



Statement by

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On behalf of

NTCA—The Rural Broadband Association

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*The State of Infrastructure in Rural America*

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## INTRODUCTION

Chairman Conaway, Ranking Member Peterson, and members of the Committee, thank you for this opportunity to testify about the importance of broadband infrastructure to rural areas and how rural broadband networks are deployed and sustained. I am Jennifer Otwell, Vice President and General Manager at Totelcom Communications in De Leon, TX. My remarks today are on behalf of Totelcom, as well as NTCA—The Rural Broadband Association, which represents approximately 850 rural community-based carriers that offer advanced communications services throughout the most sparsely-populated areas of the nation.

NTCA members and companies like them serve just under five percent of the U.S. population spread across approximately 37 percent of the U.S. landmass; in most of this vast expanse, they are the only fixed full-service networks available. Small telecom providers connect rural Americans with the world – making every effort to deploy advanced networks that respond to consumer and business demands for cutting-edge, innovative services that help rural communities overcome the challenges of distance and density. Fixed and mobile broadband, video, and voice are among the services that many rural Americans can access thanks to our industry’s networks and commitment to serving sparsely populated areas.

Totelcom is a local, community-based telecommunications provider with 39 employees serving a 1,182-square mile area with an average of 3.4 customers per square mile. But, 19 percent of our customers reside in just two square miles, while the remaining 81 percent reside in the other 1,180 square miles – so the population density of the more rural areas is only 2.75 customers per square mile. We provide just over 4,000 total connections to customers, delivering voice services and broadband using a variety of methods. We employ fiber-to-the-home technology and traditional copper-based facilities to provide broadband to most customers, and even fixed wireless point-to-point broadband for the most remote portions of our service area.

Our networks allow agricultural producers and other rural businesses to communicate with suppliers and sell to new markets, they enable education of our children on par with opportunities in urban areas, and they make our communities attractive destinations for people and businesses to relocate. 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.

## UNIQUE CHALLENGES OF RURAL BROADBAND DEPLOYMENT

Building broadband networks is capital-intensive and time-consuming; building them in rural areas involves a special further set of obstacles. The primary challenge of rural network deployment is in crossing hundreds or thousands of miles where the population is sparse and the terrain is diverse.

To complicate further the unique rural challenges of distance and density, when crossing federal lands or railroad rights-of-way in rural America, network operators must address environmental and historical permitting concerns or contractual obligations that can delay projects and increase their already high costs. Then, once networks are built, they must be maintained over those hundreds or thousands of miles – this requires technicians who regularly travel long distances to make service calls and customer service representatives trained to deal with questions about things like router and device configurations that were unimaginable for legacy “telephone companies.”

And even the best local networks in rural markets are then dependent upon “middle mile” or long-haul connections to Internet gateways dozens or hundreds of miles away in large cities. Reaching those distant locations is expensive as well, and as customer bandwidth demands increase – moving from Megabytes to Gigabytes to Terabytes of demand per month per customer – so too does the cost of ensuring sufficient capacity to handle customer demand on those long-haul fiber routes that connect rural America to the rest of the world.

Small telcos are eager to meet and overcome all of these challenges for the rural communities in which they live and serve, but it’s important that they have the resources and regulatory stability to do so considering the importance of broadband to the current and future success and quality of life of rural America.

## **BROADBAND IS ESSENTIAL RURAL INFRASTRUCTURE**

### *Rural Broadband Benefits the Entire U.S.*

Rural broadband has far-reaching effects for both urban and rural America, creating efficiencies in health care, education, agriculture, energy, and commerce, and enhancing the quality of life for citizens across the country. A report released last year by the Hudson Institute in conjunction with the Foundation for Rural Service found that investments by rural broadband companies contributed \$24.1 billion to the economies of the states in which they operated in 2015. Of this amount, \$17.2 billion was the direct byproduct of the rural broadband companies’ own operations while \$6.9 billion was attributable to the follow-on impact of their operations.

The Hudson study also determined that while small telcos provide a range of telecommunications services in rural areas, much of the benefit actually goes to the urban areas where the vendors, suppliers, and construction firms that rural telcos use are often based. Only \$8.2 billion, or 34 percent of the \$24.1 billion final economic demand generated by rural telecom companies accrues to rural areas – the other 66 percent or \$15.9 billion accrues to the benefit of urban areas.

Additionally, the report found that the rural broadband industry supported nearly 70,000 jobs nationwide in 2015 both through direct employment and indirect employment from the purchases of

goods and services generated in connection with broadband deployment and operations. Jobs supported by economic activity created by rural broadband companies are shared between rural and urban areas, with 46 percent in rural areas and 54 percent in urban areas.

*Immense Benefits for Consumers and Communities*

Beyond the direct economic impacts of broadband network investment and operations that I have just described, the broader socioeconomic benefits of broadband services for users and communities cannot be ignored. A Cornell University study, for example, found that rural counties with the highest levels of broadband adoption have the highest levels of income and education, and lower levels of unemployment and poverty. Access to healthcare is a critical issue for rural areas, where the lack of physicians, specialists, and diagnostic tools normally found in urban medical centers creates challenges for both patients and medical staff. Telemedicine applications help bridge the divide in rural America, enabling real-time patient consultations and remote monitoring, as well as specialized services such as tele-psychiatry. One study found that doctors in rural emergency rooms are more likely to alter their diagnosis and their patient's course of treatment after consulting with a specialist via a live, interactive videoconference.

In Hawkinsville, Georgia, rural provider ComSouth partnered with the county public school system to deploy telehealth equipment to connect the school nurses' offices with physicians at Taylor Regional Hospital. Working with the Georgia Partnership for Telehealth, the hospital, the school system, and ComSouth facilitate better health care for students who might not otherwise be able to be seen by a physician in an area where parents can ill afford to miss a half or full day for a doctor visit. This is a very simple but elegant telehealth solution – the technologies (broadband and the monitoring equipment) are not new, but ComSouth helped put the pieces together to improve student health and save everyone time and money.

Other benefits accrue in the form of distance learning and commerce. A shortage of teachers in many areas of rural America means public-school districts rely on high-speed connectivity to deliver interactive-video instruction for foreign language, science and music classes. Broadband networks also enable farmers and ranchers to use the Internet to employ precision agriculture tools and gain access to new markets.

Retail e-commerce has benefited tremendously from sales in rural America as well, where consumers may lack access to local retail outlets, but through the availability of rural broadband networks, can access a variety of shopping options. According to the Hudson Institute, rural consumers generated \$9.2 billion in online sales in 2015 and if all rural Americans had access to broadband networks, the authors estimate that Internet sales would have been \$1 billion higher. A recent Pew Study further finds that among those Americans who have looked for work in the last

two years, 79 percent used online resources in their most recent job search and 34% say these online resources were the most important tool available to them.

Indeed, job creation appears to abound when fast, high-capacity broadband is deployed in a rural area. In Sioux Center, Iowa, a major window manufacturer recently built a 260,000 square-foot plant to employ 200 people. The company considered more than 50 locations throughout the Midwest, but selected Sioux Center in part because the rural broadband provider enabled this plant to connect with its other locations throughout the U.S. using a sophisticated “dual entrance” system that could route traffic to alternate paths, ensuring that the main headquarters 250 miles away and other facilities would remain connected. In Cloverdale, Indiana, a rural broadband provider met with developers and helped bring an industrial park to its service area. Powered by this provider’s broadband, the facility brought more than 800 jobs to the area. In Havre, Montana, a rural broadband provider is partnering with a tribally-owned economic development agency to create a Virtual Workplace Suite and Training Center that is expected to create about 50 jobs. These stories are repeated throughout NTCA member service areas.

#### *Consumer Demand, Fiber, and Future-Proof Networks*

Despite these unique rural challenges, small rural telcos have made remarkable progress in deploying advanced communications networks. Based in the communities they serve, these companies and cooperatives are committed to improving the economic and social well-being of their hometowns through technological progress wherever possible.

A survey of NTCA members conducted last year found that 49 percent of respondents’ customers are served via fiber-to-the-home (FTTH), up 20 percent from 2013. Twenty-nine percent of customers are served via copper loops, 15 percent cable modem, 6 percent fiber-to-the-node (FTTN), 0.5 percent fixed wireless, and 0.1 percent satellite. Due in no small part to increased fiber deployment, rural customers have access to faster broadband speeds. Per last year’s survey, 85 percent of NTCA members’ customers can purchase broadband at speeds of 10 Mbps or higher. Seventy-one percent can now access speeds above 25 Mbps.

Fifty-nine percent of Totelcom’s customers have access to 10 Mbps or greater service. The remaining forty-one percent are served by long local loops that provide 1 to 6 Mbps service. Totelcom recently completed its first fiber-to-the-home buildout in the town of De Leon, Texas. Due to that and other Fiber to the Node construction projects used to push high speed connectivity further into the rural areas, 29% of Totelcom’s customers now have access to speeds up to 1 Gigabit. We work with our customers on an individual basis to find solutions to their broadband needs.

Totelcom also serves many important community anchor institutions, including a rural hospital and related EMS services, a low-income government medical clinic that serves three area towns, three school districts, two public libraries and nine public safety entities, including police and rural volunteer fire departments. In 2015, Telcom built fiber to a new wind power facility, which currently operates 87 wind turbines that generate enough energy to power 50,000 homes in Texas each year. Telcom also operates our own “genius bar” in the form of the Telcom Learning Center, open weekly to assist customers in a one-to-one setting in a comfortable environment. Customers can bring in their electronic devices and seek assistance with email, saving and sending pictures, and even social media.

As we look to future data needs of our customers and our communities, we have taken aggressive steps to focus on the anticipated increase in usage, including establishing a future-proof connection to a statewide fiber network that provides our middle-mile transport. This puts our customers in a great position as data needs grow, as we have seen our average data usage increase over 750% within the last 5 years. Due to this demand, we continue to employ new technology in our fiber-to-the-node and copper networks to meet demand, but also continue to deploy fiber. The speed and sustainability of deployment, however, will depend on both reasonable access to capital to finance construction and the availability of USF support to make sure user rates on these rural networks, once upgraded, are not astronomical and unaffordable.

#### *Much Progress, but Much More Work to Do*

Despite the progress discussed above, many parts of rural America still need better connectivity. Fifteen percent of NTCA member customers don’t have access to even 10/1 broadband. In a country where the Federal Communications Commission (FCC) has indicated that 90 percent of Americans already have affordable access to 25/3 Mbps service and many urban consumers and businesses benefit from 100 Mbps or Gigabit speeds, broadband access in rural America lags behind urban areas despite the best efforts, innovation, and entrepreneurial spirit of NTCA’s members.

And the price of broadband for the consumer must be considered too. As I will discuss later in this testimony, it does no good to build a network if no one can afford to make effective use of the services offered atop it. Federal law recognizes this by mandating that the federal Universal Service Fund (USF) ensure reasonably comparable services are available at reasonably comparable rates in rural and urban areas alike. Yet, in many of the rural areas served by smaller providers today, this mandate is simply failing to be achieved, as the combined effect of recent USF reforms and USF budget cuts have resulted in prices that are tens or even hundreds of dollars more per month for rural Americans than urban consumers.

Finally, once a network is built, it is not self-effectuating, self-operating, or self-sustaining. Services must be activated and delivered atop it, maintenance must be performed when troubles

arise, and upgrades must be made to facilities or at least electronics to enable services to keep pace with consumer demand and business needs. In addition to these ongoing operating costs, networks are hardly ever “paid for” once built; rather, they are built leveraging substantial loans that must be repaid over a series of years or even decades.

All of these factors make the delivery of broadband in rural America an ongoing effort that requires sustained commitment, rather than a one-time declaration of “success” just for the very preliminary act of connecting a certain number of locations. Particularly when one considers that even where networks are available many rural Americans pay far more for broadband than urban consumers, it becomes apparent that the job of really connecting rural America – and, just as importantly, sustaining those connections – is far from complete. The rural broadband industry and our nation as a whole has a great story of success but we also have much more work to do – and this is where public policy plays such an important role in helping to build and sustain broadband in rural markets that would not otherwise justify such investments and ongoing operations.

## A HOLISTIC APPROACH TO BROADBAND INFRASTRUCTURE

The critical role of communications infrastructure is as necessary to the present and future needs of rural America as is electricity and other infrastructure that enables the ordinary course of a thriving society. The current administration expressly recognized the importance of advanced communications networks by including “telecommunications” within an initial list of infrastructure priorities prior to taking office, followed by over 100 members of Congress writing to the President urging him to include broadband within any broader infrastructure initiative. President Trump indeed recently pledged to include measures to spur rural broadband in his infrastructure proposals. NTCA applauds the apparent consensus already achieved with respect to making broadband an infrastructure priority, and welcomes the opportunity to participate in a further discussion on how best to tackle this priority.

Before turning to specific thoughts on paths forward, it may make sense first to outline a few key objectives for consideration with respect to any broadband infrastructure plan:

- **First**, the plan should at least account for, if not specifically leverage, what is already in place and has worked before. Creating new programs from scratch is not easy, and if a new broadband infrastructure initiative conflicts with existing efforts, that could undermine our nation’s shared broadband deployment goals.
- **Second**, there should be meaningful expectations of those who leverage any resources made available through such an initiative. Looking to providers with proven track records in delivering real results makes the most sense, but whomever receives any support should be

required to show clearly that they used those resources to deliver better, more affordable broadband that will satisfy consumer demand over the life of the network in question.

- **Third**, any broadband infrastructure plan needs to be carefully designed and sufficiently supported to tackle the challenges presented. This is a question of both program focus and program scope.
  - From a focus perspective, any infrastructure plan should aim toward getting broadband where it is not and also sustaining it where it already is; deployment of duplicative infrastructure in rural areas that are uneconomic – and may not even support a single network on their own – will undermine the sustainability of existing network assets.
  - From a scope perspective, deploying and sustaining rural broadband is neither cheap nor easy; we obviously need to recognize that finite resources are available to address any number of priorities, but any plan that calls for broadband deployment – especially in high-cost rural America – should match resources to the size of the problem to be solved.
- **Fourth**, any resources provided as part of an infrastructure plan should look to get the best return on such long-term investments. For networks with useful lives measured in decades -- especially private investments that leverage federal dollars – this should mean the deployment of infrastructure capable of meeting consumer demands not only today and tomorrow, but for ten or twenty years. Putting resources toward infrastructure that needs to be substantially rebuilt in only a few years' time could turn out to be federal resources wasted – and still risk leaving rural America behind.
- **Fifth**, while the economics of deployment are an essential component of any infrastructure plan, a comprehensive approach to promoting deployment is required. Barriers or impediments to broadband deployment must also be addressed as part of any holistic plan to promote and sustain infrastructure investment. Put another way, the best-funded, best-planned networks may never deliver fully on their promise if they are caught in regulatory red tape and needless delay.

## **UNIVERSAL SERVICE FUND AND RURAL BROADBAND INFRASTRUCTURE**

Any potential path forward with respect to broadband infrastructure policy should be evaluated against such criteria. As one example of a policy with promise, and as NTCA first outlined in a December 2016 letter to the National Governors Association when that group was evaluating infrastructure priorities in collaboration with the Presidential transition team, strong consideration should be given to leveraging and supplementing the existing high-cost Federal Universal Service

Fund (“USF”) programs under the oversight of the Federal Communications Commission (the “FCC”) as a primary means of implementing a broadband infrastructure initiative.

The USF programs have been in place for years, and the FCC recently reoriented them under a “Connect America Fund” (“CAF”) banner to promote broadband in high-cost rural areas. The high-cost USF/CAF programs are essential both in justifying the business case for broadband infrastructure investment in the first instance, and then in keeping rates for services affordable atop the networks once they are built.

The FCC’s high-cost USF programs therefore could represent a logical focal point for future broadband infrastructure initiatives. The FCC is the nation’s expert agency in telecom policy, and it is already tackling the broadband challenges described above with respect to availability and affordability. Moreover, recent USF reforms adopted by the FCC have sought to: (1) reorient the programs toward broadband, (2) ensure funding is targeted to where it is needed (*i.e.*, to places where the market does not enable service delivery on its own), and (3) define what the FCC considers an efficient level of support in each area.

The reformed program rules now compel significant accountability, to the point that support recipients must meet specified deployment obligations and geocode new locations to which they deploy broadband leveraging USF support. The FCC is also working to finalize rules that make USF resources in wide swaths of rural America available for companies of all kinds – cable companies, traditional telcos, wireless Internet Service Providers, and satellite providers – to leverage in making the business case for rural broadband investment and service delivery.

Although some implementation efforts remain ongoing and some questions remain outstanding, and while some minor conforming changes would likely be needed to implement any resources available as part of a new broadband infrastructure initiative, it would seem more straightforward to coordinate any new initiative as a supplement to such existing programs than to stand up an entirely new program from scratch and then attempt “on the back end” to coordinate that new program with ongoing efforts. Indeed, as NTCA has recently described in filings at the FCC and elsewhere, additional broadband infrastructure resources, if flowed through the high-cost USF programs, could achieve immediate and compelling effects given significant and troubling current budget shortfalls in those programs.

#### *USF High Cost Program Budget*

Unfortunately, these otherwise very effective programs are significantly underfunded to achieve their goals as designed, relegating tens of thousands of rural Americans to lesser broadband than their urban counterparts (or no broadband at all), and leaving millions of other rural Americans paying tens or even hundreds of dollars more per month than their urban counterparts do for the

same broadband services. Such impacts undermine the benefit of building rural broadband infrastructure in the first instance, as well as hindering the value of broadband as a component of a broader economic development strategy. They put at serious risk the very ability of our nation to achieve the universal service mission articulated by Congress in Communications Act Section 254 for millions of rural consumers and businesses – and they will undermine the viability of a broadband infrastructure initiative if not addressed upfront.

While the Federal Communications Commission (FCC) thankfully took steps to provide some level of additional funding earlier this year within the fixed overall USF budget for a subset of carriers that elected model-based High-Cost USF support, the funding was insufficient to achieve the goals of the model the FCC designed. An additional \$110 million per year is needed to fully fund an alternative model that the FCC created to promote broadband deployment. Because of this budget shortfall, 71,000 rural locations will receive lower-speed broadband, and nearly 50,000 may see no broadband investment at all.

And the problem is even more dire for those small carrier recipients of High-Cost USF that could or did not elect model support. The High-Cost USF has been locked at the same budget level overall since 2011, and a lower budget target first adopted in 2011 for smaller carriers within that overall budget total is now being enforced via a strict budget control mechanism that threatens to wreak havoc on consumer rates and network investment.

Under this tightly constrained USF budget, over the next 12 months, small rural network operators will be denied recovery of \$173 million in actual costs for private broadband network investments that these carriers have already made. In other words, small rural network operators and the customers they serve will need to come up somehow with \$173 million to pay for broadband investments that the USF program would have supported just a year ago – and that the rules would still provide for recovery today via USF had it not been for arbitrary “haircuts” made to enforce an artificial budget target adopted six years ago when the program was oriented toward voice services only.

#### *Real World Impacts of USF High Cost Budget Cuts*

Because of these support cuts, rural network operators are already increasing rural broadband rates for consumers and cutting back on future infrastructure investments. NTCA reports, for example, that one member telco has indicated it cannot justify seeking a \$26 million loan to build high-speed broadband infrastructure due to the USF cuts; a project that would have delivered approximately 1,000 miles of fiber to over 7,000 rural customers is now on indefinite hold. Similarly, due to the USF budget cuts, a cooperative in the upper Midwest will put several 2018 new construction projects on hold worth several million dollars; these projects would have upgraded or delivered broadband for the first time to approximately 500 rural consumers and businesses, but the company

now needs to scale back future investment because the USF cuts are taking away millions of dollars that were counted upon for investments already made in the past. In Mississippi, a small rural provider has been forced to hold off indefinitely on plans for future investments due to the USF budget concerns, instead making minimal investments just to keep existing network plant operational rather than upgrading that network for higher-speed broadband that would help those areas thrive. In Nebraska, a small company with only 12 employees that just recently completed a significant fiber-to-the-home project has declined to fill four open positions – effectively cutting its workforce by 25% – because of concerns with declining USF support and its impact on the ability to pay for the network construction already completed. And in Iowa, a small carrier has not been able to lower its prices for standalone broadband because the USF budget cuts are effectively wiping out any support for such connections, despite the intention of the reforms and the repeated calls for such a fix from Congress.

All of these effects translate to one conclusion – the USF budget cut is hindering recovery of prior private investments, deterring future investments, driving up consumer prices, and hurting job creation. These are all directly contrary to the stated goal of a broadband infrastructure initiative, and highlight how predictable and sufficient USF is a condition precedent to the success of any such initiative.

#### *Unpredictability of USF High Cost Support*

Perhaps the most troubling aspect of this budget control is that it not only cuts support that the rules indicate should be available, but it does so in unpredictable ways. For the last four months of last year, the budget control was 4.5% on average; for the first six months of this year, it rose to 9.1% on average. Now, as of July 1, the budget control will on average reduce USF support by 12.3% for the next 12 months. As if the support losses for investments already made were not bad enough, this lack of predictability makes it even harder to justify building going forward.

If a company does not know whether the budget control will be 5% or 10% or 20% next year – and given the growth trends, all we can guess is that the budget control will grow – that company cannot make informed decisions to invest in capital-intensive broadband infrastructure. If it does not get fixed soon, we will be looking at years of lost rural broadband investment to the detriment of millions of rural Americans. Rather than creating new programs from scratch or taking flyers on untested theories of broadband deployment, why not use a program that has a proven track record and has just been improved in recent years? Why starve that program's budget while throwing dollars at new initiatives that might not work or, worse still, might conflict with this proven program? If rural broadband is really a priority, good public policy would indicate we should be building upon what has worked to promote it, rather than neglecting it.

*Congressional Support for Addressing High Cost Budget*

It's not just NTCA that is concerned about the USF budget shortfall. In May 2017, nearly 170 Members of Congress – including 22 members of the House Agriculture Committee – wrote to the FCC expressing serious concern about how the USF budget shortfalls will undermine private infrastructure investment and consumer rates. This letter demonstrated the shared bipartisan interest in prompt action on this issue, and a window of opportunity exists. We are hopeful that with continued congressional interest and leadership we can see these issues addressed, and the promise of last year's USF reforms can be realized by the millions of rural consumers served by smaller rural network operators.

*Benefits of Shoring Up USF High Cost Program*

Providing additional resources to allow the FCC's cost models and competitive bidding programs to function as designed could yield measurably improved delivery of broadband to tens of thousands of additional locations at higher speeds, and help deliver service to many more who currently face the prospect of no broadband at all. Industry estimates show that 71,000 more households would be the beneficiaries of better broadband infrastructure if the FCC's cost model were funded as designed, while 47,000 households are currently at risk of receiving no broadband at all due to a lack of sufficient support.

Meanwhile, in other rural areas, additional resources could mitigate the fact that millions of rural consumers are still forced to pay tens or even hundreds of dollars more per month for standalone broadband than their counterparts in urban areas – *despite the fact that hundreds of Members of Congress wrote to the FCC in 2014 and again in 2015 expressly asking for this concern to be resolved.*

A recent survey of NTCA member companies revealed that the average respondent estimates charging \$126 per month for standalone broadband under the budget control – far more than most rural consumers could afford. Further, the average response predicted charging only \$70 per month for standalone broadband if the budget control were not in place and carriers received support for investments under program rules. These numbers reveal that the budget control is preventing the High Cost program from helping rural providers offer reasonably comparable services and rates as called for in the Communications Act.

From an infrastructure perspective specifically, it is far harder to justify future investments in broadband networks when consumers face prices such as these and cannot reasonably afford the services once delivered. These are concerns common to many rural consumers, and they are particularly acute of course in areas with significant rural poverty levels and tribal areas.

The FCC’s various high-cost USF programs – both the CAF II initiative and the programs that enable service delivery in rural areas served by smaller businesses – therefore offer a ready-made platform that, with additional resources but with very little additional “heavy lifting” or process, could “hit the ground running” and yield immediate, measurable benefits for rural consumers.

Other options for implementing a broadband infrastructure initiative could include alternative grant or capital infusion programs through other agencies, comparable to what several States have used to address “market failure areas” – places where the business case for investment is difficult, if not impossible, to make without additional resources. At the same time, creating such programs would require more administrative effort than leveraging existing programs, and the rules for any such new program must still be informed by the objectives I first articulated above and any “lessons learned” from similar prior efforts at the Federal and State levels. For example, as a matter of program integrity and to ensure the most efficient possible use of resources, it would be necessary to ensure such a capital infusion program is carefully coordinated with the existing USF programs, among other things. And although some have alternatively touted tax incentives as offering promise – and while there are certainly areas in which such incentives might help – such measures are unlikely to make a material impact in most rural areas where distance and density make it difficult, if not impossible, to justify a business case for infrastructure investment to start.

## RURAL UTILITIES SERVICE TELECOM FINANCING

### *The Strength of RUS Experience*

Deploying a communications network in a rural area requires a large capital outlay due to the challenges of distance and terrain. The number of rural network users (as compared with more densely-populated urban areas) is too small to pay the costs of deployment and ongoing operations through customer charges. As Congress considers the details of legislation to promote infrastructure deployment, it’s important to note that USDA’s Rural Utilities Service (RUS) has long played a crucial role in addressing rural broadband challenges through its telecommunications programs that finance network upgrades and deployment in rural areas.

Since the early 1990s, the RUS telecom programs have financed advanced network plant at a net profit for taxpayers and helped deploy state-of-the-art networks to rural Americans left behind by providers unable or unwilling to serve low-population-density markets. With rare exception, RUS, CoBank and RTFC are the primary lenders that small rural providers can turn to for outside financing. Not only does RUS help rural America remain connected, its Broadband Loan & Guarantees program and traditional Telecommunication Infrastructure Loan & Guarantees program make loans that must be paid back with interest – creating a win/win situation for rural broadband consumers and American taxpayers.

*RUS and USF Work in Concert*

While RUS lending programs finance the substantial upfront costs of network deployment, the USF High Cost Fund helps make the business case for construction and sustains ongoing operations at affordable rates. More specifically, USF by law aims to ensure “reasonably comparable” services are available at “reasonably comparable” rates. Not to be confused or conflated, RUS capital and ongoing USF support serve distinctly important, but complementary rather than redundant, purposes in furthering rural broadband deployment. The availability of USF – the ability to make sure that consumers can actually afford to buy services on the networks once built – is so essential to the RUS telecom loan calculus that uncertainty in the Federal USF program in recent years has hindered some of the success, momentum, and economic development otherwise and previously enabled by the RUS telecommunications programs.

*Farm Bill Considerations*

Apart from infrastructure legislation, the pending expiration of the current Farm Bill affords opportunity to review the Farm Bill Broadband Loans & Loan Guarantees program that was first authorized in the 2002 Farm Bill. Each subsequent Farm Bill has made extensive reforms to the program with the goal of greater accountability, efficiency, and effectiveness. Two rounds of program reforms in less than 15 years – the first of which was significantly delayed by the ARRA BIP program’s use of the Broadband Loan Program mechanism – means that the Broadband Loan Program has been almost continuously “under construction” since its inception, rendering the program inaccessible to borrowers for long periods of time. While the program isn’t perfect, it may be helpful to simply let borrowers use the Broadband Loan Program in current form and become familiar with it for a few years before undertaking another extensive reform effort.

NTCA urges the Committee to continue to support the RUS Broadband Loan program that is subjected to the Farm Bill reauthorization process at or above current funding levels as you formulate recommendations. Furthermore, we urge the Committee to continue its long history of support for the Telecommunications Infrastructure and Community Connect programs that are also vital to the ongoing deployment and maintenance of advanced communications infrastructure throughout rural America.

The Broadband Opportunity Council (BOC), which includes USDA as a member, released a report in September 2015 that recommended authorizing more USDA programs to make grants and loans for broadband infrastructure. The BOC’s January 2017 progress report affirmed this recommendation. While more resources for rural broadband deployment are needed, involving more government entities and programs in broadband financing should be undertaken cautiously to avoid duplicating efforts and undermining a coherent, cohesive approach to financing and then sustaining rural broadband networks.

## **INFRASTRUCTURE INVESTMENT AND BARRIERS TO DEPLOYMENT**

Infrastructure investment depends not only on financing but also on prompt acquisition or receipt of permissions to build networks. Barriers or impediments to broadband deployment must also be addressed as part of any holistic plan to promote and sustain infrastructure investment. Such roadblocks, delays, and increased costs are particularly problematic for NTCA members, each of which is a small business that operates only in rural areas where construction projects must range across wide swaths of land.

Permitting and access, particularly with respect to federal lands, can present a significant impediment to the deployment of rural broadband infrastructure. Navigating byzantine application and review processes within individual federal land-managing and property-managing agencies can be burdensome for any network provider, but particularly the smaller network operators that serve the most rural 40 percent of the U.S. landmass. The review procedures can take substantial amounts of time, undermining the ability to plan for and deploy broadband infrastructure – especially in those areas of the country with shorter construction seasons due to weather.

The lack of coordination and standardization in application and approval processes across federal agencies further complicates the deployment of broadband infrastructure. While not specifically regarding federal lands, the terms of local franchises, pole attachments, and railroad crossings can also create substantial costs and concerns in deploying broadband infrastructure. Government at all levels – state and local, counties, tribal lands, and Federal – should work collaboratively to harmonize their process to expedite placement of facilities.

These issues significantly affect broadband network operators and consumers. In Wyoming, the Bureau of Land Management (BLM) state office adopted a unique bonding policy and application process that appeared to equate deployment of telecom facilities with installation of pipelines transporting hazardous substances, dramatically increasing the application burdens and potential costs. In California, the U.S. Forest Service waited months to begin work on environmental reports for a small rural provider's broadband deployment and then refused a temporary construction permit, costing the carrier most of the 2017 construction season and delaying the project into next year. In Utah, carriers have faced construction delays due to inter-agency permitting disagreements between the BLM and the U.S. Department of Transportation. From my experience at Totelcom, I can attest that when building new fixed wireless towers for deployment, the cost of the various permits and approvals normally runs higher than the actual construction of the tower.

We have seen much agreement for some time now on solutions to simplifying the administrative barriers to deployment. The standardization of application, fee and approval policies and procedures across federal land-managing and property-managing agencies to the extent possible should be a high priority. The Senate MOBILE NOW (S. 19) bill contains changes that should be

considered for near-term implementation on federal lands, such as improved “shot-clock” measures, while the FAST Act (P.L. 114-94) included sound reforms that should be extended to smaller projects as well. Such actions would enable smaller operators to remain focused on providing high-quality broadband service to their customers rather than dealing with onerous regulations.

FCC Chairman Ajit Pai’s “Digital Empowerment Agenda” contains many thoughtful suggestions on how “to make it easier for [Internet Service Providers] to build, maintain, and upgrade their networks,” ranging from greater scrutiny of local franchising regulations to ensuring reasonableness in the costs for pole attachments. Chairman Pai’s formation of a Broadband Deployment Advisory Committee also represents a meaningful step in evaluating and taking real action on these issues. Continued progress in consideration and implementation of such ideas must be seen as an essential component of a holistic broadband infrastructure initiative.

Finally, though rural telcos have long enjoyed productive working relationships with RUS, there is always room for improvement. Small carriers typically spend about two years and about \$250,000 securing loan approval from RUS. Some providers would love to take advantage of RUS’s low rates, but the procedural barriers to borrowing from RUS send them to private lenders that offer higher rates. RUS could make its processes more user friendly and free up resources for broadband deployment with loan sequencing reforms that would allow borrowers to delay costly reviews until a loan is approved, but before funding is released.

## **CONCLUSION**

Robust broadband infrastructure is crucial to the current and future success of rural America. But the characteristics that enable the unique beauty and enterprise of rural America make it very expensive to deploy advanced communications services there. Our nation’s small, rural telecom providers are deploying faster broadband throughout their service areas, but no carrier – regardless of size – can deliver high-speed, high-capacity broadband in rural America without the ability to justify and then recover the initial and ongoing costs of sustaining infrastructure investment in high-cost areas.

A legislative infrastructure initiative offers a unique opportunity to provide the resources needed to make these investments, and mechanisms that ensure efficiency and accountability in the expenditure of funds are already in place. Our industry is excited to participate in this conversation regarding broadband infrastructure initiatives, and we look forward to working with policymakers and other stakeholders on a comprehensive infrastructure strategy to ensure that all Americans will experience the numerous agricultural, economic, health, and public safety benefits of broadband.

Thank you for the opportunity to testify, and for the Committee’s commitment to creating an environment conducive to broadband infrastructure investment in rural America.