Statement by

Shirley Bloomfield
Chief Executive Officer
NTCA–The Rural Broadband Association
Arlington, VA

Before the

United States House of Representatives
Committee on Natural Resource
Subcommittee on Federal Lands

Legislative Hearing on H.R. 4824
Washington, DC

May 17, 2018

INTRODUCTION AND BACKGROUND

Chairman McClintock, Ranking Member Hanabusa, 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, locally-owned 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. These companies serve areas where the average density is about seven customers per square mile; to put this in context, this is roughly the average 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.

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. 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 seeking to deploy more future-proof fiber-based systems. 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.

BROADBAND IS ESSENTIAL RURAL INFRASTRUCTURE

Rural broadband has far-reaching effects for both urban and rural America, creating efficiencies in healthcare, education, agriculture, energy, and commerce, and enhancing the quality of life for citizens across the country. A report released in 2016 by the Hudson Institute in conjunction with the Foundation for Rural Service (FRS) found that investments by rural broadband companies contributed $24.1 billion to the economies of the states in which they operated.[1] While $8.2 billion (or 34 percent of this sum) accrued to rural areas, the remaining 66 percent – $15.9 billion of economic activity – accrued to the benefit of urban areas. Additionally, the report found that the rural broadband industry directly and indirectly supported nearly 70,000 jobs nationwide in 2015, with 46 percent of those being in rural areas and 54 percent located in urban areas.

[1] The Economic Impact of Rural Broadband, Hanns Kuttner, Hudson Institute (April 2016).

In addition, iGillotResearch and FRS released a paper in March 2018 that underscores the value of Internet transactions and further reveals how rural broadband benefits the entire economy:

- Rural consumers are responsible for more than 15% of all internet-driven transactions – approximately 10.8 billion internet-driven transactions.
- Internet-driven transactions drive a substantial portion of U.S. gross domestic product (GDP) – approximately $9.6 trillion annually.
- The estimated value of rural online transactions is nearly $1.4 trillion – or 7% of the U.S. nominal GDP.[2]

Broader Benefits for Consumers and Communities

Beyond these economic impacts of broadband network investment and operations, 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.[3]

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. A rural Wisconsin community experienced the broadband difference when a rural telco deployed a fiber network to a 25-bed critical access hospital and its satellite clinics to enable patients to obtain broadband-supported healthcare closer to home. Telehealth services enabled by high-speed broadband also facilitate "aging in place," as seen in rural North Dakota where a small, rural broadband provider developed a telemedicine link with a local pharmacist that enabled a neighboring community pharmacy to remain open upon the retirement of its pharmacist.

The unique "hometown focus" of smaller providers, as captured in NTCA's Smart Rural Community initiative, helps in promoting innovative uses of these networks for the benefit of rural America. For example, in western Oklahoma, high-speed broadband supports a community-based charitable organization that assists clients with mental health therapy and foster child placement; the broadband connection enables rapid transfer of data across great distances to speed the settlement of children in

[2] A Cyber Economy: The Transactional Value of the Internet in Rural America, iGR (March 2018).
[3] Broadband's Contribution to Economic Health in Rural Areas, Community & Regional Development Institute, Cornell University (February 2015).

new homes. A Wisconsin rural telco serves as technology partner to local children's charities that rely on electronic auctions for fundraising revenue.

Other benefits accrue in the form of distance learning. A shortage of teachers in parts of rural America means public school districts rely on high-speed connectivity to deliver interactive video instruction for foreign language, science, and music classes. For example, high school students in a rural Nebraska community can now receive college credits for courses taken online thanks to fiber connectivity to area school systems and community colleges, and students at a small private college in rural South Carolina use high-speed broadband to engage coursework in programming, advanced mathematics, engineering, research, and design – preparing them to enter a tech-centric job market.

WE ARE MAKING GREAT PROGRESS ON RURAL BROADBAND – BUT THERE IS MUCH MORE TO DO TO REACH ALL AMERICANS AND SUSTAIN NETWORKS ONCE BUILT

Despite the many challenges of deploying broadband in rural areas, 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. Forty-five percent of customers are served via DSL technologies, 12 percent by cable modem, 1.1 percent via fixed wireless, and 0.2 percent through satellite.[4] Due in no small part to increased fiber deployment, rural customers have access to faster broadband speeds, including 67 percent that can access speeds at or above 25 Mbps download. These statistics confirm what we already know, but occasionally overlook – that through the work of small, local operators committed to the rural areas in which they live we are making strides year-over-year to reduce the digital divide.

But 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 that is considered average for most urban Americans today. And the story is even worse in areas that are not 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 are lacking in 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 finished when broadband 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 proven track records of success to emulate, we as a nation

[4] NTCA 2016 Broadband/Internet Availability Survey Report (2017), NTCA–The Rural Broadband Association, Arlington, VA.

have much more to do both to reach unserved areas and also to sustain robust and affordable rural broadband where it is available today.

Before All Else, A Business Case is Essential

So how do we overcome these significant challenges of 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. Although many rightly focus on the challenges of complex or costly permitting procedures as a barrier to broadband access, the economics of rural broadband present the primary barrier to deployment. 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. To be sure, obtaining permits to build new infrastructure and navigating complex bureaucratic application processes can be difficult and costly for many of the small businesses in NTCA's membership, but 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 construction.

This is why sufficient ongoing support from the High-Cost Universal Service Fund (USF) program overseen by the Federal Communications Commission (FCC) is so important, allowing 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, RTFC, and some community banks. Unfortunately, a strict budget control mechanism adopted in 2016 by the FCC – based upon 2010 support levels and applied to smaller rural carriers – has undermined incentives and capabilities to invest in many rural areas. While the FCC recently took steps to provide additional funding, even that funding remains insufficient to meet the long-term needs of rural consumers. 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. Even worse, the 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 and achievement of higher speeds for rural consumers. Remedying such concerns is essential to help make the business case for investment in rural broadband possible – put another way, permitting barriers present no barrier at all if one cannot justify building the network in the first place.

HOW PERMITTING REFORMS CAN HELP OVERCOME DIGITAL DIVIDES

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 become so important, helping to reduce responsibly and thoughtfully the costs and time associated with deployment and allowing providers to get back to the business of building broadband networks in rural America.

The Rural Broadband Efficiency Act of 2018 (H.R. 4824), introduced by Rep. John Curtis, would help reduce barriers to deployment by allowing certain state permitting authorities to enter into agreements with the U.S. Forest Service (USFS) and Bureau of Land Management (BLM) for states to conduct environmental reviews required for gaining access to certain federal lands for the purpose of installing broadband infrastructure. The bill would also would exempt projects from environmental permitting when using an existing right-of-way across USFS or BLM lands. Finally, H.R. 4824 would require BLM to establish a Federal Permit Streamlining Project in each BLM field office and serve as lead agency for the issuance of a single permit on behalf of all other federal agencies involved in a proposed broadband project.

From my work on behalf of and through interaction with our members, it has become clear that taking sensible steps to evaluate and streamline permitting processes where possible is an essential part of a coordinated and comprehensive effort to help address challenges across the broadband landscape. Smaller providers like those in NTCA's membership have neither the staff nor the resources to navigate complex federal agency structures in search of complicated 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 BLM, USFS, 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 comply with environmental and historical permitting requirements that can introduce concerns or contractual obligations that can delay projects and increase their already high costs.

Costly Delays Hurt Consumers

NTCA recognizes the need to protect our nation's natural resources, and appropriate, well-designed permitting processes are a necessary part of such protection. In consulting with NTCA members, however, I can provide several examples of the issues that can arise in attempting to work with federal land-owning and property-managing agencies in the process of deploying broadband communications networks. For example, NTCA members in Utah have endured frustrating and lengthy delays with the USFS. It took one small broadband provider over three years to receive a public permit to build service to the top of a peak to connect a wireless tower. In another example,

a small provider that needed to repair existing fiber-optic network facilities on public land in Utah requested a permit from the USFS in October 2011, and finally received approval in June of 2014.

As another example about which we learned last 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. Although there had been some hope that the state BLM office might modify this policy for the 2018 construction season, that is now on hold as the national BLM operations apparently considers its own revisions to such policies. Meanwhile, in South Dakota, a small, rural provider's multimillion-dollar fiber deployment requiring USFS approval confronted permitting delays that put completion of the construction project on hold for more than a year. Furthermore, a member in another western state reports that permitting has taken three times as long with the Department of Transportation specifically as compared to other federal agencies; the company has been forced as a result to incur the costs and extra work of moving contractors around to different areas in an otherwise arbitrary and artificial way simply to manage around which permits arrive when.

While not related to federal lands specifically, one of the most significant access issues we hear about from members at NTCA is the process for deploying broadband networks across or within railroad rights-of-way. For example, one of our members in Missouri reports that it took seven months and tens of thousands of dollars to cross just three railroad rights-of-way across two different railroads. Of note, these costs do not even include the actual costs of construction -- these are just the costs of fees and the resources required to receive approval.

NTCA members largely live in the communities they serve, and with decades of operating experience, they are deeply familiar with the areas in which they will build networks and deliver services. They share an interest both in deploying better communications services to these communities and preserving these areas for the enjoyment and benefit of current residents – their neighbors – and future generations. But the examples described above highlight the need for sensible reform of permitting procedures to ensure greater efficiency and timeliness in the process, especially when the work involves replacing or upgrading facilities in existing rights-of-way. States that are closer to these areas and communities can help in striking such an effective balance, and thus NTCA supports H.R. 4824. Moreover, NTCA and its members have consistently urged that differences in policies and procedures among federal land-owning and property-managing agencies should be the exception rather than the rule, applying only where needed to implement a statutory directive that is unique 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.

BDAC Working Group

Fortunately, we are seeing increasing levels of attention paid to such concerns. It is for these reasons too that I strongly supported, along with several NTCA members who joined me on the FCC's Broadband Deployment Advisory Committee's (BDAC) Streamlining Federal Siting Working Group, 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.*
- *The 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 some of these same themes reflected in Rep. Curtis's bill under consideration today, such as recognizing the utility and applicability of completed studies in previously disturbed areas – this commonality indicates some coalescence 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 and then the barriers that hinder such deployment once the business case is made.

Wireless Needs Wires and 5G Needs Fiber

Many urging greater streamlining of permitting procedures tend to invoke the promise of 5G wireless networks as a rationale for doing so. As Congress considers any permitting reforms, however, it is important to emphasize that any changes and coordination with respect to permitting should be made on a "technology neutral" basis. Although the availability of 5G wireless capabilities through the increased placement of small cells can offer promise in some areas, these services alone will not fulfill the need for broadband access in much of rural America – and, for this reason, we must ensure

that any permitting reforms adopted apply equally to wireline and wireless technologies alike to the extent applicable.

Indeed, it is important to take realistic stock of whether, when, and to what degree 5G services will be available on a widespread basis in rural America. A technical paper released last year found that the full promise of 5G capability can only be realized in rural America if small cells are placed every several hundred feet apart,[5] and it will take significant amounts of backhaul capacity – "densification" of fiber[6] – to manage the data loads that 5G is hoping to handle.[7] In short, the deployment of 5G-capable networks in rural areas where there are only a few households per square mile would effectively seem to translate to a fiber-to-the-premise construction. Put another way, the old mantra of "wireless needs wires" is quickly becoming "5G needs fiber." In addition, it has been explained that taking steps to rationalize 5G permitting alone "will not solve the problem in unserved areas;" it will clearly take both permitting relief and additional resources if the promise of 5G will come to rural America within the foreseeable future.[8]

In the end, for rural consumers to have a broadband experience reasonably comparable to that in urban America, they must have meaningful access to both fixed and mobile broadband services. Placing too much hope on mobility alone without recognizing "wireless needs wires" – or, these days, "5G needs fiber" – is a recipe for insufficient access in 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. The Rural Broadband Efficiency Act of 2018 (H.R. 4824) under consideration today would represent a welcome, sensible step forward in promoting broadband deployment and addressing challenges rural carriers face in planning for and building broadband in rural America. Together with a sufficient High-Cost USF program, and in coordination with other broadband proposals in Congress and across our federal agencies that recognize the importance of broadband to rural communities, we believe proposals such as this bill can help us make great collective progress on tackling our nation's broadband challenges.

---

[5] Evaluating 5G Wireless Technology as a Complement or Substitute for Wireless Broadband, Vantage Point Solutions (2017).

[6] See Remarks of Federal Communications Commission Chairman Ajit Pai at the Mobile World Congress, Barcelona, Spain, February 28, 2017.

[7] The Road to 5G is Paved with Fiber, Fiber Broadband Association, December 2017; Sean Buckley, "Verizon's McAdam: Our multiuse fiber approach offers more cost efficiencies," Fierce Telecom, May 22, 2017.

[8] Holmes, Allan, "5G Cell Service is Coming. Who Decides Where It Goes?" The New York Times, March 2, 2018; *see also* remarks of CTIA during "Closing the Digital Divide: Broadband Infrastructure Solutions" hearing, U.S. House of Representatives Energy & Commerce Communications and Technology Subcommittee, January 30, 2018.

On behalf of NTCA–The Rural Broadband Association, your commitment to helping to enhance the case for rural broadband deployment is greatly appreciated. Thank you for inviting me to be with you today, and I look forward to your questions.