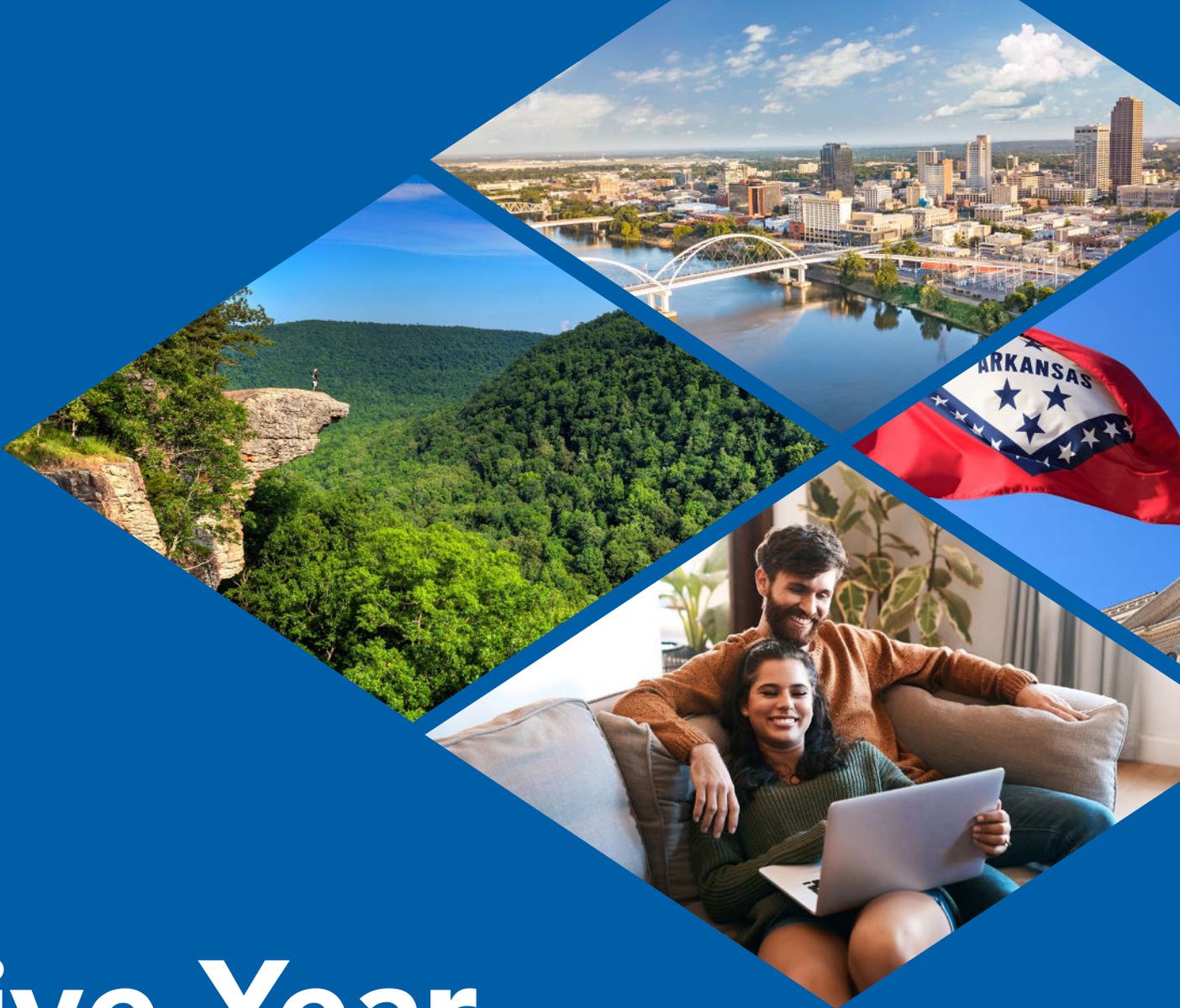




ARConnect
The Arkansas State Broadband Office



Five-Year Action Plan

AUGUST 2023

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1.0 EXECUTIVE SUMMARY

The Arkansas State Broadband Office (ARConnect) was created in 2019 to address the critical need of Arkansans for affordable, reliable high-speed internet. In partnership with the General Assembly and at the direction of the Office of the Governor, ARConnect began identifying broadband gaps and fostering public-private partnerships across the state to connect the unconnected. The Arkansas Rural Connect (ARC) Grant Program was launched to fund broadband infrastructure deployment in unserved areas of the state. Affecting the whole of our economy and society, the COVID-19 pandemic of 2020 only escalated the need for broadband access for every household and business in Arkansas.

Specific to broadband infrastructure deployment, Arkansas is ahead of many of its peer states. According to the latest release in May 2023 of the Federal Communications Commission's (FCC) National Broadband Map, there are 180,000 unserved homes and businesses in Arkansas. This number is less than the number of unserved locations in the states of Louisiana, Mississippi, Alabama, Georgia, and Missouri. This is due, in part, to the active nature of the ARC grant program. To date, the ARC grant program has funded three broadband infrastructure grant rounds, totaling nearly \$550 million in grants awarded across 185 projects that will ultimately connect nearly 130,000 homes and businesses. Even with this substantive progress, connectivity challenges remain for the existing 180,000 unconnected and under-connected locations across the state. These challenges prevent our residents and communities from igniting economic growth, improving outcomes in healthcare, enhancing agricultural output, and advancing the educational experience of our children.

Through the Broadband Equity, Access, and Deployment (BEAD) Program, Arkansas will have the resources to complete its broadband infrastructure buildout and upgrade. Broadband affordability will be addressed by designing an infrastructure grant program that fosters competitiveness and introduces new competition into the state's marketplace, driving down prices for consumers. ARConnect has also identified the connection between available, open-access middle-mile infrastructure and affordability and will collaborate with industry leaders to enhance middle-mile access to all internet service providers (ISPs). This plan also features strategies intended to implement digital skills initiatives that will increase the competitiveness of our state's economy and its residents.

The Five-Year Action Plan outlined herein describes the state of broadband in Arkansas in the past, the state-of-play today, and the path forward to universal connectivity.





2.0 OVERVIEW OF THE FIVE-YEAR ACTION PLAN

2.1 VISION

It is Governor Sanders’ vision, and ARConnect’s mandate, to eliminate the digital divide in Arkansas by 2028 and usher in an era of efficient, next-generation opportunity, society, and government. The process of eliminating the digital divide begins at its foundation, with broadband infrastructure deployment.

Since its establishment, ARConnect’s singular focus has been on the critical need for broadband infrastructure deployment, and for good reason: broadband infrastructure is foundational to all broadband efforts. Established in 2020, the ARC grant program has funded three grant rounds totaling nearly \$550 million in awards across 185 projects and 130,000 homes and businesses. However, according to the latest release of the FCC’s National Broadband Map, approximately 180,000 homes and businesses remain unserved in Arkansas. It is Governor Sanders’ top priority to connect these remaining 180,000 locations across the state by 2028.

We also have to think about broadband more broadly. Beyond infrastructure, the “broadband” issue is also an affordability issue and a digital skills issue.

Specific to affordability, Arkansas will design an infrastructure grant program that fosters competitiveness and introduces new competition into the state’s marketplace, driving down prices for consumers. ARConnect has also identified the connection between available, open-access middle-mile infrastructure and affordability and will collaborate with industry leaders to enhance middle-mile access to all internet service providers (ISPs).

Digital skills are key to economic growth, workforce development, small business expansion, and entrepreneurial endeavors in the 21st Century digital economy. ARConnect estimates that nearly 274,000 Arkansans in the traditional working age bracket of 18-64 may lack basic digital skills. This is not indicative of the skills needed to write code or create a website. Basic digital skills are akin to being able to take the mouse, navigate to Google, and apply for a job. The state will work to establish public-private partnerships and initiatives to reduce the existing digital skills gap.

Should Arkansas’ efficient and cost-effective execution of the BEAD program result in any excess funding, the state will look to advance additional priority broadband projects across socioeconomic sectors, including education, healthcare, small business, and agriculture, with a focus on innovative solutions.

By December 31, 2028, it is Governor Sanders’ vision to have universal broadband access in Arkansas, connecting every single home, business, and community anchor institution to affordable, reliable high-speed internet. We will design an infrastructure grant program that fosters competitiveness and introduces new competition into the state’s marketplace, driving down prices for consumers. We will work to reduce the digital skills gap, driving economic opportunity and workforce development for our residents. Lastly, the state will invest any excess funding across several socioeconomic sectors, prioritizing investment in innovative solutions throughout the state’s economy and society.

2.2 GOALS AND OBJECTIVES

The state’s overall goals, relative to comprehensive statewide investment of broadband program funds, are outlined below in Table 1.

TABLE 1: BROADBAND GOALS AND OBJECTIVES

GOAL	OBJECTIVE(S)
Broadband Infrastructure Deployment / Access	
<p>Expand broadband access to all unserved and underserved locations in the state</p>	<ul style="list-style-type: none"> • Connect 100% of broadband serviceable locations (homes and businesses) in Arkansas with access to reliable high-speed internet • Provide fiber technology to as many unserved and underserved locations as possible, with priority from lowest to highest cost-to-serve; evaluate alternative technologies for highest cost-to-serve locations • Enhance broadband access at community anchor institutions (CAIs)
<p>Increase broadband data collection, research, and utilization</p>	<ul style="list-style-type: none"> • Expand Arkansas’ broadband data analyses and interactive, public-facing tools • Educate the broader public on broadband opportunities, uses, and other pertinent information
Broadband Adoption	
<p>Increase broadband adoption rates by 50%</p>	<ul style="list-style-type: none"> • Increase public awareness of planned, ongoing, and completed broadband infrastructure projects (including those outside the purview of ARConnect); digital skills programming and events; and other broadband-related activities and opportunities • Create public awareness campaigns highlighting stories of broadband connectivity positively impacting lives and promoting positive use-cases in everyday life and business • Leverage state survey data, national research, and ISP perspectives to understand current and potential challenges to consumer adoption and develop proposed solutions to those challenges
<p>Reduce the digital skills gap, with enhanced focus on individuals in the traditional working age bracket (ages 18-64)</p>	<ul style="list-style-type: none"> • Identify any existing barriers that prevent Arkansans from using the internet to accomplish common, daily tasks, and work to mitigate against • Promote digital skills training, online safety programming, and financial literacy initiatives to populations demonstrating a substantive gap in digital skills
Broadband Affordability	
<p>Design an infrastructure grant program that fosters competitiveness and introduces new competition into the state’s marketplace</p>	<ul style="list-style-type: none"> • Utilize mechanisms within the ARC grant program to increase competition and competitiveness among ISPs, both in cost of project construction and package prices to consumers • Partner with ISPs to improve outreach and education on existing low-cost consumer plans • Coordinate with ISPs to encourage development of low-cost service plan thresholds for consumers, where economically feasible • Collaborate with federal, state, and industry leaders to enhance middle-mile access for all ISPs in the state

GOAL	OBJECTIVE(S)
Broadband Opportunity* ARConnect intends to separately submit its Digital Skills and Opportunity Plan to further identify goals, objectives, strategies, and planned activities. To date, the following have been identified:	
Enable efficient next-generation opportunity, society, and government	<ul style="list-style-type: none"> • Through innovative investment in broadband-related, non-deployment initiatives and programming, leverage public-private partnerships to enable efficient, next-generation opportunity, society, and government
Stimulate cross-sectoral economic growth through broadband-related, non-deployment activities	<ul style="list-style-type: none"> • Explore pathways to enable enhanced, broadband-related positive outcomes for all Arkansans across four key sectoral areas: education, healthcare, small business, and agriculture
Enhance workforce development	<ul style="list-style-type: none"> • Train new broadband and telecommunication industry workers • Collaborate with state government, private industry, and philanthropy, as well as secondary and post-secondary educational institutions, to meet workforce needs
<i>*These proposed goals and objectives are subject to excess funding resulting through efficient execution of the BEAD program.</i>	





3.0 CURRENT STATE OF BROADBAND AND DIGITAL OPPORTUNITY

3.1 EXISTING PROGRAMS

On January 13, 2020, the ARC grant program was established to provide funding and incentivize ISPs to deploy or improve broadband infrastructure in unserved and underserved communities across the state.

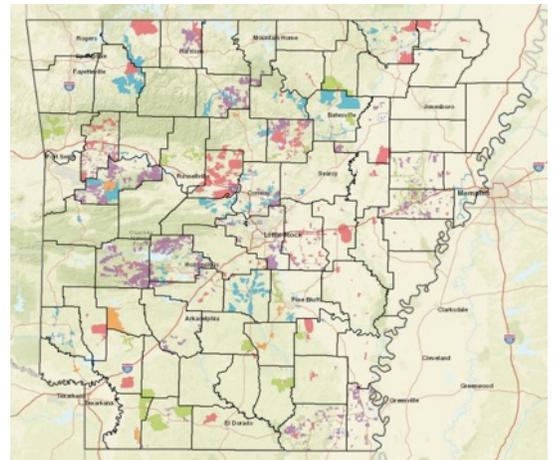
To date, the ARC program has funded three broadband infrastructure grant rounds, each with differing federal funding sources and regulatory guidance. Administered by ARConnect, ARC program grants have been awarded in 61 counties throughout the state. All ARC program grants can be found [here](#).

ROUND 1

Administration of the first round of the ARC program began in February 2020, using a combination of state general funds and federal Coronavirus Aid, Relief, and Economic Security (CARES) Act funding. In this initial round, ISPs were required to partner with county and/or municipal leadership and design their own project footprint areas. All award recipients in the first round of the ARC program were required to provide broadband tier packages at a minimum of 25:3 Mbps speed to potential subscribers. Round 1 was administered over two sub-rounds, totaling 76 projects awarded, \$118,102,067.07 allocated in grant funding, and approximately 55,700 locations served.

ROUND 2

The second round of the ARC program began in February 2021, using federal Coronavirus State and Local Fiscal Recovery Funds (SLFRF) Program funding. In the same manner as the first round a year earlier, ISPs were again required to partner with county and/or municipal leadership and design their own project footprint areas. All award recipients in the second round of the ARC Program were required to provide broadband tier packages at a minimum of 100:100 Mbps symmetrical speed to potential subscribers. Round 2 was administered over three sub-rounds, totaling 87 projects awarded, \$274,475,795.20 allocated in grant funding, and over 54,000 locations served.



Infrastructure Projects

- CARES Act/State Funding Round 1A/1B
- American Rescue Plan Funding Round 2A
- American Rescue Plan Funding Round 2B
- American Rescue Plan Funding Round 2C
- American Rescue Plan Funding Round 3
- Other

ROUND 3

The third round of the ARC program began in October 2022, using federal Capital Projects Fund program funding. Unlike previous rounds, ARConnect implemented recommendations from the state's [Broadband Master Plan](#) to predefine 40 project areas eligible for funding. As a result, ISPs were no longer allowed to define their own project footprints; ISPs could only seek funding to serve the state-defined 40 project areas. This enhanced, competitive application process garnered almost 100 applications, eventually securing approval for 22 projects by the Arkansas General Assembly. The 22 awards totaled \$147,251,108 in allocated grant funding to provide broadband services to approximately 19,700 locations. As with the second round, all award recipients were required to offer broadband packages with a minimum of 100:100 Mbps symmetrical speed to potential subscribers.

Table 2 below outlines ARConnect's current activities.



Installing conduit in rural north central Arkansas (Photo courtesy of Yelcot)

TABLE 2: CURRENT ARCONNECT BROADBAND ACTIVITIES

Activity Name	Description	Intended Outcome(s)
Arkansas Rural Connect (ARC) Grant Program	Provides funding and incentivizes ISPs to deploy or improve broadband infrastructure in unserved and underserved communities across the state	Assisting to eliminate the digital divide by connecting every remaining unserved and underserved location in the state to reliable high-speed internet
Digital Skills and Opportunity Outreach and Engagement	Stakeholder engagement, focus groups, surveys, and regional community listening sessions	Assisting to eliminate the digital divide by collecting information on how and why people use the internet, documenting what challenges exist, and collaboratively working with all stakeholders to procure needed resources to enhance digital skills and resulting opportunities

ARConnect anticipates expanding internal staff and external contracting support to implement BEAD programs. Tables 3 and 4 below depict existing and projected ARConnect staff, as well as external contractual relationships.

TABLE 3: CURRENT AND PLANNED FULL-TIME AND PART-TIME EMPLOYEES

Current/ Planned	Full-Time/ Part-Time	Position	Description of Role
Current	FT	State Broadband Director	Strategic leadership of the state's efforts to advance broadband initiatives
Current	FT	Broadband Grant Program Manager	Manages all pre- and post-award broadband grant activities
Current	FT	Broadband Project Manager	Manages qualitative and quantitative data and research, program and project planning and execution, as well as stakeholder engagement
Current	FT	Administrative Analyst	Manages all administrative functions, including grant expense reimbursement, legal communications, and stakeholder engagement
Current	PT	Financial Analyst	Financial auditing, reporting, and data tracking for all funding sources
Planned	FT	Digital Opportunity Manager	Will manage digital opportunity programming and reporting, as well as community engagement
Planned	FT	Broadband Assistant Controller	Will manage financial review, audit, and monitoring for compliance and funding program directives
Planned	PT	Student Interns	Will coordinate stakeholder engagement, social media, and other projects as needed

TABLE 4: CURRENT AND PLANNED CONTRACTOR SUPPORT

Current/ Planned	Full-Time/ Part-Time	Position	Description of Role
Current	PT	Strategic Planning Consultant	Advises on overall program strategy
Current	PT	Digital Opportunity Consultant	Advises on digital opportunity efforts and consults on Digital Skills and Opportunity Plan Development
Current	PT	Digital Skills and Opportunity Plan Developer	Guides research, analysis, and development of the Digital Skills and Opportunity Plan
Current	PT	BEAD Planning Developer	Responsible for drafting BEAD Five-Year Action Plan
Current	PT	BEAD Planning Developer	Data research and analysis, strategic guidance, and technical writing of BEAD Initial Proposal Vol. 1 and Vol. 2
Current	FT	Grant Program Administrator	Manages existing grant program processes, including technical review of applications, ongoing project monitoring, and financial reconciliation
Planned	PT	Mapping/Challenge Consultant	Will develop and provide data management support and technical design for challenge structure and public-facing challenge portal
Planned	PT	Application Technical Review	Application technical evaluation and review

The state, and entities within its jurisdiction, have been the recipient of federal and state funding dedicated to broadband-related initiatives, programs, and projects. Table 5 below illustrates broadband-related funding sources in Arkansas. Funding administered through ARConnect are notated.

TABLE 5: BROADBAND-RELATED FUNDING IN ARKANSAS

Source	Fund/Program	Purpose	Total
Federal	Connect America Fund (CAF) Phase II Model	Provided set monthly payments based on a forward-looking cost model to "price cap carriers" to build broadband service	\$1,455,845,504
Federal*	Broadband Equity, Access, and Deployment (BEAD) Program	Support the expansion of high-speed internet access by funding planning, infrastructure deployment, and adoption programs	\$1,024,303,993.86**
Federal	Federal Communications Commission (FCC) E-Rate	Allows schools and libraries to receive discounts on telecommunications, internet access, and related services	\$684,451,597.60
Federal	Rural Digital Opportunity Fund (RDOF)	Support the expansion of high-speed internet access by funding infrastructure deployment	\$424,243,217.60
Federal	Alternative Connect America Cost Model (ACAM)	Funding to rate-of-return carriers that voluntarily elected to transition to a new cost model for calculating High Cost support in exchange for meeting defined broadband build-out obligations	\$291,610,928.99
Federal*	Coronavirus State and Local Fiscal Recovery Funds (SLFRF) Program	Support entities' response and recovery from the COVID-19 pandemic, including high-speed internet deployment	\$229,647,382.45
Federal	Connect America Fund (CAF) Broadband Loop Support	Provides support for voice and broadband service, including stand-alone broadband	\$218,188,348
Federal	Emergency Connectivity Fund (ECF)	Funded through the American Rescue Plan Act (ARPA), supports internet services and connected devices for students, school staff, and library patrons	\$179,533,649.18
Federal*	Capital Projects Fund (CPF)	Provides funding through the American Rescue Plan Act (ARPA) to entities to fund critical capital projects that enable work, education, and health monitoring in response to the public health emergency, including high-speed internet infrastructure	\$158,000,000
Federal*	Coronavirus Aid, Relief, and Economic Security (CARES) Act	Direct economic assistance for workers, families, small businesses, and industries and implemented a variety of programs to address issues related to the onset of the COVID-19 pandemic, including broadband access	\$117,077,742.83
Federal	Alternative Connect American Cost Model (ACAM) II	Funding to rate-of-return carriers that voluntarily elected to transition to a new cost model for calculating High Cost support in exchange for meeting defined broadband build-out obligations	\$85,218,918.69
Federal	Affordable Connectivity Program (ACP)	Broadband benefit that provides eligible households with a monthly discount of up to \$30 per month and a one-time \$100 discount toward a laptop, desktop computer, or tablet	\$63,953,205
Federal	Connect America Fund (CAF) Phase II Auction	Provides support to carriers to deliver service in areas where the incumbent price cap carrier didn't accept CAF Phase II model-based funding and in extremely high-cost areas located within the service areas of the incumbent price cap carriers	\$37,977,387.29
Federal	Federal Communications Commission (FCC) Emergency Broadband Benefit (EBB) Program	Funding to lower the cost of broadband service for eligible households during the COVID-19 pandemic	\$23,094,350
Federal	ReConnect Loan and Grant Program	Funded through the Bipartisan Infrastructure Law (BIL), provides for the cost of construction, improvement, or acquisition of facilities needed to provide high-speed internet service in eligible rural areas	\$17,717,434
State*	Broadband Initiative	Initial state investment in broadband infrastructure funding, as well as administrative allowances	\$5,700,000
State	Arkansas Office of Skills Development (OSD)	Train new broadband and telecommunication industry workers to close the gap in the state's digital workforce	\$3,300,000
Federal	Connecting Minority Communities Pilot Program (CMC)	Provides funding to Philander Smith College to implement the Connecting Minority Communities Program	\$2,999,903

Source	Fund/Program	Purpose	Total
State	Arkansas' Rural Broadband I.D. Expenses Trust Fund Grant	Conduct studies in preparation for federal grant and loan applications for broadband development programs	\$2,000,000
Federal	Federal Communications Commission (FCC) COVID-19 Telehealth Program Phase I	Provides funds to help healthcare providers provide telehealth services to patients at their homes or mobile locations in response to the COVID-19 pandemic	\$1,739,139
Federal	Federal Communications Commission (FCC) Affordable Connectivity Program (ACP) Outreach Pilot Program	Provides funding to support outreach activities (including application assistance) by trusted, neutral third-party entities, such as schools and school districts, or other local or state government entities	\$1,670,000
Federal*	Digital Equity Act (DEA) Initial Planning Funds	Data research and analysis, stakeholder engagement activities, and planning related to the DEA program	\$843,673.10

* These funding sources are administered through ARConnect.
 ** \$4,999,998.75 already awarded for Internet infrastructure planning.



3.2 PARTNERSHIPS

Public-private partnerships are key to eliminating the digital divide in Arkansas and fostering such relationships remains the preferred method of action for developing effective stakeholder engagement and sourcing programmatic efforts. To assist in its mission of connecting the unconnected, ARConnect has and continues to partner with numerous public, private, nonprofit, and philanthropic organizations. Table 6 below provides a comprehensive listing of ARConnect’s partnerships, both past and present, across all three pillars of broadband: access (infrastructure deployment), affordability outreach, and digital skills and opportunity.

TABLE 6: PARTNERS

Partners	Description
AARP Arkansas	Committed to working with local leaders to improve residents’ quality of life by implementing quick-action projects that will jumpstart long-term change in their communities, especially for Arkansans over the age of 50
Accelerate Arkansas	Initial pilot group of five communities that worked with the Arkansas Connectivity Coalition and completed a 14-week intensive broadband training program meant to add organizational knowledge and capacity, specific to broadband, with the ultimate goal of bringing broadband service to the area using federal and state funding opportunities. The communities involved were Cleveland County, the City of Elaine, the City of Hughes, the City of Keo, and the City of West Memphis
Affordable Housing Association of Arkansas	With more than 80 member organizations representing over 12,000 affordable housing units around the state, Affordable Housing Association of Arkansas is dedicated to the enhancement of multi-family housing through promotion of professionalism of apartment management
Arkansas Association of Community Action Agencies	A non-profit organization that serves as the hub for a network of 14 community-based private, nonprofit organizations that provide assistance to low- and moderate-income individuals across the state
Arkansas Association of Counties	Provides a single source of cooperative support and information for all counties, and county and district officials, with the focus of improving county government in Arkansas
Arkansas Community Foundation	Since 1976, Arkansas Community Foundation has provided more than \$393 million in grants and partnered with thousands of Arkansans to help improve neighborhoods, towns, cities, and the state
Arkansas Connectivity Coalition	A group of 17 non-profit organizations with broadband interests working to prepare communities for establishing and implementing full-scale broadband connectivity visions
Arkansas Department of Corrections	Provides public safety by carrying out the mandate of the courts; provides a safe, humane environment for staff and inmates; strengthens work ethic through teaching of good habits; and provides opportunities for staff and inmates to improve spiritually, mentally, and physically
Arkansas Department of Education	Aims to ensure that every Arkansan is prepared, supported, and inspired to succeed in school, career, community, and life
Arkansas Department of Labor	Seeks to promote workplace health and safety through consultation and enforcement; protect employers and employees from financial burden imposed by work-related injury and disease; and provide consumer protection through occupational licensing as authorized by Arkansas law
Arkansas Electric Cooperatives, Inc.	Provides education, public relations, governmental affairs, and other support services to its 17 member-owners who are the electric distribution cooperatives in Arkansas; also sells electric utility materials and equipment and provides related services to and for electric utilities across the United States
Arkansas Farm Bureau	A grassroots organization that represents more than 190,000 families throughout the state by advocating for and promoting agriculture throughout Arkansas, the region, and the country
Arkansas Hospital Association	Works toward the betterment of hospitals by instituting spirited programs in education, government relations, research, and communications
Arkansas Impact Philanthropy	Convenes funders to collaborate, influence, and invest for economic improvement throughout Arkansas
Arkansas Office of Skills Development	A division of the Arkansas Department of Commerce, OSD strategically invests in all levels of the Arkansas workforce and worked with industry, educational, and nonprofit partners to create broadband-related workforce programs
Arkansas Rural Health Partnership	A non-profit healthcare network comprised of 16 rural hospital members, 3 medical teaching institutions, and 2 FQHCs throughout south Arkansas

Partners	Description
Arkansas State Chamber of Commerce	The leading voice for business in Arkansas and serves as the primary business advocate on all issues affecting Arkansas employers
Arkansas State University - Three Rivers	Trains new broadband and telecommunication industry workers to close the workforce gap
Arkansas Support Network	Provides support and services to individuals and families with children with disabilities
Arkansas Veterans Association	An organization that represents and supports veterans
Better Development Partners	A faith-based community in Little Rock that aims to improve quality of life for low-income, underserved, disadvantaged, and at-risk children, youth, and family
Communities Unlimited	A non-profit organization that serves seven states in the southern United States, connecting people to solutions through human connections
DecARate	A non-profit with active work inclusive of required covered populations
Diamond State Networks	A wholesale broadband provider that unites the fiber-optic networks of electric cooperatives throughout Arkansas
Disability Rights Arkansas	An independent, private, nonprofit organization designated by the governor to implement federally funded and authorized Protection and Advocacy systems throughout the state
EducationSuperHighway	Arkansas was the first state in the country to partner with the national non-profit EducationSuperHighway to close the broadband affordability gap through a statewide initiative to encourage Arkansans to enroll in the ACP program, if eligible
Forward Arkansas	A public-private partnership established in 2014 by the Arkansas State Board of Education, the Walton Family Foundation, and the Winthrop Rockefeller Foundation to increase student achievement and economic prosperity for Arkansas
Goodwill Industries of Arkansas	A non-profit that impacts underserved communities by providing education, training, and employment
Internet Service Providers	Since 2020, ARConnect has partnered with Internet Service Providers for broadband infrastructure deployment activities through the ARC program
Pulaski County Sheriff's Office	A government entity that requested county residents complete steps to identify areas in need of broadband access
Refugee Resettlement Office, a ministry of Catholic Charities of Arkansas	Provides services and assistance to refugees, asylees, Special Immigrants from Iraq and Afghanistan (SIVs), Cuban parolees, and victims of trafficking
Runway Group	A holding company making investments in real estate, outdoor initiatives, hospitality, and businesses committed to moving Northwest Arkansas forward
University of Arkansas - Community College Morrilton	Trains new broadband and telecommunication industry workers to close the workforce gap
University of Arkansas - Cossatot	Trains new broadband and telecommunication industry workers to close the workforce gap
University of Arkansas Cooperative Extension	A division of the University of Arkansas System leveraging resources and purposeful action to assist in eliminating the digital divide in Arkansas, with a focus on digital skills

3.3 ASSET INVENTORY

BROADBAND DEPLOYMENT

Many assets that could be valuable for broadband deployment are owned by public entities and/or located in the public right-of-way. There has been some advocacy for these assets to be used to help meet demands from residents for enhanced broadband access. However, there are several impediments to using such assets, including:

- Agreements by public entities with private partners that, in some cases, preclude them from using assets in ways that would compete with the private partners;
- Statutes such as Act 1050 of 2011 prohibit governmental entities from retailing communications services to the public;
- Desires by public entities to reserve excess capacity to meet anticipated future mission-related needs;
- Lack of capacity on the part of public entities to handle complex and/or voluminous transactions with private companies and/or individuals, and/or to govern and make use of revenues that might arise from such transactions; and
- Fairness issues and corruption risks arise when taxpayer-supported entities compete with profit-seeking businesses

Over the past few years, ARConnect has worked to establish a statewide repository of broadband data points to inform investment decisions. While some assets are categorized below, an objective of the BEAD program is to further catalog and leverage the assets that exist in Arkansas.

ARE-ON

The Arkansas Research and Education Optical Network (ARE-ON) provides a high-speed fiber optic backbone network and WAN services throughout Arkansas to directly service community anchor institutions' internet and data transport needs. As a self-funded public consortium, ARE-ON serves 41 members, including universities, community colleges, agricultural research stations, hospitals, and medical centers in rural and urban locations.

ARE-ON supports institutional connections of up to 100Gbps to its members, peering to national internet content providers, affiliates, national research and education networks, regional optical networks, and commercial service providers. The network consists of approximately 2,200 miles of long-haul fiber optic cable and about 85 miles of metro fiber in 24 cities in Arkansas and four neighboring states. ARE-ON's core router network consists of 9 core nodes connected via 20Gb or 100Gb backbone links with full route diversity to all nodes. The ARE-ON Network consists of mostly leased fiber and point-to-point network services from commercial providers that connect local institutions and the ARE-ON network with out-of-state major internet points of presence.

In addition, the ARE-ON Network provides optical transport between regions for the Arkansas e-Link Network, a telemedicine network of over 450 healthcare institutions statewide. ARE-ON also provides colocation facilities in 19 locations around Arkansas for local and regional ISPs, as part of its open access federal requirement and general stance.

E-LINK TELEMEDICINE NETWORK

UAMS e-Link is the statewide telemedicine network that securely connects local healthcare delivery locations with decentralized medical experts via local and regional broadband providers. UAMS e-link also brokers broadband delivery at over 450 healthcare, higher education, public safety, and research agencies across Arkansas, thus enabling each entity to transmit and receive real-time care and education. UAMS e-Link represents the \$102 million expansion of two existing networks: Arkansas Telehealth Network (ATN), managed by the Arkansas Telehealth Oversight and Management (ATOM) group, and the Arkansas Research and Education Optical Network (ARE-ON). Aligning partners from across Arkansas, this project improves broadband resources within all of Arkansas' 75 counties.

ARKANSAS DEPARTMENT OF TRANSPORTATION

Some fiber optic assets are located in the public right-of-way that is managed by the Arkansas Department of Transportation, and agreements with communications companies give the department certain rights of use in these fiber assets.

ARKANSAS STATE NETWORK

The Arkansas State Network is a private network dedicated to exclusive use for state departments, agencies, divisions, and boards and commissions within state government. The Arkansas Division of Information Systems (DIS) is legislatively mandated with the powers and duties necessary for implementing and managing the network and is responsible for "conceptualizing, designing, developing, building, and maintaining common information technology infrastructure elements used by state agencies and governmental entities" (Arkansas Code 25-4-105). Over 2,100 governmental sites, including K-12 public schools, are connected to the internet and state data infrastructure by the Arkansas Statewide Network.



ARKANSAS PUBLIC SCHOOL COMPUTER NETWORK (APSCN)

APSCN, the private network serving the state's K-12 school system and funded by the Arkansas Department of Education, underwent an upgrade to a high-speed broadband network delivered over fiber between 2015-2017. As a result of the upgrade, the network delivered internet speeds 40 times faster than the previous network. The network delivered a minimum speed of 200 kbps per user, doubling the federal recommendation of 100 kbps per user. In 2020 the network was upgraded to a minimum of 1 Mbps per user. Starting in the fall of 2023, DIS will be providing enhanced school network security by upgrading network equipment. Looking to the future, they will be sized to handle 3Mbps per user of network bandwidth.

ARKANSAS PUBLIC SAFETY BROADBAND NETWORK (FIRSTNET)

The First Responder Network Authority (FirstNet) was created by the Middle-Class Tax Relief and Job Creation Act of 2012 as an independent authority within the National Telecommunications and Information Administration (NTIA), to provide emergency first responders with the first high-speed, nationwide network dedicated to public safety. FirstNet is technically a federal asset; however, it plays an important role for Arkansas emergency first responders.

ARKANSAS WIRELESS INFORMATION NETWORK (AWIN)

The Arkansas Wireless Information Network (AWIN) is a statewide, multiple-site, digital 700/800 MHz trunked communications system. The AWIN provides statewide operations within the system's coverage area for public service entities using P-25 digital 700/800 MHz radios.

The AWIN serves the state by providing a reliable, statewide means of communication for the state's emergency first responders. The AWIN system consists of over 100 tower sites scattered throughout the state. Every county in the state has access to the system through its county emergency managers, but most counties have several other authorized users such as the county sheriff or local police departments.

UTILITY POLES

Utility poles may be classified by ownership as publicly-owned poles, poles belonging to investor-owned companies, and poles owned by nonprofits. Utility poles typically serve multiple purposes, of which the most important are electricity supply and communications. Some utility poles also provide street lighting.

In some communities throughout the state, electric utilities actively leverage their pole assets to help bring broadband to their communities. Some are becoming full-fledged broadband service providers, while others are cooperating with logistical support and reasonable cost to support third-party deployment on their poles. Barriers to pole usage include pole attachment fees, engineering drawings, project planning and coordination, make-ready work by the pole owner, safety compliance and insurance, record-keeping, auditing, and accounting.

In Arkansas, the Public Service Commission (PSC) regulates pole attachments. As such, pricing is somewhat controlled by requiring pole owners to permit new attachments, preferably at a negotiated price, but, if necessary, at a formula price administered by the PSC. The PSC encourages pole lessees and pole owners to negotiate and come to an agreement on their own. If they cannot agree, the PSC will calculate what the lessee must pay the pole owner in return for being allowed to add an attachment. Such fees should compensate the pole owner for the expense of maintaining the poles and provide an adequate return on the pole owner's investment, without unduly impeding the deployment of valuable new network services such as broadband.

TOWERS

In the proper circumstance, towers can function as key assets in broadband delivery. Many towers are publicly or quasi-publicly owned, such as AWIN towers or water towers. Other towers and vertical assets are privately controlled. In such cases, state policy avoids interfering with the property rights of private owners, either to require or to prevent the use of such privately-held vertical assets from being used for broadband deployment.

WORKFORCE DEVELOPMENT

The Office of Skills Development (OSD), housed within the Arkansas Department of Commerce, invested \$3.3 million in 2022 to train new broadband and telecommunication industry workers to close the gap in the state's digital workforce. The Fiber Broadband and Telecommunications Working Group, a partnership of industry leaders, state government officials, and educators, worked collaboratively to make this goal a reality. In partnership with the Arkansas Association of Community Colleges (ACC), key broadband-industry leaders, legislators, and educators selected three community colleges to develop and host non-credit training programs for broadband and telecommunications-related skills and offer one specialty program. The first part of the training is a foundational program, consisting of 10 courses covering core industry competencies. Once students have essential knowledge of safety standards and general knowledge of the broadband industry, they can choose from three specialty programs that cover specific aspects of broadband infrastructure deployment, including tower technicians, aerial linemen, and underground technicians. Each college offers the foundational program and its own specialty program:

- **Arkansas State University - Three Rivers:** Offers a program for telecommunication tower technicians.
- **University of Arkansas - Cossatot Community College:** Offers a program for aerial linemen training.
- **University of Arkansas - Community College of Morrilton:** Offers a program for underground technicians.



Installing fiber broadband service (Photo courtesy of Yelcot)

BROADBAND ADOPTION

Between 2017 and 2021, the U.S. Census Bureau reported that while 89.8% of households in Arkansas had computers in their home, only 79.7% of households had a broadband internet subscription.¹

Further, ARConnect estimates that approximately 274,000 Arkansans, in the traditional working age bracket of 18-64, may lack basic digital skills.

DIGITAL SKILLS

While not exhaustive, the following digital skills and opportunity programs are illustrative of active, impactful programming already occurring in Arkansas:

- **The Arkansas Digital Literacy Program** assists parents in navigating their children's online school system.
- The **University of Arkansas, Division of Agriculture 4-H Tech Changemakers Program** utilizes the technological expertise of 4-H members to teach digital skills to adults in their local communities. This program specifically focuses on improving employability skills and is active in 10 counties.
- The **Digital Connector Program** will train up to seven rural community-based partners in the following ways:
 - Cross-train direct service providers as Digital Connectors for user support, with a focus on assisting clients to become familiar with, and take advantage of, discounts with internet service providers, signing up for internet service, taking advantage of subsidies and other benefits, getting devices connected to the internet, basic troubleshooting of equipment problems, and understanding how to use digital platforms and applications such as telehealth and online banking.
 - Provide access to resources and guidance to introduce Northstar Digital Literacy, helping clients learn skills for jobs, lives, and livelihoods.
 - Purchase in-full or subsidize the cost of technology to support digital skill-building training and to support client access to affordable, reliable high-speed internet.
 - Develop a custom local resource guide that identifies connectivity and other digital opportunity supports to aid clients.
 - Support rural, community-based partners with high-value expert content and training. Content will include professional development resources to identify and leverage new funding to promote broadband and digital opportunity, increase collaborative partnerships, and build local capacity for community development.
- **Digital Literacy at the Central Arkansas Library System (CALs)** provides CALs members with technology classes and one-on-one assistance.

¹ "U.S. Census Bureau Quickfacts: United States." QuickFacts Arkansas; United States, www.census.gov/quickfacts/fact/table/US/PST045222. Accessed 17 July 2023.

PARTNERSHIP WITH EDUCATIONSUPERHIGHWAY

In 2021, Arkansas partnered with EducationSuperHighway and others to utilize federal resources and state funding to improve its statewide education network. The state has transformed from having some of the slowest K-12 internet connections to now having some of the fastest and serving as a national model. Arkansas was the first state in the country to meet the FCC's school broadband goal of 1 Mbps per student, providing enough bandwidth to make digital learning a reality in every classroom, daily. Further, at 200 kbps/user, the state doubled the FCC's minimum recommended connectivity of 100 kbps/per user.

ARKANSAS CONNECTIVITY COALITION

In July 2022, more than 15 state and local organizations committed to expanding internet access in Arkansas and announced the formation of the Arkansas Connectivity Coalition. This group was formed to help support the state's and local communities' plans to secure the federal dollars needed to expand access and ensure high-speed internet is more accessible and affordable across the state. Convened by Heartland Forward, the coalition is made up of nonprofits, advocacy organizations, thought leaders, and philanthropies, including the Arkansas Black Mayors Association, Arkansas Community Foundation, Arkansas Electric Cooperatives Inc., Arkansas Farm Bureau, Arkansas Impact Philanthropy, Communities Unlimited, Diamond State Networks, Forward Arkansas, Holman Strategies, Runway Group, University of Arkansas-Department of Communication, University of Arkansas System Division of Agriculture, Winrock International, and the Winthrop Rockefeller Foundation.

The first major effort of the coalition was the launch of Accelerate Arkansas, a 14-week planning and capacity-building program developed in coordination with the Benton Institute for Broadband & Society. Accelerate Arkansas offers structured community engagement to identify broadband goals, gather data, understand available funding options, and target capital dollars to support implementation.

BROADBAND AFFORDABILITY

BROADBAND COST SURVEY

A 2022 survey of over 15,000 residents in Arkansas found that 58% of respondents were unwilling to pay more than \$50 per month for internet service, and 32% would be willing to pay up to \$100 per month for internet service. Although respondents were not asked to disclose the current cost of their internet service, 32% indicated that they considered the internet to be "affordable" if service costs less than \$100 per month, and 45% considered it "affordable" if service costs less than \$50 per month. These results indicate that most respondents would be willing to pay a competitive price for internet service. About 11% indicated that a service cost of less than \$25 per month would be considered "affordable."

ARKANSAS RURAL CONNECT (ARC) GRANT PROGRAM

The Arkansas Rural Connect (ARC) Grant Program fosters competition and affordability. Through the application scoring process, more points are awarded to those applications offering lower internet service package prices to consumers as a result of the project. In short, the lower the cost of internet service, the more points that are awarded. An internet service provider (applicant) receives more points and is more likely to win a broadband deployment project by offering lower prices to consumers. This process necessitates an environment of competition among providers (applicants), which then leads to more affordable prices for consumers.

EMERGENCY BROADBAND BENEFIT (EBB) PROGRAM / AFFORDABLE CONNECTIVITY PROGRAM (ACP)

The Emergency Broadband Benefit (EBB) Program was initiated by the Federal Communications Commission (FCC) in June 2021 and utilized federal COVID-19 relief funding to provide eligible households with discounts of up to \$50 a month on home internet service. This funding aimed to make service more affordable and accessible for low-income families. In addition, the program offered a \$100 discount towards the purchase of a laptop, computer, or tablet from a participating provider. To ensure that qualifying Arkansans knew about the program, the state launched a public awareness campaign, including paid media, and coordinated community outreach through state agencies and local organizations.

On December 31, 2021, the Emergency Broadband Benefit (EBB) Program became the Affordable Connectivity Program (ACP). The ACP functions in much the same manner as the EBB program, except that the monthly benefit has been reduced from \$50 per month to \$30 per month. As of May 15, 2023, it is estimated that over 600,000 households in Arkansas are eligible for the ACP. Of these eligible households, 170,755 (28.5%) are enrolled in the program, representing a monthly economic impact of \$5.1 million.



Photo: Affordable Connectivity Program (ACP) enrollment event in Rison (June 2023)

SUBSIDIZED BROADBAND DEPLOYMENT

The Arkansas High Cost Fund (AHCF) is a state program that indirectly supports broadband deployment by helping to fund rural telecommunications providers. The AHCF, established by the Arkansas General Assembly in 2007, is the successor program to the Arkansas Universal Service Fund (AUSF), established in 1997, in the wake of the deregulatory nature of the Federal Telecommunications Act of 1996. In general, universal service programs, funded by charges on all consumers' phone bills, supplement revenues of rural telecommunications providers, as they operate in less dense, more costly areas. The goal of universal service programs is to provide rural consumers with access to communications services of comparable quality and price to those of more urban consumers, even though rural consumers are generally more costly to serve.

BROADBAND ACCESS

Specific to broadband infrastructure deployment, Arkansas is ahead of many of its peer states. According to the latest release in May 2023 of the Federal Communications Commission's (FCC) National Broadband Map, there are approximately 180,000 unserved homes and businesses in Arkansas. This number is less than the number of unserved locations in the states of Louisiana, Mississippi, Alabama, Georgia, and Missouri. This is due, in part, to the active nature of the ARC grant program. To date, the ARC grant program has funded three broadband infrastructure grant rounds, totaling nearly \$550 million in grants awarded across 185 projects that will connect nearly 130,000 homes and businesses. Even with this progress, connectivity challenges remain for the existing 180,000 unconnected locations across the state. These challenges prevent our residents and communities from igniting economic growth, improving outcomes in healthcare, enhancing agricultural output, and advancing the educational experience of our children.

PUBLIC COMPUTER ACCESS

Career education centers, community colleges, state offices, community-based organizations, and public libraries have served as valuable resources for Arkansans, offering public computer usage and, in some places, Wi-Fi availability.

- Arkansas has 56 career education and community college locations providing public computer access. A [file](#) is available for download containing the location names, addresses, and counties served.
- The Arkansas Department of Human Services operates 55 locations providing public computer access. A [file](#) is available for download listing the location names, addresses, and counties served.
- The Arkansas Division of Workforce Services operates 35 locations providing public computer access. A [file](#) is available for download listing the location names, addresses, and counties served.
- The Central Arkansas Development Council (CADC), a community-based organization, has 24 locations that provide public access to computers and Wi-Fi. A [file](#) is available for download listing the location names, addresses, and counties served.
- Goodwill Industries operates 24 locations in Arkansas where the public can access computers. A [file](#) is available for download listing the location names, addresses, and counties served.
- Arkansas has 214 public library system locations that provide access to public computers. Among these locations, 124 offer access to Wi-Fi. A [file](#) is available for download listing the public library systems, branch names, locations, and Wi-Fi availability.

PUBLIC WI-FI AVAILABILITY

Using crowdsourced data collection, the University of Arkansas published a map of publicly available Wi-Fi locations throughout the state. According to this [map](#), 131 public locations, excluding businesses, offer free Wi-Fi.

DIGITAL OPPORTUNITY

Arkansas recognizes that digital opportunity is a core component of broadband planning. As such, ARConnect intends to submit its state Digital Skills and Opportunity Plan separately to satisfy Requirement 11 of the Five-Year Action Plan.

3.4 NEEDS AND GAPS ASSESSMENT

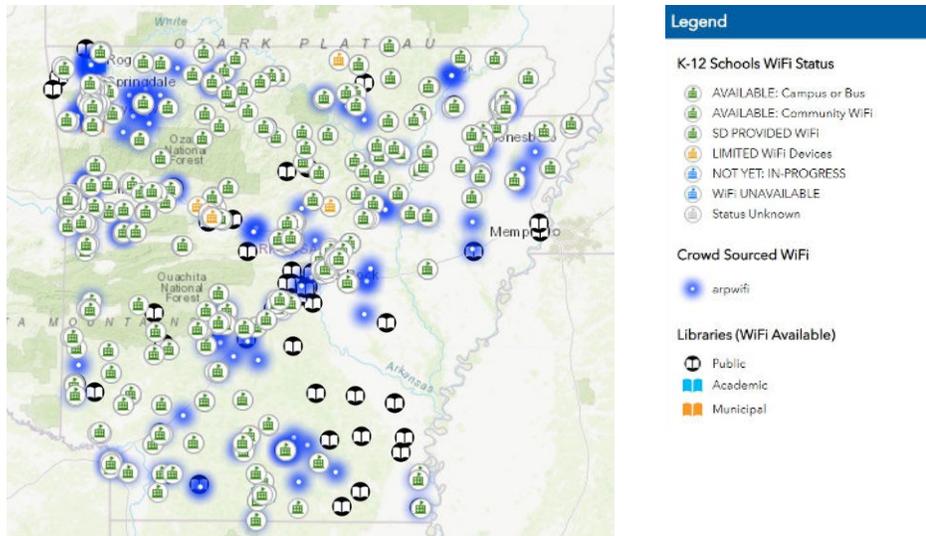
A significant benefit of ARConnect's stakeholder engagement activities, as further described in Section 5.1, involves hearing the needs, concerns, and solutions presented by communities throughout Arkansas.

To further ascertain needs and gaps, ARConnect utilized the following sources:

- 2020 U.S. Census
- FCC Broadband Data Collection, dated May 2, 2023
- U.S. Department of Health & Human Services – Medically Underserved Areas/Populations (MUA/Ps), dated June 13, 2023
- Broadbandnow.com, dated February 8, 2023
- Statewide broadband survey completed in 2022
- Statistical analysis conducted by ARConnect

Table 7 below outlines statewide broadband needs and gaps identified to date.

TABLE 7: BROADBAND NEEDS AND GAPS



Need	Gap to Close
Broadband Deployment / Access	
Access to broadband infrastructure²	<ul style="list-style-type: none"> • 215,617 (15.9%) unserved Broadband Serviceable Locations (BSLs) • 55,111 locations in high-cost areas • 77.5% of Arkansas residents are able to purchase wired or fixed wireless internet services of at least 25 Mbps download and 3 Mbps upload • 33.2% of Arkansas residents are able to purchase fiber internet services
Broadband Adoption	
Increased household broadband subscriptions	<ul style="list-style-type: none"> • Between 2017 and 2021, the U.S. Census reported that while 89.8% of households in Arkansas had computers in their home, 79.7% of households had a broadband internet subscription – defined at the time as internet service speeds of 25:3 Mbps
Broadband Affordability	
Increased competition and affordability	<ul style="list-style-type: none"> • 58% of Arkansans prefer not to pay more than \$50 per month for internet service
Increased awareness of existing internet service packages designed by providers for low-income households	<ul style="list-style-type: none"> • 58% of Arkansans prefer not to pay more than \$50 per month for internet service
Digital Opportunity	
<p>ARConnect intends to submit its Digital Skills and Opportunity Plan separately to further identify needs and gaps related to digital opportunity. For now, the following have been identified.</p>	
Improved digital skills	<ul style="list-style-type: none"> • ARConnect estimates that 274,000 Arkansans in the traditional working age group of 18-64 may lack basic digital skills
Increased broadband-related workforce	<ul style="list-style-type: none"> • Lack of skilled broadband, construction, and telecommunication workers • BEAD demand makes up 24% of Arkansas’ cross-industry deficit
Expansion of telehealth access	<ul style="list-style-type: none"> • 92 Medically Underserved Areas (MUA/Ps) in Arkansas, with 68 MUA/Ps located in rural areas³

² Conlow, Mike. “First Look: New Version of the National Broadband Map.” Mike’s Newsletter, 30 May 2023, mikeconlow.substack.com/p/first-look-new-version-of-the-national.

³ “Health Workforce Shortage Areas.” Data.HRSA.Gov, data.hrsa.gov/topics/health-workforce/shortage-areas. Accessed 17 July 2023.



4.0 OBSTACLES OR BARRIERS

Arkansas continues to face several barriers to achieving its vision of eliminating the digital divide by 2028.

As the state embarks on its next phase of broadband infrastructure deployment over the next five years, the following challenges must be considered:

- High-Cost Geographic and Topographic Areas
- Cost and Time to Deploy
- Labor Shortages
- Supply Chain and Material Shortages
- Industry Participation
- Agricultural Challenges
- Permitting or Regulatory Challenges

4.1 HIGH-COST GEOGRAPHIC AND TOPOGRAPHIC AREAS

Among the greatest and highest-cost barriers to achieving ubiquitous internet-for-all in the state will be servicing geographically remote, rural areas. This is doubly complex in Arkansas due to the fact that the vast majority of the state is rural and less dense, but also inclusive of mountainous, rocky terrain, compounding the cost complexity of broadband infrastructure deployment. Due to these topographical and population-density challenges, cellular service is often the only option for connectivity within extremely rural and remote counties, and service gaps in cellular coverage continue to persist. Additionally, Arkansas' location and topography make it susceptible to various natural disasters, including tornadic activity and remnants of tropical low-pressure systems.

4.2 COST AND TIME TO DEPLOY

The need for broadband services to support work-from-home, distance-learning, and telemedicine capacity is critical. Accordingly, potential deployment solutions must be weighed not only by current and future speed and quality, but also by the cost and amount of time required for deployment. While rapid deployment is highly valuable, Arkansas must weigh the price of expediency against the cost of meeting broadband connectivity requirements over the coming decades.

Fiber optic deployment is a priority for most internet service providers as it is the most reliable, resilient, and scalable broadband technology in the market. There are two methods of fiber optic installation: buried and aerial. Buried fiber optics are much less susceptible to line breakages, cuts, and other damage from disasters or other weather-related events. However, buried fiber optics are more expensive to install than aerial deployments due to trenching and boring costs, as well as the additional time needed for construction.

Wireless technologies, though less expensive to deploy than fiber optics, are more susceptible to signal interference, line-of-sight

obstructions, and other issues. As a result, engineering design of wireless technologies are of the utmost importance, ensuring both the technology involved and the geography and topography of project areas are suitable for such deployment.

4.3 LABOR SHORTAGES

Avoiding a labor shortage relative to the broadband industry will be crucial for effectively and efficiently administering BEAD funding. The federal Government Accountability Office (GAO) believes the BEAD Program could create demand for 23,000 jobs for skilled telecommunications workers. Other research has suggested that the Infrastructure Investment and Jobs Act (IIJA), as a whole, is expected to create demand for almost 800,000 jobs in the broadband sector.

Many job roles are needed to construct, operate, and maintain networks built through BEAD funding, such as engineers, designers, construction personnel, operators, maintenance personnel, technicians, and surveyors. A shortage of skilled employees in the broadband sector in Arkansas, particularly in rural portions of the state, will pose a barrier to administering BEAD funding. Supporting and funding programs and initiatives addressing labor shortages will be a key component of successful broadband efforts.

The National Telecommunications and Information Administration (NTIA) has identified roles likely needed for BEAD deployment and categorized them into occupation groups to facilitate more robust workforce data analysis. As depicted below in Table 8, BEAD labor demands comprise 24% of Arkansas’ projected cross-industry deficit by 2026.

TABLE 8: BEAD-IDENTIFIED LABOR SHORTAGES (POTENTIAL)

BEAD Occupation Group	BEAD Demand (Full-Time Employees)	Cross-Industry Deficit (Full-Time Employees)	Deficit / Supply
Laborers and Material Movers	1,247	5,919	-8.9%
Trucking Crew	1,121	3,598	-1.3%
Equipment Operators	307	1,380	-9.2%
Fiber and Wireless Technicians	247	996	-8.5%
Trenchers	171	563	-6.3%
Software Engineers	154	1,164	-14.8%
Master and Stage Electricians	143	631	-8.4%
Structural Engineers	64	241	-7.5%
Network Architects and Coordinators	63	304	-9.5%
Surveyors and Drafters	43	198	-9.3%
Inspectors (e.g., permit, health, and safety)	37	136	-7.1%
RF & Field Engineers	21	101	-16.8%
2026 Totals	3,618	15,231	-7.9%



Running underground conduit for fiber infrastructure (Photo courtesy of Yelcot)

4.4 SUPPLY CHAIN AND MATERIAL SHORTAGES

As in all construction projects, broadband deployment is contingent upon the availability of supplies and materials. Over the past two years, there has been an influx of infrastructure expansion, causing numerous internet service providers to experience significant delays in obtaining the materials and equipment needed for deployment activities. To date, these delays have affected all broadband-related materials, including: conduits, cables, junction boxes, wireless radios, towers, antennas, cabinets, connectors, termination panels, switches, and other communications equipment. The supply chain is a top concern for nearly every industry, and with the significant demand created by the BEAD program, it is expected that there will be additional pressures on the supply of required materials.

4.5 INDUSTRY PARTICIPATION

In general, the current broadband availability gap primarily exists because the cost of deployment and ongoing operational maintenance in unserved and underserved areas is too high, relative to the potential revenue generation that can be obtained. In short, internet service providers cannot generate a viable return on their capital investment. Where population density is low and/or the geography and topography of the area are less than ideal (mountainous areas), the cost of infrastructure deployment per location passed is high, leaving households and businesses without needed broadband services.

Specific to broadband, Arkansas' competitive landscape features numerous internet service providers, 53 according to HighSpeedInternet.com⁴, offering service over different, but often overlapping, coverage areas using different technologies, including fiber, cable, digital subscriber line (DSL), and fixed wireless. It may seem paradoxical that with so many providers offering internet service, there is so often little consumer choice, as a single provider almost always serves rural areas under little to no competitive pressure. While investment in broadband access may be profitable, the provider may have other lines of business, like cellular, that offer higher returns or are more competitive and consequently draw available capital away from rural broadband projects. Furthermore, an exclusive provider may generate higher profits from existing legacy services without new investment in higher speed technologies; in such a situation, the provider has an inherent financial incentive to defer new investment for as long as possible.

4.6 AGRICULTURE CHALLENGES

Agriculture is Arkansas' largest industry, adding around \$16 billion annually to the state's economy. The state's diverse landscape and climate enables the production of a wide variety of agricultural products. Arkansas is a major exporter of rice, soybeans, cotton, poultry, and feed grains. There are over 49,000 farms statewide and 97% are family owned. The state's land resources consist of 14.5 million acres of workable farmland.⁵

Arkansas farmers and ranchers are faced with rising challenges in competitive pricing, weather, operating costs, and limited infrastructure, while needing to produce more to feed a growing global population. The agriculture industry is also undergoing a technological revolution, providing farmers and ranchers greater abilities to maximize land use, increase crop yields, individually manage herd health, adopt more sustainable practices, and lower operational costs.

Full access and utilization of current (and future) technologies are constrained due to limited or no broadband connectivity in much of rural Arkansas. Nationally, 82% of farms reported having access to the internet, while in Arkansas, 76% of farms reported having access to the internet. Interestingly, only 23% of farms in Arkansas have reported using precision agriculture practices to manage crops or livestock.⁶

4.7 PERMITTING OR REGULATORY CHALLENGES

Obtaining permits for broadband infrastructure deployment can be burdensome and time-consuming for internet service providers. For deployment of buried fiber optics, providers must obtain permits from the regulating authority (local, state, or federal), depending on the jurisdiction. The time to receive approval on a permit can vary greatly and can range from several days, weeks, months, to even several years, depending on complexity.⁷ Some permitting agencies are understaffed or have a large backlog of permit reviews, which prevents them from responding in a timely manner, thus delaying the process even further. Given that the number of permit requests will continue to rise as BEAD allocations are awarded and disbursed, more staff will be needed to process permit applications across all of government. Additionally, some federal agencies (e.g., Bureau of Land Management, U.S. Forest Service) require environmental evaluations and clearances to ensure the installation causes no significant impacts before permits are issued.

4 "Internet Service Providers in Arkansas." HighSpeedInternet.Com, www.highspeedinternet.com/ar. Accessed 17 July 2023.

5 "Agriculture Facts ." Ag Facts | Arkansas Farm Bureau, www.arfb.com/pages/education/ag-facts/. Accessed 17 July 2023.

6 "Farm Computer Usage and Ownership ." United States Department of Agriculture, Aug. 2021, downloads.usda.library.cornell.edu/usda-esmis/files/h128nd689/j0990b03m/bk129904d/fmpc0821.pdf.

7 Buckley , Sean. "Providers, Regulators Vie for Consistent Broadband Permitting." Broadband Communities , 2023, www.bbcmag.com/economic-development/providers-regulators-vie-for-consistent-broadband-permitting#:~:text=Uncoordinated%20and%20slow%20permitting%20processes%20could%20have%20a,getting%20permit%20approvals%20has%20never%20been%20more%20pressing.

5

5.0 IMPLEMENTATION PLAN

5.1 STAKEHOLDER ENGAGEMENT PROCESS

ARConnect conducted significant stakeholder engagement during the combined strategic approach for developing the state's Five-Year Action Plan and the Digital Skills and Opportunity Plan. To ensure the office engaged with all segments of the population, ARConnect contracted with Heartland Forward, a Bentonville-based non-profit organization, to coordinate stakeholder engagement efforts with the state's counties, cities, community members, and other key broadband stakeholders – such as members of the Arkansas Connectivity Coalition, including the University of Arkansas, the University of Arkansas System Division of Agriculture Cooperative Extension Service, Winrock International, Communities Unlimited, and the Arkansas Black Mayors Association. The first major effort of the Coalition was the launch of Accelerate Arkansas, a 14-week planning and capacity-building program developed in partnership with the Benton Institute for Broadband & Society. Accelerate Arkansas offers structured community engagement to identify broadband goals, gather data, understand available funding options, and target capital dollars to support implementation.

Additional stakeholder engagement activities include the following:

- **Statewide Tour:** From February through June 2023, ARConnect conducted a statewide tour and visited all 75 counties to discuss all things broadband. The "Broadband County Roadshow" spanned 81 business days and resulted in over 5,900 miles driven and 878 individual interactions with fellow Arkansans.

Throughout the tour, ARConnect introduced the new, innovative vision for broadband in Arkansas and then discussed what has occurred in the past, the current state of play, and what is to come. After presenting statewide and county-specific statistics across the three pillars of broadband (access, affordability, and digital skills), as well as introducing the BEAD and DEA programs, every county in Arkansas was encouraged to form its own county broadband committee. Lastly, ARConnect solicited feedback on local broadband barriers and prompted for potential solutions to those barriers.



Photos: Left, Broadband County Roadshow Presentation in Desha County (March 2023) | Right, Broadband County Roadshow Presentation in Boone County (March 2023)

- **County Broadband Committees:** A derivative of the Broadband County Roadshow, ARConnect encouraged every county in Arkansas to form its own county broadband committee. The county broadband committees are intended to determine local strategies supporting affordability program outreach and digital skills training, as well as establish other broadband priorities at the local level. The county broadband committees will work in a collaborative partnership model with ARConnect to define local barriers and implement local solutions, as well as provide purposeful review and feedback on BEAD and DEA planning documents.
- **Arkansas Broadband Leaders Network (ABLN):** The Arkansas Broadband Leaders Network (ABLN) is a communications medium between ARConnect and the county broadband committees and other broadband stakeholders to connect, collaborate, and share information. The ABLN meets bi-weekly in a virtual format, with scheduled broadband educational programming for one week and an open discussion among all stakeholders the following week.
- **Digital Skills and Opportunity Survey:** ARConnect is currently conducting research to better understand the state's digital divide. As part of this data collection and analysis effort, ARConnect developed a Digital Skills and Opportunity Survey, measuring numerous variables related to Arkansas residents' experience with broadband. The survey closed on August 2, 2023, and garnered 12,532 responses. Data collected through this survey will directly inform both the state's BEAD Initial Proposal and its Digital Skills and Opportunity Plan, which will be available for public review and feedback in Fall 2023.
- **Regional Community Listening Sessions:** The state held five regional community listening sessions in the locations listed below, focused on identifying challenges to internet access and digital opportunities, as well as strengthening and supporting the state's BEAD and DEA planning efforts:
 - Little Rock
 - Springdale
 - Pine Bluff
 - Jonesboro/West Memphis
 - Texarkana
- **Focus Groups:** The state conducted 32 focus groups to directly engage with the covered populations listed below to learn more about their unique experiences as they relate to broadband access, affordability, and digital skills and opportunity:
 - Individuals living at or below 150% of the federal poverty level
 - Aging individuals (60+ years old)
 - Incarcerated and formerly- incarcerated individuals
 - Veterans
 - Individuals with language barriers
 - Individuals with disabilities
 - Individuals who are members of a racial or ethnic minority group
 - Individuals living in rural areas



Photo: Digital Skills and Opportunity Focus Group in Little Rock (June 2023)

- **Public Review and Feedback Periods:** Arkansas will release all BEAD and DEA planning documents for public review and feedback. In addition, ARConnect will purposefully engage with as many stakeholders as possible during these periods, with the goal of producing a robust, holistic public review process.
- **Workforce Development Roundtable:** In the first half of 2023, ARConnect established a workforce development roundtable and brought together workforce leaders from the governor's office, Arkansas Department of Education, Arkansas Division of Higher Education, Arkansas Division of Workforce Services, Office of Skills Development, Heartland Forward, Arkansas Economic Development Commission, University of Arkansas Community College – Morrilton, University of Arkansas Community College – Cossatot, Arkansas State University – Three Rivers, and State Senator Jane English to discuss broadband workforce challenges communicated to ARConnect by internet service providers. This roundtable will continue to meet as a function of the state's BEAD planning.

- **Infrastructure Roundtable:** ARConnect is establishing an infrastructure roundtable. This roundtable is intended to allow for internet service providers to collaborate with ARConnect and discuss the BEAD Program, specifically the subgrantee selection process and its structural design and associated rules. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **State Agency Roundtable:** ARConnect is establishing a state agency roundtable. This roundtable is intended to allow for state agencies to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which the whole of state government can be leveraged to effectuate the program's intended outcomes. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **General Assembly Roundtable:** ARConnect is establishing a General Assembly roundtable. This roundtable is intended to allow for state lawmakers to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which the whole of state government can be leveraged to effectuate the program's intended outcomes, especially required timelines by U.S. Commerce and state rule promulgation procedures. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **Healthcare Roundtable:** ARConnect is establishing a healthcare roundtable. This roundtable is intended to allow for healthcare experts to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which, should any excess funds remain, broadband-related projects in the healthcare space could produce the most positive impact for all Arkansans. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **Agriculture Roundtable:** ARConnect is establishing an agriculture roundtable. This roundtable is intended to allow for agriculture experts to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which, should any excess funds remain, broadband-related projects in the agriculture space could produce the most positive impact for all Arkansans. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **Small Business Roundtable:** ARConnect is establishing a small business roundtable. This roundtable is intended to allow for small business experts to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which, should any excess funds remain, broadband-related projects in the small business space could produce the most positive impact for all Arkansans. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.
- **Education Roundtable:** ARConnect is establishing an education roundtable that will launch in August 2023. This roundtable is intended to allow for education experts to collaborate with ARConnect and discuss the BEAD Program, specifically the ways in which, should any excess funds remain, broadband-related projects in the education space could produce the most positive impact for all Arkansans. Once launched, this roundtable will continue to meet as a function of the state's BEAD planning.

ARConnect will continue to prioritize stakeholder communication and engagement as the state moves forward through the BEAD and DEA planning process, implementing its infrastructure and digital opportunity plans, and other initiatives intended to assist in eliminating the digital divide.

5.2 PRIORITIES

It is without question that as broadband access expands, so do digital opportunities. Through the BEAD program, communities throughout Arkansas will gain broadband access for the very first time, or their currently available substandard service will be upgraded to today's broadband standard. Assuming universal broadband access is achieved, the state has developed the following list of priorities as they relate to expanded broadband access and the digital opportunities that can result from that access.

TABLE 9: PRIORITIES FOR BROADBAND DEPLOYMENT AND DIGITAL OPPORTUNITY

Priority	Description
Education	Universal broadband connectivity leads to greater access to educational choices and increases educational opportunities for students and their families, while also promoting enhanced collaboration between educational institutions and private-sector businesses to create successful career pathways for individuals.
Healthcare	The significant shift in healthcare from a 'fee-for-service' to a 'value-based' model has given rise to telehealth services. Telehealth is the virtual delivery of healthcare services through an internet connection. The range of services includes remote patient monitoring, educational sessions, access to electronic medical records, and the opportunity to connect with medical professionals and specialists when acute health concerns arise. Telehealth fosters patient/provider connections and offers economic efficiencies in rural areas with limited healthcare options. Expanding broadband access to unserved and underserved areas of the state will provide the core infrastructure necessary to enable the full suite of telehealth options to positively impact the state's covered populations.
Small Business	From payroll to e-commerce and all business processes in between, companies today increasingly rely on technology that requires significant broadband access, and this reliance will only further solidify into the future. Emerging trends in telecommuting strategies, remote technology platforms, and re-training workers into more high-tech positions have stabilized and even advanced career opportunities once unattainable to the average worker. Broadband infrastructure deployment and adoption will enable small businesses to grow and the entrepreneurial spirit to flourish.

Priority	Description
Agriculture	Farming is becoming increasingly reliant on broadband connectivity; one study has shown that farms without broadband access have profits of nearly 70% less than farms with broadband access. ⁸ Farmers and ranchers are using precision agricultural technologies to make decisions about the amount of fertilizer needed for planting, the amount of water needed to sustain the crop, and the amount and type of herbicides or pesticides needed to maintain crop health. These are only a few examples of the use of broadband connectivity to achieve optimal crop yield, lower environmental impact, and maximize profits. As agriculture is the number one industry in Arkansas, prioritizing broadband infrastructure deployment and adoption in farming-heavy areas is critical for the overall economy in the state.
Workforce Development and Economic Renewal	Education and economics are invariably interdependent. A connected economy is realized when robust workforce development initiatives result in the creation and sustainability of high-quality, high-paying jobs and career paths for residents – both in urban and rural communities. Ubiquitous broadband connectivity enables remote education, training, and workforce opportunities that can produce a more educated, trained, and workforce-ready citizenry. A more educated populace is enticing to capital investment and business development. From a manufacturing resurgence, the expansion of existing in-state businesses, the recruitment of out-of-state firms, and an elevation of entrepreneurial endeavors, a universally connected state will produce a more educated citizenry and an economic renewal in our communities.

5.3 KEY EXECUTION STRATEGIES AND PLANNED ACTIVITIES

The state will continue its comprehensive approach to enhancing broadband access, affordability, and digital skills and opportunity by implementing the following strategies and activities that align with the state’s goals and objectives over the next five years.

TABLE 10: BROADBAND GOALS, OBJECTIVES, STRATEGIES, AND ACTIVITIES

Goals	Objectives	Strategies	Activities
Broadband Infrastructure Deployment / Access			
Expand broadband access to all unserved and underserved locations in the state	<p>Connect 100% of broadband serviceable locations (homes and businesses) in Arkansas with access to reliable high-speed internet</p> <p>Provide fiber technology to as many unserved and underserved locations as possible, with priority from lowest to highest cost-to-serve; evaluate alternative technologies for highest cost-to-serve locations</p> <p>Enhance broadband access at community anchor institutions (CAIs)</p>	<p>Develop an analytical approach to identify an estimated “cost-to-build” for every location in the state – producing positive and negative businesses cases for potential broadband infrastructure project footprints – with specific impact to needed state subsidy, high-cost locations, and technology deployment mix</p> <p>Prioritize fiber deployment</p> <p>Facilitate engagement with ISPs to drive interest and competition</p> <p>Incentivize interest in negative business case areas through programmatic design of the subgrantee process</p> <p>Encourage county broadband committees to engage with ISPs to support high industry participation</p>	<p>Purposeful stakeholder engagement with county broadband committees, the Arkansas Broadband Leaders Network, and our state’s current and potential internet services providers</p> <p>Through the state-administered grant program, prioritize fiber deployment to as many unserved and underserved locations as possible, ordered in priority from lowest to highest cost-to-serve, with alternative technologies designated for only the most extremely high-cost areas and locations</p> <p>After an initial competitive selection process is completed, inventory unserved and underserved areas in which no acceptable competitive bid was received – and introduce a mechanism to further incentivize competitive applications and awards</p>

8 “Why Farmers Need Broadband.” Socket, www.socket.net/blog/fiber/why-farmers-need-broadband. Accessed 17 July 2023.

Goals	Objectives	Strategies	Activities
Broadband Infrastructure Deployment / Access			
<p>Increase broadband data collection, research, and utilization</p>	<p>Expand Arkansas' broadband data analyses and interactive, public-facing tools</p> <p>Educate the broader public on broadband opportunities, uses, and other pertinent information</p>	<p>Establish state broadband datasets, representative of access, affordability, and digital skills and opportunity metrics, and develop a system and associated processes to collect, update, and monitor such metrics</p> <p>Highly encourage ISPs, state agencies, philanthropies, nonprofits, and all state broadband stakeholder entities to participate in the state's collection of broadband datasets</p> <p>Leverage existing national, state, and local broadband data resources</p> <p>Establish and leverage partnerships with state agencies, higher education entities, the private sector, the nonprofit community, and funders to fund and conduct broadband-related research and product development in the state</p> <p>Strategically and purposefully communicate digital opportunities</p>	<p>Catalog existing digital assets in the state, inclusive of broadband access, affordability, and digital skills and opportunity metrics</p> <p>Conduct purposeful stakeholder engagement with ISPs, state agencies, philanthropies, nonprofits, and all state broadband stakeholder entities</p> <p>Survey national, state, and local broadband data resources for relevant information</p> <p>On an ongoing basis, provide access to curated broadband-related content to strategic stakeholders and the broader public, inclusive of educational resources, novel research, mapping, survey data, and funding opportunities through all capable and suitable mediums</p> <p>Convene meetings and pursue purposeful dialogue with state agencies, higher education entities, the private sector, the nonprofit community, and funders, with the intent to initiate broadband-related research and product development, leading to economic growth</p>
Broadband Adoption			
<p>Increase broadband adoption rates by 50%</p>	<p>Increase public awareness of planned, ongoing, and completed broadband infrastructure projects (including those outside the purview of ARConnect); digital skills programming and events; and other broadband-related activities and opportunities</p> <p>Create public awareness campaigns highlighting stories of broadband connectivity positively impacting lives and promoting positive use-cases in everyday life and business</p> <p>Leverage state survey data, national research, and ISP perspectives to understand current and potential challenges to consumer adoption and develop proposed solutions to those challenges</p>	<p>Leverage partnerships to promote and implement planned and completed broadband-related processes, initiatives, and programming established by ARConnect, other state agencies, the private sector, nonprofits, and other broadband stakeholders</p> <p>Survey completed broadband infrastructure projects and locate stories of success</p> <p>Consider research and feedback from ISPs when designing subsequent interventions</p>	<p>Establish and deploy a public awareness campaign detailing existing programs, opportunities, and other broadband-related activities</p> <p>Establish and deploy a public awareness campaign highlighting stories of success, specific to the positive impact of broadband access</p> <p>Evaluate research specific to barriers to broadband adoption and propose common sense solutions</p> <p>Conduct roundtable discussions with ISPs to gain their perspectives on barriers to adoption and include in solution development</p>

Goals	Objectives	Strategies	Activities
Broadband Adoption			
<p>Reduce the digital skills gap, with enhanced focus on individuals in the traditional working age bracket (ages 18-64)</p>	<p>Identify any existing barriers that prevent Arkansans from using the internet to accomplish common, daily tasks, and work to mitigate against</p> <p>Promote digital skills training, online safety programming, and financial literacy initiatives to populations demonstrating a substantive gap in digital skills</p>	<p>Leverage the Arkansas LEARNS initiative</p> <p>Collaborate with ISPs to study why some potential broadband customers choose not to purchase service for any reason other than affordability (including potential digital skills gaps), as well as potential strategies and/or recommendations to address these issues</p> <p>Utilize the results of ARConnect’s Digital Skills and Opportunity Survey, as well as the survey conducted as a part of the 2021-2022 state master planning process, to further understand potential digital skills gaps</p> <p>Evaluate any relevant research at the national, state, and local levels to further understand potential digital skills gaps</p> <p>Survey existing digital skills and opportunity efforts in the state, working to understand current efforts, effectiveness, gaps, and scalability</p> <p>Evaluate relevant data and research to identify, both demographically and geographically, individuals and areas with demonstrative and substantive digital skills gaps</p> <p>Establish or scale new or existing digital skills initiatives and programming, with enhanced focus on the traditional working age bracket of 18-64</p>	<p>Conduct purposeful engagement with ISPs to gain their perspectives on barriers to adoption (with a focus on potential digital skills barriers) and include in solution development</p> <p>Analyze results from ARConnect’s Digital Skills and Opportunity Survey, the survey conducted as a part of the 2021-2022 state master planning process, and all relevant national, state, and local research, and use findings to improve and scale existing and subsequent digital skills programs and initiatives</p> <p>Leverage county broadband committees and other regional stakeholders to develop localized digital skills training opportunities, based on specific, local needs</p> <p>Leveraging the Arkansas LEARNS initiative, establish the “Arkansas Connection Corps.,” a novel program that would allow high school students to earn required public service hours through their participation in digital skills training programs; high school students would lend their technological knowhow and volunteer to teach digital skills through structured programming at the local level</p> <p>Partner with the state Department of Education and local school districts to ensure that digital skills training and instruction on the negative “unintended consequences” of internet use and social media are incorporated into the state’s elementary and secondary education curriculum</p>

Goals	Objectives	Strategies	Activities
Broadband Affordability			
<p>Design an infrastructure grant program that fosters competitiveness and introduces new competition into the state's marketplace</p>	<p>Utilize mechanisms within the ARC grant program to increase competition and competitiveness among ISPs, both in cost of project construction and package prices to consumers</p> <p>Partner with ISPs to improve outreach and education on existing low-cost consumer plans</p> <p>Coordinate with ISPs to encourage development of low-cost service plan thresholds for consumers, where economically feasible</p> <p>Collaborate with federal, state, and industry leaders to enhance middle-mile access for all ISPs in the state</p>	<p>Survey existing affordability-related programs and align new funding opportunities with existing initiatives to optimize broadband affordability objectives</p> <p>Structure state-administered grant programs to consider affordability as a sub-grantee selection criterion and component of the application scoring matrix</p> <p>Encourage middle-mile development</p> <p>Leverage available federal and philanthropic funding to connect residents with quality devices (e.g., computers, tablets, mobile devices, routers)</p>	<p>Include an affordability scoring component when evaluating competitive applications during state-administered grant programs</p> <p>Compare applicant-provided estimated construction cost to state-estimated construction cost, ensuring economic efficiency of projects, with subsequent use of deconfliction mechanisms to protect taxpayer investment</p> <p>Catalogue existing affordability programs and align any new, applicable funding sources</p> <p>Survey and catalogue potential funding sources for enhanced, open-access middle-mile infrastructure; and encourage development</p>
<p>Broadband Opportunity*</p> <p>ARConnect intends to separately submit its Digital Skills and Opportunity Plan to further identify goals, objectives, strategies, and planned activities. To date, the following have been identified:</p>			
<p>Enable efficient next-generation opportunity, society, and government</p>	<p>Through innovative investment in broadband-related, non-deployment initiatives and programming, leverage public-private partnerships to enable efficient, next-generation opportunity, society, and government</p>	<p>Leverage Arkansas' experience and reputation as a center of financial technology innovation</p> <p>Leverage the state's strong philanthropic and nonprofit sector to positively impact digital skills and opportunity program maintenance, establishment, and scalability</p> <p>Educate and supplement state, county, and local government expertise and capacity, specific to broadband-related efficiencies</p> <p>Research and explore the establishment of "broadband innovation zones"</p>	<p>Purposefully engage the state's fintech sector to extrapolate learnings and best practices that can translate into "broadband-tech" initiatives</p> <p>Partner with the state's strong philanthropic and nonprofit base to maintain, establish, or scale existing and novel digital skills and opportunity programs</p> <p>Collaborate with all of state government to educate, train, and supplement capacity and expertise with the intention to enhance SMART state government, increasing effectiveness and efficiency while reducing the size, scope, and cost of government</p> <p>Collaborate with county and local governments to educate, train, and supplement capacity and expertise at the local level with the intention to enable SMART counties, cities, and communities, increasing effectiveness and efficiency while reducing the size, scope, and cost of government</p> <p>Explore the creation of "broadband innovation zones," which would incentivize private sector investment in newly connected communities</p>

Goals	Objectives	Strategies	Activities
Broadband Opportunity*			
ARConnect intends to separately submit its Digital Skills and Opportunity Plan to further identify goals, objectives, strategies, and planned activities. To date, the following have been identified:			
Stimulate cross-sectoral economic growth through broadband-related, non-deployment activities	Explore pathways to enable enhanced, broadband-related positive outcomes for all Arkansans across four key sectoral areas: education, healthcare, small business, and agriculture	Leverage universal broadband access with existing and emerging technologies dependent on broadband connectivity to positively impact the lives, families, and businesses of Arkansas	Position Arkansas as a sandbox of innovation that is business friendly and welcoming to new investment, research and development, and product/service distribution, specific to broadband-related technologies, products, and services Align future funding allocated from the DEA capacity grant with the goals, objectives, strategies, and planned activities as outlined in the forthcoming Digital Skills and Opportunity Plan
Enhance workforce development	Train new broadband and telecommunication industry workers Collaborate with state government, private industry, and philanthropy, as well as secondary and post-secondary educational institutions, to meet workforce needs	Build upon existing telecommunications training and work to expand and scale the programs to additional locations throughout the state	Survey and catalogue effectiveness of existing training programs Partner with other state agencies, private industry, and philanthropy, as well as secondary and post-secondary educational institutions to evaluate and improve existing programs Expand and scale the scope and locations of existing telecommunications training programs Establish a comprehensive telecommunications career and educational opportunity online hub to connect job seekers with career and educational opportunities
*These proposed goals, objectives, strategies, and planned activities are subject to excess funding resulting through efficient execution of the BEAD program.			

5.4 ESTIMATED TIMELINE FOR UNIVERSAL SERVICE

ARConnect has determined that expected funding through the BEAD program will have significant positive impact for all Arkansans, significantly impacting broadband access, affordability, and digital skills and opportunity throughout the state. Specific to broadband access, it is Governor Sanders' vision, and ARConnect's mandate, to utilize and exhaust all available efforts with the intention of enabling universal broadband access by December 31, 2028. Table 11 below provides an estimated BEAD program timeline.

TABLE 11: BEAD PROGRAM TIMELINE

	2023		2024				2025	2026	2027	2028
	Q3	Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Submit Initial Proposal Volume 1										
Initial Proposal Volume 1 Approved by NTIA and Challenge Process Begins										
Submit Digital Skills and Opportunity Plan to NTIA for Approval										
Submit Initial Proposal Volume 2 to NTIA for Approval										

	2023		2024				2025	2026	2027	2028
	Q3	Q4	Q1	Q2	Q3	Q4	Q1-Q4	Q1-Q4	Q1-Q4	Q1-Q4
Initial Proposal Volume 2 Approved by NTIA										
Infrastructure Grant Application Round Begins										
Final Proposal Submitted to NTIA										
Broadband-Related, Non-Deployment Activities are Decided										
Implementation Phase										

5.5 ESTIMATED COST FOR UNIVERSAL SERVICE

Arkansas will receive an allocation of \$1,024,303,993.86 in BEAD program funding. Utilizing the May 2023 release of the Federal Communications Commission’s national broadband availability map, analysis indicates there are approximately 180,000 unserved and underserved locations (homes, businesses, and community anchor institutions) that lack broadband access. This number is not inclusive of unserved and underserved locations that are subject to a preexisting federal funding commitment.

Using this data, the state has considered several scenarios with numerous variables to estimate the range of amount of funding needed to serve all unserved and underserved locations. These scenarios and variables consider high-cost location thresholds, technology mix, economic analysis inclusive of estimated cost to build and required state subsidy, inflation, supply chain and workforce pressures, among others. Table 12 below demonstrates the estimated cost ranges for universal service.

TABLE 12: ESTIMATED COST FOR UNIVERSAL SERVICE

BEAD Funding	\$1,000,000,000
Anticipated Provider Match	\$175,000,000 - \$275,000,000
Approximate Total Capital Available	\$1,175,000,000 – \$1,275,000,000
Approximate Capex Required to Build	\$875,000,000 - \$1,375,000,000
Estimated Remaining Funds	\$0 - \$300,000,000

5.6 ALIGNMENT

Executing on the vision of Governor Sanders, the Arkansas State Broadband Office (ARConnect) is the sole administrative entity responsible for both the BEAD and DEA planning grants and documents, which ensures the alignment of both plans. The office also recognizes that alignment with other stakeholder entities and state priorities is critical for the efficient and effective execution of the overall vision and mission of broadband access, affordability, and digital skills and opportunity.

ALIGNMENT WITH THE DIGITAL SKILLS AND OPPORTUNITY PLAN

Arkansas’ Five-Year Action Plan has been developed concurrently with the state’s Digital Skills and Opportunity Plan, and the digital opportunity components of this plan draw from the Digital Skills and Opportunity Plan currently in development. Since ARConnect is the administrative entity responsible for both plans, the office will work cohesively to meet its shared objectives.

ALIGNMENT WITH OTHER STATE PRIORITIES

Achieving Arkansas’ vision to eliminate the digital divide and enhance broadband connectivity and digital opportunity for all Arkansans will support and advance a number of the state’s broader existing and planned efforts related to bold educational reform, health-care, small business, and agriculture, as described below.

BOLD EDUCATIONAL REFORM

As highlighted during the COVID-19 pandemic, the need for broadband access to provide for distance learning opportunities is paramount, particularly for students in more rural areas of Arkansas. Governor Sanders' singular most important priority to provide universal broadband access, resulting in enhanced educational opportunities and choices for students and their families, aligns directly with the Arkansas LEARNS initiative.

HEALTHCARE

Enabling greater positive impact to health outcomes for all Arkansans using telehealth solutions requires intentional efforts to ensure that all communities and individuals have access to telehealth technologies and the digital skills and support to use them. For many, telehealth may be the key to making healthcare more accessible and more affordable. Providing for universal broadband access and reliable, affordable high-speed internet will support the state's health outcome goals, as highlighted in Arkansas' Department of Health's plans.

SMALL BUSINESS

Arkansas' strategic vision to bolster its economy and develop its workforce is largely dependent on and will be advanced by increased access to broadband. Resources needed to develop professional skills, discover job opportunities, and conduct business are increasingly located online. As such, broadband access is a vital component of a thriving economy and workforce. The state's goal of universal broadband access and eliminating the digital divide will bolster Arkansas' short- and long-term economic and workforce development plans.

AGRICULTURE

Just as other sectors of the economy continue to learn, embrace, and utilize technology to access new markets and gain production efficiencies, Arkansas' agriculture producers must be equipped with internet connectivity and digital tools to capture new opportunities and strengthen Arkansas' position as a global leader in agriculture. The state's goal of universal broadband access and eliminating the digital divide in rural agricultural areas will support the Arkansas Department of Agriculture's mission of keeping farmers and ranchers competitive in national and international markets.

5.7 TECHNICAL ASSISTANCE

ARConnect will leverage state agencies, elected officials, broadband providers and stakeholders, consultants, and the NTIA as support mechanisms for the BEAD program. With sufficient clarity, ongoing communication, and guidance from our federal partners, the state anticipates requiring minimal technical assistance to implement planned projects. However, ARConnect may request assistance from NTIA or other partners as it relates to the following:

- Initial Proposal:
 - Review of applicable state statutes and overall program mission and goals
 - Assistance in developing a proposal that aligns with requirements and goals, specifically:
 - Workforce and wage requirements
 - State challenge process
 - High cost / extremely high-cost threshold determinations
 - Project cost estimates
 - Strategies for the subgrantee application process
 - Developing broadband-related, non-deployment priorities
- Final Proposal:
 - Interpreting and reporting awards and results
 - Developing recommendations for future implementation
- Program Implementation:
 - Implementing selected interventions and strategies
 - Data collection and analysis
 - Addressing challenges or issues that arise during implementation
 - Ongoing project monitoring, compliance, and reporting

6.0 CONCLUSION

It is Governor Sanders' vision, and ARConnect's mandate, to eliminate the digital divide in Arkansas by 2028. Further, it is our mission to capitalize on this pivotal moment, the single largest investment in broadband infrastructure deployment in Arkansas' history, to usher in an era of efficient, next-generation opportunity, society, and government.

Eliminating the digital divide is essential to ensuring that the state continues to grow its population and economy and solidifies its place as the best state in the country to live, work, and raise a family.

Through this program, Arkansas will be in a position to provide universal broadband access throughout the state, connecting every single home, business, and community anchor institution to reliable, affordable high-speed internet. We will design an infrastructure grant program that fosters competitiveness and introduces new competition into the state's marketplace, driving down prices for consumers. We will work to reduce the digital skills gap in the traditional working age bracket, increasing economic opportunity and workforce development for our residents. Lastly, the state will advance digital opportunities for all Arkansans, igniting cross-sectoral economic growth and prioritizing investment in innovative solutions throughout Arkansas' economy and society.



ARConnect
The Arkansas State Broadband Office

