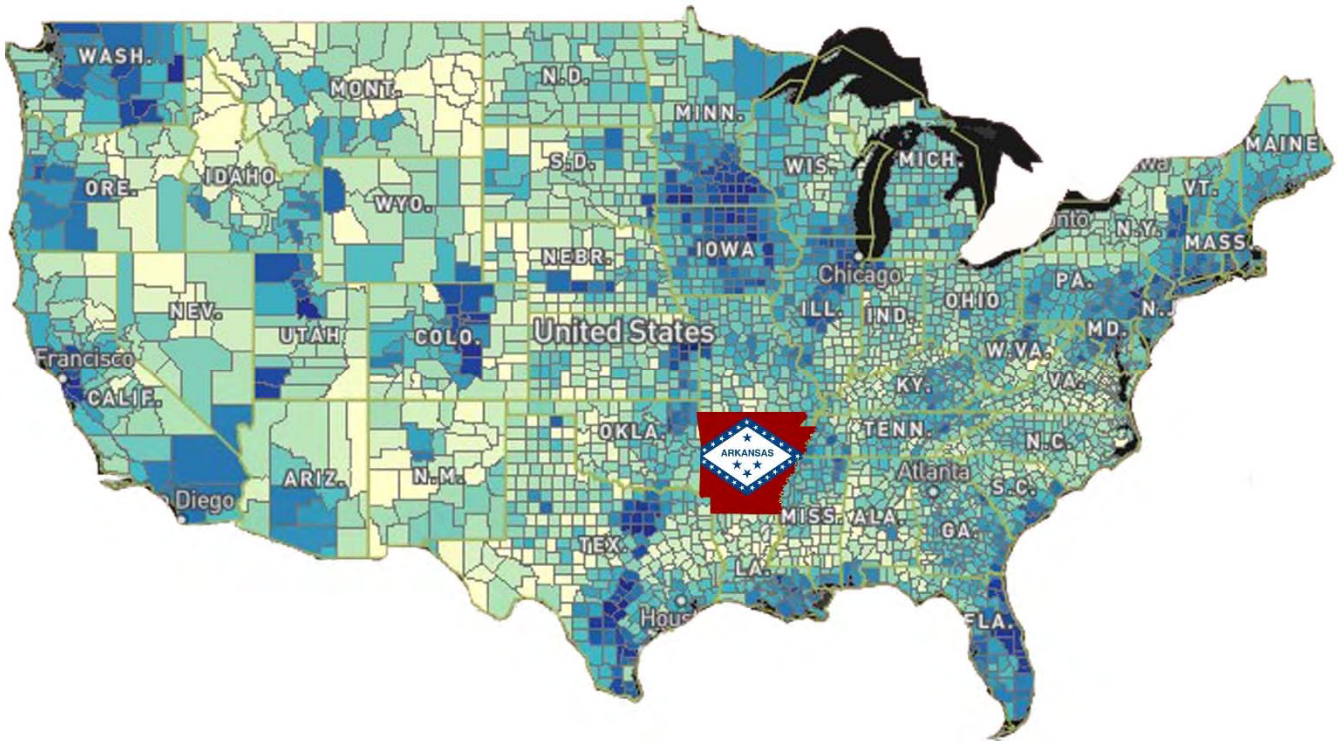
ARKANSAS STATE BROADBAND MANAGER'S REPORT



PERIOD ENDING JUNE 30, 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.

Contents

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

- 79.6 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 22.1Mbps
- Over $2.2 billion was budgeted toward the federal Lifeline program to help make broadband more affordable for low income Americans
- The federal omnibus spending bill allocated $600 million for rural broadband expansion
- The Connect America Fund will provide nearly $2 billion over the next 10 years to expand broadband in unserved rural areas.

Even with tremendous progress, Arkansas still ranks as the 48th most connected state in the nation, according to BroadbandNow. 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:

- FCC's Definition - (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*

- Advanced Telecommunications Capability- 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)
- Fiber
- Satellite
- Cable Modem
- Wireless (Wi-Fi, Mobile, and Fixed Wireless)

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
- Public safety
- Economic development
- Business
- Education
- Health care
- Government
- 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 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
• 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?

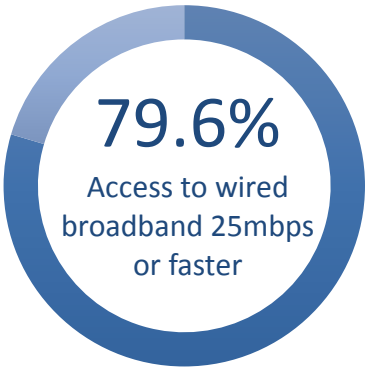
Broadband Snapshot

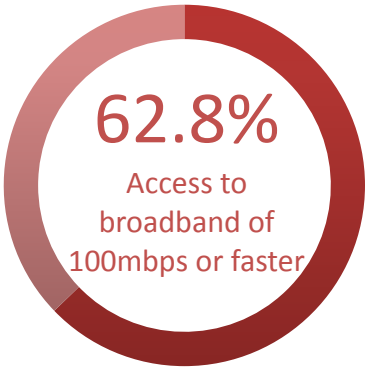
The following statistics provide a snapshot of broadband penetration in Arkansas as researched by BroadbandNow. This private company located in Austin, Texas, collects data for its statistics from the FCC and U.S. Census Bureau and compares it to data acquired from broadband providers and other sources.

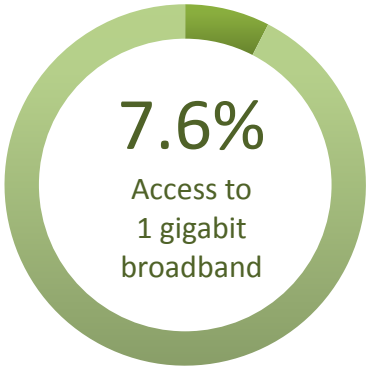
Arkansas broadband stats from BroadbandNow:

- **127 internet providers in Arkansas**
- **614,000 Arkansans without access to a wired connection capable of providing FCC defined broadband**
- **661,000 Arkansans with access to only one wired provider**
- **230,000 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 gigabit broadband.



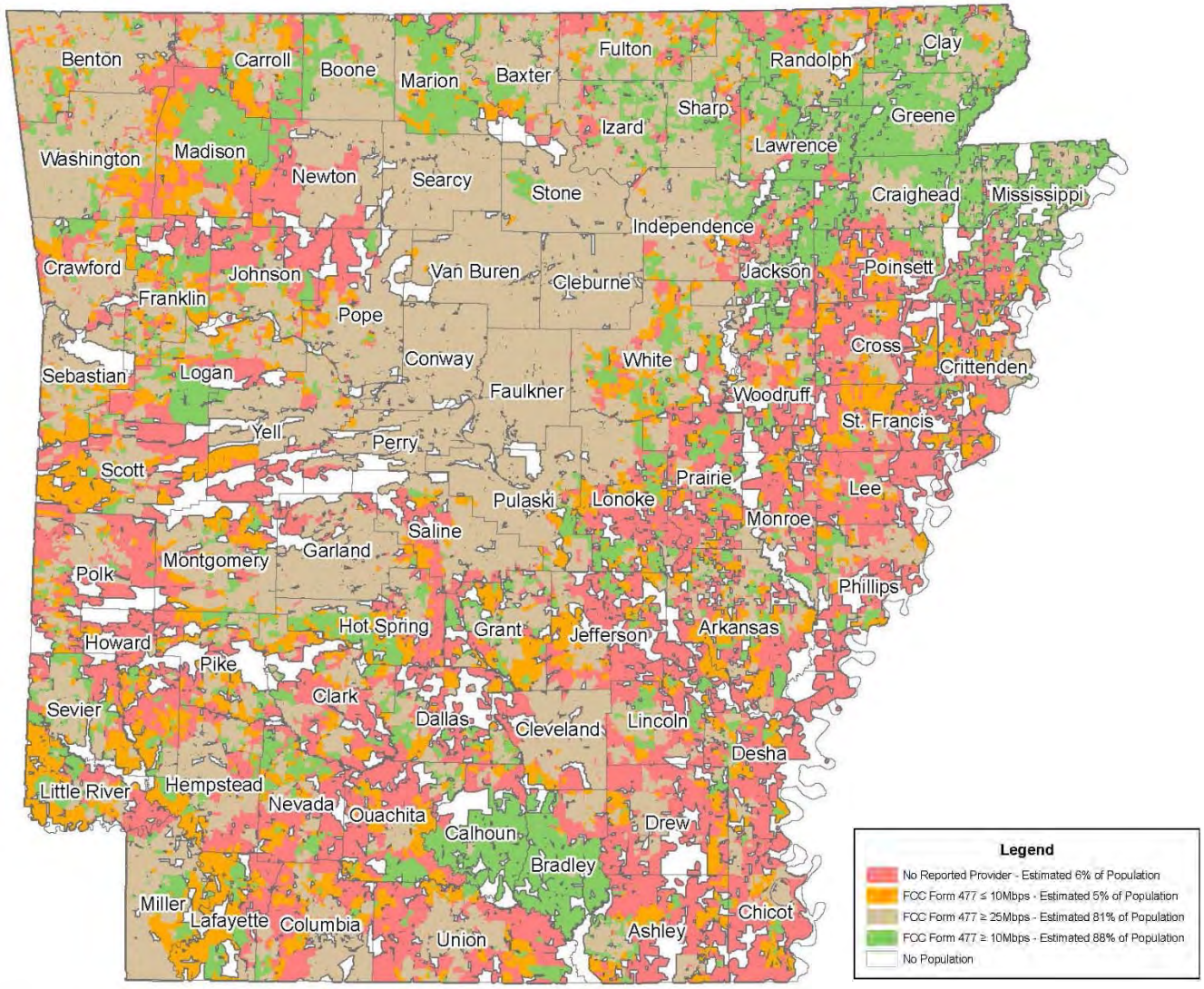




The average statewide speed is 22.1Mbps

Source: https://broadbandnow.com/Arkansas

Statewide Broadband Speed Coverage Map



Source: Arkansas Geographic Information Systems

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.

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.

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

**From FCC Broadband Report

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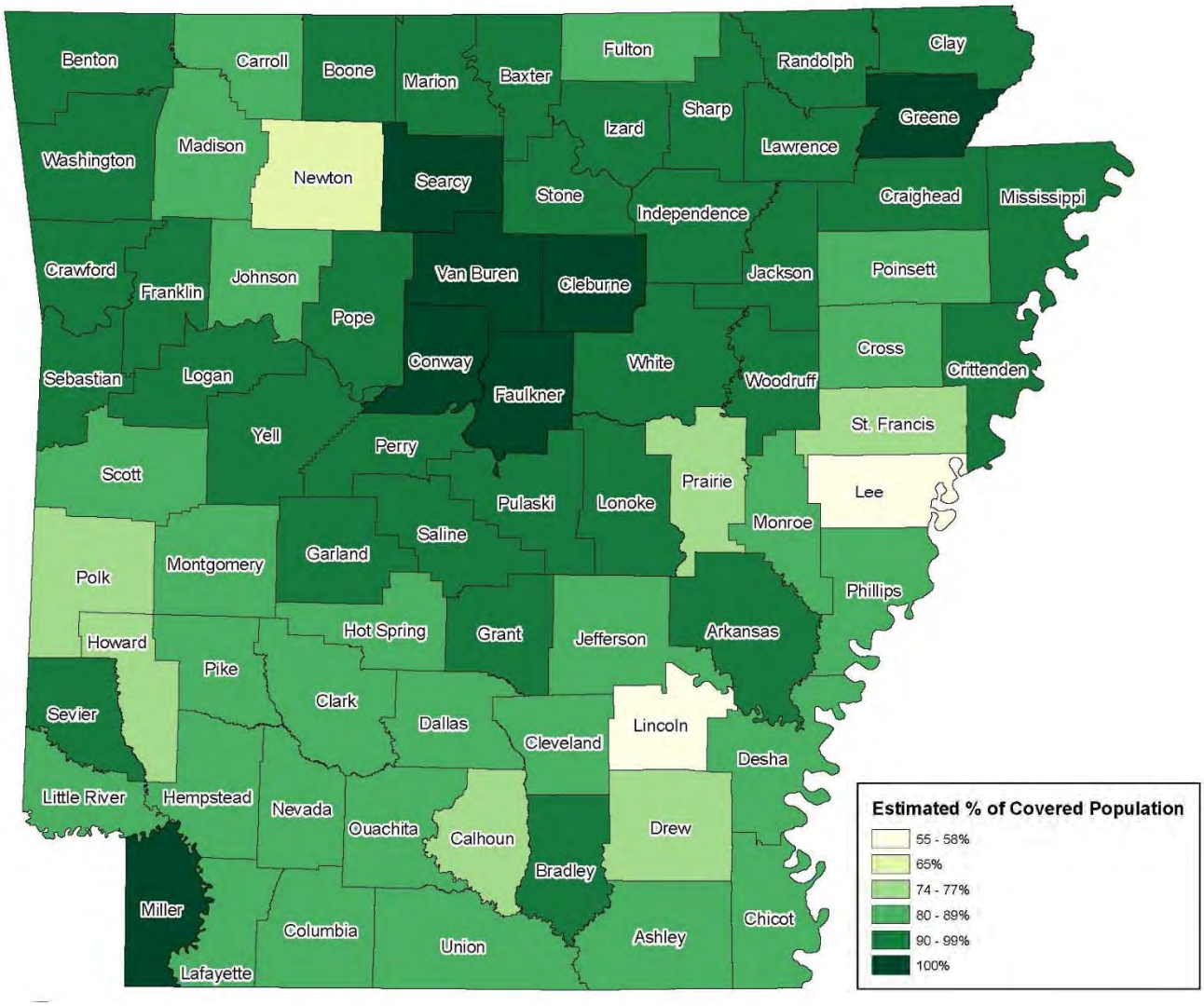
County Populations with Access to Fixed Broadband of any Speed



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/

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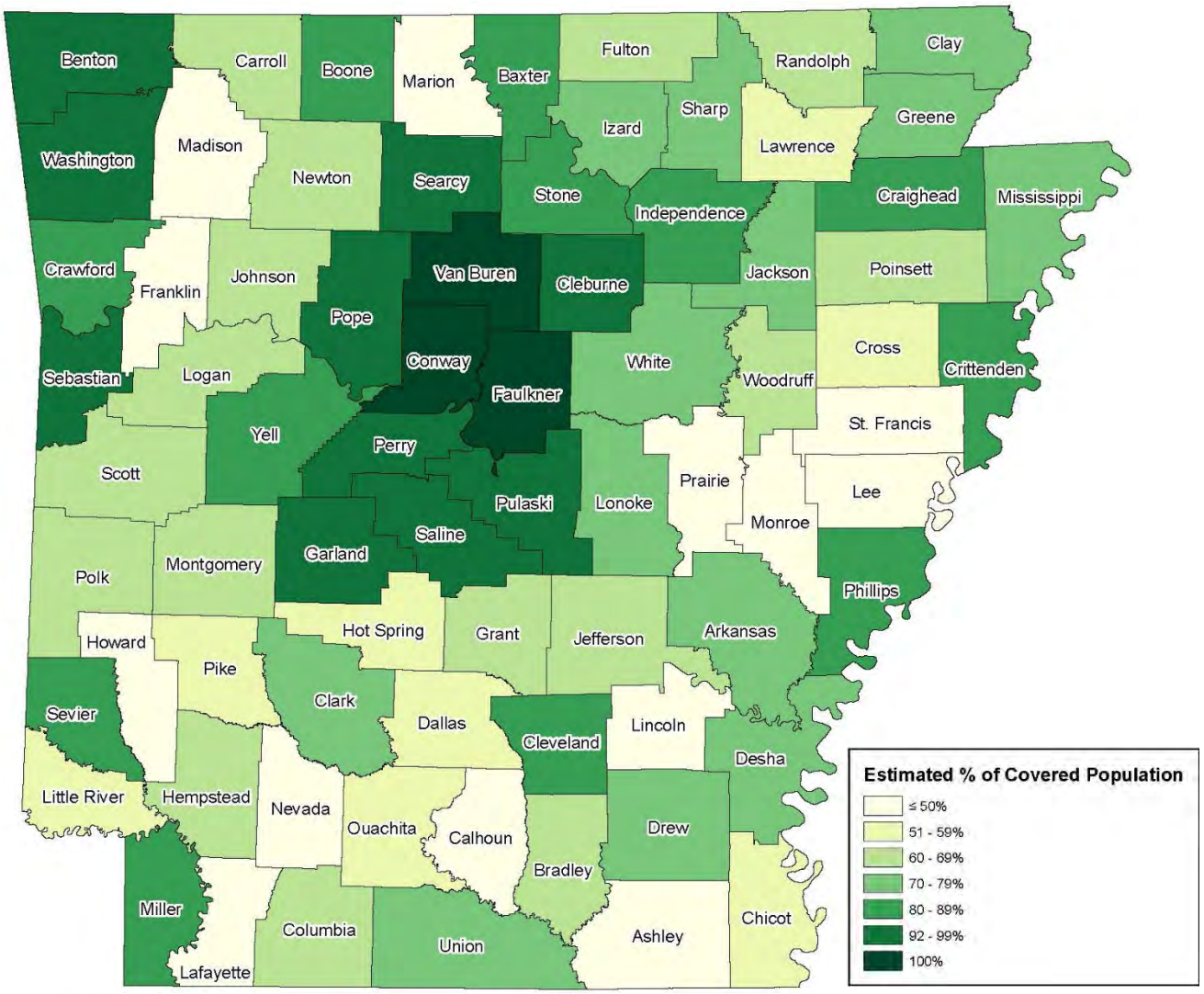
County Populations with Access to 25Mbps of Fixed Broadband



Source: Arkansas Geographic Information Systems

Appendix III: 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/

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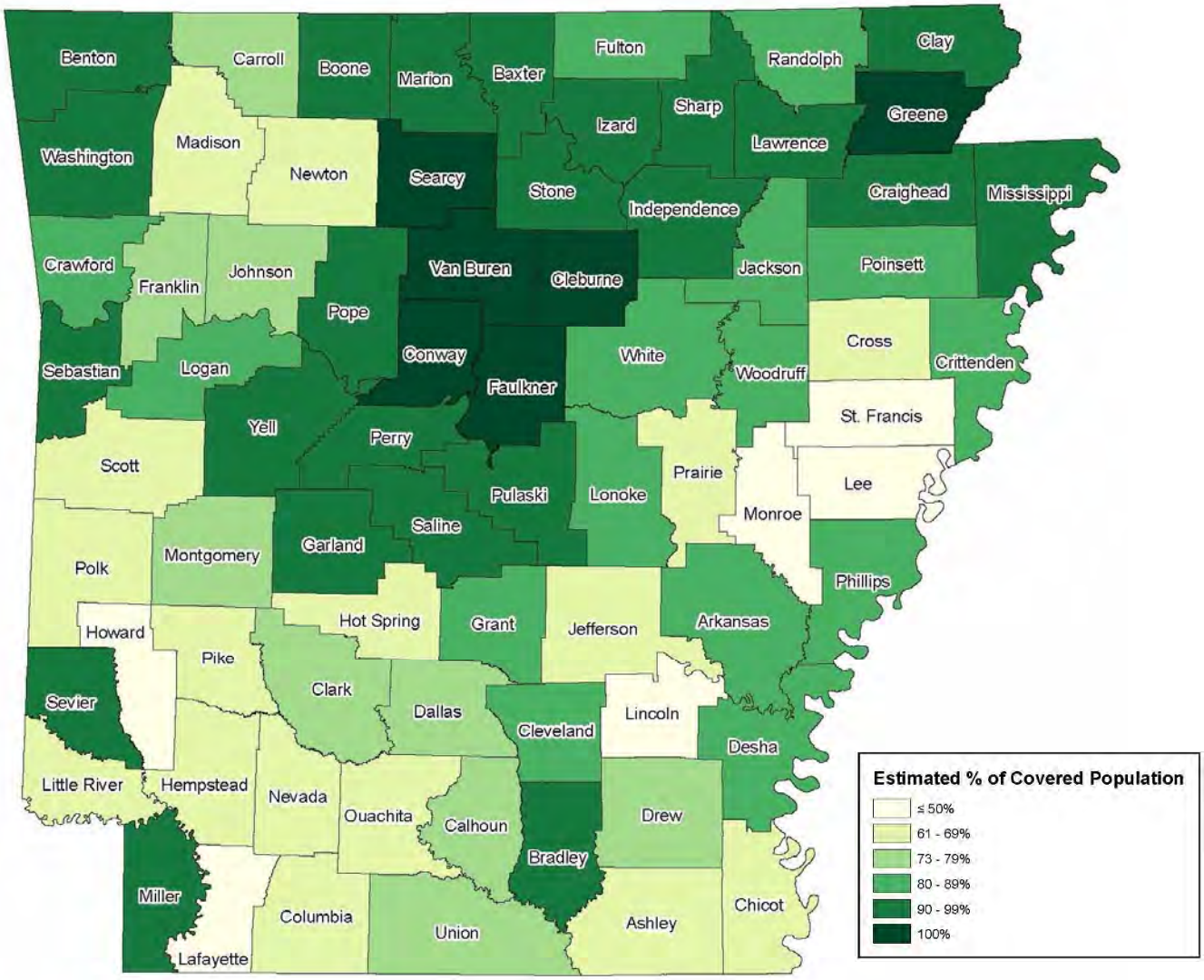
County Populations with Access to 10Mbps of Fixed Broadband*



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.

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.

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.

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

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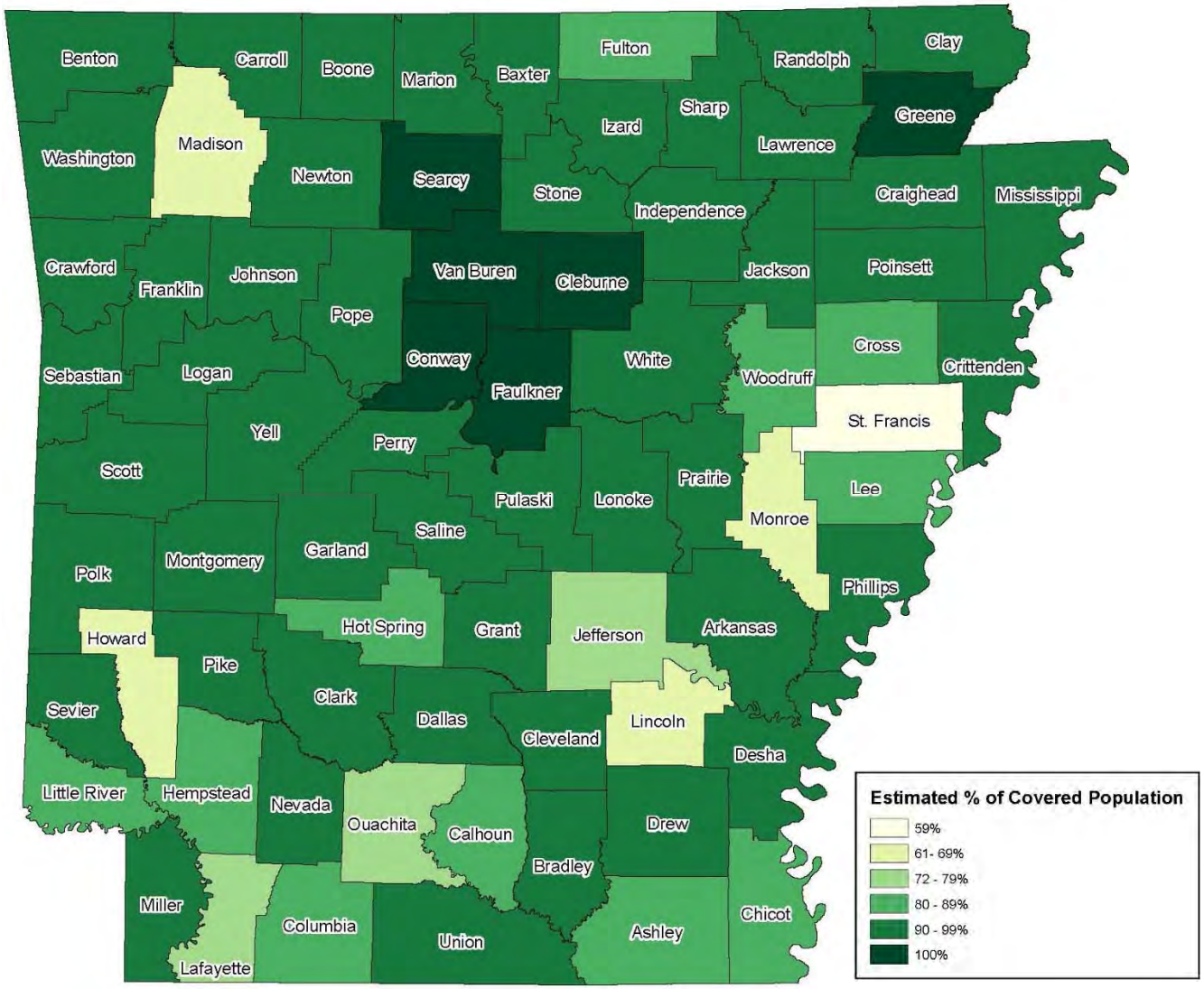
County Populations with Projected Access to 10Mbps of Fixed Broadband upon Completion of CAF II Funded Projects*



Source: FCC Form 477 - https://www.fcc.gov/general/broadband-deployment-data-fcc-form-477 December 2016v1 (includes revisions made 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.

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

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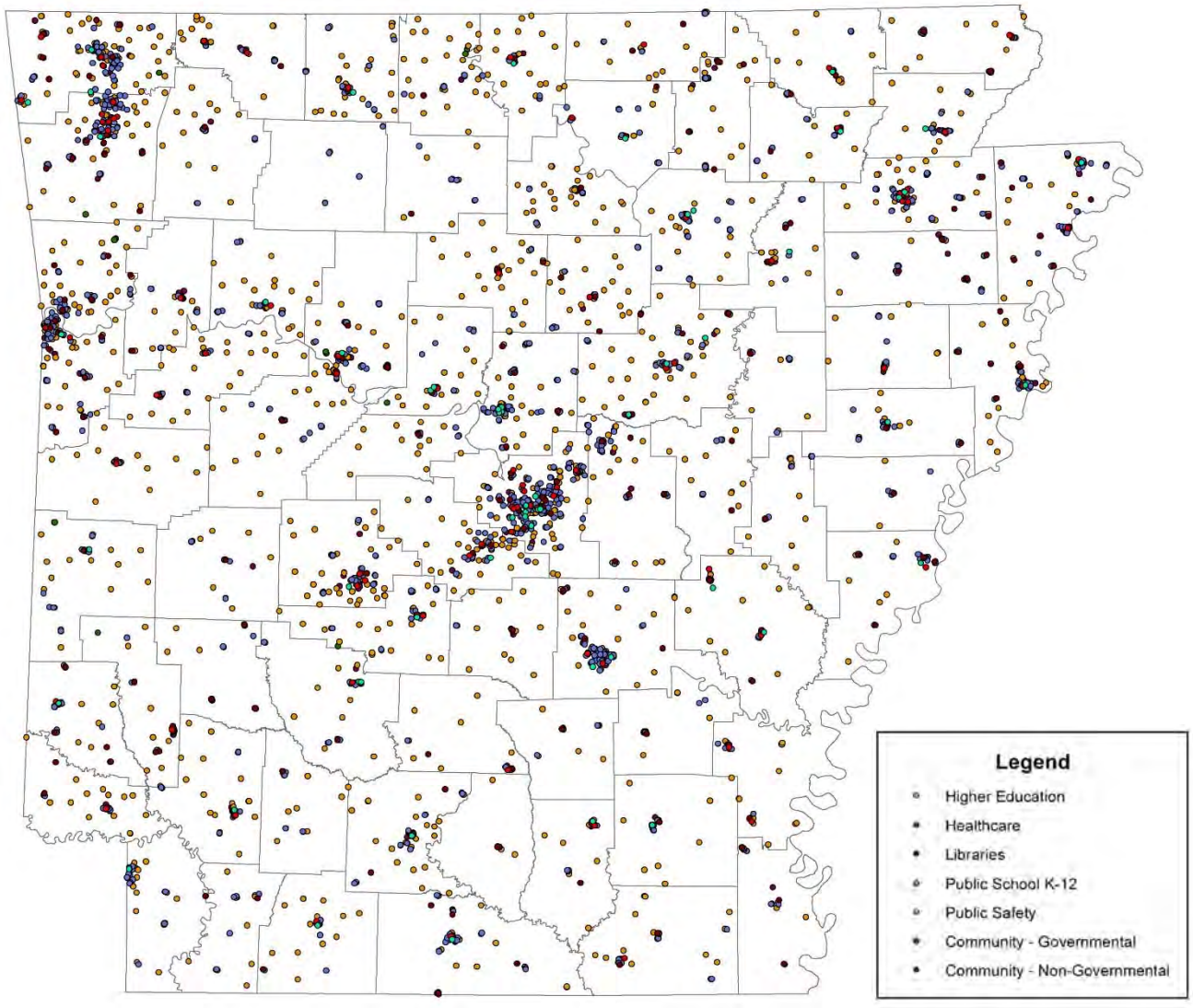
State Community Anchor Institutions

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



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Broadband Adoption by Arkansans

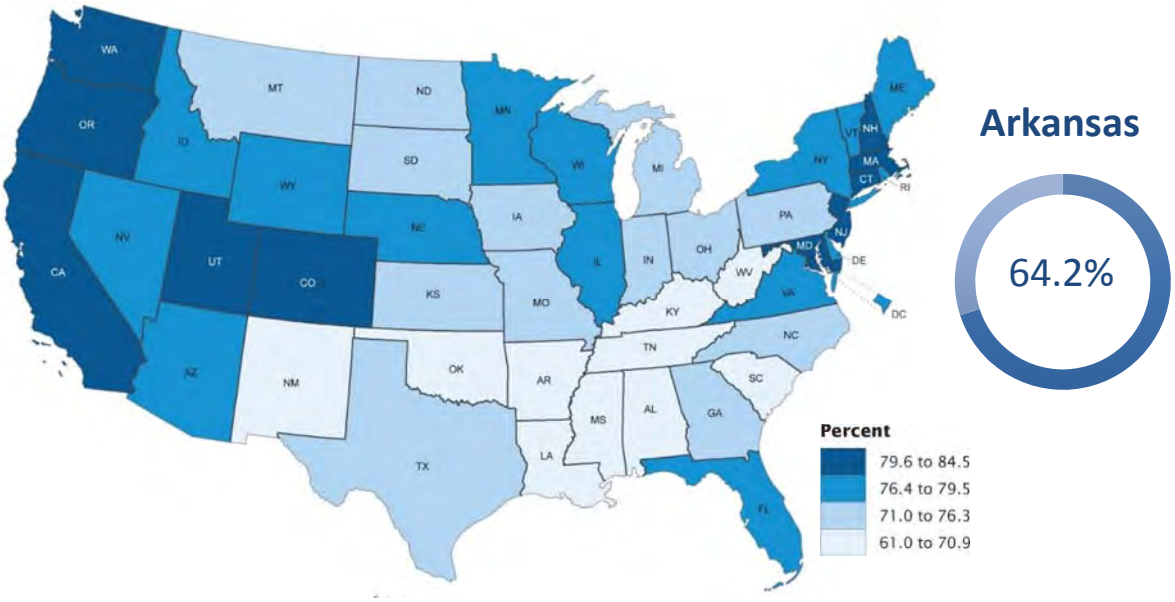
Although broadband adoption is on the rise, Arkansans still lag behind a vast majority of the population when turning to the internet for aspects of daily life, according to American Community Survey Reports on Computer and Internet Use in the United States by the U.S. Census Bureau.

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

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.

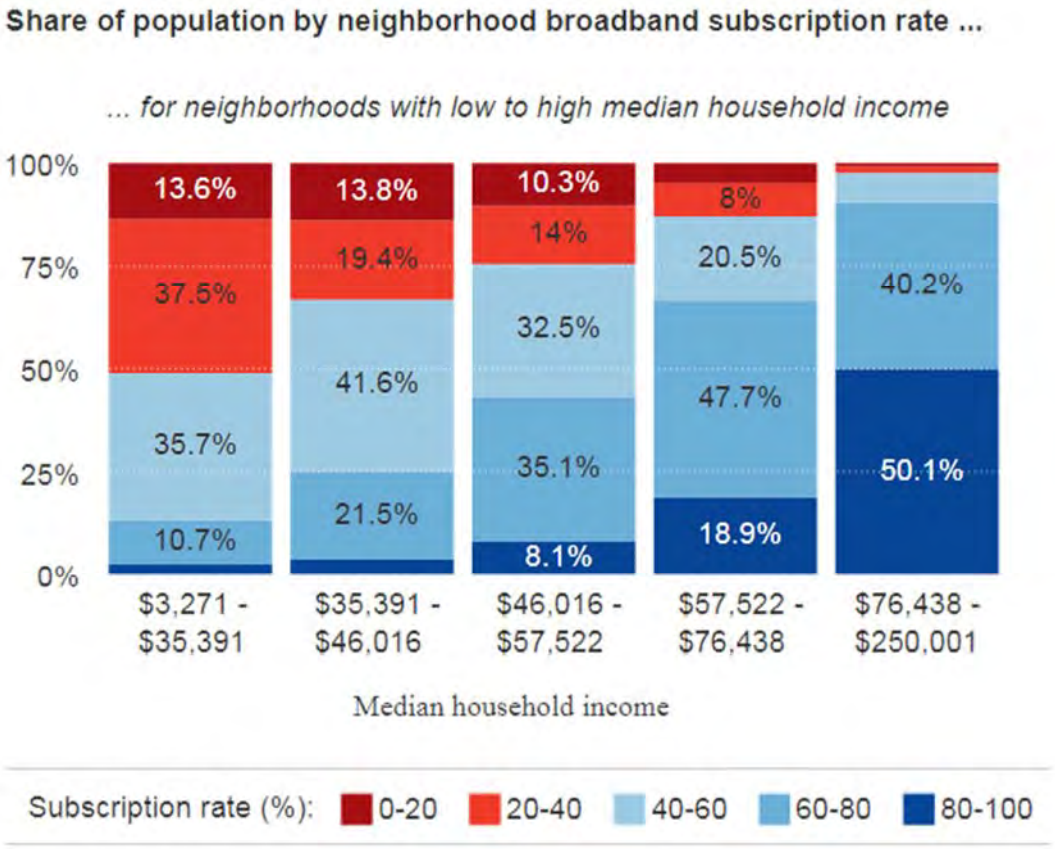
The FCC placed Arkansas's adoption rate of 10Mbps/1Mbps fixed broadband at 44.9 percent, 25Mbps/3Mbps at 29.3 percent, and 50Mbps/5Mbps at 26.9 percent. Only Idaho and New Mexico had lower adoption rates of the 10Mbps/1Mbps speed than Arkansas at 42.3 percent and 40.1 percent respectively. Mississippi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

Overall Adoption Rate for Fixed Broadband			
	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

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.



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

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

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

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 1, 2017	750 Minutes	Speed: 3G Usage Allowance: 1 GB	Speed: 15/2*** Usage Allowance: 250GB	$9.25	$9.25
December 1, 2018	1000 Minutes	Speed: 3G or Bureau Determination Usage Allowance: 2 GB	Speed: Mechanism Usage Allowance: CAF Standard or Bureau Determination	$9.25	$9.25

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.

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 fund the vendor fiber build out with the anticipated savings in bandwidth costs for the two sites alone.

Another agency, with locations in various areas of the state, will have the ability to significantly increase the bandwidth for all of its county locations and end up on vendor fiber to each site with no increase in cost.

DIS intends to prioritize the transition to broadband beginning with agencies that have statewide offices 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 K12 network.

Boozman Leads Senate Caucus to Strengthen Broadband Infrastructure

In an effort to extend broadband service to Arkansans, U.S. Senator John Boozman, as part of his membership on a Senate Broadband Caucus, urged President Donald Trump to include dedicated, stand-alone funding for broadband deployment targeted at rural America. The caucus previously issued a letter to the president, signed by over 40 congressmen, encouraging President Trump to make funding for broadband a policy priority.

Dark Fiber Transport Services

The Department of Information Systems (DIS) issued an Invitation for Bid (IFB) through OPM, November 9, 2016, to obtain pricing and contract(s) for dark fiber transport services. Bids were subsequently awarded to two vendors. The deployment of the dark fiber will form two fiber rings connecting the state's two data centers and multiple point to point spurs creating a High Speed Optical Network accommodating speeds of 10, 40, and 100 Gigabit Ethernet. This will encompass two fiber rings connecting the state's

two data centers and other state buildings having a need for bandwidth and equipped with emergency power.

Update: As of this reporting period, both fiber rings have been completed and are providing services at a significant cost savings. The level of bandwidth is limited only by the electronics terminating the fiber. Spurs serving a number of major state buildings are on order from vendors.
Appendix VII: Project Concept and Buildings with State Entities Impacted

FCC Plans Auction for up to $2 Billion to Expand Broadband in Rural Areas

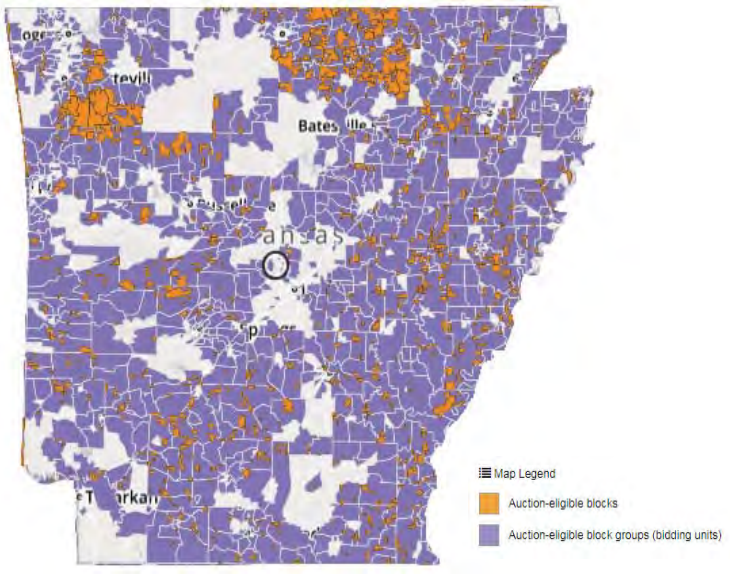
The FCC's primary funding mechanism for rural broadband expansion, the Connect America Fund, will provide nearly $2 billion over the next 10 years to expand broadband in unserved rural areas. The auction, scheduled to begin July 24, will include opportunities for rural telcos, electric utility broadband providers and others regardless of technology to ensure the ability for providers of all types to fully participate.
The map below depicts the areas in Arkansas eligible for CAFII funding.
Source: FCC Press Release
Appendix VIII: Full Press Release

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
Appendix IX: Full Fact Sheet

FCC Chairman Proposes Over $500 Million for Rural Broadband Deployment

FCC Chairman Ajit Pai proposed $500 million in additional funding to cooperatives and rural carriers to promote more high-speed broadband deployment in rural areas.
Source: FCC Press Release
Appendix X: Full Release



FCC Relieves Rural Broadband Providers from USF Taxes

In a step the FCC believes will place rural carriers on more even footing with larger providers, the commission ended the requirement for rural carriers to pay Universal Service Fund (USF) taxes on broadband internet access transmission services. In a written statement, FCC Chairman Ajit Pai said relief from the tax would facilitate a lower cost of broadband to the customer.

Source: FCC-WC Docket No. 17-206

FirstNet: Public Safety Broadband

All 50 states and several U.S. territories have accepted a plan by FirstNet and AT&T for the build out of a broadband network dedicated for the exclusive use of the public safety community. Governor Asa Hutchinson announced his decision for Arkansas to join the FirstNet network in July 2017. This made Arkansas one of the first states in the nation to opt in to FirstNet

Sources: Press Releases from NTIA and FirstNet

Appendix XI: Full stories

President Issues Executive Order Pertaining to Rural Broadband

President Donald Trump issued an executive order declaring it to be the policy of the executive branch to use all viable tools to accelerate the deployment and adoption of affordable, reliable, modern high-speed broadband connectivity in rural America. The order extended to rural homes, farms, small businesses, manufacturing and production sites, tribal communities, transportation systems, and health care and education facilities. The order stated that executive departments and agencies should seek to reduce barriers to capital investment, remove obstacles to broadband services, and more efficiently employ government resources for rural broadband infrastructure projects.

Appendix XII: Full executive order

Rural Broadband Sees $600 Million in Omnibus Spending Bill

The USDA was provided with $600 million to fund rural broadband grants in the omnibus spending bill. The bill appropriated funding for a new pilot grant and loan combination program, administered by the USDA, to provide broadband to under-served rural and tribal areas. This investment will leverage nearly $1 billion in total new rural broadband projects.

UAMS Builds Broadband Network for Telestroke Application

A broadband network, built by the University of Arkansas Medical Sciences (UAMS) connects 53 of the 80 hospitals in the state to a telestroke application. The network, known as AR SAVES (Stroke Assistance through Virtual Emergency Support) operates across the Arkansas Research Education Optical Network (AREON) fiber backbone. UAMS credits the telemedicine program for stroke education and treatment for lowering the state's ranking from first in the nation for stroke deaths to sixth.

Source: Health IT Outcomes

Source: UAMS

Private Initiatives to Expand Broadband

AireCast (South Arkansas Telephone Company)

The company has completed the build out of 50 miles of fiber optical cable/broadband as part of a $20 million multi-year initiative. It also reports "100 solar electrical use for network operations."

Source: Broadband provider survey

Electric Cooperatives Work to Bring Broadband to Rural Arkansas

Arkansas Valley Electric Cooperative announced a feasibility study in June to assess bringing broadband to more rural areas of the state. The company cited education needs outside of the classroom as the driving force behind the initiative, according to a Government Technology news article. A cooperative spokesperson cited an example of a parent driving her children to a local fast food restaurant to do their homework. Other electric cooperatives in the state have previously announced initiatives to provide broadband service.

Source: Government Technology

AT&T Expands High-Speed Internet Across Arkansas

AT&T announced in February 2018 that it had deployed high-speed internet service to unserved and underserved locations in parts of 40 counties serving more than 26,000 Arkansas locations. The expansion was part of the company's FCC Connect America Fund commitment. The service delivers download speeds of at least 10Mbps and upload speeds of at least 1Mbps.

In the annual Broadband Provider Survey, AT&T said it plans to provide service to approximately 52,000 locations by the end of 2020.

Source: Broadband Technology Report

Appendix XIII: Full article

Source: Broadband Provider Survey

AT&T Offers Low-Income Americans High-Speed Internet for just $5 per Month

AT&T announced in May 2018 that it would offer high-speed internet service to low-income Americans for just $5 per month. The download speed at that price is 3Mbps. Faster speeds (five and 10Mbps) is available for $10 per month, the company said. As part of the new service, the company said it is also waiving all activation fees and is including a free wireless router. For families without a computer in the home, AT&T is offering qualifying families a computer for just $149.99.

Source: https://www.att.com/shop/internet/access/#/

Central Arkansas Telephone Cooperative (CATC)

CATC is in the process of converting all customers to fiber to the home where each customer will be able to receive speeds of 200Mbps/200Mbps. CATC plans to have all customers converted within three years. The company serves approximately 2,400 customers.

Source: Broadband Provider Survey

CenturyLink

CenturyLink will upgrade or add over 45,708 living units as part of its CAFII funding. As of December 31, 2017, CenturyLink surpassed the 40 percent target set by the FCC by providing service to 20, 241 living units. Most of the living units exceed the 10Mbps minimum speed required by the FCC for CAFII funding. CenturyLink projects to reach 7,000 living units in 2018.

Source: Broadband provider survey

Connect Americans Now

Connect Americans Now is a new alliance joining forces to work alongside the FCC to accelerate the deployment of high speed broadband service to over 23 million rural Americans. The plan is to leverage bandwidth below the 700 MHZ frequency range (TV white space) available on an unlicensed basis and close the digital divide by 2022. Wireless signals in this range have the ability to traverse across terrain such as hills, trees and through buildings. Founding partners of Connect America Now include Microsoft, ACT: The App Association, the National Rural Education Association, the Schools, Health and Library Broadband Coalition, the Wisconsin Economic Development Association, Alaska Communications, Axiom, the Mid-Atlantic Broadcasting Communities Corporation, the American Pain Relief Institute, HTS Ag and others.

Source: Press Release: New Coalition Aims to Eliminate the Digital Divide in Rural America

Madison County Telephone and Cable Company

Madison County Telephone is in the process of converting all customers within its service area to fiber to the home technology with a three to four year expected completion date.

Source: Broadband Provider Survey

Paragould Light Water & Cable

The company indicated it is in the process of deploying fiber to the home (FTTH) to the entire city. The fiber network will provide broadband speeds up to 1Gbps and include state of the art IPTV (the delivery of television content over the internet).

Source: Broadband Provider Survey

Pinnacle Telecommunications

A blog post by Pinnacle Communications said the company has built a state of the art network providing fiber to the home to all of its rural customers.

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.

Source: Broadband provider survey

Ritter Tri-County Telephone

Ritter has elected the Alternative-Connect America Cost Model (A-CAM) for funding of broadband deployment in specific hard-to-serve rural areas. A-CAM provides installation funds to offer broadband speeds at 25Mbps/3Mbps, 10Mbps/1Mbps and 4Mbps/1Mbps. Ritter is engineering deployments to exceed A-CAM requirements. The result will be that over 80 percent of its customers will have access to at least 25Mbps/3Mbps service. The company is also upgrading service in higher population areas that will also provide 25Mbps/3Mbps service. The 10-year project began in 2017 and is approximately 15 percent completed.

Source: Broadband provider survey

The Computer Works

The company is expanding fiber as finances allow. Eligibility for government funding or spectrum would enable the company to serve all rural areas. In the Broadband Manager's Report for period ending December 31, 2017, the company introduced fiber broadband to its customer base in Faulkner County, according to a news report. The company was focusing efforts on providing fiber service to residents of Vilonia with a completion goal by the end of 2017, the report stated.

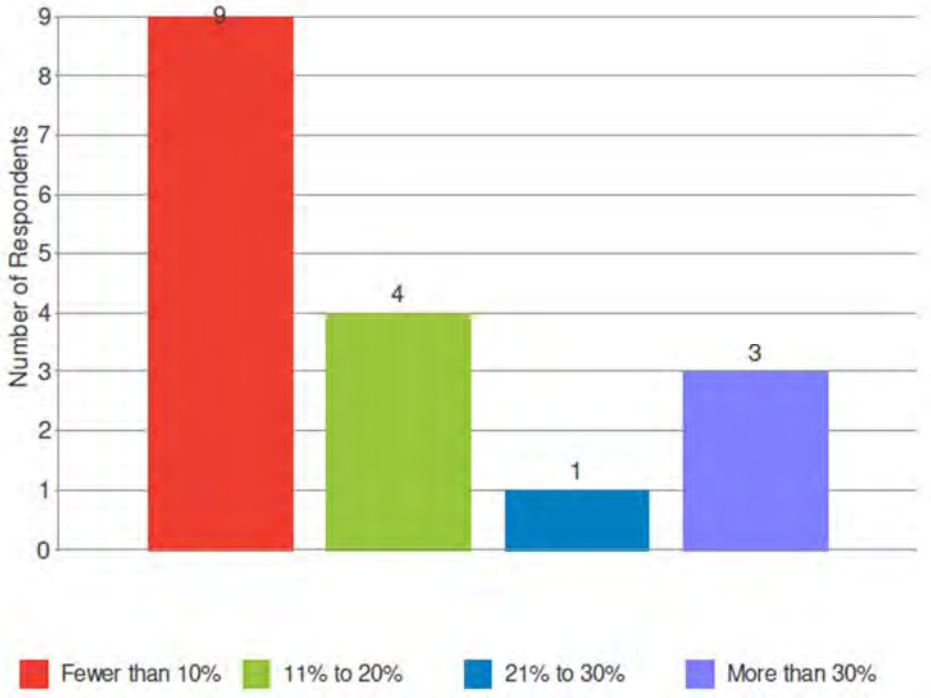
Source: Broadband provider survey

Source: July 19, 2017 article published in the Log Cabin Democrat

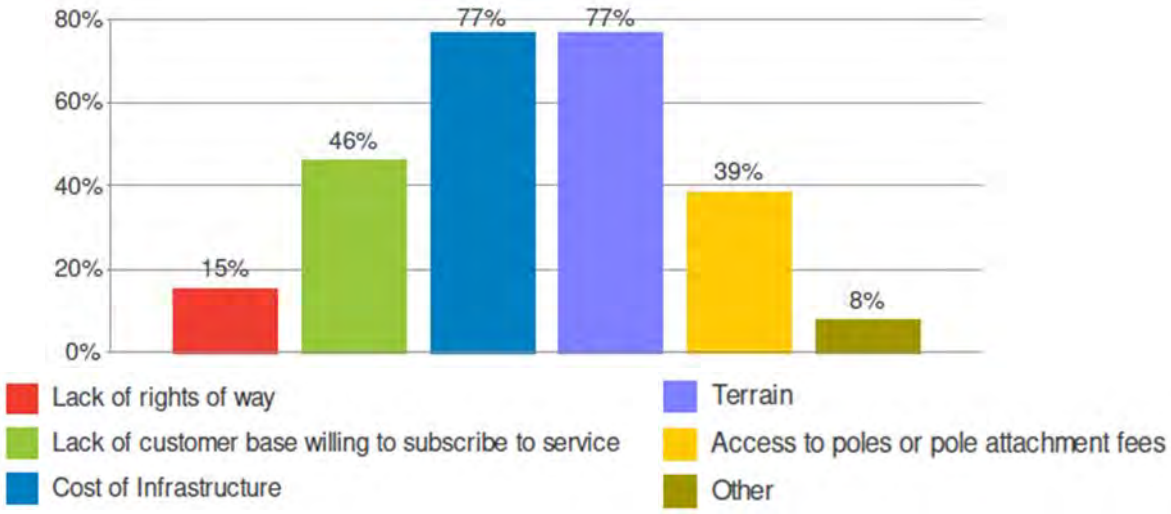
Provider Survey for Broadband Expansion

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:

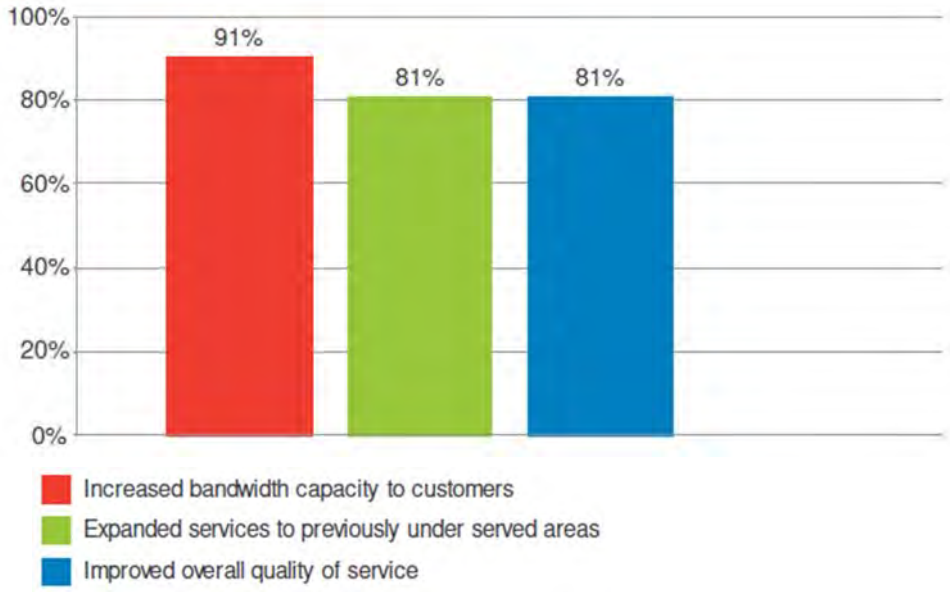
Q. What percentage of your customers are unserved?



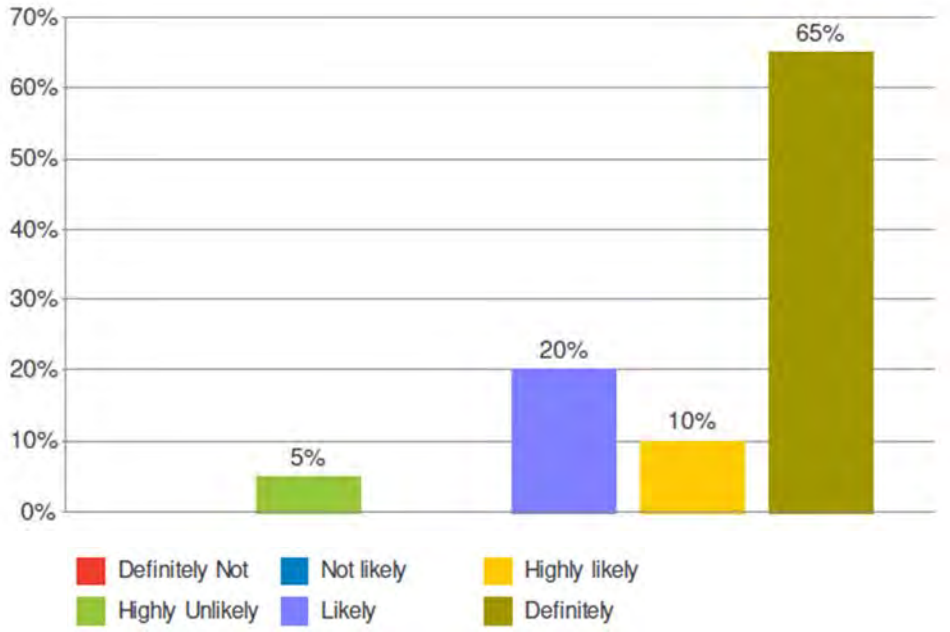
Q. What are the reasons for unserved areas?



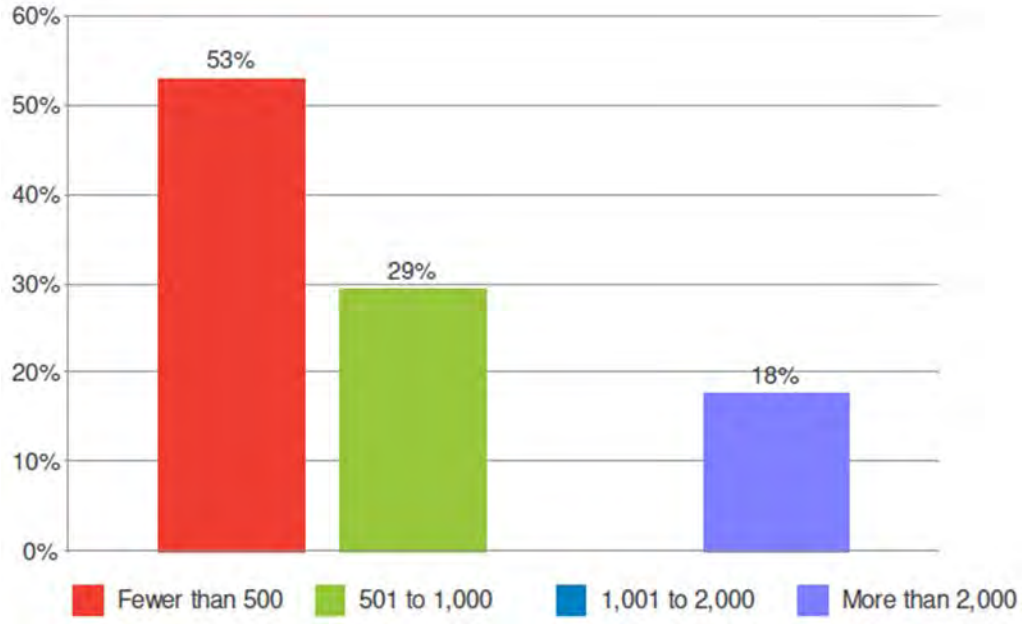
Q. Within the past year, what broadband improvement efforts have you undertaken within your service area?



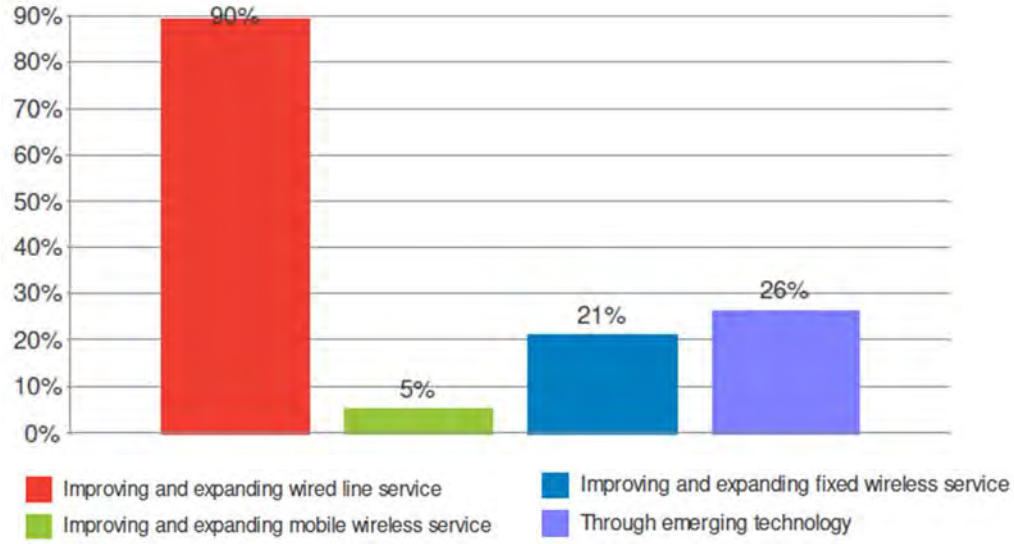
Q. How likely are you to expand broadband coverage in your service area in the next six months?



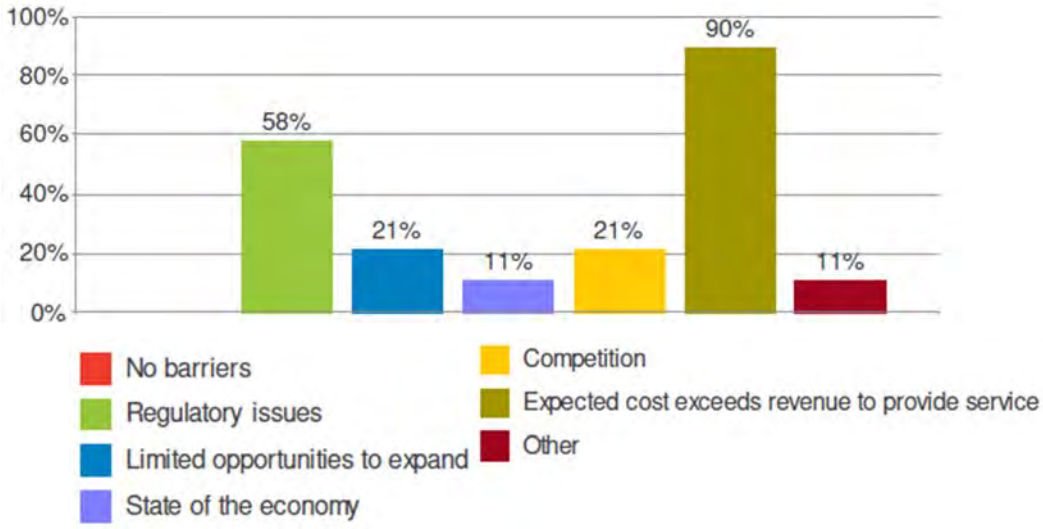
Q. If you are planning on expanding in the next six months, approximately how many new customers are you hoping to serve?



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



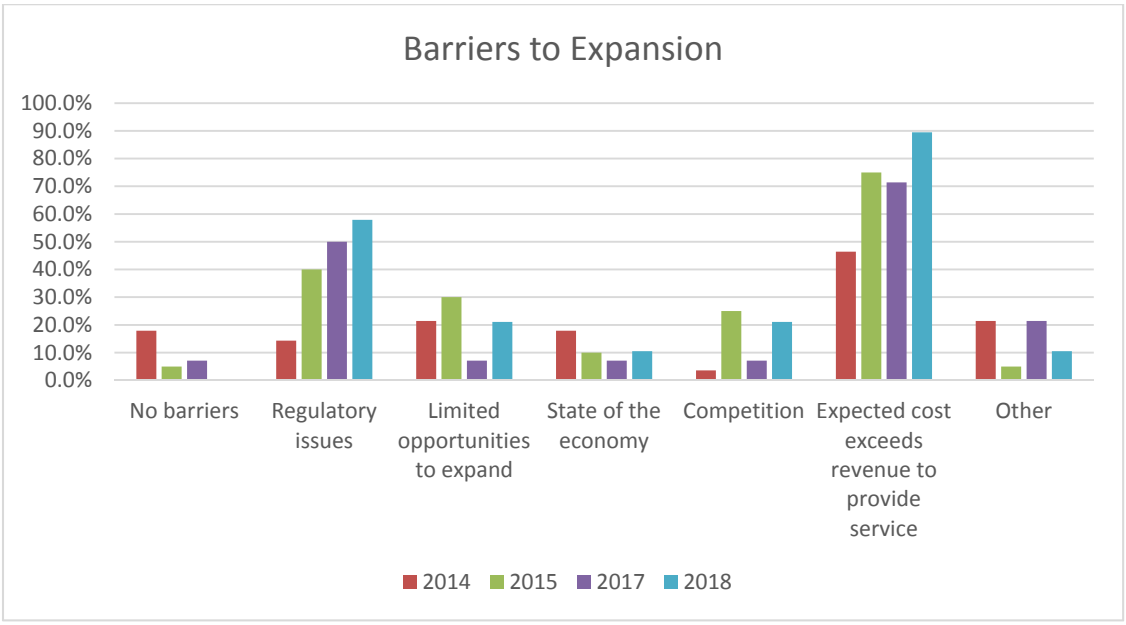
Q. Do you have barriers to expansion?

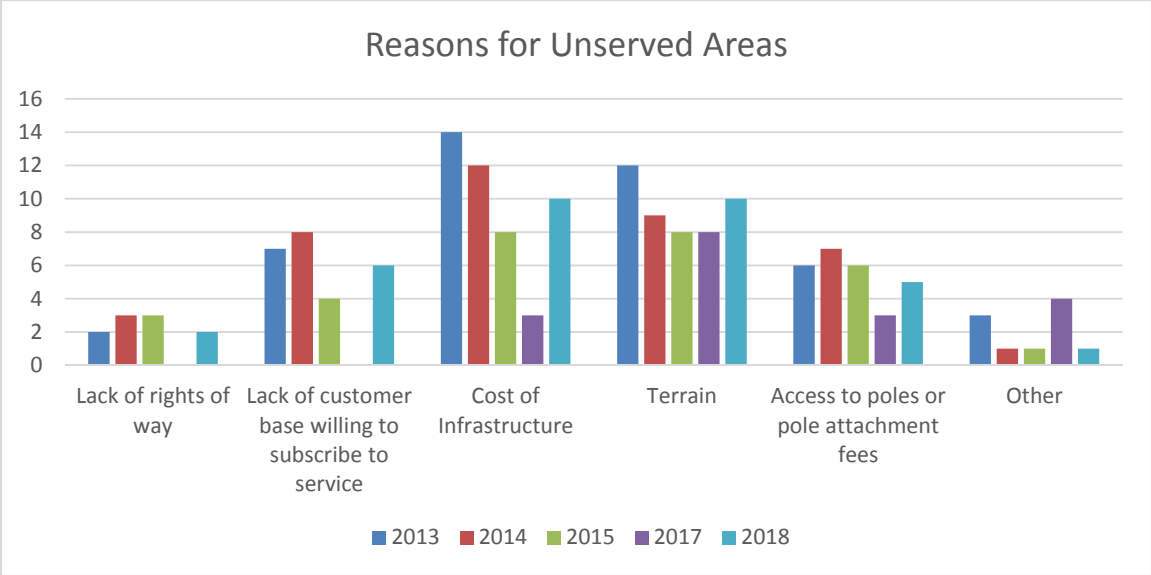


If other, please describe.

- 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. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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	1.490	88.7%	1.657	98.6%	1.362	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 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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%

	Pop. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		Pop. With Access	% of Pop.
Minnesota	5.513	5.102	92.6%	5.506	99.9%	4.843	4.768	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%	1.084	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%	0.466	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	99.2%	1.844	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. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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. Evaluated	Fixed 25 Mbps/ 3 Mbps		Mobile LTE 5 Mbps/ 1 Mbps		Pop. Evaluated	Mobile LTE 10 Mbps/3 Mbps	
		Pop. With Access	% of Pop.	Pop. With Access	% of Pop.		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

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	88
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	80.8	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	0.3
Wisconsin	76.9	0.4
District of Columbia	76.8	1.4
UNITED STATES	**76.7**	**0.1**
Idaho	76.7	0.9
North Dakota	76.3	1.0
Kansas	76.2	0.5
Ohio	76.1	0.2
Pennsylvania	75.7	0.3
South Dakota	75.3	1.2
Iowa	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	0.8
Louisiana	68.7	0.6
Alabama	68.3	0.5
New Mexico	67.2	0.9
Arkansas	64.2	0.5
Mississippi	61.0	0.8

Appendix VII

Project Concept and Buildings with State Entities Impacted

The Department of Information Systems (DIS) seeks to obtain dark fiber transport that will be configured in a ring and star topologies consisting of two (2) dark fiber network rings and fourteen (14) point to point dark fiber connections back to the state's primary data center (SDC-MAC) or the state's backup data center (SDC-West). Each connection will require one *pair* of fiber (two fiber strands) with the option for additional *pairs* as needed by the state. For rings 1 and 2 the vendor is asked to provide the cost for optional diverse routing of the fiber *pairs* between the two point sections of each ring.

Ring 1 (Table 1) is planned to connect all of the state agencies listed below:

- The State Primary Data Center – MAC (SDC-M)
- The State Backup Data Center - West (SDC-W)
- The State Ledbetter Building (LED) Data Center

Ring 2 (Table 2) is planned to connect all of the State agencies listed below:

- The State Primary Data Center (SDC-M)
- The State Backup Data Center - West (SDC-W)
- Donaghey Plaza North (Waldon Building) is located at: 108 East 7th St., Little Rock, AR 72201
- Mann on Main is located at: 324 South Main St., Little Rock, AR 72201
- Arkansas Department of Health (ADH) is located at: 4815 West Markham St., Little Rock, AR 72205
- Arkansas State Police (ASP) is located at: 1 State Police Plaza Dr., Little Rock, AR 72209

The following locations will connect to either the state's primary data center (SDC-M) or to the state's backup data center - west (SDC-W) via point to point connections in the most effective topology.

- Union Plaza 1 Building is located at: 124 West Capitol Av., Little Rock, AR 72201
- Department of Arkansas Heritage (DAH) is located at: 1100 North St., Little Rock, AR 72201
- City of Little Rock is located at: 718 West Markham St., Little Rock, AR 72201
- 5 Main Place is located at: 413 South Main St., Little Rock, AR 72201
- 1515 Building is located at: 1515 West 7th St Little Rock, AR 72201
- Arkansas Teacher Retirement is located at: 1400 W 3rd St. #200, Little Rock, AR 72201

• Arkansas Public Service Commission (PSC) is located at: 1000 Center St., Little Rock, AR 72201
• Arkansas Workers Compensation Commission (AWCC) is located at: 324 South Spring St., Little Rock, AR 72201

• Arkansas State Hospital (ASH) is located at: 305 South Palm St., Little Rock, AR 72205
• Little Rock School District (LRSD) Technical Center is located at: 7701 Scott Hamilton, Little Rock, AR 72209

• Arkansas State Highway and Transportation Department (AHTD) is located at: 10324 Interstate 30, Little Rock, AR 72209

• Arkansas Game and Fish Commission (AGFC) is located at: 2 National Resources Dr., Little Rock, AR 72205

• Arkansas State Crime Lab is located at: 3 Natural Resources Dr., Little Rock, AR 72205

• Arkansas Department of Environmental Quality (ADEQ) is located at: 5301 Northshore Dr. North Little Rock, AR 72118

• Arkansas National Guard (ANG) is located at: @Building 6200 Camp Robinson, North Little Rock, AR 72118

• AREON North Little Rock Hut is located at 2809 Eanes Road, North Little Rock, AR 72117

Appendix VIII

FCC TAKES NEXT STEP TOWARD $2 BILLION RURAL BROADBAND EXPANSION

Innovative Connect America Fund Phase II Reverse Auction Planned for 2018

WASHINGTON, August 3, 2017 – The Federal Communications Commission today took the next step toward launching an auction that will provide nearly $2 billion over ten years to expand high-speed Internet access to consumers and businesses in rural areas that are currently unserved by fixed broadband.

This proceeding represents the first use of an auction by the FCC to allocate ongoing Connect America Fund support for fixed broadband and voice services in rural areas. Use of this market-based "reverse auction" mechanism will enable the FCC to expand and support high-quality rural fixed broadband and voice services at a lower cost and to maximize the value of its investment.

The auction will commence in 2018. The Public Notice adopted today by the FCC seeks comment on the proposed application and bidding procedures for the auction, including how interested parties can qualify to participate in the auction, how bidders will submit their bids, and how the FCC will process bids to determine the winners and support amounts.

This first-of-its-kind auction of support for fixed broadband and voice service is expected to attract parties that have never participated in an FCC auction. Recognizing that, the FCC's Rural Broadband Auctions Task Force, along with the Wireline Competition Bureau and Wireless Telecommunications Bureau, plan to provide detailed educational materials and hands-on practice opportunities in advance of the auction.

For more information about the auction, visit https://www.fcc.gov/connect-america-fund-phase-ii-auction or e-mail RBATF@fcc.gov.

Action by the Commission August 3, 2017 by Public Notice (FCC 17-101). Chairman Pai, Commissioners Clyburn and O'Rielly approving and issuing separate statements.

AU Docket No. 17-182

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Appendix IX

Fact Sheet on Draft 2018 Broadband Deployment Report

Recognizing the importance of high-speed broadband Internet access, Congress in 1996 tasked the Federal Communications Commission with "encourag[ing] the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans." To ensure the Commission took this obligation seriously, Congress required the Commission to report on its progress each year.

Chairman Pai has circulated a draft 2018 Broadband Deployment Report to his colleagues and below are the key findings and additional information.

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 X

For Immediate Release

CHAIRMAN PAI PROPOSES OVER $500 MILLION IN FUNDING TO PROMOTE RURAL BROADBAND DEPLOYMENT

WASHINGTON, January 16, 2018—Federal Communications Commission Chairman Ajit Pai today shared with his fellow commissioners an order to promote more high-speed broadband deployment in rural areas. If adopted, it would provide over $500 million in additional funding for cooperatives and small rural carriers. The order would also put in place strong new rules to prevent abuse of the high-cost program. Finally, the order proposes several reforms to the FCC's high-cost program to improve its effectiveness and efficiency in promoting rural broadband deployment, including the use of a Tribal Broadband Factor to enable better access on Tribal lands. Chairman Pai offered the following statement:

"Closing the digital divide is the FCC's top priority. A key way to reach this goal in rural America is updating the FCC's high-cost universal service program to encourage cooperatives and other small, rural carriers to build more online infrastructure. We need more deployment in sparsely populated rural areas if we're going to extend digital opportunity to all Americans. But I've heard from community leaders, Congress, and carriers that insufficient, unpredictable funding has kept them from reaching this goal. With the $500 million in new funding provided by this order, we'll boost broadband deployment in rural America and put our high-cost system on a more efficient path, helping to ensure that every American can benefit from the digital revolution."

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This is an unofficial announcement of Commission action. Release of the full text of a Commission order constitutes official action. See MCI v. FCC, 515 F.2d 385 (D.C. Cir. 1974).

Appendix XI

All 50 States Choose FirstNet Public-Private Partnership for Public Safety Broadband Network

Topics:

FOR IMMEDIATE RELEASE:
December 29, 2017

News Media Contact:

- Commerce Department, Office of Public Affairs, 202-482-4883

WASHINGTON – Today, the U.S. Department of Commerce and the First Responder Network Authority (FirstNet) announced that all 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands have accepted FirstNet and AT&T's proposals to design and build a broadband network for the public safety community. Guam, the Pacific Territories of American Samoa, and the Mariana Islands have until March 12, 2018, to make their decision.

"With all 50 states and several territories participating in FirstNet, we have a clear path to delivering a truly nationwide broadband network for first responders," said U.S. Secretary of Commerce Wilbur Ross. "We are now one step closer to delivering on a key recommendation of the 9/11 Commission, and I commend the governors and leaders of these states and territories for demonstrating their commitment to the safety of all Americans."

"FirstNet will transform how first responders communicate as they respond to emergencies and protect the public in communities across the country, including rural America," said Assistant Secretary for Communications and Information and NTIA Administrator David Redl. "As we turn now to deployment, I look forward to continuing to work with FirstNet, AT&T, and first responders in all states, territories, and Washington, D.C., to make this network a reality."

Background

FirstNet is an independent authority within the Department of Commerce's National Telecommunications and Information Administration (NTIA). FirstNet's mission is to ensure the building, deployment, and operation of the nationwide broadband network that equips first responders to save lives and protect U.S. communities. In March 2017, the Department of Commerce and FirstNet announced a partnership with AT&T [3] to build and operate and the first responder network. It will deliver the technologies and infrastructure that public safety desperately needs for day-to-day operations, disaster response and recovery, and securing of large events.

First-of-its-Kind Solution Will Create Jobs, Spur Investment and Modernize Public Safety Communications throughout the State

RESTON, Va., July 13, 2017 – Today at the National Governors Association's summer meeting, Governor Asa Hutchinson announced his decision to join the FirstNet network. This will make Arkansas one of the first states in the country to "opt in" to FirstNet and bring advanced technologies that will help first responders save lives and protect communities.

"First responders put their lives on the line each day to protect our communities. I am excited to partner with FirstNet and AT&T to provide innovative communication technologies and tools that will help first responders protect communities and lives. This is a major step forward for the Arkansas public safety community, and I am proud that Arkansas is among the first states in the nation to opt in to this critical infrastructure project," said Governor Asa Hutchinson.

FirstNet and AT&T will build, operate and maintain a highly secure wireless broadband communications network for Arkansas' public safety community at no cost to the State for the next 25 years. The FirstNet network will deliver innovation and create an entire system of modernized devices, apps and tools for first responders.

This is one of the most economical and technologically advanced decisions Governor Hutchinson will make for the State's first responders and the residents they serve. The network will transform the way Arkansas' fire, police, EMS and other public safety personnel communicate and share information. Specifically, FirstNet and AT&T will:

- Connect first responder subscribers to the critical information they need in a highly secure manner when handling day-to-day operations, responding to emergencies and supporting large events such as the Arkansas State Fair and Riverfest.
- Create an efficient communications experience for public safety personnel in agencies and jurisdictions across the State during natural disasters. This includes fires and severe weather events like tornadoes, straight-line winds, ice storms and devastating flooding throughout Arkansas.
- Enhance network coverage in rural areas. This will benefit first responders and residents in less populated areas of the state.
- Drive infrastructure investments and create jobs across the State.
- Usher in a new wave of innovation that first responders can depend on. This will create an ever-evolving set of life-saving tools for public safety, including public safety apps, specialized devices and Internet of Things technologies. It also carries the potential for future integration with NextGen 9-1-1 networks and Smart Cities' infrastructure.

"Governor Hutchinson and I have shared a vision for a safe and secure country since our days in Homeland Security. Today, he has made one of the most economical and technologically advanced decisions he can make for the safety of Arkansas' residents and first responders," said former Pennsylvania Governor and Homeland Security Secretary Tom Ridge. "Participation in FirstNet is going to transform how Arkansas' first responders coordinate during emergencies and everyday situations."

The FirstNet solution that will be built in Arkansas was designed with direct input from the State's public safety community. Since 2013, FirstNet has met with Arkansas officials and public safety personnel more than 30 times to address their unique communication needs and challenges. This includes:

- Understanding the importance of serving the State's diverse coverage needs.
- Caring for coverage in rural areas and park and recreation grounds.
- Providing capacity in densely populated areas.
- Enabling access to dedicated network technologies that can be deployed in emergencies to support on-demand needs like search and rescue operations.

"Arkansas has been a tremendous partner to work with to plan and design this network," said FirstNet CEO Mike Poth. "With today's decision, Governor Hutchinson realizes public safety's efforts and sets this life-saving network into motion. We look forward to delivering the technology and communication tools that first responders need to serve and protect the residents of Arkansas."

The decision enables FirstNet and AT&T to begin creating an entirely new wireless ecosystem for public safety communications. Arkansas' first responder subscribers will have immediate access to quality of service and priority to voice and data across the existing nationwide AT&T LTE network.

Preemption for primary users over the AT&T LTE network is expected by year-end. This means fire, police, EMS and other public safety workers will have dedicated access to the network when and where they need it – 24/7/365, like their mission.

"It's a privilege to bring the FirstNet network to Arkansas," said Chris Sambar, SVP, AT&T – FirstNet. "Governor Hutchinson is making the safety of his first responders and Arkansans a top priority. His decision will give public safety the tools and technologies they need to keep themselves and those they protect safe."

"It is our honor to provide advanced communications capabilities to ensure Arkansas' first responder community has a network they can rely upon when needed most," said Ed Drilling, president, AT&T Arkansas. "AT&T has a long history with the public safety community, and together we know we will create a first-of-its-kind network that will help first responders operate faster, safer and more effectively when lives are on the line. We will bring first responders the coverage, value and experience they expect."

Appendix XII

Presidential Executive Order on Streamlining and Expediting Requests to Locate Broadband Facilities in Rural America

LAND & AGRICULTURE | Issued on: January 8, 2018

★ ★ ★

STREAMLINING AND EXPEDITING REQUESTS TO LOCATE BROADBAND FACILITIES IN RURAL AMERICA

By the authority vested in me as President by the Constitution and the laws of the United States of America, and in order to promote better access to broadband internet service in rural America, it is hereby ordered as follows:

Section 1. Policy. Americans need access to reliable, affordable broadband internet service to succeed in today's information-driven, global economy. Currently, too many American citizens and businesses still lack access to this basic tool of modern economic connectivity. This problem is particularly acute in rural America, and it hinders the ability of rural American communities to increase economic prosperity; attract new businesses; enhance job growth; extend the reach of affordable, high-quality healthcare; enrich student learning with digital tools; and facilitate access to the digital marketplace.

It shall therefore be the policy of the executive branch to use all viable tools to accelerate the deployment and adoption of affordable, reliable, modern high-speed broadband connectivity in rural America, including rural homes, farms, small businesses, manufacturing and production sites, tribal communities, transportation systems, and healthcare and education facilities.

To implement this policy and enable sustainable rural broadband infrastructure projects, executive departments and agencies (agencies) should seek to reduce barriers to capital investment, remove obstacles to broadband services, and more efficiently employ Government resources.

Among other actions, the executive branch will continue its implementation of section 6409 of the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law 112-96)("section 6409"), which requires, among other things, that the General Services Administration (GSA) develop a common form and master contract for wireless facility sitings on buildings and other property owned by the Federal Government. These documents enable the Federal Government to process wireless facility siting requests more efficiently and will also provide additional predictability regarding the availability of locations for asset installation to installers of wireless broadband facilities.

Sec. 2. Reviewing Requests to Locate Broadband Facilities on Federal Real Property. (a) Within 180 days of the date of this order, the Administrator of General Services (Administrator), in coordination with the heads of Federal property

managing agencies, shall evaluate the effectiveness of the GSA Common Form Application for use in streamlining and expediting the processing and review of requests to locate broadband facilities on Federal real property.

(b) As part of this evaluation, the Administrator shall determine whether any revisions to the GSA Common Form Application are appropriate and, to the extent consistent with law, shall begin implementation of any such revisions.

(c) In furtherance of section 6409, all applicants and Federal property managing agencies shall use the GSA Common Form Application for wireless service antenna structure siting developed by the Administrator for requests to locate broadband facilities on Federal property. Federal property managing agencies shall expeditiously review and approve such requests unless an approval would negatively affect performance of the agency's mission or otherwise not be in the best interests of the United States.

(d) Within 180 days of the date of this order, and on a quarterly basis thereafter, all Federal property managing agencies shall report to the GSA regarding their required use of the Common Form Application, the number of Common Form Applications received, the percentage approved, the percentage rejected, the basis for any rejection, and the number of working days each application was pending before being approved or rejected. Each report shall include the number of applications received, approved, and rejected within the preceding quarter.

(e) Ninety days after the date of this order, and on a quarterly basis thereafter, the Administrator shall prepare and provide to the Director of the Office of Management and Budget (Director) an aggregated summary report detailing results from the reports submitted under subsection (d) of this section. Not later than 1 year from the date of this order, the Administrator shall recommend to the Director improvements to the Common Form Application needed to further the purposes of this order.

Sec. 3. Definitions. As used in this order:

(a) The term "Federal property managing agencies" means agencies that have custody and control of, or responsibility for managing, Federal lands, buildings, and rights of way, federally assisted highways, and tribal lands.

(b) The term "Federal real property" has the same meaning as that term has in Executive Order 13327 of February 4, 2004 (Federal Real Property Asset Management).

Sec. 4. General Provisions. (a) Nothing in this order shall be construed to impair or otherwise affect:

(i) the authority granted by law to an executive department or agency, or the head thereof; or

(ii) the functions of the Director relating to budgetary, administrative, or legislative proposals.

(b) This order shall be implemented consistent with applicable law and subject to the availability of appropriations.

(c) This order is not intended to, and does not, create any right or benefit, substantive or procedural, enforceable at law or in equity by any party against the United States, its departments, agencies, or entities, its officers, employees, or agents, or any other person.

DONALD J. TRUMP

Appendix XIII

AT&T Expands High-Speed Internet in Communities across AR

LITTLE ROCK, Ark. (News release) — AT&T has expanded internet access in communities throughout Arkansas to better serve those in rural and urban areas alike.

As part of our FCC Connect America Fund commitment, AT&T has deployed high-speed internet service to unserved and underserved locations in parts of 40 counties serving more than 26,000 Arkansas locations.1 For much of this rural deployment, AT&T is using its Fixed Wireless Internet service.

Launched in Arkansas in September 2017, this innovative service delivers an internet connection with download speeds of at least 10 Mbps and upload speeds of at least 1 Mbps.

"Access to broadband service is key for today's digital economy," said Senator Jonathan Dismang, Pro-Tempore of the Arkansas Senate. "New technologies such as these will assist in closing the access gap that is present in certain areas of rural Arkansas. I'm excited to see AT&T investing in this way."

Parts of the following 40 counties in Arkansas are now eligible for this internet service from AT&T:

Benton, Bradley, Carroll, Chicot, Clark, Cleburne, Columbia, Conway, Craighead, Crawford, Crittenden, Cross, Drew, Faulkner, Garland, Grant, Greene, Hempstead, Hot Spring, Independence, Jackson, Jefferson, Lafayette, Lawrence, Lee, Lincoln, Little River, Madison, Mississippi, Monroe, Nevada, Ouachita, Poinsett, Polk, Pulaski, Saline, Sharp, St. Francis, Union, White.

"It's nice to finally have a fast, dependable connection, even though we live in a rural area," said Judy McCool, Hot Spring County resident. "It's especially great for our triplet granddaughters who live with us. Each has a laptop to complete school work and EAST Initiative projects at home. Before the new AT&T technology was installed, we had to go to the county library seven miles away to connect to the Internet."

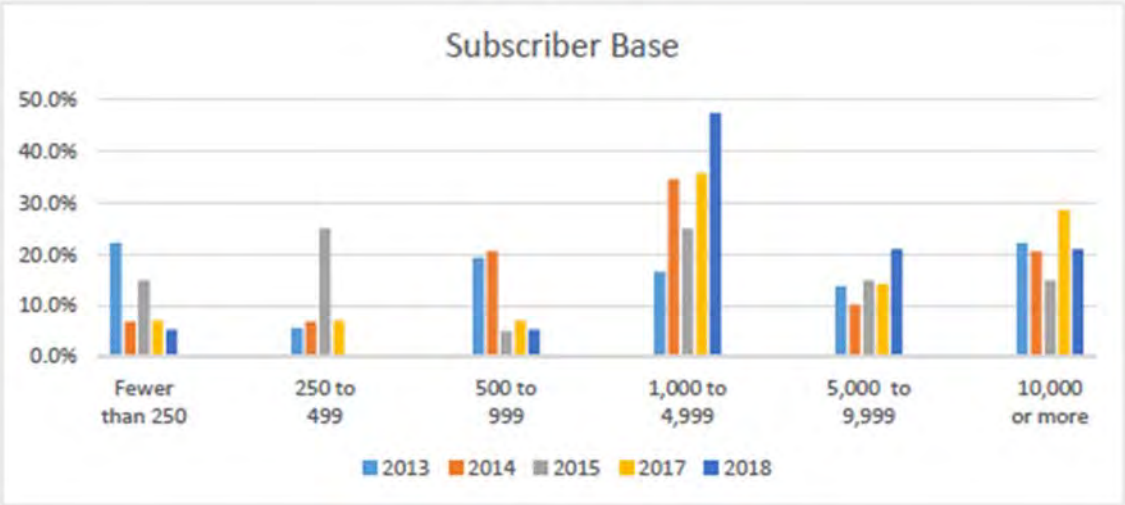
"The thousands of dedicated men and women who work for AT&T and call Arkansas home are proud to work with our state's political leadership to provide the connectivity Arkansas' residents and businesses demand," said Ronnie Dedman, regional director of External Affairs for AT&T Arkansas.

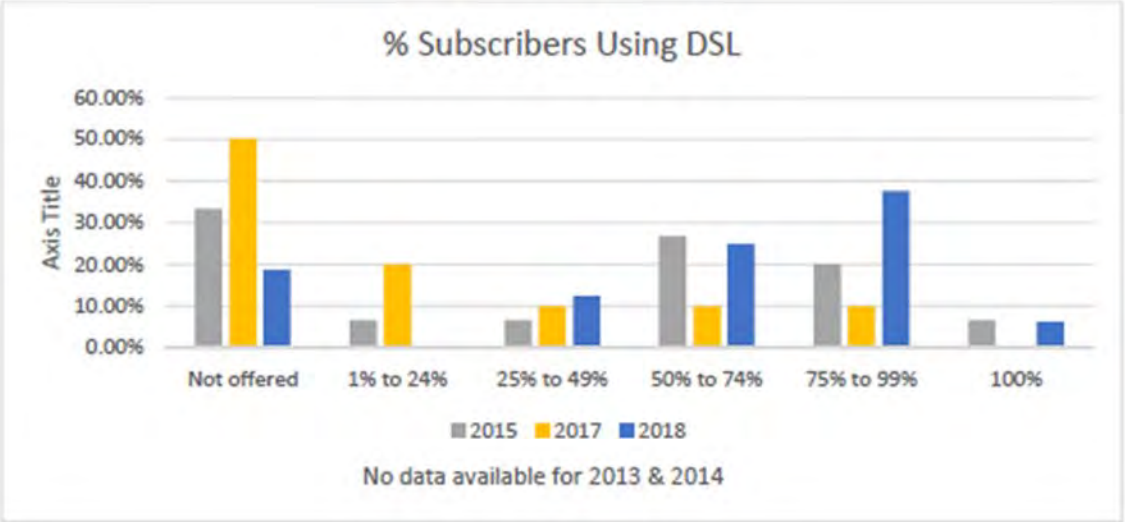
Connect America Fund Deployment:
AT&T has extended high-speed internet as part of its FCC Connect America Fund commitment to help predominantly rural areas. As a part of that commitment, AT&T began offering high-speed internet to over 440,000 locations across 18 states last year, and will expand that offer to more than 1.1 million locations nationwide by the end of 2020, many getting access to high-speed internet for the first time. In Arkansas, AT&T is committed to extending high-speed internet service to more than 50,000 locations across the state over the next several years.

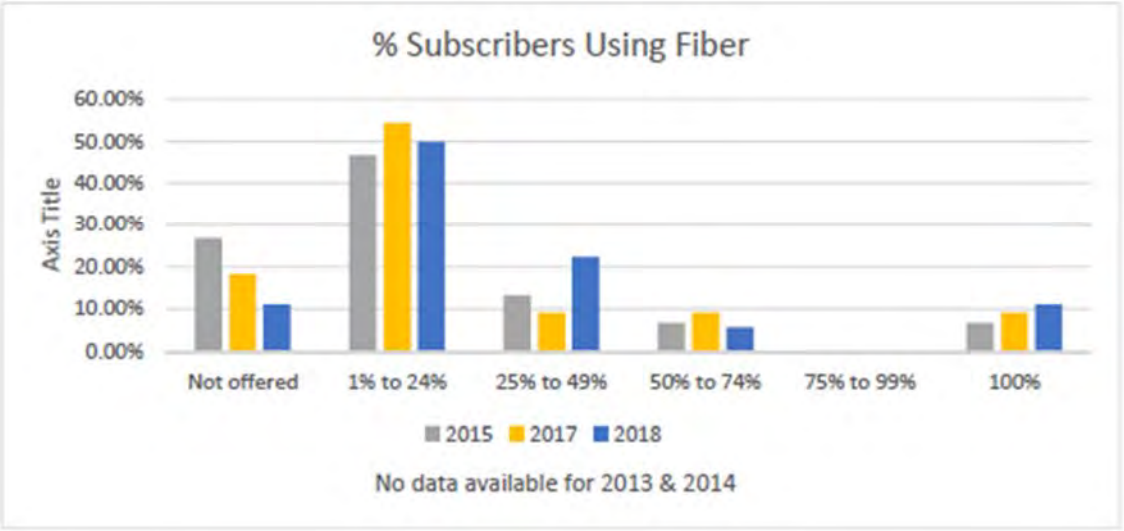
To determine eligibility, interested consumers living in the counties listed above may call toll-free 1-877-990-0041. AT&T will continue making community-specific announcements in Arkansas in the months ahead, providing updates about additional availability as we expand high-speed internet to more locations.

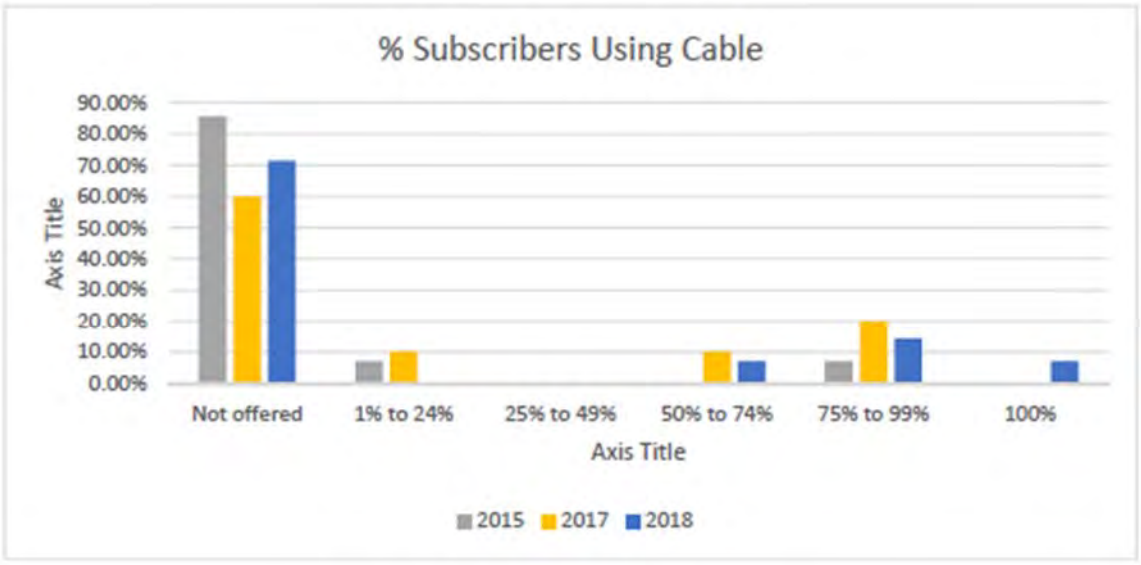
Appendix XIV

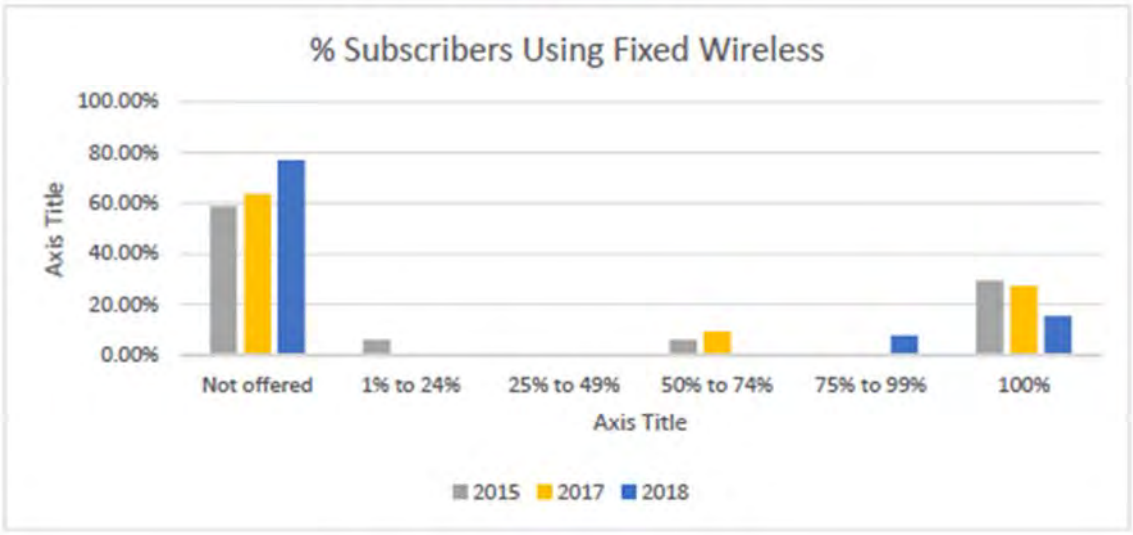
Provider Survey Trending Data Charts

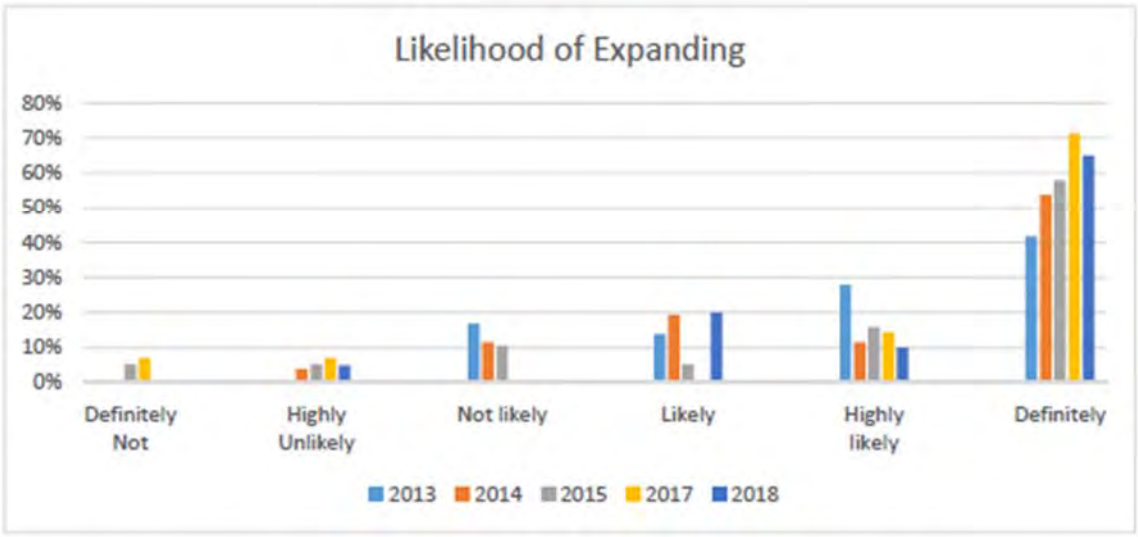


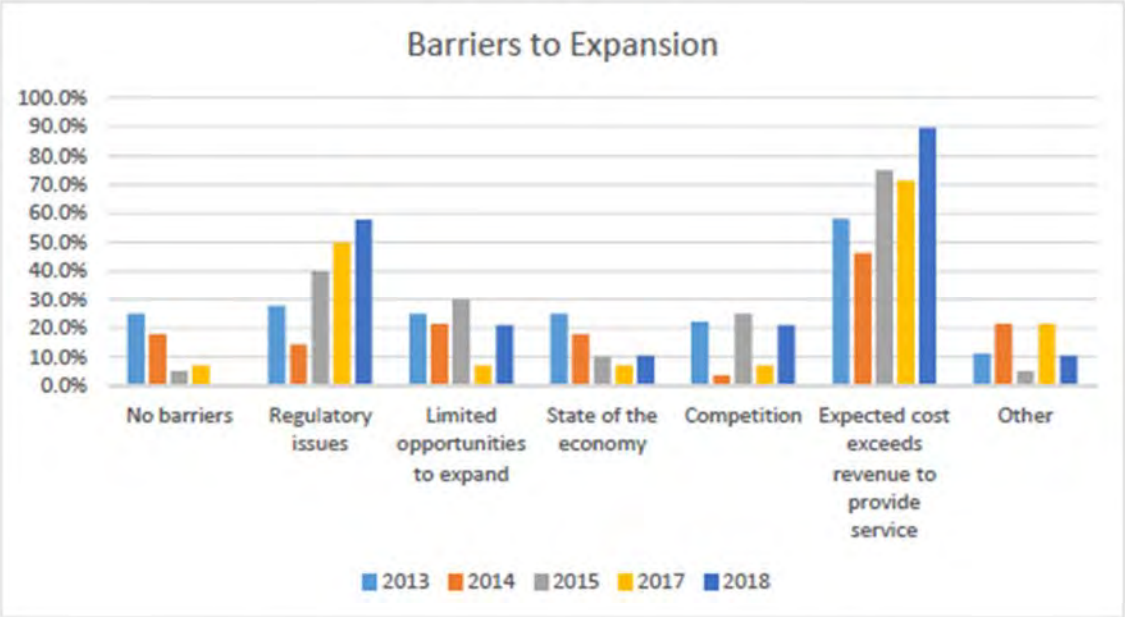


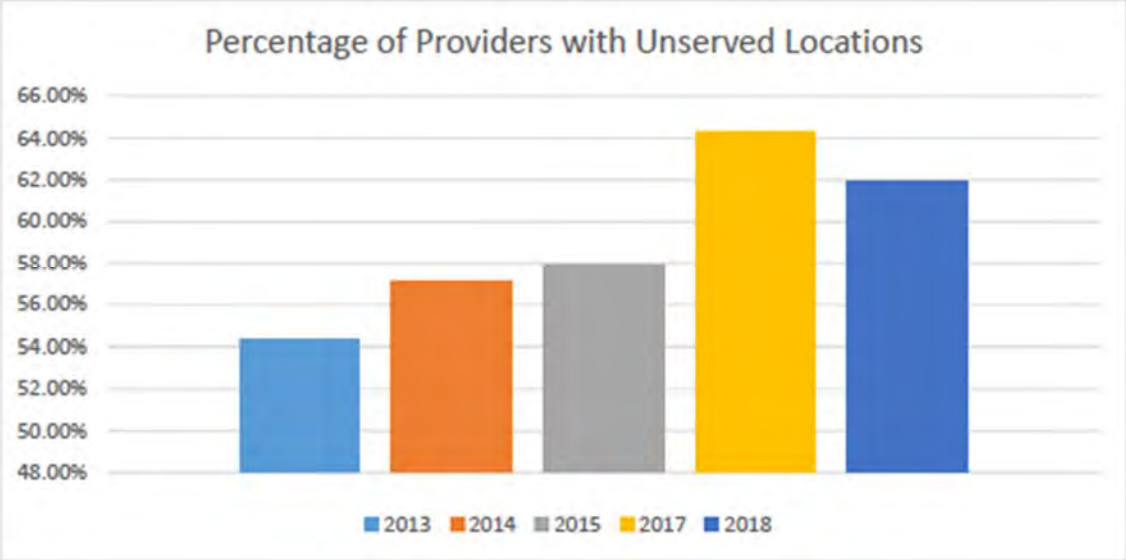


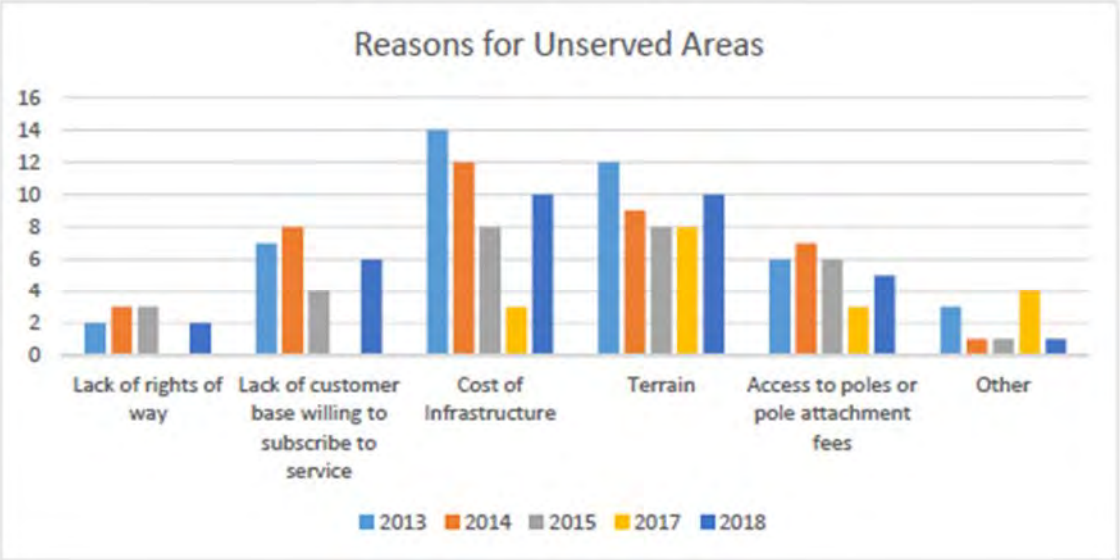

% Subscribers Using Cable
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
Axis Title
Not offered
1% to 24%
25% to 49%
50% to 74%
75% to 99%
100%
Axis Title
2015
2017
2018

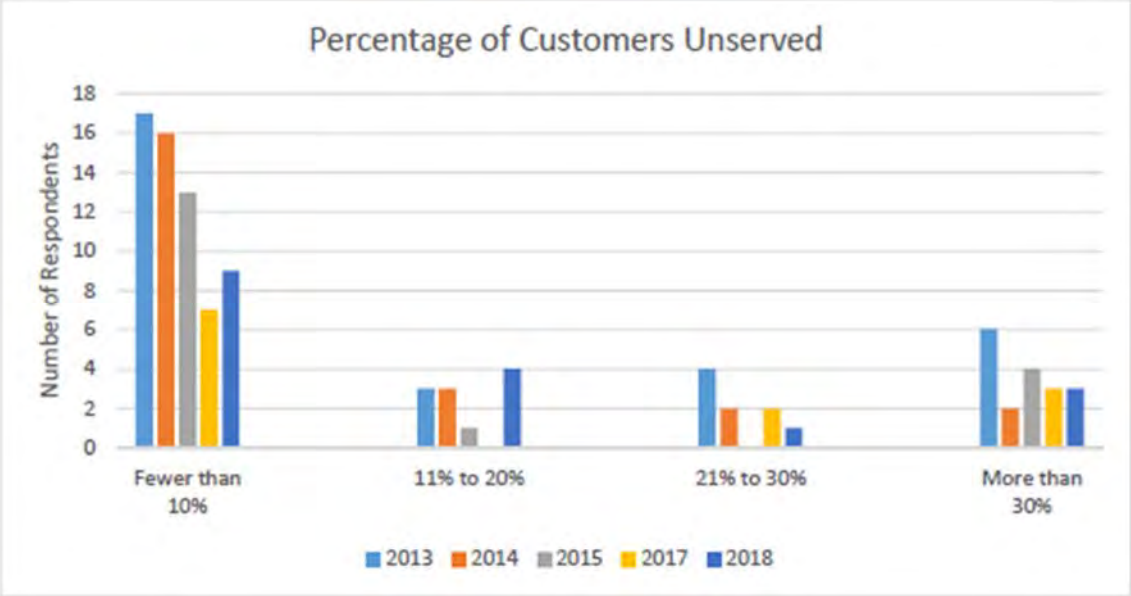

% Subscribers Using Fixed Wireless
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
Axis Title
Not offered
1% to 24%
25% to 49%
50% to 74%
75% to 99%
100%
Axis Title
2015
2017
2018

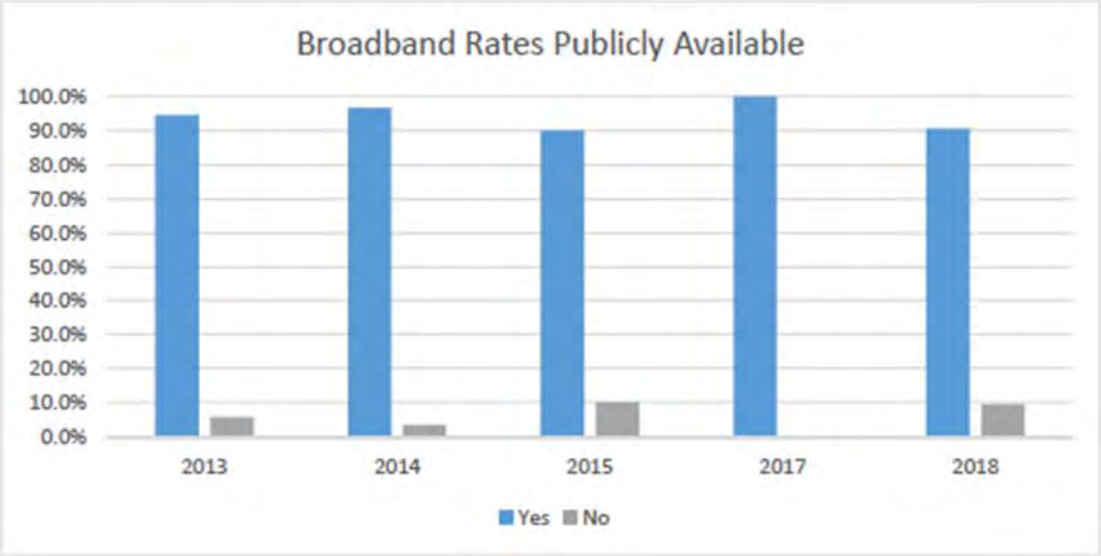

Likelihood of Expanding
80%
70%
60%
50%
40%
30%
20%
10%
0%
Definitely Not
Highly Unlikely
Not likely
Likely
Highly likely
Definitely
2013
2014
2015
2017
2018

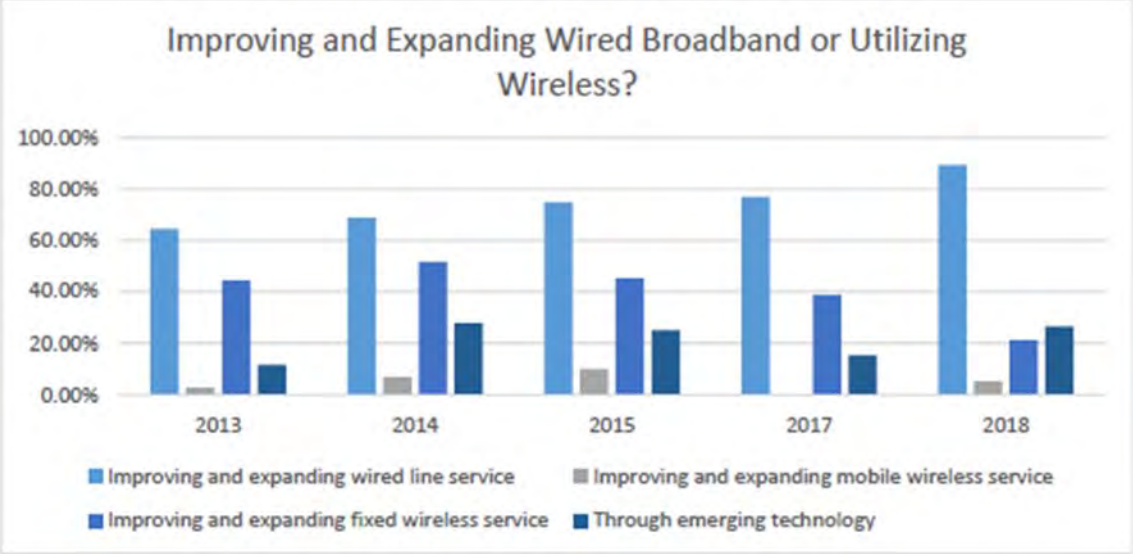

Barriers to Expansion
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
No barriers
Regulatory issues
Limited opportunities to expand
State of the economy
Competition
Expected cost exceeds revenue to provide service
Other
2013
2014
2015
2017
2018

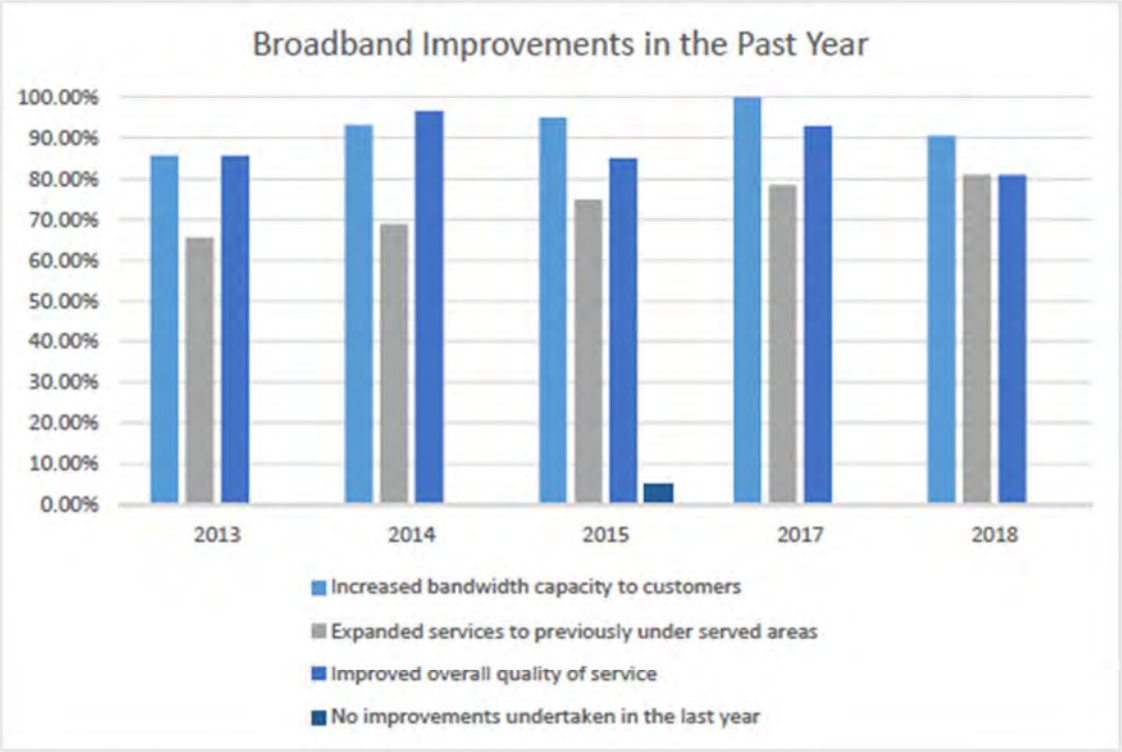

Percentage of Providers with Unserved Locations
66.00%
64.00%
62.00%
60.00%
58.00%
56.00%
54.00%
52.00%
50.00%
48.00%
2013
2014
2015
2017
2018

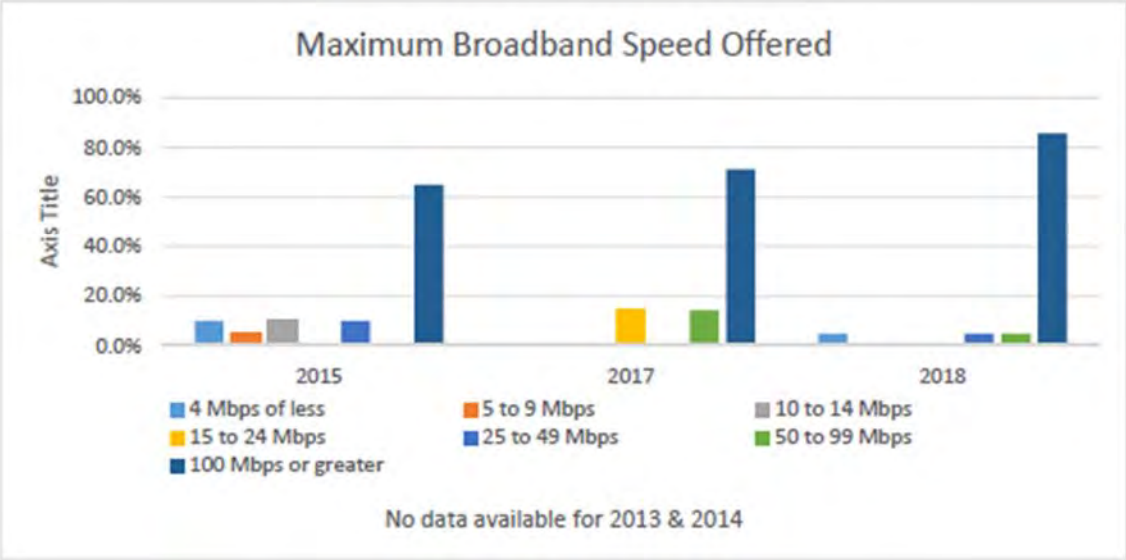

Reasons for Unserved Areas
16
14
12
10
8
6
4
2
0
Lack of rights of way
Lack of customer base willing to subscribe to service
Cost of Infrastructure
Terrain
Access to poles or pole attachment fees
Other
2013
2014
2015
2017
2018


Percentage of Customers Unserved
Number of Respondents
18
16
14
12
10
8
6
4
2
0
Fewer than 10%
11% to 20%
21% to 30%
More than 30%
2013
2014
2015
2017
2018


Broadband Rates Publicly Available
100.0%
90.0%
80.0%
70.0%
60.0%
50.0%
40.0%
30.0%
20.0%
10.0%
0.0%
2013
2014
2015
2017
2018
Yes
No


Improving and Expanding Wired Broadband or Utilizing Wireless?
100.00%
80.00%
60.00%
40.00%
20.00%
0.00%
2013
2014
2015
2017
2018
Improving and expanding wired line service
Improving and expanding mobile wireless service
Improving and expanding fixed wireless service
Through emerging technology


Broadband Improvements in the Past Year
100.00%
90.00%
80.00%
70.00%
60.00%
50.00%
40.00%
30.00%
20.00%
10.00%
0.00%
2013
2014
2015
2017
2018
Increased bandwidth capacity to customers
Expanded services to previously under served areas
Improved overall quality of service
No improvements undertaken in the last year


Maximum Broadband Speed Offered
100.0%
80.0%
60.0%
40.0%
20.0%
0.0%
Axis Title
2015
2017
2018
4 Mbps of less
5 to 9 Mbps
10 to 14 Mbps
15 to 24 Mbps
25 to 49 Mbps
50 to 99 Mbps
100 Mbps or greater
No data available for 2013 & 2014