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:	May 23, 2019
RE:	Subcommittee field hearing entitled, "Small Businesses and Their Limitations Without Reliable Access to Rural Broadband" on Thursday, May 30, 2019 at 10:00 a.m. in Bulltear Industries, Inc, 24543 Olinda Trail N, Scandia, MN 55073

The Committee on Small Business Subcommittee on Contracting and Infrastructure will meet for a field hearing titled, "Small Businesses and Their Limitations Without Reliable Access to Rural Broadband." The hearing is scheduled to begin at 10:00 A.M. on Thursday, May 30, 2019 at Bulltear Industries, Inc, 24543 Olinda Trail N, Scandia, MN 55073. According to U.S. Census data, only 17 percent of businesses are located in rural areas despite 97 percent of the nation being classified as rural. Digital tools have changed the way many rural entrepreneurs are starting and growing their business. By embracing digital engagement, Main Street firms are experiencing greater sales both locally and globally. Yet, rural entrepreneurs still face challenges in fully utilizing digital technologies. The hearing will review the opportunities online technology holds and examine the barriers rural small businesses face in fully embracing it.

Witnesses include:

- Mr. Adam Artz, Realtor, Realty Executives, Blaine, MN
- Mr. Marc Johnson, Director, East Central Minnesota Educational Cable Cooperative, Braham, MN
- Mr. Greg Carlson, Executive Director of Partnered & Affiliated Boards, Cambridge Presbyterian Homes, Roseville, MN
- Mr. Matt Crescenzo, Owner, Bulltear Industries, Inc., Scandia, MN

Background

Internet penetration has increased almost sevenfold in the past 15 years, from 6.5 percent of the world population in 2000 to 43 percent in 2015, with more than 3.2 billion people online worldwide.[1] As more countries get online and as technology develops, the U.S. must consider policy proposals conducive to addressing gaps in broadband service availability – and ensure the internet is available to all Americans. Internet broadband is the foundation of the digital economy and the gateway for future economic development; it's the connective tissue supporting communities and cities across America.

[1] One Internet: A social compact for the digital age. (2016). *OECD Observer*, (No 307), 3.

A high-speed internet connection ensures industries such as telemedicine, distance learning, advertising, and even public safety are successful in the 21st century. Regrettably, the U.S. is ranked number 16 in the world in broadband access and number 13 in average broadband speed, according to the Organization for Economic Co-Operation and Development (OECD).[2] As the creator of the Internet, the U.S. has the oldest telecommunications infrastructure in place. This legacy system could pose certain challenges and creates a disadvantage as compared to other countries that never wired their communities with telephone lines and can jumpstart their broadband connections with fiber technology – one of the most efficient.

While technological advancements are making it easier for small businesses to operate and be competitive in today's economy, there is a comparative disadvantage for businesses operating in geographically hard to reach and sparsely populated parts that do not have access to the same connectivity as their counterparts in urban area. In fact, 12.6 million Americans are still lacking broadband access,[3] making broadband buildout a top priority for small businesses all across the nation.

The Rural Economy

Of the 46.1 million residents that call rural American home, nearly one in five are over the ages of 65 years old, much higher than urban areas.[4] The large difference in age of the population can be attributed to net outmigration of young people moving to pursue educational and job opportunities in other places. Between 2010 and 2016, the rural population experienced a 0.4 percent decline in population, with almost 700,000 people leaving on net.[5] In contrast, urban counties experienced more than a 5 percent increase in population over the same period.[6] Though, it should be noted that between July 2016 and July 2017 rural counties increased in population for the first time this decade.[7] Normally lost in the story, though, is the growing diversification of rural communities. In 188 rural classified counties, increases in the Hispanic population over the years has helped stem and even offset population losses.[8] Nonetheless, the aging of the population and outmigration has major implications for rural labor force participation, the health care system, and the future economic stability of rural communities.

Broadband Access and Small Businesses

The competitiveness and viability of small firms are increasingly dependent on access to fast, reliable connections to the Internet. Although broadband availability and adoption have improved dramatically over the last few years for small and rural businesses, the statistics mentioned above still highlight the disadvantages of access to rural and tribal areas. It is essential to the nation's

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[2] Communications Workers of America, Letter to Congress, Jun. 6, 2017.
[3] Nick Corasaniti, In New York, Bringing Broadband to Everyone by 2018, New York Times, Mar. 20, 2017.
[4] RURAL AMERICA AT A GLANCE, 2018 EDITION, USDA ERS - FOOD ENVIRONMENT ATLAS, https://www.ers.usda.gov/publications/pub-details/?pubid=90555 (last visited Mar 8, 2019).
[5] CENSUS SHOWS NONMETROPOLITAN AMERICA IS WHITER, GETTING OLDER, AND LOSING POPULATION, BROOKINGS.EDU, https://www.brookings.edu/blog/the-avenue/2017/06/27/census-shows-nonmetropolitan-america-is-whiter-getting-older-and-losing-population/ (last visited Mar 8, 2019).
[6] *Id.*
[7] RURAL AMERICA ENDS FIRST-EVER PERIOD OF POPULATION LOSS, USDA ERS - FOOD ENVIRONMENT ATLAS, https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=58278 (last visited Mar 8, 2019).
[8] HISPANICS HELP SOME RURAL COUNTIES AVOID POPULATION LOSS, USDA ERS - FOOD ENVIRONMENT ATLAS, https://www.ers.usda.gov/data-products/chart-gallery/gallery/chart-detail/?chartId=79658 (last visited Mar 8, 2019).

continued progress for all sectors of the population to have adequate access to telecommunications and broadband services. 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 stronger and more businesses. As providers, infrastructure investments ensure more competition between broadband providers, resulting in lower prices and healthier companies.

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. Small businesses operate differently than large businesses. But it is this difference that provides small businesses a strategic advantage over larger, well-funded competitors when it comes to adapting to new innovations. In many situations, small firms are able to train employees faster and less developed software and infrastructures are necessary.

As wireless, or mobile, technology makes it easier for small businesses to operate and quickly achieving major strides through the development of applications, or apps, and other technological innovations, there is a need to consider Spectrum access. Spectrum is the radio frequencies that are designated for specific uses, such as personal communications services and public safety. Spectrum capacity is necessary to deliver high-speed, high-quality communications and support the needs of industries that use spectrum-dependent technologies. Besides spectrum, competition and cost are a central feature to broadband infrastructure to increase the accessibility of broadband. And as producers and consumers of innovative products and services, the availability of broadband will increase productivity. The higher productivity and efficiency levels result in more profits and sales, which lead to additional job creation.

Constraints to Broadband Buildout

Making it economical to deliver rural broadband access is crucial because the cost of expanding the infrastructure is the primary reason these areas are unattractive to investors and competitors. Among the inherent challenges for rural broadband buildout, especially small carriers, are low population densities, rugged terrain, and a smaller customer base over which to spread deployment costs. In recent years, the U.S. has poured money into programs aimed at making broadband buildout and access more affordable for lower-income Americans and those living in sparsely populated areas.

Rural Utilities Service Funding

Because private providers are unlikely to earn enough revenue to cover the costs of deploying and operating broadband networks in many unserved rural areas, it is unlikely that private investment alone will bring service to these areas. In an attempt to fill this gap, federal programs have been established to incentivize and subsidize broadband infrastructure investment in unserved and underserved rural areas.

A loan and grant program for rural broadband deployment originates with the Rural Utilities Service (RUS) of the Department of Agriculture. There are several loan and grant programs available 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. The Rural eConnectivity Pilot Program (ReConnect Program) has

the intended goal of expanding service to rural areas without sufficient broadband access, which is defined as 10 megabits per second downstream and 1 megabit per second upstream.

Adequate funding is necessary to ensure competition and actual infrastructure exist in rural and underserved areas. Small broadband providers cannot effectively expand and invest in their existing infrastructure without funding support. In order to improve and expand a network, the carriers must maintain those networks and much of the costs are paid for with RUS loans and grants and through the USF funds.

Universal Services Fund and Connect America Fund

While the RUS broadband loan and grant programs are exclusively dedicated to deploying broadband infrastructure, the major vehicle for funding telecommunications development in rural and low-income areas is the Universal Service Fund (USF). Though the USF does not explicitly fund broadband infrastructure, its subsidies are used to upgrade existing telephone networks so that they are capable of delivering high-speed internet services. The Telecommunication Act of 1996 established that all providers of telecom services should 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.

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:

- Connect America Fund provides assistance for high-cost (mostly rural) areas;
- Lifeline provides assistance for low-income households;
- Rural healthcare program provides broadband for telemedicine services for rural health care facilities; and
- E-rate program for schools and libraries.

The USF is funded by contributions from wireline telephone companies, wireless telephone companies, and interconnected Voice over Internet Protocol (VoIP) providers. These providers contribute a percentage of their interstate and international long-distance revenues. They recover USF contributions directly from their customers in a USF fee on the consumers' monthly service bills. Since 1996, the fund has doubled in size, costing over $8 billion annually. Over $4.5 billion annually goes directly to a small selection of mostly rural carriers through the high-cost fund. While carriers' USF costs grow, the revenue base for telecommunications and VoIP is shrinking, as consumers cut their landlines and shift to other forms of communication.

Recognizing this problem, the FCC in October 2011 released an order detailing how the USF will be reformed in stages over a multi-year period. In 2013, the FCC created the Connect America Fund (CAF) as part of a realignment of the regulator's USF and Intercarrier Compensation systems to accelerate broadband buildout to the approximately 23 million users in the United States. Carriers had the option to move from the high-cost USF program to the Alternative Connect America Cost Model (A-CAM), which is part of the Connect America program.

The FCC is currently in CAF-Phase II, wherein they used auctions to assist in funding of wireline infrastructure. Phase II is a follow-up in states where carriers did not take the incentives because the costs were too great. The eligible areas for this funding include regions in states where larger

telephone providers declined an earlier offer, and areas that are not served by a current carrier or unsubsidized service provider with certain broadband speeds. It is estimated that by the end of 2020, CAF Phase II rural broadband deployment will serve over 3.6 million homes and small businesses in 24 states.[9] In total, government support for rural broadband buildout could reach up to $20 billion over the next decade.[10]

Broadband Map Update

The FCC released their new National Broadband Map on February 22, 2018 and uses 2016 information. The map was launched by the Obama administration in 2011 but was last updated in June 2014 due to an absence of funding. The map is aimed at helping consumers find providers in their area and show where the nation's fiber cable is deployed and where it is lacking. The map is critical to show regions where funding for high-speed broadband is necessary. The FCC requires Internet Service Providers (ISPs) to identify the areas in which they make available residential or business service, including the maximum speeds offered. Yet, the GAO concluded in the fall of 2018 that broadband availability data does not accurately reflect broadband access.[11] Without accuracy, the carriers in regions that need funding are in danger of losing investment to help them deploy broadband.

Conclusion

The Internet has transformed from a project of the U.S. military to the delivery mechanism of many government services, news, employment, entertainment, even telemedicine and distance education. Life without connectivity is increasingly and unnecessarily isolated. If America was founded on the belief of opportunity for all, then Members of Congress must ensure that policy proposals conducive to addressing gaps in broadband service availability are implemented. Expanding digital infrastructure should be incorporated into any broader of any infrastructure plan so that the U.S. can achieve its goal of providing broadband access for all U.S. residents.

[9] Universal Service Administrative Co., Connect America Fund (CAF) Phase II.
[10] Larry Downes, Listen, technology holdouts: Enough is Enough, The Washington Post, Feb. 24, 2017.
[11] GAO Report, Tribal Broadband: FCC's Data Overstate Access, and Tribes Face Barriers Accessing Funding, https://www.gao.gov/assets/700/694864.pdf