TVA TENNESSEE
VALLEY
AUTHORITY

CONNECTED COMMUNITIES

Broadband
Funding Guide

VERSION ONE: 10/2022

Note to Readers

This report was developed by Tennessee Valley Authority's (TVA) Connected Communities, an initiative of TVA's Innovation and Research group. This report provides an overview of funding opportunities for broadband deployment and expansion. The contents of the report should not be interpreted as a recommendation for any funding source or opportunity, but rather as a resource for those interested in broadband deployment.

For more information on Connected Communities, please visit tva.com/connectedcommunities or email: connectedcommunities@tva.gov

Background

Of the approximately four million homes in the Tennessee Valley Authority's (TVA's) service area, 14%, or 550,000 households, are in range of basic broadband with speeds of 25/3* megabits per second (Mbps). 5% of households, or approximately 200,000 homes, are not in range of any broadband infrastructure, and approximately 20%, or 800,000** homes, are estimated not to be subscribed to any broadband service.

Improving access to high-speed broadband internet, necessary for increasing connectivity demands like teleworking or virtual learning, is a priority in the TVA service area. Efficiently capturing and capitalizing on broadband funding can help meet needs in the TVA region and bridge the digital equity gap.

The recently passed Bipartisan Infrastructure Law (BIL), also known as the Infrastructure Investment and Jobs Act (IIJA), allocates approximately $65 billion of funding toward broadband and digital equity related projects.

In This Guide

As access to funding is one of the most pressing considerations for communities as they expand broadband connectivity, this guide focuses on the various federal and state funding opportunities available to TVA communities. Additionally, this guide contains an overview of broadband challenges in TVA's service area as a critical first step for creating effective funding applications. Applicants must understand factors influencing adoption across a range of areas to identify relevant needs, gaps and potential opportunities for expanding access. The information in this guide also serves as a complement to the TVA Broadband Solutions Implementation Guide, which provides additional information on implementing broadband solutions.

* This term will be explained in more detail in the following pages

Source: American Community Survey 5-Year Estimates (2020)

800k
households
in TVA's service area are estimated to not be subscribed to broadband.

OUTLINES

federal and state funding opportunities
available to TVA communities.

HELPFUL TERMS

Broadband
The infrastructure needed to connect homes and businesses with internet services.

Broadband internet
Also known as high-speed internet, broadband internet is faster than basic internet speeds and allows users to do things like remote work, video calls, online video games, streaming television, etc.

Connectivity
The ways computers, mobile devices and local area networks connect to the global Internet.

Mbps
Megabits per second, a measurement of the internet speed. Internet speeds are expressed in upload and download speeds. For example, broadband is defined as 25 Mbps download and 3 Mbps upload, expressed as "25/3 Mbps."

Introduction

What is Broadband?

The Federal Communications Commission (FCC) defines broadband as high-speed internet access that is always on and faster than traditional dial-up access. The FCC currently uses a minimum speed of 25/3 Mbps* – meaning a download speed capable of streaming information to a user at a rate of 25 Mbps and an upload speed for sending information from a user at a rate of 3 Mbps – as a benchmark for high-speed service, however faster speeds are necessary for many uses. This has led to a push to increase the benchmark to speeds of 100/20 or 100/100 Mbps, a move already reflected in many federal funding programs. The National Telecommunications and Information Administration (NTIA) defines underserved households as those that do not have access to speeds of at least 100/20 Mbps, while unserved households are those without any access to a connection of at least 25/3 Mbps.

Broadband is a key enabler for many community solutions, such as access to healthcare, online education and training, remote work and other business opportunities. Additionally, broadband is critical to support the modern energy system, which includes a more distributed and interactive grid. Without the ability to support multiple devices sending and receiving data rapidly, the performance of distributed grids will suffer. Because of the critical access and opportunities high-speed internet provides, expanding broadband is a key step toward setting up communities for success.

High-speed internet access requires sufficient infrastructure to support each end user on an internet service provider's (ISP) network – individual connections and the ISP's overall network capabilities affect the speed and reliability. There are a variety of technologies that enable broadband access. A digital subscriber line (DSL) utilizes existing telephone lines; a cable modem utilizes existing television cables; fixed wireless utilizes radio frequencies; and fiber utilizes fiber optic cables. Fiber connections are typically the fastest and most future-proof for growing speed demands. Fiber also offers the unique benefit of symmetrical speeds, ideal for activities requiring simultaneous download and

*Mbps is the rate at which that data can be downloaded to your device, or uploaded from your device, via an internet connection

upload speeds, such as telework or high-definition (HD) video chat. For a full analysis of the pros, cons and different use cases of the various internet access technologies, refer to the TVA Broadband Solutions Implementation Guide.

How Do Speeds Translate to Activities?

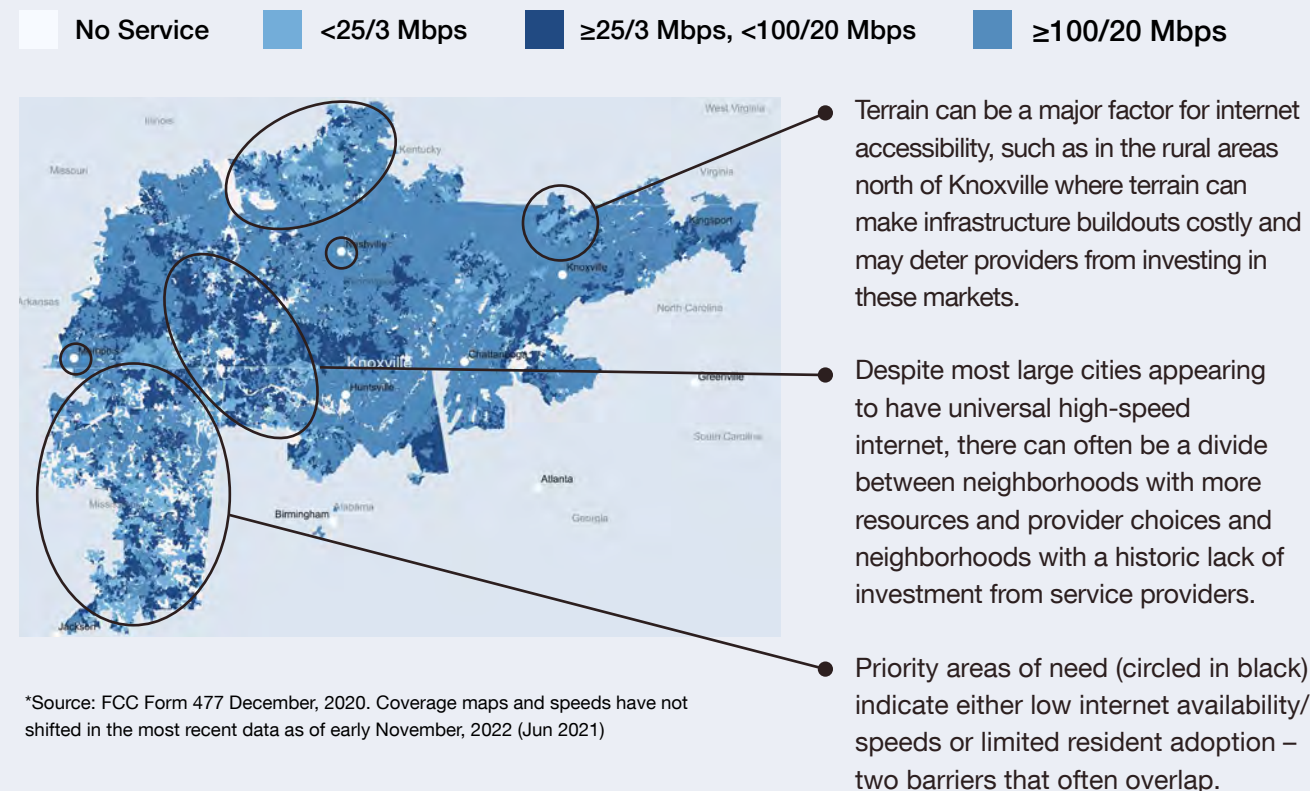| DOWNLOAD SPEED	CAPABILITY
0 – 5 Mbps	• Check email • Browse web • Stream audio on one device
5 – 40 Mbps	• Stream video on one device • Video calls or conferencing sessions
40 – 100 Mbps	• Stream video on one device • Video calls or conferencing sessions
100 – 500 Mbps	• Stream HD video on one device, remote monitoring for telehealth • Download large files (e.g., working from home)
500 Mbps – 1 Gbps	• Simultaneous activities on numerous devices

Source: https://www.highspeedinternet.com/resources/the-consumers-guide-to-internet-speed

Broadband Challenges

Broadband Challenges in the TVA Service Area

The FCC requires ISPs to publish data on the areas they serve. Overlaying this reporting data with the TVA service area gives a broad overview of the speeds available. Below is a map of broadband service at three different speed thresholds, 25/3 Mbps, between 25/3 Mbps - 100/20 Mbps and above 100/20 Mbps.

ADVERTISED FCC SERVICE OFFERING & QUALIFIED CENSUS TRACTS*

No Service   <25/3 Mbps   ≥25/3 Mbps, <100/20 Mbps   ≥100/20 Mbps

Terrain can be a major factor for internet accessibility, such as in the rural areas north of Knoxville where terrain can make infrastructure buildouts costly and may deter providers from investing in these markets.

Despite most large cities appearing to have universal high-speed internet, there can often be a divide between neighborhoods with more resources and provider choices and neighborhoods with a historic lack of investment from service providers.

Priority areas of need (circled in black) indicate either low internet availability/ speeds or limited resident adoption – two barriers that often overlap.

*Source: FCC Form 477 December, 2020. Coverage maps and speeds have not shifted in the most recent data as of early November, 2022 (Jun 2021)

Broadband Adoption

- Some TVA communities lag in broadband adoption, and the magnitude of need may be even greater in the future
- An estimated 80.5% of households in the TVA region have a broadband subscription (compared to 85% nationally), with some 800,000 unsubscribed households
- An additional 580,000 households are only connected to broadband by cellular data plans
- If the minimum definition of broadband speeds increases to 100/20 Mbps, more TVA communities will lack broadband availability, making high-speed connections both a local necessity and a national priority

Geographic Challenges

- Urban and rural areas face different challenges. Rural areas tend to struggle with availability of adequate speeds, while urban areas may struggle to afford high-speed plans and internet devices
- Rural areas in TVA's service area tend to be less subscribed to broadband (78% subscribed) than urban areas (84% subscribed)
- Roughly 16,000 or 0.6% of urban households in the TVA region are unserved or underserved as it relates to infrastructure according to FCC data**, compared to over 200,000 or 13% of rural households

Equity Issues

- Of the TVA residential households with less than $20,000 in annual income, only 56% are subscribed to an internet plan compared to 94% of households with income greater than $75,000 per year
- Increased awareness of FCC's Affordable Connectivity Program (ACP) may help address affordability-based issues. While only 61% of TVA area ISPs participate in ACP, together, they cover most of the service area

**FCC Form 477 data is likely to over-estimate service offerings, as the requirements for an area being displayed as "served" tend to inflate the area served. More granular maps to be released end of 2022

Federal Funding

Funding to Address These Challenges

Expanding broadband access will require significant financial investment from federal, state and local governments, as well as private ISPs. The BIL provides over $65 billion to fund broadband infrastructure deployment and digital equity initiatives across the country. Broadband funding made available through BIL builds on existing federal broadband and infrastructure-related programs and state programs funded through American Rescue Plan Act (ARPA) allocations.

These programs are a great starting point to identify resources for infrastructure deployment and digital adoption initiatives. Details on each BIL broadband funding program are highlighted on the next page. Details on other federal broadband programs (RDOF, E-Rate and Lifeline) are provided on subsequent pages.
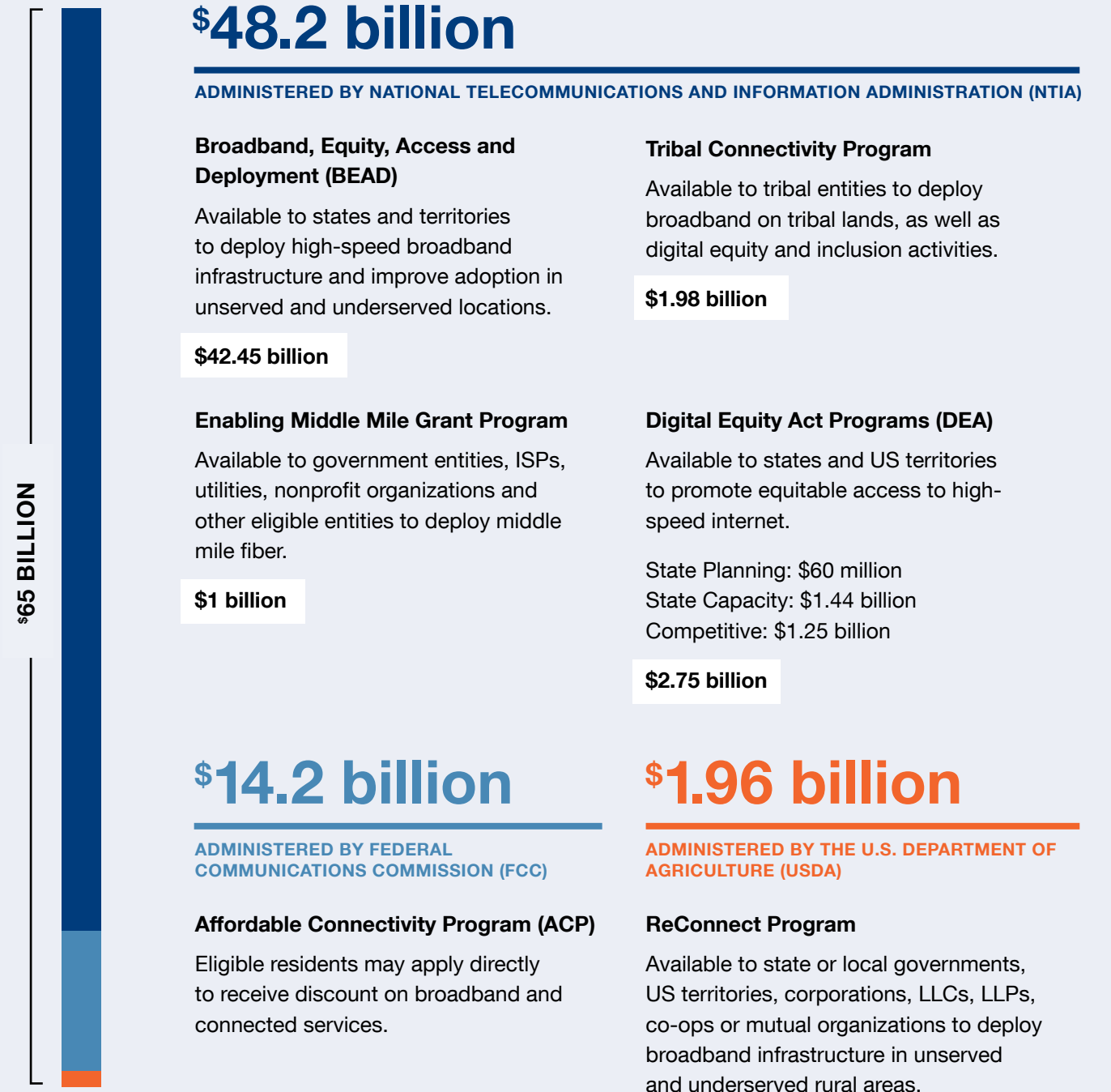
$**$65B**

provided by BIL to fund broadband infrastructure deployment

and digital equity initiatives across the country.

BIL BROADBAND FUNDING PROGRAMS

$**$65 BILLION**

$48.2 billion

ADMINISTERED BY NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (NTIA)

Broadband, Equity, Access and Deployment (BEAD)

Available to states and territories to deploy high-speed broadband infrastructure and improve adoption in unserved and underserved locations.

$42.45 billion

Tribal Connectivity Program

Available to tribal entities to deploy broadband on tribal lands, as well as digital equity and inclusion activities.

$1.98 billion

Enabling Middle Mile Grant Program

Available to government entities, ISPs, utilities, nonprofit organizations and other eligible entities to deploy middle mile fiber.

$1 billion

Digital Equity Act Programs (DEA)

Available to states and US territories to promote equitable access to high-speed internet.

State Planning: $60 million
State Capacity: $1.44 billion
Competitive: $1.25 billion

$2.75 billion

$14.2 billion

ADMINISTERED BY FEDERAL COMMUNICATIONS COMMISSION (FCC)

Affordable Connectivity Program (ACP)

Eligible residents may apply directly to receive discount on broadband and connected services.

$1.96 billion

ADMINISTERED BY THE U.S. DEPARTMENT OF AGRICULTURE (USDA)

ReConnect Program

Available to state or local governments, US territories, corporations, LLCs, LLPs, co-ops or mutual organizations to deploy broadband infrastructure in unserved and underserved rural areas.

Federal Funding

Broadband, Equity, Access and Deployment (BEAD)

BEAD aims to achieve universal broadband coverage by funding the deployment of broadband infrastructure to unserved and underserved areas and increasing the adoption of high-speed internet.

FUNDING

$42.5B

in federal program funding from the BIL

Each state will receive an initial $5 million to develop a BEAD Five-Year Action Plan and receive a minimum $100 million final allocation. Final state allocations will be based on a formula to be finalized following the publication of the new FCC maps.

ADMINISTRATION

Administered by NTIA

BEAD funds are awarded directly to states and territories. Local governments, ISPs, utilities, community organizations and other entities may receive funding to support development of a Five-Year Action Plan, for example, through sub-grant awards.

Eligibility

ELIGIBLE ENTITIES

- All 50 states, District of Columbia and Puerto Rico
- Other US territories
- NTIA guidance specifies qualifications for subgrantees

ELIGIBLE USE OF FUNDS EXAMPLES

- Planning, deploying or upgrading high-speed internet
- Installing high-speed internet in multi-tenant buildings
- Implementing adoption and digital equity programs
- Workforce and job training

Milestones

- State develops Five-Year Action Plan (due 270 days after receiving initial planning funds)
- Challenge Process of FCC broadband coverage maps that determines states' BEAD allocation is set to begin in November
- **August 31, 2022:** NTIA announces first Initial Planning Grant award, with rolling distribution thereafter

- NTIA to publish Notice of Available Amounts based on FCC DATA maps
- Initial proposal due 180 days after Notice of Available Amounts are announced
- Final proposal due 365 days after initial proposal approval
- **June 2023:** NTIA to publish Notice of Available Amounts based on FCC DATA maps

Community Considerations

- Local governments, ISPs, utilities (e.g., LPCs), community organizations and others should engage with their State Broadband Office (or administering entity) to learn about their state's Five-Year Action Plan development planning and opportunities for partnerships
- Participation in ACP is required to receive BEAD funding
- Local jurisdictions may consider opportunities to contribute to the

state's Five-Year Action Plan and later stages of the BEAD program, including performing community outreach and digital inclusion activities
- NTIA defines unserved locations as those without any broadband service or those with speeds below 25/3 Mbps. Underserved locations are those with broadband service speeds between 25/3 and 100/20 Mbps

Federal Funding

Affordable Connectivity Program (ACP)

The ACP provides a discount of up to $30 per month toward internet service for eligible households and up to $75 per month for households on qualifying tribal lands. Eligible households can also receive a one-time discount of up to $100 for a laptop, tablet or desktop computer from participating providers.

FUNDING

$14.2B
in federal program funding from the BIL

The participating broadband provider will receive the funds directly.

ADMINISTRATION

Administered by the FCC

The ACP is continuously accepting provider applications for participation and consumer enrollments.

Eligibility

- ISPs must have submitted Form 477 data and either be designated as Eligible Telecommunications Carriers (ETCs) or apply for approval* from the FCC

- Participants who live on qualifying tribal lands must also participate in an assistance program (e.g., Bureau of Indian Affairs General Assistance, Tribal TANF)

- Participants must have a household income at or below 200% of the Federal Poverty Guidelines, or meet at least one of several criteria, including:
  - Meets the eligibility criteria for a participating provider's existing low-income internet program
  - Participates in a federal assistance program (e.g., SNAP, Medicaid, Free-and-Reduce Price School Lunch)
  - Participates in the Lifeline** program

Milestones

- Funds are available until expended

Community Considerations

- Participation in ACP is required to receive BEAD funding

- A limited list of providers have committed to offering ACP-eligible households high-speed internet plans for $30/month or less (a fully subsidized internet plan)

- The potential benefit of ACP to households may be reduced in areas of the TVA region that lack adequate broadband service speeds and coverage

- An estimated 41% of households in TVA's service area, or at least 300,000 households, are potentially eligible to receive ACP benefits but do not as of August 2022 data***

- Any resident eligible for Lifeline is also eligible for ACP. If a resident enrolls in ACP benefits, they may also qualify for Lifeline phone service assistance

*ACP provider eligibility requirements can be found at https://www.fcc.gov/affordable-connectivity-program

**Lifeline is an FCC program providing assistance with phone service - https://www.fcc.gov/general/lifeline-program-low-income-consumers

***Please see USAC enrollment data - https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/#enrollment-and-claims-by-zipcode-and-county

Federal Funding

Affordable Connectivity Outreach Grant Program

The Affordable Connectivity Outreach Grant Program will provide entities with funding and resources needed to increase awareness and participation in the ACP to eligible households. A key objective of the grant program is to expand and support diverse and impactful outreach efforts.

FUNDING

$100M
will be available through BIL
for ACP outreach efforts. $70 million has been allocated to the Affordable Connectivity Outreach Grant Program.

ADMINISTRATION

Administered by the FCC

Eligibility

ELIGIBLE ENTITIES

- States, US territories, tribal governments
- Local governments
- Public housing authorities
- Social service providers
- Education organizations
- Workforce development training organizations
- Nonprofit and community-based organizations
- Community anchor institutions
- Public service organizations

ELIGIBLE ACTIVITIES

- A wide range of activities may qualify, including, but not limited to, in-person events, literature campaigns, digital campaigns and paid media campaigns to targeted communities

Milestones

- **November 10, 2022:** ACP Outreach Notice of Funding Opportunities (NOFO) was published

- **January 9, 2023:** Application deadline

Community Considerations

- Communities should conduct an assessment to determine eligible population groups that require additional ACP outreach and determine potential strategies to improve uptake in those population groups

- State and local governments may consider partnering with entities that have established connections with targeted communities to assist in developing outreach strategies and implementation plans

Federal Funding

Digital Equity Act

The Digital Equity Act created three grant programs (State Planning, State Capacity and Competitive) that provide funding to promote digital inclusion and advance digital equity for all. These programs aim to ensure that all communities can access and use affordable, reliable, high-speed internet to meet their needs and improve community members' lives.

FUNDING

$2.75B

in federal program funding from the BIL

States within the TVA service area have been allocated approximately $8 million in Digital Equity State Planning funds. States must develop a Digital Equity Plan to be eligible for State Capacity grant funding.

ADMINISTRATION

Administered by NTIA

Eligibility

ELIGIBLE ENTITIES

- **State Planning Program**: States, US territories, Indian Tribes, Alaska Native entities and Native Hawaiian organizations; eligible entities can also make awards to subgrantees
- **Capacity Program**: To be determined
- **Competitive Program**: To be determined

ELIGIBLE ACTIVITIES

- **State Planning Program**: developing digital equity plans; distributing awards to other entities for digital equity plans
- **Capacity Program**: Implementing digital equity plans and related activities; providing digital literacy and digital skills education; improving accessibility and inclusivity of public resources; facilitating adoption of high-speed internet
- **Competitive Program**: To be determined

Milestones

- **August 31, 2022:** First Planning Grant award announced by NTIA, with rolling distribution afterwards
- **November 21, 2022:** The first states in the TVA region, North Carolina and Georgia, received DEA Planning Grants
- State Digital Equity Plans due 365 days after funds received and are required to be eligible for State Capacity grant funding
- **2023:** Digital Equity Capacity Grant NOFO likely to be released with application opening in 2024
- **2023:** Digital Equity Competitive Grant NOFO likely to be released
- Competitive Grant Program launches within one month of first Capacity Grant awards

Community Considerations

- Local governments should engage in the development of the State Digital Equity Planning as a subgrantee and may consider reaching out to their State Broadband Office or administering entity to get involved in the process
- ISPs, LPCs and nonprofit organizations should consider how to align their efforts with the state's identified digital equity gaps and priorities
- Nonprofit and community-based organizations should evaluate what subgrantees are available to assist the state with planning, community engagement and implementation of digital equity plans

Federal Funding

Emergency Connectivity Fund (ECF)

The ECF, operated by the FCC, provides funding to eligible schools and libraries to assist communities during the remote learning period, particularly for those that do not have needed internet access or devices.

FUNDING

$1.17B

remaining funds distributed through rounds and allocated by ARPA

ADMINISTRATION

Administered by the FCC

Eligibility

ELIGIBLE ENTITIES

- Schools, libraries and consortia of schools and libraries that are eligible for support under the FCC's E-Rate Program
- Tribal libraries eligible for support under the Library Services and Technology Act

ELIGIBLE EQUIPMENT

- Wi-Fi hotspots, modems (including air cards), routers, devices that combine a modem and router and connected devices (laptop and tablet computers)

Milestones

- **May 13, 2022:** Third application window closed
- A fourth application window has not yet been announced

Community Considerations

- Local governments should advertise programs and work with local libraries and schools in their jurisdictions for local community engagement and outreach
- Local governments can provide support to local schools and libraries for completing the application process

Federal Funding

Rural Digital Opportunity Fund (RDOF)

The RDOF was established by the FCC to award up to $20.4 billion over 10 years to bring fixed broadband and voice service to unserved homes and businesses in rural America. The RDOF is implemented in a two-phase reverse auction that prioritizes broadband infrastructure projects that deliver higher network speeds and lower latency.

FUNDING

$11.2B
awarded in phase II
Phase I (complete) awarded $9.2 billion.

ADMINISTRATION

Administered by the FCC

Eligibility

ELIGIBLE ENTITIES

- Telecommunication providers that demonstrate two years of experience providing voice, broadband and/or electric distribution or transmission service

ELIGIBLE AREAS

- Census blocks where no provider is offering or has committed to offering service of at least 25/3 Mbps (based on Form 477 data)

Milestones

- Phase I auction closed

- Upcoming Phase II auction will become available but information on this funding opportunity is not yet available

Community Considerations

- ISPs and LPCs should identify areas that are not already served or committed to being served at 25/3 Mbps as outlined in the RDOF programs and identify feasible projects with competitive rates
- ISPs and LPCs should engage local communities and governments to discuss potential plans, identify a possible partnership and garner community support

- Local governments can identify eligible areas and qualified telecommunication providers for the RDOF program

Source: Universal Service Administrative Co. - https://www.usac.org/high-cost/funds/rural-digital-opportunity-fund/

Federal Funding

E-Rate

The Schools and Libraries Universal Service Support Program, also known as E-Rate, provides schools and libraries with funding and support to obtain affordable broadband.

FUNDING

Funding availability up to an annual Commission-established cap of

$4.456B

based on demand

Funding comes from the Universal Service Fund. Funding can be requested under two categories of service: services to a school or library (telecommunications, telecommunications services and internet access) and services to deliver internet access within schools and libraries (internal connections, basic maintenance of internal connections and managed internal broadband services).

ADMINISTRATION

Administered by the FCC

Eligibility

ELIGIBLE ENTITIES

- Schools that meet the statutory definition of elementary and secondary schools
- School consortium and school districts
- Libraries that meet the statutory definition of a library or library consortium
- Only libraries whose budgets are completely separate from a school are eligible; otherwise, they must apply through their school

Milestones

- **September 22, 2022:** Wave 23 for Fiscal Year 2022 (FY2022) was issued for $21.4 million
- Deadlines for FY2023 are being extended due to natural disasters throughout the country
- The most recent update for FY2023 extends the deadline to 150 days from October 4, 2022
- Applicants should engage with funding resources now, as the administrative window opened on October 25 and will help applicants prepare for the funding application opening in early FY2023

Community Considerations

- Highest poverty schools and libraries will be prioritized
- Discount amounts vary based on the level of poverty and whether the school or library is in an urban or rural area
- Discounts can range from 20% to 90% of the costs of eligible services
- Recipients must pay some portion of the service costs

Source: Federal Communications Commission E-Rate Guidance - https://www.fcc.gov/consumers/guides/universal-service-program-schools-and-libraries-e-rate | https://www.fcc.gov/general/e-rate-schools-libraries-usf-program

Universal Service Administrative Co. - https://www.usac.org/e-rate/resources/announcements/
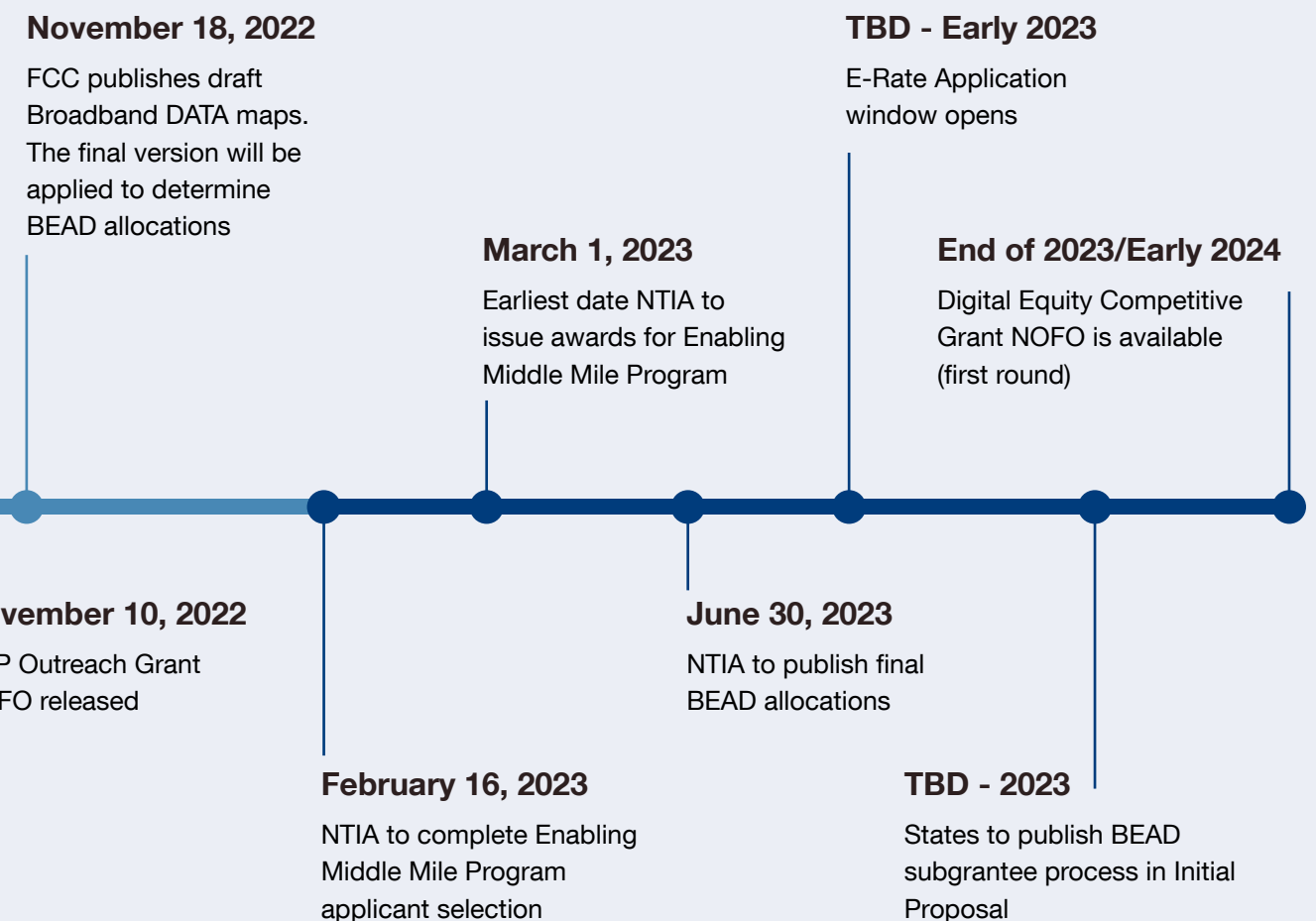
Federal Funding

Federal Funding Timelines

Federal funding for various programs is passed to either national or local governmental organizations to oversee and disburse program funds. However, because there are many organizations planning to apply, it is important to ensure that TVA communities are as prepared as possible to submit compelling and competitive applications.

There are several programs with applications that are currently available or will soon become available, all of which come with extensive application and grant reporting protocols. As some programs have shorter application windows than others, communities should prepare by reviewing the notable application timelines below. Some deadlines have already passed at the time of this guide's publishing.

PAST DATES

July 12, 2022
Digital Equity Planning application or Letter of Intent due

July 18, 2022
BEAD Letter of Intent due

August 15, 2022
BEAD Initial Planning funds application due

August 31, 2022
NTIA announces first DEA Planning Grant Award

September 6, 2022
Round 4 of ReConnect Program application window opens

September 29, 2022
Earliest date for NTIA to release Digital Equity Funds

September 30, 2022
Enabling Middle Mile Program application due

October 13, 2022
NTIA announces first BEAD Initial Planning Grant Award

November 2, 2022
ReConnect Program application closes

UPCOMING DATES

November 18, 2022
FCC publishes draft Broadband DATA maps. The final version will be applied to determine BEAD allocations

November 10, 2022
ACP Outreach Grant NOFO released

February 16, 2023
NTIA to complete Enabling Middle Mile Program applicant selection

March 1, 2023
Earliest date NTIA to issue awards for Enabling Middle Mile Program

June 30, 2023
NTIA to publish final BEAD allocations

TBD - Early 2023
E-Rate Application window opens

End of 2023/Early 2024
Digital Equity Competitive Grant NOFO is available (first round)

TBD - 2023
States to publish BEAD subgrantee process in Initial Proposal

State Funding

State Broadband Opportunities and Investments Summary

States in the TVA service region are ramping up broadband investments in line with federal funding opportunities available through BIL, ARPA and others. Some states have an existing broadband infrastructure grant program or are in the process of standing up a program to funnel investments toward deployment of infrastructure to unserved and underserved areas. An overview of broadband opportunities for and investments made by states in the TVA service area is provided below. Further detail on state broadband grant programs is provided in the Appendix.

STATE INVESTMENTS

Alabama
Alabama has allocated more than $276 million from its ARPA funds specifically to fund two broadband programs: The Alabama Broadband Accessibility Fund Grant and the Statewide Middle-Mile Network Grant Program. Both programs are administered by the Alabama Department of Economic and Community Affairs and aim to expand middle mile projects and provide connections to community anchor institutions. A range of applicants including government entities, ISPs, utilities and nonprofit organizations can apply.

Georgia
Georgia has committed over $648 million to broadband investments, initially from a $408 million investment through grants chosen by the State's competitive State Fiscal Recovery Fund Grant established by Governor Kemp. In August 2022, Georgia announced another $240 million investment for a newly established Capital Projects Fund program funded by the state's ARPA allocation. Georgia's broadband investments have focused on infrastructure investments to bring internet to its unserved communities.

Kentucky
Kentucky earmarked $250 million of its ARPA funds to improve broadband infrastructure through the Broadband Deployment Fund Grant. The grant is administered by the Kentucky Infrastructure Authority (KIA) and government agencies are eligible. The state's investment places an emphasis on last mile broadband infrastructure but will invest in middle mile infrastructure where it is necessary for last mile service.

Mississippi
Mississippi has allocated $570 million in federal funding through the Office of Broadband Expansion and Accessibility of Mississippi (BEAM). The grants are intended to aid in the development of communities and to promote economic growth goals in the region. Coordinating and streamlining broadband policy is one way it can achieve these goals. Local units of government are eligible for these grants.

North Carolina
North Carolina has invested more than $1 billion in ARPA funds in infrastructure, access and digital literacy. These funds are administered through the Department of Information Technology and will leverage significant private investment in addition to the public dollars provided. Funding will primarily go toward providing service to unserved and underserved areas through last mile and middle mile connections, but will also include digital equity, inclusion and digital literacy programs.

Tennessee
Tennessee has allocated $500 million of ARPA funds to make necessary investments in infrastructure, including broadband infrastructure. The intent is ultimately to make a full recovery from the pandemic by addressing its economic fallout, laying the foundation for a strong and equitable recovery and helping with costs associated with the installation of middle mile and last mile broadband infrastructure. These funds can be used by local, municipal and county governments.

Virginia
Virginia has committed $2 billion in broadband investment primarily through the Virginia Telecommunications Initiative, a competitive broadband infrastructure grant program. The program is designed to promote public-private partnerships and provide financial incentives to broadband providers to extend broadband service to unserved areas. Units of government can apply with a private internet service provider as a co-applicant.

Community Funding

Steps to Community Readiness for Funding Applications

While there are many funding programs currently and soon-to-be available, each will have a unique application requiring close attention to detail. Programs will often organize webinars and compile technical assistance materials when NOFOs become available. Applications will need to be tailored to each program to remain competitive, but TVA communities can start planning for application openings. The key steps to follow that will best position communities to submit timely and compelling applications for eligible projects and activities are outlined below.

1 **Identify where gaps exist in the region and align with priority areas in funding opportunities**

- Refer to state and FCC coverage maps to identify unserved or underserved communities and validate coverage gaps
- Gauge community interest in identified areas of need through surveys and community outreach

- Conduct feasibility studies to establish level of effort
- Target initiatives for rural, low-income and other communities that may be socially vulnerable and typically have lower rates of broadband adoption

2 **Identify the appropriate solution to address the unique needs of each community**

INFRASTRUCTURE

Meet consumer choice and availability needs through promoting:
- Middle mile infrastructure
- Last mile infrastructure (wired and wireless)
- Public Wi-Fi hotspots

DIGITAL ADOPTION & EQUITY

Meet social and economic needs through:
- Affordable internet plans and subsidies (including ACP enrollment)
- Digital literacy courses
- Internet enabled device giveaways and loan programs

3 **Determine scale of impact and required resources to enable organized and competitive funding applications**

IMPACT
- Number of households served by newly added broadband
- Number of community anchor institutions connected
- Number of households subscribed to a broadband plan

REQUIRED RESOURCES
- Determine total costs of the project
- Establish what costs the organization can cover
- Identify grants that can fund project costs
- Determine which activities can be performed by the organization independently and which activities need to be contracted out

4 **Identify potential partners**

- Conduct outreach to potential partners with the required expertise as soon as feasible
- Evaluate interest and establish what type of partnership can be agreed upon

- Determine whether partners can contribute financial resources to the effort
- Identify funding opportunities for partnership and individual applications

5 **Build capacity to respond and submit competitive applications**

- Seek full-time resources to identify, track and lead application responses to eligible funding opportunities
- Attend webinars and follow technical assistance materials to ensure accurate understanding of application requirements
- Work with partners to establish what forms,

financial documents, project narratives and audits are required as part of the application
- Prepare and follow meticulous reporting protocols to prepare for reporting deadlines and requirements
- Establish who will serve as implementation and grant management teams

Community Funding

Choosing the Appropriate Broadband Model

Broadband business models can take many forms but can typically be placed in one of a few categories, ranging from fully public to fully private. Public-Private Partnerships (P3s) are increasingly being employed by local governments to facilitate broadband expansion projects across the country. Each community should evaluate the various models to determine which could be a good fit for their needs. These models ultimately involve a few key considerations, including 1) the local government's **funding capacity**, 2) **preexisting infrastructure and workforce** that can be leveraged for broadband use, 3) the viability of **trusted private partners** and 4) the local government's **risk tolerance**.

BUSINESS MODEL	CONSIDERATIONS FOR IMPLEMENTATION	
Fully Municipal PUBLIC ENTITY Owns rights of way (ROW), builds out infrastructure, operates the network and provides services to end customer	Unit of government may have good access to funding and preexisting infrastructure to utilize for broadband deployment but no private partner options. A unit of local government may also choose this model if it has a potential private ISP partner, but it would rather maximize the benefit to the community over minimizing financial burden.	✔ Ample public funding ✔ Good existing infrastructure
Publicly Owned, Privately Serviced PUBLIC ENTITY Owns ROW, middle and last mile and operates infrastructure (likely) THIRD-PARTY Serves customer	Unit of government may have good access to funding, preexisting infrastructure and a viable private partner that can help contribute a cost share to reduce the financial burden on the community. This may also be a good option for a unit of government if it has access to the required funding but limited infrastructure to leverage on its own.	✔ Ample public funding ✔ Good existing infrastructure ✔ Viable private partners

Source: US Ignite, Altman Solon "Broadband Models for Unserved and Underserved Communities"

BUSINESS MODEL	CONSIDERATIONS FOR IMPLEMENTATION	
Hybrid Ownership PUBLIC ENTITY Owns ROW, middle mile infrastructure THIRD-PARTY Owns last mile infrastructure, operates network and provides service	Unit of government may have limited access to funding but good existing infrastructure to leverage for broadband deployment.	✔ Good existing infrastructure ✔ Viable private partners
Private Developer, Open Access PUBLIC ENTITY Owns ROW PRIVATE DEVELOPER Finances and builds middle and last mile, operates network MULTIPLE PROVIDERS Provides service	Unit of government may have limited access to funding and limited infrastructure on its own, but one or multiple private partners to minimize the risk and increase prospects of wider broadband deployment.	✔ Viable private partners
Fully Private Broadband PUBLIC ENTITY Ownership of ROW SERVICE PROVIDERS Ownership of all infrastructure, operates network, owns maintenance and provides service	Unit of government has limited access to funding and limited infrastructure on its own, but one or multiple private partners and prioritizes limiting its financial commitments.	✔ Viable private partners

⚠ **As the ownership model moves away from the public sector, the business risk moves toward the private sector.**

Next Steps

Manage Your Funding Journey to Plan for Success

Start Early
Review requirements and goals early and prioritize based on needs in your community.

Build Partnerships
Build partnerships that boost your ability to pursue funding and ease the burden of managing funds once secured.

Access Your Capability
Gauge your organization's ability to manage funds and the level of effort for pursuing funding opportunities.

Manage Requirements
Ensure plans are in place to manage reporting and compliance risk.

Socialize Your Efforts
Focus on establishing buy-in and awareness of upcoming projects within your community on an ongoing basis.
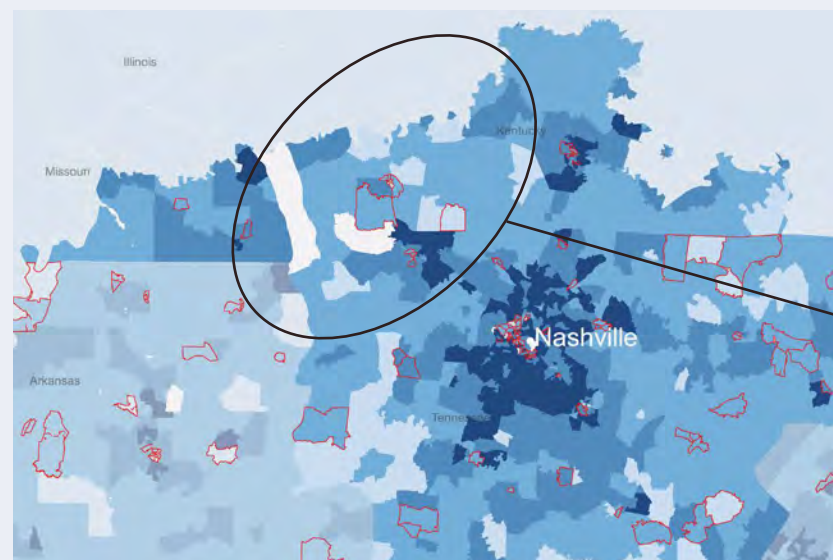
RESOURCES

Visit Connected Communities website
TVA's Connected Communities website is continually updated with the latest information and should be checked frequently for developments in funding and resources.

Leverage TVA's Research Database
Connected Communities Research Database can be leveraged to find relevant research information for your organization.

Appendix

TVA North Region Broadband Overview

HOUSEHOLDS WITH A BROADBAND SUBSCRIPTION AND QUALIFIED CENSUS TRACTS*

- ☐ QCTs
- <50% subscribed
- 50 to <65% subscribed
- 65 to <80% subscribed
- 80 to <90% subscribed
- ≥90% subscribed

Nashville

Subscription gaps in the North region may be driven by a lack of provider offerings, with many residents only served below 25/3 Mbps.

Impact of ACP outreach may be maximized by focusing on urban areas in and around Nashville, where there are several areas of high eligibility and moderate to high adoption.

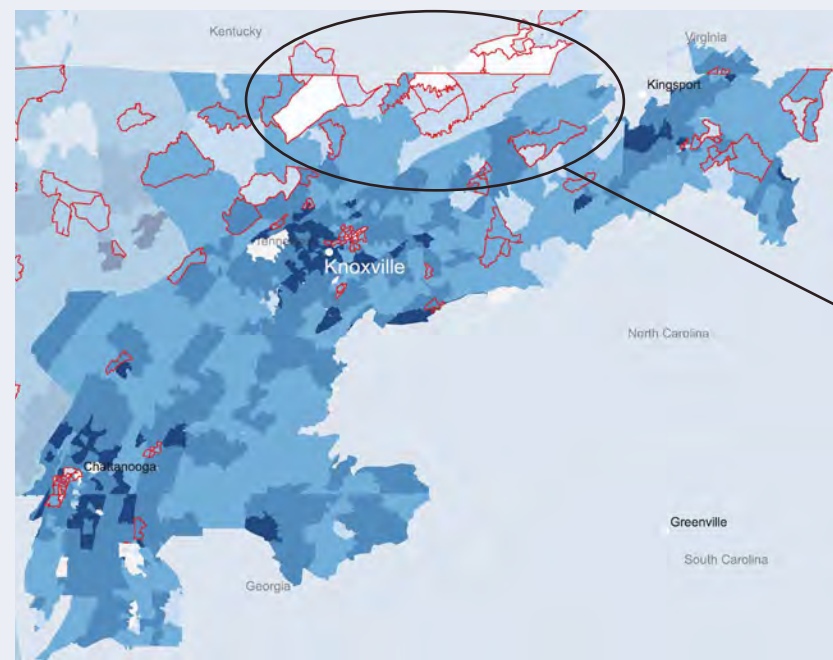(!) **Pockets in the North region with low-income and lower broadband adoption require targeted interventions.**

*Qualified Census Tracts are a Housing and Urban Development dataset indicating areas where at least 25% of the households are below the federal poverty line, or a majority of the area is below 60% of the local median income

The North region has some of the highest instances of positive key indicators, such as percentage of residents with access to 100/20 Mbps service offerings, number of providers offering high-speed services, median household income and percentage of residents with a bachelor's degree or higher.

Despite generally high resources, 93 QCTs are designated in the North region, highlighting a digital divide driven by pockets of need spread throughout the area. Limited consumer choice hinders both urban and rural internet access in the North region, as it does in the West. Data show that subscriptions are often lower in low-income urban areas, likely related to affordability concerns of low-income residents. The North region has the highest percentage of rural residents with access to 100/20, but a digital divide still exists.

74%

of rural residents

live in an area served at 100/20 Mbps speeds compared to 99% of urban residents.

AFFORDABILITY

$53,761

is the median household income in the North region, the highest of any TVA region.

23%

of households in the North region are housing burdened,** indicating that high cost of living may curb some of the benefit of higher incomes in the North.

ACCESSIBILITY

91%

of residents live in an area where at least one provider offers service at 100/20 Mbps, the highest among TVA regions.

10%

of residents in the North region have internet access through a smartphone only, which may not be sufficient for remote work or virtual school.

ADOPTION

52%

of eligible households are subscribed to ACP benefits on a low-end estimation, meaning the North region has the most still to gain from ACP enrollment.

An additional 98,000 households could still enroll in ACP, meaning nearly $3 million in benefits per month.

**The U.S. Department of Housing and Urban Development defines housing burdened households as those paying more than 30% of their gross income on their rent or mortgage

Appendix

TVA East Region Broadband Overview

HOUSEHOLDS WITH A BROADBAND SUBSCRIPTION AND QUALIFIED CENSUS TRACTS*

- ☐ QCTs
- <50% subscribed
- 50 to <65% subscribed
- 65 to <80% subscribed
- 80 to <90% subscribed
- ≥90% subscribed

The northern tip of the TVA East region has limited infrastructure to deliver broadband at adequate speeds. Many residents live in areas without access to speeds of 100/20 Mbps or even 25/3 Mbps as a result.

Areas with limited broadband offerings must rely on cellular data plans or satellite for broadband access, which are typically more expensive than comparable speeds from fixed wireless plans.

(!) **Rural regions in the East struggle with access to affordable broadband.**

*Ookla Global Fixed Network Performance Map Data. Map tile data measures the average download and upload speeds taking the average speeds for all tests performed in that tile.

The East region performs lowest according to broadband speed test data. The Ookla* median speeds were 143/20 Mbps, compared to an overall TVA median of 163/25 Mbps. Another measure of broadband internet speed, Microsoft Airband Usage data**, suggests that the average resident north of Knoxville is at or below 25/3 Mbps speeds.

There are 110 QCTs in the East region spread between densely populated urban areas and more mountainous areas in northeastern Tennessee, North Carolina and Virginia. Pockets of high-speeds and high broadband adoption in Chattanooga, Knoxville and south of Kingsport suggest that local partnerships can be a powerful tool for expanding access to underserved areas nearby.

Residents living north of Knoxville often have limited economic resources in addition to limited offerings for broadband services.***

AFFORDABILITY

19%
of residents in the East region are over retirement age (65 years and older) and more likely to live on a fixed income. Overall, 42% of residents are not in the workforce, likely driven by an aging population as well as high disability rates.

ACCESSIBILITY

100%
of urban residents live in areas with some provider offering broadband speed plans, making ACP enrollment especially effective for closing urban digital divides.

16%
of rural residents do not have access to a fixed broadband connection of any type.

ADOPTION

106,000
households in the East region are eligible for ACP but not enrolled, providing an opportunity to help close the adoption gap, particularly in urban areas.
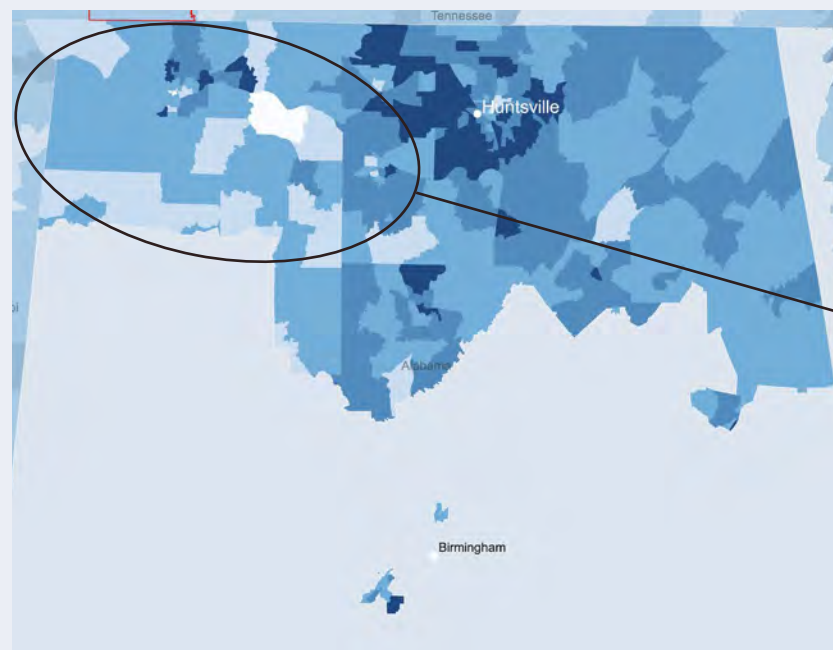
20%
of households in the East have no broadband internet subscription.

**Microsoft Airband Usage Data is a publicly available dataset measuring the speed at which Microsoft Windows users communicate with Microsoft servers to measure user-experience speeds

***Sources: Ookla Global Fixed Network Performance Map Data, American Community Survey 5-Year Estimates (2020)

Appendix

TVA South Region Broadband Overview

HOUSEHOLDS WITH A BROADBAND SUBSCRIPTION AND QUALIFIED CENSUS TRACTS*

- ☐ QCTs
- <50% subscribed
- 50 to <65% subscribed
- 65 to <80% subscribed
- 80 to <90% subscribed
- ≥90% subscribed

Rural areas around Florence and Muscle Shoals often lack access to providers of broadband speeds.

Rural areas in eastern Alabama generally have moderate broadband availability and adoption, but infrastructure gaps in the West make access difficult in rural areas.

A high proportion of residents in and around Huntsville have access to plans at broadband speeds, driving high adoption in urban areas.

The South region of TVA's service area has no QCTs.

(!) **Low population density in northwestern Alabama discourages infrastructure investment.**

Despite multiple indicators that residents in western Alabama may be able to afford broadband and have needs for new broadband services, the region has low broadband availability. Low population density is the likely driver for a low level of service provided.

Western Alabama has moderate median income and a low percentage of residents who are housing burdened, suggesting that affordability is not a primary barrier in the market for broadband.

Microsoft Airband Usage data suggests that the percentage of internet users experiencing broadband speeds is also moderate to low across the region.

Certain areas must rely on cellular data plans or satellite for broadband access, which are typically more expensive than comparable speeds from fixed wireless plans.

AFFORDABILITY

86,000
families are living below 200% of the federal poverty level. Of these, roughly 40% are not enrolled in ACP benefits.

19%
of households are housing burdened, despite having no qualified census tracts in the region.

ACCESSIBILITY

40%
of rural residents do not have access to plans at or above 100/20 Mbps.

15%
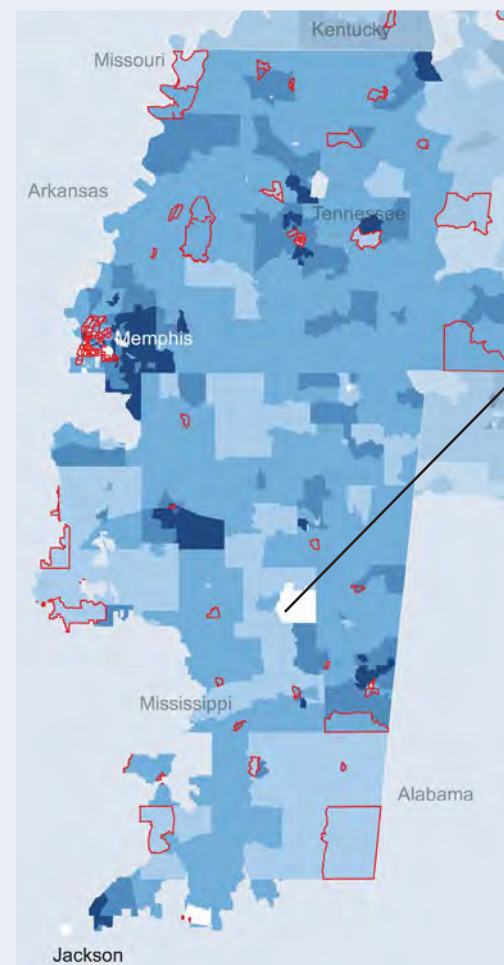of residents have a cellular data plan only.

ADOPTION

11%
of households have no internet access device besides a smartphone, likely accounting for a large proportion of the households with no fixed broadband plan.

40%
of eligible households are not enrolled in ACP, translating to at least 34,000 households.

Appendix

TVA West Region Broadband Overview

HOUSEHOLDS WITH A BROADBAND SUBSCRIPTION AND QUALIFIED CENSUS TRACTS*

☐ QCTs   <50% subscribed   50 to <65% subscribed   65 to <80% subscribed   80 to <90% subscribed   ≥90% subscribed

The West region of TVA's service area will require continued progress from local stakeholders, particularly in areas where broadband infrastructure does not already exist or is too outdated to reach modern speed requirements.

The greatest concentration of low-income households are in urban areas, highlighting the need to tap into federal funding and programs focused on affordability, such as the ACP.

(!) Access to affordable, accessible plans is a barrier for the West region.

In the West region, 91% of residents live in an area with access to plans offering 25/3 Mbps, however only 79% of residents have access to plans offering 100/20 Mbps or higher. In comparison, 95% of residents in the TVA region have access to plans offering 25/3 Mbps and 86% have access to plans offering 100/20 Mbps.

In Mississippi, only 81% of residents have access to a plan offering 25/3 Mbps plan and 59% have access to a plan offering 100/20 Mbps. Limited infrastructure availability contributes to a lack of consumer choice and affordable plans options in both urban and rural areas of the state. LPC's have been making rapid progress to close the rural access gap and offer plans tailored to small communities.

TVA's West region has the lowest access to basic (>25/3 Mbps) and high-speed plan options (>100/20 Mbps).

AFFORDABILITY

15%
of families are under the federal poverty level.

24%
of households are qualified as housing burdened and struggle to afford cost of living, even before factoring in broadband costs that cause an additional burden.

ACCESSIBILITY

93%
of urban residents live in areas where an internet speed of 100/20 Mbps is offered.

48%
of rural residents live in areas where an internet speed of 100/20 Mbps is offered, though recent improvement from LPCs may have raised this number.

ADOPTION

14%
of households do not have access to an internet access device. An additional 14% of households only have access by smartphone.

18%
of households only have access to the internet via cellular data plan, which is usually a costly and limited option.

Appendix

Federal Funding Data Table

Broadband deployment will require significant resources, and communities may not always have capital readily available. Fortunately, there are many resources at both the state and federal level that can be utilized to help fund broadband infrastructure and digital adoption initiatives. In addition to existing federal programs through the US Department of Agriculture (USDA), National Telecommunications and Information Administration (NTIA) and Economic Development Administration (EDA), there are many programs newly available as a result of the nearly $65 billion investment in broadband through BIL. Some of these programs have already become available to applicants, while others will open in future years. Additionally, funding through these programs will become available to states, particularly through the Broadband Equity, Access and Deployment (BEAD) and the Digital Equity Planning programs. These will likely be used as a source to replenish state programs formerly established using ARPA funds that have since been depleted.

The following pages provide an overview of the funding available in the current or near-term that will be distributed at the federal, state and local level for communities to pursue. Some programs with closed application windows may soon receive additional rounds of funding and re-open.

The TVA Connected Communities initiative provides additional funding resources, including a Research Database for analyzing funding opportunities.

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
21st Century Community Learning Centers	Department of Education	**FY2023 Annual Estimate:** AL: $20,078,248 KY: $19,776,684 TN: $25,156,746 GA: $47,481,147 VA: $21,693,820 NC: $37,743,564 MS: $16,643,513	State Education Agencies (SEAs)	Not identified
Affordable Connectivity Program	FCC	$14.2B	ISPs, eligible low-income households	Present – Funding expiration
Appalachian Regional Initiative for Stronger Economies (ARISE)	Appalachian Regional Commission	$73.5M	Local development districts, tribal governments, local and state governments, higher education institutions, nonprofit organizations	Open Applications accepted on a rolling basis
Area Development Program	Appalachian Regional Commission	$23.3M	Consortium of business or nonprofit organizations, state and local governments, educational institutions	Applications can be submitted throughout the year although states may have specific requirements.
Business and Industry (B&I) Guaranteed Loan Program	Rural Business -Cooperative Service	$1.3B	Libraries, higher education institutions, state and local governments, US territories, tribal governments	Open Applications accepted on a rolling basis

Appendix

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Choice Neighborhoods	Department of Housing and Urban Development: Office of Public and Indian Housing	$379M	Local governments, tribal governments, nonprofit organizations and local housing authorities, in cooperation with local organizations and businesses	Applications due 1/11/2023
Community Development Block Grant	States and entitlements	Varies – annual allocations TBD	Varies (generally local governments/ municipalities)	Varies
Community Development Block Grant - Alabama	Alabama Department of Economic and Community Affairs	$23.55M	Varies (generally local government/ municipalities)	Varies
Community Development Block Grant - Georgia	Georgia Department of Community Affairs	Not Identified – max award: $1M for single activity	Varies (generally local government/ municipalities)	Varies
Community Development Block Grant - Mississippi	Central Mississippi Planning and Development District	$24.914M	Varies (generally local government/ municipalities)	Varies
Community Development Block Grant - Tennessee	Tennessee Housing Development Agency	$28.178M	Public bodies, community-based nonprofit organizations, tribes, rural areas with fewer than 20,000 residents	Open Applications accepted on a rolling basis

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Community Development Block Grant - North Carolina (Building Reuse Program, Public Infrastructure Grant, Demolition Grant, Disaster Recovery Grant, and Community Housing Grant)	North Carolina Department of Commerce, Rural Economic Development Division	$47M	Public bodies, community-based nonprofit organizations, tribal governments, rural areas with fewer than 20,000 residents	Open Applications accepted on a rolling basis
Community Development Block Grant – Virginia (Community Improvement Grant)	Virginia Department of Housing and Community Development	$18.8M	Public bodies, community-based nonprofit organizations, tribes, rural areas with fewer than 20,000 residents	Open Applications accepted on a rolling basis
Community Facilities (CF) Direct Loan and Grant Program	Rural Housing Service	Not set	Public bodies, community-based nonprofit organizations, tribal governments	Open Applications accepted on a rolling basis
Community Facilities (CF) Guaranteed Loan Program	Rural Housing Service	Total amount not set, maximum loan of $100M	Libraries, K-12 schools, higher education institutions local governments, territorial governments, tribal governments, public safety entities, healthcare facilities, nonprofit organizations	Open Applications accepted on a rolling basis

Appendix

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Digital Equity Capacity Grant	States	$1.44B	States, District of Columbia, US territories, local governments	TBD - 2023
Digital Equity Competitive Grant	NTIA	$1.25B	Local education agencies, local governments, tribal governments, nonprofit organizations, work force development programs	TBD - 2023/2024
Distance Learning and Telemedicine (DTL) Grant Program	Rural Utilities Service	$64M	Most state and local government entities, tribal governments, nonprofit organizations, for profit businesses, consortia of eligible entities	Open Applications accepted until January 30, 2023
Distressed Counties Program	Appalachian Regional Commission	$14.9M	Libraries, K-12 schools, higher education institutions, state and local governments, US territorial governments, tribal governments, public safety entities, healthcare facilities, nonprofit organizations, electric co-ops/utilities	Open Applications accepted on a rolling basis, although states may have specific requirements
EDA Planning and Local Technical Assistance Programs	EDA	Not Identified	District organizations, tribal governments, state and local governments, institutions of higher education, nonprofit organizations	Open (ongoing)

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
E-rate Program	FCC	Funding cap of $4.46B	Libraries, K-12 schools, a consortium of eligible entities	Open Applications due 150 days from October 4, 2022
Fiscal Years 2021-2023 Research And National Technical Assistance (RNTA) Notice Of Funding Opportunity	EDA	$2.5M	District organization, tribe, state and local governments, institutions of higher education, nonprofit organizations	Open Applications accepted on a rolling basis
FY 2020 EDA Public Works and Economic Adjustment Assistance Programs including CARES Act Funding	EDA	$200.5M	State and local governments, institutions of higher education, tribal governments, nonprofit organizations	Open (ongoing)
Rural Digital Opportunity Fund	FCC	$11.2B	Telecommunication providers	Not identified
Rural Economic Development Loan and Grant Program	Rural Business-Cooperative Service	$60M for FY2022	Electric co-ops/ utilities	Application open **DEADLINES** **First Quarter:** September 30, 2022; **Second Quarter:** December 31, 2022; **Third Quarter:** March 31, 2023; **Fourth Quarter:** June 30, 2023

Appendix

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Smart and Connected Communities	National Science Foundation	Maximum award of $2.5M	Libraries, K-12 schools, higher education institutions, state and local governments, territorial governments, tribal governments, public safety entities, healthcare facilities, for profit organizations, nonprofit organizations, electric utilities/co-ops, financial institutions	Open Applications accepted until 2024
Telecommunications Infrastructure Loans & Loan Guarantees	USDA	$690M	State and local governments, tribal governments, nonprofit organizations, for profit organizations	Present (No end date)
Telecommunications Infrastructure Loans and Loan Guarantees Program	Rural Utilities Service	Not identified	State and local government entities, tribal governments, nonprofit organizations, for profit businesses	Open Applications accepted on a rolling basis
"Your Home, Your Internet"/ Affordability Connectivity Outreach Program	FCC	$10M	State and local housing authorities , tribal housing entities, community partners	N/A

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
ARC Power	Appalachian Regional Commission	$45M	Libraries, K-12 schools, higher education institutions, public safety entities, healthcare facilities, nonprofit organizations, electric co-ops/ utilities, state and local governments, territorial governments, tribal governments	Application closed April 2021
Broadband Equity, Access & Deployment (BEAD) Program	States	$42.45B TBD (minimum $100M/state)	States, District of Columbia, US territories, local governments	Application closed
Broadband Infrastructure Program	NTIA	$288M	State and local governments, for profit organizations	Application closed August 2021
Central Appalachia & North Central/ North Appalachia Broadband	Appalachian Regional Commission	$15M	Libraries, K-12 schools, higher education institutions, public safety entities, healthcare facilities, nonprofit organizations, electric co-ops/ utilities, state and local governments, territorial governments, tribal governments	Application closed April 2021

Appendix

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Community Connect Grant Program	Rural Utilities Service	Maximum award of $3M	State and local governments, territorial governments, tribal governments, for profit organizations, nonprofit organizations, electric utilities/co-ops	Application closed December 2020
Community Infrastructure Fund	Delta Regional Authority	$15M	Higher education institutions, state and local governments, tribal/native governments, healthcare facilities, nonprofit organizations, electric utilities/co-ops	Application closed June 2021
Connected Care Pilot Program	FCC	$100M	Healthcare facilities	Application closed December 2020
Connecting Minority Communities (CMC) Pilot Program	NTIA	$268M	Higher education institutions, for profit organizations, nonprofit organizations	Application closed June 2021

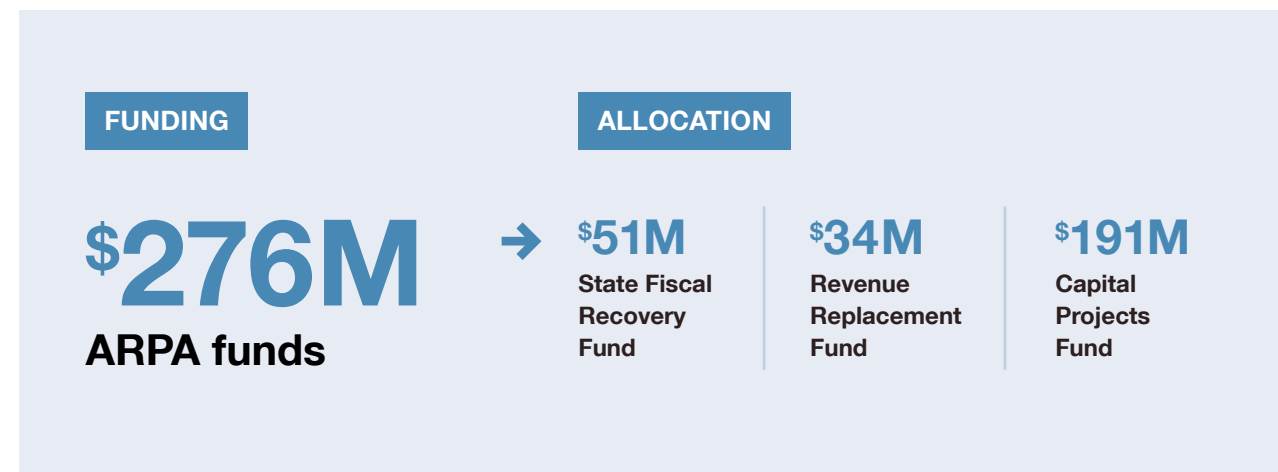| OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Digital Equity State Planning Grant	States	Alabama: $981,081 Georgia: $1,429,212 Kentucky: $874,236 Mississippi: $875,585 North Carolina: $1,415,614 Tennessee: $1,092,244 Virginia: $1,222,391	States, District of Columbia, US territories, local governments (as state sub-grantees)	Application closed
Enabling Middle Mile Program	NTIA	$980M	State/economic development authorities, tribal governments, technology/utility companies or districts	Application closed
Platforms for Advanced Wireless Research (PAWR)	National Science Foundation	$8.7M	Higher education institutions	Application closed

Appendix

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
POWER Initiative	Appalachian Regional Commission	$25M	Local development districts, tribal governments, state and local governments, institutions of higher education, nonprofit organizations	Application closed for 2022 (reoccurring)
Project OVERCOME	National Science Foundation	$1.9M	Higher education institutions	Application closed
Rural Broadband Loan and Loan Guarantee Program (Broadband Program)	Rural Utilities Service	Not identified	State and local governments, territorial governments, tribal governments, for profit organizations, nonprofit organizations, electric utilities/co-ops	Application closed 2020
Rural Business Development Grant (RBDG)	Rural Business-Cooperative Service	$41M	Higher education institutions, state and local governments, territorial governments, tribal governments, nonprofit organizations	Application closed March 2021
Rural Community Development Initiative (RCDI) Grant Program	USDA	$6M	Public bodies, nonprofit organizations, for-profit organizations	Application closed; next window TBD
Rural Connectivity (Reconnect) Program	Rural Utilities Service	TBD	State and local governments, territorial government, tribal governments, for profit organizations, nonprofit organizations, electric utilities/co-ops, financial institutions	Application closed for 2022 – Recurring program, 2023 application opening TBA

OPPORTUNITY NAME	ADMINISTRATING ENTITY	FUNDS AVAILABLE	ELIGIBLE ENTITIES	TIMELINE
Rural Health Care Program	FCC	Funding cap of $571M	Healthcare facilities	Application closed February 2021; additional funding windows expected
Spectrum and Wireless Innovation enabled by Future Technologies (SWIFT)	National Science Foundation	Estimated $13.5M	Higher education institutions	Application closed May 2022
States' Economic Development Assistance Program	Delta Regional Authority	$14.8M	State and local governments, public bodies, nonprofit organizations	Application closed June 2022
Tribal Broadband Connectivity Program	NTIA	$1.98B	Tribal governments, Tribal colleges or universities, tribal organizations	Application closed—remaining funding may be made available in late 2022 or early 2023 after existing applications are reviewed
Workforce Opportunity for Rural Communities (WORC): A Grant Initiative for the Appalachian and Delta Regions	Department of Labor, Employment and Training Administration	$34.2M	State and local governments, local development boards, school districts, higher education institutions, tribal governments, housing authorities, labor organizations, nonprofit organizations	Application closed for 2022 (reoccurring)

Appendix

Alabama Funding Overview

The State of Alabama allocated more than $276 million from its ARPA funds specifically to broadband programs to be administered by the Alabama Department of Economic and Community Affairs, Digital Expansion Division (ADECA).

FUNDING

$276M
ARPA funds

→

ALLOCATION

$51M
State Fiscal Recovery Fund

$34M
Revenue Replacement Fund

$191M
Capital Projects Fund

Alabama Broadband Accessibility Fund

PROGRAM FUNDS

- **$25 million**
- Maximum award not to exceed 80% or **$5 million**, whichever is less

ELIGIBLE ENTITIES

- Cooperatives, corporations, limited liability companies, partnerships, private business entities or units of government that provide broadband services

ELIGIBLE ACTIVITIES

- Middle mile projects or projects to provide broadband service to a specific hospital, health care facility, public school, public safety or economic development site
- Project must result in service to customers offering 100/100 Mbps speeds

TIMELINE

- **October 6, 2022:** Application submission open for the 2023 cycle
- **January 3, 2023:** Application submission deadline for the 2023 cycle

Alabama Community Broadband Technical Assistance Program

PROGRAM FUNDS

- Not identified. Alabama received EDA Statewide Planning Award and awardees will receive their awards in the form of technical assistance

ELIGIBLE ENTITIES

- Cities, towns, counties, regional planning and development commissions, collaborations between local governments, counties, incorporated municipalities and ISPs

TIMELINE

- **August 1, 2022:** Applications closed

ELIGIBLE ACTIVITIES

- Stakeholder engagement and community education
- Assessment of community broadband infrastructure
- Assessment of community current broadband market (services)
- Evaluation of current and future demand for broadband (needs assessment)
- Digital inclusion and equity assessment
- High-level design and cost estimate for broadband deployment
- Funding option evaluation and strategy for engaging partners

Alabama Statewide Middle-Mile Network Grant

PROGRAM FUNDS

- **$85 million**. A single applicant will be selected to develop a statewide middle mile broadband network

ELIGIBLE ENTITIES

- Statewide broadband middle mile network

ELIGIBLE ACTIVITIES

- Cooperatives, corporations, limited liability companies, local governments
- Other business entities that own and maintain middle mile or long-haul broadband infrastructure
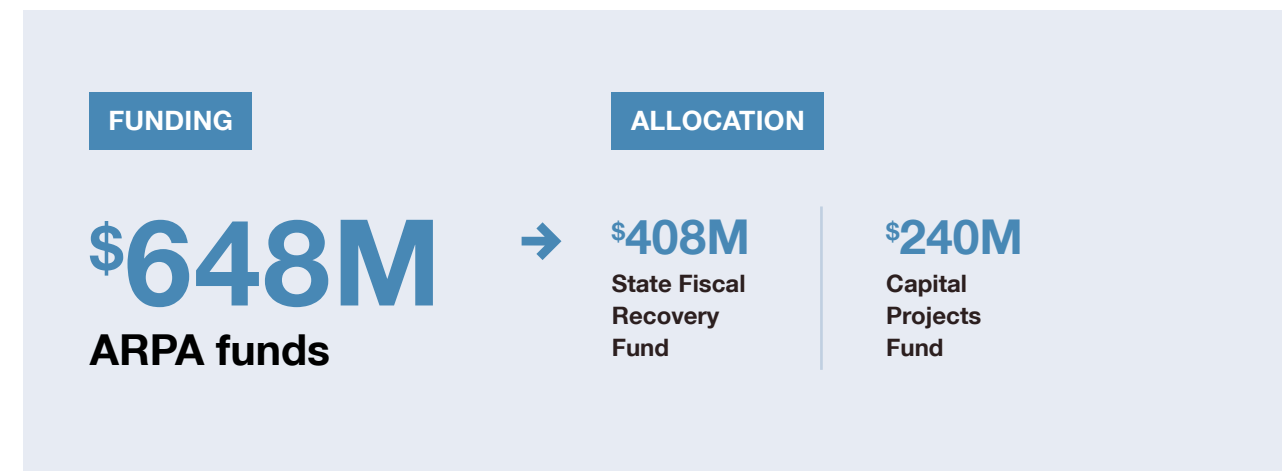
TIMELINE

- **April 28,2022:** Application opened
- **June 27, 2022:** Application closed

Source: Alabama Department of Economic and Community Affairs - https://adeca.alabama.gov/alabama-middle-mile-network-grant-program/

Appendix

Georgia Funding Overview

Georgia has allocated over $648 million of its ARPA funds to broadband investments, including $408 from the State Fiscal Recovery Fund and $240 million from the Capital Project Fund. Georgia's broadband investments have focused on broadband infrastructure investments to bring internet to the state's unserved communities.

FUNDING

ALLOCATION

$648M
ARPA funds

→

$408M
State Fiscal Recovery Fund

$240M
Capital Projects Fund

Source: Governor's Office of Planning & Budget - State Fiscal Recovery Fund; Governor's Office of Planning & Budget - Capital Projects Fund - https://opb.georgia.gov/capital-projects-fund

State of Georgia's Competitive State Fiscal Recovery Fund Grant

PROGRAM FUNDS
- **$408 million**
- Funds competitively awarded by the Broadband Infrastructure Grant Committee

ELIGIBLE ENTITIES
- State agencies, county governments, city or townships and special district governments
- Industry trade associations, business organizations, trade/professional organizations and nonprofit organizations

ELIGIBLE ACTIVITIES
- Investment in water, sewer and broadband infrastructure
- Activities that address negative economic impacts caused by the public health emergency

TIMELINE
- **October 31, 2021:** Applications were due

Capital Projects Fund

PROGRAM FUNDS
- **$240 million**

ELIGIBLE ENTITIES
- ISPs including co-operatives, electric utilities and other entities that build or operate broadband networks
- Partnerships and consortiums comprised of eligible entities are accepted

TIMELINE
- **September 6, 2022:** Application window opened
- **October 7, 2022:** Applications due by 5PM EST
- **October 28, 2022:** Application review completed
- **Fall 2022:** Awards announced

ELIGIBLE ACTIVITIES
- Broadband infrastructure projects that would not be feasible without assistance
- **Eligible areas:** 44 preliminary eligible project areas have been identified by the state. Eligible areas were evaluated by their nature of service, prioritizing areas lacking at least a 25/3 Mbps service connection that have not already received grant funding

Appendix

Kentucky Funding Overview

The State of Kentucky allocated $250 million of its ARPA funds to improving broadband infrastructure through the Broadband Deployment Fund Grant administered by the Kentucky Infrastructure Authority.

FUNDING INVESTED

$12M
Kentucky Infrastructure Authority Loan Program

$250M
Kentucky Broadband Deployment Fund

Kentucky Infrastructure Authority Loan Program

PROGRAM FUNDS

- **Over $12 million**

ELIGIBLE ENTITIES

- Government entities

ELIGIBLE ACTIVITIES

- Broadband deployment projects

TIMELINE

- **TBD**

Kentucky Broadband Deployment Fund

PROGRAM FUNDS

- **$250 million**

ELIGIBLE ENTITIES

- Governmental agencies or private sector entities that have submitted an application to the Kentucky Infrastructure Authority for a grant from the Broadband Deployment Fund
- Organizations and nonprofit organizations

TIMELINE

- **October 25, 2021:** Application window closed
- Future funding rounds will become available as $200 million remains in the fund
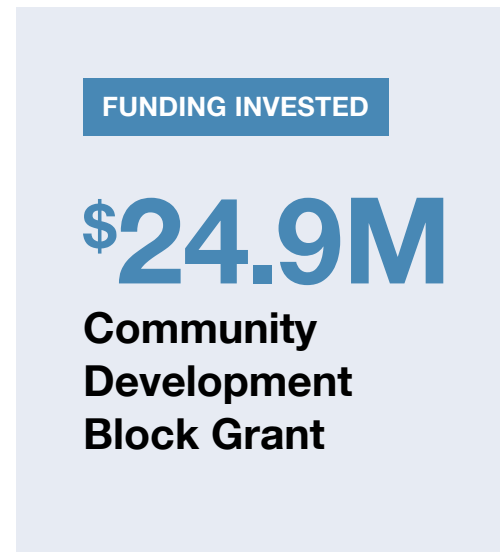
ELIGIBLE ACTIVITIES

- Acquisition and installation of last mile infrastructure that can support broadband service scalable to speeds of at least 100/100 Mbps.
- Middle mile infrastructure costs may be eligible if they are determined to be necessary for the construction and provision of last mile broadband service.
- Project engineering/design plans
- Permitting
- Pre-construction costs (e.g., make-ready costs)
- Outside plant materials (e.g., fiber, poles, hardware, conduit, splitters, etc.)
- Labor, construction management, equipment
- Installation and testing/validation of the broadband service.

Source: Kentucky Finance and Administration Cabinet – Broadband Deployment Fund; Kentucky Infrastructure Authority - https://finance.ky.gov/eProcurement/Pages/kentucky-broadband-deployment-fund-grant-application.aspx

Appendix

Mississippi Funding Overview

The State of Mississippi allocated $75 million in CARES Act funds through a COVID-19 Broadband Grant Program. This program provided pilot project funding to 15 electric cooperatives to expand high-speed internet service to unserved and underserved area of the state. In February 2022, the NTIA awarded Mississippi $32 million grant for broadband expansion in 10 counties. This NTIA grant award and any future broadband funding will be administered by the newly established Office of Broadband Expansion and Accessibility of Mississippi (BEAM).

FUNDING INVESTED

$24.9M

Community Development Block Grant

Capital Improvements Revolving (CAP) Loan Program

PROGRAM FUNDS

- **$1 million** maximum award

ELIGIBLE ENTITIES

- Municipalities and counties in Mississippi

TIMELINE

- **Not identified**

ELIGIBLE ACTIVITIES

- Construction, renovation or repair of buildings for economic development purposes (e.g., upgrading wiring to support high-speed internet)
- Construction or repair of water and sewer systems, access roads, bridges and rail spurs
- Drainage system, land and fire protection improvements
- Remediation of brownfield agreement sites

Small Municipalities and Limited Population Communities

PROGRAM FUNDS

- **$150,000** maximum award
- Matching funds required: 10% for a community with a population of 3,500 or less and 20% for communities with a population greater than 3,500

ELIGIBLE ENTITIES

- Small municipalities (<10,000 residents)
- Limited population counties (<30,000 residents)
- Natural gas districts

TIMELINE

- **Not identified**

ELIGIBLE ACTIVITIES

- Economic development-related improvements including water, sewer, street and drainage improvements for the benefit of site development, industrial parks, business districts, tourism destinations and projects that improve the competitiveness of a community
- Downtown improvements
- Non-economic development related water, sewer, street and drainage improvements
- Purchase, construction or rehabilitation of public buildings including town halls, libraries, police stations, fire stations, community centers, courthouses and other publicly owned buildings as approved by Mississippi Development Authority

Sources:
Central Mississippi Planning and Development District - Small Communities and Limited Population Counties - http://cmpdd.org/development/small-municipalities-and-limited-population-counties/
Central Mississippi Planning & Development District – CAP Loan Program - http://cmpdd.org/development/cap-loan/

Appendix

North Carolina Funding Overview

North Carolina is investing more than $1 billion in ARPA funds in infrastructure, access and digital literacy. These funds are administrated through the Division of Broadband and Digital Equity office within the Department of Information Technology (NCDIT). Of this funding, $940 million has been appropriated for last mile broadband infrastructure in the unserved and underserved areas of the state, primarily from the Growing Rural Economies with Access to Technology (GREAT) Grant Program ($350 million) and the Completing Access to Broadband (CAB) Program ($400 million). Additionally, NCDIT plans to launch two more programs which are currently in development: the $100 million Pole Replacement Program (Broadband Make Ready Accelerator Program) to reimburse providers for pole replacement costs; and the Stop Gap Solutions Program ($90 million) which would serve any areas still underserved or unserved following the GREAT and CAB programs. This funding will leverage significant private investment in addition to the public dollars provided. More information about these two programs is expected in the future. Another $50 million of funding will go toward digital literacy programs.

FUNDING INVESTED

$1B+

ARPA funds

Growing Rural Economies with Access to Technology (GREAT) Grant

Launched in 2019, GREAT is a competitive grant program for last mile infrastructure and became a recurring state-funded grant program within the Division of Broadband and Digital Equity's Broadband Infrastructure office. For the 2021-2022 cycle, up to $350 million in ARPA funding was available. The office received 305 applications from 38 providers across every county in the state for the May, 2022 deadline.

PROGRAM FUNDS

- Maximum matching requirement of 50%
- **$350 million** directly from ARPA ($260 million awarded so far)*
- **$4 million** single grant maximum
- Total maximum of **$8 million** in grant awards per county

ELIGIBLE ENTITIES

- Private broadband providers receive the grants
- Must be for use in eligible economically-distressed counties for areas unserved with broadband
- ISP must participate in ACP (providing eligible low-income households a $30 per month discount)

TIMELINE

- **May 4, 2022:** Closed for the 2021-2022 round, future rounds may become available

ELIGIBLE ACTIVITIES

- Broadband infrastructure development of minimum 100/20 Mbps service, scalable to 100 Mbps symmetrical service
- Used to deploy infrastructure to rural areas to reach farms, households and businesses
- Service must be provided on or before December 31, 2026

Source: North Carolina Department of Information Technology Division of Broadband and Digital Equity - https://www.ncbroadband.gov/funding-programs

*According to the North Carolina Budget and Tax Center, $277 million comes from the Capital Projects Fund and the remaining $73 million comes from State Fiscal Recovery Funds - https://ncbudget.org/key-sources-of-state-and-federal-funding-for-local-broadband-infrastructure-and-digital-inclusion-in-north-carolina/

Appendix

North Carolina Funding Overview (Continued)

Completing Access to Broadband (CAB)

Counties work directly with the Division of Broadband and Digital Equity's Broadband Infrastructure office to develop their own specific process for ISPs to bid on infrastructure projects. The counties and NCDIT mutually identify project areas and specific project scope and jointly determine a which areas require project funding.

PROGRAM FUNDS

- Matching funds from counties (using ARPA or their general funds) and participating ISPs required
- **$400 million** directly from ARPA (a mix of State Fiscal Recovery Funds and Capital Project Funds)
- No county may receive more than **$4 million** in aggregate CAB funding per year

ELIGIBLE ENTITIES

- All counties are eligible except those which have already utilized federal funding for broadband infrastructure projects on or after May 1, 2021 for any program other than CAB or GREAT
- Projects applied for and not funded by GREAT Grant can be considered

ELIGIBLE ACTIVITIES

- Installation and deployment of broadband infrastructure in project areas
- Operations of infrastructure in project areas
- Must make service available in currently unserved areas; may also make service available in underserved areas as long as all unserved areas are covered in the project

TIMELINE

- **Ongoing**

Digital Equity Grant

This program is meant for large-scale projects that can be implemented or expanded in a short timeframe of two years or less that benefit rural and low-income residents as well as the elderly, incarcerated/previously incarcerated, veterans, non-native English speakers and people with disabilities. The program is administered by the Division's Office of Digital Equity and Literacy.

PROGRAM FUNDS

- **$10 million** for 10-15 entities
- **$2 million** maximum award

ELIGIBLE ENTITIES

- State government organizations
- Public colleges and universities or university systems such as the University of North Carolina and the North Carolina Community College system
- Experience with digital equity preferred

ELIGIBLE ACTIVITIES

- Digital literacy programs only
- Attainable and specific goals in the first year

TIMELINE

- **October 28, 2022:** Application deadline is closed

Source: North Carolina Department of Information Technology Division of Broadband and Digital Equity – Funding Programs - https://www.ncbroadband.gov/funding-programs

Appendix

Tennessee Funding Overview

Federal funding has drastically increased the available funds for broadband in Tennessee, allowing for ample opportunities for broadband projects to address significant needs. Other non-broadband specific funding sources may include the Community Development Block Grant or the FastTrack Infrastructure Program that provide grants to local governments for specific infrastructure improvements.

FUNDING INVESTED

$120M
in the form of grants
from state and federal funds were awarded by the state since 2018.

$500M
in total ARPA funds
will be dedicated to broadband in the state.

Community Development Block Grant

PROGRAM FUNDS

- **$28,178,019** in total funding available
- Maximum amount of funding that can be requested by an applicant is dependent upon the activity

ELIGIBLE ACTIVITIES

- Housing rehabilitation, sewer and water system improvements, public health and safety
- Community infrastructure and revitalization (this could include broadband projects)

ELIGIBLE ENTITIES

- Local municipal and county governments that are not Entitlement Communities receiving CDBG funds directly from the US Department of Housing and Urban Development (HUD)

TIMELINE

- **TBD – April 2023**

Tennessee Emergency Broadband Fund – American Rescue Plan

Administered by the Tennessee Emergency Broadband Fund – American Rescue Plan (TEBF-ARP), grants are awarded to IPSs, cooperatives, municipalities and private providers to expand access to those in unserved and underserved areas.

PROGRAM FUNDS

- No maximum award limit
- 30% matching funds required
- **$446 million** for infrastructure and **$50 million** for digital literacy and adoption efforts from ARPA (State and Local Fiscal Recovery Funds)
- Anticipated to generate **$331 million** in spending from grant recipients

ELIGIBLE ENTITIES

- Applicants must be authorized to provide retail broadband in the area proposed to be served with grant funding, which includes telecommunications providers such as cable, electric and telephone cooperatives, fixed wireless, municipal broadband and satellite
- Unserved areas are prioritized over underserved areas in scoring

ELIGIBLE ACTIVITIES

- Costs associated with the installation and/ or acquisition of middle mile and last mile broadband infrastructure that supports broadband service at the locations and speeds identified in the application are eligible for funding
- Providers are only able to include middle mile expenses when they are necessary for the provision of last mile service

TIMELINE

- **March 15, 2022:** Closed but other opportunities to open later in 2022

Source: Tennessee Department of Economic & Community Development - https://www.tn.gov/ecd/rural-development/tnecd-broadband-initiative.html

Appendix

Virginia Funding Overview

Virginia has committed $2 billion in broadband investment primarily through the Virginia Telecommunications Initiative (VATI), a competitive broadband infrastructure grant program. This initiative is designed to promote public-private partnerships and provide financial incentives to broadband providers to extend broadband service to unserved areas. Funding from this initiative has allowed Virginia to set an ambitious goal of universal access to broadband by 2024, which the state is set to meet according to their Department of Housing and Community Development (DHCD).

FUNDING INVESTED

$2B
committed to broadband services
since 2018.
(including private funds)

including

$846M
in public funds
to connect more than 429,000 Virginia homes, businesses and community anchor institutions to broadband services.

Virginia Telecommunications Initiative (VATI)

DHCD'S VATI is a public-private partnership where the state supports specific broadband infrastructure developments to provide service in underserved and unserved areas by leveraging private funds from providers to build this infrastructure. The 2022-2023 round funded 35 projects which covered 278,550 households and businesses.

PROGRAM FUNDS

- VATI funding cannot exceed 80% of total project costs
- **$722 million** this cycle from Virginia's general fund and ARPA funding (adding to $846 million since 2018)
- **$220 million** was made available from ARPA's Capital Projects Fund (100% of Virginia's CPF allocation)
- Another **$479 million** in funding came from Fiscal Recovery Funds

ELIGIBLE ENTITIES

- Applications must be submitted by a unit of government (towns, cities, counties, economic development authorities, planning district commissions, school divisions, etc.) with a private sector ISP as a co-applicant

ELIGIBLE ACTIVITIES

- DHCD awards funding to applicants to provide last mile services, including middle mile networks, equipment or other investments required to deliver last mile service to unserved areas of the Commonwealth

TIMELINE

- **2022** VATI Application Window is now closed

Sources:
Virginia Department of Housing and Community Development - https://dhcd.virginia.gov/governor-northam-announces-virginia-deploys-2-billion-achieve-near-universal-broadband
U.S. Department of the Treasury - https://home.treasury.gov/news/press-releases/jy0809
The White House - https://www.whitehouse.gov/briefing-room/statements-releases/2022/06/07/fact-sheet-biden-harris-administration-announces-over-25-billion-in-american-rescue-plan-funding-to-help-ensure-every-american-has-access-to-high-speed-affordable-internet/#:~:text=The%20State%20of%20Virginia%20is,institutions%20to%20high-speed%20internet

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