NYDIA M. VELAZQUEZ, NEW YORK
CHAIRWOMAN

STEVE CHABOT, OHIO
RANKING MEMBER

Congress of the United States
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515-0515

MEMORANDUM

TO:	Members, Subcommittee on Contracting and Infrastructure
FROM:	Rep. Jared Golden, Chairman
DATE:	September 6, 2019
RE:	Subcommittee field hearing entitled, "Connecting Rural Small Businesses to Broadband: Challenges, Successes, and How to Do Better" on Friday, September 6, 2019 at 3:30 p.m. in Lecture Hall Science 102 at University of Maine Machias, 116 O'Brien Avenue, Machias, Maine 04654

The Committee on Small Business Subcommittee on Contracting and Infrastructure will meet for a field hearing titled, "Connecting Rural Small Businesses to Broadband: Challenges, Successes, and How to Do Better." The hearing is scheduled to begin at 3:30 P.M. on Friday, September 6, 2019 in the Lecture Hall Science 102 at University of Maine Machias, 116 O'Brien Avenue, Machias, Maine 04654. The principle that all Americans should have access to reliable communications services, also known as universal service, has been a critical mission of the federal government for over 100 years. This includes access to telecommunications services and more advanced services, such as high-speed internet, for all consumers at reliable, reasonable, and affordable rates.

However, there are still 19 million Americans that do not have access to high-speed broadband. The lack of access is concentrated in remote parts of the U.S. where difficult terrain and sparse populations make broadband deployment more costly and less lucrative. More investment in targeted funding is critical to connect small businesses and families to the economic opportunities that reliable high-speed broadband provides. The hearing will review the barriers to broadband infrastructure deployment in rural America and ways increased federal investment can help close the digital divide.

Witnesses include:

- Mr. Mark Ouellette, President and CEO, Axiom Technologies LLC, Machias, Maine
- Mr. Chris Loughlin, Board Member, Downeast Broadband Utility and Town Manager, Baileyville, Maine
- Ms. Lisa Hanscom, Co-Manager, Welch Farm & First Selectman, Roque Bluffs, Maine
- Mr. Timothy R. McAfee, CEO, Pioneer Broadband, Houlton, Maine

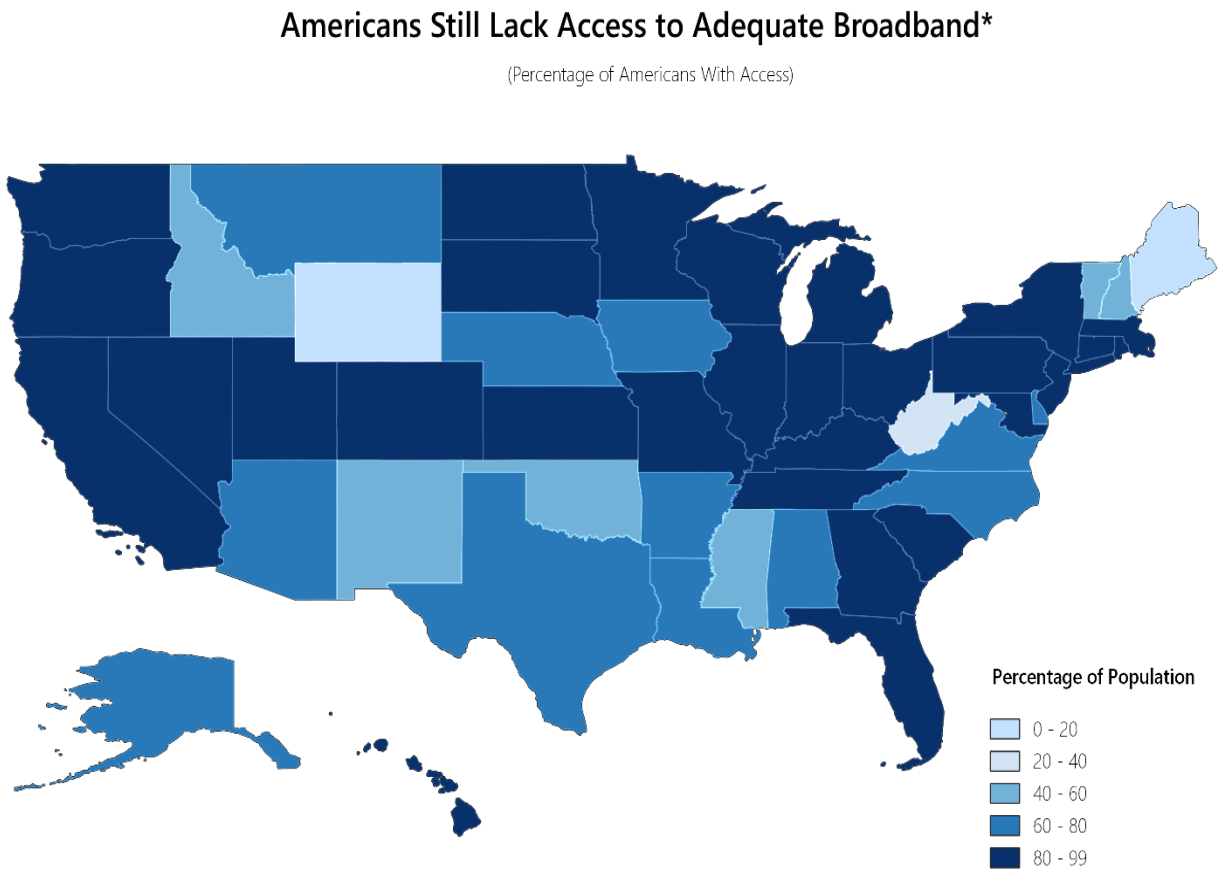
Background

Access to high-speed broadband has unlocked tremendous economic growth and transformed the American way of life. Today, more than 293 million Americans use high-speed broadband to work, learn, access healthcare, and operate their businesses.[1] Yet, 19 million Americans still lack access to high-speed broadband,[2] which is particularly detrimental in rural America. Over 26 percent of Americans in rural areas lack access compared to 1.7% of Americans in urban areas. This disparity has become known as the digital divide and greatly impacts small business in rural America that are struggling to compete with urban counterparts to reach consumers who are increasingly engaging with businesses online.

The principle that all Americans should have access to reliable communications services, also known as Universal service, was a cornerstone of the Communications Act of 1934, the law that established the Federal Communications Commission (FCC).[3] Universal service has helped make telephone services available throughout the country and today the FCC recognizes that high speed internet is another essential part of it. The Telecommunications Act of 1996, discussed further below, expanded the traditional goal of Universal service to include advanced services, such as high-speed internet. [4]

To bridge this gap, the federal government has funded broadband deployment in areas where the business community has determined that the costs are too high, and the return-on-investment is too low. The FCC's Universal Service Fund and USDA's Rural Utilities Service programs have assisted rural carriers to defray these costs.[5] However, inaccurate broadband mapping and lack of coordination with state and local governments has curbed progress. This year the FCC and NTIA have launched separate initiatives to improve broadband mapping through coordination with state governments, including Maine, and increased granularity in carrier-provided service data.[6] The FCC has also proposed a new fund called the Rural Digital Opportunities fund that will provide an additional $20.4 billion over the next 10 years.[7]

[1] Internet Usage in the United States – Statistics & Facts, STATISTA, June 4, 2018, https://www.statista.com/topics/2237/internet-usage-in-the-united-states/.
[2] Federal Communications Commission, 2019 Broadband Deployment Report, FCC 19-44, May 2019.
[3] Federal Communications Commission, Universal Service, https://www.fcc.gov/general/universal-service (last visited Sep. 3, 2019).
[4] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).
[5] Angele A. Gilroy and Lennard G. Kruger, Cong. Research Serv., R42524, Rural Broadband: The Roles of the Rural Utilities Services and Universal Service Fund (2013).
[6] Press Release, NTIA, NTIA Unveils National Broadband Map and New Broadband Adoption Survey Results (Feb. 17, 2011); Press Release, FCC, FCC Establishes New Digital Opportunity Data Collection (Aug. 1, 2019).
[7] *Rural Digital Opportunity Fund, et al*., WC Docket Nos. 19-126, *et al*., Notice of Proposed Rulemaking, 2019 FCC LEXIS 2115 (2019) [hereinafter *Rural Digital Opportunity Fund NPRM*].



Source: FCC 2019 Broadband Deployment Report
Note: *Broadband is defined as fixed internet with download speeds of 25 Mbps or greater and upload speeds of 3 Mbps or greater. Percentage shown is the share of residents within a state without access to at least one provder that meets the outlined definition.

Constraints to Broadband Buildout

Because of the higher costs to build broadband and other digital networks in rural areas and fewer subscribers to defray those costs, it is necessary for the government to fill the gap and serve consumers and small businesses. Without these public investments, small towns across the country will lose residents, small firms, and ultimately the potential for economic growth. In recent years, the U.S. has dedicated resources into programs aimed at making broadband services available to those living in sparsely populated areas.

Universal Services Fund and High-Cost Program

The Telecommunication Act of 1996 expanded the traditional goal of universal service by that specifically focusing on increasing access to evolving services for consumers living in rural and insular areas, and for consumers with low-incomes. Additional principles called for increased access to high-speed Internet in the nation's schools, libraries, and rural health care facilities.

To effectuate this goal, the law requires providers of telecom services to contribute to a Federal fund designed to promote the availability of advanced communications services to those in low-income, rural, and high-cost areas at affordable rates.[8] To meet the directive of the 1996 Act, a Universal Service Fund (USF) was established to support four specific telecom programs. The four programs are the:

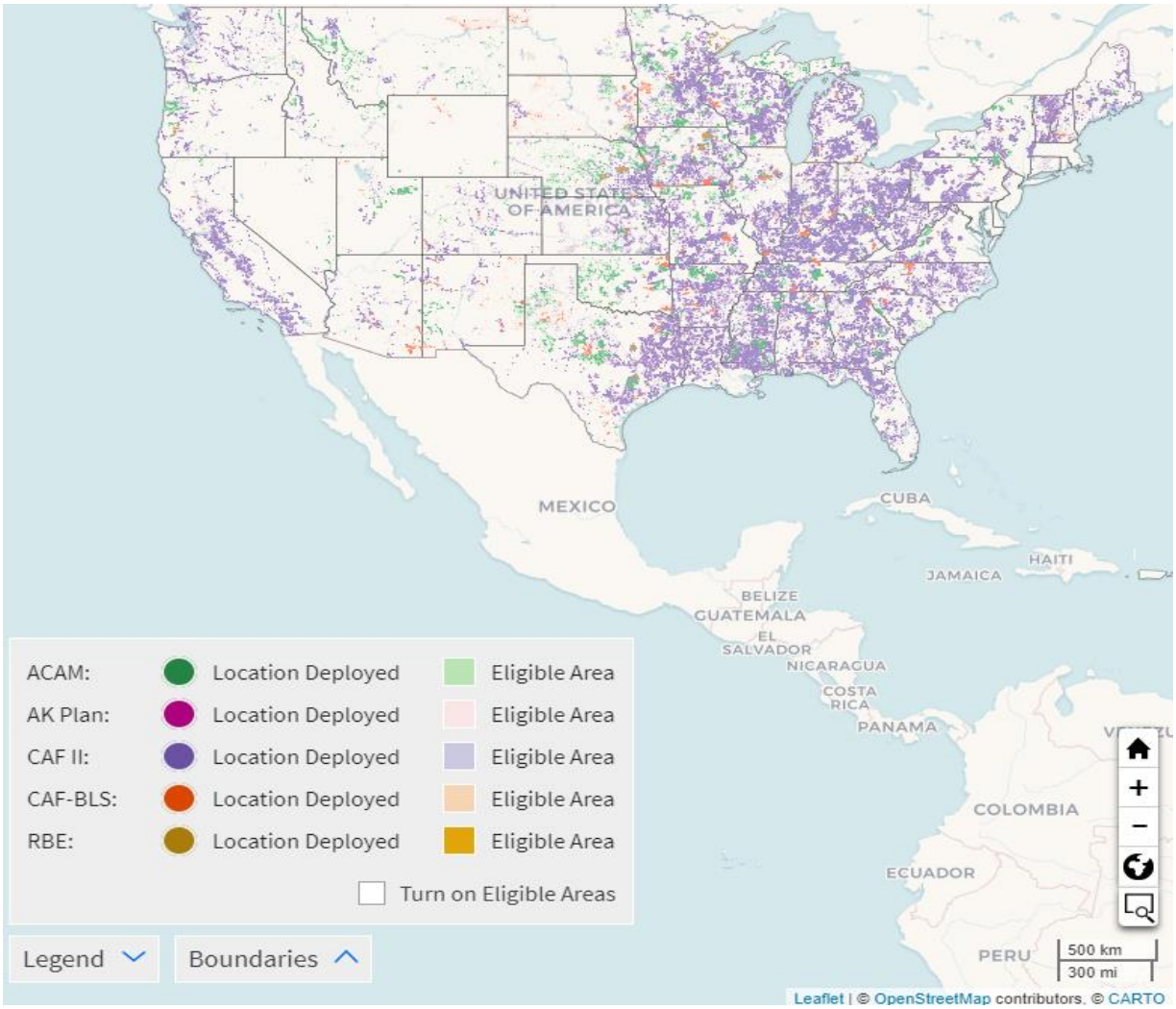
- High-Cost program provides assistance for telecommunications services in rural areas;
- Lifeline program provides assistance for low-income households;
- Rural Health Care program provides broadband for telemedicine services for rural health care facilities; and
- E-Rate program provides assistance for schools and libraries that serve low-income communities.[9]

The USF is funded by contributions from wireline telephone companies, wireless telephone companies, and interconnected Voice over Internet Protocol (VoIP) providers.[10] These providers contribute a percentage of their interstate and international long-distance revenues.[11] They recover USF contributions directly from their customers in a USF fee on the consumers' monthly service bills.[12] Since 1996, the fund has more than doubled in size, costing over $11.42 billion in 2018.[13] Over $4.5 billion annually goes directly to a small selection of mostly rural carriers through the High-Cost program.[14]

In 2013, the FCC created the Connect America Fund (CAF) and transformed the Universal Service Fund to offer grants in exchange for deployment high-speed broadband infrastructure.[15] This shift was necessary to move Universal Service Funds away from maintaining legacy telecommunications networks to building out new broadband infrastructure to places where market forces failed to incentivize deployment. Last year, the FCC completed the CAF-Phase II reverse auction which allocated $1.488 billion to deliver high speed broadband to more than 700,000 unserved homes over the next 10 years.[16] Since May, the FCC has completed three funding authorizations, releasing more than half of the allocated funds to providers in just a few months.[17]

[8] Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (1996).
[9] *Universal Service Contribution Methodology*, WC Docket No. 06-122, Notice of Proposed Rulemaking, 34 FCC Rcd. 4143 (2019).
[10] *Id*.
[11] *Id*.
[12] *Id*.
[13] *Id*.
[14] Lennard G. Kruger and Angele A. Gilroy, Cong. Research Serv., RL30719, Broadband Internet Access and the Digital Divide: Federal Assistance Programs (2019) [hereinafter CRS RL30719].
[15] *Connect America Fund*, WC Docket No. 10-90 et al., Report and Order and Further Notice of Proposed Rulemaking, 26 FCC Rcd. 17663 (2011) [hereinafter *USF/ICC Transformation Order*].
[16] Press Release, FCC, FCC Authorizes $524 Million in Funding for Rural Broadband From Connect America Fund Auction (Jul. 15, 2019).
[17] *Id*.

Connect America Fund Broadband Deployments



Source: Universal Service Administrative Co. Connect America Fund Broadband Map

The FCC has also launched a new Rural Digital Opportunity Fund at the August 2019 Open Meeting, which will provide at least $20.4 billion over 10 years to expand broadband to rural areas.[18]

Rural Utilities Service Funding

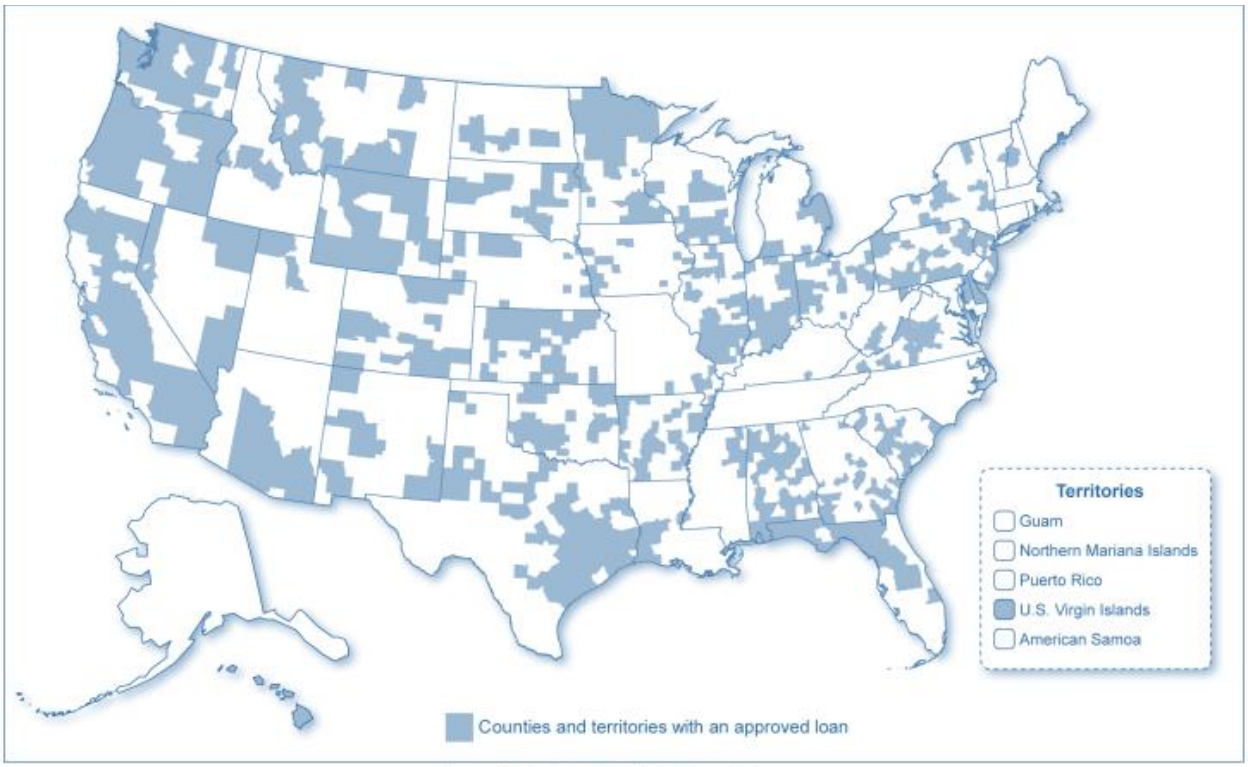
The U.S. Department of Agriculture also provides grants and loans for service providers in rural areas to deploy broadband networks. The Rural Utilities Service (RUS) of the Department of Agriculture administers several loan and grant programs to build or expand broadband networks to rural consumers and businesses. In fact, in the Consolidated Appropriations Act of 2018, which passed on March 23, 2018, a new broadband pilot program was established.[19] The Rural eConnectivity Pilot Program (ReConnect Program) has the intended goal of expanding service to

[18] *Rural Digital Opportunity Fund NPRM*, *supra* note 7.

[19] Lennard G. Kruger, Cong. Research Serv., RL33816, Broadband Loan and Grant Programs in the USDA's Rural Utilities Service (2019) [hereinafter CRS RL33816].

rural areas without sufficient broadband access, which is defined as 10 megabits per second downstream and 1 megabit per second upstream.[20]

Counties with One or More Approved RUS Broadband Loan



Source: GAO analysis of Rural Utilities Service data

Adequate funding is necessary so that broadband infrastructure exists in rural and underserved areas. Small broadband providers cannot effectively expand and invest in their existing infrastructure without financial support. To close the digital divide, small carriers that serve the most remote parts of the U.S. must use RUS and USF funds to build and maintain their networks.

Broadband Mapping

In the American Recovery and Reinvestment Act of 2009, the government established a $4.7 billion Broadband Technology Opportunities Program to develop and expand broadband services and set aside $350 million to develop and maintain the National Broadband Map by 2011.[21] In February 2011, NTIA released the first National Broadband Map which was compiled through the efforts of federally funded State Broadband Initiative (formerly called the State Broadband Data and Development Program) in which grantees collected data from 3,400 broadband providers and performed verifications through drive-testing, meetings with community leaders, and field investigations.[22] The National Broadband Map was updated by NTIA every six months until

[20] *Id.*
[21] American Recovery and Reinvestment Act of 2009, Pub. L. No. 111-5, 123 Stat. 115 (2009).
[22] Anne Neville, *National Broadband Map has Helped Chart Broadband Evolution*, NTIA, (Mar. 23, 2015), https://www.ntia.doc.gov/blog/2015/national-broadband-map-has-helped-chart-broadband-evolution.

2014.[23] The map was a vital tool to direct funding from federal programs like the FCC's Universal Service Fund and the USDA's Rural Utilities Service to areas that are unserved by a broadband service provider.[24]

In 2018, the FCC decommissioned the National Broadband Map and released a new Fixed Broadband Deployment Map using carrier-provided data from FCC Form 477 submissions.[25] Public and private sectors have criticized the FCC using Form 477 data because it has resulted in overstated coverage reporting, particularly in rural America. In fact, in fall of 2018, the GAO concluded that broadband availability data in the FCC's map does not accurately reflect broadband access.[26] In response, Congress set aside $7.5 million in appropriations for broadband mapping.[27] In 2019, NTIA announced a pilot program with eight states, including Maine, Minnesota, California, and Tennessee to collect broadband to update the National Broadband Map.[28] The FCC also recently initiated a new data collection called the Digital Opportunity Data Collection and improve the FCC's Form 477 requirements to collect more accurate and granular data.[29]

Broadband Access and Small Businesses

Small firms are becoming increasingly dependent on reliable high-speed broadband services to operate and grow their businesses. Regardless of the type of business, the most successful small firms are the ones adopting new technology to become more effective and efficient at meeting customer needs. From connecting with consumers to fulfilling orders, a broadband connection is essential to day-to-day operations of many main street businesses. In fact, 82 percent of consumers expect immediate responses from businesses which can only be made possible with robust digital connections.[30] Small firms that are digitally connected also earn twice as much revenue per employee, experience revenue four times the revenue growth year over year, and are three times more likely to create jobs.[31] Although broadband availability and adoption improved over the last few years for rural businesses, over a quarter of small businesses in rural areas are still using very basic digital tools compared to their urban counterparts.[32]

Small rural businesses are impacted as both consumers and as small internet service providers (ISPs) who provide broadband service. Building and upgrading the broadband infrastructure will make technology more affordable in rural areas, which can facilitate more economic growth. As

[23] *Id.*
[24] *Id.*
[25] Rich Mansfield, *Decommissioning of the National Broadband Map and its APIs*, (Dec. 7, 2018), https://www.fcc.gov/news-events/blog/2018/12/07/decommissioning-national-broadband-map-and-its-apis.
[26] U.S. GOV'T ACCOUNTABILITY OFF., GAO-19-134T, TRIBAL BROADBAND: FCC'S DATA OVERSTATE ACCESS, AND TRIBES FACE BARRIERS ACCESSING FUNDING (2018).
[27] Consolidated Appropriations Act of 2018, Pub. L. No 115-141, 132 Stat. 348 (2018).
[28] Press Release, NTIA, NTIA Partners with 8 States on Improvements to Broadband Availability Map (Feb. 12, 2019).
[29] *Establishing the Digital Opportunity Data Collection, et al*., WC Docket Nos. 19-195, *et al*., Report and Order and Second Further Notice of Proposed Rulemaking, 2019 FCC LEXIS 2140 (2019).
[30] Michael Guta, 82% of Consumers Expect Immediate Response on Sales or Marketing Questions, SMALL BUSINESS TRENDS (Jul. 2, 2018), https://smallbiztrends.com/2018/07/real-time-response-to-customers.html (last visited May 19, 2019).
[31] John O'Mahoney & Sara Ma, *Connecting Small Businesses in the US*, DELOITTE ,(2018), file:///C:/Users/msunn/Downloads/us-tmt-connected-small-businesses-Jan2018.pdf**.**
[32] *Id.*

providers, infrastructure investments ensure more adoption in rural areas, allowing smaller carriers to enter the market and compete. Increased funding for alternative broadband technology will also drive down costs of new types of hardware particularly suited for rural deployment.

Conclusion

Access to reliable high-speed broadband is not a luxury. Robust and ubiquitous connectivity ensures that communities thrive, and small businesses grow. Congress must ensure that policy proposals conducive to addressing gaps in broadband service availability are implemented. Expanding digital infrastructure should be incorporated into a broader infrastructure plan so that the U.S. can achieve its goal of providing broadband access for all U.S. residents. Small rural carriers that are embedded in remote parts of the U.S. have a very important role to play in closing the digital divide. This hearing will allow Members to hear directly from small businesses on policies that will result in broadband infrastructure funding that connects the many towns and communities that remain unserved.