

Asa Hutchinson Governor

January 7, 2019

Senator Bill Sample Representative Jim Dotson Arkansas Legislative Council State Capitol, Room 315 Little Rock, Arkansas 72203

Dear Senator Sample and Representative Dotson,

Pursuant to <u>A.C.A. § 25-4-125</u>, I am pleased to submit the Arkansas State Broadband Manager's Report for the July 1-December 31, 2018, reporting period.

A central focus of this Arkansas State Broadband Manager's Report is to continually evaluate Arkansas's progress in expanding broadband and to track the public and private initiatives that will make broadband increasingly available, adequate, and affordable to all Arkansans regardless of geographical location.

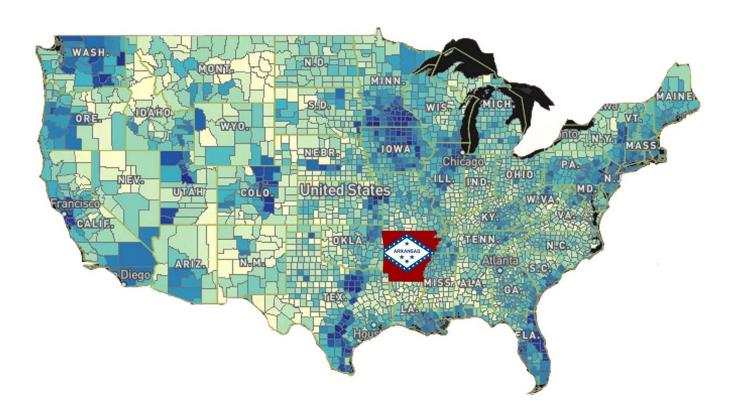
This report illustrates the areas of the state where access to broadband exists and areas where expansion is needed. It identifies barriers to broadband expansion on behalf of the provider community and outlines their suggestions for what the state can do from a regulatory or policy perspective to remove barriers and encourage broadband expansion. This report also underscores the numerous initiatives that reflect the personal commitment and financial investment being made in both the public and private sectors to help move the broadband needle for Arkansas.

Please contact me personally by email at <u>yessica.jones@arkansas.gov</u> or by phone at 501-682-5148 with any questions or additional information about this report.

Sincerely,

Yessica Jones State Broadband Manager State Chief Technology Officer Director, Arkansas Department of Information Systems

ARKANSAS STATE BROADBAND MANAGER'S REPORT



PERIOD ENDING DECEMBER 31, 2018

Cover Art: This is the National Broadband Map displaying broadband technologies offered to end users (DSL, cable, wireless, fiber, etc.). This data is created and maintained by the National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC), and in partnership with the 50 states, five territories and the District of Columbia.

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Executive Summary

Internet connectivity and access to high speed broadband is now viewed by many as a necessity in parallel to other utilities such as water and electricity. It is also considered to be a critical tool for cultivating economic development; enhancing educational opportunities; increasing the effectiveness and responsiveness of public safety; expanding health care to rural Arkansans; empowering citizens to interact with and connect with government, among others.

This semi-annual Arkansas State Broadband Manager's Report reflects the initiatives taking place within the federal and state public sector and by the private sector to expand and bring the power of broadband to Arkansans in all geographic regions of the state. Initiatives range from the adoption of new policies, changes to existing policies, the build out of broadband infrastructure, and broadband mapping of the state to illustrate where adequate high speed broadband exists and areas where expansion is needed.

As the report provides details in the state's areas of focus (availability, affordability and adequacy) for broadband expansion, the following key findings illustrate the progress.

Key Findings

- 77.6 percent of Arkansans have access to FCC (Federal Communications Commission) defined broadband speeds
- 80-100 percent of Arkansans will have access to at least 10Mbps of fixed broadband upon completion of projects funded by CAFII (Connect America Fund Phase II Auction).
- The average broadband speed in Arkansas is 26.7Mbps
- Arkansas rural electric service cooperatives are joining forces to share costs and data to bring gigabit (Gbps) broadband to thousands of Arkansans
- The federal omnibus spending bill allocated \$600 million for rural broadband expansion
- The Connect America Fund (CAF) awarded \$1.5 billion to build out broadband in unserved rural areas.

The broadband needle has moved from Arkansas which improved its ranking from the 48th most connected state in the nation to the 45th, according to <u>BroadbandNow</u>. Much work remains to ensure that every Arkansan has access to high-speed internet in the coming years.

Background

Arkansas Code Annotated § 25-4-125 designates the director of the Arkansas Department of Information Systems to serve as the state broadband manager to coordinate efforts to expand and improve broadband capacity and availability. The state broadband manager serves as the single point of contact for state agencies, boards, commissions, and constitutional officers, including without limitation the governor, Department of Education, Department of Higher Education, the Arkansas State Department of Transportation, private businesses, enterprises, broadband providers, nonprofits, governmental entities and other organizations. The legislation requires the state broadband manager to submit a report on a semiannual basis to the Arkansas Governor's Office, Arkansas Legislative Council, and Joint Committee on Advanced Communications and Information Technology of the activities and operations of the state broadband manager for the preceding six months. The report is to be submitted on or before January 1 and July 1 of each year.

What are the Areas of Focus for Arkansas?

Availability

Broadband is available if it is accessible to accomplish all necessary goals regardless of the nature of those goals (business or educational, economic or legislatively mandated).

Affordability

Broadband is affordable if it is both affordable to the consumer to purchase and for the provider to offer.

Adequacy

Broadband is considered adequate if it provides enough bandwidth to meet the personal, business, educational, and economic development needs of each constituency and is capable of expansion to meet future needs.

What is Broadband?

Definitions:

- <u>FCC's Definition</u> (Federal Communications Commission) categorizes an internet service as "broadband" if it transmits at a speed of at least 25 megabits/second (Mbps) for downloading and at least 3Mbps for uploading *Broadband speed requirements vary for personal use versus use by institutions*
- <u>Advanced Telecommunications Capability</u>- The FCC has sometimes used the term "broadband" to refer to "advanced telecommunications capability." The definition of advanced telecommunications capability found within this report is without regard to any transmission media or technology, as high-speed, switched, broadband telecommunications capability that enables users to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." The term broadband is not equated to advanced

telecommunications capability, but the availability of various broadband services that contribute to advanced telecommunications capability is taken into consideration.

Source: FCC 2018 Broadband Deployment Report

What are the Types of Broadband?

- Digital Subscriber Line (DSL)
- Cable Modem

• Fiber

• Wireless (Wi-Fi, Mobile, and Fixed Wireless)

• Satellite

Fixed Broadband

Fixed (wired) broadband services generally require a physical transmission path to connect a user to the internet. Examples include coaxial cable, copper wire, or fiber-optic cable.

Why is Broadband Important?

Broadband is fast becoming of primary importance for

- Citizens
 Education
- Public safety
 Health care
- Economic development
- _

Government

Business

• Environmental management

All of which are significant enablers to economic growth, delivery of services and quality of life.

•

How Important Is Broadband Speed?

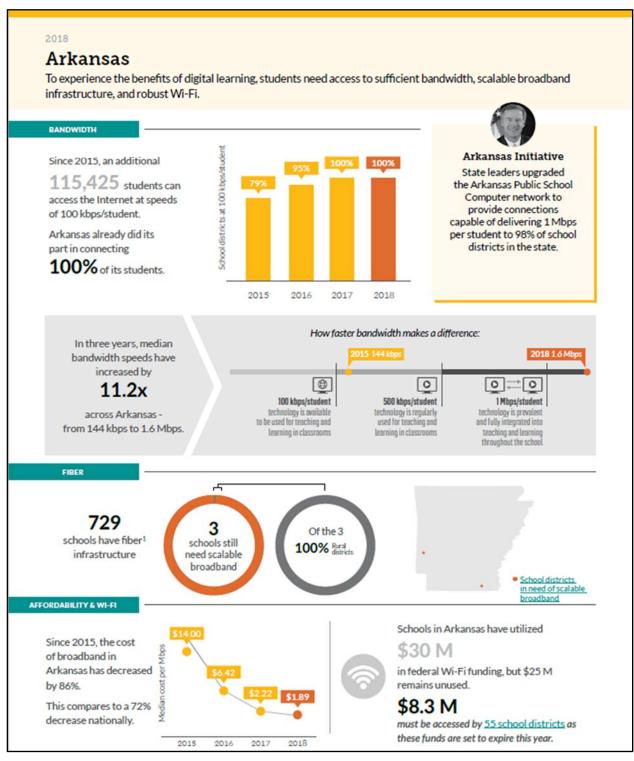
The FCC definition of broadband speed changes as technologies continue to evolve. The FCC indicated that advances in technology, market offerings by broadband providers and consumer demand prompted updating broadband benchmark speeds to 25Mbps for downloads and 3Mbps for uploads. The FCC's Broadband Speed Guide below compares typical online activities with the minimum download speed needed to adequately perform each application.

Source: FCC Broadband Speed Guide

Online A	Activity
General Usage	Minimum Download Speed (Mbps)
General Browsing and Email	1
Streaming Online Radio	Less than 0.5
VoIP Calls	Less than 0.5
Student	5-25
File Downloading	10
Social Media	1
Watching Video	Minimum Download Speed (Mbps)
Streaming Standard Definition Video	3-4
Streaming High Definition (HD) Video	5-8
Streaming Ultra HE 4K Video	25
Video Conferencing	Minimum Download Speed (Mbps)
 Standard Personal Video Call (e.g. Skype) 	1
HD Personal Video Call (e.g. Skype)	1.5
HD Video Teleconferencing	6
Gaming	Minimum Download Speed (Mbps)
Game Console Connecting to the Internet	3
Online Multiplayer	4

What is the State of Broadband in Arkansas?

Arkansas has gone from being at the bottom of the nation in K-12 internet connectivity to the top as a national role model. This snapshot of K-12 connectivity by <u>EducationSuperHighway</u> shows the great strides that have been since 2015. An important statistic not reflected in the snapshot is that, at 200 kbps/user, Arkansas doubled the FCC's minimum recommended connectivity of 100 kbps/per user.



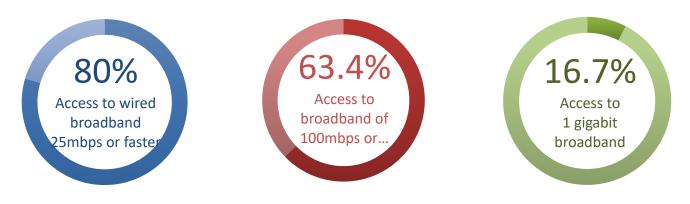
Broadband Snapshot**

The following statistics provide a snapshot of broadband penetration in Arkansas as researched by BroadbandNow. This private company located in Austin, Texas, collects data for its statistics from the FCC and U.S. Census Bureau and compares it to data acquired from broadband providers and other sources.

Arkansas broadband stats from BroadbandNow:

- 129 internet providers in Arkansas
- 603,000 Arkansans without access to a wired connection capable of providing FCC defined broadband
- 661,000 Arkansans with access to only one wired provider
- 226,000 Arkansans without access to any wired provider

The chart below depicts the percentage of Arkansans with access to the FCC defined wired broadband speed of at least 25Mbps/3Mbps or faster, 100Mbps or faster and 1 Gbps broadband.



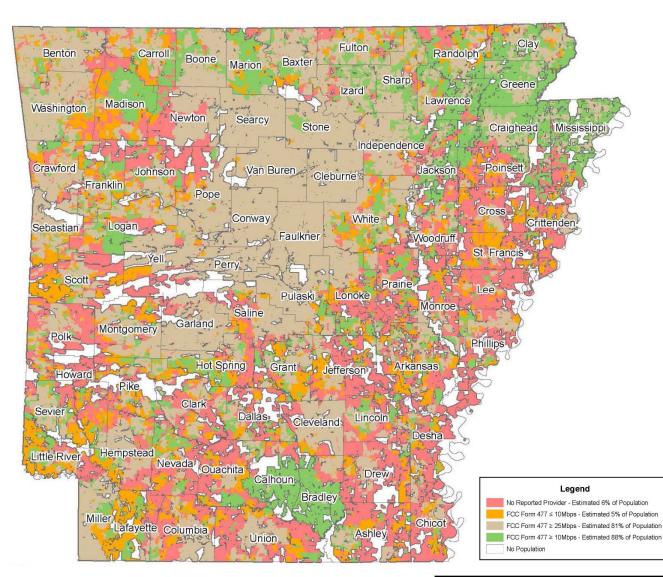
The average statewide speed is 26.7 Mbps

Source: https://broadbandnow.com/Arkansas

**Arkansas has shown improvement in broadband penetration from the BroadbandNow statistics cited in the June 30, 2018, Broadband Manager's Report.

For that reporting period, there were 614,000 Arkansans without access to a wired connection capable of providing FCC defined broadband; 230,000 Arkansans without access to any wired prover; 79.6 percent with access to wired broadband 25Mbps or faster and 62.8 percent with access to 100Mbps or faster.

The most notable improvements from the previous report are the increase in the percentage of Arkansans with access to 1 gigabit broadband from 7.6 percent to 16.7 percent and the increase in the average statewide speed which improved from 22.1 Mbps to 26.7 Mbps.



Statewide Broadband Speed Coverage Map

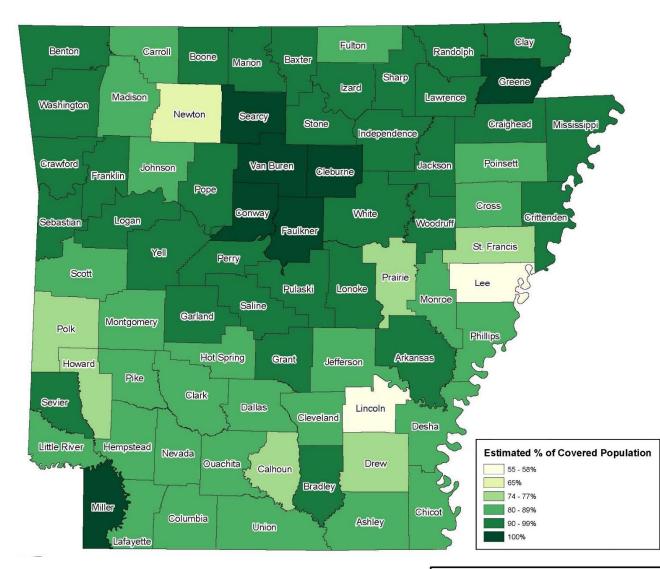
Source: Arkansas Geographic Information Systems

Appendix I: Americans with Access to Fixed 25Mbps/3Mbps Service by State** **From FCC Broadband Report Source: FCC Form 477 - https://www.fcc.gov/general/ broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisionsmade through 11/06/17)

Source: 2010 Census Blocks - https://gis.arkansas.gov /product/blocks-2010-census/

Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block, resulting in potentially less specific data.





County Populations with Access to Fixed Broadband of any Speed

Source: Arkansas Geographic Information Systems

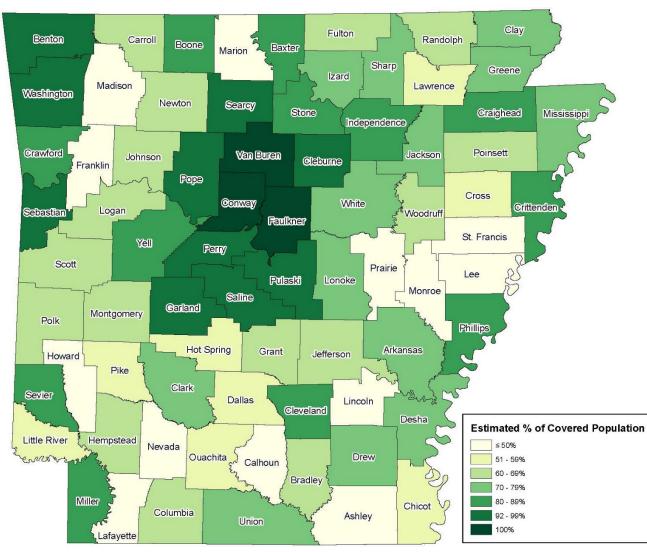
Appendix II: Percentage of County Population with Access to Broadband at any Speed

Source: FCC Form 477 - https://www.fcc.gov/general/ broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisionsmade through 11/06/17)

Source: 2010 Census Blocks - https://gis.arkansas.gov /product/blocks-2010-census/

Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block, resulting in potentially less specific data.





County Populations with Access to 25Mbps of Fixed Broadband

Source: Arkansas Geographic Information Systems

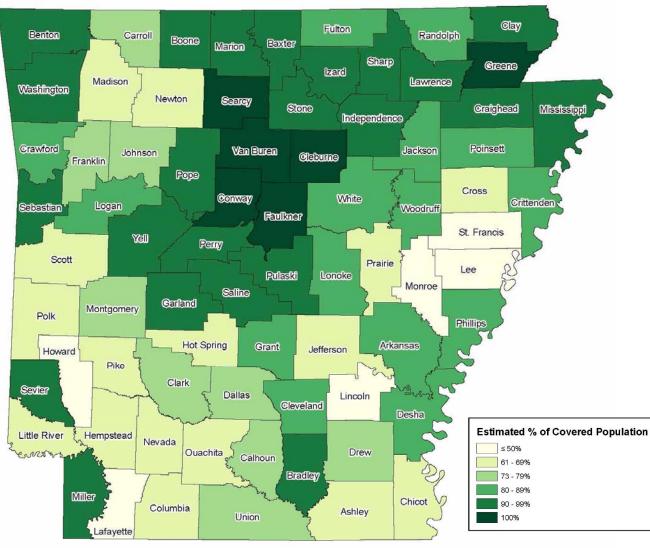
<u>Appendix III:</u> County Populations with Access to 25Mbps of Fixed Broadband

Source: FCC Form 477 - https://www.fcc.gov/general/ broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisionsmade through 11/06/17)

Source: 2010 Census Blocks - https://gis.arkansas.gov /product/blocks-2010-census/

Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block, resulting in potentially less specific data.





County Populations with Access to 10Mbps of Fixed Broadband*

Source: Arkansas Geographic Information Systems

*Excludes satellite. Although the FCC redefined broadband as 25Mbps/3Mbps, minimum speed requirements for phase II Connect America Fund eligibility were 10Mbps/1Mbps. The rationale for the difference is that it allowed carriers to build networks in rural areas capable of upgrading to faster speeds found in urban areas. The FCC further determined that additional flexibility made it easier for carriers to expand service to more challenging outlying households it otherwise would have excluded from expansion.

<u>Appendix IV:</u> Percentage of County Population with Access to 10Mbps Broadband

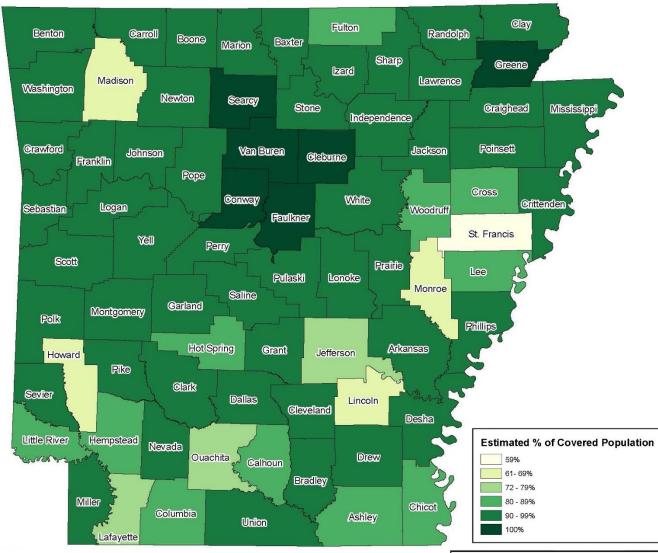
Source: FCC Form 477 - https://www.fcc.gov/general/ broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisionsmade through 11/06/17)

Source: 2010 Census Blocks - https://gis.arkansas.gov /product/blocks-2010-census/

Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block, resulting in potentially less specific data.



County Populations with Projected Access to 10Mbps of Fixed Broadband upon **Completion of CAF II Funded Projects***



Source: Arkansas Geographic Information Systems

*In the Broadband Manager's Activities and Operations Report for period ending December 31, 2015, it was documented that AT&T and CenturyLink received a share of \$54 million from phase II CAF to deploy broadband services in rural and remote areas of the state with little or no high speed internet access. This map depicts access to 10Mbps of fixed broadband when projects by AT&T and CenturyLink are completed. The combined total of Arkansans estimated to benefit from these projects was 97,500.

Appendix V: Percentage of County Population with Access to 10Mbps Broadband Upon Completion of CAFII

Source: FCC Form 477 - https://www.fcc.gov/general/ broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisionsmade through 11/06/17)

Source: 2010 Census Blocks - https://gis.arkansas.gov /product/blocks-2010-census/

Source: Connect America Fund - https://transition. fcc.gov/wcb/CAM43_Supported Locations zip

Source: Connect America Fund - https://transition fcc.gov/wcb/ACAM231_CB_funded_Yes_list_081516.zip

Note: A provider that reports deployment of a particular technology and bandwidth in a census block may not necessarily offer that service everywhere in the block, resulting in potentially less specific data

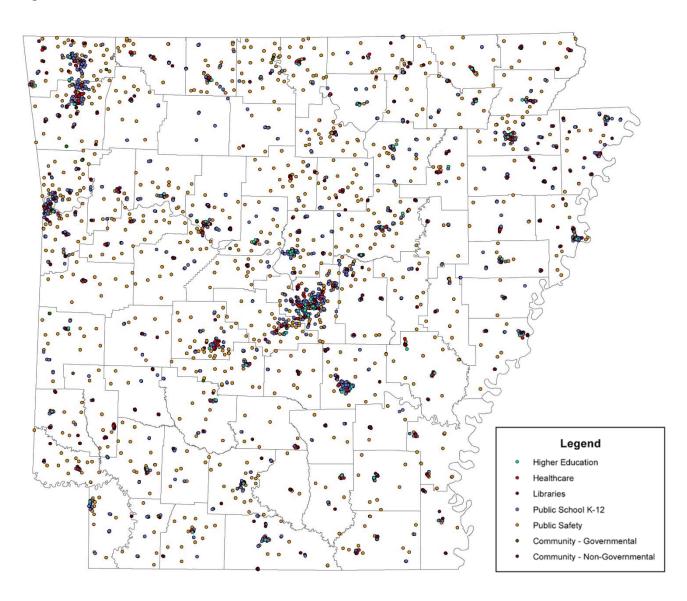
As a result, population statistics shown herein will overstate the actual number of residents with access to broadband speeds. However, this approach is an effort to convey the nature of broadband access in Arkansas using the available data



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State Community Anchor Institutions

The dots on this map are state government locations including schools, libraries and other governmental entities where broadband exists.



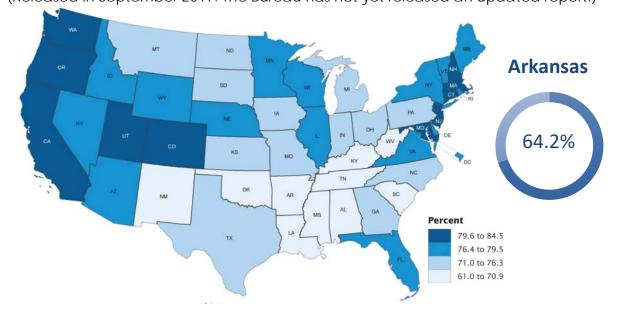


Broadband Adoption by Arkansans

Although broadband adoption is on the rise, Arkansans still lag behind a vast majority of the population when turning to the internet for aspects of daily life, according to American Community Survey Reports on Computer and Internet Use in the United States by the U.S. Census Bureau.

The percentage of all U.S. households with either a desktop or laptop computer reached 78 percent, followed by 75 percent with a handheld computer such as a smartphone or other mobile device, and 77 percent had a broadband subscription. Overall, 62 percent of U.S. households had a combination of three (desktop, laptop, handheld device, smartphone, broadband internet subscription).

In Arkansas, 64.2 percent of the population reported having one or more of the following broadband internet subscriptions, DSL, cable, fiber optic, mobile broadband, satellite, or fixed wireless.



Percentage of Households with Broadband Internet Subscription by State 2015 (Released in September 2017. The Bureau has not yet released an updated report.)

Source: <u>https://www.census.gov/content/dam/Census/library/publications/2017/acs/acs-37.pdf</u>

Appendix VI: Percentage of U.S. households with a broadband internet subscription: 2015

In its 2018 Broadband Deployment Report, the FCC put the state's overall adoption rate for fixed broadband much lower depending upon speed.

The FCC placed Arkansas's adoption rate of 10Mbps/1Mbps fixed broadband at 44.9 percent, 25Mbps/3Mbps at 29.3 percent, and 50Mbps/5Mbps at 26.9 percent. Only Idaho and New Mexico had lower adoption rates of the 10Mbps/1Mbps speed than Arkansas at 42.3 percent and 40.1 percent respectively. Mississippi shared Arkansas's 44.9 percent adoption rate at this speed.

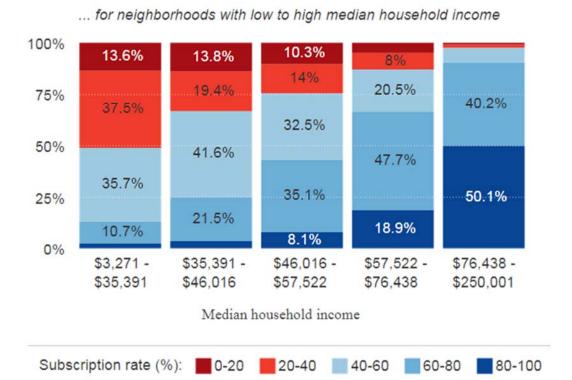
Idaho and New Mexico exceeded Arkansas in the adoption rate of 25Mbps/ 3Mbps. The adoption rate in Idaho at this speed was 35.5 percent. In New Mexico, it was 40.6 percent. The adoption rate for this speed in Mississippi was slightly less than Arkansas's at 28.8 percent. Arkansas and Mississippi were the lowest ranking states in overall adoption of 25Mbps/3Mbps broadband speed.

	10Mbps/1Mbps	25Mbps/3Mbps	50Mbps/5Mbps
United States	66.2%	53.5%	44.2%
Arkansas	44.9	29.3	26.9
Idaho	42.3	35.5	6.7
New Mexico	40.1	40.6	29.2
Mississippi	44.9	28.8	18.9

Overall Adoption Rate for Fixed Broadband

Source: FCC 2018 Broadband Deployment Report

Income and education are also two key factors most closely correlated with broadband adoption. High subscription areas tend to be high income and have a smaller percentage of population with less than a high school diploma.



Share of population by neighborhood broadband subscription rate ...

Source: <u>http://www.pewinternet.org/2015/12/21/3-barriers-to-broadband-adoption-cost-</u> <u>is-now-a-substantial-challenge-for-many-non-users/</u>

Source: https://docs.fcc.gov/public/attachments/DOC-351633A1.pdf

Source: <u>https://www.brookings.edu/research/signs-of-digital-distress-mapping-broadband-availability/</u>

Broadband Affordability in Arkansas

Cost continues to be the number one obstacle for broadband adoption at home. A previous FCC broadband study found that 71 percent of those without broadband cited affordability as the major factor. A study of barriers to broadband adoption by Pew Research Center pointed to multiple factors for why residents do not subscribe to high-speed service at home.

- Monthly cost of a broadband subscription is too much
- Cost of a computer
- Functionality of mobile devices rivals the monthly cost of in-home broadband makes traditional broadband a lesser priority
- Lack of access to suitable broadband service in their area

In its findings, 65 percent of non-adopters said that a lack of home broadband is a major disadvantage of some sort.

As recently as June 15, the FCC's rural healthcare fund was expected to realize a \$171 million increase in its annual budget. This fund could offer low income Americans with options when it comes to their ability to subscribe to broadband as this fund covers some of the costs of broadband connectivity in rural areas where delivery of the service is much higher than in urban areas.

The FCC's Lifeline program also helps to make communications services, including broadband more affordable for low-income individuals by providing a discount on monthly telephone or broadband service from participating providers.

Date	Mobile Voice	Mobile Broadband	Fixed Broadband	Voice Support Amount (Per Month)	Broadband Support Amount (Per Month)	
December	750 Minutes	Speed: 3G	Speed: 15/2***	\$9.25	\$9.25	
1, 2017	Minutes	Usage Allowance: 1 GB	Usage Allowance: 250GB			
December	1000	Speed: 3G or Bureau Determination	Speed: Mechanism	\$9.25	50 DF	
1, 2018	Minutes	Determination	Usage Allowance: CAF Standard or	\$9.20	\$9.25	
		Usage Allowance: 2 GB	Bureau Determination			

To qualify to participate in the Lifeline program, individuals must either have an income that is at or below 135 percent of the federal Poverty Guidelines or participate in certain assistance programs such as Medicaid, Supplemental Nutrition Assistance Program, Supplemental Security Income, or Federal Public Housing Assistance.

The budget for the Lifeline program is \$2.279 billion effective January 1, 2018, according to the FCC.

Source: Lifeline Program for Low-Income Consumers

Source: FCC Consumer Guide: Lifeline Support for Affordable Communications

State and Federal Initiatives to Expand Broadband

Arkansas State Network Broadband Upgrade

The Arkansas Department of Finance and Administration Office of State Procurement (OPM) awarded two bids to provide broadband Ethernet services to state agencies, boards, and commissions. With the exception of pricing received for the K-12 broadband upgrade in the spring of 2015, the bid prices were generally much better than the Department of Information Systems (DIS) has previously seen. In some cases, the cost of bandwidth will be one-half of the current price or better. There are cases where agencies can receive 10 times the bandwidth for the same price they have been paying.

This initiative, led by DIS, will enable some agencies with offices in other areas of the state to migrate from T-1 technology to broadband. In one example, an agency will be able to increase its bandwidth by eight times and save enough money in one year to fund the vendor fiber build out for the two sites alone.

There are agencies in the state, with locations in every county that will have the ability to significantly increase the bandwidth for all of its county offices and end up on vendor fiber to each site with no increase in cost. These agencies and agencies with the greatest need for bandwidth are being given top priority for transition to broadband as they will realize the greatest savings due to the volume of bandwidth needed. DIS is also working with the agencies, boards, and commissions to merge needed bandwidth with available new vendor options.

This initiative will enable DIS to completely withdraw from the old state backbone network and share a single backbone with the upgraded high speed broadband K-12 network.

FCC Speeds Access to Utility Poles to Promote Broadband, 5G Deployment

The FCC is reforming the federal framework governing pole attachments to address a primary barrier to broadband deployment commonly cited by providers. In August 2018, the FCC said it would adopt a process called "one-touch, make-ready," in which the new attacher performs all necessary work to ready the pole for a new attachment instead of spreading the work across multiple parties. The FCC believes this action will speed up the process and reduce the costs of attaching new network facilities to utility poles. Appendix VII: Full Press Release

FCC's Connect America Fund Auction to Expand Broadband to Over 700,000 Rural Homes and Businesses

The FCC's primary funding mechanism for rural broadband expansion, the Connect America Fund, allocated \$1.488 billion to expand rural broadband service in 45 states including Arkansas. Over 50 percent of the homes and business benefitting from the action will have available download speeds of at least 100 Mbps, and almost 20 percent will have gigabit service available. Providers must build out to 40 percent of the assigned homes and businesses in a state within three years of becoming authorized to receive support. Buildout must increase by 20 percent in each subsequent year, until complete buildout is reach at the end of the sixth year.

State	Total Assigned	Winning	Locations
	Support	Bidders	Assigned
AR	\$51,988,094	5	16,048

TOTAL 10-YEAR SUPPORT FOR ARKANSAS

Source: FCC Press Release Appendix VIII: Full Press Release

USDA Announces \$600 Million Loan and Grant Program for Rural Broadband

Telecommunications providers, rural electric cooperatives, utilities, internet service providers and municipalities are eligible to apply for funding from the United States Department of Agriculture's (USDA) new Reconnect Program to build broadband infrastructure in areas the currently lack sufficient broadband service.

Eligible projects must serve communities with fewer than 20,000 people either where no broadband exists or where service is slower than 10 Mbps/1Mbps. Projects are required to create speeds of 25 Mbps/1 Mbps with priority given to projects that will deliver faster connections to rural homes, businesses and farms.

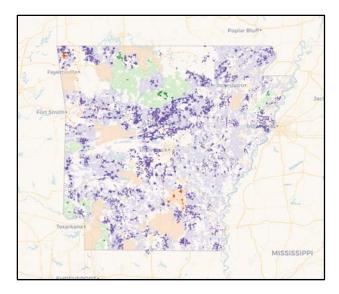
Source: USDA Press Release, December 2018

Appendix IX: ReConnect Program Fact Sheet

Wireline Competition Bureau Announces Availability of Connect America Fund Map

An <u>interactive map</u> showing locations where Connect America Fund (CAF) recipients have reported broadband deployments. The CAF map contains broadband deployment data in from several support sources, illustrates areas eligible for funding, and depicts completed deployments by address, latitude and longitude, maximum speed offered and deployment date.

Source: FCC Public Notice, October 2018



FCC Releases Fact Sheet from Draft Broadband Deployment Report

The FCC circulated a fact sheet of key findings in the 2018 Broadband Deployment Report. The FCC did not modify the speed of 25Mbps/3Mbps that currently defines broadband. The information also said that broadband deployment remains the FCC's top priority.

Source: FCC Fact Sheet on Draft 2018 Broadband Deployment Report <u>Appendix X:</u> Full Fact Sheet

Private Initiatives to Expand Broadband

Arkansas to Benefit from USDA Investment

About 25,000 homes and businesses in five rural Arkansas counties will benefit from a loan from the USDA to Arkansas Rural Internet Service (ARIS) to deploy a fiber to the home (FTTH) broadband system. The \$19.9 million loan from the USDA will add to the \$5 million ARIS said it has already invested in high-speed internet services within the company's service territory in Dallas, Calhoun, Bradley, Nevada and Ouachita Counties, according to the company's website.

Source: <u>http://southeastagnet.com/2018/11/13/usda-high-speed-broadband-rural-areas/</u> Source: <u>http://www.arisark.us/resources/companys-20m-usda-loan-to-aid-</u> broadband-in-5-counties/

Arkansas Valley Electric Announces \$27M Investment in Fiber Optic Network

Arkansas Valley Electric Cooperative Corporation (AVECC), based in Ozark, Ark., said a \$27 million investment in its electric grid will ultimately provide high-speed internet capable of delivering one gigabit upload and download speeds to customers in the Ft. Smith area and parts of Crawford and Sebastian counties. The six phase project first connects fiber to the coop's electric grid and substations followed by high-speed internet services to customers. The company allowed one-year for the completion of each phase, but said internet connections to Crawford and Sebastian counties could be available next year. **Source:** Talk Business and Politics, August 2018

Arkansas Providers Awarded CAFII Funds for Rural Broadband Expansion

Broadband service is on the horizon for thousands of Arkansans in rural counties. The FCC announced in August that 103 bidders won a share of \$1.49 billion through its Connect America Fund (CAF) II auction. The funds will be allocated over 10 years to provide fixed broadband and voice services to over 700,000 locations in 45 states. Providers are required to build out 40 percent of the assigned homes and businesses in a state within three years of becoming authorized to receive support. Buildout must increase by 20 percent in each subsequent year, with complete buildout reached by the end of the sixth year.

Source: <u>FCC Press Release</u>, <u>August 2018</u> <u>Appendix XI</u>: Arkansas Providers & Counties Awarded CAF II Funds

Broadband Development Group (HyperLeap)

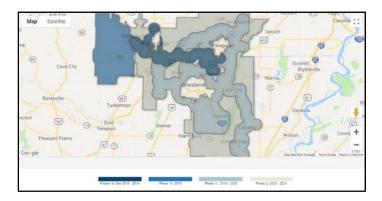
The Broadband Development Group (BDG) was formed to offer high-speed internet access to multi-tenant residential and business subscribers. HyperLeap uses a local area network (LAN) architecture that provides the ability to deliver up to 1 Gbps of connectivity speed without a modem at a cost that is typically 40 percent cheaper than traditional providers. A company executive characterized HyperLeap's service as "Google Fiber without Google or the fiber." In addition to speed and price, other features HyperLeap subscribers find appealing are no hidden fees, no contract, no data caps, no throttling, no limits on using multiple devices at once, and no equipment to rent or buy. **Source:** https://www.bdg.link/

Source: Arkansas Times, July 26, 2018

"Empower" Broadband to Invest Over \$100M to Deliver 1 Gbps Connections

As soon as December 2018, Empower, delivered by Craighead Electric, will offer select areas of northeast Arkansas high-speed internet and other telecommunications services. Empower is constructing a new broadband network consisting of approximately 5,000 miles of fiber optic cable with the ability to deliver 1 Gbps connections to more than 30,000 members and non-members of Craighead Electric. About 50 contractors are working on the five to seven year project to bring high-speed broadband, either wirelessly or with full fiber-to-the-home (FTTH), to the more than 44 percent of company members in an eight-county region who are currently unserved or underserved in terms of broadband. Phase 1A, scheduled for completion by the end of 2018, would bring 1 Gbps connections to customers from Walnut Ridge to Brookland.

Empower Broadband offers an <u>interactive map</u> where residents may check the construction schedule for the availability of high-speed broadband by address.



Source: Empower Broadband Source: KAIT, August 2018

Comcast Expands Gigabit Network in Central Arkansas

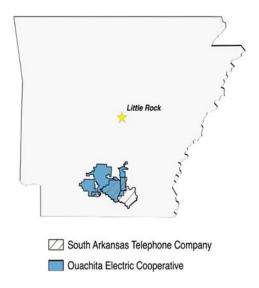
Comcast completed a \$2 million expansion of its gigabit fiber network to Maumelle. The company said the project spanned more than 20 square miles. The advanced network offers businesses, schools, hospitals and government organizations access to 10 Gbps internet speeds, and up to 100 Gbps in certain instances. Comcast announced plans to deliver up to 1 Gbps internet service to residential customers in Maumelle later this year. **Source:** <u>Talk Business, July 2018</u>

North Arkansas Electric Cooperative Expands Fiber-to-the Home Network

The board of directors of the North Arkansas Electric Cooperative (NAEC) approved an expansion of a FTTH network throughout the cooperative's service territory. The announcement was made in July 2018. The FTTH network is scheduled to be built in phases over the next five years and is expected to cost \$140 million. A pilot program providing speeds up to one gigabit was previously introduced to three areas in Baxter and Fulton counties. The expansion will bring FTTH connectivity and one gigabit speeds to the co-op's entire service area which serves more than 36,000 members. Source: Munineworks.org, July 2018

Partnership to Bring One Gigabit Service to Ouachita Electric Service Territory

A partnership between South Arkansas Telephone Company and Ouachita Electric intends to bring one gigabit internet and other telecommunications services to all homes and businesses within Ouachita Electric's service territory. The partner companies indicated they would share the cost of infrastructure development and revenue generated by the 9,500 homes and business that makeup the customer base. The multi-year project was first announced in 2016. The project involves the installation of over 1,800 miles of fiber.



Rice Belt Telephone Company

Rice Belt Telephone Company is current installing a fiber network in rural communities within its service area such as Weiner, Waldenburg and Fisher. The company is also deploying fiber to more heavily populated areas that will enable high speeds to be accessible to its rural customers.

Rice Belt Telephone Company offers an <u>interactive map</u> where residents may check the availability of high-speed broadband by address.



Source: Broadband provider survey

Ritter Initiative Looks to Learn More About Customer Broadband Needs

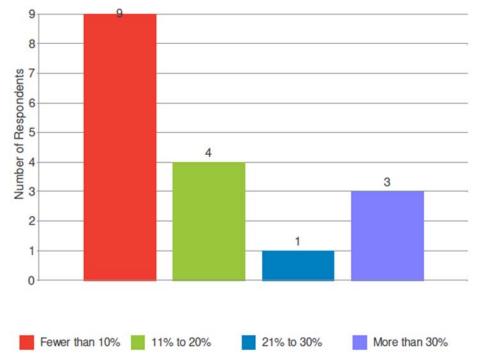
Ritter Communications and OpenVault, a leading provider of industry analytics and technology solutions for broadband operators, announced an expanded relationship to learn more specifically about the usage and bandwidth needs of Ritter's customers. Ritter said leveraging OpenVault's analytics expertise will enable it develop and deploy optimal bandwidth service packages geared toward average and power users. **Source:** CISION PR Web, November 2018

Windstream Announces Broadband Growth and Expansion

Windstream said its customer base in the third quarter of 2018 grew by 8,400 subscribers pointing to an increase in adoption among Arkansans, especially with the rollout of faster broadband speeds within the company's rural footprint. Forty percent of Windstream broadband customers will have access to speeds of 25 Mbps or better by the end of the year, the company reported. Windstream also announced plans to double its 100 Mbps capability by the end of 1Q19 by leveraging fixed wireless across some rural parts of its network. Another option under consideration by Windstream is a trial of millimeter wave spectrum for fixed wireless, with speeds approaching gigabit capability. Windstream said it will reach 40 percent penetration with 25 Mbps or better speeds by the end of the year, and approximately 1.5 million locations will have access to 50 Mbps or better.

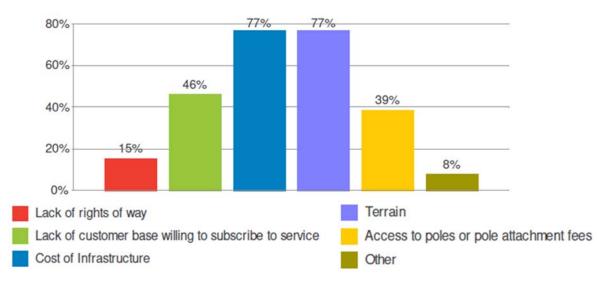
Provider Survey for Broadband Expansion (June 2018)

Each year, a survey is sent to Arkansas telecommunications providers to help provide a representation of Arkansas's current overall broadband standing as the state pursues the availability of broadband connectivity to all Arkansans regardless of geographical location. Survey responses were received from 21 providers. Appendix:

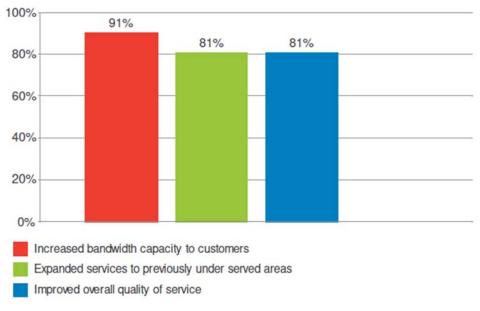


Q. What percentage of your customers are unserved?

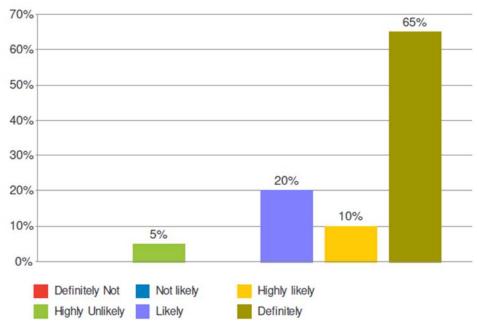
Q. What are the reasons for unserved areas?



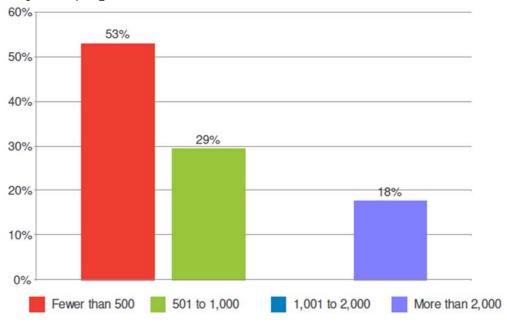
Q. Within the past year, what broadband improvement efforts have you undertaken within your service area?



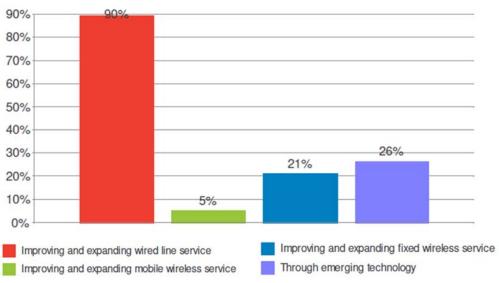
Q. How likely are you to expand broadband coverage in your service area in the next six months?



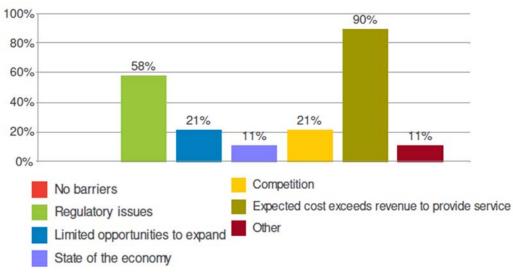
Q. If you are planning on expanding in the next six months, approximately how many new customers are you hoping to serve?



Q. Are you focusing more on improving and expanding wired broadband or utilizing wireless?



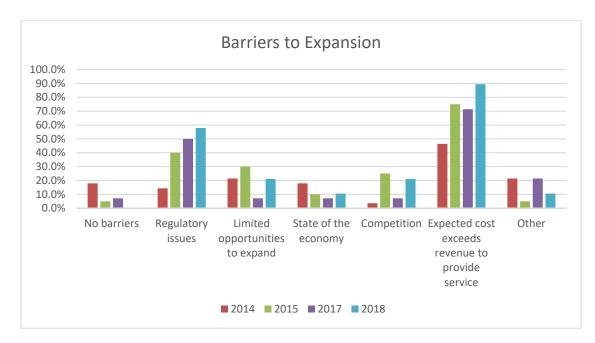
Q. Do you have barriers to expansion?

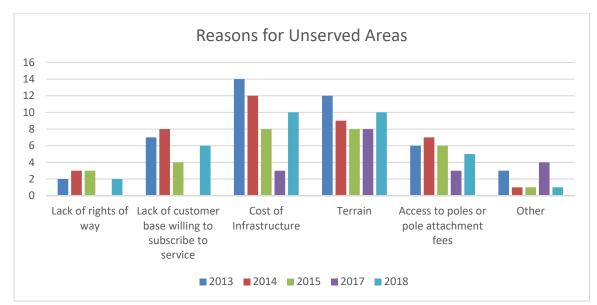


If other, please describe.

- Rental rates for space on utility poles owned by many electric cooperatives are unjustifiably high. The terms and conditions for permission to contact those poles can be overly burdensome. This works to make broadband expansion projects unfeasible.
- Cost of equipment

Since the inception of the Broadband Manager's Report and the provider survey, trending data indicates that cost/revenue feasibility and regulatory issues are consistently cited by providers as the top barriers to broadband expansion and the primary reasons for an inability to provide service in certain areas.





Appendix XIV: Provider Survey Trending Data Charts

Q. What can the state do from a policy or regulatory perspective to incentivize broadband expansion in rural areas? *

*The comments below are inserted unedited directly from the survey response.

What can the state do from a policy or regulatory perspec...

Continue to support the Arkansas High Cost Fund. Without predictable and stable support, companies can not advance broadband services into remote rural areas. there is no business case a company can make to serve remote rural areas without a support mechanism.

Provide more funding to assist in the initial costs to provide additional services and speeds

Start using the USF for what it was intended for, be careful when you pass legislation as many times it has unintended consequences.

Insure the Arkansas High Cost fund will continue to help support the advancement of Broadband into remote area where there is no current business case to without federal and state support funds

Allow point to point wireless bridging from telcos

Need more Wireless spectrum. We currently work in the unlicensed band of 2.4 and 5 GHZ. We also have a limited 3.65 license. These do not provide enough spectrum to serve large quantities of customers or the spectrum is not NLOS.

Maintain a viable financially stable Arkansas High Cost Fund.

Money

Sustainable support to help repay long-term debt.

The federal government recognized the access to utility poles was necessary for the expansion of broadband services and established rules and regulations (including a fair pricing formula) for the poles owned by public utility companies, but the State's electric co-ops are exempt from that. The Arkansas P.S.C. should require the electric co-ops to give fair access to competitive broadband providers to the unused space on their poles, as well.

It's going to take a remake of the Universal Service Funding. I feel the money is going to companies that aren't using the money to expand the broadband in an effective manner.

Tax incentives through property tax relief and sales tax exemptions would help to free up capital and to reduce overall project costs. State grant funds for broadband would be welcome, as long as they are separate from any support available for voice service in rural areas and discourage overbuilding. Additionally, a reduced emphasis on the narrow definition of broadband as 25/3 and recognition that 10/1, as required by the FCC for CAF2 purposes, qualifies as broadband.

What can the state do from a policy or regulatory perspec...

As stated in previous responses, pro-growth policies should be adopted and maintained that would foster the deployment and expansion of broadband services. First, the state should ensure all broadband providers, including wireless companies, have streamlined access to rights-of-way, poles, ducts and conduits. These would include streamlining the municipal permitting processes that often delay the placement of wireline and wireless facilities (including wireless "small cells") in rights of way and in buildings. Perhaps of most importance, the State should pass legislation that streamlines the placement of wireless small cells in the right of way and more specifically regulates pole attachments, including: (1) the adoption of the Federal Communications Commission's "cable" rate to calculate compensation due to pole owners; (2) expanding pole attachment laws so they apply to all pole owners, including those owned by municipalities that operate electric power systems; and (3) directing the Public Service Commission to adopt rules that encourage a less burdensome negotiations process. Second, the state should continue the successful policy adopted years ago to discourage and restrict the introduction or expansion of government owned networks. Not only does the introduction of government and municipal owned networks serve to discourage private investment, it exposes citizens to unfortunate and potentially significant financial liabilities when the adventures fail. The known failures of government ventures into these areas around the country are compelling examples of why Arkansas cities should not be allowed to build broadband networks. Finally, Arkansas should adopt pro-broadband tax policies. With respect to sales tax, there are over 100 exemptions currently in the law; however, most of these apply to a 19th century economy that focused on agriculture and livestock. To our knowledge, there are no sales tax exemptions in place to encourage broadband deployment. Therefore, targeted sales tax exemptions, perhaps for equipment purchased by providers, would encourage broadband deployment. With respect to property taxes, broadband providers are "centrally assessed" entities and are treated as if they were monopolies with guaranteed customer bases and rates. As a result, broadband providers pay a disproportionately higher share of property taxes when compared to the general business community. Additional property tax reform would also encourage additional broadband investment in our state.

Maintain the ARHCF and possibly develop a grant program for new facilities.

In our area, broadband service is provided over the underling telephone network. State funds such as the Arkansas High Cost Fund help support the installation and maintenance of that telephone network. We wouldn't be alto to offer, install maintain or upgrade broadband in our area without these telephone support funds. From a policy perspective, keeping these telephone funds in place will help us deliver, expand and maintain broadband service to rural areas. Low priced pole attachment fees and rights of way would also assist with broadband deployment.

Regarding NOT being able to provide service -- we CAN serve anywhere in our territory. The current take rate/penetration rate is 26.7 percent in markets that are enabled to provide service. Business case, cost and access to poles and fees all factor into future plans. To ease the burden – tax incentives provided to companies on infrastructure after the service is deployed. This would guarantee the state facilities in place and incentivize companies to build.

Appendix I

Americans with Access to Fixed 25Mbps/3Mbps Service by State**

	Pop.	Fixed 25 I 3 Mbj	ps	Mobile I Mbp 1 Mb	os/ ops	Pop.	Mobile L Mbps/3	Mbps
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
United States	322.518	297.766	92.3%	321.347	99.6%	300.036	261.898	87.3%
Rural Areas	62.926	43.604	69.3%	61.802	98.2%	47.025	32.962	70.1%
Urban Areas	259.592	254.162	97.9%	259.545	100.0%	253.011	228.936	90.5%
Alabama	4.857	4.036	83.1%	4.826	99.4%	4.189	3.966	94.7%
Rural Areas	2.002	1.277	63.8%	1.970	98.4%	1.475	1.323	89.7%
Urban Areas	2.856	2.759	96.6%	2.856	100.0%	2.713	2.644	97.4%
Alaska	0.738	0.582	78.8%	0.626	84.8%	0.695	0.429	61.8%
Rural Areas	0.259	0.120	46.4%	0.169	65.2%	0.236	0.072	30.5%
Urban Areas	0.479	0.461	96.4%	0.457	95.4%	0.459	0.357	77.8%
Arizona	6.915	5.917	85.6%	6.850	99.1%	6.810	5.299	77.8%
Rural Areas	0.798	0.275	34.4%	0.740	92.7%	0.749	0.276	36.8%
Urban Areas	6.116	5.642	92.2%	6.110	99.9%	6.061	5.023	82.9%
Arkansas	2.982	2.316	77.6%	2.971	99.6%	2.242	1.682	75.0%
Rural Areas	1.318	0.758	57.6%	1.306	99.2%	0.790	0.570	72.2%
Urban Areas	1.665	1.557	93.5%	1.665	100.0%	1.452	1.112	76.5%
California	39.171	37.114	94.7%	39.126	99.9%	39.071	36.530	93.5%
Rural Areas	2.255	1.042	46.2%	2.210	98.0%	2.190	1.735	79.2%
Urban Areas	36.916	36.072	97.7%	36.916	100.0%	36.880	34.795	94.3%

	Pop.	Fixed 25 M 3 Mbj		Mobile l Mbj 1 Mb	os/	Pop.	Mobile L Mbps/3	
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
Colorado	5.520	5.241	94.9%	5.503	99.7%	5.074	4.294	84.6%
Rural Areas	0.834	0.601	72.1%	0.816	97.9%	0.557	0.425	76.3%
Urban Areas	4.686	4.640	99.0%	4.686	100.0%	4.517	3.869	85.7%
Connecticut	3.571	3.538	99.1%	3.570	100.0%	3.571	3.570	100.0%
Rural Areas	0.431	0.427	99.2%	0.430	99.9%	0.431	0.430	99.9%
Urban Areas	3.140	3.111	99.1%	3.140	100.0%	3.140	3.140	100.0%
Delaware	0.950	0.925	97.4%	0.950	100.0%	0.950	0.731	76.9%
Rural Areas	0.166	0.153	92.2%	0.166	100.0%	0.166	0.075	45.0%
Urban Areas	0.784	0.772	98.4%	0.784	100.0%	0.784	0.656	83.7%
District of Columbia ²	0.678	0.665	98.1%	0.678	100.0%	0.678	0.678	100.0%
Florida	20.564	19.698	95.8%	20.557	100.0%	20.245	19.829	97.9%
Rural Areas	1.955	1.469	75.2%	1.947	99.6%	1.722	1.476	85.7%
Urban Areas	18.609	18.229	98.0%	18.609	100.0%	18.522	18.354	99.1%
Georgia	10.284	9.341	90.8%	10.266	99.8%	8.861	8.451	95.4%
Rural Areas	2.521	1.812	71.9%	2.503	99.3%	1.512	1.270	84.0%
Urban Areas	7.763	7.529	97.0%	7.763	100.0%	7.348	7.181	97.7%
Hawaii	1.425	1.358	95.3%	1.423	99.8%	1.425	0.434	30.4%
Rural Areas	0.130	0.082	63.1%	0.128	98.3%	0.130	0.117	90.1%
Urban Areas	1.295	1.276	98.5%	1.295	100.0%	1.295	0.317	24.5%
Idaho	1.680		88.7%	1.657	98.6%		0.910	66.8%
Rural Areas	0.512	0.346	67.6%	0.489	95.6%	0.314	0.160	50.8%
Urban Areas	1.168	1.144	98.0%	1.168	100.0%	1.048	0.751	71.6%
Illinois	12.791	12.114	94.7%	12.785	100.0%	12.005	11.779	98.1%
Rural Areas	1.473	0.935	63.5%	1.468	99.6%	0.973	0.877	90.1%
Urban Areas	11.317	11.179	98.8%	11.317	100.0%	11.032	10.902	98.8%

	Pop. Evaluated	Fixed 25 Mbj		Mobile l Mbp 1 Mb	os/	Pop.	Mobile L Mbps/3	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
Indiana	6.626	5.759	86.9%	6.624	100.0%	5.921	5.383	90.9%
Rural Areas	1.829	1.070	58.5%	1.828	99.9%	1.328	0.988	74.4%
Urban Areas	4.797	4.689	97.8%	4.797	100.0%	4.594	4.396	95.7%
Iowa	3.130	2.832	90.5%	3.125	99.8%	2.105	2.101	99.8%
Rural Areas	1.130	0.875	77.4%	1.126	99.6%	0.437	0.433	99.0%
Urban Areas	2.000	1.957	97.9%	2.000	100.0%	1.668	1.668	100.0%
Kansas	2.901	2.589	89.2%	2.901	100.0%	2.277	2.195	96.4%
Rural Areas	0.751	0.499	66.5%	0.750	99.9%	0.338	0.306	90.6%
Urban Areas	2.151	2.090	97.2%	2.151	100.0%	1.939	1.889	97.4%
Kentucky	4.428	3.799	85.8%	4.301	97.1%	3.443	2.941	85.4%
Rural Areas	1.823	1.255	68.8%	1.697	93.1%	1.004	0.678	67.6%
Urban Areas	2.605	2.544	97.7%	2.604	100.0%	2.439	2.263	92.8%
Louisiana	4.670	3.948	84.5%	4.669	100.0%	4.231	2.862	67.6%
Rural Areas	1.252	0.713	56.9%	1.251	99.9%	0.938	0.730	77.9%
Urban Areas	3.418	3.235	94.7%	3.418	100.0%	3.293	2.132	64.7%
Maine	1.332	1.198	89.9%	1.298	97.4%	1.231	0.369	30.0%
Rural Areas	0.826	0.708	85.7%	0.792	95.9%	0.732	0.244	33.4%
Urban Areas	0.506	0.490	96.9%	0.506	100.0%	0.499	0.125	25.0%
Maryland	6.001	5.850	97.5%	6.001	100.0%	5.861	4.895	83.5%
Rural Areas	0.790	0.740	93.7%	0.790	100.0%	0.695	0.356	51.2%
Urban Areas	5.211	5.110	98.1%	5.211	100.0%	5.166	4.539	87.9%
Massachusetts	6.794	6.634	97.7%	6.793	100.0%	6.783	6.712	99.0%
Rural Areas	0.544	0.492	90.3%	0.544	99.9%	0.542	0.503	92.8%
Urban Areas	6.249	6.143	98.3%	6.249	100.0%	6.241	6.209	99.5%
Michigan	9.934	8.965	90.2%	9.926	99.9%	9.450	8.953	94.7%
Rural Areas	2.547	1.692	66.4%	2.538	99.7%	2.213	1.846	83.4%
Urban Areas	7.387	7.273	98.5%	7.387	100.0%	7.238	7.107	98.2%

	Fixed 25 Mbp Pop. 3 Mbps			Mobile LTE 5 Mbps/ 1 Mbps		Pop.	Mobile LTE 10 Mbps/3 Mbps	
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
Minnesota	5.513		92.6%	5.506	99.9%	4.843		98.5%
Rural Areas	1.466	1.099	74.9%	1.459	99.5%	1.001	0.951	95.0%
Urban Areas	4.046	4.003	98.9%	4.046	100.0%	3.842	3.817	99.3%
Mississippi	2.986	2.157	72.3%	2.977	99.7%	1.979	1.359	68.7%
Rural Areas	1.515	0.756	49.9%	1.507	99.4%	0.752	0.449	59.8%
Urban Areas	1.470	1.401	95.3%	1.470	100.0%	1.227	0.910	74.1%
Missouri	6.086	5.080	83.5%	6.065	99.7%	5.097	4.297	84.3%
Rural Areas	1.814	0.897	49.5%	1.793	98.9%		0.708	65.4%
Urban Areas	4.272	4.183	97.9%	4.272	100.0%	4.013	3.589	89.4%
Montana	1.041	0.803	77.1%	0.981	94.2%	0.722	0.306	42.4%
Rural Areas	0.474	0.280	59.2%	0.419	88.5%	0.271	0.066	24.4%
Urban Areas	0.568	0.523	92.1%	0.561	98.9%	0.450	0.240	53.2%
Nebraska	1.903	1.692	88.9%	1.901	99.9%	1.284	1.246	97.0%
Rural Areas	0.509	0.333	65.5%	0.507	99.5%	0.140	0.126	90.5%
Urban Areas	1.394	1.359	97.5%	1.394	100.0%	1.144	1.120	97.8%
Nevada	2.937	2.820	96.0%	2.926	99.6%	2.864	0.602	21.0%
Rural Areas	0.197	0.104	53.0%	0.185	94.1%	0.160	0.082	51.1%
Urban Areas	2.741	2.716	99.1%	2.741	100.0%	2.704	0.520	19.2%
New Hampshire	1.334	1.258	94.2%	1.329	99.6%	1.262	0.711	56.3%
Rural Areas	0.530	0.465	87.9%	0.524	98.9%	0.483	0.163	33.7%
Urban Areas	0.805	0.792	98.4%	0.805	100.0%	0.779	0.548	70.3%
New Jersey	8.933	8.842	99.0%	8.933	100.0%	8.933	8.778	98.3%
Rural Areas	0.466	0.454	97.3%	1000000	100.0%	0.466	0.432	92.6%
Urban Areas	8.466	8.388	99.1%	8.466	100.0%	8.466	8.347	98.6%
New Mexico	2.075	1.672	80.6%	2.058			0.817	44.3%
Rural Areas	0.487	0.208	42.8%	0.470	96.4%	0.364	0.059	16.2%
Urban Areas	1.588	1.464	92.2%	1.588	100.0%	1.480	0.757	51.2%

	Pop.	Fixed 25 M 3 Mbj		Mobile l Mbp 1 Mb	os/	Pop.	Mobile L Mbps/3	
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
New York	19.721	19.328	98.0%	19.692	99.9%	19.263	17.349	90.1%
Rural Areas	2.351	1.992	84.7%	2.322	98.8%	2.020	1.025	50.7%
Urban Areas	17.370	17.336	99.8%	17.370	100.0%	17.242	16.325	94.7%
North Carolina	10.123	9.481	93.7%	10.045	99.2%	9.440	7.540	79.9%
Rural Areas	3.375	2.768	82.0%	3.302	97.8%	2.807	1.722	61.3%
Urban Areas	6.749	6.714	99.5%	6.743	99.9%	6.633	5.818	87.7%
North Dakota	0.756	0.689	91.2%	0.753	99.6%	0.458	0.455	99.3%
Rural Areas	0.334	0.281	84.1%	0.331	99.1%	0.119	0.116	97.4%
Urban Areas	0.422	0.408	96.7%	0.422	100.0%	0.339	0.339	100.0%
Ohio	11.610	10.724	92.4%	11.600	99.9%	11.101	10.061	90.6%
Rural Areas	2.570	1.827	71.1%	2.561	99.6%	2.199	1.715	78.0%
Urban Areas	9.039	8.896	98.4%	9.039	100.0%	8.902	8.346	93.8%
Oklahoma	3.915	3.014	77.0%	3.906	99.8%	3.518	2.727	77.5%
Rural Areas	1.341	0.617	46.0%	1.331	99.3%	1.046	0.649	62.0%
Urban Areas	2.574	2.397	93.1%	2.574	100.0%	2.471	2.078	84.1%
Oregon	4.086	3.717	91.0%	4.052	99.2%	3.907	3.744	95.8%
Rural Areas	0.813	0.521	64.0%	0.780	95.8%	0.717	0.641	89.3%
Urban Areas	3.273	3.196	97.7%	3.273	100.0%	3.190	3.103	97.3%
Pennsylvania	12.774	12.124	94.9%	12.753	99.8%	12.178	11.626	95.5%
Rural Areas	2.724	2.252	82.7%	2.703	99.2%	2.307	2.010	87.1%
Urban Areas	10.050	9.871	98.2%	10.050	100.0%	9.871	9.616	97.4%
Rhode Island	1.056	1.036	98.1%	1.056	100.0%	1.056	1.056	100.0%
Rural Areas	0.097	0.095	97.6%	0.097	100.0%	0.097	0.097	100.0%
Urban Areas	0.958	0.941	98.2%	0.958	100.0%	0.958	0.958	100.0%
South Carolina	4.950	4.373	88.3%	4.948	100.0%	4.451	3.669	82.4%
Rural Areas	1.676	1.165	69.5%	1.674	99.9%	1.302	1.107	85.0%

	Pop.	Fixed 25 Mbj		Mobile I Mbp 1 Mb	os/	Pop.	Mobile L Mbps/3	
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
Urban Areas	3.274	3.208	98.0%	3.274	100.0%	3.148	2.562	81.4%
South Dakota	0.863	0.762	88.3%	0.860	99.6%	0.387	0.383	99.2%
Rural Areas	0.384	0.288	75.1%	0.381	99.2%	0.090	0.086	96.4%
Urban Areas	0.479	0.474	98.9%	0.479	100.0%	0.297	0.297	100.0%
Tennessee	6.640	6.049	91.1%	6.606	99.5%	5.705	5.206	91.2%
Rural Areas	2.235	1.716	76.8%	2.200	98.5%	1.483	1.177	79.4%
Urban Areas	4.406	4.332	98.3%	4.406	100.0%	4.222	4.029	95.4%
Texas	27.764	25.943	93.4%	27.754	100.0%	26.660	20.521	77.0%
Rural Areas	4.512	3.260	72.3%	4.503	99.8%	3.826	2.113	55.2%
Urban Areas	23.251	22.683	97.6%	23.251	100.0%	22.834	18.408	80.6%
Utah	3.040	2.936	96.6%	3.022	99.4%	2.882	2.170	75.3%
Rural Areas	0.361	0.265	73.4%	0.343	95.2%	0.263	0.116	44.1%
Urban Areas	2.679	2.671	99.7%	2.679	100.0%	2.619	2.054	78.4%
Vermont	0.624	0.538	86.1%	0.599	96.0%	0.394	0.000	0.0%
Rural Areas	0.383	0.301	78.5%	0.358	93.4%	0.199	0.000	0.0%
Urban Areas	0.241	0.237	98.3%	0.241	100.0%	0.195	0.000	0.0%
Virginia	8.387	7.617	90.8%	8.347	99.5%	7.457	5.549	74.4%
Rural Areas	2.053	1.459	71.1%	2.014	98.1%	1.372	0.340	24.8%
Urban Areas	6.334	6.158	97.2%	6.334	100.0%	6.085	5.209	85.6%
Washington	7.269	7.147	98.3%	7.234	99.5%	7.157	6.806	95.1%
Rural Areas	1.226	1.124	91.7%	1.193	97.4%	1.154	0.964	83.5%
Urban Areas	6.043	6.023	99.7%	6.040	99.9%	6.003	5.842	97.3%
West Virginia	1.830	1.504	82.2%	1.710	93.4%	1.148	0.287	25.0%
Rural Areas	0.934	0.647	69.2%	0.816	87.4%	0.453	0.089	19.6%
Urban Areas	0.896	0.857	95.7%	0.894	99.7%	0.696	0.199	28.5%
Wisconsin	5.775	4.992	86.4%	5.738	99.4%	5.228	4.824	92.3%
Rural Areas	1.736	0.988	56.9%	1.699	97.9%	1.293	1.055	81.6%

	Pop.	Fixed 25 Mbj		Mobile I Mbp 1 Mb	os/	Pop.	Mobile L Mbps/3	
	Evaluated	Pop. With Access	% of Pop.	Pop. With Access	% of Pop.	Evaluated	Pop. With Access	% of Pop.
Urban Areas	4.039	4.004	99.1%	4.039	100.0%	3.935	3.768	95.8%
Wyoming	0.585	0.457	78.2%	0.574	98.2%	0.341	0.048	14.2%
Rural Areas	0.217	0.099	45.5%	0.207	95.1%	0.084	0.015	18.2%
Urban Areas	0.367	0.358	97.6%	0.367	100.0%	0.257	0.033	12.8%

** This table from the FCC also depicts access to Mobile LTE with a minimum advertised speed of 5Mbps/1Mbps and Mobile LTE with a median speed of 10Mbps/3Mbps.

Appendix II

Appendix II Percentage of County Population with Access to Broadband at any Speed

County Name 🔻	2010 Population 💌	Population Covered 💌	Percentage 💌
Arkansas	19019	17558	92
Ashley	21853	18138	83
Baxter	41513	39424	95
Benton	221339	215241	97
Boone	36903	36642	99
Bradley	11508	10714	93
Calhoun	5368	4160	77
Carroll	27446	24086	88
Chicot	11800	9622	82
Clark	22995	20146	88
Clay	16083	15712	98
Cleburne	25970	25870	100
Cleveland	8689	7615	88
Columbia	24552	20240	82
Conway	21273	21273	100
Craighead	96443	95477	99
Crawford	61948	57460	93
Crittenden	50902	46963	92
Cross	17870	14884	83
Dallas	8116	7079	87
Desha	13008	11214	86
Drew	18509	14241	77
Faulkner	113237	113177	100
Franklin	18125	16316	90
Fulton	12245	10927	89
Garland	96024	93862	98
Grant	17853	16654	93
Greene	42090	42069	100
Hempstead	22609	19322	85
Hot Spring	32923	26415	80
Howard	13789	10265	74
Independence	36647	35640	97
Izard	13696	13094	96
Jackson	17997	16374	91
Jefferson	77435	68441	88
Johnson	25540	22461	88

County Name 🔻	2010 Population 💌	Population Covered 🔻	Percentage 👻
Lafayette	7645	6295	82
Lawrence	17415	16448	94
Lee	10424	5769	55
Lincoln	14134	8139	58
Little River	13171	11247	85
Logan	22353	20135	90
Lonoke	68356	65741	96
Madison	15717	13186	84
Marion	16653	16323	98
Miller	43462	43281	100
Mississippi	46480	45364	98
Monroe	8149	6630	81
Montgomery	9487	8437	89
Nevada	8997	7170	80
Newton	8330	5408	65
Ouachita	26120	21409	82
Perry	10445	10271	98
Phillips	21757	18947	87
Pike	11291	9783	87
Poinsett	24583	21071	86
Polk	20662	15909	77
Pope	61754	59934	97
Prairie	8715	6605	76
Pulaski	382748	378782	99
Randolph	17969	16650	93
Saline	107118	101817	95
Scott	11233	9144	81
Searcy	8195	8182	100
Sebastian	125744	124159	99
Sevier	17058	16237	95
Sharp	17264	16804	97
St. Francis	28258	20779	74
Stone	12394	12331	99
Union	41639	36815	
Van Buren	17295	17295	100
Washington	203065	198024	98
White	77076	72310	94
Woodruff	7260	6564	90
Yell	22185	21207	96

Appendix III County Populations with Access to 25Mbps of Fixed Broadband

County Name 💌	2010 Population 💌	Population Covered 🔻	Percentage 💌
Arkansas	19019	13293	70
Ashley	21853	8719	40
Baxter	41513	34653	83
Benton	221339	203753	92
Boone	36903	31817	86
Bradley	11508	7216	63
Calhoun	5368	314	6
Carroll	27446	18264	67
Chicot	11800	6416	54
Clark	22995	17064	74
Clay	16083	11970	74
Cleburne	25970	25834	99
Cleveland	8689	7298	84
Columbia	24552	16332	67
Conway	21273	21273	100
Craighead	96443	82922	86
Crawford	61948	53153	86
Crittenden	50902	40942	80
Cross	17870	10537	59
Dallas	8116	4757	59
Desha	13008	9557	73
Drew	18509	13147	71
Faulkner	113237	113156	100
Franklin	18125	8817	49
Fulton	12245	7677	63
Garland	96024	92935	97
Grant	17853	11311	63
Greene	42090	31017	74
Hempstead	22609	14267	63
Hot Spring	32923	16941	51
Howard	13789	1201	9
Independence	36647	31584	86
Izard	13696	9772	71
Jackson	17997	14083	78
Jefferson	77435	46205	60
Johnson	25540	17386	68

County Name 🔻	2010 Population 💌	Population Covered 💌	Percentage 💌
Lafayette	7645	1097	14
Lawrence	17415	9859	57
Lee	10424	3411	33
Lincoln	14134	4567	32
Little River	13171	7002	53
Logan	22353	13429	60
Lonoke	68356	51325	75
Madison	15717	3291	21
Marion	16653	7269	44
Miller	43462	38760	89
Mississippi	46480	34877	75
Monroe	8149	2586	32
Montgomery	9487	5699	60
Nevada	8997	4263	47
Newton	8330	5136	62
Ouachita	26120	13642	52
Perry	10445	10076	96
Phillips	21757	17764	82
Pike	11291	6279	56
Poinsett	24583	15680	64
Polk	20662	13422	65
Pope	61754	56717	92
Prairie	8715	2332	27
Pulaski	382748	372584	97
Randolph	17969	12019	67
Saline	107118	98274	92
Scott	11233	6856	61
Searcy	8195	8070	98
Sebastian	125744	119802	95
Sevier	17058	13627	80
Sharp	17264	13377	77
St. Francis	28258	10375	37
Stone	12394	10964	88
Union	41639	30147	72
Van Buren	17295	17235	100
Washington	203065	188615	93
White	77076	54402	71
Woodruff	7260	4644	64
Yell	22185	19291	87

Appendix IV Percentage of County Population with Access to 10Mbps Broadband

County Name 🔻	2010 Population 💌	Population Covered 💌	Percentage *
Arkansas	19019	16847	89
Ashley	21853	13359	61
Baxter	41513	38654	93
Benton	221339	208621	94
Boone	36903	35803	97
Bradley	11508	10374	90
Calhoun	5368	4027	75
Carroll	27446	21036	77
Chicot	11800	7277	62
Clark	22995	18160	79
Clay	16083	14908	93
Cleburne	25970	25849	100
Cleveland	8689	7316	84
Columbia	24552	16911	69
Conway	21273	21273	100
Craighead	96443	95042	99
Crawford	61948	54642	88
Crittenden	50902	43497	85
Cross	17870	11932	67
Dallas	8116	6438	79
Desha	13008	10386	80
Drew	18509	13470	73
Faulkner	113237	113177	100
Franklin	18125	13556	75
Fulton	12245	9824	80
Garland	96024	93131	97
Grant	17853	14679	82
Greene	42090	42045	100
Hempstead	22609	15588	69
Hot Spring	32923	22629	69
Howard	13789	4293	31
Independence	36647	34808	95
Izard	13696	13014	95
Jackson	17997	16060	89
Jefferson	77435	48479	63
Johnson	25540	20163	79

County Name 🔻	2010 Population 💌	Population Covered 💌	Percentage 💌
Lafayette	7645	3487	46
Lawrence	17415	15844	91
Lee	10424	4014	39
Lincoln	14134	7087	50
Little River	13171	8818	67
Logan	22353	18190	81
Lonoke	68356	60881	89
Madison	15717	10009	64
Marion	16653	14958	90
Miller	43462	41622	96
Mississippi	46480	44706	96
Monroe	8149	3686	45
Montgomery	9487	6910	73
Nevada	8997	6074	68
Newton	8330	5348	64
Ouachita	26120	15963	61
Perry	10445	10076	96
Phillips	21757	18280	84
Pike	11291	7708	68
Poinsett	24583	20255	82
Polk	20662	14359	69
Pope	61754	58096	94
Prairie	8715	5946	68
Pulaski	382748	375232	98
Randolph	17969	15162	84
Saline	107118	98962	92
Scott	11233	7710	69
Searcy	8195	8179	100
Sebastian	125744	120970	96
Sevier	17058	15364	90
Sharp	17264	16195	94
St. Francis	28258	11219	40
Stone	12394	12016	97
Union	41639	32425	78
Van Buren	17295	17235	100
Washington	203065	192687	95
White	77076	64673	84
Woodruff	7260	5772	80
Yell	22185	20234	91

Appendix V

County Populations with Projected Access to 10Mbps of Fixed Broadband upon Completion of CAF II Funded Projects

County Name 🔻	2010 Population 🔻	Population Covered 🔻	Percentage 👻
Arkansas	19019	18535	97
Ashley	21853	17991	82
Baxter	41513	38791	93
Benton	221339	213577	96
Boone	36903	36677	99
Bradley	11508	11269	98
Calhoun	5368	4675	87
Carroll	27446	25804	94
Chicot	11800	9496	80
Clark	22995	21112	92
Clay	16083	15651	97
Cleburne	25970	25943	100
Cleveland	8689	8396	97
Columbia	24552	21504	88
Conway	21273	21273	100
Craighead	96443	95319	99
Crawford	61948	58503	94
Crittenden	50902	46661	92
Cross	17870	15160	85
Dallas	8116	7630	94
Desha	13008	11888	91
Drew	18509	17434	94
Faulkner	113237	113237	100
Franklin	18125	17026	94
Fulton	12245	9895	81
Garland	96024	94198	98
Grant	17853	17013	95
Greene	42090	42087	100
Hempstead	22609	18918	84
Hot Spring	32923	28043	85
Howard	13789	8805	64
Independence	36647	36129	99
Izard	13696	13192	96
Jackson	17997	17217	96
Jefferson	77435	55867	72
Johnson	25540	24086	94

County Name 💌	2010 Population 💌	Population Covered 🔻	Percentage 💌
Lafayette	7645	6027	79
Lawrence	17415	17172	99
Lee	10424	8326	80
Lincoln	14134	9429	67
Little River	13171	11396	87
Logan	22353	21607	97
Lonoke	68356	63826	93
Madison	15717	10868	69
Marion	16653	16106	97
Miller	43462	42876	99
Mississippi	46480	45699	98
Monroe	8149	4935	61
Montgomery	9487	9001	95
Nevada	8997	8604	96
Newton	8330	8150	98
Ouachita	26120	20396	78
Perry	10445	10361	99
Phillips	21757	20118	92
Pike	11291	10638	94
Poinsett	24583	22702	92
Polk	20662	18879	91
Pope	61754	60445	98
Prairie	8715	8062	93
Pulaski	382748	376477	98
Randolph	17969	17568	98
Saline	107118	104179	97
Scott	11233	10738	96
Searcy	8195	8195	100
Sebastian	125744	123526	98
Sevier	17058	16720	98
Sharp	17264	16351	95
St. Francis	28258	16696	59
Stone	12394	12301	99
Union	41639	37327	90
Van Buren	17295	17295	100
Washington	203065	192734	95
White	77076	71447	93
Woodruff	7260	6466	89
Yell	22185	21657	98

Appendix VI

Percentage of U.S. households with a broadband internet subscription: 2015*

*Released in September 2017: Note: A broadband subscription refers to households who said "Yes" to one or more of the following types of subscriptions: DSL, cable, fiber optic, mobile broadband, satellite, or fixed wireless.

Geographical area	Percent	Margin of error (±) ¹
New Hampshire	84 .5	0.7
Washington	83 .9	0.4
Utah	83 .1	0.7
Colorado	83 .0	0.4
Massachusetts	82 .6	0.4
Hawaii	82.2	0.9
Connecticut	82 .0	0.6
Alaska	81.7	1.3
New Jersey	81 .6	0.3
Maryland	81 .4	0.4
California	81 .3	0.2
Oregon	8. 08	0.4
Minnesota	79 .5	0.4
Nevada	79.0	0.6
Vermont	78.7	1.1
Virginia	78.6	0.4
Rhode Island	78.2	1.1
Arizona	78.1	0.4
Nebraska	78.1	0.5
New York	77.8	0.2
Wyoming	77.8	1.3
Florida	77.5	0.2
Delaware	77.4	1.1
Maine	77.1	0.7
Illinois	76 .9 76 .9	0.3
Wisconsin	76.9 76.8	0.4 1.4
District of Columbia	76.8 76.7	0.1
	76.7	0.9
Idaho	76.3	1.0
North Dakota	76.2	0.5
Kansas	76.1	0.2
Ohio	75.7	0.3
Pennsylvania	75.3	1.2
lowa	75 .0	0.5
Montana	75.0	1.0
Georgia	74 .8	0.4
Michigan	74.4	0.3
Texas	74 .3	0.2
North Carolina	74 .1	0.4
Indiana	73 .3	0.4
Missouri	73.3	0.4
Kentucky	70.9	0.6
Oklahoma	70.8	0.5
Tennessee	70.2	0.4
South Carolina	69.9	0.5
West Virginia	69.8	8.0
Louisiana	68.7	0.6 0.5
Alabama	68.3 67.2	0.5 0.9
	64.2	0.9
Arkansas	61.0	0.5 0.8
Mississippi	01.0	0.0

Appendix VII



FCC SPEEDS ACCESS TO UTILITY POLES TO PROMOTE BROADBAND, 5G DEPLOYMENT

Access to Poles Must Be Swift, Predictable, and Affordable -

WASHINGTON, August 2, 2018—The Federal Communications Commission continued its efforts to promote broadband deployment and competition by speeding the process and reducing the costs of attaching new network facilities to utility poles.

To enable broadband providers to enter new markets and deploy high-speed networks, access to poles must be swift, predictable, safe, and affordable. Pole access also is essential in the race to deploy fast 5G wireless service, which relies on small cells and wireline backhaul.

The Commission fundamentally reformed the federal framework governing pole attachments by adopting a process in which the new attacher moves existing attachments and performs all other work required to make the pole ready for a new attachment. Called "one-touch, make-ready," this process speeds and reduces the cost of broadband deployment by allowing the party with the strongest incentive—the new attacher—to prepare the pole quickly, rather than spreading the work across multiple parties.

By some estimates, one-touch, make-ready alone could result in approximately 8.3 million incremental premises passed with fiber and about \$12.6 billion in incremental fiber capital expenditures. The process will not apply to more complicated attachments, or above the "communications space" of a pole, where safety and reliability risks are greater, but the Order improves current processes for attachments in these spaces.

The Commission also addressed two forms of state and local regulatory barriers to the deployment of wireline and wireless facilities. The Report and Order makes clear that the FCC will preempt, on a case-by-case basis, state and local laws that inhibit the rebuilding or restoration of broadband infrastructure after a disaster. And in a Declaratory Ruling, the FCC made clear that blanket state and local moratoria on telecommunications services and facilities deployment are barred by the Communications Act because they, in the language of Section 253(a), "prohibit or have the effect of prohibiting the ability of any entity to provide any interstate or intrastate telecommunications service."

Appendix VIII



CONNECT AMERICA FUND AUCTION TO EXPAND BROADBAND TO OVER 700,000 RURAL HOMES AND BUSINESSES

Auction Allocates \$1.488 Billion To Close the Digital Divide

WASHINGTON, August 28, 2018—Over 700,000 rural homes and small businesses will gain access to highspeed Internet service for the first time through the Federal Communications Commission's Connect America Fund Phase II auction, auction results released today show, and more than half of those 713,176 locations will have service available with download speeds of at least 100 megabits per second.

The auction allocated \$1.488 billion in support to be distributed over the next 10 years to expand rural broadband service in unserved areas in 45 states. A total of 103 providers won support from the Connect America Fund to expand broadband in rural areas where, absent this funding, this type of broadband expansion and ongoing service would not be economically feasible.

"The successful conclusion of this first-of-its kind auction is great news for the residents of these rural communities, who will finally be able to share in the 21st-century digital opportunities that broadband provides," said FCC Chairman Ajit Pai. "By tapping the mechanisms of the marketplace, the Phase II auction served as the most appropriate and cost-effective way to allocate funding for broadband in these unserved communities, bringing the highest-quality broadband services to the most consumers at the lowest cost to the ratepayer."

The auction encouraged innovation and deployment of robust service by giving providers the flexibility to use any broadband technology to meet the FCC's buildout and performance standards for fixed service. The auction design included a weighted preference for service with higher speeds, higher usage allowances, and lower latency.

As a result, 53% of all homes and businesses served with support from the auction will have broadband available with download speeds of at least 100 megabits per second. 19% will have gigabit service available. And 711,389 locations—all but 0.25%—will have at least 25 Mbps service available, more than twice the 10 Mbps minimum standard for the Connect America Fund program.

The auction also unleashed robust price competition that means more locations will be served at less cost to Americans who pay into the Fund. Although the 713,176 locations assigned had an initial reserve price of \$5 billion over the next decade, the final price tag to cover these locations is now only \$1.488 billion.

Providers must build out to 40 percent of the assigned homes and businesses in a state within three years of becoming authorized to receive support. Buildout must increase by 20 percent in each subsequent year, until complete buildout is reach at the end of the sixth year.

The Connect America Fund Phase II auction is part of a broader effort by the FCC to close the digital divide in rural America. In addition to the funding that will provided by this auction, the Commission is working toward the launch of a \$4.53 billion Mobility Fund Phase II auction to expand 4G LTE wireless coverage throughout rural America. And the Connect America Fund is in the midst of providing over \$9 billion over a six-year period for rural broadband in areas served by large carriers.

In addition to modernizing its support programs, the FCC is also working to reduce the cost of broadband deployment by eliminating needless regulatory barriers and by freeing up more spectrum for wireless broadband.

On the following pages are the results of the Connect America Fund Phase II auction by state. A separate chart below lists winning bidders. More information is available at <u>https://www.fcc.gov/auction/903</u>. A map of winning bids is available at <u>https://www.fcc.gov/reports-research/maps/caf2-auction903-results/</u>

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Appendix IX



What does this program do?

The ReConnect Program is an innovative new pilot program that offers unique federal financing and funding options in the form of loans, grants, and loan/grant combinations to facilitate broadband deployment in areas of rural America that don't currently have sufficient access to broadband. This pilot program will generate private sector investment to deploy broadband infrastructure to provide high-speed internet e-Connectivity to as many rural premises as possible, including homes, community facilities for healthcare and public safety, schools, libraries, farms, ranches, factories, and other production sites.

Who may apply for this program?

Eligible applicants must be able to supply retail broadband to customers. Applicant types include:

- Cooperatives, non-profits, or mutual associations
- For-profit corporations or limited liability companies
- States, local governments, or any agency, subdivision, instrumentality, or political subdivision thereof

What is an eligible area?

For a geographic area to be eligible to receive Federal funds from this pilot program, it must meet two criteria: (1) it must be rural and (2) most households must currently have insufficient internet service.

- WHAT IS CONSIDERED "RURAL"?
- Service areas shall not be located in a city, town or incorporate area that has a population greater than 20,000 or an urbanized area adjacent to a city or town with a population greater than 50,000 people
- Eligible areas must be completely contained within a rural area or composed of multiple rural areas. Visit the mapping tool at <u>reconnect.usda.gov</u> for additional eligibility information.
- WHAT IS "CURRENTLY INSUFFICIENT SERVICE"?
- At least 90 percent of households in the proposed area must not have sufficient access to broadband service
- For this program, sufficient access is defined as fixed terrestrial broadband service at 10 Mbps (megabits per second) downstream and 1 Mbps upstream
- No part of the proposed area may overlap with the service area of a company that has received a broadband loan from the Rural Utilities Service (RUS) as defined in this Funding Opportunity Announcement (FOA).

- A territory or possession of the U.S.
- An Indian tribe (as defined in <u>section 4 of the</u> <u>Indian Self-Determination and Education</u> <u>Assistance Act</u> (25 U.S.C. § 450b))

How may funds be used?

This program provides funding for:

- The construction, improvement, and acquisition of facilities required to provide service at a minimum of 25 Mbps downstream and 3 Mbps upstream
- An acquisition of an existing system not currently providing sufficient access to broadband, under certain circumstances and with restrictions
- Some pre-application expenses may also be eligible for reimbursement

How do we apply?

The online application portal is not yet open, but basic information may be viewed at <u>reconnect.usda.gov</u>. Detailed application guidelines are available at this site, and USDA will publish a notice in late February with more information about the online application portal's opening date

Where can we find technical assistance?

USDA and its partners will hold technical assistance webinars that will be recorded and available for viewing on demand after their initial broadcast. Six regional in-person workshops will also be held across the country. Webinar and workshop dates and times, and additional technical assistance is available through <u>reconnect.usda.gov</u>. <u>Rural</u> <u>Development's General Field Representatives</u> and <u>State</u> <u>Directors</u> can also assist with general questions.



What kind of funding is available?

The type and amount of award will depend on the type of financing or funding that best fits the applicant's business model, service area, and financial plan. An applicant may submit only one application, for one of the following three options:

Type of Funding Available	Total Funding Available for the Funding Type/ Maximum Award	How USDA Will Select Projects	Application Deadline
Rural Broadband Grant, with applicant supplying a cash contribution equal to 25% of project cost	Total of \$200 million in federal funds available/\$25 million maximum award per project	Competitive review based on criteria, such as the number of rural premises connected by the project and service speed that will be provided, for areas where 100% of households do not have sufficient access to broadband	April 29, 2019
Grant + Loan Combo (50% of award as a grant/50% of award as a loan at Treasury rate of approximately 3.875%)	Total of \$200 million in federal funds available/\$50 million maximum award per project	Competitive review based on criteria, such as the number of rural premises connected by the project and service speed that will be provided, for areas where at least 90% of households do not have sufficient access to broadband	May 29, 2019
Low Interest Rural Broadband Loan (fixed at 2%)	Total of \$200 million in federal funds available/\$50 million maximum award per project	Funds to be awarded on a "first-come- first-served" basis while available for areas where at least 90% of households do not have sufficient access to broadband	June 28, 2019

Why does USDA Rural Development do this?

On March 23, 2018, Congress passed the Consolidated Appropriations Act, 2018 which provided \$600 million in Federal funds for a pilot program for rural broadband loans and grants. This appropriation created the Rural eConnectivity Pilot Program (ReConnect Program) to build infrastructure for essential internet e-Connectivity services to rural areas without sufficient access to broadband, defined by the new law as 10 Mbps (megabits per second) downstream and 1 Mbps upstream.

http://reconnect.usda.gov http://www.usda.gov/broadband

> NOTE: Because citations and other information may be subject to change please always consult the program instructions listed in the Federal Record. You may also contact your <u>General Field</u> <u>Representative</u> for assistance. You will find additional forms, resources, and program information at <u>reconnect.usda.gov</u>. USDA is an equal opportunity provider, employer, and lender.

> > Last Updated December 2018

FACT SHEET ON DRAFT 2018 BROADBAND DEPLOYMENT REPORT

Topline Takeaways:

- The 25/3 speed benchmark is maintained. The draft report finds that the current speed benchmark of 25 Mbps/3 Mbps remains an appropriate measure by which to assess whether a fixed service provides advanced telecommunications capability.
- Mobile services are not full substitutes for fixed services—there are salient differences between the two technologies. Both fixed and mobile services can enable access to information, entertainment, and employment options, but there are salient differences between the two. Beyond the most obvious distinction that mobile services permit user mobility, there are clear variations in consumer preferences and demands for fixed and mobile services.
- Because fixed services and mobile services are not full substitutes, it is important to evaluate progress in deploying fixed broadband service as well as progress in deploying mobile broadband service. Any analysis that only looked at the progress in deploying fixed broadband service or only looked at the progress in deploying mobile broadband service would be incomplete. Therefore, the draft report takes a holistic view of the market and examines whether we are both making progress in deploying fixed broadband service and making progress in deploying mobile broadband service.
- Analyzing broadband deployment *progress* is most consistent with the language of section 706. The draft report finds that analyzing progress to determine whether deployment is occurring in a reasonable and timely fashion is the approach most consistent with the language of section 706, as this enables the Commission to determine whether advanced telecommunications capability "is being deployed" as the law requires.
- Since the last report, the FCC has taken many steps to encourage broadband deployment. Most notably, the Commission has taken concrete actions to reduce regulatory barriers to the deployment of wireline and wireless infrastructure, constituted a Broadband Deployment Advisory Committee to assist in these efforts, reformed the legacy high-cost universal service program to ensure accountability and introduce opportunities for new entrants through reverse auctions, modernized our rules for business data services to facilitate facilities-based competition, authorized new uses of wireless spectrum both terrestrially and in space, and voted to eliminate the heavy-handed regulations contained in the *Title II Order*, returning to the successful light- touch regulatory framework for broadband Internet access.
- Due to these efforts, the draft report concludes that the FCC is now meeting its statutory mandate to encourage the deployment of broadband on a reasonable and timely basis. That positive finding, however, does not undermine our continued commitment to closing the digital divide. Too many Americans remain unable to access high-speed broadband, and we have much work to do if we are going to extend digital opportunity to them.
- **Broadband deployment remains the FCC's top priority.** Our effort to bridge the digital divide and promote the further deployment of advanced telecommunications capability will remain the Commission's top priority as we continue our work to deliver the benefits of broadband to all Americans.

Appendix XI Arkansas CAFII Awards

State	County	Bidder	Locations	Total Support (10 years)
AR	Arkansas	ArisWave Consortium	82	\$351,088.4
AR	Ashley	ArisWave Consortium	135	\$397,675.2
AR	Baxter	Rural Electric Cooperative Consortium	1,573	\$3,399,664.0
AR	Benton	Rural Electric Cooperative Consortium	69	\$298,114.8
AR	Chicot	ArisWave Consortium	175	\$379,047.
AR	Clark	Rural Electric Cooperative Consortium	365	\$1,035,703.
AR	Clay	Wisper ISP, Inc	94	\$393,327.
AR	Cleveland	ArisWave Consortium	35	\$91,018.
AR	Craighead	3E8 Broadband Solutions, LLC	326	\$1,747,832.
AR	Crawford	ArisWave Consortium	18	\$23,059.
AR	Crawford	Rural Electric Cooperative Consortium	267	\$709,309.
		Crawford, AR Total	285	\$732,369.
AR	Crittenden	3E8 Broadband Solutions, LLC	13	\$70,273.
AR	Crittenden	3E8 Broadband Solutions, LLC	56	\$120,932.
		Crittenden, AR Total	69	\$191,205.
AR	Cross	ArisWave Consortium	243	\$309,916.
AR	Desha	ArisWave Consortium	156	\$432,515.
AR	Drew	ArisWave Consortium	66	\$228,472.
AR	Faulkner	ArisWave Consortium	34	\$53,786.
AR	Franklin	Rural Electric Cooperative Consortium	145	\$1,150,489.
AR	Fulton	Rural Electric Cooperative Consortium	1,806	\$7,536,165.
AR	Grant	ArisWave Consortium	55	\$223,025.
AR	Greene	3E8 Broadband Solutions, LLC	111	\$517,272.
AR	Greene	Wisper ISP, Inc	8	\$6,238.
		Greene, AR Total	119	\$523,510.

0	Connect America Fund	d Phase II Auction Results by State and County	(Total Sup	oport \$)
AR	Izard	Rural Electric Cooperative Consortium	1,169	\$5,175,805.2
AR	Jefferson	ArisWave Consortium	174	\$348,111.4
AR	Johnson	Rural Electric Cooperative Consortium	82	\$924,008.2
AR	Lawrence	3E8 Broadband Solutions, LLC	135	\$820,625.1
AR	Lee	ArisWave Consortium	125	\$382,908.2
AR	Lincoln	ArisWave Consortium	176	\$269,593.6
AR	Logan	Rural Electric Cooperative Consortium	163	\$384,166.8
AR	Lonoke	ArisWave Consortium	144	\$334,529.8
AR	Madison	Rural Electric Cooperative Consortium	2,079	\$7,327,448.6
AR	Marion	Rural Electric Cooperative Consortium	187	\$364,222.9
AR	Monroe	ArisWave Consortium	172	\$481,980.3
AR	Nevada	Rural Electric Cooperative Consortium	89	\$845,091.
AR	Phillips	ArisWave Consortium	312	\$580,923.0
AR	Pike	Rural Electric Cooperative Consortium	112	\$945,251.
AR	Poinsett	3E8 Broadband Solutions, LLC	97	\$292,321.
AR	Poinsett	3E8 Broadband Solutions, LLC	73	\$52,590.
		Poinsett, AR Total	170	\$344,911.
AR	Pope	Rural Electric Cooperative Consortium	70	\$771,748.
AR	Prairie	ArisWave Consortium	127	\$465,933.
AR	Pulaski	ArisWave Consortium	105	\$154,682.
AR	Pulaski	Fidelity Communications Company	7	\$25,177.
		Pulaski, AR Total	112	\$179,859.
AR	Saline	ArisWave Consortium	128	\$201,539.
AR	Saline	Fidelity Communications Company	3	\$23,282.
		Saline, AR Total	131	\$224,821.
AR	Scott	Rural Electric Cooperative Consortium	53	\$561,006.
AR	Sebastian	ArisWave Consortium	88	\$53,328.
AR	Sebastian	Rural Electric Cooperative Consortium	52	\$119,644.
7.0.1		Sebastian, AR Total	140	\$172,972.
AR	Sharp	Rural Electric Cooperative Consortium	1,813	\$5,933,299.
AR	St. Francis	ArisWave Consortium	293	\$582,928.
AR	Stone	Rural Electric Cooperative Consortium	34	\$190,869.
AR	Washington	Rural Electric Cooperative Consortium	1,806	\$3,177,208.
AR	White	ArisWave Consortium	255	\$339,802.
AR	Woodruff	ArisWave Consortium	93	\$383,137.

Appendix XII Guide to Federal Funding of Broadband Projects

BroadbandUSA: Guide to Federal Funding of Broadband Projects

JUNE 2017





Visit: <u>https://broadbandusa.ntia.doc.gov/sites/default/files/resource-</u> <u>files/ntia_guidetofedfunding_062317.pdf</u>