



Statement by

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Subcommittee on Communications and Technology

*Closing the Digital Divide: Broadband Infrastructure Solutions*  
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## **INTRODUCTION AND BACKGROUND**

Chairman Blackburn, Ranking Member Doyle, and members of the subcommittee, thank you for this opportunity to testify today to discuss legislation being considered by your subcommittee. I am Shirley Bloomfield, Chief Executive Officer of NTCA–The Rural Broadband Association, which represents nearly 850 rural community-based carriers in 46 states that offer advanced communications services throughout the most sparsely-populated areas of the nation.

Small, hometown-based rural telecom providers like those in NTCA’s membership 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. These cooperatives and small, hometown companies serve the most rural parts of the United States, reaching areas that contain less than five percent of the U.S. population but which are spread across more than 35 percent of the U.S. landmass – where the average density is about seven customers per square mile, or roughly the average population density for the entire state of Montana. The distances to cover and the low population densities present unique challenges, and underscore the critical importance of these small telecom providers that connect rural Americans with the world.

Even in the face of such challenges, however, these small, hometown businesses are working to help position rural communities for success in a rapidly-changing world. Fixed and mobile broadband, video, and voice are among the many services that rural Americans can access thanks to our industry’s commitment to serving sparsely populated areas. The rural telecom industry has always been innovative – leading the way in converting to digital switched systems, deploying creative technological solutions to their hardest-to-reach customers, enabling distance learning and tele-health applications, and ultimately deploying future-proof fiber-based systems.

Indeed, NTCA members have led the charge in deploying broadband in rural America and closing the digital divide for rural areas fortunate enough to be served by these hometown providers. Despite the many challenges, a survey of NTCA members conducted in 2017 found that 41 percent of respondents’ customers are served via fiber-to-the-home, up 20 percent from 2013. Thirty-six percent of customers are served via copper loops, 12 percent cable modem, 9 percent fiber-to-the-node, 1.1 percent fixed wireless, and 0.2 percent satellite.<sup>1</sup> Due in no small part to increased fiber deployment, rural customers have access to faster broadband speeds. In fact, the survey concluded that 87 percent of NTCA members’ customers can purchase broadband at speeds of 10 Mbps or higher, and 67 percent can access speeds above 25 Mbps. These statistics confirm what we already know, but occasionally overlook – that through the work of small, local telcos we are making strides year-over-year to reduce the digital divide, despite an uncertain regulatory environment.

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<sup>1</sup> NTCA 2016 Broadband/Internet Availability Survey Report (2017), NTCA–The Rural Broadband Association, Arlington, VA.

But there is more to do – the job is far from done. The statistics noted above are good news, but they also tell a story of many rural consumers and communities still left behind. Thirteen percent of consumers served by NTCA members still cannot get even 10 Mbps broadband, while 33 percent are unable to obtain 25 Mbps broadband – a speed considered average for urban Americans today. And the story is even worse in areas that are not as fortunate to be served by cooperatives and other small hometown-based telecom companies like those in NTCA’s membership; in other rural communities, we know that many more consumers, businesses, schools, and medical facilities lack access to even basic levels of broadband.

And, finally, even where broadband *is* available, sustaining it and upgrading it to keep pace with today’s economy and user demands is a challenge unto itself; the job is not done when networks are deployed, because consumers’ use of broadband depends upon reliable and affordable services that will stay high-quality and keep pace with advances in technology and user needs. Thus, even as we have successes to celebrate and roadmaps to look to for proven track records of success, we as a nation have much more to do both to reach unserved areas and also to sustain robust and affordable rural broadband where it is available today.

So how do we overcome these significant challenges of both deploying and sustaining rural broadband infrastructure? The first step is to clearly identify those challenges and think carefully and creatively about measures to address them.

In the first instance, the economics of rural broadband are difficult, if not impossible, in many rural markets. The rates that rural consumers pay are rarely sufficient to cover even the costs of operating in rural areas, much less the enormous capital expenditure required in the first instance to deploy reliable, high-speed broadband in rural America. While obtaining permits to build new infrastructure and navigating complex bureaucratic application processes can be difficult for many of the small businesses in NTCA’s membership, the single biggest challenge in rural America is simply making the business case to build any broadband at all.

Without a reasonable business plan, providers are hard-pressed to justify borrowing funds or using one’s own capital to build, and then even harder-pressed to sustain networks in areas where densities are low, distances are great, and terrain and topography complicate operations. Put another way, permitting barriers are no barrier at all if one cannot justify building the network in the first place. Ongoing support from the High-Cost Universal Service Fund (USF) program overseen by the Federal Communications Commission (FCC) has therefore been essential to making the business case for and then sustaining rural broadband. The program allows providers to keep rates affordable for consumers and to help justify financing from the few lenders that tend to serve rural Internet service providers – the Department of Agriculture’s Rural Utilities Service (RUS), CoBank, the Rural Telephone Finance Cooperative (RTFC), and some community banks.

After the initial business case can be made for rural broadband, we come to the next significant challenge – the barriers to deployment itself. This is where the questions and legislation presented in today’s hearing then become so important, helping to reduce the costs and time associated with deployment and allowing providers to get back to the business of building broadband networks in rural America. I will now turn to a discussion of the ideas being reviewed in today’s hearing, and describe how action in many of these areas would be welcomed to stimulate and accelerate deployment.

## **CURRENT EFFORTS TO HELP OVERCOME A DIGITAL DIVIDE**

Especially with the potential for an infrastructure package on the horizon, it is encouraging that members of this subcommittee are considering different measures aimed at tackling the many unique challenges presented by rural broadband – introducing bills to streamline regulations for providers and thinking innovatively about how to address the challenges of building and sustaining both middle mile and last mile networks. As an overarching matter, these ideas are welcome, much-needed additions to a comprehensive conversation on promoting broadband buildout across rural America. From my work on behalf of and interaction with our members, I can tell you that addressing permitting reform, disaster relief, broadband mapping, and supporting innovation – concepts raised by the bills that are the subject of today’s hearing – is an essential part of a coordinated and comprehensive effort to help address challenges across the broadband landscape.

### *Permitting Reform*

Smaller providers like those in NTCA’s membership have neither the staff nor the resources to navigate complex federal agency structures in search of permissions to build broadband; for companies and cooperatives with an average of approximately 25 employees, time and money spent on such efforts translates to time and money not spent building broadband. At the same time, in serving many of the most remote parts of the United States, our members have deep experience with the Bureau of Land Management (BLM), U.S. Forest Service, National Park Service, and many other land-owning and property-managing agencies across the federal government. Especially when crossing federal lands or railroad rights-of-way in rural America, small, rural providers must address environmental and historical permitting concerns or contractual obligations that can delay projects and increase their already high costs.

These issues are very real and affect broadband network operators and the consumers they seek to serve. To provide just a few examples that we have heard about within the past year, one 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. Meanwhile, in South Dakota, a small, rural

provider's multimillion-dollar fiber deployment requiring U.S. Forest Service approval encountered permitting holdups delaying completion more than a year.

For these reasons, NTCA and its members have consistently urged that differences in agency policies and procedures should be the exception rather than the rule, applying only where needed to implement a unique statutory directive to the agency in question. A lack of coordination and standardization in environmental and historical application and approval processes across federal agencies increases the cost and further complicates and delays the deployment of broadband infrastructure – especially for small providers.

Thankfully, we are seeing increasing levels of attention paid to such concerns. Several NTCA members joined me in working on the FCC's Broadband Deployment Advisory Committee's (BDAC) Streamlining Federal Siting Working Group, and we strongly supported [the report and recommendations of that group](#), including suggestions to:

- *Standardize and publish fee schedules, and utilize revenue in a way that promotes expediting federal siting processes.*
- *Harmonize permitting processes across agencies to the extent feasible and ensure the process is uniformly applied across regional and state offices.*
- *Recognize and accept existing completed studies in previously disturbed areas.*
- *Harmonize environmental assessments across federal landholding or managing agencies, further streamline National Environmental Protection Act and National Historic Preservation Act exclusions, and eliminate duplicative environmental studies.*
- *Make current environmental and historic review streamlining mechanisms mandatory for all agencies.*
- *There should be a single, easily accessible online-tracking mechanism at each federal agency for the permitting process. All agencies should regularly report on permit status and the number of permitting applications they have processed.*
- *A common application form should accommodate changes to existing installations and applicable leases and easements. Agencies should accommodate and incorporate new broadband infrastructure technologies into their review processes.*

It is encouraging to see many of these same ideas reflected in the bills being considered by this subcommittee, indicating that “all roads” seem to be leading to similar destinations in terms of what might be done to improve the processes and policies for permitting on federal lands and properties. NTCA is eager to see such recommendations become part of a comprehensive and coordinated national strategy that tackles both the economics of rural broadband deployment in the first instance and then the barriers that hinder such deployment once the business case is made.

Finally, as Congress moves forward on reform, it is important to note that any changes and coordination with respect to permitting should be made on a “technology neutral” basis. While some current federal permitting processes and forms were developed initially to accommodate wireless infrastructure and attachments, in today’s converging world where data demands are increasing at exponential rates and “densification” of wireless networks is a national priority, all wireless systems will need closer and more robust connections to wireline networks. For example, [an engineering study](#) last year indicated that successful 5G wireless deployment will depend upon substantial future-proof backhaul capability for small cells placed within just several hundred feet of each other; this conclusion has been independently validated by others interested in promoting 5G who have noted the need for “densification” (*i.e.*, increased small cell deployment backed by fiber penetration) of wireless networks.<sup>2</sup> It is therefore imperative that any reform of permitting applications and processes expressly accommodate both wired and wireless technologies.

### *Broadband Mapping*

This committee’s attention to mapping and the desire to obtain better data is much-needed and greatly appreciated by NTCA and its members. We need accurate, granular data on availability to ensure that government efforts to support broadband target resources as efficiently as possible. Such data would help ensure both that support and programs are not withdrawn when they are still needed in an area, while also avoiding the prospect of duplicative infrastructure deployment to the very same locations being promoted by multiple different federal programs.

Under the FCC’s High-Cost USF program, our members are now required to geocode individual locations where new broadband is installed (and, in some cases, for prior deployments too). Such measures – particularly the geocoding of new installations and upgrades going forward – can bring us closer to identifying where broadband exists with much greater precision, which would then allow us to target support and other efforts to promote broadband deployment where needed most. In the end, however, it will also be important to reconcile and coordinate data-gathering and mapping efforts among agencies to avoid facing duplicative reporting requirements and the prospect of generating inconsistent data due to differing measures among multiple reports at different agencies. In short, there is great need for a single, authoritative source that can provide accurate data at a granular level and on a consistent basis to help drive better informed decision-making.

### *Supporting Innovation*

NTCA welcomes the subcommittee’s consideration of ideas as well on supporting innovation in enabling rural broadband. Today, small, rural broadband providers are using all communications

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<sup>2</sup> See [Remarks](#) of Federal Communications Commission Chairman Ajit Pai at the Mobile World Congress, Barcelona, Spain, February 28, 2017; [The Road to 5G is Paved with Fiber](#), Fiber Broadband Association, December 2017; [Verizon’s CEO: Our strategy to deliver the promise of the digital world](#), July 29, 2016.

technologies available to them to provide world-class services to their members and customers. Just as we transitioned from telephone-focused to broadband-focused companies, we will need flexibility and access to additional support and resources such as spectrum and robust middle mile networks to develop and deploy new technologies and address the challenges remaining.

## **OTHER MUCH-NEEDED NEXT STEPS**

As I mentioned earlier in this testimony, although obtaining permits to build can be difficult for small businesses like those in NTCA's membership, the most fundamental challenge to rural broadband is simply making the business case to build broadband at all – being able to justify borrowing funds or using one's own capital to build and then sustain networks in areas where densities are low, distances are great, and terrain and topography complicate operations. With millions of rural Americans still lacking access to robust, high-speed broadband, and millions more only receiving affordable access now through the help of the FCC's USF programs, we must continue working diligently to ensure no child is left without Internet access for homework, no rural area is left without life-saving access to telehealth capabilities, and no Main Street business is prevented from utilizing e-commerce to compete in a global economy. To realize these goals, it is essential that Congress not only look at new ideas for building out rural broadband, but also focus on ways to leverage those programs that have already been most successful in doing so.

Recognizing the foundational nature of the challenging business case for rural broadband, policymakers throughout the federal government, including many of the leaders on this subcommittee, have expressed tremendous interest in pursuing broadband initiatives as part of a broader national infrastructure initiative. In fact, just last week, House Rural Broadband Caucus Co-Chairs Cramer, Welch, Latta, Loeb sack, Kinzinger, and Pocan sent a bipartisan [letter](#) to President Trump requesting that a broadband-specific funding mechanism be included in any such package. An infrastructure bill represents a rare opportunity to make great headway on rural broadband deployment, and we hope that the promise of broadband is not lost among the many other compelling infrastructure priorities also in need of attention (and funding). We greatly appreciate the work of this subcommittee and the congressional rural broadband caucuses more generally in keeping broadband "top of mind," and in leaving no stone unturned in considering all the ways in which conditions can be improved to enable broadband deployment that will benefit rural Americans now and into the future.

Beyond such new initiatives, however, few steps could be more important for policymakers to take than to ensure sufficient, sustainable funding for the High-Cost USF Program, which has served as the foundation for the most successful buildouts to date of broadband across rural America. While often lost in the shuffle of new initiatives, this program is the primary tool to ensure consumers and businesses in rural America can purchase communications services that are reasonably comparable to what urban Americans receive at rates reasonably comparable to what urban consumers pay. The USF program is therefore critical and foundational to making the business case for rural broadband

investment. Moreover, USF is perhaps the best, most successful, proven example of a public-private partnership that exists in the broadband space, having helped to justify private network investments that can total tens of billions of dollars per year when measured as gross plant in service.

But the USF program has encountered difficulties in recent years even as policymakers cast about for new ways to overcome rural broadband challenges. Enabling the business case for deployment of networks and delivery of broadband across rural America is a big job to say the least, and yet the High-Cost USF program has been confined under a flat budget (without even an inflationary adjustment) for years. This is true even as small, rural carriers like those in NTCA's membership have sought to deliver more robust networks that will scale to meet the anticipated enormous consumer demands for bandwidth in the future and far outlast the timeframes of the loans taken out to build them. A strict budget control mechanism adopted in 2016 by the FCC – based upon 2010 support levels and applied only to smaller rural carriers – has only exacerbated this problem.

While the FCC took steps to provide some additional funding last year within the fixed overall USF budget for a subset of small carriers that elected a certain kind of High-Cost USF support, even that funding remained insufficient to achieve the goals of the very model the FCC designed for it. As a result, tens of thousands of rural consumers will see lower speeds or no broadband at all – precisely what the reforms were intended to alleviate. And the concerns are just as significant, if not greater, for rural areas served by small carrier recipients of High-Cost USF that could not or did not elect this model-based support. These small, rural telecom operators have had their support slashed by more than 12 percent on average, denying recovery of actual costs for private broadband network investments *that they have already made*. Even worse, this specific USF budget control has been growing unpredictably, undermining access to capital and the business case for sizeable long-term infrastructure investments in rural America. In short, not only is the insufficient budget undermining recovery of past investments and making rural consumer broadband prices higher, but it is also deterring future investment by hurting the business case for broadband.

These concerns have been confirmed both in the individual stories of NTCA members and in a survey we conducted last summer to determine how insufficient funding and unpredictable budget cuts were undermining rural broadband availability and affordability. Individual examples of reduced investment or other customer impacts we heard about in 2017 included: a cooperative in the Southeast that put on hold a new multi-million dollar loan to build 1,000 miles of high-speed broadband infrastructure to more than 7,000 rural consumers due to the USF cuts; another small locally-owned provider in the Southeast that suspended plans to upgrade two rural communities and instead simply maintained older network plant for fear of support reductions; a Midwestern small operator with only 12 employees that had recently finished a fiber project but then declined to fill open jobs due to the need to conserve funds in the face of USF budget cuts; and another small Midwestern carrier that continues to charge high standalone broadband prices because the USF budget effectively wipes out support for such connections.

Such stories are consistent with [NTCA's summer 2017 survey](#), where 183 small business member companies reported facing annual USF support reductions of more than \$500,000 on average, with a corresponding average decline in planned network investment of nearly \$950,000 that translated to more than 850 customers on average being denied near-term access to upgraded broadband services. This support reduction also led to standalone broadband prices for rural consumers \$50 higher *per month* than they would have been for urban consumers.

Fortunately, Congress and members of this subcommittee recognize the problems this hard cap has placed on rural providers. Last year, a bipartisan [letter](#) led by Congressman Cramer and co-led by Reps. Loeb sack, Latta, Welch, Kinzinger, and Pocan, was signed by 101 members of the House of Representatives encouraging the FCC to ensure “sufficient resources are available to enable the USF mechanisms to work as designed.” (A similar letter was sent by several dozen Senators.) The FCC has taken notice of these concerns, and just this month Chairman Ajit Pai announced the potential for more than \$500 million to be injected into the High-Cost USF program. The Chairman’s proposal is currently circulating among the commissioners at the FCC, and also includes a notice that poses crucial questions on what the High-Cost USF budget should be going forward and how to ensure the program can consistently support and provide certainty for robust network deployment over time.

NTCA applauds this announcement, and we are grateful for the leadership of members of this subcommittee and many others in Congress for helping to elevate this concern. We hope that more sufficient support through the USF program – together with the prospect of a comprehensive infrastructure strategy that includes ideas like many of those before this subcommittee today and additional funding resources – will stimulate investment and eliminate deployment barriers. Achieving this goal through such a coordinated, comprehensive approach is the key for success in the years to come, and will help us deploy and sustain broadband throughout rural America.

## **CONCLUSION**

Due in part to the leadership of this subcommittee, small, rural broadband providers like those in NTCA’s membership have made great strides in reducing the digital divide in rural America. But the job is far from done. Many of the ideas being discussed here today would represent important steps forward in promoting broadband deployment and addressing challenges we face for the broadband of the future – and together with the High-Cost USF program, and in coordination with a comprehensive infrastructure package that recognizes the importance of broadband to rural communities – we believe we can make great progress on tackling our nation’s broadband challenges.

On behalf of NTCA–The Rural Broadband Association, your commitment to identifying and solving these challenges is greatly appreciated. Thank you for inviting me to be with you today and I look forward to your questions.