

Congress of the United States
U.S. House of Representatives
Committee on Small Business
2361 Rayburn House Office Building
Washington, DC 20515-0315

Memorandum

To: Members, Subcommittee on Agriculture, Energy, and Trade
From: Committee Staff
Date: June 19, 2017
Re: Subcommittee Hearing: “Improving Broadband Deployment: Solutions for Rural America”

I. Introduction

On Thursday, June 22 at 10:00 am, the Subcommittee on Agriculture, Energy, and Trade will hold a subcommittee hearing titled, “Improving Broadband Deployment: Solutions for Rural America.” The hearing will focus on broadband deployment efforts by small telecommunications companies that traditionally supply the bulk of such services to the most rural parts of America. Witnesses will also discuss the potential for policy changes at the Federal Communications Commission (FCC) and what the FCC has done to either help or hinder broadband deployment. Additionally, witnesses will suggest potential policy changes that Congress could make to improve broadband access in the nation’s underserved areas.

II. Broadband Deployment

Broadband has the potential to transform the way small businesses operate and compete in the 21st century. The Internet provides a number of tools to help small firms increase their productivity, efficiency, and overall success. Social media, teleworking, cloud data storage, and global video conferencing are a few examples of opportunities provided by the Internet. As early as 2010, there were estimates that 97 percent of small businesses use some form of broadband applications to strengthen their operations.¹ Internet usage in some way, shape, or form has become a way of life for nearly every single small business in the United States.

One of the most important tools the Internet offers to businesses is the ability to access the global electronic marketplace. From 2005 to 2015, electronic commerce in the United States, also known as online sales, grew from \$291.08 billion to \$341.8 billion, with an average increase of 15.3 percent from 2012 to 2015.² Moreover, broadband generated an

¹ FCC, NATIONAL BROADBAND PLAN 16 (2010) [hereinafter “Broadband Plan”], *available at* <http://download.broadband.gov/plan/national-broadband-plan.pdf>.

² <https://www.digitalcommerce360.com/2016/02/17/us-e-commerce-grows-146-2015/>.

entrepreneurship boom in new Internet technologies, such as websites and applications; the expectation is that these enterprises will grow into medium and large businesses.

The development and adoption of Internet technology continues to grow at a rapid pace. To keep up with the demand, private sector carriers have been aggressively building out their broadband infrastructure to provide more coverage at faster speeds. Due to the cost, this build-out has tended to occur in high-density urban and suburban areas where costs for constructing broadband networks can be spread over a larger customer base.

An important issue is how to economically provide coverage to rural, including unserved, areas. The federal government has a number of programs in place that provide incentives for the development of broadband in these areas. However, it is important to enact regulatory policies that do not diminish the incentive for private sector investment, because this will ultimately harm small businesses and the economy that rely on investments for the growth needed to create jobs.

III. Urban and Rural Deployment Disparities

Section 706 of the Telecommunications Act of 1996³ requires the Federal Communications Commission (FCC)⁴ to regularly initiate an inquiry concerning the availability of broadband to all Americans. In its *2016 Broadband Progress Report*,⁵ the FCC determined that broadband is not being deployed to all Americans in a timely and reasonable fashion. This determination rests in part on how broadband is defined. In 2015, the FCC, citing changing broadband usage patterns and multiple devices using broadband within single households, raised its minimum broadband benchmark speed from 4 megabits per second (download)/1 Mbps (upload) to 25 Mbps/3 Mbps.

While the nation continues to make progress in broadband deployment, many Americans still lack access to advanced, high-quality voice, data, graphics and video offerings, especially in rural areas. As of December 31, 2014, approximately 34 million (10 percent) of Americans lack access to fixed 25 Mbps/3 Mbps advanced telecommunications

³ Pub. L. No. 104-104, § 706, 49 Stat. 1526.

⁴ The FCC is an independent federal agency established by the Communications Act of 1934 (hereinafter “the Communications Act” or the “Act”). The mission of the FCC is to ensure that the American people have available—at reasonable cost and without discrimination—rapid, efficient, nation- and world-wide communication services, whether by radio, television, wire, satellite, or cable. It achieves this mission by regulating interstate and international communication whether by wire or wireless service. The FCC is directed by five commissioners appointed by the President and confirmed by the Senate for five-year terms. The President designates one of the commissioners to serve as chairperson. Only three commissioners may be members of the same political party. None of them can have a financial interest in any Commission-related business. The commissioners are: Ajit Pai, Chair; Mignon Clyburn., and Michael O’Rielly. There are currently two vacancies on the Commission.

⁵ *In Re: Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, 2016 Broadband Progress Report, GN Docket No 15-191, (FCC 16-6) (2016).

capability and there is a significant disparity between rural and urban areas, with more than 39 percent of Americans living in rural areas lacking access to 25 Mbps/3 Mbps advanced telecommunications capability, as compared to 4 percent of Americans living in urban areas. As the chart below shows, progress is being made, but the significant disparity between urban and rural parts of the United States still exists.

**Percentage of Americans Without Fixed Advanced Telecommunications Capability
(2012-2014)**

	2014	2013	2012
United States	10%	17%	20%
Rural Areas	39%	53%	55%
Urban Areas	4%	8%	11%
Tribal Lands	41%	63%	68%
Rural Areas	68%	85%	89%
Urban Areas	14%	41%	47%
U.S. Territories	66%	63%	100%
Rural Areas	98%	79%	100%
Urban Areas	54%	57%	100%

Source: FCC 2016 *Broadband Progress Report*, p. 39.

IV. Federal Role in Expanding Broadband

A. The FCC Role

Federal involvement in the management and deployment of communication services dates back to the Great Depression. In the 1930s, many rural areas lacked the infrastructure to support communications services, or even electrical service, due to the high cost. The gap in coverage of communication services was one factor that led to the 1934 Communications Act, which established the concept of providing ‘universal service’ to all Americans.⁶ The goal of universal service, described in greater detail later in the memorandum, is to provide telecommunication services to all individuals in the United States at a just, reasonable, and non-discriminatory rate.⁷ The FCC, through its regulatory powers, ensures that regulatory policies ensure access to this universal service.

B. The Rural Utilities Service (RUS) Role

In addition, the Rural Electrification Act of 1936 established the Rural Electric Administration (REA) to provide loans for the electrification of America.⁸ This program was then expanded in 1949 to allow telecommunication cooperatives and increase the build-out of

⁶ 47 U.S.C. § 151.

⁷ *Id.* at §§ 151, 201(b).

⁸ Pub. L. No. 74-605, § 2, 49 Stat. 1363, 1363 (1936), codified as amended at 7 U.S.C. § 902.

telephone services to needed areas.⁹ The functions of the REA were transferred to a new organization in the Department of Agriculture, the Rural Utility Service (RUS).¹⁰

The RUS is the primary agency for financing rural broadband development. RUS regularly administers two funding programs to expand broadband: the Rural Broadband Access Loan and Loan Guarantee program; and the Community Connect Broadband grants.¹¹

C. The National Telecommunications and Information Administration (NTIA) Role

The NTIA is the primary agency responsible for developing telecommunications and information policy for the Executive Branch.¹² NTIA intercedes in FCC regulatory proceedings to represent the interests of the federal government. The agency also manages the spectrum owned by the federal government for use of wireless services by federal agencies. Finally, NTIA administered parts of the American Recovery and Reinvestment Act¹³ that provided federal dollars for deploying broadband services.

V. The Universal Service Fund (USF)

As already mentioned, the concept of providing universal service of communication to all of the people of the United States was first alluded to in the 1934 Communications Act.¹⁴ Specifically, the FCC was and still is tasked with making “wire and radio so as to make available, so far as possible, to all the people of the United States...a rapid, efficient, nationwide, and world-wide wire and radio communications services with adequate facilities at reasonable charges.”¹⁵ In response, the FCC developed the USF as a mechanism to subsidize telephone service to high-cost, almost always rural areas and low-income households.

The funding mechanism for the USF was not explicitly delineated when the FCC developed the concept. Initially, higher rates for long-distance calls by subscribers in low-cost areas were used to fund the USF.¹⁶ As Congress considered the overhaul to the 1934 Communications Act in 1995 and 1996, a decision was made to statutorily recognize the concept of universal service and require the FCC to make the subsidies for universal service explicit and transparent.

⁹ Act of Oct. 28, 1949, Ch. 776, Pub. L. 81-423, 63 Stat. 948, codified at 7 U.S.C. § 921.

¹⁰ Federal Crop Insurance Reform and Department of Agriculture Reorganization Act of 1994, Pub. L. 103-354, § 232, 108 Stat. 3178, 3219 (1994), codified at 7 U.S.C. § 6942.

¹¹ <http://www.rurdev.usda.gov/AboutRD.html>.

¹² <http://www.ntia.doc.gov/about>.

¹³ Pub. L. No. 111-5, 123 Stat. 128.

¹⁴ 47 U.S.C. § 151.

¹⁵ *Id.*

¹⁶ Long-distance telephone service customers could not see what portion of their bill was being used to provide for the USF monies.

The FCC's decision made sense in 1997. Internet usage was in an embryonic stage at the time. To demonstrate the growth of the Internet, consider that one of the largest companies in the United States, Google, did not even exist four years after the passage of the 1996 Telecommunications Act. If the Internet was only just entering growth at the dawn of the 21st century, no one could have imagined delivery on wireless networks. It took less than a half-decade for Internet usage to go from something for tech geeks to widespread mainstream adaptation.

Today, the USF, generally, is the money collected¹⁷ from all telecommunications companies and then allocated to carriers with the mission of providing universal telecommunication service to American citizens, including small businesses, at an affordable rate. However, broadband was not included in the FCC's original definition of telecommunication services for which USF support could be used from the 1996 Telecommunications Act.

In 2007, the FCC Federal-State Joint Board¹⁸ recommended that broadband and Internet services should receive support from the USF to meet the nation's communication goals.¹⁹ The FCC adopted that recommendation and started making changes to its policies in order to enable firms to increase deployment of broadband under USF and the Telecommunications Act of 1996.

The USF is divided into four parts: the Connect America Fund (CAF or High-Cost Fund); the E-Rate (Schools and Libraries Program); Rural Health Care Program; and, the Lifeline Program.²⁰ While each provides specific and necessary assistance to deploy broadband to various segments of the population, the largest and most complex portion of the USF is the CAF, which will be the focus of much of the discussion at the hearing.

The CAF subsidizes the cost of operating and extending infrastructure (both fixed and mobile) to serve consumers and small businesses in rural, high cost areas. Recipients of funding must be designated an "eligible telecommunications carrier" by the relevant state or, in cases where the state does not have jurisdiction over a particular type of provider, the FCC. Over the past decade, the USF (particularly the largest and most complex portion, the CAF)

¹⁷ Currently, all telecommunications companies that provide service between states, including long distance companies, local telephone companies, wireless telephone companies, paging companies, and payphone providers, are required to contribute to the federal Universal Service Fund.

¹⁸ The Federal-State Joint Board on Universal Service is comprised of the FCC Commissioners, State Utility Commissioners, and a consumer advocate representative. The Joint Board is tasked with providing recommendations to implement the universal service provisions of the 1996 Telecommunications Act, including the separation of property and expenses between interstate and intrastate operations. The Joint Board was created pursuant to the authority of § 410 of the 1934 Communications Act. U.S.C. 47 §410.

¹⁹ In the Matter of High-Cost Universal Service Support; Federal-State Joint Board on Universal Service, WC Docket No. 05-337, 22 FCC Rcd 20,477 (2007).

²⁰ While each provides specific and necessary assistance to deploy broadband to various segments of the population, the largest (and, therefore, the one that has the most policy debate surrounding it and the focus for this memorandum and hearing) is the Connect America Fund.

has undergone numerous revisions²¹ attempting to equitably divide the USF resources to maximize broadband deployment, increase broadband performance standards, and targeting the most underserved areas.

While the changes are designed to prevent unwise capital spending by rural carriers, the CAF limitations might prevent such carriers from deploying broadband services as their costs might exceed CAF contributions. In addition, numerous other changes, such as how compensation is calculated between carriers finishing other carriers calls, may impose additional roadblocks to broadband deployment in high-cost areas, be they rural areas or inner cities.²²

VI. Conclusion

Modern communications technology has provided endless opportunities to American small businesses and to rural America. Continued oversight of the FCC by Congress is essential to ensure that small firms and those enterprises located in rural America have equal access to technology and interconnectivity as their larger and more urban brethren. This hearing provides Members the opportunity to hear from rural broadband providers to see what obstacles they face in deploying services to rural areas.

²¹ See, for example, 2011, 2016, https://apps.fcc.gov/edocs_public/attachmatch/FCC-11-161A1.pdf and https://apps.fcc.gov/edocs_public/attachmatch/FCC-16-33A1.pdf.

²² Inner cities, where adoption of broadband is low, can result in high costs for the carriers as the number of subscribers to cover the cost may be as limited as in a very rural area.