
Sisseton Wahpeton Oyate	South Dakota
Scott County Telephone Cooperative	Virginia
Quinault Indian Nation	Washington
Jamestown S'Klallam Tribe	Washington



$ = Amount (in millions) of all BTOP and BIP awards impacting that State or Territory (note: amount may include the estimated per State share of any BTOP awards that impact multiple States).

= Total number of BTOP and BIP awards impacting that State or Territory.

The combined investments of USDA's BIP and the U.S. Department of Commerce's National Telecommunications and Information Administration Broadband Technology Opportunities Program (BTOP). The funds awarded in each State are the result of the two agency programs authorized by the Recovery Act of 2009.

For additional information on the BTOP awards, visit *http://www2.ntia.doc.gov*.

Industry Standard Terms

ADSL/ADSL2+	Asymmetric Digital Subscriber Line
ASN–GW	Access Service Network Gateway
BLC	Broadband Loop Carrier
BPL	Broadband Over Powerlines
CLEC	Competitive Local Exchange Carrier
CSN	Connectivity Service Network
DLC	Digital Loop Carrier
DOCSIS	Data Over Cable Service Interface Specification
DSL	Digital Subscriber Line
DSLAM	Digital Subscriber Line Access Multiplexer
DWDM	Dense Wavelength Division Multiplexing
FTTH	Fiber-to-the-Home
FTTN	Fiber-to-the-Node
FTTP	Fiber-to-the-Premise
FTTT	Fiber-to-the-Tower
FTTx	Fiber-to-the-x
Gbps	Gigabits Per Second
GHz	Gigahertz
GigE	Gigabit Ethernet
GPON	Gigabit Passive Optical Network
HFC	Hybrid Fiber/Coaxial
Hz	Hertz
ILEC	Incumbent Local Exchange Carrier
IP	Internet Protocol
IPTV	Internet Protocol Television
ITU	International Telecommunication Union
Kbps	Kilobits Per Second
LEC	Local Exchange Carrier
LTE	Long Term Evolution
Mbps	Megabits Per Second
MIMO	Multiple Input Multiple Output
OLT	Optical Line Terminals
OSN	Optical Splitting Network
P2MP	Point-to-Multipoint
PFSA	Proposed Funded Service Area
PON	Passive Optical Network
POP	Point of Presence
POTS	Plain Old Telephone Service
PUD	Public Utility District
RF	Radio Frequency
RFoG	Radio Frequency over Glass
SIP	Service Interface Point
VDSL2	Very-High-Speed Digital Subscriber Line 2
VoIP	Voice over Internet Protocol
WiMAX	Worldwide Interoperability for Microwave Access

Infrastructure Project Summaries

Estimates of jobs created or saved are based on information provided by applicants.

Alabama

Butler Telephone Company, Inc.

Butler Telephone Company, Inc., Project to Serve Rural, Remote, and Unserved Establishments

Last Mile Remote

$3,892,920 Grant

Butler Telephone Company, Inc., a subsidiary of TDS Telecommunications Corp. (TDS Telecom), will provide high-speed DSL broadband service to remote, unserved households within its rural service territory in Alabama. The network will make services available to 462 households, 23 businesses, and 1 anchor institution. The project will create or save an estimated 77 jobs.

National Telephone of Alabama, Inc.

Cherokee Broadband Initiatives Project

Last Mile

$421,578 Loan

$1,264,739 Grant

National Telephone of Alabama, Inc., will deploy ADSL2+ technology to provide the infrastructure necessary for rural subscribers in the Colbert County communities of Barton, Cherokee, and Margerum to access advanced high-speed broadband service. The network will make services available to 1,294 households, 231 businesses, and 8 anchor institutions. The project will create four jobs.

North Alabama Electric Cooperative

North Alabama Remote Rural Broadband Economic Development Initiative

Last Mile

$19,100,909 Grant

North Alabama Electric Cooperative will provide a last-mile FTTH network for high-speed broadband in an underserved rural area in northeast Alabama. North Alabama Electric Cooperative and New Hope Telephone Cooperative, a service provider, are partnering to provide high-speed broadband access to more than 8,048 households, 1,442 businesses, and 53 anchor institutions. North Alabama Electric Cooperative will provide voice, video, and data services to customers over an active GPON using fiber-optic cable and passive and active components. Internet connections will be at 100 Mbps or higher. The project will create or save 51 jobs.

Peoples Telephone Company, Inc.

Peoples Telephone Company, Inc., Broadband Project to Serve Rural Unserved Establishments

Last Mile

$4,163,589 Grant

Peoples Telephone Company, Inc. (Peoples Tel), a subsidiary of TDS Telecom, will build a project to bring high-speed broadband service to unserved premises within Peoples Tel's rural franchise service territory. Peoples Tel is the State-certified ILEC in Alabama. The project will serve 11 PFSAs located within its franchised service territory, which are 100 percent rural and include 11 communities. Within these PFSAs, there are 1,219 premises (1,199 households, 19 businesses, and 1 anchor institution) that have no access to broadband service. Peoples Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 109 jobs.

Utopian Wireless Corporation

Utopian Ashford WiMAX Project

Last Mile

$396,525 Loan

$1,189,575 Grant

Utopian Wireless Corporation will make available advanced 4G wireless broadband service to underserved communities in and around the Ashford area. The PFSA includes the rural areas of Slocomb, Ashford, Hartford, Cottonwood, Webb, and Chancellor. The PFSA covers approximately 9,391 households, 3,848 businesses, and 219 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian Wireless Corporation will deploy a broadband wireless system that features Motorola Mobile WiMAX technology, which offers several advantages over other wireless technologies, including a highly efficient air interface optimized for IP, built-in support for advanced antenna technologies like MIMO, and quality-of-service controls that enable differentiated services and open access. The project will create 10 full-time jobs.

Utopian Wireless Corporation

Utopian Shoals WiMAX Project

Last Mile

$569,679 Loan

$1,709,039 Grant

Utopian Wireless Corporation will make available advanced 4G wireless broadband service to underserved communities in and around the Shoals area. The rural PFSA includes the ZIP code areas of 35645 (Killen), 35652 (Rogersville), 35672 (Town Creek), 35646 (Leighton), and 35618 and covers approximately 11,885 households, 1,731 businesses, and 220 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian Wireless Corporation will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The system solution includes WiMAX access points, wireless and wired backhaul, ASN–GW, CSN, and an IP core that supports authentication and routing of traffic to application servers and the Internet. The project will create 14 full-time jobs.

Alaska

Copper Valley Telephone Cooperative, Inc.

McCarthy Microwave Shot

Middle Mile

$2,613,975 Loan

$2,613,975 Grant

Copper Valley Telephone Cooperative, Inc. (CVTC) will extend terrestrial wireless broadband connectivity to McCarthy, a remote rural community where CVTC is the serving LEC. The project will allow CVTC to transition from a low-bandwidth-capacity satellite link to the proposed high-capacity terrestrial microwave middle-mile service in an area that has no terrestrial connections to outside networks. Currently, all communications in and out of McCarthy utilize earthorbiting satellites. The project will make services available to 26 households, 15 businesses, and 3 anchor institutions that are unserved, creating the potential for increased business growth, public services, public safety, and quality of life for the residents of McCarthy. The project will create 56 jobs.

Copper Valley Wireless, Inc.

Copper Valley Wireless—Cordova, AK, Microwave

Middle Mile

$1,747,796 Loan

$1,747,795 Grant

Copper Valley Wireless, Inc., will extend terrestrial connectivity from Naked Island to Cordova, a remote rural community with voice service provided by the local cooperative. The project will provide access to the interexchange carrier to provide high-speed broadband to residents. The network will make services available to 1,077 households and 10 anchor institutions. The project will create five jobs.

Rivada Sea Lion, LLC

Southwestern Alaska Broadband Rural Expansion (SABRE)

Last Mile Remote

$25,333,240 Grant

Rivada Sea Lion, LLC will deliver low-cost, highspeed broadband and public safety interoperability to the inaccessible communities of southwestern Alaska. The project will dramatically enhance service to homes, businesses, community centers, schools, medical clinics, and public safety organizations. SABRE will use a unique combination of wireless technologies to deliver leading-edge connectivity to the proposed service area. The network will make services available to 8,136 households, 809 businesses, and 128 anchor institutions. The project will create an estimated 60 jobs.

Supervision, Inc.

Farther and Faster

Last Mile Remote

$174,680 Grant

Supervision, Inc.'s Farther and Faster project will provide last-mile cable to deliver broadband capability to homes, businesses, and community facilities in Tanana, a predominantly Alaska Native community located on the Yukon River. The network will make services available to 166 households, 14 businesses, and 5 anchor institutions.

United Utilities, Inc.

TERRA–SW: Terrestrial Broadband in Southwestern Alaska

Middle Mile

$44,158,522 Loan

$43,982,240 Grant

United Utilities, Inc., will provide middle-mile connectivity to 65 communities in southwestern Alaska. These communities span the Bristol Bay and Yukon Kuskokwim regions, an area approximately the size of North Dakota. Connectivity is over a combination of undersea fiber, terrestrial fiber, and microwave links. United Utilities will leverage its DeltaNet network to reduce the total cost of deployment. The network will make services available to 9,100 households, 748 businesses, and 89 anchor institutions. The project will create or save 105 jobs.

American Samoa

American Samoa Telecommunications Authority

Broadband Linking the American Samoa Territory (BLAST) Project

Last Mile Remote

$10,000,000 Loan

$81,034,763 Grant

American Samoa Telecommunications Authority will replace its old, deteriorating legacy copper infrastructure with a more robust and weather-durable fiber-optic network that will link the main islands of American Samoa, making it possible to provide broadband services to every household, business, and anchor institution in the territory. The network will make services available to 9,735 households, 315 businesses, and 106 anchor institutions. The project will create an estimated 2,000 jobs.

Arizona

Arizona Telephone Company

Arizona Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$4,014,808 Grant

Arizona Telephone Company (Arizona Tel) will bring high-speed broadband service to unserved premises in its rural franchise service territory. Arizona Tel, a subsidiary of TDS Telecom, is the State-certified ILEC in Arizona. The project is designed to serve nine PFSAs in its franchised service territory, which is 100 percent rural and includes six communities. In these PFSAs, 608 premises (552 households, 54 businesses, and 2 anchor institutions) currently have no access to broadband service. Arizona Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 106 jobs.

Hopi Telecommunications, Inc.

HTI Jeddito Middle-Mile/Last-Mile Project

Middle Mile

$1,090,471 Loan

$2,544,432 Grant

Hopi Telecommunications, Inc. (HTI) will deploy 61 miles of fiber-optic cable between the community of Jeddito in its service area and the Frontier Communications POP in Holbrook. In addition to this fiber build-out, a last-mile component will provide broadband service to currently unserved subscribers around the communities of Jeddito and Spider Mound. HTI will serve these subscribers using wireless P2MP WiMAX access equipment. As the middle-mile component is the predominant part of the proposed system, this project is classified as a middle-mile project. The network will make services available to 2,734 households, 26 businesses, and 22 anchor institutions. The project will create 18 jobs.

J.C. Cullen, Inc.

Northern Arizona Data/Internet Network Extension (NADINE)

Middle Mile

$2,204,230 Grant

J.C. Cullen, Inc., will implement the NADINE project to provide broadband service speeds of up to 300 Mbps in rural areas of the Havasupai Reservation and two scientific research facilities. The project will use licensed microwave radios with hot

standby units. The project also includes a monitoring system located at an existing operation center and the utilization of five existing mountaintop communications sites for backhaul repeater locations. The network will make services available to 2,330 households, 8 businesses, and 20 anchor institutions. The project will create or save 22 jobs.

Midvale Telephone Exchange, Inc.

MTE Last Mile Broadband Connections Initiative Henderson Service Area

Last Mile

$334,924 Loan

$781,488 Grant

Midvale Telephone Exchange, Inc., will offer last-mile broadband service speeds of at least 20 Mbps in the Prescott Prairie, Mingus Meadows, and Mingus Mountain areas of Henderson Valley using FTTH technology. The network will make services available to 117 households and 981 businesses. The project will create or save 10 jobs.

Midvale Telephone Exchange, Inc.

MTE Last Mile Broadband Connections Initiative Young Service Area

Last Mile

$644,045 Loan

$1,502,769 Grant

Midvale Telephone Exchange, Inc., will implement the Last Mile Broadband Connections Initiative Young Service Area project to provide service with a minimum of 20 Mbps in rural areas of the Young exchange. The project will use FTTH technology, and will facilitate public safety training, improved access to urban medical care centers, educational access, and expanded access to urban library services. The network will make services available to 236 households, 14 businesses, and 1 anchor institution. The project will create or save 10 jobs.

San Carlos Apache Telecommunications Utility, Inc.

San Carlos Apache Telecommunications, Inc. Broadband Offering

Last Mile

$5,244,585 Loan

$5,244,585 Grant

San Carlos Apache Telecommunications Utility, Inc. (SCATUI) will provide FTTP services to two areas within its serving areas on the San Carlos Apache Reservation. In the Bylas PFSA, residents currently are being compelled to relocate their homes to a different area due to uncontrollable circumstances. This grant is crucial to providing these customers with broadband Internet and phone service. Within the San Carlos service area, FTTP services will be provided to five new communities, a hospital, and multiple doctor facilities that are currently unserved. In addition, SCATUI will build five new tower sites to provide broadband Internet service for residents and emergency services personnel in very remote areas of the reservation that are also unserved. The network will make services available to 2,377 households, 21 businesses, and 51 anchor institutions. The project will create 63 jobs.

Tohono O'odham Utility Authority

Tohono O'odham Fiber Route—Middle Mile

Middle Mile

$3,565,900 Loan

$3,565,900 Grant

Tohono O'odham Utility Authority (TOUA) will enable high-speed DSL service throughout the entire Tohono O'odham Reservation, with FTTP and fixed wireless broadband in certain areas. This area includes the three telephone exchanges currently owned and operated by TOUA. The network will offer a range of plans, with the most common average broadband service speed supporting 2 Mbps downstream and 512 Kbps upstream. TOUA also plans to offer 1,000 free computers and 6 months of free high-speed Internet service to those in need who can demonstrate an economic development or educational benefit. The network will make services available to 2,307 households and 480 businesses.

Tohono O'odham Utility Authority

Tohono O'odham Last-Mile FTTH and Broadband Wireless Network

Last Mile

$2,576,750 Loan

$7,730,250 Grant

Tohono O'odham Utility Authority (TOUA) will further develop its communications network to improve current conditions in the Tohono O'odham Nation. TOUA was awarded a middle-mile BIP loan and grant (Easygrants ID 1767) in round one. This last-mile project is synergistic with the recently awarded project. Both the middle-mile and lastmile elements are integral to the total broadband solution for the TOUA service area. The middle-mile project allows TOUA to build a strong high-speed transport network that will interconnect all the last-mile nodes in this project. TOUA will leverage its current investment in broadband access BLC equipment to build an extensive FTTH network. In conjunction with the project defined in the middlemile award, this project will extend broadband service to nearly all the unserved and underserved lastmile sections in the entire PFSA Tohono O'odham Reservation. The system will use a combination of fiber-optic technology along with DSL and broadband wireless and will enable service speeds beyond 20 Mbps. TOUA will also offer wireless services from each of its BLC locations. These WiFi areas can be deployed quickly and economically. The project will make services available to 2,711 households, 1,329 businesses, and 60 anchor institutions. The project will create more than 100 jobs.

Arkansas

Crystal Broadband Networks

Crystal Broadband Networks Southeast Arkansas WiMAX System

Last Mile

$1,808,881 Loan

$1,737,945 Grant

Crystal Broadband Networks will provide last-mile broadband service to more than 600 square miles of rural Arkansas. The project will deploy a fixed wireless network utilizing WiMAX technology to offer broadband service speeds of at least 5 Mbps. The network will make services available to 2,399 households, 1,318 businesses, and 13 anchor institutions. The project will create or save 24 jobs.

Northern Arkansas Telephone Company

Northern Arkansas Broadband

Last Mile

$2,569,636 Grant

Northern Arkansas Telephone Company will substantially expand the provision of advanced FTTH and ADSL2+ services via a fiber-optic network with combined speeds exceeding 20 Mbps in Marion and Boone counties in rural north central Arkansas. The network will make services available to 725 households, 70 businesses, and 10 anchor institutions. The project will create 95 jobs.

Utopian Wireless Corporation

Utopian Searcy WiMAX Project

Last Mile

$744,165 Loan

$2,232,496 Grant

Utopian Wireless Corporation will provide wireless broadband service to two rural underserved communities near Searcy. These rural PFSAs cover approximately 19,391 households, 2,050 businesses, and 111 anchor institutions. Using its licensed 2.5G Hz spectrum, Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology that will support 5.0 and 10 MHz channels. The system includes WiMAX access points, wireless and wired backhaul, ASN–GW, CSN, and an IP core that supports authentication and the routing of traffic to application servers and the Internet. Utopian will offer tiered services with an average minimum wireless downlink speed of at least 1.8 Mbps. The project will create 15 jobs.

Windstream Corporation

Windstream Arkansas, LLC

Last Mile

$7,285,202 Grant

Windstream Corporation will expand broadband service to unserved customers in rural areas of Arkansas. With this project, Windstream will extend the reach of its broadband network to make services available to 6,111 households, 339 businesses, and 33 anchor institutions. It will provide broadband to last-mile wireline telephone

subscribers. Windstream will provide broadband service to community and public service facilities in the PFSAs at discounted rate packages for at least 3 years. Windstream will deploy industry standard DSLAM protocols to provide a minimum of 6.0 Mbps downstream and 786 Kbps upstream data services. The DSLAM will be strategically deployed to reach the greatest number of unserved customers over its existing wireline copper plant. The project will create or save 122 jobs.

California

Audeamus

Westside Broadband Project for Rural Central California—San Joaquin, Tranquillity, and West Fresno

Last Mile Non-remote

$2,741,505 Loan

$2,741,505 Grant

Audeamus will build a fiber-based broadband infrastructure for the unserved and underserved communities of San Joaquin and Tranquillity and for a portion of rural west Fresno County. This last-mile project will provide broadband access to approximately 1,352 households, 125 local businesses, and 24 anchor institutions. The project will create or save 93 jobs.

Calaveras Telephone Company

Calaveras Fiber-to-the-Home Broadband Deployment Project

Last Mile

$1,226,093 Loan

$2,860,883 Grant

Calaveras Telephone Company will deploy FTTH technology to increase the availability of broadband service in Poker Flat, an area south of Copperopolis in Calaveras County. The company will bring a robust FTTH infrastructure to its existing customer footprint in Calaveras County. Deployment is based upon an overbuild and expansion of existing exchange areas as well as an increased transport route to the local Internet POP. The project's PFSA, which lies in the Sierra Nevada foothills, has a unique mixture of broadband users that includes remote workers from nearby economic centers like Stockton, Sacramento, and San Francisco. The project will make services available to 409 households and 4 businesses. It includes upgraded transport infrastructure to handle backhaul for existing and new construction areas and effectively expands the company's broadband footprint. To accommodate the varied demographics and subscriber profiles in the served areas, Calaveras will use several service offerings, ranging from 1.5 Mbps to 50 Mbps. The network will incorporate GPON and active fiber infrastructure with existing landline telephone switching. The project will create or save eight jobs.

Cal-Ore Communications, Inc.

North Siskiyou Wireless Broadband

Last Mile

$446,600 Loan

$1,339,800 Grant

Cal-Ore Communications, Inc., and Cal-Ore Telephone Company will cooperate to build and manage a last-mile wireless broadband project to serve north central Siskiyou County. The general mountainous terrain combined with dense stands of juniper trees makes wireless coverage difficult and requires additional radio sites to achieve coverage across the area. The project will also provide IP voice services over a wireless network. The PFSA includes 2,022 households and 365 businesses that are predominantly farms, ranches, and other agricultural entities, and 27 anchor institutions. The project will provide wireless broadband to unserved and underserved communities and enhanced backhaul capacity to neighboring blocks served by Cal-Ore Communications and Cal-Ore Telephone Company. The project will create five jobs.

Ponderosa Cablevision

Millerton Project

Last Mile Non-remote

$1,926,431 Loan

$1,926,431 Grant

Ponderosa Cablevision will deploy FTTP in a 31-square-mile area adjacent to Ponderosa's current service territory. The project will make telemedicine and online

education applications accessible, a true benefit in an area where reaching the closest medical and school facilities requires a 45-minute drive. The network will make services available to 693 households. The project will create or save 34 jobs.

Smarter Broadband

Smarter Broadband Project

Last Mile

$624,681 Loan

$1,874,043 Grant

Smarter Broadband will provide high-speed broadband access to western Nevada County over 435 square miles of rural, mountainous, and wooded territory. Smarter Broadband operates a network of wireless access points spanning multiple towers throughout the PFSA. The company will deliver speeds up to 6 Mbps and more to this largely underserved area. The project will make services available to 14,075 households, 3,581 businesses, and 298 anchor institutions. The project will create 10 jobs.

Softcom Internet Communications, Inc.

Softcom Rural Broadband Expansion Project

Last Mile

$1,689,710 Loan

$5,069,125 Grant

Softcom Internet Communications, Inc., will provide broadband service speeds of 3 Mbps downstream and 1 Mbps upstream to an underserved rural area in Sacramento and San Joaquin counties in north central California. The project will cover 378 square miles and will make services available to 6,001 households, 4,266 businesses, and 5 anchor institutions. The project network is based on Softcom's second-generation wireless platform, a proven platform that has been in operation more than 3 years. The project consists of augmenting and expanding the coverage of this network to provide 100 percent broadband availability throughout the entire service area. The project will create 38 jobs.

Colorado

Delta County Tele-Com, Inc.

Delta County Tele-Com, Inc., Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,826,979 Grant

Delta County Tele-Com, Inc. (Delta County Tel), a subsidiary of TDS Telecom, will provide highspeed broadband service to three 100 percent rural PFSAs with four communities in its service territory. These PFSAs have 540 premises (495 households and 45 businesses) with no access to broadband service. Delta County Tel is the State-certified ILEC in Colorado. As engineered, the network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 48 jobs.

Nunn Telephone Company

Nunn Rural Broadband Project

Last Mile

$1,293,125 Loan

$3,879,375 Grant

Nunn Telephone Company will provide highspeed broadband service to rural residents and businesses in north central Colorado, utilizing FTTH technologies. The network will make services available to 373 households, 191 businesses, and 3 anchor institutions. The project will create 20 jobs.

Peetz Cooperative Telephone Co.

Peetz Last Mile

Last Mile Remote

$756,925 Grant

Peetz Cooperative Telephone Co., will deploy broadband infrastructure in and around the Peetz community using a combination of technologies. This deployment within the remote unserved ranching and agricultural community will create jobs and stimulate economic growth. Anchor institutions within the community will have connectivity to necessary distance learning and public safety applications. A portion of this project will also be implemented in Nebraska. The network will make services available to 254 households, 15 businesses, and 6 anchor institutions. The project will create five jobs.

Plains Cooperative Telephone Association, Inc.

Fiber on the Colorado Plains

Last Mile

$9,475,120 Loan

$1,672,080 Grant

Plains Cooperative Telephone Association, Inc., will offer FTTH broadband service on the eastern plains of Colorado. The project will add 1,000 miles of fiber-optic cable over a 1,974 square-mile area. The network will make services available to 1,096 households, 272 businesses, and 42 anchor institutions. The project will create or save 24 jobs.

Stoneham Cooperative Telephone Corporation

Stoneham FTTH

Last Mile

$234,541 Loan

$1,407,244 Grant

Stoneham Cooperative Telephone Corporation will offer FTTH broadband service in Weld, Logan, and Morgan counties, which consist of rural farming and ranching territory. The network will make services available to 62 households, 9 businesses, and 4 anchor institutions. The project will create or save two jobs.

Wiggins Telephone Association

Weldona-Orchard FTTP

Last Mile Non-remote

$2,168,544 Loan

$2,159,887 Grant

Wiggins Telephone Association will deploy FTTP infrastructure in the Weldona-Orchard area of northeastern Colorado. The network will make services available to 446 households, 40 businesses, and 7 anchor institutions. The project will create nine jobs.

Willard Telephone Company

Willard Telephone Company FTTH

Last Mile

$245,505 Loan

$546,442 Grant

Willard Telephone Company will upgrade its exchange facilities located in western Logan County to offer FTTH to the Willard Community, a non-designated community in northeastern Colorado. The PFSA, mainly farm and ranch land, is so remote that residents do not receive daily newspapers and some residents receive mail service only 3 days a week. The network will make services available to 76 households, 8 businesses, and 3 anchor institutions. The project is expected to create or save 11 jobs.

Florida

Litestream Holdings, LLC

Western St. Lucie County Broadband Expansion

Last Mile

$5,053,427 Grant

Litestream Holdings will extend its existing fiber trunk to serve more than 940 unserved locations in a rural portion of unincorporated St. Lucie County. The PFSA will have access to high-speed Internet, digital voice service, and analog and digital high-definition video services. The project will implement FTTH using RFoG technology that allows seamless end-to-end conversion of traditional coax RF signals over fiberoptic cable. RFoG technology will allow Litestream to leverage its existing 860 MHz RF head-end and DOCSIS-based Internet distribution framework, thus re-

ducing cost. The project will be constructed in four phases across approximately 54 miles of trunk fiber to connect with the existing network infrastructure, 111 miles of lateral fiber, and 72 miles of community fiber. Maximum combined download and upload speeds will exceed 20 Mbps on the maximum tiered level of service offered. The project will create 52 jobs.

Myakka Communications, Inc.

Myakka Communications

Last Mile

$1,963,930 Loan

$5,891,796 Grant

Myakka Communications will deploy a fiber overbuild and expansion of the wireless network of its sister company, Myakka Technologies. The project will serve a rural portion of Florida that has no cable, DSL, or fiber infrastructure. It will serve rural eastern portions of Manatee and Sarasota counties with speeds of up to 20 Mbps. The project will deploy approximately 150 miles of fiber-optic cable and will make services available to 4,150 premises. This overbuild will provide a hybrid, efficient, and economical system of fiber and wireless. The project will create 49 jobs.

Quincy Telephone Company

Quincy Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,145,379 Grant

Quincy Telephone Company will offer broadband service speeds of up to 20 Mbps in Gadsden County, Florida and Decatur County, Georgia. As engineered, the network will deploy Ethernet-over-copper technology and will provide VDSL2 access via FTTN. The network will make services available to 346 households, 12 businesses, and 2 anchor institutions. The project will create or save 30 jobs.

Windstream Corporation

Windstream Florida, Inc.

Last Mile

$38,288,349 Grant

Windstream Corporation will expand broadband service to unserved customers in rural areas of Florida. The project will allow Windstream to extend the reach of its broadband network to make services available to 50,026 households, 4,765 businesses, and 149 anchor institutions. It will provide broadband to last-mile wireline telephone subscribers. Windstream will provide broadband service to community and public service facilities in the PFSAs at discounted rate packages for at least 3 years. Windstream will deploy industry-standard DSLAM protocols to provide a minimum of 6.0 Mbps downstream and 786 Kbps upstream data services. The DSLAM will be strategically deployed to reach the greatest number of unserved customers over its existing wireline copper plant. The project is expected to create an estimated 226 jobs.

Georgia

Blue Ridge Telephone Company

Blue Ridge Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$853,768 Grant

Blue Ridge Telephone Company (Blue Ridge Tel), a subsidiary of TDS Telecom, will build a highspeed broadband network in Georgia in two 100 percent rural PFSAs with three communities. These PFSAs have 368 premises (352 households and 16 businesses) with no access to broadband service. Blue Ridge Tel is the State-certified ILEC in Georgia. As engineered, the network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow future PON upgrades without needing to rebuild the transport routes. The network's target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 22 jobs.

Bulldog Cable Georgia, Inc.

Bulldog Cable—Lake Sinclair System

Last Mile

$2,843,713 Loan

$8,531,138 Grant

Bulldog Cable Georgia, Inc., will offer advanced broadband service speeds of up to 5 Mbps in the area of Lake Sinclair. The project will upgrade 42 miles of cable with new 1 GHz cable and expand an additional 163 miles of new construction for a total of 205 miles of HFC cable. The network will make services available to 5,025 households and 1,369 businesses. The project will create or save 59 jobs.

Darien Telephone Company, Inc.

Broadband Bridge to Sapelo Island

Last Mile

$223,996 Loan

$223,997 Grant

Darien Telephone Company, Inc., will expand high-speed broadband service to Sapelo Island, a barrier island off the coast of Georgia currently without access to high-speed broadband, using FTTH GPON technology. The network will make services available to 240 households, 10 businesses, and 10 anchor institutions and will help drive economic development in the community. The project will create 23 jobs.

Flint Cable TV, Inc.

Flint Digital Wave

Last Mile Non-remote

$4,095,913 Loan

$4,095,913 Grant

Flint Cable TV, Inc., will provide an HFC network to homes in the underserved areas of Culloden, Friendship, and Yatesville in rural central Georgia. This HFC network will use the latest DOCSIS 3.0 cable standard, enabling channel bonding and speeds up to 100 Mbps. The network will make services available to 2,786 households, 22 businesses, and 19 anchor institutions. The project will create 20 jobs.

Quincy Telephone Company

Quincy Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$218,168 Grant

Quincy Telephone Company will offer broadband service speeds of up to 20 Mbps in Gadsden County, Florida and Decatur County, Georgia. As engineered, the network will deploy Ethernet-over-copper technology and will provide VDSL2 access via FTTN. The network will make services available to 66 households and 2 businesses. The project will create or save six jobs.

South Georgia Regional Information Technology Authority

SGRITA Rural Last Mile Infrastructure Project

Last Mile

$6,663,515 Loan

$6,663,515 Grant

South Georgia Regional Information Technology Authority will offer 700 MHz and 2.5 GHz 4G mobile and fixed wireless broadband service in the rural southwest counties of Baker, Calhoun, Early, Miller, and Mitchell. The network will make services available to 21,033 households, 2,272 businesses, and 246 anchor institutions. The project will create or save eight jobs.

Wilkes Telephone & Electric Company

Wilkes Telephone Company FTTH Build-Out

Last Mile

$14,433,762 Loan

$33,678,779 Grant

Wilkes Telephone & Electric Company will provide state-of-the-art communication services while enhancing broadband communication options to the citizens of Lincoln, Taliaferro, and Wilkes counties. The network will make services available to 7,832 households, 802 businesses, and 58 anchor institutions, providing infrastructure for affordable bandwidth and services, and will integrate economic development, employment, education, public safety, public health, and other government

services. The technology will be an FTTH wireline fiber-optic cable network, configured in PON architecture, able to support speeds in excess of 20 Gbps. The project will create 74 jobs.

Windstream Corporation

Georgia Windstream, LLC

Last Mile

$4,665,116 Grant

Windstream Corporation will offer broadband service speeds of up to 12 Mbps in the counties of Appling, Charlton, Dodge, Early, Miller, Rabun, Seminole, Tattnall, Telfair, Upson, Walker, and Wayne by deploying DSLAMs using ADSL2+. The network will make services available to 4,033 households, 284 businesses, and 35 anchor institutions. The project will create or save 54 jobs.

Windstream Corporation

Windstream Georgia Communications, LLC

Last Mile

$5,129,575 Grant

Windstream Corporation will provide last-mile broadband service to numerous unserved rural areas of Georgia. Windstream will deploy industry-standard DSLAMs using ADSL2+ protocols to provide a minimum of 6 Mbps downstream and 786 Kbps upstream data services. DSLAMs will be strategically deployed to reach the greatest number of unserved customers over the existing wireline copper plant. The project will make services available to 18,503 households, 2,037 businesses, and 119 anchor institutions. The project will create an estimated 55 jobs.

Windstream Corporation

Windstream Standard, LLC

Last Mile

$6,940,375 Grant

Windstream Corporation will expand broadband service to unserved customers in rural areas of Georgia. The PFSA comprises the 21 communities of Baldwin, Blairsville, Clarkesville, Cleveland, Cornelia, Dahlonega, Dawsonville, Helen, Hiawassee, Ivylog, Juno, Macedonia, Mineral Bluff, Morganton, Notla, Suches, Three Sisters Mountains, Tiger, Toccoa, Turnerville, and Young Harris. The project will allow Windstream to extend the reach of its broadband network to make services available to 12,177 households, 743 businesses, and 58 anchor institutions and provide broadband to last-mile wireline telephone subscribers. The project also will allow Windstream to provide broadband service to 61 community and public safety facilities in the PFSA. The project will use industry standard ADSL2+ protocols that will allow customers to enjoy broadband at speeds of up to 12 Mbps. The project will create an estimated 73 jobs.

Hawaii

Big Island Broadband/Aloha Broadband, Inc.

Aloha Broadband Kohala

Last Mile Remote

$106,503 Loan

Aloha Broadband will provide affordable terrestrial fixed wireless broadband service to the community of North Kohala on the Big Island of Hawaii. The area is not currently served by any broadband service provider. The network will make services available to 553 households, 35 businesses, and 9 anchor institutions. The project will create five jobs.

Idaho

Coeur d'Alene Tribe

Coeur d'Alene Reservation FTTH Project

Last Mile Non-remote

$6,142,879 Loan

$6,142,879 Grant

The Coeur d'Alene Tribe will deploy an FTTH broadband system to provide improved broadband service to anchor institutions, critical community facilities, and approximately 3,770 unserved and underserved households in the communities of DeSmet, Plummer, Tensed, and Worley. The project will include service to isolated farms and rural home sites on the Coeur d'Alene Indian Reservation in northern

Idaho. The network will make services available to 429 businesses and 21 anchor institutions and will create 30 jobs.

Midvale Telephone Exchange, Inc.

MTE Last Mile Broadband Connections Initiative Stanley Service Area

Last Mile

$380,751 Loan

$888,420 Grant

Midvale Telephone Exchange, Inc., will offer last-mile broadband service speeds of at least 20 Mbps in the rural town of Stanley using FTTH technology. The network will make services available to 205 households, 31 businesses, and 6 anchor institutions. The project will create or save 10 jobs.

Potlatch Telephone Company

Potlatch Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,013,722 Grant

Potlatch Telephone Company (Potlatch Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in 100 percent rural Idaho. The project will serve five PFSAs with four communities. These PFSAs have 306 premises (296 households and 10 businesses) with no access to broadband service. Potlatch Tel is the State-certified ILEC in Idaho. As engineered, the network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 53 jobs.

Illinois

Cellular Properties, Inc.

Eastern Illinois Broadband Deployment

Last Mile

$6,132,260 Loan

$6,132,260 Grant

Cellular Properties, Inc. (CPI) will upgrade an existing wireless network to 3G wireless to provide mobile and fixed wireless broadband to extremely rural and predominantly underserved areas of east central Illinois. The project will deploy FTTT where economically feasible to provide an eventual migration path to 4G/LTE. Initially, the 3G network will offer speeds of 7.2 Mbps downstream and 3.6 Mbps upstream. The three PFSAs are 99 percent rural and cover 11 counties and 36 communities. The communities include 26,605 households, 7,123 businesses, and 704 anchor institutions. CPI will upgrade to a 3G network through an overlay on existing cell sites, coupled with a build of new cell sites. The PFSAs constitute 48 of the 100 towers CPI plans to construct or upgrade to a 3G universal mobile telecommunications system. The project will create 267 jobs.

Convergence Technologies, Inc.

CTI Rural Open Access WiMAX Network

Last Mile

$1,434,375 Loan

$4,303,125 Grant

Convergence Technologies, Inc., will offer last-mile wireless broadband and VoIP in Cook, Kankakee, and Will counties in Illinois and Lake, Newton, and Porter counties in Indiana. The project will utilize WiMAX technology as a platform to deliver broadband service speeds of up to 11 Mbps. The network will make services available to 43,755 households, 9,497 businesses, and 3 anchor institutions. The project will create or save 26 jobs.

Norlight, Inc.

Illinois VDB Network Expansion

Last Mile

$3,311,324 Loan

$7,726,423 Grant

Norlight, Inc., will implement the Illinois VDB Network Expansion project to provide a wireless network to 13 unserved and underserved areas in central Illinois. This fixed wireless deployment will consist of a network of 72 towers providing highspeed broadband of greater than 5 Mbps. Counties covered include all or parts of Bond, Calhoun, Cass, Christian, Fayette, Greene, Jersey, Macoupin, Montgomery, Morgan, Pike, Scott, and Shelby. The network will make services available to 75,253 households, 9,737 businesses, and 804 anchor institutions. The project will create or save 36 jobs.

Shawnee Telephone Company

Shawnee's FTTH Project: Focused Economic Revitalization and Sustainable Transformation of Southern Illinois

Last Mile

$6,249,989 Loan

$1,102,940 Grant

Shawnee Telephone Company will deploy an FTTH network capable of 1 Gbps broadband service speeds in PFSAs that rank among the lowest in per household income and the highest in unemployment in southern Illinois. The network will make services available to 1,209 households, 438 businesses, and 35 anchor institutions. The project will create 91 jobs.

Utopian Wireless Corporation

Utopian Bushnell WiMAX Project

Last Mile

$66,091 Loan

$198,271 Grant

Utopian Wireless Corporation will provide 4G wireless broadband service to underserved communities near Bushnell. The PFSA is rural and covers approximately 1,481 households, 102 businesses, and 32 anchor institutions. Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology for efficient air interface optimized for IP, built-in support for advanced antenna technologies like MIMO, and quality-of-service controls that enable differentiated services and open access. The system includes WiMAX access points, wireless and wired backhaul, ASN–GW, CSN, and an IP core that supports authentication and traffic routing to application servers and the Internet. Utopian will offer tiered services with average minimum downlink speeds of at least 1.8 Mbps. The project will create 10 jobs.

Utopian Wireless Corporation

Utopian Cairo WiMAX Project

Last Mile

$68,686 Loan

$206,055 Grant

The Utopian Cairo WiMAX project will make available advanced 4G wireless broadband service to underserved communities in and around Cairo. The PFSA includes the 62914 ZIP code area in Alexander County, where Cairo is the county seat. The PFSA is rural and covers approximately 1,746 households, 87 businesses, and 43 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology, which offers several advantages over other wireless technologies, including a highly efficient air interface optimized for IP, built-in support for advanced antenna technologies like MIMO, and quality-of-service controls that enable differentiated services and open access. The project will create 10 jobs.

Utopian Wireless Corporation

Utopian Flora WiMAX Project

Last Mile

$129,714 Loan

$389,141 Grant

Utopian Wireless Corporation will provide 4G wireless broadband service to underserved communities near Flora. The rural PFSA covers approximately 2,791 households, 276 businesses, and 86 anchor institutions. Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology for efficient air interface optimized for IP, built-in support for advanced antenna technologies like MIMO, and quality-of-service controls that enable differentiated services and open access. The system includes WiMAX access points, wireless and wired

backhaul, ASN–GW, CSN, and an IP core that supports traffic authentication and routing to application servers and the Internet. Utopian will offer tiered services with average minimum downlink speeds of at least 1.8 Mbps. Utopian will hire full-time local staff in the PFSA, including up to three sales people to prepare for launch. The project will create 10 jobs.

Utopian Wireless Corporation

Utopian Monmouth WiMAX Project

Last Mile

$150,063 Loan

$450,189 Grant

The Utopian Monmouth WiMAX project will make available advanced 4G wireless broadband service to underserved communities in the Monmouth area. The PFSA includes the 61462 ZIP code area in Warren County, where Monmouth is the county seat. The PFSA covers 4,419 households, 290 businesses, and 95 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian Wireless Corporation will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The average minimum downlink speeds for Utopian Wireless subscribers will be at least 1.8 Mbps. The project will create 10 jobs.

Utopian Wireless Corporation

Utopian White Hall WiMAX Project

Last Mile

$63,594 Loan

$190,780 Grant

The Utopian White Hall WiMAX project will make available advanced 4G wireless broadband service to underserved communities in and around White Hall. The PFSA includes the 62092 ZIP code area in Greene County. The PFSA is rural and covers 1,224 households, 147 businesses, and 36 anchor institutions. Utilizing licensed 2.5 GHz spectrum, Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. WiMAX offers a number of advantages over other wireless technologies, including a highly efficient air interface optimized for IP, built-in support for advanced antenna technologies like MIMO, and quality-of-service controls that enable differentiated services and open access. The project will create 10 jobs.

Indiana

Camden Telephone Company, Inc.

Camden Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,089,955 Grant

Camden Telephone Company, Inc. (Camden Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Camden Tel is the State-certified ILEC in Indiana. The project will serve five PFSAs, located within its franchise service territory, which are 100 percent rural and include three communities. This project will build a broadband network that will make services available to 326 rural unserved premises (309 households and 17 businesses) to provide them with access to high-speed broadband service (20 Mbps upstream and downstream combined). The project will provide DSL broadband capability to unserved premises and deliver broadband high-speed capabilities of 20 Mbps (upstream and downstream combined). The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, and upgrade access in the central office to support the extension of the broadband networks to these remote areas. The project will use PON FTTH where economically feasible and allow for future PON upgrades without needing to rebuild the transport routes. The project will create or save 29 jobs.

Convergence Technologies, Inc.

CTI Rural Open Access WiMAX Network

Last Mile

$1,378,125 Loan

$4,134,375 Grant

Convergence Technologies, Inc., will offer last-mile wireless broadband and VoIP in Cook, Kankakee, and Will counties in Illinois and Lake, Newton, and Porter

counties in Indiana. The project will utilize WiMAX technology as a platform to deliver broadband service speeds of up to 11 Mbps. The network will make services available to 42,039 households, 9,124 businesses, and 3 anchor institutions. The project will create or save more than 25 jobs.

DigitalBridge Communications Corp.

Round 2: IN-Franklin Last Mile

Last Mile

$397,224 Loan

$397,224 Grant

DigitalBridge Communications Corp., will provide 4G broadband service to unserved and underserved portions of Franklin County. The project will utilize last-mile broadband access via fixed and mobile WiMAX technology. Service will include Internet access and VoIP service speeds of up to 4 Mbps. The network will make services available to 2,673 households, 266 businesses, and 41 anchor institutions. The project will create or save six jobs.

Home Telephone Company, Inc.

Home Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$416,743 Grant

Home Telephone Company, Inc. (Home Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Home Tel is the Statecertified ILEC in Indiana. The project will serve two 100 percent rural PFSAs, which have 178 premises (176 households and 2 businesses) with no access to broadband service. The project will build a network to provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The project will create or save 11 jobs.

Sunman Telecommunications, Inc.

Sunman 700-MHz WiMAX Wireless Broadband Plan

Last Mile Non-remote

$5,694,611 Loan

$5,694,611 Grant

Sunman Telecommunications will create a 700 MHz WiMAX build-out plan to serve rural communities within Indiana. This project will provide needed broadband service to households, businesses, and key community organizations in underserved rural communities. About 1 percent of this network will also serve a small area in Kentucky. The network will make services available to 52,657 households, 11,025 businesses, and 135 anchor institutions. The project will create 25 jobs.

Tipton Telephone Company, Inc.

Tipton Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,011,971 Grant

Tipton Telephone Company, Inc. (Tipton Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Tipton Tel is the State-certified ILEC in Indiana. The project will serve three 100 percent rural PFSAs, which include two communities with 382 premises (332 households and 50 businesses) with no access to any broadband service. As engineered, the network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. Target speed to unserved customers is at 20 Mbps (upstream and downstream combined). The project will create or save 27 jobs.

Tri-County Telephone Company, Inc.

Tri-County Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$593,273 Grant

Tri-County Telephone Company, Inc. (Tri-County Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Tri-County Tel is the State-certified ILEC in Indiana. The project will serve three 100 percent rural PFSAs in its franchise service territory, which includes five communities. Within the PFSAs, there are 245 premises (234 households, 10 businesses, and 1 anchor institution) with no access to broadband service. The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed to unserved customers is 20 Mbps (upstream and downstream combined). The project will create or save 16 jobs.

Iowa

Breda Telephone Corporation

Breda and Lidderdale Town and Rural Fiber-to-the-Premises Overbuild

Last Mile

$783,572 Loan

$1,828,337 Grant

Breda Telephone Corporation will overbuild with FTTP two of its seven rural ILEC exchanges, which are adjacent to each other in west central Iowa. The overbuild would allow high-speed Internet and video services to reach all of the customers in the Breda and Lidderdale exchanges, supplementing their present landline phone services. The network will make services available to 609 households, 77 businesses, and 3 anchor institutions. The project will create 56 jobs.

Clear Lake Independent Telephone Company, Inc.

Clear Lake Independent Telephone Company: Fiber-to-the-Home Broadband Deployment Project

Last Mile

$2,373,138 Loan

$5,537,324 Grant

Clear Lake Independent Telephone Company, Inc., will deploy FTTH broadband as a key part of the infrastructure development needed to drive and sustain economic growth and community vitality. The project will serve 3,991 households, 342 businesses, and 22 anchor institutions, with 893 households, 20 businesses, and 1 anchor institution in the PFSA. Service tiers will run from 3 to 20 Mbps. The network design uses PON infrastructure over existing Calix Networks systems. Existing systems for POTS, data, and video services will be integrated with the new fiberoptic network. The project will create two jobs.

C–M–L Telephone Cooperative Association

Meriden and Archer Fiber-to-the-Home Project

Last Mile Non-remote

$1,519,225 Grant

C–M–L Telephone Cooperative Association will deploy FTTH technology to provide broadband service via fiber–optic network to rural Iowa communities, including Archer and Meriden. The C–M–L Telephone Cooperative Association will offer services that include high–speed Internet exceeding 20 Mbps, digital television, and telephone service. The network will make services available to 285 households, 14 businesses, and 2 anchor institutions.

Eastlight, LLC

Southeast Iowa Rural Wireless Broadband

Last Mile Non-remote

$3,836,926 Loan

Eastlight, LLC will serve more than 80 small rural communities with high-speed, affordable Internet using wireless technology. The Southeast Iowa Rural Wireless Broadband project will extend highspeed broadband coverage into villages, towns, and unincorporated areas of 12 Iowa counties across 6,226 square miles with

144,000 residents in unserved and underserved areas. The network will make services available to 61,236 households, 31,014 businesses, and 370 anchor institutions. The project will create an estimated 40 jobs.

Ellsworth Cooperative Telephone Association

Ellsworth Fiber-to-the-Home Broadband Deployment Project

Last Mile

$1,580,609 Loan

$3,688,087 Grant

Ellsworth Cooperative Telephone Association will provide high-speed Internet service in the communities of Ellsworth and Garden City and their surrounding rural areas via an FTTH network. The network will make services available to 502 households, 305 businesses, and 8 anchor institutions. The project will create one job.

F&B Communications, Inc.

F&B Communications FTTH Stimulus Project

Last Mile Non-remote

$1,628,588 Loan

$1,609,162 Grant

F&B Communications will deploy FTTH technology to provide advanced broadband service via a high-speed fiber-optic network, with speeds exceeding 20 Mbps, to the rural areas surrounding the Iowa communities of Bennett, Delmar, and Lowden. The system will also allow for expansion at a future date. The network will make services available to 444 households. The project will create an estimated 25 jobs.

Farmers' Telephone Company

Farmers' Telephone Company Fiber-to-the-Premises Overbuild

Last Mile

$9,367,926 Loan

$9,367,927 Grant

Farmers' Telephone Company will construct an FTTP network to provide greater than 20 Mbps broadband access to households and businesses in the exchange areas of Greene, Little Cedar, Marble Rock, New Haven, Plymouth, Riceville, St. Ansgar, and Stacyville. The network will make services available to 3,284 households, 148 businesses, and 22 anchor institutions. The project will create 255 jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 4

Last Mile

$2,788,293 Loan

$6,506,016 Grant

Grand River Mutual Telephone Corporation will provide broadband service to the towns of Lorimor, Murray, and Thayer and their surrounding rural areas via an FTTH network. The network will make services available to 1,074 homes, 498 businesses, and 10 anchor institutions. The project will create 22 jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 5

Last Mile

$5,108,257 Loan

$11,919,267 Grant

Grand River Mutual Telephone Corporation will provide broadband service to the towns of Allerton, Corydon, Lineville, and Millerton, Iowa and Powersville, Missouri and their surrounding rural areas. The network will make services available to 1,677 households, 285 businesses, and 30 anchor institutions along the Iowa-Missouri border. The project will create 34 jobs.

Hospers Telephone Exchange, Inc.

HTC Fiber-to-the-Home Broadband Deployment Project

Last Mile

$2,497,621 Loan

$5,827,781 Grant

Hospers Telephone Exchange, Inc., will serve one PFSA in the town of Hospers and its surrounding rural areas in Lyon, O'Brien, Osceola, and Sioux counties. The network in this PFSA will make services available to 859 households, 168 businesses, and 9 anchor institutions. Hospers will provide voice or POTS, Internet access, and video services over a GPON FTTH. Hospers will use connections to FiberNet to provide high-bandwidth Internet connectivity. Customers will have an uninterruptible power supply and an optical network terminal installed on premises to convert the fiber-based access network to the copper-based systems used in the home. The Hospers Area Development Corporation currently finds it difficult to serve the needs of local businesses and attract new business development to the area, in part because it lacks an adequate broadband infrastructure. The project will aid economic development in the communities it serves by providing faster connections to businesses. The project will create or save an estimated eight jobs.

Iowa Telecommunications Services, Inc.

Connecting Rural Iowa: High-Speed Broadband Expansion 1

Last Mile

$5,163,935 Grant

Iowa Telecommunications Services, Inc. (Iowa Telecom), an ILEC, will provide an FTTN network to deliver broadband service using DSL technology. In the 42 PFSAs that comprise this last-mile network, Iowa Telecom will establish new DLC/DSL nodes to expand high-speed broadband capability to deliver broadband speeds of 3 Mbps up to 15 Mbps for residential and business customers. The project will make services available to approximately 2,908 households and 7,367 businesses. During the initial 5-year period, some of the FTTN fiber will be used for backhaul facilities for multiple wireless carriers as they expand more deeply into rural markets. The project will create 21 jobs.

Iowa Telecommunications Services, Inc.

Connecting Rural Iowa: High-Speed Broadband Expansion 2

Last Mile

$12,236,836 Grant

Iowa Telecommunications Services, Inc. (Iowa Telecom), an ILEC, will provide an FTTN network to deliver broadband service using DSL technology. Iowa Telecom will establish new DLC/DSL nodes to expand high-speed broadband capability to 80 PFSAs that comprise this last-mile network to deliver broadband speeds of 3 Mbps up to 15 Mbps for residential and business customers. This project will make services available to approximately 3,717 households and 14,291 businesses. During the initial 5-year period, some of the FTTN fiber will be used to provide backhaul facilities for multiple wireless carriers as they expand more deeply into rural markets. The project will create 21 jobs.

La Motte Telephone Company

Springbrook Wireless Internet Project

Last Mile Non-remote

$187,815 Loan

$187,815 Grant

La Motte Telephone Company will provide wireless broadband service from a 300-foot tower and WiMAX installation. This project is expected to primarily serve homes in an underserved rural area. The network will make services available to 264 households, 6 businesses, and 2 anchor institutions. The project will create four jobs.

Municipal Communications Utility of the City of

Cedar Falls (Cedar Falls Utilities) CFU Broadband Expansion

Last Mile

$873,433 Grant

Cedar Falls Utilities will offer broadband service speeds of up to 50 Mbps in rural Black Hawk, Butler, and Grundy counties. The new broadband system will employ a combination of state-of-the-art broadband wireless and FTTP technologies in an area that is 90 percent unserved. The network will make services available to 701 households and 259 businesses. The project will create 11 jobs.

Southwest Telephone Exchange, Inc.

Southwest Iowa Fiber-to-the-Home Broadband Deployment Project

Last Mile

$1,796,199 Loan

$4,191,131 Grant

Southwest Telephone Exchange, Inc., will provide broadband service to the towns of Emerson, Henderson, Imogene, and their surrounding rural areas. The network will make services available to 587 households, 55 businesses, and 9 anchor institutions in Fremont, Mills, Montgomery, Page, and Pottawattamie counties. The project will create six jobs.

Winnebago Cooperative Telecom Association

WCTA 2010 Broadband Initiative

Last Mile

$8,245,610 Loan

$8,245,610 Grant

Winnebago Cooperative Telecom Association (WCTA) will provide last-mile high-speed wireline broadband FTTP to rural areas in north-central Iowa and south-central Minnesota. The infrastructure will support existing rural wireless tower facilities for future growth and bandwidth expansion to 3G and 4G networks and beyond. The project will build on a previously deployed FTTN system. The PFSA serves portions of 21 communities in 5 counties in Iowa and 2 counties in Minnesota. This project will make services available to 2,839 premises, including 138 mainly home businesses, and will offer broadband service at combined speeds ranging from 5 Mbps to 25 Mbps. WCTA will also offer digital video and unlimited local voice services. The project will create or save 40 jobs.

Kansas

H&B Communications, Inc.

FTTH—Rural Ellinwood and Claflin, Kansas

Last Mile

$1,965,455 Loan

$4,586,064 Grant

H&B Communications, Inc., will provide high-speed broadband to the rural communities surrounding Claflin and Ellinwood. The network will serve 751 households, 91 businesses, and 23 anchor institutions. The project will create five jobs.

Home Communications, Inc.

Rural Canton FTTP

Last Mile

$601,464 Loan

$1,403,415 Grant

Home Communications, Inc. (HCI) will upgrade its network, installing FTTP facilities to eliminate a last-mile bottleneck in rural areas of Canton. HCI provides broadband service to more than 1,200 customers in Kansas. This upgrade will provide access to higher bandwidth for its customers. HCI already offers FTTP service in the town portion of this exchange; therefore, the town of Canton is excluded from this PFSA. None of the premises in this PFSA has access to 5 Mbps service (upstream and downstream combined). The project will make services available to 253 premises (219 households, 24 businesses, and 10 anchor institutions). HCI will implement FTTP using GPON, International Telecommunication Union, and Full Service Access Networks G.984 standards. This project will create or save an estimated three jobs.

Iowa Tribe of Kansas and Nebraska

Iowa Tribe of Kansas and Nebraska Fiber-to-the-Premise

Last Mile

$764,833 Grant

The Iowa Tribe of Kansas and Nebraska will build an FTTP network on its federally recognized reservation. The network will be the first of its type in the area. The FTTP network will cover 100 percent of the PFSA and make services available to 68 households, 12 businesses, and 10 anchor institutions. Although the public service entities are under the jurisdiction of the Iowa Tribe of Kansas and Nebraska, they often provide services to the surrounding communities. The project will provide Internet access using a buried FTTP network for high reliability and exceptional capacity and speed. Broadband service speeds will be up to 20 Mbps (15 Mbps downstream and 5 Mbps upstream). The project will use a technological agnostic distribution system to increase the economic efficiency of its network. The project will create

three jobs, and an advanced network will generate economic development and job opportunities in the area.

JBN Telephone Company, Inc.

JBN East Towns

Last Mile

$1,000,568 Loan

$2,323,576 Grant

JBN Telephone Company, Inc., will deploy FTTP broadband throughout the towns of Corning, Goff, Havensville, Netawaka, Soldier, and Wetmore. The network will serve 427 households, 29 businesses, and 21 anchor institutions. The project will create three jobs.

Madison Telephone, LLC

Madison-Lamont FTTP

Last Mile Non-remote

$3,519,750 Loan

$3,519,750 Grant

Madison Telephone, LLC will deploy FTTP technology throughout its certified service area, including the telephone exchanges of Madison and Lamont. The network will make services available to 601 households, 81 businesses, and 40 anchor institutions. The project will create nine jobs.

Peoples Telecommunications, LLC

Peoples Telecommunications Rural FTTP

Last Mile

$3,891,062 Loan

$3,891,061 Grant

Peoples Telecommunications, LLC (PTL) will upgrade the LaCygne telephone exchange to eliminate the last-mile bottleneck in the rural area and provide access to high-speed broadband for premises with no broadband service. The project will make services available to 760 households, 50 businesses, and 7 anchor institutions in this rural area. PTL will offer high-speed data and voice services over FTTP facilities at speeds of 15 Mbps downstream and 5 Mbps upstream. PTL provides broadband service to more than 500 customers in the LaCygne exchange and extending coverage with this project will promote rural economic development. The project will create or save 10 jobs.

Rural Telephone Service Co., Inc.

Rural Opportunities Delivered

Last Mile Non-remote

$51,612,842 Loan

$49,588,807 Grant

Rural Telephone Service Co., will provide service in a 4,600-square-mile area of western Kansas that is 99.5 percent unserved and underserved. The roject will provide a rural infrastructure required for economic stability, education, and healthcare. Rural Telephone leads a team of seven companies with this shovel-ready project. A portion of this project will also be implemented in Nebraska. The network will make services available to 18,342 households, 4,372 businesses, and 335 anchor institutions. The project will create an estimated 179 jobs.

South Central Telephone Association, Inc.

Lake City & Sun City Rural FTTH

Last Mile Remote

$871,200 Grant

South Central Telephone Association, Inc., will bring FTTH broadband service to all unserved establishments in the exchanges of Lake City and Sun City. The network will make services available to 79 households, 8 businesses, and 1 anchor institution. The project will create seven jobs.

South Central Wireless, Inc.

South Central Wireless—Attica, Kansas Fiber-to-the-Premise

Last Mile

$560,000 Loan

$557,621 Grant

South Central Wireless, Inc., will construct an FTTP infrastructure for Attica to offer voice and high-speed service ranging from 1.5 Mbps to 20 Mbps. The network will serve 314 households, 41 businesses, and 10 anchor institutions. The project will create nine jobs.

Totah Communications, Inc.

Totah Broadband Expansion Project

Last Mile Non-remote

$2,426,053 Loan

$1,830,180 Grant

Totah Communications, Inc., will upgrade existing copper-fed DSL nodes to fiber-fed DSL nodes. This project will also install additional fiber-fed DSL nodes throughout the service area. The total route will cover approximately 152 miles and will serve approximately 800 new customers. A portion of this project will also be implemented in Oklahoma. The network will make services available to 422 households, 9 businesses, and 8 anchor institutions. The project will create an estimated 25 jobs.

Wave Wireless, LLC

Wave Wireless Southeast Kansas Broadband Expansion Project

Last Mile

$619,147 Loan

$1,857,441 Grant

Wave Wireless will expand its high-speed broadband access to the rural unserved and underserved southeast Kansas PFSA. The project, covering 849 square miles, has an overall household density of 3.6 per square mile. The project will make services available to 2,890 households, 2,106 businesses, and 72 anchor institutions using a combination of WiMAX and 900 MHz systems. Wave Wireless will deliver significant upgrades using WiMAX technology and will build an additional 6 towers on its existing network of 19 towers and will lease 1 tower location. The upgraded equipment will provide higher service tiers at 2.5 Mbps and 768 Kbps. The project will create 12 jobs.

Kentucky

Foothills Rural Telephone Cooperative Corporation, Inc.

Foothills Broadband Initiatives Project

Last Mile

$6,291,744 Loan

$14,680,738 Grant

Foothills Rural Telephone Cooperative Corporation, Inc., will provide FTTH to portions of Lawrence and Magoffin counties in the Foothills service area. The PFSAs lack access to high-speed broadband data and quality video feeds that include local content. The PFSAs in this project will make services available to 2,247 households, 780 businesses, and 8 anchor institutions. The access network will use FTTH technology to deliver broadband and will use GPON standards with 2.48 Gigabit rates downstream and 1.2 Gigabit rates upstream. The project will create 326 jobs.

Highland Telephone Cooperative, Inc.

Highland Telephone Cooperative FTTH Build-Out

Last Mile

$4,820,464 Loan

$14,461,393 Grant

Highland Telephone Cooperative, Inc. (HTC) will provide state-of-the-art communication services while enhancing broadband communication options to the citizens of McCreary, Morgan, and Scott counties in rural Tennessee and Kentucky. HTC will construct an FTTH wireline fiber-optic cable network, configured in PON architecture, able to support speeds in excess of 20 Gbps for all subscribers in its exchange boundaries. The network will make services available to 6,278 households, 532 businesses, and 31 anchor institutions, providing infrastructure for affordable bandwidth. The project will ensure HTC's ability to continue to operate as a major employer, provide highspeed broadband services critical to the economic growth of the region, and ensure the communications services for this rural community are as reliable and competitive as those in large cities in Tennessee and Kentucky. The project will create 21 jobs.

Leslie County Telephone Company

Leslie County Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$6,169,295 Grant

Leslie County Telephone Company (Leslie County Tel) will bring high-speed broadband service to unserved premises in its rural franchise service territory. Leslie County Tel, a subsidiary of TDS Telecom, is the State-certified ILEC in Kentucky. The project is designed to serve nine PFSAs in its franchised service territory, which is rural and includes eight communities. These PFSAs have 1,591 premises (1,517 households, 38 businesses, and 36 anchor institutions) that currently have no access to broadband service. Leslie County Tel has built a broadband network that currently is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will bring access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 162 jobs.

Mikrotec CATV, LLC

Connect Eolia, Oven Fork, and Partridge

Last Mile

$829,813 Grant

Mikrotec CATV, LLC will provide broadband Internet service to the small rural communities of Eolia, Oven Fork, and Partridge in Letcher County, tucked in a valley amidst rugged mountain terrain deep in the heart of the Appalachian coalfields. The project area covers 18 square miles and will serve 800 households, 15 businesses, and 5 anchor institutions. The system design uses wireline technology, both fiber-optic cable and coaxial cable. The hybrid system includes HFC, at least 750 MHz node + 6 actives to allow speeds of up to 6 Mbps downstream and 1 Mbps upstream. The project will create or save 14 jobs.

Mountain RTCC

Mountain RTCC ILEC Broadband

Last Mile Non-remote

$39,843,535 Loan

$38,281,044 Grant

Mountain RTCC will deploy a fiber cable-based broadband network in Elliott, Menifee, Morgan, and Wolfe counties. This network will provide broadband service speeds above 20 Mbps. Affordable broadband access in these counties will enhance economic development and workforce training. The network will make services available to 13,013 households, 2,335 businesses, and 65 anchor institutions. The project will create an estimated 49 jobs.

Peoples Rural Telephone Cooperative Corp, Inc.

Broadband Infrastructure Investment in Persistent Poverty Counties: Jackson and Owsley Counties, KY

Last Mile

$7,654,254 Loan

$17,859,928 Grant

The Peoples Rural Telephone Cooperative, Inc., will build FTTP facilities in Cow Creek, Jackson, and Owsley counties to provide residents, businesses, and critical community facilities with high-speed broadband service. The project will make services available to 4,747 households, 111 businesses, and 33 anchor institutions and will offer broadband service speeds ranging from 1.5 Mbps to 18 Mbps. The project design is an FTTP overlay, based on the use of Occam Network's GPON equipment and uses existing equipment cabinets and buildings to house the OLT and OSN equipment. The project will create 46 jobs.

Salem Telephone Company

Salem Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,934,474 Grant

Salem Telephone Company (Salem Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Salem Tel is the State-certified ILEC in Kentucky. The project will serve three PFSAs that include five communities. This project will build a broadband network that will make services available to 551 rural unserved premises (529 households, 15 businesses, and 7 anchor institutions) that have no access to broadband service. Salem Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 51 jobs.

Thacker-Grigsby Telephone Company, Inc.

Breathitt County Broadband

Last Mile

$2,222,542 Loan

$5,185,932 Grant

Thacker-Grigsby Telephone Company, Inc., will deploy a fiber-optic network in portions of Breathitt County. The network will serve 1,214 households, 60 businesses, and 34 anchor institutions. The project will create 61 jobs.

West Kentucky Rural Telephone Cooperative Corporation, Inc.

West Kentucky and West Tennessee Broadband FTTH Initiative

Last Mile

$42,711,001 Loan

$42,710,999 Grant

West Kentucky Rural Telephone Cooperative Corporation, Inc. (WK&T) will build a fiber-optic network to provide broadband infrastructure for rural southwest Kentucky in the counties of Calloway, Carlisle, Fulton, Graves, Hickman, and Marshall, and in the northwest Tennessee counties of Henry, Obion, and Weakley. The project will make services available to 11,980 households, 2,492 businesses, and 68 anchor institutions. By installing fiber throughout the service areas, broadband with speeds up to 20 Mbps will become more affordable. At the conclusion of the project, WK&T expects to double its data subscribers and have almost 90 percent of its customer base, more than 14,000 customers, on broadband, with data speeds averaging 1.5 Mbps or higher. The project will create 110 jobs.

Windstream Corporation

Windstream Kentucky East, LLC 219

Last Mile

$27,644,292 Grant

Windstream Corporation will offer broadband service speeds at a minimum of 6 Mbps in more than 80 rural communities by deploying DSLAMs using standard ADSL2+. The network will make services available to 117,740 households, 10,329 businesses, and 574 anchor institutions. The project will create or save 397 jobs.

Windstream Corporation

Windstream Kentucky East, LLC 220

Last Mile

$31,118,534 Grant

Windstream Corporation will offer broadband service speeds of up to 12 Mbps in more than 80 rural communities. The network will make services available to 101,009 households, 8,156 businesses, and 682 anchor institutions. The project will create or save 513 jobs.

Windstream Corporation

Windstream Kentucky West, LLC

Last Mile

$951,445 Grant

Windstream Corporation will expand broadband service to unserved customers in the rural Kentucky communities of Coxs Creek, Fort Knox, Lebanon, Shepherdsville Northwest, and Shepherdsville Southeast. The project will allow Windstream to extend the reach of its broadband network to make services available to 3,490 house-

holds, 50 businesses, and 4 anchor institutions. It will provide broadband to last-mile wireline telephone subscribers. Windstream will provide broadband service to community public service facilities in the PFSAs at discounted rate packages for at least 3 years. Windstream will deploy industry-standard DSLAM protocols to provide a minimum of 6.0 Mbps downstream and 786 Kbps upstream data services. The DSLAMs will be strategically deployed to reach the greatest number of unserved customers over its existing wireline copper plant. The project will create an estimated 53 jobs.

Louisiana

LBH, LLC

Rural Broadband Powered by Fiber

Last Mile Non-remote

$16,693,439 Loan

$16,691,939 Grant

LBH, LLC, a subsidiary of Cameron Communications, LLC, will expand the existing FTTH system in Moss Bluff in the communities and surrounding rural areas of Oakdale and Vinton. The project will provide broadband, voice, and video services to unserved and underserved areas. The network will make services available to 8,232 households, 444 businesses, and 22 anchor institutions. The project will create or save an estimated 136 jobs.

Nexus Systems, Inc.

West Carroll Parish Infrastructure Project

Last Mile

$724,256 Grant

Nexus Systems, Inc., as part of a private-public partnership, will implement the West Carroll Parish Infrastructure project to provide fiber broadband service to unserved and underserved areas in northeastern Louisiana. The technology will be a combination of microwave and fiber connectivity. The network will tie into the middle-mile LA Broadband Alliance-Infrastructure project by the LA Board of Regents. The network will make services available to 4,427 households, 240 businesses, and 47 anchor institutions. The project will create or save 11 jobs.

Northeast Louisiana Telephone Company, Inc.

Northeast Louisiana Telephone Co. FTTH & Broadband Project

Last Mile Non-remote

$8,124,600 Loan

$4,359,000 Grant

The Northeast Louisiana Telephone Company project will provide an active Ethernet system with symmetrical broadband service speeds of 20 Mbps. The system will use buried FTTH to serve the communities of Bonita and Collinston in Morehouse Parish. The network will make services available to 1,627 households, 74 businesses, and 15 anchor institutions. The project will create or save 22 jobs.

PRIDE Network, Inc.

North Shore Project

Last Mile

$18,461,417 Loan

$17,737,440 Grant

PRIDE Network, Inc., will deploy FTTP infrastructure, with a wireless service-extension overlay, that will bring advanced broadband service to rural communities in St. Helena, Tangipahoa, and Washington parishes. The network will offer broadband service speeds between 20 and 100 Mbps. The network will make services available to 10,097 households, 2,978 businesses, and 172 anchor institutions. The project will create or save an estimated 1,316 jobs.

Maine

Hartland and St. Albans Telephone Company

Hartland and St. Albans Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,009,522 Grant

The Hartland and St. Albans Telephone Company (Hartland and St. Albans Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in its rural Maine service territory. The project will serve six 100 percent rural PFSAs that include five communities. These PFSAs have 599 premises (568 households, 28 businesses, and 3 anchor institutions) with no access to broadband service. Hartland and St. Albans Tel is the State-certified ILEC in Maine. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 53 jobs.

Somerset Telephone Company, Inc.

Somerset Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$5,840,363 Grant

Somerset Telephone Company (Somerset Tel), a subsidiary of TDS Telecom, will provide access to high-speed broadband service to unserved premises in its 100 percent rural service territory in Maine. The project will serve 20 PFSAs with 8 communities. These PFSAs have 1,468 premises (1,375 households, 73 businesses, and 20 anchor institutions) with no access to broadband service. Somerset Tel is the State-certified ILEC in Maine. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 153 jobs.

West Penobscot Telephone and Telegraph Company

West Penobscot Telephone and Telegraph Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,554,981 Grant

West Penobscot Telephone and Telegraph Company (West Penobscot Tel), a subsidiary of TDS Telecom, will build a project to bring high-speed broadband service to unserved premises in West Penobscot Tel's rural franchise service territory. West Penobscot Tel is the State-certified ILEC in Maine. The project will bring high-speed broadband service to four PFSAs in its franchised service territory, which are 100 percent rural and include three communities. These PFSAs have 440 premises (428 households and 12 businesses) that have no access to broadband service. West Penobscot Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded to meet future needs. The project will create or save 41 jobs.

Maryland

Bloosurf, LLC

Delmarva Wireless Broadband

Last Mile

$1,600,000 Loan

$1,600,000 Grant

Bloosurf, LLC, in partnership with the University of Maryland Eastern Shore, a historically black college, will build a wireless last-mile network for the rural areas of Somerset, Wicomico, and Worcester counties, as well as Smith Island. This network will connect to the Maryland Broadband Cooperative optic fiber at four interconnection points. The network will make services available to 50,545 households, 6,292 businesses, and 351 anchor institutions. The project will create or save 22 jobs.

West Virginia PCS Alliance, LC

Rural Mobile Broadband Initiative—Maryland

Last Mile

$1,209,352 Grant

West Virginia PCS Alliance, LC and NTELOS Licenses Inc., both subsidiaries of NTELOS Holdings Corporation, will expand West Virginia PCS Alliance's existing wireless services to provide 3G mobile broadband service in unserved rural portions of western Maryland and south-central Pennsylvania, north of Hagerstown. The PFSAs comprise eight communities, with more than 50 percent of the premises lacking high-speed broadband service. The network will make services available to 28,521 households, 3,306 businesses, and 704 anchor institutions. The project will create or save nine jobs.

Massachusetts

Mid-Hudson Cablevision, Inc.

Last-Mile High Speed Broadband in Greene and Columbia Counties

Last Mile

$486,349 Grant

Mid-Hudson Cablevision, Inc., will provide high-speed broadband access to unserved and underserved PFSAs in the Hudson Valley and Catskill Mountain region between New York City and Albany. The network will make services available to 1,170 households, 421 businesses, and 16 anchor institutions and will complete part of the region's 911 public safety system. The last-mile extensions will require construction of 135 linear miles of FTTH on existing utility poles and connection for a network of five fire towers. Another 341-square-mile area will be reached by deploying 16 transmitting sites for wireless. The PFSAs also cover four underserved communities. The company will deploy 16 or more transmitting sites using Motorola Canopy equipment to provide access speeds of 10 Mbps in line-of-sight areas and 4 Mbps in dense foliage. The project will create or save 10 jobs.

Michigan

Air Advantage, LLC

Michigan Thumb Area Broadband Expansion Project II

Last Mile

$32,300,000 Loan

$31,950,000 Grant

Air Advantage, LLC will offer broadband service to last-mile consumers in 13 counties that make up an area known as the Great Lakes Bay Region and Thumb Area. The project will use a hybrid system of fiber and wireless technologies to offer broadband service speeds in excess of 3 Mbps. The network will make services available to 279,306 households, 21,302 businesses, and 4,011 anchor institutions. The project will create or save an estimated 142 jobs.

Allband Communications Cooperative

Allband F.I.B.E.R. I: Federal Investment in Broadband for Economic Recovery I

Last Mile

$8,622,754 Grant

Allband Communications Cooperative serves the Robbs Creek exchange, an irregularly shaped 177-square-mile area southeast of Hillman and north of Curran in Michigan. The project will bring high-speed broadband and VoIP service to its members and customers in these unserved rural areas. The project covers Alpena County and the unincorporated communities of Lachine, Long Rapids, and Spratt, along with the surrounding townships of Green, Long Rapids, Ossineke, Wellington, and Wilson; a service area covering Alcona and Oscoda counties and the unincorporated community of Curran, along with the surrounding townships of Millen and Mitchell; and a service area covering Montmorency County in the east-central part of Rust Township. The network will make services available to 1,622 households, 95 businesses, and 9 anchor institutions and will offer broadband service speeds of up to 2.5 Gbps downstream and 1.25 Gbps upstream. Allband will deploy FTTH technology for its broadband system. The fiber-optic cable infrastructure is designed to accomodate a GPON and Active Ethernet network solutions. The project will create or save an estimated 100 jobs.

Allband Communications Cooperative

Allband F.I.B.E.R. II: Federal Investment in Broadband for Economic Recovery II

Last Mile

$1,107,903 Grant

Allband Communications Cooperative serves the Robbs Creek exchange, an irregularly shaped 177-square-mile area southeast of Hillman and north of Curran in Michigan. The project will bring high-speed broadband and VoIP services to its members and customers in these unserved rural areas. The project covers a service area that includes a rural area in Alcona County and takes in the unincorporated communities of Gustin and Mikado townships. The network will make services available to 206 households, 20 businesses, and 2 anchor institutions and will offer broadband service speeds of up to 2.5 Gbps downstream and 1.25 Gbps upstream. Allband will deploy FTTH technology for its broadband system. The fiber-optic cable infrastructure is designed to accommodate a GPON and Active Ethernet network solutions. The project will create or save 17 jobs.

Chatham Telephone Company

Last Mile Remote

$8,605,935 Grant

Chatham Telephone Company, a subsidiary of TDS Telecom, will bring high-speed DSL service to remote, unserved households within its rural service territory. The network is engineered to be easily upgraded to meet future needs. The network will make services available to 878 households, 38 businesses, and 2 anchor institutions. The project will create or save 170 jobs.

Climax Telephone Company

FTTx Broadband Service to Rural Climax, MI

Last Mile

$1,072,501 Loan

$2,144,998 Grant

Climax Telephone Company (CTC) ILEC will build facilities to offer state-of-the-art triple-play services to the communities of Climax and Scotts. CTC will overbuild the rural and underserved ILEC service territory with FTTx and will build a new FTTP plant based on the GPON standard of 2.5 Mbps downstream and 1.25 Mbps upstream. The network will make services available to 781 households, 51 businesses, and 9 anchor institutions. This project will connect small underserved communities with the municipal government, public safety, education, and medical institutions. The project will create or save 47 jobs.

Communication Corporation of Michigan

Communication Corporation of Michigan: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,221,811 Grant

Communication Corporation of Michigan (CCM), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in CCM's rural franchise service territory. CCM is the State-certified ILEC in Michigan. The project is designed to serve three rural PFSAs with two communities. These PFSAs have 288 premises (278 households and 10 businesses) that lack access to broadband service. This project will build a broadband network to deliver access to high-speed broadband service (20 Mbps upstream and downstream combined). The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, and upgrade access in the central office to support the extension of the broadband networks to these remote areas. It will use PON FTTH where economically feasible and allow for future PON upgrades without needing to rebuild the transport routes. The project will create or save 32 jobs.

Crystal Automation Systems, Inc.

Mid-Michigan Broadband ARRA Project

Last Mile

$7,949,227 Loan

$18,548,197 Grant

Crystal Automation Systems, Inc. (Casair) will provide broadband access in a large area of mid-Michigan. Casair will build this project by using 30 of its existing towers and backhauls and will install WiMAX wireless gear to provide access to rural households. Casair will lease 18 additional towers, build 14 towers where none are available, and add fiber-optic lines between towers to handle the extra bandwidth required. The network will make services available to 58,848 households,

4,970 businesses, and 706 anchor institutions in Casair's service areas 1 and 2. The project will create or save 144 jobs.

Island Telephone Company

Island Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,001,528 Grant

Island Telephone Company (Island Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in Island Tel's rural franchise service territory. Island Tel is the State-certified incumbent ILEC in Michigan. The project is designed to serve one PFSA, which has two communities that have no access to broadband service. The network will make services available to 283 rural unserved premises (245 households, 35 businesses, and 3 anchor institutions). Island Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded to meet future needs. The project will create or save 53 jobs.

Southwest Michigan Communications

Southwest Michigan Communications—Paw Paw and Antwerp, MI FTTP

Last Mile Non-remote

$4,165,513 Loan

$4,165,512 Grant

Southwest Michigan Communications will construct an FTTP network that will cover the rural areas of its competitive LEC and provide advanced broadband service to the residents of the rural Paw Paw area. The network will make services available to 1,452 households. The project will create or save 14 jobs.

Minnesota

Arrowhead Electric Cooperative, Inc.

Arrowhead Electric Cooperative Fiber-to-the-Home Project

Last Mile

$4,841,245 Loan

$11,296,239 Grant

Arrowhead Electric Cooperative, Inc., will build a last-mile, open-access, FTTH network to serve northeastern Cook County. Because of the topography of the land and dense forestation, fixed wireless is not an option. The wireline passive fiberoptic network that the company will build will offer up to 100 Mbps symmetrical service. The network will make services available to 4,545 households, 138 businesses, and 63 anchor institutions. The project will create or save an estimated 87 jobs.

Arvig Telephone Company

Arvig Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$5,048,168 Grant

Arvig Telephone Company, a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. The project will serve 12 rural PFSAs that include 7 communities with 836 premises (768 households, 67 businesses, and 1 anchor institution) with no access to broadband service. The project will deliver broadband high-speed capabilities of 20 Mbps (upstream and downstream combined). The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The project will create or save an estimated 133 jobs.

City of Windom

Southwest Minnesota Broadband Group

Last Mile Non-remote

$6,350,000 Loan

$6,350,250 Grant

The Southwest Minnesota Broadband Group project will deploy FTTP infrastructure to eight rural communities throughout southwestern Minnesota. The network will consist of a 125-mile fiber ring that will connect the 8 communities and an FTTP infrastructure within the communities that will support 3,649 households. The fiber network will also be open to other providers for provision of wireless services, dark fiber services, and competitive services. The network will make services available to 292 businesses and 50 anchor institutions. The project will create or save 52 jobs.

Farmers Mutual Telephone Company

Farmers Telephone-Lac qui Parle County FTTP Project

Last Mile

$4,826,478 Loan

$4,826,478 Grant

Farmers Mutual Telephone Company and Lac qui Parle County will provide FTTP services to towns and townships in Lac qui Parle County. The two entities are working in partnership to give many residents their first opportunity to obtain high-speed Internet service and put in place the infrastructure to support economic development. The service area has two cities, Boyd and Dawson, and 15 townships over 339 square miles of unserved and underserved territory. The project will construct an FTTP network that will make services available to every home and business in the PFSA and utilize Calix GPON technology. The network will make services available to 1,561 households, 165 businesses, and 12 anchor institutions. The project will create or save 110 jobs.

Federated Telephone Cooperative

Rural Appleton, MN

Last Mile

$630,289 Loan

$630,289 Grant

Federated Telephone Cooperative will build an FTTP system to deploy voice, video, and data services to the Rural Appleton exchange. The PFSA is primarily located in Swift County, with small portions in Big Stone and Chippewa counties. The PFSA includes 152 households, 7 businesses, and 1 anchor institution. The project will create or save one job.

Federated Telephone Cooperative

Rural Morris, MN

Last Mile

$1,493,637 Loan

$1,493,637 Grant

Federated Telephone Cooperative (FTC) will provide services to the Rural Morris exchange, adjacent to its existing ILEC and CLEC service areas. The PFSA is primarily located in Stevens County, with a small portion in Grant County. The service area has 408 households, 20 businesses, and 2 anchor institutions. FTC will deploy voice service, data service over FTTP, and RF video service over its existing FTTP system. FTC will use Calix DSLAMs, which are standards based, to deploy GPON FTTP service capable of 1 Gig. The project will create or save two jobs.

Halstad Telephone Company

HTC Minnesota Exchanges FTTP

Last Mile Non-remote

$3,277,500 Loan

$3,277,500 Grant

Halstad Telephone Company will deploy FTTP broadband in five towns and surrounding rural and farm areas in Norman and Polk counties. The project will use 320 miles of fiber-optic cable and provide those locations with broadband capability of up to 100 Mbps. Less than 5 percent of this network will also serve an area in North Dakota. The network will make services available to 1,015 households, 41 businesses, and 15 anchor institutions. The project will create or save 42 jobs.

Lake County

Lake County Fiber Network

Last Mile

$56,413,705 Loan

$9,955,359 Grant

Lake County, in partnership with National Public Broadband, Inc., will implement the Lake County Fiber Network project to offer FTTP advanced voice, video, and data services to every home and business in Lake and eastern St. Louis counties. The network will make services available to 14,941 households, approximately 1,060 businesses, and 98 anchor institutions. The project will create or save 510 jobs.

Minnesota Valley Television Improvement Corporation

Minnesota Wireless Expansion

Last Mile Non-remote

$562,776 Loan

$562,776 Grant

Minnesota Valley Television Improvement Corporation will continue building out its two-way broadband Internet network to unserved and underserved areas of west-central and south-central Minnesota. The project will add 34 additional WiMAX access points in 34 unserved and underserved communities adjacent to its current service area. The network will make services available to 23,121 households, 479 businesses, and 200 anchor institutions. The project will create or save three jobs.

Northeast Service Cooperative

Northeast Minnesota Middle Mile Project

Middle Mile

$21,749,110 Loan

$21,749,110 Grant

The Northeast Service Cooperative will implement a middle-mile project to make dark fiber, wavelength services available to private-sector providers in rural areas of northeast Minnesota. The network will make services available to 105,904 households, 7,618 businesses, and 100 anchor institutions.

Red River Rural Telephone Association, Inc.

RRT FTTP Broadband Upgrade Rural MN, ND, and SD Exchanges

Last Mile

$181,769 Loan

$181,769 Grant

Red River Rural Telephone Association, Inc., will offer FTTP broadband service speeds of up to 100 Mbps. The project will install 690 miles of fiberoptic cable to serve rural exchanges in Ransom, Richland, and Sargent counties in North Dakota, as well as Wilkin County in Minnesota, and Marshall and Roberts counties in South Dakota. The network will make services available to 42 households and 9 businesses. The project will create or save four jobs.

Sjoberg's, Inc.

Northwest Minnesota Fiber Project

Last Mile

$216,516 Loan

$649,544 Grant

Sjoberg's, Inc., will offer FTTH broadband service in Roseau, Thief River Falls, and the hamlet of Fox. This project will benefit many small farms located in the "grain belt." Additional video, Internet, and telephone services will be delivered via RFoG technology, while current broadband service will be upgraded to deliver download speeds of 40 Mbps using DOCSIS 3.0. The network will make services available to 227 households, 15 businesses, and 3 anchor institutions. The project will create or save 11 jobs.

Wikstrom Telephone Company, Inc.

Wikstrom NW MN Broadband

Last Mile

$2,219,581 Loan

$5,179,019 Grant

Wikstrom Telephone Company, Inc., will implement two distinct types of projects in rural, unserved, and underserved areas in northwest Minnesota. The first project will upgrade the backbone and distribution fiber-optic data networks for broadband in 16 of the rural telephone exchanges that Wikstrom serves. The network will

make services available to an unserved area of 182 square miles with 150 households and 573 businesses. The FTTN ADSL2+ network, provisioned for 2,755 customers, will provide speeds of up to 48 Mbps. Key components of the upgrade include installation of 74 miles of fiber-optic cables with GigE service to remote DSLAM cabinets; installation of an upgraded 6 GHz, 150 megabits radio to serve Angle Inlet; and upgrade of microwave service to the northwest Angle/Angle Inlet community and the fiberoptic network to serve the islands in the northernmost part of the contiguous United States, of which most of the land mass is Red Lake Nation Reservation. Also included is an extension of fiber-optic cable to serve the Agassiz National Wildlife Refuge, in cooperation with American Recovery and Reinvestment Act funding for upgrades to its facilities. The second project is to install a GPON 2.4 Gbps FTTH system, with the installation of 414 miles of fiber-optic cable with GigE to 1,163 homes and businesses, in the exchanges of Greenbush and Karlstad, and the small cities of Kennedy, Lake Bronson, Lancaster, and Stephen. The network will make services available to 5,115 households, 1,499 businesses, and 83 anchor institutions. The project will create or save 26 jobs.

Winnebago Cooperative Telecom Association

WCTA 2010 Broadband Initiative

Last Mile

$1,570,592 Loan

$1,570,592 Grant

Winnebago Cooperative Telecom Association (WCTA) will provide last-mile, high-speed wireline broadband FTTP to rural areas in north-central Iowa and south-central Minnesota. The infrastructure will support existing rural wireless tower facilities for future growth and bandwidth expansion to 3G and 4G networks and beyond. The project will build on a previously deployed FTTN system. The PFSA serves portions of 21 communities in 5 counties in Iowa and 2 counties in Minnesota. The network will make services available to 541 premises, which include households plus 138 home businesses, and will offer broadband service at combined speeds ranging from 5 Mbps to 25 Mbps. WCTA will also offer digital video and unlimited local voice service. The project will create or save eight jobs.

Woodstock Telephone Company, Inc.

WTC 2010 Broadband Initiative

Last Mile

$4,555,328 Loan

$10,629,096 Grant

Woodstock Telephone Company, Inc. (WTC) will provide high-speed broadband service to rural areas in southwest Minnesota. WTC has the opportunity to incorporate and share some existing facilities to help provide feasible service in adjoining underserved areas. WTC will also serve farming areas near small towns. The PFSA covers parts of Lyon, Pipestone, and Rock counties. The PFSA has 15 communities with 3,677 establishments consisting of 3,447 households, 183 businesses, and 47 anchor institutions. WTC will offer a reduced service rate to anchor institutions and small disadvantaged businesses. The project will provide service speeds of 10 Mbps upstream and downstream as basic service and higher speed service at 30 Mbps and 80 Mbps. WTC will deploy a GPON-based FTTP system using a combination of nodes to cost-effectively build the system. An initial deployment of 16-way optical splitters will support an average bandwidth per subscriber of 150 Mbps. Each establishment will be served by a dedicated fiber from the central office or the remote huts housing local active electronic nodes. The project will create or save 41 jobs.

Mississippi

Calhoun City Telephone Company, Inc.

Calhoun City Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,962,169 Grant

Calhoun City Telephone Company, Inc. (Calhoun City Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in Calhoun City Tel's rural Mississippi service territory. The project will serve five rural PFSAs with six communities. These PFSAs have 586 premises (553 households, 25 businesses, and 8 anchor institutions) with no access to broadband service. Calhoun City Tel is the State-certified ILEC in Mississippi. As engineered, the network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 ac-

cess devices packaged in an FTTN configuration, upgrade access in the central office to support extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed on the network is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 78 jobs.

DigitalBridge Communications Corporation

Round 2: MS-Panola Last Mile

Last Mile

$657,833 Loan

$1,973,499 Grant

DigitalBridge Communications Corporation will offer 4G broadband service to Panola County. This project will deploy fixed and mobile WiMAX technologies to offer broadband service speeds of up to 5 Mbps. The network will make services available to 7,311 households, 1,379 businesses, and 87 anchor institutions. The project will create or save six jobs.

Smithville Telephone Company, Inc.

Smithville Telephone Broadband Program

Last Mile

$7,110,886 Grant

Smithville Telephone Company, Inc., the certified ILEC serving rural portions of Itawamba and Monroe counties in northeastern Mississippi, will bring high-speed fiber-optic broadband service to the area. The company's licensed telephone service area includes the town of Smithville, with a population of about 900, and almost 1,300 premises. The PFSA has 298 unserved households in the more remote parts of the rural area. As engineered, the project will build a combination of FTTH and advanced xDSL service. The project will provide GPON technology FTTP broadband service to all 298 unserved rural households and upgrade the existing network in the remaining part of the PFSA to the same capabilities available to all 738 premises in the PFSA. The project will replace the existing voice switch with a softswitch and build a network capable of 100 Mbps broadband speeds that later can be reconfigured to active Ethernet for much higher speeds. The project will create or save 30 jobs.

Southeast Mississippi Telephone Company, Inc.

Southeast Mississippi Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,875,204 Grant

Southeast Mississippi Telephone Company, Inc. (Southeast MS Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Southeast MS Tel is the State-certified ILEC in Mississippi. The project is designed to serve 10 PFSAs in its franchised service territory, which is 100 percent rural and includes 4 communities. These PFSAs have 612 premises (595 households, 12 businesses, and 5 anchor institutions) that have no access to broadband service. Southeast MS Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 49 jobs.

Windstream Corporation

Windstream Mississippi, LLC

Last Mile

$1,005,566 Grant

Windstream Corporation will provide last-mile broadband service to unserved premises in the Prentiss and Rankin rural communities. Windstream will deploy industry-standard DSLAMs using ADSL2+ protocols to provide a minimum of 6 Mbps downstream and 786 Kbps upstream data services. DSLAMs will be strategically deployed to reach the greatest number of unserved customers over the existing wireline copper plant. The network will make services available to 1,153 households,

24 businesses, and 5 anchor institutions. The project will create or save an estimated 28 jobs.

Missouri

Big River Broadband, LLC

Big River Broadband Project

Last Mile

$12,191,271 Loan

$12,190,784 Grant

Big River Broadband, LLC will provide high-speed Internet access to an unserved area in southeast Missouri. The network, which covers 3,409 square miles in 7 counties, will make services available to 44,967 households, 7,511 businesses, and 311 anchor institutions. The project will provide high-speed Internet access (both fixed and mobile) at download speeds of up to 14.4 Mbps and upload speeds of 5.8 Mbps and will deploy a wireless broadband network using Advanced Wireless Services licensed spectrum and high-speed packet access technology. The project will create or save 1,370 jobs.

Cass County

Cass County, MO, Broadband Initiatives Fiber-to-the-Home Project

Last Mile

$7,802,391 Loan

$18,205,578 Grant

Cass County will construct a last-mile FTTH network that will extend approximately 1,286 miles to enable broadband service speeds of up to 100 Mbps. The network will make services available to 10,360 households, 710 businesses, and 118 anchor institutions. The project will create or save an estimated 138 jobs.

Finally Broadband, LLC

Southwest Missouri Rural Broadband Initiative

Last Mile

$499,000 Loan

$499,000 Grant

Finally Broadband, LLC will provide terrestrial fixed wireless technology to four rural counties in southwest Missouri, two of which are designated as persistent poverty counties. The network will make services available to 45,782 households, 7,484 businesses, and 404 anchor institutions in a 4,563-square-mile area. The project will deploy a Motorola Canopy platform to provide Internet bandwidth over three interconnection points for redundancy. The project will create or save seven jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 1

Last Mile

$3,418,682 Loan

$7,976,924 Grant

The Grand River Mutual Telephone Corporation Service Area 1 project will provide broadband service to the town of Lathrop and the surrounding rural areas via an FTTH network. The network will make services available to 1,221 households, 47 businesses, and 12 anchor institutions in the Lathrop area. The project will create or save 21 jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 2

Last Mile

$12,363,759 Grant

The Grand River Mutual Telephone Corporation Service Area 2 project will provide broadband service to customers in the towns of Browning, Linneus, Meadville, and Purdin and the surrounding rural areas. The network will make services available to 1,185 households, 773 businesses, and 22 anchor institutions. The project will provide high-speed Internet access over an FTTH system to customers in the PFSAs that include Linn and Sullivan counties. The expanded network will upgrade 459 residential customers and 80 business customers to higher speed service. The project will create or save an estimated 28 jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 3

Last Mile

$8,970,781 Grant

The Grand River Mutual Telephone Corporation Service Area 3 project will provide high-speed Internet access over an FTTH system to customers in the PFSAs that include the towns of Denver, Gentry, and New Hampton, and their surrounding rural areas. The network will make services available to 641 households, 371 businesses, and 8 anchor institutions. Active Ethernet or GPON are planned as the access delivery technology and are deployed in other locations in Grand River Mutual's ILEC service area. The company will use connections to the Missouri Network Alliance to provide high-bandwidth Internet connectivity. The project will create or save an estimated 20 jobs.

Grand River Mutual Telephone Corporation

Grand River Mutual Fiber-to-the-Home Broadband Deployment Project—Service Area 5

Last Mile

$973,001 Loan

$2,270,336 Grant

The Grand River Mutual Telephone Corporation Service Area 5 project will provide broadband service to the towns of Allerton, Corydon, Lineville, and Millerton, Iowa, and Powersville, Missouri, and their surrounding rural areas. The network will make services available to 320 households, 54 businesses, and 6 anchor institutions along the Iowa-Missouri border. The project will create or save six jobs.

Northeast Missouri Rural Telephone Company

Green City, MO, Fiber-to-the-Premises

Last Mile

$3,595,810 Loan

$3,595,810 Grant

Northeast Missouri Rural Telephone Company will construct an FTTP network. This FTTP overbuild will provide greater than 20 Mbps broadband access to households, businesses, and anchor institutions in the Green City telephone exchange. The network will make services available to 972 households, 49 businesses, and 20 anchor institutions. The project will create or save 78 jobs.

Northeast Missouri Rural Telephone Company

Unionville, MO, FTTP Project

Last Mile Non-remote

$5,140,458 Loan

$5,140,458 Grant

Northeast Missouri Rural Telephone Company will deploy FTTP infrastructure to provide needed broadband service to households, businesses, and anchor institutions that are underserved in the Unionville Exchange. The network will make services available to 1,437 households, 157 businesses, and 8 anchor institutions. The project will create or save 37 jobs.

Orchard Farm Telephone Company

Orchard Farm Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$604,794 Grant

Orchard Farm Telephone Company (Orchard Farm Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Orchard Farm Tel is the State-certified ILEC in Missouri. The project will serve one PFSA in its franchised service territory, which is rural and includes three communities. This PFSA has 142 premises (92 households, 47 businesses, and 3 anchor institutions) that have no access to broadband service. Orchard Farm Tel has already built a broadband network that is capable of serving the majority of the premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the

PFSAs. The project will deliver high-speed broadband capabilities of 20 Mbps (upstream and downstream combined). The project will create or save 16 jobs.

Ralls County Electric Cooperative

Ralls County Electric Fiber-to-the-Home Project

Last Mile Non-remote

$9,548,909 Loan

$9,548,908 Grant

Ralls County Electric Cooperative will provide a fiber-optic network to residential and commercial members and the underserved anchor institutions in the service area. This is a State of Missouri demonstration project. The network will make services available to 4,594 households, 311 businesses, and 58 anchor institutions. The project will create or save 35 jobs.

Socket Telecom, LLC

Rural Mid-Missouri Fiber-to-the-Premise Project

Last Mile

$7,120,345 Loan

$16,614,137 Grant

Socket Telecom, LLC will provide high-speed broadband access to rural mid-Missouri over a fiber-optic network. The PFSA consists of 117 square miles in parts of Fulton City and Callaway County. The network will make services available to 2,728 households, 269 businesses, and 36 anchor institutions. The project is designed as an FTTH broadband infrastructure to provide subscribers with access to telephone, video, and broadband Internet. Broadband service speeds will include 6.0 Mbps and 20 Mbps options. The broadband-over-fiber network will deploy a GPON-based system that will use passive splitters to deliver concurrent signals to multiple users within 20 kilometers of cable footage. The project will create or save 525 jobs.

United Electric Cooperative, Inc.

United Electric Fiber Initiative

Last Mile

$6,363,933 Loan

$14,849,173 Grant

United Electric Cooperative will build an advanced last-mile FTTH network capable of delivering high-speed broadband at 100 Mbps to 21 rural communities in northwest Missouri. The cooperative will also add fiber strands to create a dedicated 1G education network to provide rural schools and libraries with increased broadband access. This education intranet, the Cooperative Network for Rural Education Advancement, will open the door to advanced education options through the use of video and shared resources. The network will be an open network model with competing Internet, video, and voice providers offering advanced broadband applications to 4,224 households, 58 businesses, and 150 anchor institutions. The network spans 1,370 miles. Through its partner, Pulse Broadband, United Electric Cooperative will build a passive optical FTTH network on the existing electric distribution right-of-way. Service providers will enter the United Electric Cooperative fiber network through a central SIP controlled by the cooperative. The project will create or save an estimated 113 jobs.

Utopian Wireless Corporation

Utopian Benton WiMAX Project

Last Mile

$62,433 Loan

$187,298 Grant

The Utopian Benton WiMAX project will make available advanced 4G wireless broadband service to underserved communities around the Benton area. The PFSA covers approximately 1,105 households, 56 businesses, and 30 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian Wireless Corporation will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The average minimum downlink speeds for wireless Utopian subscribers will be at least 1.8 Mbps. The project will create or save 11 jobs.

Windstream Corporation

Windstream Missouri, Inc.

Last Mile

$10,328,319 Grant

Windstream Corporation will provide last-mile broadband service to numerous unserved rural areas of Missouri. Windstream will deploy industry-standard DSLAMs using ADSL2+ protocols to provide a minimum of 6 Mbps downstream and 786 Kbps upstream data services. DSLAMs will be strategically deployed to reach the greatest number of unserved customers over the existing wireline copper plant. The network will make services available to 4,350 households, 201 businesses, and 39 anchor institutions. The project will create or save an estimated 229 jobs.

Montana

Montana Opticom, LLC

Gallatin Gateway Broadband Project

Last Mile

$32,127,322 Loan

$32,000,000 Grant

Montana Opticom, LLC will build a gateway broadband project to expand high-speed broadband to the rural communities of Belgrade, Bozeman, Gallatin Gateway, Manhattan, and a portion of West Yellowstone. The project is an FTTP infrastructure overbuild that will deploy fiber to a rural area with a population of 18,844, where it has been cost prohibitive to deploy FTTP. The PFSA has 7,746 households, 4,118 businesses, and 58 anchor institutions. The project will offer voice, video, and data services at speeds of up to 100 Mbps. The project will create or save 697 jobs.

Nemont Telephone Cooperative, Inc.

Ft. Peck Reservation FTTP

Last Mile

$2,599,390 Loan

$23,394,510 Grant

Nemont Telephone Cooperative, Inc., will deploy an FTTP network to the exchanges of Brockton, Frazer, Froid Rural, North Poplar, North Wolf Point, and Poplar in northeast Montana. The PFSA, entirely in the Ft. Peck Indian Reservation, includes the communities of Brockton, Frazer, Fort Kipp, Homestead, Lustre, Oswego, Poplar, and Volt. This service area is a remote, rural, underserved, and severely economically challenged area. The network will make services available to 3,279 premises. It will also connect 42 anchor institutions, of which 19 are tribal entities, 6 medical and healthcare centers, 7 educational institutions, 4 emergency services, 2 libraries, 11 government facilities, and 12 community support organizations. The project will provide up to 100 Mbps service to all locations and the future capability of up to 1 Gbps service at cost-effective pricing. The project will provide a 100 percent fiber-optic network using Calix GPON equipment. The project will create or save an estimated 283 jobs.

Project Telephone Company

Crow Agency/Lodge Grass FTTP

Last Mile

$3,887,370 Loan

$11,662,109 Grant

Project Telephone Company will provide FTTP to all locations within the Crow Reservation exchanges of Crow Agency and Lodge Grass, where more than 50 percent of the locations do not have access to 5 Mbps (upstream and downstream combined). This project will also bring FTTP to all anchor institutions, including the headquarters of the Crow Tribe in Crow Agency. The service will be accessible by each location and delivered by GPON and/or active Ethernet topologies. The network will make services available to 1,495 households, 191 businesses, and 26 anchor institutions. The project will create or save an estimated 169 jobs.

Project Telephone Company

Scott St. Pryor Middle Mile

Middle Mile

$962,672 Loan

$2,888,015 Grant

Project Telephone Company will create a fiber-optic transport network that connects the Crow Indian Reservation communities of Fort Smith, Pryor, and Saint Xavier to existing fiber-transport networks in Lockwood, near Billings. This project will also bring FTTP-type services to 26 anchor institutions, ncluding tribal, State, and Federal entities. The infrastructure will allow Project Telephone to link to other

backbone providers. This project will promote rural economic development and provide interconnection points to underserved areas. It will also stimulate broadband growth by providing interoffice transport, backhaul, Internet connectivity, and/or special access using fiber. This redundant network is vital in the event of a network outage, such as a fiber cut, in order to keep critical services like public safety operational. The network will make services available to 1,765 households and 493 businesses. The project will create or save 42 jobs.

Reservation Telephone Cooperative

Last Mile Broadband to Rural ND and MT

Last Mile Non-remote

$2,190,000 Loan

$2,190,000 Grant

Reservation Telephone Cooperative will deploy FTTH technology to bring affordable and reliable broadband access and video service to underserved rural areas in western North Dakota and eastern Montana communities in and around the Fort Berthold Indian Reservation. These areas include the remote Squaw Gap service area and the partially remote Mandaree, New Town, Parshall, and Roseglen service areas. The network will make services available to 281 households, 8 businesses, and 4 anchor institutions. The project will create or save eight jobs.

Nebraska

Peetz Cooperative Telephone Co.

Peetz Last Mile

Last Mile Remote

$756,925 Grant

Peetz Cooperative Telephone Co., will deploy broadband infrastructure in and around the Peetz community using a combination of technologies. Anchor institutions within the community will have the connectivity necessary for distance learning and public safety applications. The network will make services available to 254 households, 15 businesses, and 6 anchor institutions. The project will create or save five jobs.

Southeast Nebraska Communications, Inc.

Southeast Nebraska Communications Rural FTTH

Last Mile

$3,396,895 Loan

$7,888,472 Grant

Southeast Nebraska Communications, Inc. (SNC) will upgrade its network to alleviate a last-mile bottleneck in its service area in Nebraska and Kansas. The current technology limits average customer throughput and is distance sensitive, which results in the most rural subscribers having less bandwidth access than those closer to town. The PFSA for this project is SNC's entire certificated telephone company service territory. The network will make services available to 1,215 households, 51 businesses, and 22 anchor institutions. The project will upgrade these areas from copper-based facilities and technologies to FTTH and will offer broadband service speeds of a minimum of 3 Mbps downstream and a minimum of 1 Mbps upstream. The FTTH equipment will be standards-based active Ethernet. The project will create or save nine jobs.

Nevada

Arizona Nevada Tower Corporation

Central Nevada Community Anchor Wireless Backhaul Solution

Middle Mile

$2,276,650 Loan

$5,312,182 Grant

Arizona Nevada Tower Corporation will provide middle-mile broadband to enhance existing but limited fiber-optic cable and provide transport where fiber-optic cable is unavailable by using LTE/WiMAX-ready technology. This project will provide microwave radio backbone and a middle-mile system to provide significant bandwidth in 15 areas of Nevada and California. The network will make services available to 12,933 households, 3,422 businesses, and 186 anchor institutions. The project will create or save eight jobs.

KeyOn Communications, Inc.

KeyOn WiMAX Nevada

Last Mile

$3,054,989 Loan

$7,106,233 Grant

KeyOn Communications, Inc., will offer 4G last-mile wireless broadband and VoIP in 39 of the most rural communities in Nevada. Using KeyOn's nationwide 3.65 GHz license and the standards-based WiMAX protocol, the network will offer broadband service speeds of up to 8 Mbps. The network will make services available to 37,569 households, 5,522 businesses, and 849 anchor institutions. The project will create or save 30 jobs.

Reno-Sparks Indian Colony, Inc.

Hungry Valley Broadband Initiative

Last Mile

$400,000 Grant

Reno-Sparks Indian Colony, Inc., will offer wireless broadband service speeds at a minimum of 5 Mbps to communities in a rural reservation in Hungry Valley. The network will make services available to 162 households, 1 business, and 4 anchor institutions. The project will create or save one job.

Rural Telephone Company

North Fork, Tuscarora, and Jarbidge Service Area Broadband Service Implementation

Last Mile

$728,700 Loan

$1,700,300 Grant

Rural Telephone Company will extend ADSL2+ high-speed broadband service to existing and new customers in the Jarbidge, North Fork, and Tuscarora service areas. The network will make services available to 272 households, 104 businesses, and 10 anchor institutions. The project will create or save two jobs.

New Hampshire

Bretton Woods Telephone Company, Inc.

Last Mile Remote Area—Bretton Woods, NH

Last Mile Remote

$985,000 Grant

The Bretton Woods area lacks broadband service sufficient for the community's needs and commercial applications. Bretton Woods FTTP will provide nearly 40 times faster service than is currently available. Tourism is the primary industry supporting jobs and economic development in the region and broadband access will help keep this industry strong. The network will make services available to 386 households, 19 businesses, and 6 anchor institutions. The project will create or save 11 jobs.

Kearsarge Telephone Company

Kearsarge Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$372,532 Grant

Kearsarge Telephone Company (Kearsarge Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in its rural New Hampshire service territory. The project will serve three rural PFSAs. These PFSAs have 116 premises (107 households and 9 businesses) with no access to broadband service. Kearsarge Tel is the State-certified ILEC in New Hampshire. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 10 jobs.

Merrimack County Telephone Company

Merrimack County Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,021,197 Grant

Merrimack County Telephone Company (Merrimack County Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in its rural New Hampshire service territory. The project will serve eight rural PFSAs with five communities. These PFSAs have 832 premises (770 households and 62 businesses) with no access to broadband service. Merrimack County Tel is the State-certified ILEC in New Hampshire. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 53 jobs.

New Mexico

Baca Valley Telephone Company, Inc.

Baca Valley Telephone Last Mile DSL Project

Last Mile Non-remote

$1,651,000 Loan

$1,586,000 Grant

Baca Valley Telephone Company, Inc., will deploy a fiber-optic last-mile access system to provide ADSL2+ broadband service to households and businesses in two separate PFSAs located in northeast New Mexico. This project will serve subscribers located in Union and Colfax counties, and consists of two service areas: Des Moines and Maxwell. The network will make services available to 373 households, 71 businesses and rural establishments (including farms and ranches), and 20 anchor institutions. The project will create or save 10 jobs.

Dell Telephone Cooperative, Inc.

Dell Telephone Last-Mile DSL project

Last Mile

$435,500 Grant

Dell Telephone Cooperative, Inc., will provide high-speed broadband access to subscribers in Bug Scuffle. This rural PFSA is a residential community in southeast New Mexico. The network expansion will use copper-based ADSL2+ technology to provide broadband data and voice service to the 44 households in the PFSA. The project will replace existing legacy Tellabs DLC equipment with next-generation, fiber-fed Occam BLC equipment that is capable of providing service speeds of 4.5 Mbps downstream and 768 Kbps upstream. The project will create or save 18 jobs.

Kit Carson Electric Education Foundation, Inc.

Kit Carson Electric Cooperative Fiber-to-the-Home Project

Last Mile

$19,130,601 Loan

$44,638,070 Grant

Kit Carson Electric Cooperative (KCEC) will build an open-access FTTH fiber-optic network in the unserved and underserved counties of Colfax, Rio Arriba, and Taos in northern New Mexico. Two of the counties are among New Mexico's 12 designated persistent poverty counties. The PFSAs include 29 communities comprising an estimated 20,458 households, 3,647 businesses, 183 anchor institutions, and 2 Native American pueblos in a 2,951-square-mile rural underserved area. The network spans 2,400 miles. KCEC will build and operate an FTTH network capable of at least 100 Mbps for residential service and 1 Gbps broadband service for anchor institutions. KCEC will use this project to build an FTTH network along the existing electric distribution right-of-way to enable smart grid/green grid technologies. The smart-grid functionality can handle intermittent power from renewable energy sources and help customers track and manage their real-time energy consumption. The fiber network will provide the backbone for deploying smart meters at residential and commercial sites so consumers can use broadband to set up home area networks capable of supporting smart appliances and time-shifting peak-demand strategies. The investment in the fiber network will be leveraged to tie together regional power substations and the operations center. KCEC is also working with the Taos Pueblo tribal government to build fiber into that community to provide affordable broadband access for tribal anchors and members. The project will create or save an estimated 333 jobs.

La Jicarita Rural Telephone Cooperative

Broadband Services to Mora County, NM

Last Mile

$3,557,050 Loan

$8,299,782 Grant

La Jicarita Rural Telephone Cooperative will offer full fiber capabilities to rural establishments with broadband service speeds of up to 18 Mbps. This lastmile project, along with a middle-mile component, will allow the company to provide affordable higher speed last-mile service to a majority of its subscriber base who otherwise would go underserved. The network will make services available to 1,384 households, 41 businesses, and 8 anchor institutions. The project will create or save 48 jobs.

Peñasco Valley Telephone Cooperative, Inc.

PVT ILEC

Last Mile Non-remote

$4,818,607 Loan

$4,770,660 Grant

Peñasco Valley Telephone Cooperative, Inc., will deliver high-speed broadband service to unserved areas in its ILEC territory. The project will deploy fiber and electronics to allow for broadband service offerings to customers who are unable to access DSL, include wireless capabilities for difficult-to-reach areas, and provide for additional fiber capacity. The network will make services available to 1,871 households and 6 businesses.

Pueblo de San Ildefonso

TewaCom Broadband Initiative (TBI), Phase 1—Upper Rio Grande Valley

Last Mile Non-remote

$632,225 Loan

$632,225 Grant

San Ildefonso Pueblo is a partner in the Northern New Mexico Regional Economic Development Initiative, which will deploy a regional open network. The network will support the multiple purposes of economic development, education, healthcare, and sustainable energy development, and will make services available to 2,405 households, 35 businesses, and 23 anchor institutions. The project will create or save 10 jobs.

Windstream Corporation

Valor Telecommunications of Texas 310

Last Mile

$2,273,847 Grant

Windstream Corporation will extend its broadband network to provide service to unserved homes and businesses in the areas of Chimayo, Dixon, Peñasco, Rio Chama, Ruidoso, South Rio Arriba, Tierra Amarilla, Truth or Consequences, and Vallecitas. The project will use industry-standard ADSL2+ protocols that will offer broadband service speeds of up to 12 Mbps. The network will make services available to 3,999 households, 56 businesses, and 2 anchor institutions. The project will create or save an estimated 29 jobs.

New York

Castle Cable TV, Inc.

Castle Cable TV Broadband Project

Last Mile

$3,584,280 Loan

$3,584,279 Grant

Castle Cable TV, Inc., will extend broadband and other advanced telecommunications services through several communities in Jefferson and St. Lawrence counties, making services available to 2,321 households, 217 businesses, and 12 anchor institutions. The project will deploy FTTH wireline technology, update access in the head-end necessary to support the extension of the broadband network to these areas, and utilize a configuration that will allow for future PON upgrades without having to rebuild the transport routes. In addition, through its subsidiary Citizens Cablevision, Castle Cable TV will provide the same service to Morristown and the

community of Brier Hill in rural Morristown Township along the St. Lawrence River. The project will create or save 11 jobs.

Deposit Telephone Company, Inc.

Deposit Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$3,018,085 Grant

Deposit Telephone Company, Inc. (Deposit Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in Deposit Tel's rural franchise service territory. Deposit Tel is the State-certified ILEC in New York. The project will serve six PFSAs in its franchised service territory, which is 100 percent rural and includes six communities. These PFSAs have 1,140 premises (1,069 households and 71 businesses) that have no access to broadband service. Deposit Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, much of which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will bring access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 80 jobs.

Mid-Hudson Cablevision, Inc.

Last-Mile High Speed Broadband in Greene and Columbia Counties

Last Mile

$2,987,570 Grant

Mid-Hudson Cablevision, Inc., will provide high-speed broadband access to seven unserved and underserved PFSAs in the Hudson Valley and Catskill Mountain region between New York City and Albany. The network will make services available to 7,186 households, 2,586 businesses, and 97 anchor institutions and will complete part of the region's 911 public safety infrastructure. The last-mile extensions will require construction of 135 linear miles of FTTH on existing utility poles and connection for a network of five fire towers. Another 341-square-mile area will be reached by deploying 16 transmitting sites for wireless. The PFSAs also cover four underserved communities, including Greene County. Mid-Hudson will deploy more than 16 transmitting sites using Motorola Canopy equipment to provide access speeds of 10 Mbps in line-of-sight areas and 4 Mbps in dense foliage. The project will create or save 59 jobs.

Port Byron Telephone Company, Inc.

Port Byron Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$639,218 Grant

Port Byron Telephone Company, Inc. (Port Byron Tel), a subsidiary of TDS Telecom, will bring highspeed broadband service to unserved premises in Port Byron Tel's rural franchise service territory. Port Byron Tel is the State-certified ILEC in New York. The project is designed to serve three PFSAs in its franchised service territory, which is 100 percent rural and includes two communities. These PFSAs have 166 premises (160 households and 6 businesses) that have no access to broadband service. Port Byron Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area, which is sparsely populated, lacks broadband access due to the high cost of building such a network. In addition, facilities-based terrestrial broadband service is unavailable to the premises in the PFSAs. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 17 jobs.

St. Regis Mohawk Tribe

St. Regis Mohawk Tribe Connect (Economic Development for the 21st Century)

Last Mile

$528,125 Loan

$10,034,392 Grant

The St. Regis Mohawk Tribe will bring a last-mile fiber-optic network to its tribal lands in north-central New York. This project will link 68 miles of fiber network

to the Open Access Telecommunications Network of the Development Authority of North Country, to ION Incorporated Network, and to Nicholville's network. The network will make services available to 1,500 households, 200 businesses, and 42 anchor institutions. The project will create or save an estimated 784 jobs.

Slic Network Solutions, Inc.

Franklin County, NY, Broadband Initiative

Last Mile Remote

$1,066,000 Loan

$4,262,642 Grant

Slic Network Solutions, Inc., will construct 136 miles of fiber-optic cable to deliver advanced broadband service in western Franklin County. The network will provide voice and IPTV services over the same facilities. The network will make services available to 6,508 households, 29 businesses, and 10 anchor institutions. The project will create or save 10 jobs.

Slic Network Solutions, Inc.

St. Lawrence Broadband Initiative

Last Mile

$6,958,193 Loan

$20,874,574 Grant

Slic Network Solutions, Inc., will construct 660 miles of fiber-optic cable in 10 PFSAs to make services available to 5,856 households, 112 businesses, and 30 anchor institutions in St. Lawrence County. The PFSAs can be separated into two groups: the northern and southern serving areas. The northern group consists of Flackville, Knapps Station, Pierrepont, Slab City-Crary Mills, Southville, and St. Lawrence North. These service areas in the northern part of the county cover 414 square miles of primarily agricultural areas. The southern group includes communities along the New York State Route 3 corridor, including Star Lake, Wanakena, Cranberry Lake, and Piercefield, which are in the towns of Fine, Clifton, and Piercefield. All have been chronically unserved because of their isolated location in the foothills of the Adirondacks. Broadband service is currently unavailable to the residents of these communities. Slic Network Solutions will deploy a 100 percent fiber-optic network using Occam GPON equipment. The company will use infrastructure obtained through its round one BIP award. The project will create or save 67 jobs.

Windstream Corporation

Windstream New York, Inc. 26

Last Mile

$855,901 Grant

Windstream Corporation will offer broadband service speeds of up to 12 Mbps in Clymer, Columbus, Ellery, French Creek, Mina, and Sherman by deploying industry-standard DSLAMs with ADSL2+. The network will make services available to 571 households, 8 businesses, and 8 anchor institutions. The project will create or save 53 jobs.

North Carolina

Atlantic Telephone Membership Corporation

Columbus County ACCESS (Advanced Connectivity for Communities, Education, Safety and Support)

Last Mile

$4,801,025 Loan

$11,202,393 Grant

Atlantic Telephone Membership Corporation (ATMC) will implement the Columbus County ACCESS project to deploy FTTH to all premises in the PFSA. The project will serve a rural, 185-square-mile area near the eastern boundary of Columbus and Brunswick counties in the southeastern part of the State. The network will make services available to 3,641 households, 274 small businesses, and 35 anchor institutions to provide them with access to high-speed broadband service with speeds from 1.5 Mbps to 5.0 Mbps. The project will leverage ATMC's existing 10 GigE core backbone, backhaul, and IP connections through interconnection to a GigE fiber ring to be deployed in the PFSA. The FTTP network will use GPON network gear. The project will create or save 87 jobs.

Country Cablevision, Inc.

Yancey Mitchell Rural Broadband
Last Mile
$6,324,250 Loan
$18,972,750 Grant

Country Cablevision, Inc., will deliver digital TV, data, and VoIP to all customers in Mitchell and Yancey counties. The PFSAs lie in the Appalachian Mountains of western North Carolina, bordering the Tennessee line. The project will install an FTTN broadband system delivering RFoG. The project will update and expand the company's operating system to enable high-speed broadband access at speeds of up to 20 Mbps to make services available to 14,029 households, 1,963 businesses, and 123 anchor institutions. The project will create or save 22 jobs.

French Broad Electric Membership Corporation
French Broad Electric BPL Project
Last Mile
$621,492 Loan
$1,154,200 Grant

French Broad Electric Membership Corporation (FBEMC) will provide broadband Internet access to Beech Glenn, Laurel, and Spring Creek, and the areas of Marshall and Mars Hill. The technology used in this project includes fiber-optic communications as the middle-mile backhaul link and BPL as the last-mile medium to provide service to subscribers. FBEMC chose this technological combination because it can use existing infrastructure to deploy the system and minimize project cost. The network will make services available to 1,016 households, 699 businesses, and 6 anchor institutions. The project will create or save 33 jobs.

Lumbee River Electric Membership Corporation
Lumbee River EMC Broadband Economic Development Initiative
Last Mile
$4,986,935 Loan
$14,960,804 Grant

Lumbee River Electric Membership Corporation will provide high-speed broadband access in southern North Carolina. The project will offer voice, video, and data services on an active GPON network using fiber-optic cable and passive and active components. The FTTH last-mile project will provide broadband service speeds of 100 Mbps or higher and will make services available to 11,384 households, 1,634 businesses, and 95 anchor institutions. The company will own and operate the fiber network while partnering with Innovative Communications, Inc., to provide all customer service functions. The project will create or save 51 jobs.

Skyline Telephone Membership Corporation
High Country Fiber
Last Mile
$7,739,073 Loan
$18,057,838 Grant

Skyline Telephone Membership Corporation will substantially expand the provision of advanced FTTH services via a fiber-optic network with combined speeds exceeding 20 Mbps to 6,019 households, 521 businesses, and 84 anchor institutions in Alleghany and Ashe counties in rural northwestern North Carolina. The project will create or save 85 jobs.

Tri-County Telephone Membership Corporation
TriCounty Telecom FTTP Project
Last Mile
$3,536,805 Loan
$10,610,410 Grant

Tri-County Telephone Membership Corporation will offer broadband service using FTTP technology in northeast Beaufort County and parts of Hyde and Washington counties. This project will deploy a GPON network with the inherent capability to deliver broadband service speeds of 80 Mbps. The network will make services available to 4,312 households, 889 businesses, and 32 anchor institutions. The project will create or save 77 jobs.

Utopian Wireless Corporation
Utopian Riegelwood WiMAX Project

Last Mile
$115,249 Loan
$345,744 Grant

The Utopian Riegelwood WiMAX project will make available advanced 4G wireless broadband service to underserved communities in and around Riegelwood. The rural PFSA includes part of Columbus County, and covers an estimated 1,255 households, 452 businesses, and 32 anchor institutions. Using 2.5 GHz spectrum, Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The project will create or save 10 jobs.

Wilkes Telecommunications, Inc.
Wilkes Stimulus Project
Last Mile
$6,483,300 Loan
$15,127,700 Grant

Wilkes Telephone Membership Corporation, Inc., will provide last-mile, high-speed broadband to rural portions of Wilkes County in 10 underserved PFSAs. The PFSAs comprise 630 square miles. The fiber-optic upgrade will provide higher speed broadband service to many households, businesses, and anchor institutions, plus voice and video services. The network will make services available to 3,680 households, 3,358 businesses, and 45 anchor institutions. The project will create or save 160 jobs.

Yadkin Valley Telephone Membership Corporation
Yadkin Valley Rural FTTH
Last Mile
$10,834,116 Loan
$10,834,116 Grant

Yadkin Valley Telephone Membership Corporation will deploy 496 miles of high-capacity, last-mile FTTH service in rural North Carolina. The seven PFSAs comprise small, sparsely populated communities with no high-speed access that are in critical need of sustained economic development and support for anchor institutions. The network will make services available to 5,121 households, 606 businesses, and 56 anchor institutions. The project will deploy GPON FTTH to provide 65 Mbps of bandwidth per premise, with up to 1 Gbps of Ethernet service. The area has the potential to become a medical records processing hub. The project will create or save 57 jobs.

North Dakota

BEK Communications Cooperative
Rural Burleigh County, ND, FTTP
Last Mile Non-remote
$2,016,571 Loan
$1,986,473 Grant

BEK Communications Cooperative will deploy lastmile technology to provide FTTP broadband service to underserved homes and anchor institutions in rural Burleigh County. This will aid business growth and support public safety facilities in rural areas. The network will make services available to 542 households and 2 anchor institutions. The project will create or save nine jobs.

Consolidated Enterprises, Inc.
CEI Broadband Infrastructure Project
Last Mile
$5,782,361 Loan
$5,782,361 Grant

Consolidated Enterprises, Inc. (CEI) will serve two PFSAs in rural Belfield and Dickinson, western North Dakota. The project is an FTTH expansion to CEI's existing fixed-wireless data system in those areas. CEI will build fiber to the least populated areas of those communities where it has been cost-prohibitive to deploy FTTH and DSL. CEI will build out its facilities to make services available to 1,421 households in the PFSAs and 231 businesses and will provide voice and video, as well as data services at speeds of up to 100 Mbps. The project will create or save 25 jobs.

Dakota Central Telecom l—Streeter and Gackle
Dakota Central Telecom l—Streeter and Gackle

Last Mile Remote

$2,252,250 Grant

Dakota Central Telecom I will provide FTTP broadband service to households, businesses, and anchor institutions in portions of the Streeter and Gackle exchanges that are remote, rural, and unserved. The network will make services available to 221 households, 5 businesses, and 4 anchor institutions. The project will create or save nine jobs.

Griggs County Telephone Co.

Griggs County/Moore & Liberty Broadband Development

Last Mile

$5,524,010 Loan

$16,572,031 Grant

Griggs County Telephone Co. will provide last-mile FTTH technology for broadband access and voice, video, and data services to underserved rural areas in eastern North Dakota. The area is a designated Griggs-Steele Empowerment Zone because of the out-migration, poverty, and unemployment rates. This project will build facilities to extend video and data services at speeds of up to 100 Mbps. The two Griggs County PFSAs encompass four communities and portions of five rural counties. Griggs County will also provide service to the rural portions of two exchanges in other counties. The Moore & Liberty PFSA includes two communities and portions of three counties. The network will make services available to 1,787 households, 406 businesses, and 17 anchor institutions. The project will create or save 248 jobs.

Halstad Telephone Company

HTC Hillsboro ND Rural FTTP

Last Mile Non-remote

$2,027,600 Loan

$2,027,600 Grant

The Halstad Telephone Company will deploy FTTP broadband Internet and video service to 410 locations in rural Hillsboro, North Dakota, utilizing 283 miles of fiber-optic cable and providing those locations with a broadband capability of 100 Mbps. The network will make services available to 399 households, 10 businesses, and 1 anchor institution. The project will create or save one job.

Halstad Telephone Company

HTC Hillsboro ND Town Broadband

Last Mile Non-remote

$246,500 Loan

$246,500 Grant

The Halstad Telephone Company project will install electronic enhancements to existing DSL service to increase broadband capability to 100 Mbps for Internet and video service in the town of Hillsboro, North Dakota. The network will make services available to 736 households, 75 businesses, and 25 anchor institutions. The project will create or save three jobs.

Inter-Community Telephone Company, Inc.

ICTC FTTH Upgrade

Last Mile

$713,289 Loan

$1,625,362 Grant

Inter-Community Telephone Company, a local exchange carrier based in Nome, will implement a last-mile fiber project to make broadband available in three small, underserved rural communities—Hope, Sanborn, and Tower City—in the counties of Barnes, Cass, and Steele, respectively, in east-central North Dakota. The network will make services available to an estimated 412 premises. This project includes improvement and connectivity for businesses and anchor institutions. The project will implement broadband through FTTH with speeds of up to 100 Mbps. The project will create or save 32 jobs.

Red River Rural Telephone Association, Inc.

RRT FTTP Broadband Upgrade Rural MN, ND, and SD Exchanges

Last Mile

$4,362,450 Loan

$4,362,450 Grant

Red River Rural Telephone Association, Inc., will offer FTTP broadband service speeds of up to 100 Mbps. The project will install 690 miles of fiber-optic cable to serve six rural exchanges in Ransom, Richland, and Sargent counties in North Dakota, as well as Wilkin County in Minnesota, and Marshall and Roberts counties in South Dakota. The network will make services available to 996 households, 219 businesses, and 6 anchor institutions. The project will create or save 106 jobs.

Reservation Telephone Cooperative

Last Mile Broadband to Rural ND and MT

Last Mile Non-remote

$8,760,000 Loan

$8,760,000 Grant

Reservation Telephone Cooperative will deploy FTTH technology to bring affordable and reliable broadband access and video service to underserved rural areas in western North Dakota and eastern Montana, including the Fort Berthold Indian Reservation. These areas include the Squaw Gap service area and the Mandaree, New Town, Parshall, and Roseglen service areas. The network will make services available to 1,124 households, 31 businesses, and 18 anchor institutions. The project will create or save 33 jobs.

SRT Communications, Inc.

FTTP for the Rural North Dakota Community of Metigoshe

Last Mile

$2,214,758 Loan

$2,214,758 Grant

SRT Communications, Inc., will provide broadband to subscribers served by the Metigoshe exchange. The project will provide broadband service to towns and rural subscribers within the PFSA. Utilizing fiber-optic cable, the project will allow SRT to provide more than 20 Mbps broadband access to 445 households, 2 businesses, and 218 anchor institutions. The project will create or save 72 jobs.

Ohio

Benton Ridge Telephone Company

Benton Ridge Telephone Company Broadband Expansion Project—Benton Ridge

Last Mile Non-remote

$1,611,124 Loan

$1,547,942 Grant

The Benton Ridge Telephone Company will deploy an FTTH system in the Benton Ridge exchange of south central Ohio. The system will provide a dedicated fiber-optic connection for each customer. The network will make services available to 510 households, 19 businesses, and 1 anchor institution. The project is expected to create or save 34 jobs.

Consolidated Electric Cooperative, Inc.

North Central Ohio Rural Fiber Optic Network

Middle Mile

$1,399,499 Loan

$1,034,413 Grant

Consolidated Electric Cooperative, Inc., will construct an open-connectivity fiber-optic backbone network. This middle-mile project is integral to a smart grid initiative and broadband service that will bring urban connectivity to rural Ohio. The network will make services available to 35,708 households, 2,002 businesses, and 49 anchor institutions.

Hometown Cable Company, LLC

Unincorporated Areas of Darke/Preble County Network

Last Mile

$2,359,926 Loan

$2,267,380 Grant

Hometown Cable Company, LLC will deploy a wireless wide area network with fixed and mobile broadband service throughout Darke and Preble counties. The network will make services available to 19,664 households, 522 businesses, and 206 anchor institutions. The project will create or save 31 jobs.

Intelliwave, LLC

The Athens, Fairfield, and Pickaway County, Ohio, Rural Broadband Initiative

Last Mile Non-remote

$1,162,599 Loan

$1,116,997 Grant

Intelliwave, LLC will leverage Recovery Act funds to deliver wireless broadband and VoIP phone service to underserved rural communities in Athens, Fairfield, and Pickaway counties. The network will make services available to 11,428 households, 431 businesses, and 73 anchor institutions. The project will create or save seven jobs.

Nelsonville TV Cable, Inc.

Nelsonville TV Cable HFC Broadband Addition

Last Mile

$1,391,452 Loan

$3,246,721 Grant

Nelsonville TV Cable, Inc., will expand its HFC broadband to reach approximately 1,500 unserved rural homes in a persistent poverty area of southeastern Ohio. The project will expand the company's network into 14 unserved, noncontiguous, and isolated communities. The PFSAs range from less than 1 square mile up to 12 square miles each. The PFSAs include parts of 10 communities in 3 counties. The network will pass 1,461 households, 3,295 businesses, and 44 anchor institutions. The project will add a digital HFC network that provides high-speed Internet access speeds of 5.5 Mbps downstream and 650 Kbps upstream. The project will expand the network from its headend to area nodes, requiring new equipment in addition to 120 new miles of fiber and 80 miles of coax cable. The new cable will be 100 percent aerial, using existing rights-of-way and utility poles. The project will create or save 20 jobs.

New Era Broadband, LLC

Meigs County Broadband Infrastructure Project for

Advancement of Rural Economic Development

Last Mile

$738,733 Loan

$2,216,196 Grant

New Era Broadband, LLC will provide last-mile infrastructure to provide fixed P2MP wireless broadband service in Meigs County in Appalachia. Forty-four percent of the households in the State that are unserved by broadband are in Appalachian Ohio, which is a contributing factor in the ranking of Meigs County as one of the five poorest counties in the State. The project will provide broadband Internet service to a PFSA of approximately 266 square miles, comprising 3,386 unserved households, 165 unserved businesses, and 6 unserved anchor institutions. New Era will offer wireless broadband and VoIP, with minimum network speeds of 768 Kbps downstream and 200 Kbps upstream, as well as 3 Mbps combined speeds in qualified areas. The project will create or save 200 jobs.

Southern Ohio Communication Services, Inc.

Southern Ohio Underserved Rural Broadband Build

Last Mile

$738,705 Loan

$709,736 Grant

Southern Ohio Communication Services, Inc., will build a project in Appalachia. It will make broadband Internet and VoIP services available to 6,126 premises, the majority of which have no broadband service available. Adams and Pike counties will be served. In addition, the project will offer 3 Mbps upstream and 2 Mbps downstream service to the entire population in the company's service areas. The company will offer voice services through a wireless signal along with broadband data service to residential, business, and anchor institution customers. The company will add tower locations to the current network and upgrade some backhaul links to higher capacity service. The project will create or save 400 jobs.

Sycamore Telephone Company, Inc.

Sycamore FTTH

Last Mile

$1,452,310 Loan

$2,697,145 Grant

Sycamore Telephone Company, Inc., will build a fiber network in a rural PFSA to provide high-speed Internet service in the community of Sycamore Village and the villages of McCutchenville and Melmore. The technology will be over dark fiber to households and splitters will be in the central and two remote offices to implement GPON technology. The remaining remote locations will be upgraded with fiber feeds to allow bandwidth upgrade to GigE. This will provide DSL speeds from 8 to 20 Mbps. The project will serve 1,769 households, 450 businesses, and 14 anchor institutions. In the areas outside the villages, fiber will be placed to the existing DSL terminals, allowing the company to provide broadband speeds of over 5 Mbps to the subscribers throughout its exchange. The project will create or save 24 jobs.

Utopian Wireless Corporation

Utopian Kinsman WiMAX Project

Last Mile

$348,926 Loan

$1,046,778 Grant

The Utopian Kinsman WiMAX project will make available advanced 4G wireless broadband service to underserved communities in and around the Kinsman area. The rural PFSA covers approximately 2,909 households, 543 businesses, and 27 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The system solution includes WiMAX access points, wireless and wired backhaul, ASN–GW, CSN, and an IP core that supports authentication and routing of traffic to application servers and the Internet. The project will create or save 12 jobs.

Wabash Mutual Telephone Company

Wabash Mutual Telephone Company, Fort Recovery Area FTTH Project

Last Mile Non-remote

$2,201,042 Loan

$2,174,787 Grant

The Wabash Mutual Telephone Company will install an optical fiber network in its service area and will provide an advanced technology, allowing digital television, high-speed Internet at speeds in excess of 3 Mbps, and telephone services. The network will make services available to 938 households, 103 businesses, and 7 anchor institutions. The project will create or save six jobs.

Oklahoma

Atlink

Last Mile Broadband Infrastructure for Unserved, Rural Oklahoma Communities

Last Mile

$2,649,681 Loan

$5,897,676 Grant

Atlink will connect 14 Oklahoma towns that are chronically unserved and suffering from persistent poverty and unemployment. The project will deliver advanced tornado warnings and provide options for Federal and State assistance. The project includes infrastructure for high-speed access up to 10 Mbps to 1,660 households, 1,404 businesses, and 6 anchor institutions. The project will deploy a wireless architecture using equipment in multiple frequencies to reach the maximum number of unserved households. The project is expected to create or save 53 jobs.

Cimarron Telephone Company

Operation Slingshot Cimarron Telephone Company

Last Mile

$21,189,659 Loan

$21,189,658 Grant

Cimarron Telephone Company will implement an FTTH project to bring wireless broadband service to underserved rural portions of Creek, Osage, and Pawnee counties to serve 15 Oklahoma communities and surrounding rural areas. Portions of the project will serve Native American tribal lands, including the Creek, Osage, and Seminole Nations, and Pawnee Tribe of Oklahoma. The project will make services available to 8,966 households, 933 businesses, and 35 anchor institutions. The broadband system will include a portion of the network for FTTH based on the ITU–T G.984 Gigabit PON standard. The project will create or save 65 jobs.

Cross Telephone Co.

OBI–2 (Oklahoma Broadband Initiative—Area 2)

Last Mile

$8,796,980 Loan

$8,796,980 Grant

Cross Telephone Co., will offer FTTH and wireless broadband service speeds of up to 11 Mbps to underserved areas of 6 counties in Oklahoma. The network will serve portions of 3 Native American tribal lands, as well as 20,771 households, 4,183 businesses, and 111 anchor institutions. The project will create or save an estimated 63 jobs.

Medicine Park Telephone Company

Fiber-to-the-Home Project in the Rural Area of Meers in Comanche County, Oklahoma

Last Mile

$101,218 Loan

$303,488 Grant

Medicine Park Telephone Company will offer broadband service using a GPON FTTH network in the Meers community in rural and remote areas of Comanche County. This project will provide broadband service speeds of 2.4 Gbps downstream and 1.2 Gbps upstream. The network will make services available to 114 households, 3 businesses, and 6 anchor institutions. The project will create or save seven jobs.

Medicine Park Telephone Company

Sterling Oklahoma to Scotland Texas Rural Fiber Optic Route

Middle Mile

$1,198,587 Loan

$1,193,802 Grant

Medicine Park Telephone Company will offer broadband service using an FTTP network between Sterling, Oklahoma, and Scotland, Texas, with service speeds between 155 Mbps and 10 Gbps. The network will make services available to 1,524 households and 22 anchor institutions. The project will create or save 30 jobs.

Mid-America Telephone, Inc.

Mid-America Telephone, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,143,784 Grant

Mid-America Telephone Company, Inc. (Mid-America Tel), a subsidiary of TDS Telecom, will deliver high-speed broadband service to unserved premises in its rural Oklahoma service territory. Mid-America Tel is the State-certified ILEC in Oklahoma. The project will reach 4 PFSAs that include 2 communities with 310 premises (286 households and 24 businesses) with no access to broadband service. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow future PON upgrades without needing to rebuild the transport routes. The network will provide 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 30 jobs.

Oklahoma Communication Systems, Inc.

Oklahoma Communication Systems, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$3,570,745 Grant

Oklahoma Communication Systems, Inc. (OCSI), a subsidiary of TDS Telecom, will provide high-speed broadband service to 11 PFSAs that include 8 communities. These PFSAs have 912 premises (877 households, 34 businesses, and 1 anchor institution) with no access to broadband service. OCSI is the State-certified ILEC in Oklahoma. The project will provide DSL broadband capability to unserved rural premises and deliver broadband high-speed capabilities of 20 Mbps (upstream and downstream combined). The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without having to rebuild the transport routes. The project will create or save 94 jobs.

Panhandle Telephone Cooperative, Inc.

Western OK BB Infrastructure Development

Last Mile Non-remote

$3,366,188 Loan

$10,098,562 Grant

Panhandle Telephone Cooperative, Inc., will build out broadband infrastructure for rural areas within the western Oklahoma panhandle. A portion of this project will also be implemented in Texas. The network will make services available to 1,289 households, 76 businesses, and 16 anchor institutions. The project is expected to create or save 55 jobs.

Pine Telephone Company, Inc.

Broadband Grant for Isolated Southeastern Oklahoma/Choctaw Nation—Rural/Remote Areas

Last Mile Remote

$9,482,316 Grant

Pine Telephone Company, Inc., will use innovative wireless technology to deliver broadband service to rural, remote, and economically disadvantaged areas of southeastern Oklahoma—within the Choctaw Nation—to create economic growth and jobs, enhance education and healthcare, and improve public safety. The network will make broadband services available to 4,996 households, 84 businesses, and 31 anchor institutions. The project will create or save 159 jobs.

Pine Telephone Company, Inc.

Last Mile Broadband for Isolated Rural Southeastern Oklahoma/Choctaw Nation—Area 2

Last Mile

$2,926,329 Loan

$6,828,101 Grant

Pine Telephone Company, Inc., will offer 3G universal mobile broadband service in Coal, Latimer, Le Flore, and Pittsburg counties, within the Choctaw Nation, in southeast Oklahoma. The network will make broadband services available to 2,968 households, 107 businesses, and 26 anchor institutions. The project will create or save 20 jobs.

Pine Telephone Company, Inc.

Last-Mile ILEC Fiber-to-the-Home for Isolated Rural Southeastern Oklahoma/Choctaw Nation

Last Mile

$15,081,959 Loan

$15,081,958 Grant

Pine Telephone Company, Inc., will provide rural Oklahoma subscribers with services typically available in only the most urban areas of the country. In addition to enabling data rates of up to 40 Mbps, the network will enable video delivery via affiliate head-end facilities. Wireless microwave backhaul will be used in some extremely rugged portions of the network. A soft switch will enable the company to convert subscribers to VoIP, further enhancing network utilization. In addition, the network will provide backhaul for the wireless network of Easygrants 1257 awarded in round one. The network will make services available to 5,414 households, 544 businesses, and 80 anchor institutions. The project will create or save 83 jobs.

Pioneer Long Distance, Inc.

WOW Western Oklahoma Wireless

Last Mile Non-remote

$1,819,349 Loan

$1,783,322 Grant

Pioneer Long Distance, Inc., will provide wireless broadband service to unserved and underserved rural areas of western Oklahoma. The network will make services available to 21,472 households, 2,063 businesses, and 291 anchor institutions. The project will create or save 14 jobs.

Pioneer Telephone Cooperative, Inc.

Pioneer Tel FTTH Rural Broadband Initiative

Last Mile

$10,958,906 Loan

$24,971,934 Grant

Pioneer Telephone Cooperative, Inc., will offer FTTH broadband service speeds of up to 20 Mbps to remote areas within 76 western Oklahoma telephone exchange boundaries. The network will make services available to 3,952 households, 160 businesses, and 5 anchor institutions. The project will create or save 204 jobs.

Totah Communications, Inc.

Totah Broadband Expansion Project

Last Mile Non-remote

$2,426,053 Loan

$1,830,180 Grant

Totah Communications, Inc., will upgrade existing copper-fed DSL nodes to fiber-fed DSL nodes. This project will also install additional fiber-fed DSL nodes throughout the service area. The route will cover 152 miles and will serve approximately 800 new customers. The network will make services available to 422 households, 9 businesses, and 8 anchor institutions. The project is expected to create or save 25 jobs.

Utopian Wireless Corporation

Utopian Prague WiMAX Project

Last Mile

$66,139 Loan

$198,418 Grant

Utopian Wireless Corporation will provide wireless broadband service to the rural, underserved communities near Prague, Oklahoma. The rural PFSA includes an area in Lincoln County and covers approximately 1,547 households, 106 businesses, and 33 anchor institutions. Utopian will deploy a broadband wireless system that features Motorola Mobile WiMAX technology. The system includes WiMAX access points, wireless and wired backhaul, ASN–GW, CSN, and an IP core that supports authentication and routing of traffic to application servers and the Internet. The project will create or save 10 jobs.

Windstream Corporation

Oklahoma Windstream, LLC

Last Mile

$2,279,598 Grant

Windstream Corporation will expand broadband service to unserved customers in the PFSA comprising the communities of East Cherokee, Stilwell East, and Stilwell West. The project will allow Windstream Corporation to extend the reach of its broadband network to make services available to 1,667 households and 7 businesses, and provide broadband to last-mile wireline telephone subscribers. The project also will provide broadband service to 14 anchor institutions. Windstream Corporation will deploy industry standard DSLAMs using industry standard ADSL2+ protocols to provide a minimum of 6 Mbps downstream and 786 Kbps upstream data service. The project will create or save an estimated 41 jobs.

Wyandotte Telephone Company

Wyandotte Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$702,933 Grant

Wyandotte Telephone Company (Wyandotte Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in two rural Oklahoma PFSAs that include three communities. The project will make services available to 226 premises (192 households and 34 businesses) that have no access to broadband service. Wyandotte Tel is the State-certified ILEC in Oklahoma. The network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 access devices in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future upgrades without needing to rebuild the transport routes. Target speed of the expanded network will be at 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 18 jobs.

Oregon

Cascade Networks, Inc.

Rural Clatskanie Broadband Initiative
Last Mile
$578,316 Loan
$578,316 Grant

Cascade Networks, Inc., in cooperation with Clatskanie People's Utility District in Columbia County, will build a last-mile project in rural Clatskanie to provide broadband service to 410 households, 72 businesses, and 2 anchor institutions. The key business area to be served is the Port Westward light industrial development, an industrial park on the Columbia River. The infrastructure buildout includes extending fiber to the Clatskanie People's Utility District substations to allow more efficient management of the power grid. The project will provide broadband to support data, voice, and IPTV services over a hybrid system of fiber-optic and wireless equipment. The system will be primarily FTTH, with wireless micronodes at points on the edge of the service area where fiber is not a practical option. The project will create or save two jobs.

Cascade Utilities, Inc.
Cascade Utilities Broadband Project
Last Mile
$1,299,433 Loan
$3,898,299 Grant

Cascade Utilities, Inc., will lay 127 miles of fiber-optic cable and install or replace 21 DSLAMs in rural areas in Oregon that do not have high-speed broadband access. The network will make services available to 5,814 households, 1,104 businesses, and 19 anchor institutions. The project will create or save 12 jobs.

City of Sandy
Sandy Broadband Infrastructure Project
Last Mile Non-remote
$374,548 Loan
$374,537 Grant

The Sandy Broadband Infrastructure Project will improve and expand wireless Internet service provided by SandyNet, a municipal Internet service provider operated by the City of Sandy, Oregon. The project will add new antenna towers to upgrade equipment to 8 Mbps capacity and provide fiber backhaul. The network will make services available to 3,908 households, 150 businesses, and 20 anchor institutions. The project will create or save 10 jobs.

Gervais Telephone Company
Marion County Broadband Buildout
Last Mile Non-remote
$314,430 Loan
$314,430 Grant

Gervais Telephone Company will expand an existing fiber network. The project will provide broadband connectivity to 121 households, 24 businesses, and 4 anchor institutions in rural Marion County. The project will create or save nine jobs.

Monroe Telephone Company
Monroe Telephone Cheshire & Greenberry Buildout Project
Last Mile
$1,413,684 Loan
$4,241,050 Grant

Monroe Telephone Company will extend broadband services using FTTP to three remote, sparsely populated, mostly agricultural areas. The PFSAs are unserved. The project will construct a small middle-mile fiber-optic connection to an interconnection point in Junction City. The network will make services available to 959 households, 29 businesses, and 7 anchor institutions. The project's backhaul will also make fiber connectivity available to six anchor institutions in the Junction City area. The broadband system is GPON standard FTTP architecture with fiber-fed remote cabinets in the field to interconnect the end users with the Internet. This last-mile network will provide the residents, businesses, and anchor institutions with access to broadband service at minimum speeds up to 20 Mbps at affordable rates, with broadband speeds up to 100 Mbps. Discounts will be offered for service to critical community institutions and socially and economically disadvantaged small business concerns. The project will create or save four jobs.

Trans-Cascades Telephone Company

Trans-Cascades Broadband Project

Last Mile

$590,099 Loan

$1,770,294 Grant

Trans-Cascades Telephone Company will offer broadband service at a minimum speed of 10 Mbps in remote eastern Oregon, in Jefferson, Wasco, and Wheeler counties. The network will make services available to 136 households, 46 businesses, and 3 anchor institutions. The project will create or save 10 jobs.

Warm Springs Telecommunications Company

The Confederated Tribes of Warm Springs Reservation Broadband Network

Last Mile

$2,722,960 Loan

$2,722,960 Grant

Warm Springs Telecommunications Company, representing the Tribal Council of the Confederated Tribes of Warm Springs in central Oregon, will implement phase I of a long-range plan to provide advanced telecommunications service to all homes, businesses, and critical facilities on this 1,000-square-mile reservation. The PFSA has three main communities. The project will make services available to 755 households, 22 businesses, and 233 anchor institutions. The company will construct a hybrid broadband network with fiber backbone and a mix of fiber and wireless links. The network will connect all government agencies, businesses, critical and emergency facilities, and most homes on the reservation with either fiber or wireless to provide broadband Internet access with speeds of up to 5 Mbps and basic telephone service. The project will create or save 33 jobs.

Pennsylvania

Deposit Telephone Company, Inc.

Deposit Telephone Company, Inc.: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$125,754 Grant

Deposit Telephone Company, Inc. (Deposit Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. Deposit Tel is the State-certified ILEC in New York. The project will serve six PFSAs that include six communities. These PFSAs have 48 premises that have no access to broadband service. This project will bring access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is engineered so that it can be easily upgraded to meet future needs. The project will create or save three jobs.

Keystone Wireless, LLC

Keystone Wireless Broadband Initiative

Last Mile

$11,096,780 Loan

$25,286,105 Grant

Keystone Wireless, LLC will offer 3G broadband service in Berks, Centre, Clinton, Lycoming, Mountour, Northumberland, Schuylkill, Snyder, and Union counties in central Pennsylvania. Keystone will upgrade its core network infrastructure and 162 base stations with 3G wireless broadband technology to bring high-speed Internet service throughout the PFSAs. The network will make services available to 368,028 households, 26,882 businesses, and 9,035 anchor institutions. The project will create or save 56 jobs.

West Virginia PCS Alliance, LC

Rural Mobile Broadband Initiative—Maryland

Last Mile

$1,503,518 Grant

West Virginia PCS Alliance LC and NTELOS Licenses Inc., both subsidiaries of NTELOS Holdings Corp., will expand West Virginia PCS Alliance's wireless services to provide 3G mobile broadband service in unserved rural portions of western Maryland and south-central Pennsylvania north of Hagerstown. The PFSAs comprise 8 communities with more than 50 percent of the premises lacking high-speed broadband service. The project will make services available to 35,459 households,

4,110 businesses, and 876 anchor institutions. The project will create or save 11 jobs.

Windstream Corporation

Windstream Pennsylvania, LLC

Last Mile

$20,497,604 Grant

Windstream Corporation will offer broadband service to a large number of communities in Pennsylvania. The project will use industry standard ADSL2+ protocols that will offer broadband speeds of up to 12 Mbps. The network will make services available to 31,684 households, 1,793 businesses, and 105 anchor institutions. The project will create or save more than 345 jobs.

South Carolina

Home Telephone Company, Inc.

Low Country Broadband Last-Mile Project

Last Mile

$1,000,000 Loan

$2,979,868 Grant

Home Telephone Company, Inc., will provide broadband service to unserved or underserved rural areas in portions of Berkeley, Dorchester, and Orangeburg counties and the Cross and Harleyville areas. The project will deliver voice services, high-speed Internet access (up to 20 Mbps), and RF video service to customers through an ITU GPON standards-based Calix C7 GPON system. The company will install single-mode fiber-optic cable for voice and data. The network will make services available to 1,143 households, 1 business, and 7 anchor institutions. The project will create or save 14 jobs.

Orangeburg County

Southeastern Orangeburg County FTTP

Last Mile

$4,662,501 Loan

$13,987,499 Grant

Orangeburg County will offer FTTP technology to residents in the communities of Bethel Forest, Canaan, Cattle Creek, Homestead, Lambrick, McAlhany, Pea Ridge, Rowesville, and Sixty Six. The network will cover 278 square miles and will make services available to 3,631 households, 90 businesses, and 12 anchor institutions. The project will create or save an estimated 70 jobs.

Windstream Corporation

Windstream South Carolina, LLC

Last Mile

$3,050,160 Grant

Windstream Corporation will offer broadband service to the communities of Cameron, Fort Motte-Lone Star, Highland, Kershaw, Landrun, Lexington, Mount Pisgah, North, Orangeburg, Sandy Run-Staley, St. Matthews, and Westville. The project will use industry standard ADSL2+ protocols that will offer broadband service speeds of up to 12 Mbps. The network will make services available to 3,543 households, 286 businesses, and 40 anchor institutions. The project will create or save 40 jobs.

South Dakota

Midstate Communications, Inc.

Chamberlain/Oacoma Fiber-to-the-Home

Last Mile

$2,728,118 Loan

$6,365,610 Grant

Midstate Communications, Inc., will offer FTTH access in the Chamberlain/Oacoma exchange with broadband service speeds of up to 1 Gbps. The network will make services available to 1,486 households, 176 businesses, and 28 anchor institutions. The project will create or save 99 jobs.

TrioTel Communications, Inc.

TrioTel Fiber-to-the-Home Broadband Deployment Project

Last Mile

$3,704,212 Loan

$8,643,163 Grant

TrioTel Communications, Inc., will provide high-speed Internet service in the communities of Alexandria, Canova, Emery, Farmer, Salem, and Spencer and the surrounding rural areas via an FTTH network. The network will provide service to 1,654 households, 986 businesses, and 127 anchor institutions. The project will create or save 15 jobs.

Venture Communications Cooperative

Cresbard, Orient, and Faulkton Exchanges

Last Mile

$2,614,957 Loan

$2,614,956 Grant

Venture Communications Cooperative will provide broadband service to households, businesses, and key community organizations that are underserved in the Cresbard, Faulkton, and Orient exchanges. The network will make services available to 749 households, 108 businesses, and 15 anchor institutions. The project will create or save 76 jobs.

Tennessee

Bledsoe Telephone Cooperative Corporation

Nine Mile and College Station Broadband Upgrade

Last Mile

$1,527,352 Loan

$3,563,821 Grant

Bledsoe Telephone Cooperative Corporation (BTC) will extend high-speed broadband service to two PFSAs in eastern middle Tennessee. The project will upgrade facilities in two telephone exchanges, College Station and Nine Mile. BTC will establish 36 new aggregation points connected to the main exchange offices by fiber-optic cable. Existing copper cable facilities will be reconfigured between the new aggregation points and subscriber locations. BTC will provide ADSL service speeds of up to 10 Mbps downstream and 1 Mbps upstream. The premises remaining beyond the reconfiguration will be designed customer-by-customer to provide them with a minimum of 19 Mbps downstream and 1 Mbps upstream. The network will make services available to 2,675 households, 148 businesses, and 9 anchor institutions. The project will create or save 40 jobs.

Highland Telephone Cooperative, Inc.

Highland Telephone Cooperative FTTH Build-Out

Last Mile

$11,801,827 Loan

$35,405,478 Grant

Highland Telephone Cooperative (HTC) will enhance broadband communication options for the residents of McCreary, Morgan, and Scott counties in rural Tennessee and Kentucky. HTC will construct an FTTH wireline fiber-optic cable network, configured in PON architecture, able to support speeds in excess of 20 Gbps for all subscribers in its exchange boundaries. The network will make services available to 15,371 households, 1,301 businesses, and 75 anchor institutions. The project will create or save 52 jobs.

Millington Telephone Company, Inc.

Mason/Stanton Broadband Expansion

Last Mile

$1,141,987 Loan

$2,664,635 Grant

Millington Telephone Company, Inc., will expand access to high-speed broadband service to customers, businesses, and anchor institutions in areas where 75 percent of the premises lack high-speed access and 20 percent of the households are unserved by basic broadband. The PFSA comprises 166 square miles in rural western Tennessee in portions of Fayette, Haywood, and Tipton counties. Communities in the PFSA are Asbury, Braden, Danceyville, Fredonia, Keeling, Longtown, and Stanton. The project will make services available to 1,603 households, 53 businesses, and 16 anchor institutions. The company will offer community and public

safety facilities a discount on broadband services. The project will use an FTTN system and broadband loop carrier equipment as the standard for the ADSL2+ aggregation design. The fiber-optic cable design is laid out using three 1 GigE rings to backhaul the broadband data from the major aggregation points to the main data collection and switching center. The major aggregation points are the existing central offices in the five current telephone exchanges in Millington's network. Broadband speeds of up to 10 Mbps downstream and 2.0 Mbps upstream for residential subscribers and up to 15 Mbps downstream and 2.0 Mbps upstream for businesses will be provided. The project will create or save 84 jobs.

North Central Telephone Cooperative, Inc.

Broadband Infrastructure Investment Program

Last Mile Non-remote

$24,964,000 Loan

$24,715,709 Grant

North Central Telephone Cooperative will provide the infrastructure to offer advanced voice, video, and data services exceeding 20 Mbps to remote and rural communities in the service area of northern Tennessee. The network will make services available to 14,824 households, 951 businesses, and 48 anchor institutions. The project is expected to create or save 150 jobs.

Scott County Telephone Cooperative

FTTP South Scott County

Last Mile

$447,300 Loan

$1,043,700 Grant

Scott County Telephone Cooperative will deploy FTTP technology in south Scott County and a small portion of Russell County. The network will be an active Ethernet system and will provide broadband service speeds of up to 10 Gbps. The network will make services available to 292 households, 5 businesses, and 1 anchor institution. The project will create or save nine jobs.

Skyline Telephone Membership Corporation

High Country Fiber

Last Mile

$956,515 Loan

$2,231,868 Grant

Skyline Telephone Membership Corporation will substantially expand advanced FTTH service via a fiber-optic network with combined speeds exceeding 20 Mbps to 744 households, 64 businesses, and 10 anchor institutions in Alleghany and Ashe counties in rural, northwestern North Carolina. The project will create or save 10 jobs.

Sunset Digital Communications, Inc.

TRANSFORM Tennessee

Last Mile

$2,452,939 Loan

$22,076,454 Grant

Sunset Digital Communications, Inc., will offer broadband service speeds of up to 1 Gbps. The network will use DWDM to also provide bandwidths up to 1.6 Tbps. The PFSA is located in the Appalachians of northeast Tennessee and includes two persistent poverty counties. Sunset Digital Communications plans to partner with three funded middle-mile projects and has synergistic operations planned with two other last-mile applications. The network will make services available to 11,021 households, 471 businesses, and 65 anchor institutions. The project will create or save 73 jobs.

Tennessee Telephone Company, Inc.

Tennessee Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$5,150,691 Grant

Tennessee Telephone Company (Tennessee Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its rural franchise service territory. Tennessee Tel is the State-certified ILEC in Tennessee. The project will serve 11 rural PFSAs that include 9 communities. Within the PFSAs, there are

1,576 premises (1,499 households, 46 businesses, and 31 anchor institutions) with no access to broadband service. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed to unserved customers is at 20 Mbps (upstream and downstream combined). The project will create or save 135 jobs.

Twin Lakes Telephone Cooperative Corporation

Twin Lakes Telephone Cooperative Corp.: Fiber-to-the-Home Broadband Project

Last Mile

$16,076,833 Loan

$16,076,834 Grant

Twin Lakes Telephone Cooperative Corporation will provide broadband service to the rural exchanges of Byrdstown, Celina, Clarkrange, and Moss. The network will make services available to 3,956 households, 1,328 businesses, and 84 anchor institutions. The project will promote economic development in rural areas that have consistently higher than average unemployment rates and areas that are in persistent poverty counties. The project will create or save an estimated 349 jobs.

West Kentucky Rural Telephone Cooperative Corporation, Inc.

West Kentucky and West Tennessee Broadband FTTH Initiative

Last Mile

$19,189,000 Loan

$19,189,000 Grant

West Kentucky Rural Telephone Cooperative Corporation, Inc. (WK&T) will build a fiber-optic construction project to provide broadband infrastructure to rural southwest Kentucky in the counties of Calloway, Carlisle, Fulton, Graves, Hickman, and Marshall, and in the northwest Tennessee counties of Henry, Obion, and Weakley. The network will make services available to 5,382 households, 1,119 businesses, and 31 anchor institutions. At the conclusion of the project, WK&T expects to double its data subscribers and have almost 90 percent of its customer base, more than 14,000 customers, on broadband, with data speeds averaging 1.5 Mbps or higher. In addition, fiber broadband will be available to 99 public facilities. The project will create or save 50 jobs.

Texas

ATSI Communications, Inc.

South Texas Broadband Technology Progreso TX

Last Mile

$416,588 Loan

$416,588 Grant

ATSI Communications, Inc., will build a wireline broadband network infrastructure to provide last-mile service speeds of up to 6 Mbps in Progreso. The company will install a point-to-point microwave transponder solution with a capacity of 250 Mbps connecting its Internet POP to its cable network head-end in Progreso. The network will make services available to 1,010 households, 852 businesses, and 14 anchor institutions. The project will create or save 24 jobs.

Blossom Telephone Company

Red River Broadband Expansion Project

Middle Mile

$833,303 Loan

$1,944,373 Grant

Blossom Telephone Company (BTC) will provide middle-mile fiber and transmission facilities that will make available broadband service to unserved and underserved customers in rural areas in northeast Texas. The project will provide FTTH in the Blossom exchange. The 26.5-mile route of middle-mile fiber facilities will enable the FTTH facilities to deliver significantly greater bandwidth. By leveraging the middle-mile fiber with wireless last-mile facilities, the project will enable BTC to provide broadband service to customers. Broadband service speeds will exceed 5 Mbps to all Blossom wireline customers upon completion. Wireless customers will be offered packages up to 3 Mbps along the middle-mile route that is unserved. The

network will make services available to 1,887 households, 91 businesses, and 11 anchor institutions. The project will create or save 72 jobs.

Electronic Corporate Pages, Inc.

Central Texas Rural Wireless Expansion Project

Last Mile

$586,922 Loan

$1,306,376 Grant

Electronic Corporate Pages, Inc. (ECPI) will provide wireless broadband coverage to a 1,226-square-mile area of rural central Texas. This wireless expansion project will offer over 3 Mbps combined broadband service speeds (upstream and downstream) using Motorola's Canopy technology. Over the four counties covered in this project, the network will make services available to 12,677 households, 6,083 businesses, and 11 anchor institutions. ECPI serves 1,850 customers on 18 towers, which will be expanded to 24 towers under this project. Using backhaul technology and proven network management systems, ECPI will upgrade its core equipment and deploy a WiMAX system. The network is supported by ECPI's two network operations centers, each of which can be upgraded to full gigabit capacity. The project will create or save nine jobs.

Five Area Telephone Cooperative, Inc.

West Texas Broadband Infrastructure Development to Support Internet Adoption

Last Mile

$2,454,223 Grant

Five Area Telephone Cooperative will implement the West Texas Broadband Infrastructure Development to Support Internet Adoption project. The company will offer high-speed broadband service to the towns of Bledsoe, Bula, Clays Corner, Lazbuddie, Maple, and Needmore in rural west Texas via an FTTP network. The network will make services available to 199 households, 235 businesses, and 1 anchor institution. The project will create or save 16 jobs.

Hill Country Telephone Cooperative, Inc.

Project Rural Connect

Last Mile

$3,670,265 Loan

$8,563,952 Grant

Hill Country Telephone Cooperative, Inc., will offer broadband service speeds of up to 20 Mbps (copper) and up to 100 Mbps (fiber). The project will deploy 560 miles of fiber-optic cable, 280 digital loop carriers, and soft switches throughout a substantial portion of its service area. The network will make services available to 1,685 households. The project will create or save 448 jobs.

Medicine Park Telephone Company

Sterling Oklahoma to Scotland Texas Rural Fiber Optic Route

Middle Mile

$133,176 Loan

$132,645 Grant

Medicine Park Telephone Company will offer broadband service using an FTTP network between Sterling, Oklahoma, and Scotland, Texas, with service speeds between 155 Mbps and 10 Gbps. The network will make services available to 169 households and 2 anchor institutions. The project will create or save three jobs.

Mid-Plains Rural Telephone Cooperative, Inc.

Rural Texas Panhandle Mid-Plains

Last Mile

$1,421,000 Loan

$1,388,000 Grant

Mid-Plains Rural Telephone Cooperative will extend a current project in the rural Texas Panhandle to provide high-speed broadband service to six underserved PFSAs. Through a USDA Telecommunications Loan, Mid-Plains is installing fiber-optic cable to electronic equipment, FTTH, and fiber between central offices. This project will extend FTTH facilities to additional areas. Equipment is being updated in congested areas to improve service and reliability. The 6 newly served PFSAs cover 227 square miles and the project will make services available to 295 premises, of which 145 are without high-speed access. This project will serve 281 rural estab-

lishments, including farms and ranches, and an additional 14 businesses. This project will create or save 39 jobs.

PRIDE Network

Burkburnett & Iowa Park, TX

Last Mile Non-remote

$12,811,071 Loan

$6,309,931 Grant

PRIDE Network will construct an FTTP telecommunications infrastructure with a WiMAX service-extension overlay that will bring advanced broadband service to the rural communities of Burkburnett and Iowa Park. In addition, less than 5 percent of this network will serve an area in Oklahoma. The network will make services available to 7,804 households, 501 businesses, and 31 anchor institutions. This project will create or save 400 jobs.

PRIDE Network, Inc.

PRIDE Network

Last Mile Non-remote

$22,720,551 Loan

$21,829,549 Grant

PRIDE Network will construct an FTTP telecommunications infrastructure with a WiMAX service-extension overlay that will bring advanced broadband service to rural communities in the Texas South Plains region. The network will make services available to 19,777 households, 2,201 businesses, and 139 anchor institutions. This project will create or save 890 jobs.

Telecom Cable, LLC

Last Mile Remote/Rural Telecom Cable

Last Mile

$634,050 Grant

Telecom Cable, LLC will offer high-speed broadband access via two-way HFC wireline transmission in the rural areas of Corrigan, Fulshear, and Weston Lakes. This project will provide broadband service speeds of at least 5 Mbps. The network will make services available to 1,854 households, 59 businesses, and 22 anchor institutions. The project will create or save 20 jobs.

Valley Telephone Cooperative, Inc.

Southern Texas Broadband Infrastructure Development and Adoption Project

Last Mile Non-remote

$40,093,153 Loan

$38,520,868 Grant

Valley Telephone Cooperative, Inc., will develop broadband infrastructure in 11 unserved and underserved rural areas of the South Texas Plains. The network will make services available to 19,494 households, 778 businesses, and 196 anchor institutions. The project will create or save 160 jobs.

Wes-Tex Telephone Cooperative, Inc.

Western Texas Broadband Infrastructure Development

Last Mile Non-remote

$16,891,875 Loan

$16,891,875 Grant

Wes-Tex Telephone Cooperative, Inc., will develop broadband infrastructure to increase Internet availability and access speeds in rural areas of western Texas. The network will make services available to 3,298 households, 132 businesses, and 35 anchor institutions.

Windstream Corporation

Windstream Sugar Land, Inc.

Last Mile

$1,613,509 Grant

Windstream Corporation will provide last-mile broadband service to unserved premises in four communities in rural Texas. Windstream will deploy industry standard DSLAMs using ADSL2+ protocols to provide a minimum of 6 Mbps downstream and 786 Kbps upstream data service. DSLAMs will be strategically deployed to reach the greatest number of unserved customers over the existing wireline cop-

per plant. The project will make services available to 1,255 households, 139 businesses, and 4 anchor institutions. This project will create or save an estimated 31 jobs.

XIT Rural Telephone Cooperative, Inc.

XIT Rural Telephone Cooperative—wFTTP & VDSL2 Combination Application

Last Mile Non-remote

$3,065,440 Grant

XIT Rural Telephone Cooperative, Inc., will deploy a combination of FTTP and FTTN VDSL2 technology within two separate service areas in and around the communities of Dalhart and Stratford. The network will make services available to 4,195 households, 396 businesses, and 36 anchor institutions. The project will create or save 10 jobs.

XIT Rural Telephone Cooperative, Inc.

XIT Rural Telephone Cooperative, Inc.—Round 2 Rural FTTP Application

Last Mile

$2,112,950 Grant

XIT Rural Telephone Cooperative will replace a copper telephone plant with fiber to serve three rural PFSAs. Using standards-based GPON technology, XIT will provide 100 Mbps to subscribers in the three PFSAs of Coldwater, Kerrick, and Middlewater. The project will make services available to 227 households and 56 businesses. The project will create or save 82 jobs.

Utah

Central Utah Telephone, Inc.

Basin Broadband Project

Last Mile

$620,724 Loan

$1,862,070 Grant

Central Utah Telephone, Inc., will install 71.1 miles of middle-mile underground fiber-optic cable in Juab and Millard Counties and 60 miles of HFC last-mile cable and electronics and operating systems in the communities of Delta, Fillmore, Hinckley, Holden, and Lynndyl. The network will make services available to 2,107 households, 217 businesses, and 137 anchor institutions. The project will create or save seven jobs.

South Central Utah Telephone Association, Inc.

Grand Staircase High-Speed Access Broadband Initiative

Last Mile

$9,187,244 Grant

South Central Utah Telephone Association, Inc. (SCUTA) will bring high-speed broadband service to State parks, national parks, and national monuments in the PFSA. The PFSA is a 1,416-square-mile area in south central Utah that includes Bryce Canyon National Park, Capital Reef National Park, Kodachrome State Park, Anasazi State Park, and Grand Staircase-Escalante National Monument, plus their attendant operation centers or headquarters. The area includes 18 communities in Garfield, Kane, and Wayne counties. The Grand Staircase PFSA includes 3,020 households, 212 businesses, and 47 anchor institutions. SCUTA will offer broadband data service at speeds ranging from 1.0 Mbps to 15 Mbps. The project will include both FTTH and highspeed copper networks connected through a fiber backbone to deliver service to residences, businesses, community organizations, and government facilities. The project will create or save an estimated 25 jobs.

Vermont

VTel Wireless, Inc.

Wireless Open World (WOW) by VTel Wireless, Inc.

Last Mile

$35,166,081 Loan

$81,664,754 Grant

VTel Wireless, Inc., will provide Tri-Band 4G LTE wireless broadband to virtually every unserved anchor institution, unserved home, and unserved business throughout Vermont and parts of New York State and New Hampshire. VTel Wireless will reach 57,008 households, 3,775 businesses, and 714 anchor institutions. These in-

clude all the 33,165 unserved households and anchor institutions in Vermont. The area to be served includes 14 towns and villages in the most rural region of Vermont. Part of the project will upgrade every home served by Vermont Telephone Company to include GigE over active fiber. In another part of the project, VTel will work with Central Vermont Public Service, Green Mountain Power, and the affiliate of Vermont's electric companies, VELCO, on a smart grid initiative. The companies will use VTel's WiMAX wireless licenses for one of the Nation's first two tests of GE's WiMAX Smart Meters. The project will create or save 1,870 jobs.

Waitsfield-Fayston Telephone Co., Inc.

Rural Vermont Broadband Advancement Project

Last Mile

$1,667,993 Loan

$3,891,982 Grant

Waitsfield-Fayston Telephone Co., will offer FTTH broadband service in the counties of Addison, Chittenden, and Washington. The network will make services available to 682 households, 56 businesses, and 2 anchor institutions. The project will create or save 16 jobs.

Virginia

Lenowisco Planning District Commission

ADVANCE Virginia

Last Mile

$6,067,863 Loan

$14,158,344 Grant

Lenowisco Planning District Commission will offer high-speed fiber-optic broadband service in the Appalachians of southwest Virginia, a PFSA that is underserved and includes one persistent poverty county. The project will provide broadband service speeds of 1 Gbps. The network will make services available to 26,768 households, 1,553 businesses, and 109 anchor institutions The project will create or save 73 jobs.

New Castle Telephone Company

New Castle Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,066,321 Grant

New Castle Telephone Company (New Castle Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises in its service territory. New Castle Tel is the State-certified ILEC in Virginia. The project is designed to serve two PFSAs. These PFSAs have 300 premises (295 households, 4 businesses, and 1 anchor institution) that have no access to broadband service. New Castle Tel has built a broadband network that is capable of serving the majority of these premises in several of the core communities, but the surrounding area lacks broadband access. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is engineered so that it can be easily upgraded. The project will create or save 28 jobs.

NTELOS Telephone, Inc.

Alleghany Broadband Now Initiative

Last Mile Non-remote

$8,062,088 Grant

NTELOS Telephone, Inc., will provide broadband infrastructure to unserved and underserved homes, businesses, and anchor institutions in rural Alleghany County. The network will make services available to 4,216 households, 233 businesses, and 36 anchor institutions. The project will create or save an estimated 40 jobs.

Scott County Telephone Cooperative

FTTP South Scott County

Last Mile

$7,007,700 Loan

$16,351,300 Grant

Scott County Telephone Cooperative will deploy FTTP technology in south Scott County and a small portion of Russell County. The network will be an active Ethernet system and will provide broadband service speeds of up to 10 Gbps. The network

will make services available to 4,581 households, 79 businesses, and 15 anchor institutions. The project will create or save 141 jobs.

Utopian Wireless Corporation

Utopian Mineral WiMAX Project

Last Mile

$117,034 Loan

$351,099 Grant

Utopian Wireless Corporation will make available advanced 4G wireless broadband service to underserved communities in and around the Mineral area. The service area includes an estimated 1,864 households, 411 businesses, and 50 anchor institutions. Using licensed 2.5 GHz spectrum, Utopian will deploy a broadband wireless system. The project will create or save 11 jobs.

Washington

Cascade Networks, Inc.

Rural Clatskanie Broadband Initiative

Last Mile

$1,287,219 Loan

$1,287,218 Grant

Cascade Networks, Inc., in cooperation with Clatskanie People's Utility District in Columbia County, will undertake a last-mile project in rural Clatskanie, Oregon, to provide broadband service to 912 households, 159 businesses, and 4 anchor institutions. The project will provide broadband to support data, voice, and IPTV services over a hybrid system of fiber-optic and wireless equipment. The system will be primarily FTTH, with wireless micronodes at points on the edges of the service area where fiber is not a practical option. The project will create or save four jobs.

EcliptixNet Broadband, Inc.

Northeast Washington Rural Broadband Access Network (NWRBAN)

Last Mile

$6,137,496 Loan

$14,320,824 Grant

EcliptixNet Broadband, Inc., will offer 4G highspeed broadband service through fixed and mobile wireless connections to more than 90 percent of the rural premises across the counties of Ferry, Spokane, and Stevens. The network will make services available to 27,363 households, 3,627 businesses, and 303 anchor institutions. The project will create or save an estimated 236 jobs.

Hood Canal Telephone Co., Inc.

Mason County Connect

Last Mile

$904,000 Loan

$2,712,000 Grant

Hood Canal Telephone Co., Inc., will expand broadband service throughout rural Mason County in western Washington. The area includes two tribal reservations, the Skokomish and Squaxin tribes. The company has partnered with the Squaxin Reservation to extend service to residents living on tribal lands. In addition, the Catfish Lake, Dayton Trails, and Pioneer areas of Mason County will receive funding for broadband services. The project will establish a redundant telecommunications route for Mason County's Emergency Management headquarters and extend broadband, phone, and cable TV service to an additional 51.8 miles in the county. The project will deliver broadband through cable modems over an HFC system. This project will make services available to 700 permanent residents and 37 businesses, 132 seasonal residents, and 6 anchor institutions. The project will create or save 26 jobs.

McDaniel Telephone Company

McDaniel Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,192,951 Grant

McDaniel Telephone Company (McDaniel Tel), a subsidiary of TDS Telecom, will build a project to bring high-speed broadband service to unserved premises in its rural franchise service territory. McDaniel Tel is the State-certified ILEC in Wash-

ington. The project will serve six PFSAs that include two communities. These PFSAs have 596 premises (574 households and 22 businesses) that have no access to broadband service. The project will build a broadband network to provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is engineered so that it can be easily upgraded. The project will create or save 31 jobs.

Public Utility District No. 1 of Chelan County

Public Utility District No. 1 of Chelan County FTTX Rural Expansion

Last Mile

$24,963,089 Grant

Public Utility District No. 1 of Chelan County will complete the fiber-based, high-speed broadband system it operates in Washington State. The expanded network will make services available to 6,811 predominantly rural residential customers in 13 PFSAs. Operating in a public-private partnership, Public Utility District provides open-access wholesale telecommunication service to 12 local retail service providers over an FTTH standards-based fiber-optic PON. The network will offer speeds up to 100 Mbps to homes and small businesses, and up to 10 Gbps to education, healthcare, large businesses, and government institutions. This project will create or save 79 construction and 7 network jobs.

Public Utility District No. 1 of Okanogan County

Okanogan County PUD Last-Mile Project

Last Mile

$3,667,855 Loan

$5,501,782 Grant

Public Utility District No. 1 of Okanogan County will expand its high-speed broadband service to an additional 6,543 premises in Okanogan County. The county is home to the largest Indian reservation in Washington, the Confederated Tribes of the Colville Reservation, which is concurrently undertaking a broadband infrastructure project. The Public Utility District's network focuses on the premises along the existing fiber route where high-speed broadband service is unavailable. The project will make services available to 5,401 households, 1,107 businesses, and 35 anchor institutions. The project will support high-speed broadband service to 35 anchor institutions. The core backbone will initially provide a single-threaded connection to the Internet and function as an aggregation and transport medium throughout the county. The optical system will be upgraded to account for the expected increase in consumption using Ethernet transport and core IP switching technologies. The network design calls for placement of 170 access nodes along the existing fiber backbone route and extending the fiber backbone 179 miles to provide necessary redundancy to the last-mile network. The project will create or save 28 jobs.

West Virginia

Gateway Telecom, LLC

Gateway Telecom LLC West Virginia Last Mile Project

Last Mile Non-remote

$1,475,459 Loan

$1,417,597 Grant

Gateway Telecom, LLC will deploy wireless last-mile broadband infrastructure to serve residences and anchor institutions in unserved rural areas of West Virginia. The network will make services available to 1,095 households. The project will create or save four jobs.

Hardy Telecommunications, Inc.

Hardy OneNet Fiber to the Home Project

Last Mile

$9,494,483 Loan

$22,153,791 Grant

Hardy Telecommunications, Inc., will serve residents in underserved, rural, mountain communities in Hardy County. The company will deploy an FTTH network to provide reliable ultra-high-speed Internet access, VoIP, and video service to underserved areas. The network will make services available to 5,595 households, 200 businesses, and 106 anchor institutions. The project will create or save 120 jobs.

Spruce Knob Seneca Rocks Telephone, Inc.

SKSRT Rural Broadband Project

Last Mile

$8,529,310 Grant

Spruce Knob Seneca Rocks Telephone, Inc., will offer FTTP fiber-optic capacity, with associated wireless capability, to provide last-mile broadband service in Pendleton and Pocahontas counties. Fiber-optic cables will be placed on existing power and telephone pole structures along the main arteries and on existing laterals to reach customers with broadband service speeds of up to 1 Gbps. The network will make services available to 2,551 households, 207 businesses, and 23 anchor institutions. The project will create or save 125 jobs.

West Virginia PCS Alliance, LC

Rural Mobile Broadband Initiative—Maryland

Last Mile

$555,648 Grant

West Virginia PCS Alliance LC and NTELOS Licenses Inc., both subsidiaries of NTELOS Holdings Corp., will expand West Virginia PCS Alliance's existing wireless service to provide 3G mobile broadband service in unserved rural portions of western Maryland and south-central Pennsylvania north of Hagerstown. The PFSAs comprise 8 communities with more than 50 percent of the premises lacking high-speed broadband service. The project will make services available to 13,104 households, 1,519 businesses, and 324 anchor institutions. The project will create or save four jobs.

Wisconsin

Badger Telecom, LLC

Badger Telecom, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$4,080,773 Grant

Badger Telecom, LLC (Badger Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in its service territory. Badger Tel is the State-certified ILEC in Wisconsin. The project will serve five rural PFSAs that include six communities. These PFSAs have 867 premises (816 households, 35 businesses, and 16 anchor institutions) with no access to broadband service. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without the need to rebuild the transport routes. The project will create or save 107 jobs.

Baldwin Telecom, Inc.

Town of Troy FTTP Network—BTI

Last Mile

$4,533,949 Loan

$4,533,949 Grant

Baldwin Telecom, Inc. (BTI) will provide FTTP service to the Town of Troy, on the Wisconsin-Minnesota border. BTI is working in partnership with the town to bring high-speed data, voice, and video service to this underserved and unserved market in western Wisconsin. The project will make services available to 1,538 households, 30 businesses, and 2 anchor institutions. The network will provide many residents with their first opportunity to obtain high-speed Internet service and put in place the infrastructure to support planned business development along the Highway 35 corridor. The project will deploy an FTTP network to make services available to every home and business in the PFSA and will utilize Calix GPON technology. The project will create or save 99 jobs.

Central State Telephone Company, LLC

Central State Telephone Company, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$3,855,976 Grant

Central State Telephone Company, Inc. (Central State Tel), a subsidiary of TDS Telecom, will deliver high-speed broadband service to 9 rural PFSAs that include 10 communities in Wisconsin. These PFSAs have 1,384 premises (1,295 households, 76 businesses, and 13 anchor institutions) with no access to broadband service. Central State Tel is the State-certified ILEC in Wisconsin. The network will deploy

Ethernet-over-copper technology, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The network target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 101 jobs.

Chequamegon Communications Cooperative, Inc.

Chequamegon Fiber-to-the-Home

Last Mile

$15,549,091 Loan

$15,549,093 Grant

Chequamegon Communications Cooperative, Inc. (CCC) will update its facilities to offer FTTH in 3 PFSAs with 31 rural communities in northern Wisconsin. CCC's network will make services available to 5,332 premises, providing high-speed Internet access to 3,226 new customers, including several anchor institutions. As part of CCC's effort to bring high-speed broadband service to this area, the company partnered with the State of Wisconsin Office of Administration on a funded round one project to bring high-speed Internet to schools and libraries in its area. The project will create or save 66 jobs.

EastCoast Telecom of Wisconsin, LLC

EastCoast Telecom of Wisconsin, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,669,255 Grant

EastCoast Telecom of Wisconsin, LLC (EastCoast Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. EastCoast Tel is the State-certified ILEC in Wisconsin. The project will serve four rural PFSAs in its franchise service territory. These PFSAs have 511 premises (478 households, 27 businesses, and 6 anchor institutions) in 5 communities with no access to broadband service. The network will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without the need to rebuild the transport routes. This project will build a broadband network that will allow access to high-speed broadband service (20 Mbps upstream and downstream combined). The project will create or save 44 jobs.

Farmers Telephone Company, LLC

The Farmers Telephone Company, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,440,570 Grant

Farmers Telephone Company, LLC (Farmers Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. Farmers Tel is the State-certified ILEC in Wisconsin. The project will serve four rural PFSAs. These PFSAs include 6 communities and have 489 premises (456 households, 30 businesses, and 3 anchor institutions) that have no access to broadband service. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is also engineered so that it can be easily upgraded at a reasonable cost to meet future needs. The project will create or save 38 jobs.

Grantland Telecom, LLC

Grantland Telecom, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,655,504 Grant

Grantland Telecom, LLC (Grantland Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. Grantland Tel is the State-certified ILEC in Wisconsin. The project will serve six rural PFSAs that include seven communities in the franchise service territory. These PFSAs have 346 premises (332 households, 12 businesses, and 2 anchor institutions) with no access to broadband service. The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the cen-

tral office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without the need to rebuild the transport routes. The project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The project will create or save 44 jobs.

Marquette-Adams Telephone Cooperative, Inc.

Broadband Edge Out Marquette-Adams Telephone Cooperative

Last Mile

$6,202,326 Loan

$13,805,175 Grant

Marquette-Adams Telephone Cooperative, Inc., will extend fiber-optic service from the existing telephone cooperative service area to surrounding unserved rural areas in central Wisconsin. The network will make services available to 4,488 households, 144 businesses, and 12 anchor institutions. The project will create or save three jobs.

Midway Telephone Company

Midway Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$4,680,738 Grant

Midway Telephone Company (Midway Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. Midway Tel is the State-certified ILEC in Wisconsin. The project will serve seven PFSAs that include seven communities. These PFSAs have 1,201 premises (1,129 households, 52 businesses, and 20 anchor institutions) that have no access to broadband service. This project will provide access to high-speed broadband service (20 Mbps upstream and downstream combined). The network is engineered so that it can be easily upgraded. The project will create or save 123 jobs.

Reedsburg Utility Commission, Inc.

Reedsburg Utility Commission Fiber Network Expansion

Last Mile

$5,239,168 Grant

Reedsburg Utility Commission, Inc., will extend an existing municipal FTTP network, operated by the City of Reedsburg acting through the Reedsburg Utility Commission, to the surrounding rural area to provide affordable advanced broadband service to residents and businesses that receive dial-up service, wireless, and satellite services. This rural area of southwestern Wisconsin has been well documented as deficient in broadband service due to the hilly terrain and numerous valleys that severely limit wireless and satellite service coverage. The network will make services available to 2,438 households, 145 businesses, and 12 anchor institutions. The project will create or save 45 jobs.

Riverside Telecom, LLC

Riverside Telecom, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$818,687 Grant

Riverside Telecom, LLC (Riverside Tel), a subsidiary of TDS Telecom, will bring high-speed broadband service to unserved premises. Riverside Tel is the State-certified ILEC in Wisconsin. The project will serve three rural PFSAs. These PFSAs have 2 communities with 219 premises (208 households, 6 businesses, and 5 anchor institutions) with no access to broadband service. The project will build a broadband network to offer speeds of up to 20 Mbps upstream and downstream combined or DSL service. The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The project will create or save 22 jobs.

Scandinavia Telephone Company, LLC

Scandinavia Telephone Company, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,238,809 Grant

Scandinavia Telephone Company, LLC (Scandinavia Tel), a subsidiary of TDS Telecom, will bring highspeed broadband service to unserved premises in its rural franchise territory. Scandinavia Tel is the State-certified ILEC in Wisconsin. The project will serve two rural PFSAs that include four communities. Within the PFSAs, there are 462 premises (446 households, 11 businesses, and 5 anchor institutions) that have no broadband service. The project will deploy Ethernet-over-copper technology, provide VDSL2 access devices that are packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without having to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined). The project will create or save 33 jobs.

Southeast Telephone Co. of Wisconsin, LLC

Southeast Telephone Co. of Wisconsin, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$947,555 Grant

Southeast Telephone Co., of Wisconsin, LLC (Southeast Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises. Southeast Tel is the State-certified ILEC in Wisconsin. The project will serve three PFSAs with three communities in Southeast Tel's service territory. These PFSAs have 554 premises (534 households, 19 businesses, and 1 anchor institution) with no access to broadband service. The network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. The project will create or save 25 jobs.

Stockbridge & Sherwood Telephone Company, LLC

Stockbridge & Sherwood Telephone Company: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$1,837,421 Grant

Stockbridge & Sherwood Telephone Company, LLC (Stockbridge & Sherwood Tel), a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises. Stockbridge & Sherwood Tel is the State-certified ILEC in Wisconsin. The project will serve four PFSAs that include six communities. These PFSAs have 629 premises (592 households, 32 businesses, and 5 anchor institutions) with no access to broadband service. The network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 48 jobs.

UTELCO, LLC

UTELCO, LLC: Broadband Project to Serve Rural Unserved Establishments

Last Mile

$2,823,526 Grant

UTELCO, LLC, a subsidiary of TDS Telecom, will provide high-speed broadband service to unserved premises in its rural service territory. The project will serve eight PFSAs that include six communities. These PFSAs have 844 premises (786 households, 50 businesses, and 8 anchor institutions) with no access to broadband service. UTELCO is the State-certified ILEC in Wisconsin. The network will deploy Ethernet-over-copper technology to its fullest potential, provide VDSL2 access devices packaged in an FTTN configuration, upgrade access in the central office to support the extension of the broadband networks to these remote areas, use PON FTTH where economically feasible, and allow for future PON upgrades without needing to rebuild the transport routes. The target speed is 20 Mbps (upstream and downstream combined) or more DSL service. This project will create or save 74 jobs.

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ATTACHMENT 2

Status of 255 Active BIP Awards as of July 27, 2014

Project Designation	Awardee Name	Total Award	Total Project Budget	Project Status
IA1112-A40	LaMotte Telephone Company, Inc.	$375,630	$375,630	Partially Operational Stage
IA1114-A40	Farmers' Telephone Company of Riceville, Iowa, The	$18,735,853	$18,735,853	Partially Operational Stage
IA1115-A40	Ellsworth Cooperative Telephone Association	$5,268,696	$5,268,696	Operational Stage
IA1116-A40	Breda Telephone Corp.	$2,611,909	$2,611,909	Partially Operational Stage
IA1117-A40	Clear Lake Independent Telephone Co. Inc.	$7,910,462	$7,910,462	Operational Stage
IA1119-A40	Hospers Telephone Exchange, Inc.	$8,325,402	$8,325,402	Operational Stage
IA1120-A40	Winnebago Cooperative Telecom Association	$19,632,404	$19,632,404	Partially Operational Stage
IA1121-B39	Windstream Corporation	$5,163,935	$7,604,746	Partially Operational Stage
IA1121-C39	Windstream Corporation	$12,236,836	$17,227,795	Partially Operational Stage
IA1122-A40	Southwest Telephone Exchange, Inc.	$5,987,330	$5,987,330	Partially Operational Stage
IA1123-A39	Municipal Electric Utility of the City of Cedar Falls, Iowa	$873,433	$1,746,866	Partially Operational Stage
ID1103-A40	Coeur d'Alene Tribe	$12,285,758	$12,285,758	Partially Operational Stage
ID1104-A40	Rural Telephone Company	$2,429,000	$2,429,000	Partially Operational Stage
ID1107-A40	Midvale Telephone Company	$1,116,412	$1,116,412	Partially Operational Stage
ID1107-B40	Midvale Telephone Company	$1,269,171	$1,269,171	Partially Operational Stage
ID1107-C40	Midvale Telephone Company	$2,146,814	$2,146,814	Partially Operational Stage
IL1103-A40	Shawnee Telephone Company	$7,352,929	$8,442,933	Operational Stage
IL1104-A40	Convergence Technologies, Inc.	$11,250,000	$11,265,250	Partially Operational Stage
IN1104-A40	Sunman Telecommunications Corporation	$11,389,222	$11,389,222	Partially Operational Stage
KS1103-A40	Rural Telephone Service Company, Inc.	$101,201,649	$101,229,742	Partially Operational Stage
KS1104-B40	J.B.N. Telephone Company, Inc.	$3,324,144	$3,324,144	Partially Operational Stage
KS1105-A40	Madison Telephone, LLC	$7,039,500	$7,039,500	Partially Operational Stage
KS1106-A39	South Central Telephone Association, Inc.	$871,200	$903,789	Partially Operational Stage
KS1107-A40	H&B Communications, Incorporated	$6,551,519	$6,558,616	Partially Operational Stage
KS1108-A40	South Central Wireless, Inc.	$1,117,621	$1,209,418	Partially Operational Stage
KS1109-A39	Iowa Tribe of Kansas and Nebraska	$764,833	$764,833	Partially Operational Stage
KS1110-A40	Peoples Telecommunications LLC	$7,782,123	$8,033,003	Partially Operational Stage
KS1111-A40	Home Communications, Inc.	$2,004,879	$2,004,879	Partially Operational Stage
KS1112-A40	Wave Wireless, L.L.C.	$2,476,588	$2,599,955	Partially Operational Stage
KY1104-A40	Mountain Rural Telephone Cooperative Corporation, Inc.	$78,124,579	$78,124,579	Partially Operational Stage
KY1105-B40	Thacker-Grigsby Telephone Company, Incorporated	$7,408,474	$7,408,474	Partially Operational Stage
KY1106-B39	Leslie County Telephone Company	$6,169,295	$8,225,727	Partially Operational Stage
KY1107-B40	West Kentucky Rural Telephone Cooperative Corporation, Inc.	$123,800,000	$123,800,000	Partially Operational Stage
KY1108-A40	Foothills Rural Telephone Cooperative Corporation, Inc.	$20,972,482	$20,972,482	Partially Operational Stage
KY1109-A39	Mikrotec CATV, LLC	$829,813	$1,115,400	Partially Operational Stage
KY1110-A40	Peoples Rural Telephone Cooperative Corporation, Inc.	$25,514,182	$25,514,182	Partially Operational Stage
LA1101-E40	LBH, LLC	$33,385,378	$33,385,378	Partially Operational Stage
LA1104-A40	Northeast Louisiana Telephone Company, Inc.	$12,483,600	$12,483,600	Partially Operational Stage
LA1106-A39	Nexus Systems, Inc.	$724,256	$865,675	Partially Operational Stage
ME1102-B39	West Penobscot Telephone And Telegraph Company, The	$1,554,981	$2,073,308	Partially Operational Stage
ME1103-B39	Somerset Telephone Company Inc.	$5,840,363	$7,787,151	Partially Operational Stage
MI1102-E40	Air Advantage, LLC	$64,250,000	$74,515,368	Partially Operational Stage
MI1105-B40	Southwest Michigan Communications, Inc.	$8,331,025	$8,501,305	Operational Stage
MI1106-A39	Chatham Telephone Company	$8,605,935	$9,826,434	Partially Operational Stage
MI1107-B39	Island Telephone Company	$2,001,528	$2,668,704	Construction Stage
MI1108-A40	Climax Telephone Company	$3,217,499	$4,290,000	Operational Stage
MI1109-B40	Crystal Automation Systems, Inc.	$26,497,424	$26,497,424	Partially Operational Stage
MI1110-A39	Allband Communications Cooperative	$8,622,754	$9,037,754	Partially Operational Stage
MI1110-B39	Allband Communications Cooperative	$1,107,903	$1,255,403	Partially Operational Stage
MN1108-A40	Halstad Telephone Company	$4,055,200	$4,141,831	Operational Stage
MN1108-B40	Halstad Telephone Company	$493,000	$501,911	Operational Stage
MN1108-D40	Halstad Telephone Company	$6,555,000	$7,257,864	Operational Stage

Status of 255 Active BIP Awards as of July 27, 2014—Continued

Project Designation	Awardee Name	Total Award	Total Project Budget	Project Status
MN1109-A40	Southwest Minnesota Broadband Services	$12,700,250	$13,067,297	Operational Stage
MN1110-A40	Minnesota Valley Television Improvement Corporation	$1,125,552	$1,125,552	Operational Stage
MN1111-A40	Northeast Service Cooperative	$43,498,220	$43,532,647	Partially Operational Stage
MN1112-A40	Federated Telephone Cooperative	$1,260,578	$1,260,578	Partially Operational Stage
MN1112-B40	Federated Telephone Cooperative	$2,987,274	$2,987,274	Partially Operational Stage
MN1113-A40	Wikstrom Telephone Company, Incorporated	$7,398,600	$7,398,600	Partially Operational Stage
MN1115-A40	Farmers Mutual Telephone Company	$9,652,956	$9,652,956	Partially Operational Stage
MN1116-B39	Arvig Telephone Company	$5,048,168	$6,730,890	Partially Operational Stage
MN1117-A40	Sjoberg's Inc.	$866,060	$866,060	Partially Operational Stage
MN1118-B40	Lake, County of	$66,369,064	$71,727,729	Partially Operational Stage
MN1119-A40	Arrowhead Electric Cooperative Inc.	$16,137,484	$20,737,484	Partially Operational Stage
MO1104-A40	Ralls County Electric Cooperative	$19,097,817	$19,097,817	Partially Operational Stage
MO1105-A40	Northeast Missouri Rural Telephone Company	$10,280,916	$11,496,386	Operational Stage
MO1105-B40	Northeast Missouri Rural Telephone Company	$7,191,620	$7,191,620	Operational Stage
MO1106-A40	Grand River Mutual Telephone Corporation	$11,395,606	$11,395,606	Partially Operational Stage
MO1106-B39	Grand River Mutual Telephone Corporation	$12,363,759	$13,304,759	Partially Operational Stage
MO1106-C39	Grand River Mutual Telephone Corporation	$8,970,781	$9,365,281	Partially Operational Stage
MO1106-D40	Grand River Mutual Telephone Corporation	$9,294,309	$12,637,309	Partially Operational Stage
MO1106-E40	Grand River Mutual Telephone Corporation	$20,270,861	$20,270,861	Partially Operational Stage
MO1107-B40	Socket Telecom, LLC	$23,734,482	$23,984,482	Partially Operational Stage
MO1108-A40	Big River Broadband, LLC	$24,382,055	$28,707,655	Partially Operational Stage
MO1110-A40	United Electric Cooperative, Inc.	$21,213,106	$23,457,849	Operational Stage
MS1104-A40	National Telephone of Alabama, Inc.	$1,588,417	$1,588,417	Operational Stage
MS1105-A39	Smithville Telephone Company, Incorporated	$7,110,886	$7,247,796	Partially Operational Stage
MT1102-A40	Project Telephone Company	$15,549,479	$15,549,479	Partially Operational Stage
MT1102-B40	Project Telephone Company	$3,850,687	$3,850,687	Partially Operational Stage
MT1104-B40	Montana Opticom, LLC	$64,127,322	$64,127,322	Construction Stage
NC1103-A40	French Broad Electric Membership Corporation	$1,775,692	$2,008,307	Partially Operational Stage
NC1104-A40	Skyline Telephone Membership Corporation	$28,985,294	$28,985,294	Operational Stage
NC1105-A40	Atlantic Telephone Membership Corporation	$16,003,418	$16,003,418	Operational Stage
NC1106-A40	Country Cablevision Inc.	$25,297,000	$25,308,745	Partially Operational Stage
NC1107-B40	Lumbee River Electric Membership Corp.	$19,947,739	$19,947,739	Construction Stage
NC1108-A40	Wilkes Telephone Membership Corporation	$21,611,000	$21,611,000	Partially Operational Stage
NC1109-A40	The Yadkin Valley Telephone Membership Corporation	$21,668,232	$21,668,232	Partially Operational Stage
NC1110-A40	Tri-County Telephone Membership Corporation	$14,147,215	$16,215,440	Partially Operational Stage
ND1103-A40	BEK Communications Cooperative	$4,003,044	$8,249,967	Operational Stage
ND1104-A39	Dakota Central Telecom I, Inc.	$2,252,250	$3,079,172	Operational Stage
ND1105-A40	Reservation Telephone Cooperative	$21,900,000	$23,400,000	Partially Operational Stage
ND1106-B40	Consolidated Enterprises, Inc.	$11,564,722	$20,968,040	Partially Operational Stage
ND1107-A40	SRT Communications Inc.	$4,429,516	$6,629,516	Operational Stage
ND1108-A40	Inter-Community Telephone Company Inc.	$2,338,651	$2,731,836	Construction Stage
ND1109-A40	Griggs County Telephone Co.	$22,096,041	$22,814,197	Partially Operational Stage
ND1110-A40	Red River Rural Telephone Assn. (Inc.)	$9,088,438	$9,737,041	Partially Operational Stage
NE1103-A40	Southeast Nebraska Communications, Inc.	$11,285,367	$14,209,941	Operational Stage
NH1101-A39	Bretton Woods Telephone Company, Inc.	$985,000	$985,000	Partially Operational Stage
NM1104-A40	Baca Valley Telephone Company, Inc.	$3,237,000	$3,237,000	Operational Stage
NM1105-A40	Penasco Valley Telephone Cooperative, Inc.	$9,589,267	$9,589,267	Partially Operational Stage
NM1107-A40	Kit Carson Electric Cooperative, Inc.	$63,768,671	$63,779,376	Partially Operational Stage
NM1108-B40	La Jicarita Rural Telephone Cooperative	$11,856,832	$11,856,832	Partially Operational Stage
NV1103-A39	Reno-Sparks Indian Colony	$400,000	$400,000	Contracting Stage
NV1105-A40	Arizona Nevada Tower Corporation	$7,588,832	$7,736,832	Partially Operational Stage
NY1103-A40	SLIC Network Solutions, Inc.	$5,328,642	$5,328,642	Partially Operational Stage
NY1103-B40	SLIC Network Solutions, Inc.	$27,832,767	$27,832,767	Partially Operational Stage
NY1104-A40	Castle Cable TV	$7,168,559	$7,168,559	Partially Operational Stage
NY1105-A40	Saint Regis Mohawk Tribe	$10,562,517	$10,562,517	Partially Operational Stage
OH1104-C40	Hometown Cable, LLC	$4,627,306	$4,627,306	Partially Operational Stage
OH1106-A40	Consolidated Electric Cooperative, Inc.	$2,433,912	$3,658,512	Operational Stage
OH1107-A40	The Benton Ridge Telephone Co.	$3,159,066	$3,159,066	Operational Stage
OH1108-A40	INTELLIWAVE, LLC	$2,279,596	$2,329,596	Partially Operational Stage
OH1109-A40	Wabash Mutual Telephone Company	$4,375,829	$5,913,283	Partially Operational Stage
OH1110-B40	Southern Ohio Communication Services, Inc.	$1,448,441	$1,599,972	Partially Operational Stage
OH1111-A40	Sycamore Telephone Company (Inc.)	$4,149,455	$4,149,455	Partially Operational Stage
OH1113-A40	New Era Broadband	$2,954,929	$2,954,929	Partially Operational Stage
OK1110-A39	The Pine Telephone Company	$9,482,316	$9,482,316	Partially Operational Stage
OK1110-D40	The Pine Telephone Company	$30,163,917	$30,163,917	Partially Operational Stage
OK1110-F40	The Pine Telephone Company	$9,754,430	$9,754,430	Partially Operational Stage
OK1111-A40	Totah Communications, Inc.	$8,512,465	$8,512,465	Operational Stage
OK1113-A40	Pioneer Long Distance, Inc.	$3,602,671	$3,602,671	Operational Stage
OK1115-A40	@Link Services, LLC	$8,547,357	$8,547,357	Partially Operational Stage
OK1118-B40	Medicine Park Telephone Company	$404,706	$404,706	Operational Stage
OK1118-F40	Medicine Park Telephone Company	$2,658,210	$2,658,210	Construction Stage
OR1102-B40	Monroe Telephone Company, Inc.	$5,654,734	$5,654,734	Partially Operational Stage
OR1104-A40	Gervais Telephone Company	$628,860	$628,860	Operational Stage
OR1105-A40	City of Sandy, Oregon	$749,085	$1,172,595	Operational Stage
OR1107-A40	Warm Springs Telecommunications Company	$5,445,920	$5,445,920	Partially Operational Stage
OR1108-A40	Cascade Utilities, Inc.	$5,197,732	$5,197,732	Partially Operational Stage
OR1109-A40	Trans-Cascades Telephone Company	$2,360,393	$2,360,393	Partially Operational Stage
SC1104-A40	Orangeburg County	$13,987,499	$18,950,000	Partially Operational Stage
SD1101-B40	Midstate Communications, Inc.	$9,093,728	$9,093,728	Partially Operational Stage
SD1107-A40	Triotel Communications, Inc.	$12,347,375	$12,347,375	Partially Operational Stage
SD1108-A40	Venture Communications Cooperative	$5,229,913	$5,229,913	Operational Stage
TN1102-A40	North Central Telephone Cooperative Corporation	$49,679,709	$50,886,489	Partially Operational Stage

Status of 255 Active BIP Awards as of July 27, 2014—Continued

Project Designation	Awardee Name	Total Award	Total Project Budget	Project Status
TN1103-A40	Twin Lakes Telephone Cooperative Corporation	$32,153,667	$32,161,819	Partially Operational Stage
TN1104-B40	Highland Telephone Cooperative, Inc.	$66,489,162	$66,539,268	Partially Operational Stage
TN1105-A40	Millington Telephone Company, Inc.	$3,806,622	$4,029,521	Partially Operational Stage
TN1106-A40	Bledsoe Telephone Cooperative Corporation	$5,091,173	$6,937,461	Partially Operational Stage
TX1113-A40	Valley Telephone Cooperative, Inc.	$78,614,021	$78,614,021	Partially Operational Stage
TX1114-A40	PRIDE Network, Inc.	$44,550,100	$44,550,100	Partially Operational Stage
TX1114-B40	PRIDE Network, Inc.	$19,121,002	$19,121,002	Partially Operational Stage
TX1114-C40	PRIDE Network, Inc.	$36,198,857	$36,198,857	Partially Operational Stage
TX1115-B39	XIT Rural Telephone Cooperative, Inc.	$3,065,440	$6,256,000	Operational Stage
TX1115-C39	XIT Rural Telephone Cooperative, Inc.	$2,112,950	$6,037,000	Operational Stage
TX1116-A40	Wes-Tex Telephone Cooperative, Inc.	$33,783,750	$33,783,750	Partially Operational Stage
TX1117-A40	Blossom Telephone Company, Inc.	$2,777,676	$2,777,676	Partially Operational Stage
TX1119-A40	Mid-Plains Rural Telephone Cooperative, Inc.	$2,809,000	$2,809,000	Operational Stage
TX1120-A40	Electronic Corporate Pages, Inc.	$1,893,298	$1,893,298	Partially Operational Stage
TX1122-A40	Hill Country Telephone Cooperative, Inc.	$12,234,217	$12,234,217	Partially Operational Stage
UT1103-A40	Central Utah Telephone, Inc.	$1,862,070	$2,099,070	Partially Operational Stage
VA1108-A39	LUMOS Telephone Inc.	$8,062,088	$12,093,143	Partially Operational Stage
VA1109-A39	West Virginia PCS Alliance, L.C.	$3,104,486	$7,143,574	Operational Stage
VA1110-A40	Sunset Digital Communications, Inc.	$24,529,393	$24,529,393	Partially Operational Stage
VA1112-A40	Scott County Telephone Co-operative	$24,850,000	$24,850,000	Partially Operational Stage
VT1103-A40	VTEL Wireless, Inc.	$116,830,835	$116,830,835	Partially Operational Stage
VT1104-A40	Waitsfield-Fayston Telephone Co., Inc.	$5,559,975	$5,559,975	Partially Operational Stage
WA1102-B40	Hood Canal Telephone Co., Inc.	$3,616,000	$3,616,000	Partially Operational Stage
WA1106-A40	Public Utility District 1 Of Okanogan County	$9,169,637	$9,169,637	Partially Operational Stage
WA1108-A40	Cascade Networks, Inc.	$3,731,069	$4,979,272	Partially Operational Stage
WA1109-A40	Ecliptixnet Broadband, Inc.	$20,458,320	$20,458,320	Partially Operational Stage
WI1102-B40	Baldwin Telecom, Inc.	$9,067,898	$9,381,279	Operational Stage
WI1106-B40	Marquette-Adams Telephone Cooperative, Inc.	$20,007,501	$20,099,590	Operational Stage
WI1107-A39	Reedsburg Utility Commission	$5,239,168	$9,414,941	Operational Stage
WI1108-A39	Farmers Telephone Company, LLC, The	$1,440,570	$1,920,760	Partially Operational Stage
WI1109-A39	McDaniel Telephone Company	$1,192,951	$1,590,602	Partially Operational Stage
WI1110-A39	Orchard Farm Telephone Co.	$604,794	$806,392	Partially Operational Stage
WI1111-A39	Salem Telephone Company	$1,934,474	$2,579,299	Partially Operational Stage
WI1112-A39	Midway Telephone Company	$4,680,738	$6,240,984	Partially Operational Stage
WI1113-A39	Deposit Telephone Company, Inc.	$3,143,839	$4,191,786	Partially Operational Stage
WI1114-A39	Southeast Mississippi Telephone Company, Inc.	$1,875,204	$2,500,272	Partially Operational Stage
WI1115-A39	Peoples Telephone Company, Inc.	$4,163,589	$5,551,452	Partially Operational Stage
WI1116-A39	Port Byron Telephone Co. Inc.	$639,218	$852,290	Partially Operational Stage
WI1117-A39	New Castle Telephone Company	$1,066,321	$1,421,762	Partially Operational Stage
WI1118-A39	Camden Telephone Company Inc.	$1,089,955	$1,453,273	Partially Operational Stage
WI1119-A39	Communication Corporation of Michigan	$1,221,811	$1,629,082	Partially Operational Stage
WI1120-A39	Eastcoast Telecom of Wisconsin, LLC	$1,669,255	$2,225,673	Partially Operational Stage
WI1121-A39	Grantland Telecom, LLC	$1,655,504	$2,207,339	Partially Operational Stage
WI1122-A39	Riverside Telecom, LLC	$818,687	$1,091,583	Partially Operational Stage
WI1123-A39	Scandinavia Telphone Company, LLC	$1,238,809	$1,651,746	Partially Operational Stage
WI1124-A39	Tri-County Telephone Company Inc.	$593,273	$791,030	Partially Operational Stage
WI1125-A39	Home Telephone Company Inc.	$416,743	$555,658	Partially Operational Stage
WI1126-A39	Tennessee Telephone Company	$5,150,691	$6,867,588	Partially Operational Stage
WI1127-A40	Chequamegon Communications Cooperative Inc.	$31,098,184	$31,186,621	Partially Operational Stage
WI1128-A39	Tipton Telephone Company Inc.	$1,011,971	$1,349,295	Partially Operational Stage
WI1129-A39	Mid-America Telephone, Inc.	$1,143,784	$1,525,045	Partially Operational Stage
WI1130-A39	Wyandotte Telephone Company	$702,933	$937,244	Partially Operational Stage
WI1131-A39	Hartland and St. Albans Telephone Company	$2,009,522	$2,679,362	Partially Operational Stage
WI1132-A39	Badger Telecom, LLC	$4,080,773	$5,441,031	Partially Operational Stage
WI1133-A39	Central State Telephone Company, LLC	$3,855,976	$5,141,302	Partially Operational Stage
WI1134-A39	Kearsarge Telephone Company	$372,532	$496,709	Partially Operational Stage
WI1135-A39	Merrimack County Telephone Company	$2,021,197	$2,694,930	Partially Operational Stage
WI1136-A39	UTELCO, LLC	$2,823,526	$3,764,702	Partially Operational Stage
WI1137-A39	Potlatch Telephone Company	$2,013,722	$2,684,963	Partially Operational Stage
WI1138-A39	Stockbridge & Sherwood Telephone Company, LLC	$1,837,421	$2,449,895	Partially Operational Stage
WI1139-A39	Blue Ridge Telephone Company	$853,768	$1,138,358	Partially Operational Stage
WI1140-A39	Calhoun City Telephone Company, Inc.	$2,962,169	$3,949,559	Partially Operational Stage
WI1141-A39	Southeast Telephone Co. of Wisconsin, LLC	$947,555	$1,263,407	Partially Operational Stage
WI1142-A39	Oklahoma Communication Systems, Inc.	$3,570,745	$4,760,993	Partially Operational Stage
WI1143-A39	Quincy Telephone Company	$1,363,547	$1,818,062	Partially Operational Stage
WV1103-A40	Hardy Telecommunications, Inc.	$31,648,274	$31,648,274	Partially Operational Stage
WV1104-A39	Spruce Knob Seneca Rocks Telephone, Inc.	$8,529,310	$8,529,310	Partially Operational Stage