
Initial Proposal Vol. 2

Updated: January 23, 2024

State of West Virginia

West Virginia Department of Economic Development



INTERNET FOR ALL **West Virginia**

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Introduction

The Initial Proposal, comprising two volumes, constitutes West Virginia’s (the State’s) first draft of its proposed uses of Broadband Equity, Access, and Deployment (BEAD) program funds. It explains how the State plans on ensuring that every resident has access to reliable, affordable, and high-speed broadband and the ability to use it effectively. For a comprehensive understanding of the State’s plan, please read Volume 1, published for public comment on August 30, 2023, prior to reading this document, Volume 2. At its core, Volume 2 details the State’s forthcoming efforts to coordinate with local entities, establish a competitive application process for broadband infrastructure deployment, and use BEAD funding for non-deployment activities, such as workforce development, device access, and more.

As the Eligible Entity overseeing the deployment of the BEAD program in West Virginia, the West Virginia Department of Economic Development, Office of Broadband (referred to as “WVDED”), has developed this Initial Proposal Volume 2 in compliance with the 16 of the 20 BEAD program requirements established by the National Telecommunication and Information Administration (NTIA). The other four are addressed Volume 1, as required by NTIA. The requirements addressed in Volume 1 and Volume 2 are delineated below.

Initial Proposal Requirements

Volume I

Volume II

Req. 1	Objectives	Req. 11	Labor Standards and Protection
Req. 2	Local, Tribal, and Regional Broadband Planning	Req. 12	Workforce Readiness
Req. 3	Existing Broadband Funding	Req. 13	MBE’s/WBE’s/LSA’s
Req. 4	Local Coordination	Req. 14	Cost and Barrier Reduction
Req. 5	Unserved and Underserved Locations	Req. 15	Climate Assessment
Req. 6	Community Anchor Institutions	Req. 16	Low-Cost Broadband Service Option
Req. 7	Challenge Process	Req. 17	Use of 20% of Funding
Req. 8	Deployment Subgrantee Selection	Req. 18	Eligible Entity Regulatory Approach
Req. 9	Non-Deployment Subgrantee Selection	Req. 19	Cert. of Compliance with BEAD Req.
Req. 10	Eligible Entity Implementation Activities	Req. 20	Middle Class Affordability Plans

To ensure the Initial Proposal meets the specific requirements that NTIA establishes in its guidance document¹ and that NTIA can easily assess the completeness of the document, WVDED arranged this document using the same layout and numbering structure included in the guidance document. This includes preceding each of WVDED’s responses with the specific questions asked by NTIA and attachments requested, such as the text box 2.1.1 on objectives, and labeling the section headings with the numbers derived from these requirements (i.e., the second digit in the text boxes and attachment requests). The former are bolded and colored to differentiate them from the answers.

¹ NTIA, “Broadband Equity, Access, and Deployment (BEAD) Program Initial Proposal Guidance,” https://broadbandusa.ntia.doc.gov/sites/default/files/2023-07/BEAD_Initial_Proposal_Guidance_Volumes_I_II.pdf.

Background Information

Throughout the development of the Five-Year Action Plan and Digital Equity Plan, WVDED undertook an analysis of the demographic makeup of West Virginia—particularly as it relates to the covered populations—broadband availability and affordability, computer access, and barriers to deploying broadband service. While these topics were covered at length in their respective plans, the takeaways provide vital context for why WVDED has designed its BEAD and Digital Equity programs in their proposed manner.

Access to the internet is a requirement of modern life. The very fabric of society—family, commerce, education, public safety, health care, government services, employment, and more—now depends on it. Despite West Virginia’s ever-increasing reliance on the internet, there is no guarantee that every community will have fast, affordable, and reliable access without intentional effort and partnership among state and federal agencies and West Virginia’s private sector partners.

West Virginia’s broadband access gap is significant, and the State currently ranks near the bottom of broadband availability in the U.S.² As of December 31, 2022, Federal Communications Commission (FCC) data shows that only 65.3% of West Virginia’s BSLs are classified as fully served.³ Ongoing state and federal investments are projected to increase the number of connected BSLs, but there is still a long way to go to reach 100%. This gap in broadband access impedes full participation in an increasingly digital society, preventing access to telemedicine, remote work, personal connections, and online news media, among other things. West Virginia’s Five-Year Action Plan serves as a guide to achieve universal connectivity and close the digital divide.

Increasing broadband access is the first step to creating digital equity in all West Virginia communities. However, to truly benefit from increased access to broadband service, West Virginia must also address the issues of service affordability, device availability, and technological skills development through collaboration with a diverse group of stakeholders.

West Virginia leaders agree that broadband connectivity is critical to the State’s overall economic development strategy. In 2021, Governor Jim Justice announced his billion-dollar West Virginia Broadband Investment Plan. Since then, the State has made considerable progress, announcing funding for 37 projects to bring service to 54,000 unserved locations.⁴ Nevertheless, as major infrastructure initiatives, individual projects take time to move from the planning to the deployment stage. West Virginia’s climb to connectivity will occur over a period of years.

Therefore, its progress will be measurable and meaningful. The State of West Virginia is prepared to begin the work proposed in this document. When executed, these programs will provide universal broadband

² West Virginia is 50th of 50 states, Washington, D.C., and Puerto Rico. Calculated using December 31, 2022, National Broadband Data Collection Availability Data provided by the Federal Communications Commission

³ West Virginia’s broadband availability falls short; of all 50 states, the District of Columbia, and Puerto Rico, West Virginia ranks 50th. This number reflects residential broadband availability rankings; the FCC does not provide data for statewide combined residential, mixed-use, and non-residential rankings.

⁴ The number of projects and the locations served are obtained from the West Virginia’s business/residence data and not reflected in the FCC Location Fabric.

access to all citizens in West Virginia and ensure that residents have the resources they need to realize the full potential of broadband connectivity.

Baseline Demographics

West Virginia is known as the Mountain State. With a total population of approximately 1,792,147, West Virginia is home to people from all walks of life.⁵ Table 1 offers what percentage of the population belongs to each of the eight covered populations. In total 96.9% of the population, or 1,736,000 people, fall into the category of at least one of the eight covered populations.⁶ This means that West Virginia has the highest percentage of covered populations in the nation, 97%, as defined by the Digital Equity Act.⁷

Table 1: Covered Populations Percentage of Total Population

Covered population	% of total population
Covered households	26.5%
Aged 60 or over	28.0%
Incarcerated	0.5%
Veteran	6.8%
With a disability	20.3%
With a language barrier	16.1%
Racial or ethnic minority	8.0%
Rural	90.0%

Source: U.S. Census Bureau, 2015-2019 5-Year American Community Survey (ACS) Estimates

As demonstrated in the above table, the largest individual covered population category are individuals living in rural areas. Rurality significantly impacts the likelihood that an individual will have access to broadband, as discussed below.

Broadband Access

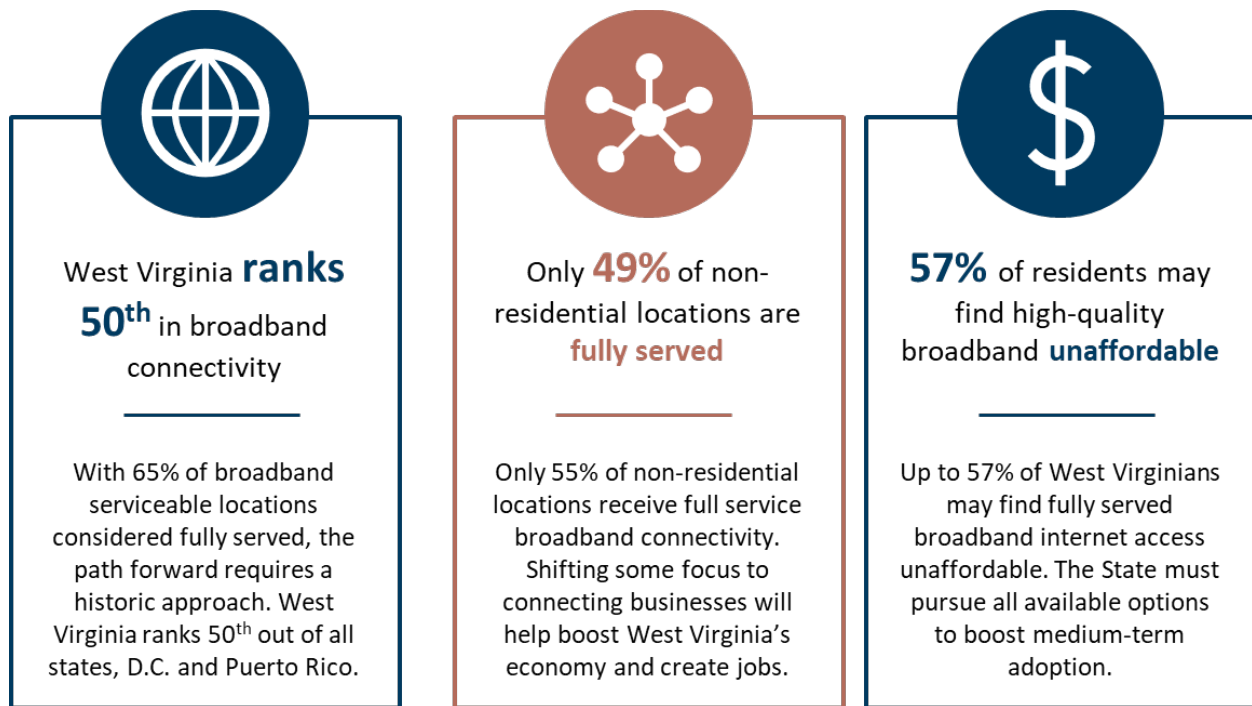
Communities throughout West Virginia are eager to address the gaps in broadband deployment, affordability, and use in West Virginia. Throughout the planning process, WVDED uncovered many of these gaps during the creation of the Five-Year Action Plan, and in parallel with Digital Equity planning activities. Figure 1 below provides a high-level overview of these factors.

⁵ U.S. Census Bureau, 2015-2019 5-Year American Community Survey (ACS) Estimates

⁶ U.S. Census Bureau, 2019 Modeled Total Covered Population Estimates

⁷ United States Census Bureau, Digital Equity Act of 2021, "Total Covered Populations under Digital Equity Act of 2021," <https://www.census.gov/programs-surveys/community-resilience-estimates/partnerships/ntia/digital-equity.html>, last accessed July 7, 2023.

Figure 1: High-Level Overview of West Virginia Broadband Availability and Affordability



Source: See the Five-Year Action Plan for more information

As of December 31, 2022, 583,180 (64.8%) of West Virginia's BSLs are classified as already fully served under the BEAD program. Of the remaining 35.2% locations, 149,262 (or an additional 16.6% of all addresses) are currently unserved or underserved but are part of previously funded project areas that, by virtue of the federal award, establish a federally enforceable funding commitment. The remaining 18.7% of locations are divided up into 140,334 unserved and 27,631 underserved locations. This data is summarized in Table 2

Table 2: BEAD Service Type of BSL, Including Funded Areas

BEAD Service Type	Broadband Serviceable Locations	
	Count	Percentage (%)
Served	583,180	64.8%
Funded	149,262	16.6%
Underserved	27,631	3.1%
Unserved	140,334	16.4%

Source: WVDED

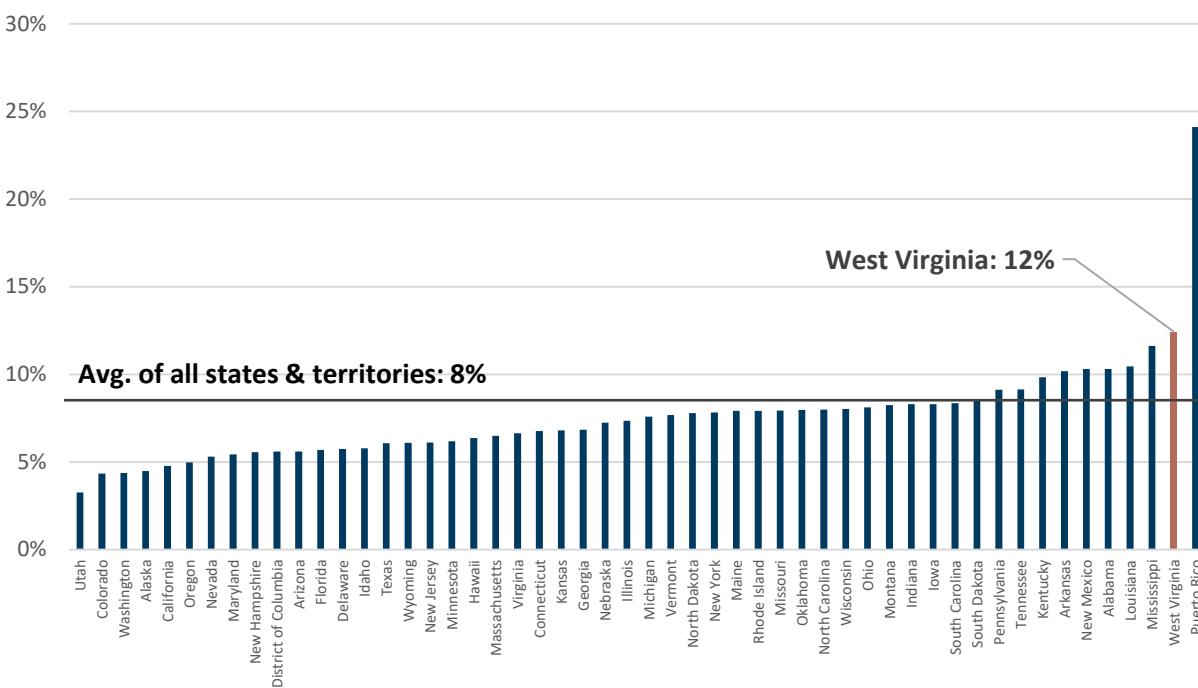
With 90% of its population considered rural, this dominant factor significantly impacts the likelihood of an individual having broadband access. Of all currently unserved broadband serviceable locations, 92%

(278,054) of all units are in Census-designated rural areas demonstrating that rurality is one of the biggest barriers to infrastructure construction.⁸

Access to a Computer

The U.S. Census Bureau's American Community Survey (ACS)⁹ provides insight into the types of computing device(s) West Virginians own. For the purpose of this plan, laptops, desktops, smartphones, tablets, and other wireless computing devices will be referred to as a "computer." According to the 2021 estimates, only 88% of West Virginians own a computer, which leaves 12% without a computer. In this important metric, West Virginia lags the rest of the nation; the average percentage of a state or territory with access to a computer is 92.4%, and the average without computer access is 7.6%. Figure 2 demonstrates this data.

Figure 2: Calculated Percentage of Households Without a Computer (by state)



Source: B28003. American Community Survey 2021. ACS 5-Year Estimates Detailed Tables

Access to a computer with an internet connection in West Virginia is 79.5% versus the national average of 86.3%. These and other analyses of computer ownership are detailed in Table 3.

⁸ Here, "Census-designated rural areas" is defined as 2010 vintage Census blocks classified as rural by the Census Bureau. This is distinct from the Digital Equity Act definition of rural areas in West Virginia.

⁹ U.S. Census Bureau, "American Community Survey 2021 5-Year Data (2009-2021)", <https://www.census.gov/data/developers/data-sets/acs-5year.html>.

Table 3: People Who Own a Computer in West Virginia and the United States

Category	United States		West Virginia		Difference in %
	Estimate	%	Estimate	%	
Total:	124,010,992		711,352		
Has a computer:	115,397,459	93.05	622,923	87.57	-5.48
With dial-up Internet subscription alone	265,164	0.21	2,236	0.31	0.10
With an Internet subscription	106,957,995	86.25	565,270	79.46	-6.79
Without an Internet subscription	8,174,300	6.59	55,417	7.77	1.18
No computer	8,613,533	6.95	88,429	12.43	5.48

Source: B28003. American Community Survey 2021. ACS 5-Year Estimates Detailed Tables

Affordability of Broadband

Despite West Virginia's significant progress in broadband deployment, the cost of high-speed broadband internet service remains a significant barrier to adoption. According to a national survey by The Pew Research Center, 45% of people without home broadband service mention the cost of connection as a barrier to access. 37% of this same demographic similarly mentioned the cost of a computer.¹⁰ This is more pronounced in households earning less than \$30,000 annually: 43% report no broadband service.¹¹ The lack of affordable internet access limits opportunities for education, healthcare, employment, and social connection, worsening the digital divide between the haves and have-nots. West Virginia's affordability gap is particularly pronounced in rural areas, where high deployment costs and limited competition have driven prices beyond affordability for the area's lower-than-average income households.

To better understand West Virginia's affordability challenges, the WVDED estimated the number of households qualifying for ACP by examining ACP income requirements and state income data. As of October 2023, nearly 120,000 eligible households are enrolled in the program.¹² In total, WVDED estimates that there are approximately 368,000 households eligible for ACP.

¹⁰ Anna Read, "How Can the United States Address Broadband Affordability?," Pew Charitable Trust, <https://www.pewtrusts.org/en/research-and-analysis/articles/2022/04/29/how-can-the-united-states-address-broadband-affordability>, April 29, 2022

¹¹ The Pew Charitable Trust, "Broadband Challenges and Opportunities in Affordable Rental Housing," <https://www.pewtrusts.org/en/research-and-analysis/issue-briefs/2023/04/broadband-challenges-and-opportunities-in-affordable-rental-housing> April 2, 2023. Accessed: June 5, 2023

¹² Universal Service Administrative Co. ACP Enrollment and Claims Tracker: <https://www.usac.org/about/affordable-connectivity-program/acp-enrollment-and-claims-tracker/>.

Barriers to Deployment

West Virginia faces several barriers to deploying broadband infrastructure and the programs proposed in this document therefore address, or at the very least acknowledge, and seek to navigate these issues. As discussed in the Five-Year Action Plan, these barriers include:

1. Legislative and regulatory barriers, such as those related to pole attachments and railroad crossings
2. Labor shortages
3. Supply chain issues
4. Materials availability
5. Industry participation
6. Lack of local digital inclusion programs/expertise
7. Topography
8. Digital literacy
9. Procurement or contracting issues

West Virginia's topography presents a unique challenge. It is the only state that lies completely within the Appalachian Mountain region and features an overall high elevation compared to its neighbors. Additionally, forests cover 78.5% of its land area.¹³ Figure 3 below illustrates the mountainous terrain that both earned the State its designation as the Mountain State and can make broadband deployment more difficult than in other locations.

¹³ USDA Forest Service. 2020. Forests of West Virginia, 2019. Resource Update FS-245. Madison, WI: U.S. Department of Agriculture, Forest Service. 2p. <https://doi.org/10.2737/FS-RU-245>.

Figure 3: New River Gorge



Source: West Virginia Department of Transportation, <https://wvtourism.com>

1. Objectives (Requirement 1)

2.1.1 Text Box: Outline the long-term objectives for deploying broadband; closing the digital divide; addressing access, affordability, equity, and adoption issues; and enhancing economic growth and job creation. Eligible Entities may directly copy objectives included in their Five-Year Action Plans.

Informed by the research undertaken throughout the development of the Five-Year Action Plan and Digital Equity Plan, WVDED established a set of goals specifically related to the BEAD program. These focus on deploying broadband infrastructure, closing the digital divide, addressing access, affordability, equity, and adoption issues, and enhancing economic growth and job creation. These goals are also discussed in the Five-Year Action Plan and are based on three pillars:

1. **Universal Broadband Access**
2. **Increase Digital Equity and Inclusion**
3. **Leverage Improved Broadband**

The goals contained within these three pillars are expounded below.

NTIA in its BEAD Initial Proposal Guidance document states for this requirement that “For States and Territories that have completed Five-Year Action Plans, reference to this plan satisfies this requirement.”¹⁴

1

Universal Broadband Access

Goal 1.1: All Broadband Serviceable Locations in West Virginia will have access to broadband at speeds of at least 100 Mbps download and 20 Mbps upload.

- Deploy broadband service to all BEAD-eligible locations by 2029 by adding services to 10% of unserved and underserved locations each year beginning in 2024.
- Continuously revise estimates of broadband availability through ongoing citizen reporting and enhanced data sets to better inform broadband mapping through the FCC Bulk challenge process.

Goal 1.2: West Virginia will address barriers to broadband infrastructure projects serving residents and businesses in the State.

- Improve Dig Once policies by: (i) creating standards for laying conduit when performing major highway construction or reconstruction and (ii) ensuring professional, responsive management of open conduit available for use.
- All state and local permitting processes and franchises that impact broadband development will have:

¹⁴ NTIA, “BEAD Initial Proposal Guidance – Volumes I and II”, July 2023, [https://broadbandusa.ntia.doc.gov/sites/default/files/2023-07/BEAD Initial Proposal Guidance Volumes I II.pdf](https://broadbandusa.ntia.doc.gov/sites/default/files/2023-07/BEAD%20Initial%20Proposal%20Guidance%20Volumes%20I%20II.pdf).

- clear, up-to-date, and published standards; certainty for common construction methods; and
- rapid turn-around for permits.
- Applications for pole attachments for broadband infrastructure will be processed in an expeditious manner and without undue cost to attachers unrelated to the costs of new development.

West Virginia has made progress in reducing unnecessary permitting and regulatory barriers that have historically impacted the deployment of broadband services to unserved and underserved areas. However, the enormous wave of broadband infrastructure investment means that permitting reforms are more important than ever. West Virginia will continue to identify ways to streamline and facilitate processes to ensure efficient deployment processes.

The long-term end date associated with this goal is completion by the start of project construction, which has yet to be determined.

Goal 1.3: Increase Access to Community Anchor Institutions

- All Community Anchor Institutions in West Virginia will have access to broadband speeds of 1 Gbps/ 1 Gbps by the end of 2029.
- By 2025, 10% of West Virginia's unserved Community Anchor Institutions will be served with 1 Gbps/ 1 Gbps service.
- Complete an examination of the percentage of West Virginians located within a reasonable proximity of Community Anchor Institutions by the end of 2024.

Schools, libraries, medical providers, public safety entities, public housing organizations, and community support organizations are collectively known as Community Anchor Institutions. Community Anchor Institutions facilitate greater use of broadband service by vulnerable populations, including, but not limited to, low-income individuals, unemployed individuals, children, the incarcerated, and aged individuals.¹⁵ Community Anchor Institutions are vital to advancing the State's goals of improving economic opportunities, education access, and healthcare outcomes. As Community Anchor Institutions need a higher level of broadband service to effectively support the services they provide to their community, West Virginia must ensure that all locations are equipped with a high-speed, high-capacity broadband connection.

¹⁵ NTIA BEAD Notice of Funding Opportunity: <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>

2

Increase Digital Equity and Inclusion

The long-term end dates associated with goals 2.1, 2.2, and 2.3 depend on many factors, such as details and viability of the proposals received for the associated non-deployment programs and the amount of funding available at the conclusion of the required deployment program. That said, these are a part of the State's Digital Equity vision, which has an estimated long-term target of 2029.

Goal 2.1: Realize affordable connectivity.

- Increase enrollment in the Affordable Connectivity Program, contingent on the continued funding for the program
- Complete broadband deployment as a part of the BEAD Five-Year Action Plan to increase the number of available internet service providers, increase the pool of their customer sizes, and increase competition

Goal 2.2: Secure device access and affordability.

- Create a program to provide device distribution, lending, and recycling
- Ensure citizens receive technical assistance for their newly acquired devices

Goal 2.3: Elevate digital skills and accessibility of public services and economic opportunity.

- Make digital literacy training in cybersecurity, privacy, telehealth, and more, available to all West Virginians, including all covered populations
- Ensure websites and online services hosted by state agencies are accessible for all West Virginians

3

Leverage Improved Broadband

Goal 3.1: West Virginia will use broadband as a driver of economic development opportunity.

- Connect West Virginia's workforce to broadband-delivered opportunities for training, and continuing education that supports the needs of the State's businesses and employers.
- Ensure that workers in West Virginia have the digital skills and knowledge to fill job openings across industries.
- Develop best practices that support remote workers and incentivize employers to offer remote work opportunities.

Goal 3.2: West Virginians will have access to online education opportunities and telehealth services.

- West Virginia schools and health-care institutions will deliver, and students and patients will have broad access to, broadband-delivered online education opportunities and telehealth services.

For more information on West Virginia's vision and goals, see the Five-Year Action Plan.

2. Local and Regional Broadband Planning Processes (Requirement 2)

2.2.1 Text Box: Identify and outline steps that the Eligible Entity will take to support local, Tribal,¹⁶ and regional broadband planning processes or ongoing efforts to deploy broadband or close the digital divide. In the description, include how the Eligible Entity will coordinate its own planning efforts with the broadband planning processes of local and Tribal Governments, and other local, Tribal, and regional entities. Eligible Entities may directly copy descriptions in their Five-Year Action Plans.

WVDED continues to support local and regional broadband planning processes and ongoing efforts to close the digital divide throughout the State and ensure that the use of BEAD funds proposed in this document align these efforts. The following section first takes inventory of existing regional and local planning and deployment efforts in West Virginia. Following this, WVDED identifies and outlines the steps it takes to support these efforts, such as technical assistance and the establishment of local cooperatives.

2.1 Inventory of Regional and Local Efforts

WVDED sought to understand and describe existing local and regional broadband planning and deployment efforts throughout the State. During the development of the Five-Year Action Plan and Digital Equity Plan, WVDED collected information on such existing efforts through:

1. a search for and analysis of local, regional, and state-level plans that addressed topics pertaining to digital equity or broadband connectivity—focusing on the latter;
2. a Digital Access and Equity (DAE) survey, which, among other actions, requested information on existing programs aimed at providing connectivity to the public or existing plans; and
3. engaging with local and regional stakeholders and monitoring, or participating in, their efforts.

2.1.1 Plans and Strategies

WVDED reviewed 160 plans, programs, and initiatives across the State to uncover which—if any—overlap with West Virginia’s broadband deployment and digital equity goals.¹⁷ Of these, 35 plans related to WVDED’s work, with 11 of those specifically discussing internet connectivity. Table 4 lists the number of plans that address broadband-related topics.

¹⁶ West Virginia does not have any federally recognized tribes or tribal lands. This is noted periodically throughout the document.

¹⁷ For more information on this inventory, see Section 2 of the Digital Equity Plan.

Table 4: Topics Covered by Analyzed Plans and Count of Plans per Subject

Topic	# of plans covering the topic
Digital Equity	1
Connectivity	11
Workforce Development	1
Economic Development	14
Community Benefit	2
Telehealth	2
Other Digital Equity or Broadband-related concepts	1

As an example of a regional plan that focuses on connectivity, Regional Planning and Development Council – Region 3’s *Regional Broadband Strategic Plan, 2014*, provides an overview of the broadband environment in the region, offers recommendations for expanding and enhancing broadband, and lists strategies to state and local governments for implementation.¹⁸ Table 5 provides the full list of plans that discuss connectivity.

Table 5: Inventory of Local, Regional, and State Plans that Address Connectivity

Entity level	Entity	Plan	Description of Relevance
State	West Virginia Department of Education	West Virginia's Strategic Plan, July 6, 2021	State Board Goal 1/Objective 3 is to “Facilitate access to technology, connectivity and innovative practices.” This plan also employs the West Virginia Kids Connect initiative which distributes free WiFi access hotspots to children who have no internet access at home.
Regional	Region 1 Planning and Development Council	Region 1 Broadband Strategic Plan, 2013	The West Virginia Office of GIS Coordination partnered with West Virginia's 11 Regional Planning & Development Councils to analyze the state's broadband infrastructure and create this plan to address high speed internet needs. The overall mission of the project was to advance broadband demand and adoption, and to study and support broadband service and infrastructure development in West Virginia.

¹⁸ Regional Planning and Development Council – Region 3, “Regional Broadband Strategic Plan,” 2014, [http://wvregion3.org/wp-content/uploads/2020/07/Broadband Strategic Plan.pdf](http://wvregion3.org/wp-content/uploads/2020/07/Broadband_Strategic_Plan.pdf).

Regional	Regions 1 & 4 Planning and Development Council	<u>Broadband Development and Implementation Study For West Virginia Regional Planning & Development Councils Regions 1 & 4 and Regional Optical Communications (ROC), February 28, 2020</u>	This plan provides Regions 1 & 4's strategies to implement broadband infrastructure builds in areas that are eligible for funding from HUD CDBG and other broadband-specific sources. The plan also includes: (1) a preliminary design of broadband networks outlining the types of installation and their locations; (2) the preliminary cost estimates for construction of the proposed installations with guidance in applying for funding sources; and (3) estimates of the number of businesses and households that will be provided with improved and/or new broadband service.
Regional	Region 11 Planning and Development Council	<u>Brooke-Hancock Area Broadband Development Plan, September 15, 2022</u>	This report is a detailed plan for developing network infrastructure to close the area's broadband gaps and drive broader community and economic development. It addresses the organizational, practical, economic, and technical challenges that must be overcome to achieve this goal.
Regional	Jefferson County Commission	<u>Technical Broadband Development Plan Jefferson County, West Virginia, Fall 2020</u>	This broadband study of Jefferson County includes several key sections: (1) a technical and asset analysis, (2) a market and gap analysis, (3) broadband surveys, (4) connectivity solutions, (5) preliminary design and cost estimates, and (6) infrastructure funding and grant opportunities. It details findings and recommendations derived from meetings with stakeholders and interested parties in the county, interviews and meetings with businesses, meetings with county officials, and residential and business broadband surveys.
Regional	Morgan County Commission	<u>Morgan County Broadband: Improving Broadband Access</u>	This report provides many recommendations on how Morgan County could plan and implement broadband expansion initiatives.

Regional	Roane, Clay and Calhoun Counties	Phased Broadband Plan: Clay, Calhoun, and Roane Counties, 2019 (estimated date of publication)	"This report provides a detailed plan for improved broadband infrastructure for each of three CCRBDC counties. For each county, four separate phases are described, and each phase has: (1) technical detail specific to that phase, (2) site locations for broadband infrastructure, (3) estimated cost of improvements, (4) recommended tasks for each phase, and (5) estimated timelines and schedule."
Regional	Region 4 Planning and Development Council	Broadband Strategic Plan, 2013	The West Virginia Office of GIS Coordination partnered with West Virginia's 11 Regional Planning & Development Councils to analyze and map the state's broadband infrastructure and create a strategic plan to understand and address high speed internet needs. The results of this endeavor begin on page 23 of the Plan. The overall mission of the project was to advance broadband demand and adoption, and to study and support broadband service and infrastructure development in the state of West Virginia.
Regional	Regional Intergovernmental Council (Region 3 PDC)	Regional Broadband Strategic Plan, 2014	At the request of the State of West Virginia, the Council facilitated the development of a regional broadband strategic plan. To develop the plan, a Regional Broadband Planning Team (RBPT) was created with representatives from government, healthcare, education, and the private sector. The goal of the project was to outline the current broadband environment, make recommendations for expanding and enhancing broadband in the region, and to provide strategies to state and local governments for implementation.

In addition to these plans, West Virginia has utilized Community Development Block Grant (CDBG) funding to support local broadband planning. Congress established CDBG through the Housing and Community Development Act of 1974.¹⁹ The West Virginia CDBG program provides grants to local governments that do not receive CDBG direct funding from the U.S. Department of Housing and Urban Development (HUD). CDBG grants focus on providing decent housing, a suitable living environment, and expanded economic opportunities principally for persons of low to moderate income. Areas that lack broadband connectivity often align with CDBG priorities for projects that benefit low- to moderate-income residents.

West Virginia's emphasis on broadband planning began in 2018 when Governor Jim Justice announced the first allocation of CDBG funds for broadband development projects in West Virginia. Through 2020, approximately \$6.3 million in CDBG funding was dedicated to broadband planning and infrastructure projects. Twenty CDBG projects, covering 41 counties, involved broadband planning and community outreach. Planning projects were conducted on a county, regional basis.

West Virginia's CDBG broadband program placed a primary emphasis on the extension of broadband to unserved and underserved communities and assisted local governments in creating a vision for connected communities throughout the State. Planning projects were conducted on a county, regional basis, as follows in Table 6.

Table 6: CDBG Broadband Planning Projects

Entity	Plan
Berkeley County Council	Berkeley County Broadband Planning
Brooke County Commission	Brooke Hancock Regional Broadband Planning
Clay County Commission	Clay County Planning and Design Grants
Fayette County Commission	Fayette County Broadband Study
Gilmer County Commission	Gilmer County Fixed Wireless Broadband Plan
Grant County Commission	Grant County Broadband Planning
Jefferson County Commission	Jefferson County Broadband Strategic Plan
Lincoln County Commission	Lincoln County Broadband Planning
Logan County Commission	Logan County Broadband Planning
Marshall County Commission	Marshall Ohio Wetzel Counties Regional Plan
Mason County Commission	Mason County Broadband Plan
Mingo County Commission	Town of Gilbert Broadband Planning
Morgan County Commission	Morgan County Broadband Plan
Pocahontas County Commission	Pocahontas Broadband Study
Taylor County Commission	Taylor County Regional Broadband Strategic Planning & Design
Tyler County Commission	Tyler County Broadband Development Plan
Wayne County Commission	Wayne County Broadband Plan
Webster County Commission	Broadband Initiative for Southern WV
Wyoming County Commission	Regional Broadband Strategic Plan

The State is also engaged in a broader regional planning effort. In 2021, the United States Economic Development Administration and the Appalachian Regional Commission awarded Regional Optical Communications (ROC) grant funds to create a set of high-level broadband designs and conduct cost analysis

¹⁹ Congress.gov. "S.3066 - 93rd Congress (1973-1974): Housing and Community Development Act of 1974." August 22, 1974. <https://www.congress.gov/bill/93rd-congress/senate-bill/3066>.

for all 55 counties. In anticipation of the BEAD and Digital Equity programs, WVDED strongly supported this grant funding. These high-level designs provided WVDED with an overview of what types of broadband projects would be necessary to provide full coverage to each county and were subsequently used to generate the universal broadband cost estimate, discussed in Requirement 9. This mapping initiative and its concurrent public outreach strategy are being leveraged as part of the BEAD and Digital Equity implementation plans. Additionally, in its agreement, ROC was required to create the high-level designs using existing utility poles. As no complete database with this information exists in West Virginia, ROC manually mapped the locations of many of these poles. This not only allowed ROC to perform its high-level design tasks but created a virtual catalog of many relevant pole locations across the State.

2.1.2 Deployment Efforts

West Virginia is engaged in numerous broadband deployment efforts.²⁰ The WVDED is the administrative agency for broadband projects funded by HUD CDBG and the Appalachian Regional Commission (ARC). ARC is a partnership between states and the Federal Government. Covering 423 counties across 13 states, ARC works with local Appalachian communities to improve overall quality of life. ARC has a variety of grant programs that local governments can use for efforts that align with its Strategic Plan, including building and improving Appalachian businesses, workforce ecosystem, infrastructure, culture and tourism, and community leaders and capacity.²¹ In many cases, funds can be used for broadband-related projects. For instance, in January 2023, ARC awarded \$6.3 million to bolster broadband access across 50 communities through its Appalachian Regional Initiative for Strong Communities (ARISE).²² ARC can either directly fund projects itself or it can provide the funds to states, such as West Virginia, for state-level grant programs. Funding opportunities are ongoing and are available each fiscal year.

ARC funds broadband through three programs in West Virginia: Partnerships for Workforce and Economic Revitalization (POWER), Central Appalachian Broadband, and North Central Appalachian Broadband. WVDED administers most ARC-funded broadband infrastructure projects in West Virginia.

Applications for ARC funding may be submitted directly to ARC or to the State of West Virginia. In either case, WVDED is the administrative agency for ARC broadband funds in West Virginia. Specific ARC programs and funds allocated to West Virginia are listed in Table 7.

Table 7: Summary of Broadband Infrastructure Programs Launched by the Appalachian Regional Commission

Program name	Administered by	Total funding awarded (\$)
Appalachian Regional Commission-POWER	ARC/WVDED	11 million
Appalachian Regional Commission-North Central Appalachian Broadband	ARC/WVDED	21 million
Appalachian Regional Commission-Central Appalachian Broadband	ARC/WVDED	5.3 million

²⁰ For more information on existing broadband funding, see Initial Proposal Volume I.

²¹ Appalachian Regional Commission (ARC), Appalachia Envisioned: ARC's 2022-2026 Strategic Plan, Accessed April 10, 2023, <https://www.arc.gov/strategicplan/>.

²² ARC, Appalachian Regional Initiative for Stronger Economies (ARISE), Accessed April 10, 2023, <https://www.arc.gov/ARISE/>.

Through the funding sources listed in Table 7, seven ARC grants are commitments to provide broadband service that meet or exceed the requirements for full service as defined under the BEAD program. Table 8 indicates the number of Broadband Serviceable Location (BSL) units covered under these ARC grants by BEAD service type. BSL is defined as a “business or residential location in the United States at which fixed broadband internet access service is, or can be, installed.”²³ Note that BSL units both covered by ARC and considered fully served may be resulting from activities including but not limited to deployment by an ARC-funded service provider, deployment by another service provider, or prior misclassification by ARC.

Table 8: BSL Units Covered by ARC Program

BEAD Service Type	BSL Units Count
Unserved – No Service	341
Unserved – Slow Service	2,628
Underserved	411

Source: WVDED

There are many complementary deployment efforts taking place at a local level as well. To collect information on these projects, among other information, WVDED developed the Digital Access and Equity (DAE) survey. The survey was targeted to organizations representing or serving at least one of the eight covered populations, including local, regional, and state entities. There were 33 respondents that completed the survey from mid-January 2023 to July 29, 2023. As a part of the survey, WVDED asked these entities if they had any existing plans that overlapped with the goals of the BEAD or Digital Equity Programs and whether they provided any relevant services to the target populations or general population of West Virginia. Regarding the latter, WVDED specifically asked about, among others, programs or services that provide public Wi-Fi and networks to the public. More details on the survey can be found in Section 3.2 of the Digital Equity Plan.

Of the entities that completed the survey, 10 reported that they provided public Wi-Fi and public networks. Although this falls outside of the strict definition of broadband deployment as covered by BEAD, it may offer an opportunity for collaboration. Table 9 lists the entities that provide such services and the populations that they serve.

Table 9: Public Wi-Fi and Network Services Provided to the Public

Entity Type	Name	To Whom Service is Provided
Library	Bridgeport Public Library	Any member of the public
High education	New River Community and Technical College	Any member of the public
Library	Parkersburg & Wood County Public Library	Any member of the public
Library	Marion County Public Library System	Any member of the public
Library	Morgantown Public Library System	Any member of the public
Library	Gassaway Public Library	Any member of the public; low-income households; aging individuals; people with disabilities; rural populations; member of a racial or ethnic

²³ NTIA, NOFO, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>. P. 13

Other	Pendleton Senior and Family Services	minority; individuals with a language barrier Any member of the public; low-income households; veterans; aging individuals; people with disabilities; rural populations;
Library	Putnam County Library	Any member of the public
Local branch of national nonprofit	Mountain CAP of WV, Inc.	Low-income households
Library	Marion County Public Library System	Any member of the public

2.1.3 GigReady Program²⁴

The GigReady program has provided an avenue for significant collaboration between WVDED and local governments. GigReady is designed to encourage the collaborative partnerships needed for successful broadband development. The program provides an opportunity for local governments and organizations to dedicate funds available through the American Rescue Plan Act (ARPA), or other local funding, to a broadband development initiative in partnership with agencies and offices.

The GigReady program assists participants in two distinct phases. In Phase One, the program provides technical assistance to help communities scope projects, select private partners and vendors, and complete other necessary steps in the broadband development process. In Phase Two, upon completion of the technical assistance phase, participants may then be eligible for implementation funding through the GigReady program or other funding sources. Participants with qualifying, shovel ready projects that do not need technical assistance can apply to proceed directly to Phase Two by submitting a complete application, including all information listed as “optional” in the application.

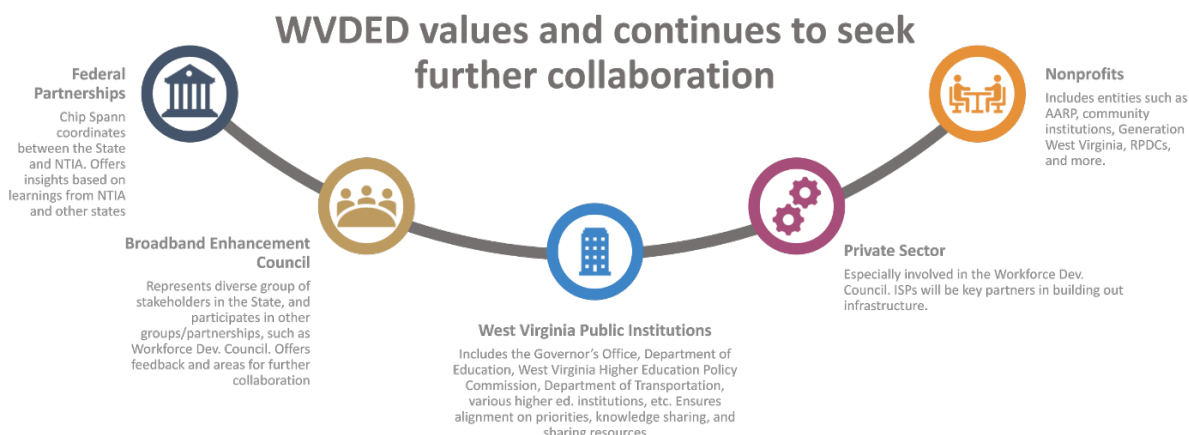
County and municipal governments and affiliated organizations (economic development corporations, Regional Planning and Development Councils, etc.) may apply to participate. Regional consortia of local governments may participate. Participating local governments will be strongly encouraged to develop partner or vendor relationships with private for-profit or non-profit companies through the technical assistance program.

2.2 Steps to Support Regional and Local Efforts

Figure 4 below summarizes WVDED’s collaboration with key groups of stakeholders throughout development of the Five-Year Action and Digital Equity Plans. Whenever possible, WVDED has committed to continue working with each of these entities throughout implementation to facilitate coordination with local and regional entities. For more information on local coordination, see Requirement 4.

²⁴ Abridged version of material provided in the West Virginia Office of Broadband, West Virginia Broadband Enhancement Council Annual Report, 2022, https://www.wvlegislature.gov/legisdocs/reports/agency/B19_CY_2022_15837.pdf.

Figure 4: Ongoing Collaboration with Entities



Ongoing Technical Assistance

WVDED and its partners have provided technical assistance to support regional and local needs across grant projects, notably through the GigReady program. Already, technical assistance has been provided to attendees of the following events, guiding BEAD strategies, and maintaining alignment:

1. Small Communities, Big Solutions Conference in November 2022
2. Monthly Workforce Development Council meetings beginning in January 2023
3. Internet For All West Virginia Kickoff Conference in February 2023
4. West Virginia Broadband Summit in July 2023

WVDED is committed to continued technical assistance throughout BEAD implementation through public forums and offering resources such as:

1. Webinars announced via the Internet for All website and other means
2. In-person presentations at community anchor institutions
3. WVU's Broadband Toolkit and associated assistance

Establishment of Local Cooperatives

The State provides a statutory mechanism for residents, businesses, and political subdivisions in West Virginia that have no good options for internet service providers to create cooperative associations (co-ops) to address their community's connectivity problems. These co-ops are authorized to establish an internet service provider focused on their communities, finance the building of infrastructure using a variety of mechanisms such as bonds, and engage in other related activities.²⁵

To assist communities considering this option, the West Virginia University Entrepreneurship and Innovation Law Clinic developed a Broadband Toolkit that details options for broadband network development in West Virginia. The Broadband Enhancement Council will continue its partnership with the Law Clinic to assist communities in the formation of cooperatives. Communities pursuing this option are encouraged to contact the Broadband Enhancement Council for additional information.

²⁵ W. Va. Code § 31G-2-1 et seq.

3. Local Coordination (Requirement 4)

2.3.1 Text Box: Describe the coordination conducted, summarize the impact such impact has on the content of the Initial Proposal, and detail ongoing coordination efforts. Set forth the plan for how the Eligible Entity will fulfil the coordination associated with its Final Proposal.

From the outset, WVDED established local coordination as a foundational goal of the BEAD program. This coordination has taken place at every step of the process and with a diverse set of stakeholders. During the planning stages of the BEAD program, WVDED established relationships with stakeholders and recruited them as trusted partners throughout the process. During the development of the Five-Year Action Plan and Digital Equity Plan, these stakeholders provided vital data on the state of broadband and digital equity. These stakeholders, as well as members of the public, offered feedback during the development of proposed activities, including during public comment periods. WVDED will continue to coordinate with stakeholders and the public at large as it further develops its plan for BEAD implementation and eventually carries out these efforts.

This section details the aforementioned efforts through the lens of the five criteria discussed in the BEAD NOFO regarding NTIA's descriptions of local coordination efforts. Each subsection contains specific examples of how WVDED met these criteria. Figure 5 summarizes these criteria.

Figure 5: Local Coordination Evaluation Criteria



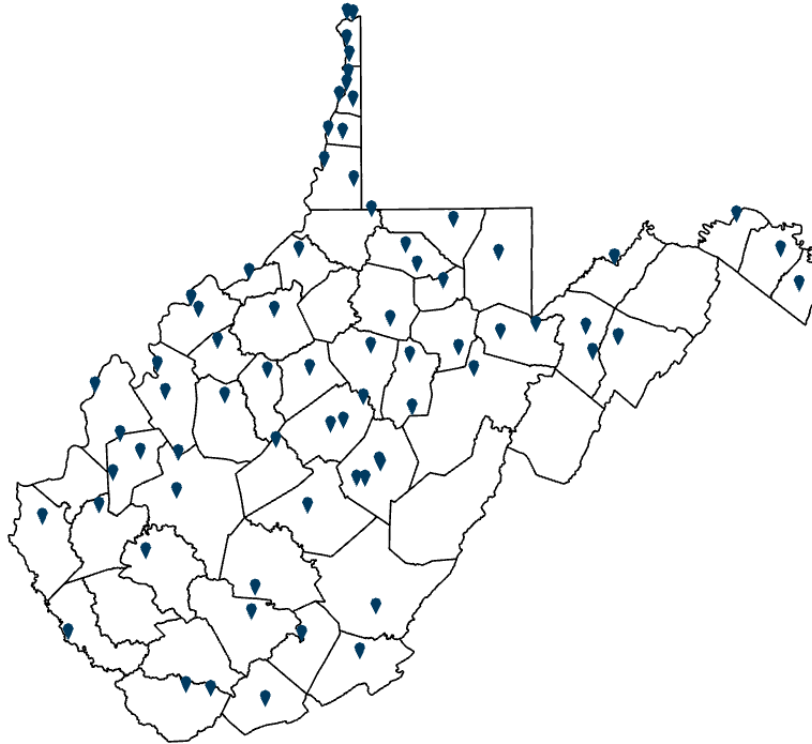
Source: NTIA

3.1 Geographic Coverage

WVDED reached full geographic coverage of the State during its coordination efforts many times over. For instance, WVDED engaged with the 11 Regional Planning and Development Councils (RPDCs) early in the BEAD program process. To solicit information on digital equity and broadband access from a representative sample of the State, WVDED enlisted the help of the RPDCs to hold listening sessions across the state. In total, the 11 RPDCs held 132 listening sessions with 1,045 total attendees spread across nearly every county. Figure 6 depicts the locations of these sessions. Building on the success of listening sessions for the Five-Year Action and Digital Equity Plans, WVDED continues to collaborate with the 11 RPDCs to engage with residents. The 11 RPDCs are currently reconvening stakeholder groups and soliciting feedback on this

proposal. Residents throughout the State will have the opportunity to include their feedback in reports from each RPDC throughout BEAD implementation. Additional strategies described below contribute to full coverage of key demographic groups and rural, suburban, and urban areas throughout West Virginia.

Figure 6: Locations of RPDC Listening Sessions



WVDED continues to rely on the RPDCs for their feedback, outreach capabilities, and occasional distribution of materials such as copies of forms to provide feedback on the Digital Equity Plan.

In addition to the statewide listening sessions, the Core Planning Team gathered input from West Virginia's covered populations and communities through online and paper surveys developed by Thomas P. Miller and Associates (TPMA). The Core Planning Team engaged with TPMA to collect responses that would add additional context to previous findings and contact individuals that might not have been able to attend the RPDC listening sessions. As with the rest of the data collection plan, this process is in line with WVDED's focus on meeting people where they are. The Digital Equity Steering Committee and the WVU Survey Research Center provided feedback during the creation of the survey. TPMA worked with WVDED, the Core Planning Team, and the Digital Equity Steering Committee to identify potential distribution lists and strategies for reaching unconnected West Virginians, including through U.S. Mail surveys. The survey closed on July 30, 2023. TPMA collected survey responses from approximately 2,000 individuals. Results from this survey are forthcoming and will further inform West Virginia's BEAD and Digital Equity initiatives. This survey complemented the findings of the RPDC listening sessions.

WVDED coordinated with local entities and individuals through many other channels as well, including by providing the Digital Equity Plan and Initial Proposal Volume 1 to all members of the public for feedback and

engaging with entities representing all geographic areas across the State, including schools, libraries, the Appalachian Regional Commission, colleges and universities.²⁶

3.2 Diverse Stakeholder Groups

WVDED has involved a diverse set of stakeholders in the development of this Initial Proposal and will continue to do so throughout BEAD implementation. This included representatives of public, private, and nonprofit organizations, as well as members of the general public. For instance, WVDED ensured that it and its Core Planning Team were surrounded and informed by entities that represent a wide cross section of the diversity found in West Virginia, including historically marginalized populations. Under the direction of WVDED, the Core Planning Team conducted outreach to local, regional, federal, and national organizations that directly or indirectly serve covered populations. These organizations provided insight for the development of the Digital Equity Plan. Figure 7 provides a comprehensive list of organizations that have provided strategic guidance to the Core Planning Team.

Figure 7: Organizations that Provided Guidance to the Core Planning Committee

Organizations That Provided Guidance to the Core Planning Committee

- Morgantown Public Library System
- Appalachian Regional Commission
- Herbert Henderson Office of Minority Affairs
- West Virginia Department of Education
- West Virginia's 11 RPDCs
- Innovative Community Solutions
- Mountain State Digital Literacy Project and Learning.com
- West Virginia Community Health Worker Workforce Advisory Consortium
- Digitunity
- EducationSuperHighway and 50 State
- ConnecTrain Corp and U.S. Economic Development Administration
- Housing and Urban Development Charleston Field Office
- West Virginia Economic Justice Project
- Communication Service for the Deaf
- National Skills Coalition
- Comcast

WVDED also facilitates regular convenings of stakeholders for planning, including the Broadband Industry Workforce Group, Workforce Development Council, Broadband Enhancement Council, and the Digital Equity Steering Committee. These groups include government entities, internet service providers, economic

²⁶ For more information on WVDED's stakeholder engagement to date, see the Five-Year Action and Digital Equity Plans.

development organizations, community and technical colleges, community anchor institutions, nonprofit organizations, and private sector partners. WVDED will also present this proposal to the West Virginia IJA Inter-Agency Working Group that convenes state agencies implementing Infrastructure Act funding.

In addition to collecting feedback from this diverse set of stakeholders by committee, email and online comments, WVDED has hosted online meetings that cover key topics, subgrantee selection, and other key components of BEAD planning. In each webinar, WVDED will inform government leaders, internet service providers, local organizations, and residents of BEAD plans and solicit feedback on proposed programs. Some examples of specific activities include:

- WVDED presented the full contents of Initial Proposal Volume 1 during the September Broadband Enhancement Council Meeting, which was open to public viewing. WVDED recorded this presentation and has posted the video online for interested residents.
- WVDED conducted a public meeting to detail the contents of Initial Proposal Volume 1.
- WVDED regularly presents updates to the Broadband Enhancement Council, which is open to public viewing.
- WVDED hosts a blog that contains regular updates on the broadband.wv.gov website.
- WVDED regularly reports to the Joint Committee on Government and Finance within the State Legislature.
- WVDED created a dashboard to highlight the deployment status of ARPA projects and will use this dashboard to show the progress of BEAD projects after grants are awarded.

To ensure the aforementioned RPDC listening sessions properly represented the wide range of individuals in West Virginia, WVDED offered guidance on the number of attendees so that the RPDCs were likely to receive a representative sample of the State. WVDED also required that the survey firm conducting outreach to citizens across the State weigh its minimum sample size in accordance with the proportion of individuals from each of the digital equity target populations.

Stakeholder engagement in West Virginia will extend to deployment awards. West Virginia has historically encouraged post award communication from internet service providers and will continue to do so for the BEAD program. WVDED's scoring criteria prioritizes strong local coordination between internet service providers, local governments, and underrepresented communities.

3.3 Multiple Awareness and Participation Mechanisms

NOFO: The Assistant Secretary will assess utilization of multiple awareness and participation mechanisms and different methods to convey information and outreach.

WVDED has and will continue to utilize multiple communication channels to promote broad awareness and participation from various stakeholder groups. Many of these channels stem directly from WVDED. For instance, the broadband.wv.gov and [Internet for All West Virginia website](https://internetforall.wv.gov) serve as key avenues for outreach and engagement by providing information about West Virginia's participation in the Digital Equity Act and BEAD Programs. The website presents information on Affordable Connectivity Program enrollment, upcoming events, listening sessions, the Core Planning Team, Digital Equity Steering Committee Membership, and links to active surveys. WVDED continues to update its website with BEAD and Digital

Equity Act documents, including the final Five-Year Action Plan, the draft Digital Equity Plan, drafts of both volumes of this Initial Proposal, and information on upcoming BEAD events. Residents of West Virginia know they can rely on this website to receive the latest updates on the BEAD program.

For public comment periods, WVDED raises attention by making announcements on social media, newsletters, and official press releases, in addition to the Internet for All and broadband.wv.gov websites. WVDED offers multiple avenues for residents to provide feedback. These include via an online form, by mail, during webinars, during in-person listening sessions, by phone, and even through RPDCs and local community organizations, such as libraries. This creates an environment in which residents are encouraged to review the program developed by WVDED and offer feedback in any manner they choose. In essence, WVDED has focused on meeting individuals “where they are.”

WVDED has also relied on its partners to raise awareness about the BEAD program. For every information release, the Governor’s Office or the WVDED issues a formal press release to keep both residents and all members of the public-sector and business communities informed. WVDED also relies on its other partners to disseminate information on new developments. The Digital Equity Steering Committee and the Core Planning Team have identified many groups in West Virginia that have either demonstrated interest in partnering with WVDED or have committed to be engaged in different phases of the plan’s implementation. WVDED will use many of these entities to spread information about participation in digital equity and accessibility progress. These are identified in Section 3.5.

3.4 Transparency

WVDED is committed to transparency, clear communication, and continuous engagement on planned broadband activities. In addition to involving a diverse set of stakeholders in planning, WVDED maintains up-to-date information on its website. Residents can access past NTIA submissions, upcoming events, WVDED contact information, and explanatory materials on the Internet for All and broadband.wv.gov websites. WVDED has engaged Regional Planning and Development Councils to facilitate feedback during public comment periods for each stage of the BEAD and Digital Equity programs, and listening sessions and Broadband Enhancement Council meetings are open to the public. WVDED will publish periodic reports on broadband efforts for community stakeholders, including a report on public comments received on this Initial Proposal and their impact on planning.

3.5 Underrepresented Engagement

WVDED continues to engage with representatives of unserved and underserved communities, including historically underrepresented and marginalized groups such as the eight digital equity covered populations as detailed in Section 3.2: Diverse Stakeholder Groups. Extending data collection since the Five-Year Action and Digital Equity Plans, WVDED and its partners are analyzing data from the Citizen Survey, launched in June 2023, and weighted to reflect the digital equity target populations. These findings on connectivity and needs will complement those of the RPDC listening sessions. WVDED will continue to plan broadband deployment and digital equity initiatives together, seeking input from the Digital Equity Steering Committee, Broadband Enhancement Council, and additional local and community organizations to plan programs that focus on the needs of underrepresented communities. Outreach to underrepresented communities will continue via webinars announced on the Internet for All Website, in-person events at community anchor institutions, and project updates distributed online. Additionally, the Citizen Survey will be conducted

regularly throughout implementation of IJJA-related plans to ensure that activities are having the intended effect.

Attached is a complete list of WVDED's local coordination with stakeholders.

2.3.1.1 Required Attachment: As a required attachment, submit the Local Coordination Tracker Tool to certify that the Eligible Entity has conducted coordination, including with Tribal Governments, local community organizations, unions and work organizations, and other groups.

See the provided Local Coordination Tracker. WVDED continues to add information to the Local Coordination Tracker based on its efforts carried out since the beginning of the BEAD and Digital Equity Planning process. As such, the Tracker is subject to change ahead of submission to NTIA.

2.3.2 Text Box: Describe the formal tribal consultation process conducted with federally recognized Tribes, to the extent that the Eligible Entity encompasses federally recognized Tribes. If the Eligible Entity does not encompass federally recognized Tribes, note "Not applicable."

Not applicable. West Virginia does not have any federally recognized tribes or tribal lands.

2.3.2.1 Optional Attachment: As a required attachment only if the Eligible Entity encompasses federally recognized Tribes, provide evidence that a formal tribal consultation process was conducted, such as meeting agendas and participation lists.

Not applicable. West Virginia does not have any federally recognized tribes or tribal lands.

4. Deployment Subgrantee Selection (Requirement 8)

2.4.1 Text Box: Describe a detailed plan to award subgrants to last-mile broadband deployment projects through a fair, open, and competitive process.

WVDED will conduct a fair, open, and competitive subgrantee selection process for deployment activities. Overall, the process breaks down as follows:

1. **Pre-Application Phase.** Applicants will submit pre-applications, which will provide WVDED with basic information to begin filtering out unqualified applicants as well as develop a clear idea of the capital that the companies have available, expanded upon in this section.
2. **Application Process.** WVDED will publish a list of Target Areas, which contain Target locations (Broadband Serviceable Locations (BSLs) that are eligible for BEAD funding), and, and have been grouped into Target Regions. Applicants that have successfully passed the pre-application phase will then be approved to submit full project applications for the Target Areas according to the rules set out in this section. The definitions related to Target Areas and Target Locations are included in 2.4.6.
3. **Setting the Extremely High Cost Per Location Threshold:** Following the full application phase, WVDED will establish the extremely high-cost threshold, discussed in more detail in Text Box 2.4.9.
4. **Scoring: Assessment of the Proposed Projects.** WVDED will use a set of clear standards to assess and score the projects, selecting the provisionally awarded projects, discussed in 2.4.2.
5. **Sustainability Review.** WVDED will require applicants to confirm sustainability of the Proposed Projects prior to final award.
6. **Project Alignment and Selection Process.** WVDED will then work with the applicants to incorporate any outliers that could not neatly fit into Target Areas into existing proposals. After the projects have been scored, WVDED will use a clearly defined selection process to provisionally award the projects.

To the extent allowable by law, WVDED will treat as confidential information that applicants supply related to their finances or other proprietary information. Upon request, WVDED has entered into non-disclosure agreements with its partners involved in other broadband grant programs.

Pre-Applications

All prospective subgrantees will be required to submit pre-applications to WVDED. WVDED may start this phase before the conclusion of the Challenge Process. The pre-application process is intended to collect the majority of application materials that will be used throughout the eligibility and eventual project scoring process. The pre-application process is intended to collect the majority of application materials, excluding project materials, that will be used throughout the eligibility and eventual project scoring process. Table 10 provides an overview of the requested materials and their purposes, and the details of these are expressed below.

Table 10: Summary of Materials Requested for Pre-Application

Purpose	Requested material
Company Information	Name of company, address federal and state EIN, etc.
Contact Information	Contact information of the individual authorized to liaise with WVDED, including name, position/title, phone number, and email address
Eligibility Check	<ul style="list-style-type: none"> • Company history • Certificate of good standing in West Virginia • Basic company financial information
Capacity Check	<ul style="list-style-type: none"> • Capital available for deployment in West Virginia • Information on relative capacity related to managerial and operational experience, ability to scale, etc.
Cost Factors	Estimated costs for buildout in West Virginia, accounting for major differentiating factors
Generic Project Pro Forma	Preliminary showing of project feasibility for a standard project, using company cost factors and program standard assumptions
Affordability	Applicants must demonstrate adherence to the low-cost broadband option requirements covered in Requirement 16 and middle-class broadband options discussed in Requirement 20. This will build on and contribute to figures provided in the Generic Project Pro Forma.
Labor standards and protection	Information required to demonstrate adherence to the required labor standards and protections as required by the BEAD Program. See Requirement 11.
Workforce readiness	Information required to demonstrate adherence to the required workforce preparedness standards required by the BEAD Program. See Requirement 11.
Other Publicly Funded Projects	Applicants must disclose information on any application that they or their affiliates have or plan to submit for undertaking relevant projects using public funds in accordance with 2.4.17 (a)
Climate Risk & Hardening	Applicants must disclose what standards, and optional guidance, they will comply with related to weatherproofing and hardening in accordance with Requirement 15.
Letter of Credit	Prior to entering into any subgrantee agreement, prospective subgrantees must provide a letter of credit and accompanying opinion letter from legal counsel. This requirement is discussed at greater length in 2.4.11 (b).

At the highest level, these pre-applications will request information designed to act as an eligibility check so that applicants do not need to go through a full application before WVDED discovers that they are not eligible from the start. This includes information such as company history, a certificate of good standing in West Virginia, examples of completed comparable projects, and basic company financial information to determine the health of the company.

WVDED recognizes that an applicant's ability to meet eligibility requirements may change with the volume of projects it is awarded. Therefore, WVDED will also ask for information related to the applicants' capacity to carry out potential projects in the aggregate, not only individual projects. WVDED will request information to establish the estimated total amount of Financial Capacity and Relative Capacity for each applicant. Financial Capacity and Relative Capacity will each set a ceiling on the total amount of awarded projects an applicant may receive. Proposed projects, that if awarded, would cause an applicant to exceed either its Financial Capacity or Relative Capacity will be treated as ineligible.

Financial Capacity will be a limit per applicant based on that applicant's demonstrated ability to provide both matching funds and a letter of credit. For example, an applicant able to demonstrate that it can provide a letter of credit to support \$50 million in grant funds and \$30 million in matching funds would not have the Financial Capacity to receive awarded projects beyond these thresholds. Relative Capacity will be a limit on the total cost of projects awarded to the applicant and on the percentage of total grant awards made to the applicant relative to all awards in the program. The latter represents the degree to which the success of the program is concentrated on a single grantee. To maximize the opportunity to use available capacity across all applicants, WVDED will determine awards in areas that have only one eligible project before proceeding to determine Proposed Project awards in areas with multiple applicants.

To estimate Financial Capacity and assess whether applicants have enough capital to meet the BEAD program requirements without intervention, WVDED will request documentation of the amount of capital that each company has available for projects in West Virginia. This will provide the benefit of ensuring that applicants take inventory of their financial capacity ahead of time so that they do not become overleveraged. It will also consider the letter of credit provided by the applicant.

For each applicant, WVDED will also assign an amount of Relative Capacity. WVDED will establish Relative Capacity based on the applicant's risk and demonstrated ability to develop and operate networks at scale. WVDED will consider the applicant's demonstrated managerial and operational experience, demonstrated ability to scale, the scale of existing awarded projects, its demonstration of sustainability, and its demonstrated track record of compliance and performance on previously awarded projects. WVDED may establish up to three levels of Relative Capacity for each applicant: Level One representing the lowest level of risk, and Levels Two and Three representing higher levels of relative risk. Depending on the applications received, WVDED may elect to not make awards to any applicant that exceeds Level One of Relative Capacity if WVDED can do so while reaching all unserved and underserved locations at a reasonable cost within the program budget. If necessary to reach all targeted locations, WVDED may also consider making awards to applicants at either Level Two or Level Three of Relative Capacity.

WVDED will request other information that it needs throughout the remainder of the competitive application process. The Cost Factors requested will inform WVDED's assigned line extension process detailed in 2.4.7 and analysis of the applicant's substantiation of the Proposed Project that is discussed in 2.4.11. The generic pro forma will demonstrate the applicant's ability to plan for a project on the scale of the BEAD program. The labor standard and protection details and workforce preparedness not only demonstrate an applicant's competence related to deployment projects, but also are crucial for WVDED's scoring of their applications in line with Requirement 11.

WVDED will accept and review pre-applications on a rolling basis. At any time after the pre-application, WVDED may request additional information from one or more applicants if the supplied information is not sufficient to score or assess their qualifications, Financial or Relative Capacity, Cost Factors, or any other facets of their submissions.

Application Process and Rules

After completing the pre-application, applicants may propose specific projects as applications. The term "Proposed Projects" as used throughout the remainder of this document is defined in 2.4.6. WVDED may allow some overlap in the periods during which pre-applications and applications are accepted. Final targeted locations may not be available before the start of the opportunity to file pre-applications, although a preliminary set will be available as part of the Challenge Process and the Initial Proposal. Nevertheless,

WVDED will publish the final targeted locations at least 45 calendar days prior to the deadline to submit applications. The program will be announced through many channels, such as the Internet for All West Virginia and broadband.wv.gov websites, official press releases from WVDED and the Governor's Office, general government notices, informing local governments and WVDED partners, communication with providers that have already expressed interest in the program, and more.

Applicants must submit two sets of materials:

1. **General Information.** Any information that is pertinent to the overall application and qualifications and is not already covered by the pre-application submission.
2. **Project Application Materials.** Information that supports each of the provider's specific Proposed Projects.

The former will include information that enables WVDED to judge the applicant's overall qualifications, such as fair labor practices information, letter(s) of credit, and environmental standards agreement. The latter will include materials and information that apply to the specific Proposed Project, such as proposed grant amounts, letter(s) of support from local communities, and more. The remainder of this section details the materials that applicants must submit and the rules for submitting applications. The response to Text Box 2.4.2 then details how the applications will be scored.

Required Information: General Information

WVDED will have collected the majority of general applicant information during the pre-application phase. As such, there will remain three categories of materials that WVDED will collect to score the general materials for the application. The list and description of the contents of each item will be expanded upon when WVDED releases the program procedures (the term used by West Virginia for the primary document that describes a grant funding opportunity with its key requirements and processes).

Category	Description/purpose
Demonstration(s) of Community Support	Applicants can provide any materials that demonstrate community support for select broadband projects. The use of these materials is discussed further in the scoring rubric in 2.4.3.
Community Impact	Applicants can optionally choose to demonstrate how their Proposed Projects will impact the communities in which they will deploy. The use of these materials is discussed further in the scoring rubric in 2.4.3.

Required Information: Project Application Materials

Applicants will create a Proposed Project by combining one or more Target Areas, covered in 2.4.6.

Applicants will be required to supply their project details, the necessary materials to demonstrate their plans for deploying broadband infrastructure, and more for each of the Target Areas where they want to propose projects. As highlighted in 2.4.3, for each Target Area, applicants must submit two sets of material: one for the unserved locations and one for all other locations, if applicable. For each Target Area, these materials will likely include, among others:

- The relevant region and targeted location numbers (provided by WVDED);
- High level designs in GIS form;

- Proposed network speeds and technology used
- Time to deployment;
- Whether the project is classified as a priority project or non-priority project, as defined in 2.4.2;
- Sum total of estimated costs to deploy network;
- BEAD grant amount solicited to complete the project;
- Percentage of total cost covered by BEAD grant amount (may not exceed 75%);
- Binding commitment for minimum total price, net all fees, costs, and taxes, for 1Gbps/1Gbps service to all customers in a Target Area; and more

2.4.2 Text Box: Describe how the prioritization and scoring process will be conducted and is consistent with the BEAD NOFO requirements on pages 42 – 46.

As required by NTIA, WVDED will establish two categories of project: priority and non-priority. Categorization of priority or non-priority will be a binary marker for each project. Priority projects are defined as those able to serve all required locations solely employing end-to-end fiber deployment, whereas non-priority projects are those that use one of the Reliable Broadband Service²⁷ technologies but cannot service all required locations using exclusively fiber. As such, projects using mixed technologies will be categorized as non-priority.

Selection Among Competing Proposals for the Same Target Areas

When there are multiple Eligible Projects for the same Target Area, WVDED will provisionally award projects using the following ranking levels:

- First, to “Priority Projects,” those that propose to use end-to-end fiber technology,
- Second, to “Non-Priority Projects” that propose to use a Reliable Broadband Service Technology other than end-to-end fiber technology, and
- Third, to “Non-Priority Projects” that do not propose to use a Reliable Broadband Service Technology but otherwise meet the program technical parameters.

When selection among projects with different ranking levels, Proposed Projects with a greater ranking level will be preferred to those that have a lesser ranking level, with some limited exceptions.

As noted in Text Box 2.4.10, in the event that all eligible projects competing for a Target Area exceed the Extremely High Cost Threshold and at least one eligible applicant proposing a non-Priority project has a cost per location lower than all eligible Priority projects, WVDED will provide all applicants proposing Priority and non-Priority projects an opportunity not exceeding five business days to revise the cost of their projects to reduce the subsidy required. If no revised Priority projects are lower than either the Extremely High Cost Threshold or the projects of non-Priority applicants, WVDED will make an award to a non-Priority applicant.

²⁷ See page 15 of the Notice of Funding Opportunity by NTIA, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>. “The term “Reliable Broadband Service” means broadband service that the Broadband DATA Maps show is accessible to a location via:10 (i) fiber-optic technology;11 (ii) Cable Modem/ Hybrid fiber-coaxial technology; 12 (iii) digital subscriber line (DSL) technology;13 or (iv) terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum.”

WVDED will only make an award to an applicant not utilizing a Reliable Broadband Service technology if no other eligible applicants can provide service at or below the Extremely High Cost Threshold.

Notwithstanding this process, WVDED may allow an award to an individual Proposed Project that exceeds Extremely High Cost Threshold if the applicant does not exceed the Extremely High Cost Threshold on average across all an applicant's proposed Project Areas in a single Target Region. WVDED may do this in cases where elimination of the individual Project Area would result in either an orphaned Target Area that receives no award, or elimination of a Priority project due to overlaps with a non-Priority project, or elimination of a project with Reliable Broadband Service technology due to overlaps with a project not having Reliable Broadband Service technology.

Selection Among Projects with the Same Ranking Levels

If there are multiple Eligible Projects in a Target Area with the same ranking level, the score of the Eligible Projects will determine the rank of competing projects within the level.

Before the application process begins, WVDED will make publicly available the scoring criteria. WVDED will objectively evaluate applications, including scoring criteria, for each grant program and publish the application review and evaluation processes prior to accepting applications. To safeguard against collusion, bias, conflicts of interest, and arbitrary decisions, WVDED and its partners will confirm all application reviewers are free of conflicts of interest and will not enter business or actions that result in conflicts of interest. WVDED will disqualify an application if applicants or any of their representatives attempt to inappropriately influence the grant process or collude in any material way.

The detailed rubric of scoring criteria is located in Appendix A.1 Deployment Subgrantee Select Rubric. The request for information not covered specifically in the rubric, such as company name and history, point of contact, and the submission of pre-application materials will be assessed on a pass/fail basis. The request for information not covered specifically in the scoring rubric, detailed in Table 11 and in Annex A.1, such as company name and history, point of contact, and the submission of pre-application materials will be assessed on a pass/fail basis. Failure to provide any of these materials in the required form could result in disqualification. At the discretion of WVDED, it may choose to provide applicants with the opportunity to amend a portion of its application within a specified amount of time.

For all other information, WVDED will use a maximum score of 200 points for both priority and non-priority projects. The scoring sheets between the two projects will differ slightly. The non-priority projects' rubric will include secondary scoring criteria for speed of network and other technical capabilities. The non-priority projects' scoring rubric will include secondary scoring criteria for speed of network and other technical capabilities. To accommodate these additional criteria, the maximum number of points for the secondary criteria for non-priority projects are distributed differently than for priority projects. Table 11 summarizes the two rubrics.

Table 11: Scoring Criteria Summary

Category	Criteria	Max points	
		Priority	Non-Priority
Primary	Minimal BEAD Program Outlay	100	100
Primary	Affordability	25	25
Primary	Compliance with Fair Labor Practices	25	25
Secondary	Speed to Deployment	15	10
Secondary	Demonstrated Community Support	15	10
Secondary	Community Impact	20	15
Secondary	Speed of Network & Other Technical Capabilities	NA	15
Total		200	200

Incentivizing Match

As noted in Text Box 2.4.7, if no proposals to serve a location or group of locations that are unserved, underserved, or a combination of both are received, first, WVDED will require as a part of the program rules that applicants with existing or previously funded fiber or cable networks must accept up to an additional 20% of grant funding to build line extensions to areas without eligible projects at WVDED's discretion. WVDED will incorporate these mandatory line extension areas into the applicant's awarded project. WVDED may offer more than 20%, but the awardee may choose whether or not to accept it. The project costs for such builds must be calculated using the applicant's cost factors that the applicant submitted during the pre-application phase plus pole make-ready costs as a path through. The awardee must provide match necessary to ensure that additional awarded areas do not cause the overall award to fall below the minimum required match. Awardees will not be required to accept projects that would cause them to exceed their capacity threshold. In addition to accounting for financial and relative capacity, WVDED will consider the following when assigning mandatory line extensions:

- whether applicants have current infrastructure or proposed projects that overlap with the Target Region in question, or are in part of a neighboring Target Region just over the border between Regions;
- whether the line extension into a Target Area could form a reasonably contiguous project with an applicant's current infrastructure or proposed projects;
- preference for applicants with the closest existing or proposed infrastructure if more than one potential applicant has existing or proposed infrastructure in proximity.

Second, if there remain Target Areas for which no eligible project was received and either all awardee capacity has been reached or the awardees are choosing not to take on an additional burden beyond the 20% requirement, WVDED will undertake direct negotiation to find solutions for these areas. This may require incentivization, negotiations between awardees to modify their Project Areas, or other means of working together, including outreach and negotiation with ISPs that did not propose a project. If the aforementioned efforts do not produce viable projects and if WVDED believes that matching funds from an external source may help applicants create viable Proposed Projects, and at its discretion, WVDED may use matching funds that may be provided by the Appalachia Regional Commission (ARC) to offset some of the matching costs. If used for this purpose, these funds will be do so in accordance with the agreement between WVDED and ARC—which at the time of drafting this document is still being formed. WVDED would

most likely use these funds for what it considers distressed areas, meaning their economic situation would most likely not produce a positive return on investment for operators and would therefore receive any applications without incentivization. This process will incentivize match, particularly in high cost areas, by bridging the gap between the amount of match an applicant can provide and how much is needed—enabling applicants that would otherwise not be able to provide any match to provide some. WVDED is developing criteria for the use of ARC funds. In such instance, WVDED will coordinate such utilization with ARC and NTIA.

Description of the Scoring Process

The following details six aspects of the scoring process that WVDED will undertake:

1. Review Team and Expertise
2. Staffing and Time Resources
3. Ensuring Consistency During Scoring
4. Meetings and Trainings Required for Thorough and Efficient Reviews
5. High-level Overview of Review Process
6. Estimated Review Timeline

1. Review Team and Expertise

The work undertaken during the BEAD application review and scoring process will be distributed among three subject-matter teams according to the task: Technical, Financial, and Geographic Information Systems (GIS). Team leads with a proven track record of conducting similar reviews for federal grant programs in other states and within West Virginia guide each team. A senior consultant and project manager will oversee and monitor the process according to WVDED's specifications, and a principal consultant will provide an experienced, holistic view of the entire operation and how it fits into WVDED's overall program.

WVDED, in conjunction with its consulting partners, will build on its previous federal programs to develop key forms and worksheets that applicants can use to easily structure and submit responses, making for more efficient and consistent reviews. These standards will serve to ensure that all projects adhere to BEAD requirements and applicable municipal, state, and federal regulations.

Expertise and Past Experience

The State and its consulting partners have experience with drafting similar program rules and requirements and the information required to evaluate a project. The State and its partners have experience with program administration using a variety of eligible areas and proposed Target Area schema. The West Virginia BEAD program will consider issues that the State has encountered in the past, which have already been factored into the design of the program.

The review team of engineers specializes in fiber and other broadband technologies to provide detailed reviews of proposed infrastructure builds that align with industry-standards. The State and its partners have worked in and with multiple state broadband offices across the country at scale, observing successful practices, failures, and opportunities for improvement. This work has involved creating strategic approaches for deploying state dollars to utilize federal and local funding opportunities.

The project managers and principal consultants bring a wealth of knowledge gained from overseeing federal grant application processes in their previous roles. Their comprehensive understanding of BEAD requirements and the three distinct subject categories of reviews ensures a meticulous evaluation.

The team of technical reviewers comprises consulting engineers and broadband consultants, all of whom possess extensive engineering experience in the telecommunications sector. These technical reviewers have hands-on industry experience in implementing comparable broadband projects. They also have experience in reviewing network architecture, comparing the extent of network elements to coverage objectives, and assessing the likelihood of achieving service performance with the proposed technology. Reviewers commonly find that technical information submitted by applicants lacks the detail required for a robust technical review based on their previous experiences. In these situations, reviewers assess risk and the need for supplemental information to complete a more in-depth review, drawing from applicants' experience in deploying similar networks.

The financial reviewers will include financial analysts and broadband consultants with a strong background in financial modeling within the telecommunications industry. In the past, financial reviewers have conducted high-level reviews to assess project cost reasonableness, budgets, and the adequacy of proposed capital sources. During these reviews, financial reviewers identify risks or vulnerabilities associated with the proposed builds. The financial team possesses extensive experience in evaluating company and project financials.

The GIS reviewers will consist of GIS technicians and analysts who have demonstrated expertise in telecommunications designs and networks. GIS experts and the systems that they use play an essential role in completing the review. We anticipate the following sets of mapping tasks to support the process:

- Converting submitted data about network or service extent into formats that can overlay and analyze with other geospatial data.
- Verifying geographic eligibility, including investigating unserved areas submitted by applicants.
- Validating claims of household, business, or road miles coverage based on the proposed network layout, state address and service availability data.
- Analyzing and optimizing the combinations of Proposed Projects and their scores.
- Identifying projects that do not extend to the end of the line.

Implementing a mapping platform for the BEAD program at the application stage will result in efficiencies at this stage. It will reduce errors or non-compliant submissions, provide easier-to-interpret information about Proposed Project areas and networks, and enable reviewers to perform key analyses more rapidly. The GIS tools for this stage of the program should extend the mapping tools available at the application phase.

2. Staffing and Time Requirements

At this stage, it is difficult to estimate the number of applications that WVDED will receive and therefore the total number of hours required throughout the entire process. As such, the following estimates are subject to change. For the purposes of this section, WVDED has estimated that it will receive 500 applications from a total of 24 applicants. Table 12 lists the number of person hours required to execute the pre-application, application, and potential award preparation phases using the estimated numbers outlined above. The potential award preparation phase includes the potential award pro forma review.

Table 12: Estimated Staffing and Time Requirements

Team	# of resources	Number of hours per team			
		Pre-Application Phase	Application Phase	Potential Award Preparation	Total
Technical	14	200	6,205	48	6,453
Financial	5	200	2,383	240	2,823
GIS	9	0	4,151	48	4,199
Project Manager, Principal & Senior Consultant	3	386	2,117	485	2,988
Total		786	14,856	821	16,463

3. Ensuring Consistency During Scoring

To ensure uniformity and fairness, all reviewers will use the same set of materials when conducting their evaluations. These materials will include the Program Procedures, the BEAD NOFO, and the scoring guide.

To maintain consistency, the State will utilize resources from previous federal grant programs, including financial tools designed to standardize scores for categories such as project cost-efficiency and matching funds contributions. Subject matter leads will supervise all reviews, having the authority to make adjustments as necessary for consistency. With a well-designed program, a well-structured application process, and thorough preparation, the State and its partners possess expertise in efficiently reviewing proposals, enabling them to make funding decisions confidently and in a timely manner.

For each unique application, we will create and provide a standardized scoring guide to the three assigned reviewers. This guide includes sections where reviewers can record their assessments and identify potential areas for remediation. The content of these scoring guides aligns with the eligibility criteria and scoring rubric outlined in the BEAD requirements.

Subject matter leads for each of the three review teams will also meet with their respective teams to ensure consistency in reviews and adherence to standards. During these meetings, the teams will communicate specific elements of an application that they should thoroughly assess, and they will reiterate scoring standards.

Financial, technical, and GIS reviewers assigned to a specific application will closely collaborate to detect any inconsistencies, given the overlap in expertise required to assign scores.

Once all applications have been received and the team has completed their pre-application review, the State will have identified all mandatory line extension areas and unawarded areas. After completing this analysis, a designated senior consultant will begin outreach and negotiation with potential subgrantees to discuss funding for these locations. The following resources will be required to execute these tasks:

- Identification of Mandatory Line Extension Areas: 2 Engineers and 2 GIS Consultants: 2 weeks for identification
- Unawarded Areas Outreach and Negotiation and Review: Principal Consultant: Approximately 3 months

The State and its partners will collaborate to conduct full application reviews. Reviewers will utilize a developed scoring guide to score sections relevant to their industry experience for quality insight. Before processing submitted applications, the project manager and principal consultant will provide advice on or create several resources to facilitate application review:

- An application completeness and scoring guide will serve both as an initial screening tool, and a convenient common summary point of reference.
- A set of technical, financial, and GIS review standards to guide application reviewers to ensure a consistent review of submitted applications.
- An application review workflow and expected timeline will incorporate steps and decision points for stakeholders and decision-makers.
- The State and its partners will establish a communications protocol and documentation process for directing questions and supplemental information requests from applicants post-submission.

4. Meetings and Trainings Required for Thorough and Efficient Reviews

Before the review period begins, the project manager and principal consultant will conduct an orientation session for all reviewers. The primary goal is to ensure everyone shares an understanding of review standards. During the orientation meetings, reviewers will also receive information about essential internal tools, such as project management software, score standardization tools, the application portal, and scoring guides. Reviewers will receive instructions to maintain comprehensive, factual notes in the internal review scoring guide and to avoid offering opinionated or subjective commentary.

Once the application period concludes, the project manager, principal consultant, and subject matter leads will convene to organize the materials submitted by applicants. They will conduct a completeness check and an initial screening to identify applications that lack essential materials and initiate the remediation process before beginning the review process begins. If applicants fail to submit all required materials, the State will communicate this deficiency.

A meeting will bring together all reviewers to clarify the prioritization of applications to review. This approach aims to facilitate efficient reviews and promptly start the remediation process.

The WVDED review team will schedule regular meetings after all review teams have completed their reviews. These meetings will provide a platform for reviewers from each expert area to present their findings to the project manager and subject matter leads, allowing the identification of potential inconsistencies before making recommendations.

The WVDED review team will base recommendations on the findings of the comprehensive review. The project manager and lead reviewer will communicate these recommendations through an award recommendation report and summary memos containing detailed information about the applicants and their applications.

The State, lead reviewers, and the project manager will meet bi-weekly meetings to discuss reviews, funding recommendations, and remediation efforts.

5. High-Level Overview of Review Process

Financial

Financial reviewers will conduct stress tests on the pro-forma included in the pre-application and again after identifying the provisionally awarded projects for a given applicant. While company financials will inherently vary, these stress tests will follow standardized procedures to assess the resiliency of a potential subgrantee's financial performance. Key elements of these tests will involve fluctuating take rates and average revenue per unit (ARPU) to assess a potential subgrantee's ability to take on projects under different adverse scenarios.

The financial reviews also ensure that the applications meet the proposed match requirements, discussed in 2.4.17 (b), and the letter of credit requirements, discussed in 2.4.11 (b).

Financial and technical reviewers will collaborate to ensure that the budget provides sufficient detail to include only eligible expenses.

Technical

Technical reviewers examine the high-level design, proposed technologies, and budgeted cost assumptions included in the applications. These reviewers will assess whether the Proposed Project is feasible and reasonable based on industry standards. They will also calculate the cost-efficiency and evaluate the applicant's readiness to execute the project within a reasonable timeline and budget.

GIS

During the pre-application phase, the GIS team will create a statewide map of all received applications for Target Areas. This map will assist the State in identifying any overlaps between projects and any mandatory line extension areas.

While conducting their full review, GIS reviewers will calculate the mileage of a given application and collaborate with the technical reviewer to ensure that it aligns with the mileage as detailed in the budget.

6. Estimated Review Timeline

Step	Efforts Involved	Estimated Duration
Program Preparation	Reviewer orientation, pre-review meetings, application materials preparation	2 months
Pre-Application Review	Review set-up, completeness check, review prioritization, and pre-application reviews of applicants	3 months
Full Application Reviews	Reviews, recommendations, and outreach	4 months
Potential Award Preparation	Alignment, preparation, finalization	4 months

2.4.2.1 Attachment: As a required attachment, submit the scoring rubric to be used in the subgrantee selection process for deployment projects. Eligible Entities may use the template provided by NTIA, or use their own format for the scoring rubric.

The detailed rubric is located in Appendix A.1 Deployment Subgrantee Select Rubric.

2.4.3 Text Box: Describe how the proposed subgrantee selection process will prioritize Unserved Service Projects in a manner that ensures complete coverage of all unserved locations prior to prioritizing Underserved Service Projects followed by prioritization of eligible CAIs.

WVDED seeks to serve all unserved locations, underserved locations, and CAIs, but it has developed a mechanism for ensuring that at least all unserved locations are served if the funding does not allow for all of both to be served. If a Proposed Project contains either more than 80% unserved locations or no unserved locations, then applicants will only be required to submit one set of costs and high-level designs. However, if the project contains any other mix of unserved and underserved locations, WVDED will require two sets of application materials: one for all of the locations and an alternative one for solely the unserved locations. By having a separate set of designs and grant request amounts for unserved locations, WVDED can easily remove underserved locations from mixed service level areas to ensure there is enough funding for unserved first.

WVDED will develop a “provisionally awarded” list of projects based on the outcome of the review and scoring process described here. If the total grant cost of the provisionally awarded projects exceeds the available grant funds, WVDED will first eliminate provisionally awarded projects with less than 80% unserved locations, and then, if necessary, substitute the alternative projects that remove underserved locations from provisionally awarded projects with a mixture of unserved and underserved locations. Provisionally awarded projects without any unserved locations will be eliminated starting with those having the highest grant cost per underserved location. Projects with a mix of unserved and underserved locations will be substituted starting with those with the greatest savings between the full and alternative projects, based on the cost per unserved or underserved location. If there is enough funding to serve all unserved and underserved locations but not CAIs, WVDED will similarly remove those provisionally awarded projects containing CAI locations but no unserved or underserved locations. In the case of provisionally awarded projects containing CAIs and unserved and/or underserved locations, WVDED may request that applicants

modify their provisionally awarded projects to remove CAIs if it appears that removal of the CAIs would materially change the grant cost of the provisionally awarded project.

2.4.4 Text Box: If proposing to use BEAD funds to prioritize non-deployment projects prior to, or in lieu of the deployment of services to eligible CAIs, provide a strong rationale for doing so. If not applicable to plans, note “Not applicable.”

WVDED proposes to provide funding for non-deployment activities to include the Permits and Licensing Coordination and Capacity Initiative and Workforce Development Program, up to the limits proposed for these programs (\$60 million combined), as described in Text Boxes 2.5.2 and 2.6.1, and below in this section, prior to deployment of services to eligible CAIs in Target Areas with no unserved or underserved locations. WVDED expects, however, substantial numbers of eligible CAIs will be part of Target Areas that do include unserved and underserved locations, which WVDED would prioritize over these non-deployment activities. WVDED proposes to prioritize these two programs over deployment to some CAIs because, while they are themselves non-deployment activities, they support the successful implementation of the proposed deployment activities with the NTIA-required performance period.

As expanded on in the sections on Requirements 9 and 10, the estimated amount is dependent upon the amount of funding available after the initial proposed deployment activities. While some projects may be exempt from a matching requirement, in most cases WVDED will grant up to approximately 75% of the total project cost. WVDED estimates providing up to \$1.14 billion to cover the total cost of projects. If West Virginia can achieve deployment costs closer to the likely or lower range estimates, more BEAD funding will be made available for non-deployment activities. While WVDED is not yet able to determine exact funding availability, of West Virginia’s BEAD of \$1,210,800,969.85, WVDED estimates \$70 million to \$517 million will remain after deployment for the initiatives described above.

Permits and Licensing Coordination

In line with goals established in the West Virginia Five-Year Action Plan, WVDED will establish a Permits and Licensing Coordination and Capacity Initiative (PLCC) to address identified deployment barriers and promote coordination between stakeholders. Chaired by WVDED, the PLCC’s committee will include: State agencies, such as the West Virginia Division of Highways, West Virginia Public Service Commission, and West Virginia Division of Environmental Protection, State Historic Preservation Office; county governments in Target Areas; pole owners; and deployment subgrantees.

WVDED intends to utilize a limited portion of BEAD funds to provide state and local government agencies a temporary surge of broadband deployment permits and licensing staffing capacity for the length of the program to the extent permitted by state and federal law. WVDED will hire a staff point person and engage a qualified contractor for additional support. The qualified contractor will assist in troubleshooting permitting issues and may provide supplementary expertise and capacity to governmental permitting agencies under an memorandum of understanding with WVDED or may assist deployment subgrantees with expertise and capacity needed to complete permit applications required for awarded projects to be constructed in a timely manner.

WVDED is best positioned to implement the PLCC and its committee because the program requires centralized control and coordination in jurisdictions throughout the State. As a government entity, WVDED

has both the existing relationships with local governments and the administrative experience to navigate barriers to infrastructure deployment.

Expedient permit approvals will support broadband deployment throughout the State. Additional staff or contracted capacity at relevant State agencies and in local governments will be critical to eliminating bottlenecks for upcoming projects and ensuring the government has the needed resources to expedite its response to the surge of permit requests. For permits and clearances outside of State jurisdiction, the WVDED will request assistance from NTIA to ensure timely review and approval by Federal agencies. For more information on WVDED's measures to reduce costs and barriers, see Requirement 14.

Workforce Development

The Permits and Licensing Coordination and Capacity Initiative will aid agencies to more rapidly process an historic increase in applications that BEAD deployment applications will create and help deployment awardees prepare high-quality permit applications that can be processed more rapidly. Similarly, this surge in development activity will require an expanded workforce.

WVDED is committed to developing its broadband industry workforce through regularly convening and coordinating stakeholders and encouraging public private partnerships. WVDED will work across the talent pipeline to ensure that employers have the workers they need in a timely manner. The goal of the workforce development grant program is to empower West Virginia institutions to build or expand training opportunities for West Virginians to enter the broadband industry.

2.4.5 Text Box: The proposed subgrantee selection process is expected to demonstrate to subgrantees how to comply with all applicable Environmental and Historic Preservation (EHP) and Build America, Buy America Act (BABA) requirements for their respective project or projects. Describe how the Eligible Entity will communicate EHP and BABA requirements to prospective subgrantees, and how EHP and BABA requirements will be incorporated into the subgrantee selection process.

WVDED will communicate requirements related to both Environmental and Historic Preservation (EHP) and the Build America Buy American Act (BABA) to all prospective subgrantees prior to the subgrantee selection process through webinars, in-person meetings, and through publication of such compliance requirements in compliance guidance to be posted to WVDED's website.

WVDED will include in its application portal a request that the applicant describe how it will comply with all applicable federal and state environmental laws. In addition, WVDED will communicate to the applicant that it will be expected to complete an environmental questionnaire during post-award that will be included in the grant agreement materials. Through its administration of other federal grants, WVDED is familiar with environmental review requirements. For funds allocated to West Virginia by the U.S. Department of the Treasury, WVDED has established a two-step process that requires authorization for a design phase and a separate authorization for a construction phase. Specifically, in post award and prior to the subgrantee requesting a Notice to Proceed with Exempt Activities (NTPE), the subgrantee will be required to download and complete the environmental questionnaire, as well as a Floodplain Status certification as applicable. Once the NTPE is issued to subgrantees by WVDED, subgrantees may then begin pre-construction activities, which involves expenditures on "soft cost" items such as engineering functions, permit applications/right-of-way practices, and associated logistical efforts. This two-step authorization process will be modified as needed to comply with the specific requirements of NTIA environmental review procedures.

According to the procedures established by NTIA, WVDED will solicit information from applicants regarding their plan for complying with all applicable requirements of the National Environmental Policy act (NEPA) and the National Historic Preservation Act (NHPA). Further, WVDED will communicate in published compliance materials and outreach the necessity that subgrantees obtain all applicable Federal, State, and local government permits and approvals needed for the Proposed Project to be conducted. Additionally, WVDED will communicate to prospective subgrantees the importance that both projects planned and any eligible activities for which grant funding is utilized be designed to minimize adverse environmental impacts.

WVDED shall develop a series of questions as part of the application by which it will evaluate an applicant's plan for compliance with applicable environmental laws and the Build America, Buy America Act requirements.

Additionally, WVDED will require potential subgrantees, as part of the materials included as exhibits to the grant agreement with subgrantees, to complete an environmental law applicability checklist with questions regarding the applicability of various environmental laws. As part of the grant agreement process, the potential subgrantee will provide a completed packet of documentation, "Request for Approval of Evidentiary Materials," a checklist and other exhibits as part of the subgrantee's required submission. These documents are accompanying exhibits to WVDED's grant agreement with each subgrantee. Submission and WVDED approval of the environmental checklist among other items included in the Request for Evidentiary Materials will be a mandatory precondition to obtaining an NTPE as part of WVDED's grant administration process.

Within the grant agreement itself, WVDED shall incorporate language regarding Environmental and Historic Preservation, in particular the grant agreement shall specify the obligations of subgrantees to complete and return to WVDED the aforementioned environmental exhibit prior to WVDED issuing a Notice to Proceed. Within the grant agreement itself, WVDED shall incorporate language regarding Environmental and Historic Preservation, in particular the grant agreement shall specify the obligations of subgrantees to complete and return to WVDED the aforementioned environmental exhibit prior to WVDED issuing a Notice to Proceed. The grant agreement with WVDED will additionally contain provisions detailing compliance including but not limited to the following:

- The National Environmental Policy Act
- Clean Air Act
- Federal Water Pollution Control Act
- West Virginia Division of Highways (DOH) General Guidelines for Fiber Optic Permitting in the ROW
- Dig Once Policy
- WV State Historic Preservation (SHPO) consultation requirements (to determine National Historic Preservation Act (NHPA) Section 106 applicability)

As part of the grant agreement WVDED shall require the subgrantee to agree to refrain from undertaking any construction activities pertaining to the project until the subgrantee or its contractors/subcontractors have submitted all applicable permits and clearances to WVDED, and WVDED has issued a Notice to Proceed with Construction Activities (NTPC) following its review of such permits and clearances. WVDED shall also note in its grant agreement with subgrantees that this requirement shall apply to all parties in the development process, including public or non-profit subgrantees and any of their contractors.

WVDED shall further require subgrantees to provide WVDED with all available environmental information about their projects as well as any information that WVDED may request in connection with environmental reviews.

WVDED shall require subgrantees to advise WVDED of any proposed changes in subgrantees project scope or changes in environmental conditions as well as changes in the nature, extent, magnitude, scope, or location of projects, the addition of new activities not anticipated in the original scope of projects; the selection of an alternative not in the original application or environmental review; or new circumstances or environmental conditions which may affect the Project or have bearing on its impact, such as concealed or unexpected conditions discovered during the implementation of the Project or activity.

Regarding NEPA compliance, WVDED will communicate to prospective subgrantees that they must cooperate with any WVDED information requests related to projects which will involve construction and/or ground disturbing activities. WVDED, through materials provided to prospective subgrantees, will inform prospective subgrantees that following the award, they must obtain all necessary federal, state, and local governmental permits and approvals necessary for the proposed work to be conducted.

Build America, Buy America Act (BABA)

With regard to BABA, in its outreach efforts and materials provided to prospective subgrantees, WVDED shall emphasize the following requirements:

- **Iron and Steel Products:** That all iron and steel products utilized by the subgrantee or any contractors and subcontractors in its Proposed Project have undergone all manufacturing processes, from the initial melting state through the application of coatings, in the U.S. unless a waiver is granted.
- **Manufactured Products:** That all manufactured products, including fiber optic cables used in its BEAD funded project such products were (a) manufactured in the U.S. and that the manufactured products contain U.S. components comprising greater than 55% of the total cost of all components of the manufactured product.
- **Construction Materials:** For construction materials, the subgrantee and its contractors must certify that construction materials including but not limited to non-ferrous metals; plastic and polymer-based products (including polymers used in fiber optic cables); glass (including optic glass); lumber; and drywall used by the subgrantee and any contractors and subcontractors have undergone all manufacturing processes domestically.
- **Regarding Waiver:** While the subgrantee and all contractors and subcontractors of the subgrantee may waive the 55% cost requirement for all electronics equipment used in fiber optic technologies, (as proposed by NTIA and the Dept. of Commerce in August 2023)²⁸, the subgrantee will be required to certify that it and any contractors or subcontractors understand and will comply with the BABA 55% cost requirement for the following non-electronic equipment used in fiber optic technologies:
 - Optical Line Terminals (OLTs) and Remote Optical Line Terminals
 - OLT Line Cards
 - Optic Pluggables
 - Optical Network Terminals and Optical Network Units

²⁸ <https://www.commerce.gov/sites/default/files/2023-08/BEAD%20Waiver.pdf>

Further, with regard to BABA compliance, WVDED shall include language relating to subgrantee requirements relative to BABA in a separate compliance section within the grant agreement. This BABA section shall outline the BABA requirements as applicable to broadband projects and outline the limited scenarios/conditions under which a waiver of BABA requirements may be obtained.

Following its established administrative procedures, WVDED will inform subgrantees of federal environmental law compliance requirements as well as BABA compliance requirements through conducting program orientation webinars at every stage of the subgrantee administration process, from pre-application informational webinars, to post-award orientation webinars, to individual meetings with subgrantees. In addition, WVDED will develop subgrantee compliance materials, which shall include guidance for subgrantees based on the BEAD NOFO and referencing underlying regulations such as the Federal Uniform Guidance for federal awards (2 CFR 200). These compliance materials will be published at WVDED's broadband website for subgrantee reference.

It should be noted with regard to compliance with 2 CFR 200, that the Uniform Guidance expressly provides that agencies may adjust or provide exceptions to requirements under certain scenarios, one of which is in the event of fixed amount awards.²⁹ Relying on this, the Department of the Treasury, in its Supplementary Broadband Guidance provided exceptions from certain requirements for subrecipients of fixed amount subawards.³⁰

In keeping with the above May 17, 2023, guidance from the U.S. Treasury concerning the administration of funding for broadband projects under the American Rescue Plan Act, West Virginia will make subawards that provide for a maximum payment amount that is calculated based on a reasonable estimate of actual cost (see 2 CFR 200.201(b)(1)) will be considered fixed amount subawards even if the subaward agreement also provides that payments to the ISP subrecipient will be limited to actual costs after review of evidence of costs.³¹

Like Treasury's guidance, NTIA is proposing exceptions to certain provisions of the Uniform Guidance that would apply to the BEAD Program, including the above flexibility for Eligible Entities to issue fixed amount subawards.³² NTIA has advised Eligible Entities to proceed with issuing fixed amount subawards, and that exceptions or adjustments will apply to these subawards.³³ As such, the WVDED wishes to avail its subrecipients of the 2 CFR Par 200 exceptions and adjustments that NTIA applies in the BEAD Program. Should any revisions to this Initial Proposal be needed to accomplish this, the WVDED requests an opportunity to make those revisions.

²⁹ See 2 CFR 200.102(c).

³⁰ United States Treasury, "SLFRF and CPF Supplementary Broadband Guidance" May 17, 2023, <https://home.treasury.gov/system/files/136/SLFRF-and-CPF-Supplementary-Broadband-Guidance.pdf>.

³¹ Id.

³² Department of Commerce, "Tailoring the Application of the Uniform Guidance to the BEAD Program; Request for Comments, July 5, 2023, 88 FR 42918. <https://www.govinfo.gov/content/pkg/FR-2023-07-05/pdf/2023-14114.pdf>

³³ PowerPoint, NTIA SBLN Meeting: Proposed Exceptions to Uniform Guidance for BEAD, October Meeting #1, Oct. 10, 2023.

2.4.6 Text Box: Describe how the Eligible Entity will define project areas from which they will solicit proposals from prospective subgrantees. If prospective subgrantees will be given the option to define alternative proposed project areas, describe the mechanism for de-conflicting overlapping proposals to allow for like-to-like comparisons of competing proposals.

West Virginia's approach to project area development seeks to ensure that all targeted addresses are included in at least one Proposed Project. The following terms have definitions specific to this program and will be considered, referenced, and utilized accordingly.

- Broadband-serviceable location;
- Target Location;
- Target Area(s);
- Target Region(s); and
- Project (including Proposed Project, provisionally awarded project, and awarded project).

For the purpose of this program, **“broadband-serviceable location”** (BSL) means a business or residential location in the United States at which fixed broadband Internet access service is, or can be, installed.³⁴ **“Target Locations”** are therefore BSLs that meet NTIA's definitions of unserved and underserved locations that are eligible for funding through the BEAD Program. More specifically, an **“unserved location”** is a BSL that the Broadband DATA Maps show as (a) having no access to broadband service, or (b) lacking access to Reliable Broadband Service offered with—(i) a speed of not less than 25 Mbps for downloads; and (ii) a speed of not less than 3 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds.³⁵ An **“underserved location”** is a BSL that is (a) not an unserved location, and (b) that the Broadband DATA Maps show as lacking access to Reliable Broadband Service offered with—(i) a speed of not less than 100 Mbps for downloads; and (ii) a speed of not less than 20 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds.³⁶ For the remainder of this document, broadband speeds may be written as either, for instance, 100 Mbps download and 20 Mbps upload or the equivalent of 100/20 Mbps. “Fully served locations” are those that already receive the minimum required broadband service of 100/20 Mbps with no more than 100 ms of latency according to the program requirements.

WVDED will create and publish a set of **“Target Areas”**, which are pre-defined groupings of targeted locations. WVDED has created these through a clustering method that seeks to create approximately homogeneous and contiguous groupings of Target Locations. Where possible, each Target Area will only contain one type of targeted location: unserved, underserved, or fully served. Note that all Target Areas will be applied for at the same time; there are no separate rounds for different types of Target Areas. Most CAls

³⁴ Section 60102(a)(2)(H) states that the terms “location” and “broadband-serviceable location” “have the meanings given those terms by the Commission under rules and guidance that are in effect, as of the date of enactment of this Act.” See § 60102(a)(2)(H) of the Infrastructure Act. In the Third Broadband Data Collection Report and Order, the Commission adopted “as the fundamental definition of a ‘location’ for purposes of the [Broadband Serviceable Location] Fabric: a business or residential location in the United States at which fixed broadband Internet access service is, or can be, installed.” See Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program, WC Docket Nos. 19-195, 11-10, Third Report and Order, 36 FCC Rcd 1126, 1175 para. 126 (2021).

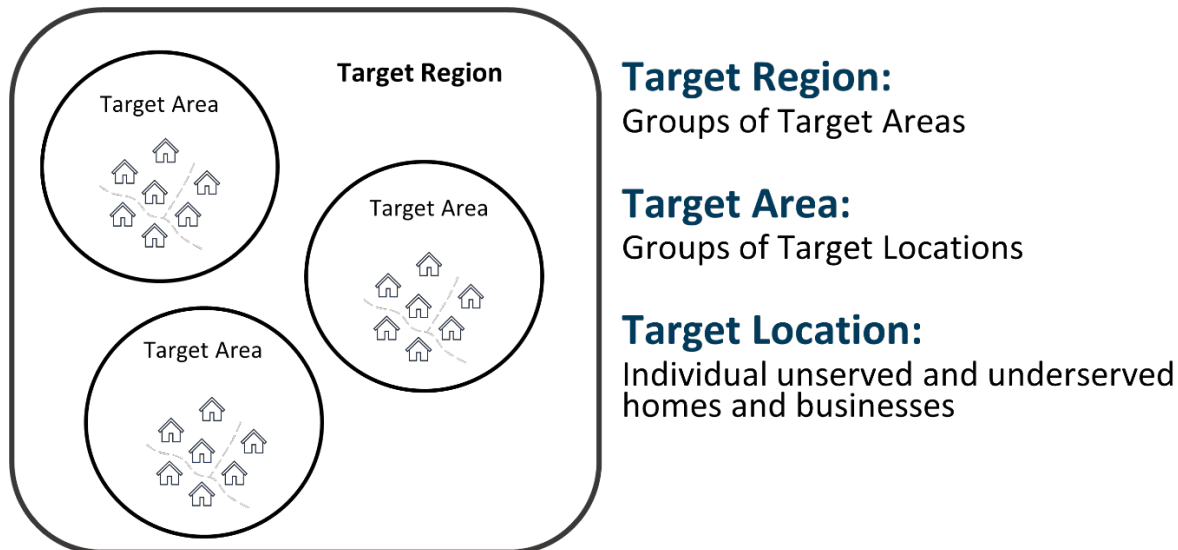
³⁵ 7 The definitions of “unserved location” and “underserved location” set forth in Section 60102(a)(1) require that a location have Reliable Broadband Service with “a latency sufficient to support real-time, interactive applications.” See Infrastructure Act § 60102(a)(1)(A)(ii)(II), (C)(ii)(II). NTIA interprets this to mean a latency of less than or equal to 100ms for the reasons articulated by the FCC's Wireline Communications Bureau in the 2013 Connect America Fund Phase II Service Obligations Order. See Connect America Fund, WC Docket No. 10-90, Report and Order, 28 FCC Rcd 15060, 15068-76 paras. 19-38 (Phase II Service Obligations Order).

³⁶ Id.

will be grouped into Target Areas with nearby unserved and underserved locations; however, those CAls that cannot so be grouped will become their own independent Target Areas. Nearby Target Areas will be further grouped into “**Target Regions.**”

Figure 8 illustrates the nesting nature of targeted locations, Target Areas, and Target Regions. As noted above, West Virginia will have many Target Regions. The house icons represent Target Locations.

Figure 8: Summary of Target Locations, Target Areas, and Target Regions



Subgrantees must serve all Target Locations in their awarded Projects; however, in circumstances where they cannot provide service for reasons completely outside of their control, such as no electricity provided to the BSL or where a property owner refuses the provision of service, subgrantees will be required to compile a list of such BSLs and present it to WVDED.

Defined Target Areas and Regions is more advantageous than allowing applicants to use individual Target Locations as the base unit for creating projects or using census-defined areas, such as tracts, for the following reasons, among others:

1. Based on WVDED’s experience carrying out other broadband deployment programs, using Target Locations as the minimum bidding unit creates a cherry-picking effect where applicants only bid on a very select set of locations, leaving many without bids. This then requires a remediation process that is often as large, if not larger, than the original bidding process. By creating packaged minimum bidding units with the requirement that all Areas in a Target Region must be bid on, this reduces the likelihood of having as many orphan Target Locations.
2. The above reason is why many entities are using Target Areas based on census-designated areas. However, census-based areas, or other purely geographical areas such as hexes, are not based on factors related to broadband deployment. Conversely, the Target Areas proposed by WVDED will likely factor in many of the considerations that applicants use when determining how to construct their networks, such as road locations, relevant boundaries, cost to deployment, and more.
3. Lastly, using Target Areas and Target Regions empowers applicants to create projects in a more strategic and competitive manner because the scoring process will create the best-scored combination of Proposed Projects, which does not necessitate a single applicant winning an entire

Target Region unless its combination of Proposed Projects outscores all other combinations, including bids from other applicants.

During curing, NTIA noted that it could not assess the Target Areas for compliance without the initial proposal demonstrating an ability to avoid overbuild should different entities win unserved and underserved locations that are in close proximity to one another. The proposed methodology, outlined above and throughout the remainder of this section, does indeed address this because, among other reasons, the Target Areas will comprise “approximately homogeneous and contiguous groupings of Target Locations...” Furthermore, this methodology was demonstrated in a presentation to NTIA during its in-person technical assistance meeting with WVDED on September 26, 2023. Attendees from NTIA included Philip Lehmkuhler, Scott Lively, Crystal Ivy, and Chip Spann. The complete version of West Virginia’s Initial Proposal Volume 2 contains figures that help to illustrate the concepts detailed herein; however, the NTIA Grants Portal does not allow for figures to be uploaded to the relevant sections—except in the supplementary materials where WVDED already includes a complete version of this document. As such, WVDED welcomes the opportunity to present its methodology to NTIA again and it has informed its Federal Program Officer, Chip Spann, of this.

Proposed Project Creation: Rules

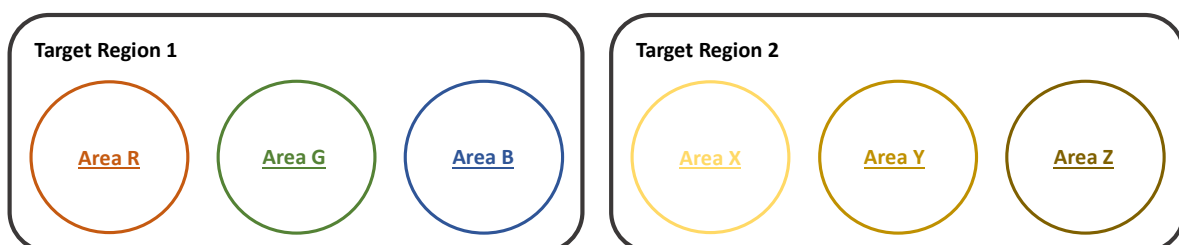
Applicants will use the Target Areas to create “**Proposed Projects**” for which they will provide service. In essence, applicants will piece together Proposed Projects using Target Areas as the building blocks and minimum unit of composition. To do so, WVDED will require that they abide by the following five rules listed then illustrated below.

1. If an applicant wishes to create a Proposed Project using a particular Target Area, then it must create Proposed Projects using all of the Target Areas in the same Target Region.
2. Proposed Projects may not overlap one another.
3. Dependent Projects are not allowed.
4. Proposed Projects may not contain more than one Target Region.
5. Target Areas containing only CAI Target Locations must not be in a Proposed Project with any Target Areas containing unserved or underserved Target Locations. Target Areas that contain a mix of CAI and unserved or underserved locations may be in a Proposed Project with other Target Areas containing unserved or underserved Target Locations.

Proposed Project Creation: Demonstration of Valid Projects

For the following demonstration of the Proposed Project creation process and above rules, consider the following two Target Regions, illustrated in Figure 9. The first comprises three Target Areas: Area R, Area G, and Area B. The second comprises Area X, Area Y, and Area Z.

Figure 9: Example Target Regions and Target Areas



Applicants may group Target Areas within a single Region together into Proposed Projects in any way they see fit, provided they meet the rules. Figure 10 offers four examples of valid Proposed Project sets in a situation where an applicant only wishes to submit Proposed Projects for Region 1. Each gray box represents the totality of the example applicant's Proposed Projects for Region 1. Note how they contain all of the Target Areas in the given Region in some form. By requiring that all Target Areas in a given Target Region receive bids if an applicant wishes to bid on any of them, this reduces the incidence rate of Target Areas not receiving any bids.

Figure 10: Examples of Valid Proposed Project Sets for Region 1 Only



If, for example, the applicant also wishes to submit Proposed Projects for both Region 1 and 2, Figure 11 provides two examples of valid Proposed Projects. Again, note how because the applicant seeks to bid on at least one Target Area in the two Target Regions, it must include All Target Areas for both Regions in its set of Proposed Projects.

Figure 11: Examples of Valid Proposed Project sets for Regions 1 & 2



Proposed Project Creation: Demonstration of Invalid Projects

Figure 12 offers two examples of projects that break the first rule because they fail to include all of the Target Areas within the Target Region in at least one Project.

Figure 12: Examples of Failure to Comply with Rule #1



Figure 13 demonstrates a breach of the second rule. Proposed Projects from a given applicant may not overlap.

Figure 13: Example of Failure to Comply with Rule #2



Figure 14 demonstrates a failure to comply with the third rule, which states that dependent Projects are not permitted.

Figure 14: Example of Failure to Comply with Rule #3

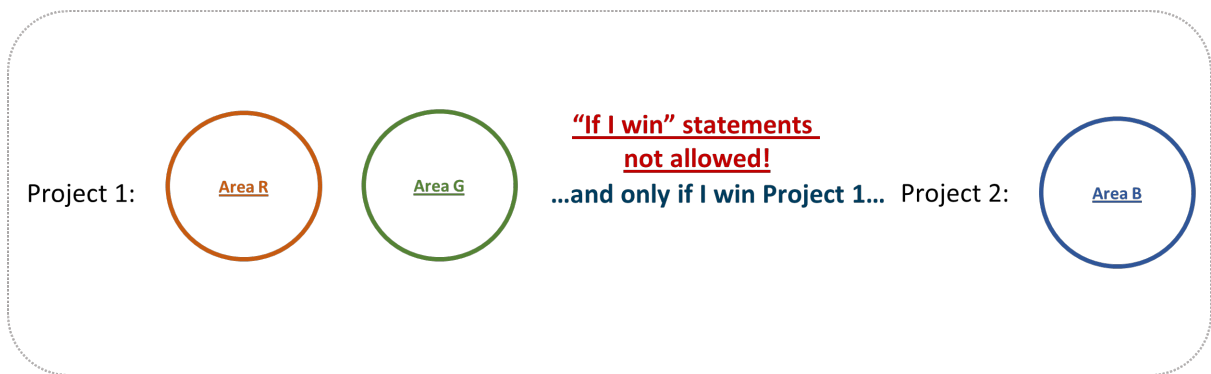


Figure 15 provides an example of failure to comply with the fourth rule, as Proposed Projects may not contain Target Areas from more than one Target Region.

Figure 15: Example of Failure to Comply with Rule #4

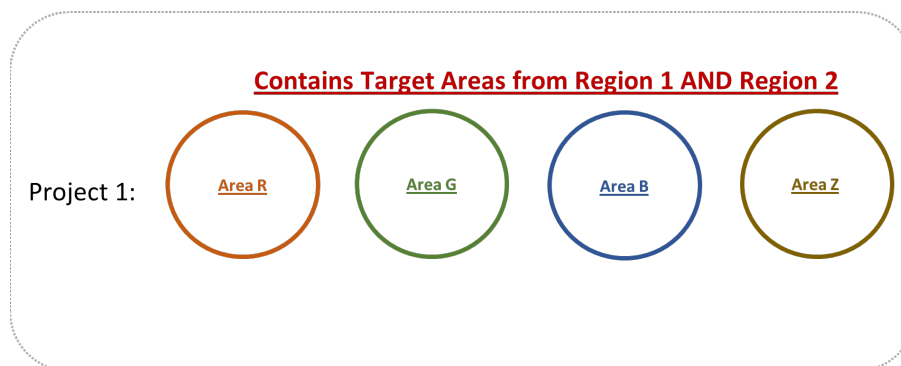
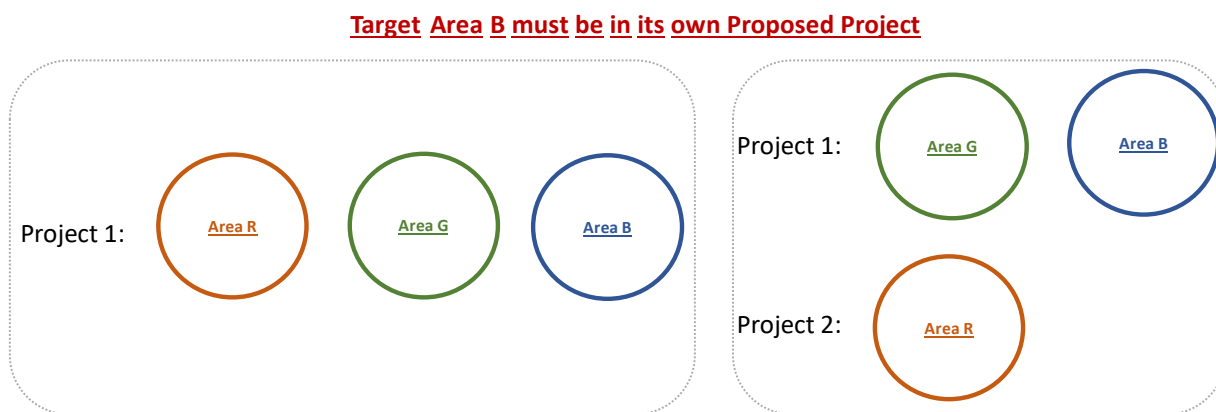


Figure 16 provides an example of failure to comply with the fifth rule. If Area B were to be assumed to be the only Target Area comprised solely of CAIs in Target Region 1, then the Proposed Project sets in Figure 16 would not be permitted because they mix a CAI-only Target Area with Target Areas that do not contain only CAIs.

Figure 16: Example of Failure to Comply with Rule #5



How WVED Will Select Projects to Provisionally Award and Avoid Overlaps

WVED will score each of the Proposed Projects according to the scoring criteria discussed in 2.4.2 and normalize them based on the number of Target Locations in each. If there is only one applicant with acceptable projects, then WVED will provisionally award projects. If there is more than one, and barring one superseding the others due to it being a priority project, WVED will generate a list of all possible combinations of using the Proposed Projects to cover the entire Target Region without overlapping projects. Following this, WVED will combine the scores of the projects that comprise the arrangement and will then select the arrangement with the highest score.

As an example, consider a scenario where three companies—Company 1, Company 2, and Company 3—submit Proposed Projects for Region 1, demonstrated in Figure 17. For easier visualization and for the remainder of this example, the inside of each Area is colored to match the respective company. This is demonstrated in the second row of Figure 17.

Figure 17: Example of Proposed Projects From Three Applicants



Figure 18, Figure 19, and Figure 20 demonstrate how WVDED will construct valid arrangements using the Proposed Projects from the three companies.

Figure 18: Demonstration of Possible Arrangement - 1

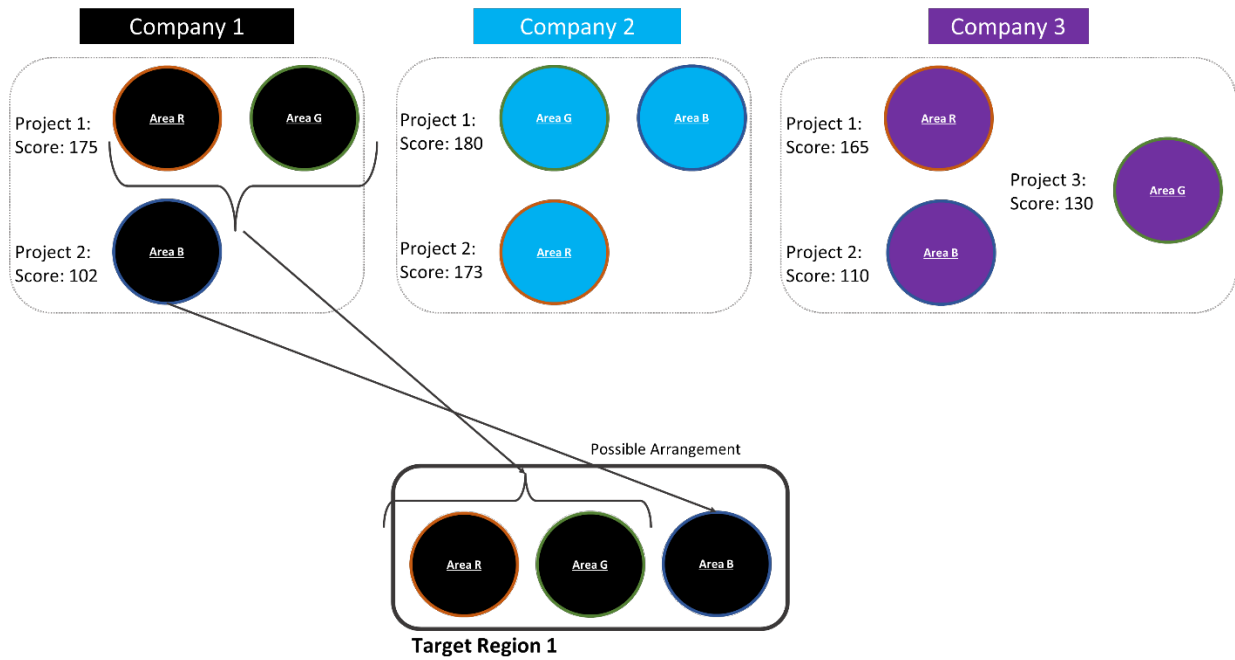


Figure 19: Demonstration of Possible Arrangement - 2

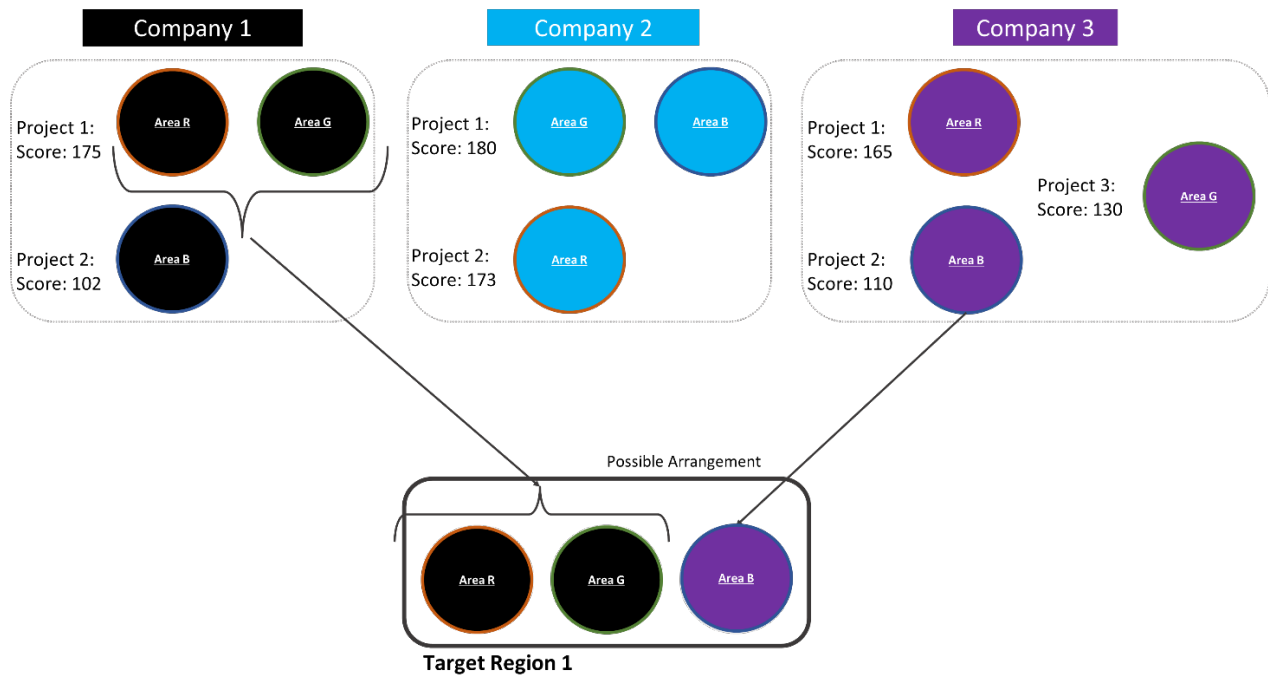
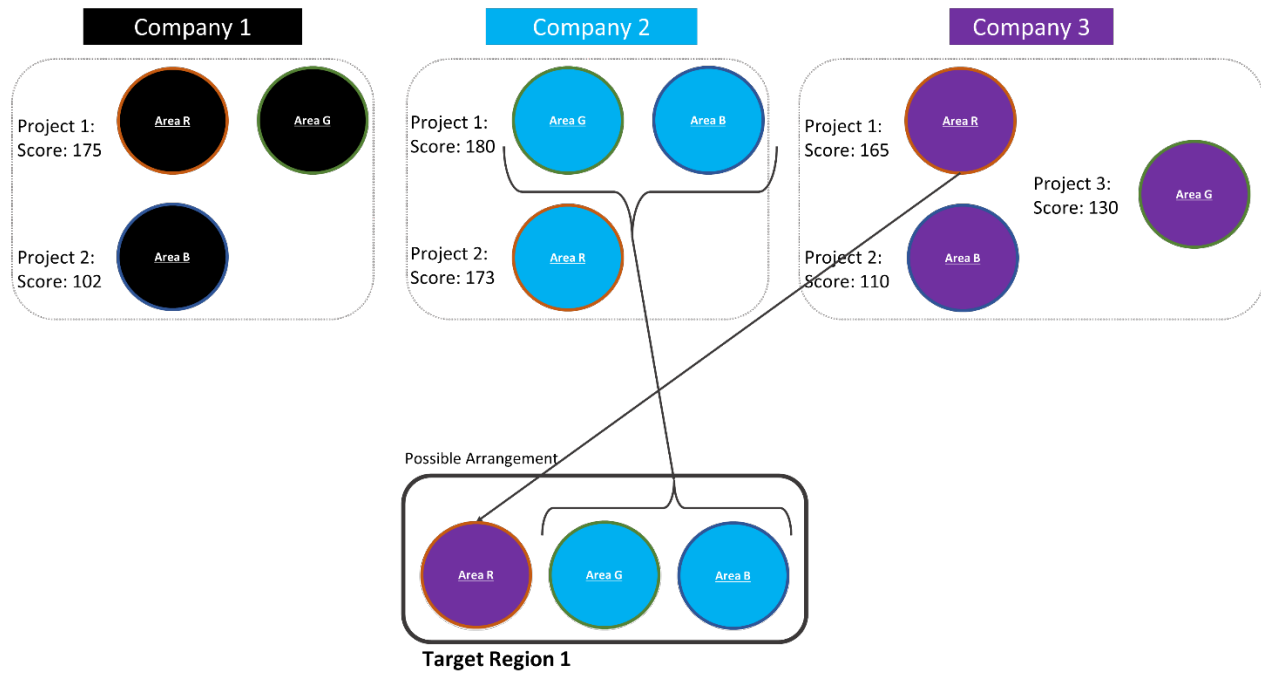


Figure 20: Demonstration of Possible Arrangement - 3



WVDED will then combine and weight the scores of the constructed arrangements and then select the Proposed Projects that comprise the best scored arrangement. Figure 21 demonstrates all of the possible, valid arrangements for this example along with the weighted scores. Arrangement 6 offers the highest score and is thus the best arrangement.

Figure 21: All Possible Arrangements of Example Scored; Best Arrangement Selected



2.4.7 Text Box: If no proposals to serve a location or group of locations that are unserved, underserved, or a combination of both are received, describe how the Eligible Entity will engage with prospective subgrantees in subsequent funding rounds to find providers willing to expand their existing or proposed service areas or other actions that the Eligible Entity will take to ensure universal coverage.

WVDED's proposed application process, highlighted earlier in this section, reduces the likelihood that a Target Area will not receive any projects. That is, applicants must propose projects for all Target Areas in a Target Region or none at all. In the event that some of the Target Regions do not receive any Proposed Projects, WVDED has two mechanisms that it can employ to any unserved or underserved areas that do not receive projects will receive service.

First, WVDED will require as a part of the program rules that applicants with existing or previously funded fiber or cable networks must accept up to an additional 20% of grant funding to build line extensions to areas without eligible projects at WVDED's discretion. WVDED will incorporate these mandatory line extension areas into the applicant's awarded project. WVDED may offer more than 20%, but the awardee may choose whether or not to accept it. The project costs for such builds must be calculated using the applicant's cost factors that the applicant submitted during the pre-application phase plus pole make-ready costs as a path through. The awardee must provide match necessary to ensure that additional awarded areas do not cause the overall award to fall below the minimum required match. Awardees will not be required to accept projects that would cause them to exceed their capacity threshold. In addition to accounting for financial and relative capacity, WVDED will consider the following when assigning mandatory line extensions:

- whether applicants have current infrastructure or proposed projects that overlap with the Target Region in question, or are in part of a neighboring Target Region just over the border between Regions;
- whether the line extension into a Target Area could form a reasonably contiguous project with an applicant's current infrastructure or proposed projects;
- preference for applicants with the closest existing or proposed infrastructure if more than one potential applicant has existing or proposed infrastructure in proximity.

Second, if there remain Target Areas for which no eligible project was received and either all awardee capacity has been reached or the awardees are choosing not to take on an additional burden beyond the 20% requirement, WVDED will undertake direct negotiation to find solutions for these areas. This may require incentivization, negotiations between awardees to modify their Project Areas, or other means of working together, including outreach and negotiation with ISPs that did not propose a project. If the aforementioned efforts do not produce viable projects and if WVDED believes that matching funds from an external source may help applicants create viable Proposed Projects, and at its discretion, WVDED may use matching funds that may be provided by the Appalachia Regional Commission (ARC) to offset some of the matching costs. If used for this purpose, these funds will be do so in accordance with the agreement between WVDED and ARC—which at the time of drafting this document is still being formed. WVDED would most likely use these funds for what it considers distressed areas, meaning their economic situation would most likely not produce a positive return on investment for operators and would therefore receive any applications without incentivization. This process will incentivize match, particularly in high cost areas, by bridging the gap between the amount of match an applicant can provide and how much is needed—enabling applicants that would otherwise not be able to provide any match to provide some. WVDED is developing

criteria for the use of ARC funds. In such instance, WVDED will coordinate such utilization with ARC and NTIA.

As a part of its curing comments, NTIA has stated that “At this stage, [West Virginia] should assume that all locations will be able to receive qualifying service. If, in the future, no option including LEO is available, waivers to the final proposal may be discussed at that time. Additionally, the [West Virginia] must include the template of a waiver that might be requested.” WVDED is, indeed, assuming that all locations will be able to receive qualifying service and that if, in the future, no option including LEO is available, waivers to the final proposal may be discussed at that time. Such situations may arise, for one or more locations, if:

- WVDED does not receive any qualifying applications through the above-mentioned methods;
- the only applications provided are for internet service that does not meet the 100/20 Mbps and 100 ms latency threshold; or
- the only applications provided not only exceed the extremely high cost threshold but WVDED also deems that the cost to provide service in one or more such locations:
 - is so high as to jeopardize the WVDED meeting the requirements, or spirit of, the BEAD plan; or
 - is so high as to be considered exorbitant or such that those funds would provide other deployment or non-deployment-related services that would ultimately meet the spirit of the BEAD program more.

During the drafting of this document, NTIA noted in a meeting with WVDED that it is considering procedures and options should any of the abovementioned situations take place wherein WVDED or any other grantee should need or request a waiver to not provide service to an unserved or underserved location.

Regarding NTIA’s request for a “template of the waiver that might be requested,” WVDED cannot at this time detail the exact nature of the template given NTIA’s decision that waivers of that nature will not be discussed until such time that they are needed. However, the template may be similar to the Internet for All Waiver Request form provided by NTIA. For demonstration purposes, WVDED has attached it as part of the supplemental materials and below are the contents of it:

- Date of Submission;
- Program;
- Entity Name;
- Point of Contact: Name, Title, Primary Phone Number, Email;
- Project Identification: Project Title, Project Identification Number;
- NOFO Provision Applicable to Requested Waiver;
- Confirmation that Eligible Entity is Not Seeking Waiver of a Statutory Requirement;
- Justification; and
- Signature.

2.4.8 Text Box: Describe how the Eligible Entity intends to submit proof of Tribal Governments’ consent to deployment if planned projects include any locations on Tribal Lands.

Not applicable. West Virginia does not have any federally recognized tribes or tribal lands.

2.4.9 Text Box: Identify or outline a detailed process for identifying an Extremely High Cost Per Location Threshold to be utilized during the subgrantee selection process. The explanation must include a description of any cost models used and the parameters of those cost models, including whether they consider only capital expenditures or include the operational costs for the lifespan of the network.

WVDED will use a “floating” Extremely High Cost Per Location Threshold. To do so, WVDED will first establish a Minimum Threshold, Maximum Threshold, and Budget. It will do so after the Pre-Application Phase.

- **The Minimum Threshold** will represent the lowest cost per location that would reasonably be considered extremely high cost based on an analysis of the CostQuest data and WVDED cost estimations.
- **The Maximum Threshold** represents the cost per location that WVDED considers to be unreasonable and that if such locations are funded above that threshold may jeopardize its ability to fulfill the spirit of the BEAD program requirements.
- **The Budget** is the targeted maximum grant cost to provide service to all unserved and underserved locations. Note that the Budget may exceed the estimate of the total grant cost to serve all unserved and underserved locations in West Virginia that WVDED developed for its Five-Year Broadband Action Plan, and it may exceed the estimated NPV deficit for these locations in the CostQuest greenfield fiber NPV estimates.

To generate the Minimum and Maximum Thresholds, WVDED will use the CostQuest greenfield fiber NPV estimates. WVDED will set the Maximum Threshold as the cost per location that if met or exceeded the total budget and therefore parts of the BEAD program will be jeopardized. It will set the Minimum Threshold based on what cost per location would reduce the number of BSLs receiving fiber to an undesirable level.

After establishing a set of provisionally awarded projects and an expected budget to complete the line extensions or other negotiated awards to reach all unserved and underserved locations, WVDED will determine whether the total expected cost exceeds the Budget. Based on this, three scenarios may occur:

1. If the total expected costs do not exceed the Budget, then WVDED will use the Maximum Threshold as the extremely high cost threshold.
2. If the total expected costs exceed the Budget, then WVDED will decrease the Maximum Threshold by \$1,000 increments and re-calculate results until the Budget is no longer exceeded. WVDED will do this prior to eliminating provisionally awarded projects for CAIs or underserved locations.
3. If the expected costs still exceed the Budget once the Minimum Threshold is reached, WVDED will perform the following actions one at a time, in order, until the budget is met:
 - a. Eliminate the resiliency and scalability credits detailed in the Minimal BEAD Program Outlay criterion;
 - b. Eliminate provisionally awarded projects that would only serve CAI Target Locations, starting with those having the highest grant cost per Target Location;
 - c. Request that applicants modify their provisionally awarded projects to remove CAIs if it appears that removal of the CAIs would materially change the grant cost of the provisionally awarded project;
 - d. Eliminate provisionally awarded projects that would only serve underserved Target Locations, starting with those having the highest grant cost per Target Location;
 - e. Substitute the alternative projects that remove underserved locations from provisionally awarded projects with a mixture of unserved and underserved locations and less than 80% unserved locations; and

- f. Eliminate provisionally awarded projects that would only serve 80% or more unserved Target Locations, starting with those having the highest grant cost per Target Location.

2.4.10 Text Box: Outline a plan for how the Extremely High Cost Per Location Threshold will be utilized in the subgrantee selection process to maximize the use of the best available technology while ensuring that the program can meet the prioritization and scoring requirements set forth in Section IV.B.6.b of the BEAD NOFO. The response must describe:

- a. The process for declining a subgrantee proposal that exceeds the threshold where an alternative technology is less expensive.
- b. The plan for engaging subgrantees to revise their proposals and ensure locations do not require a subsidy.
- c. The process for selecting a proposal that involves a less costly technology and may not meet the definition of Reliable Broadband

WVDED will set and use the Extremely High Cost Threshold in accordance with the methodology established in 2.4.9. The Extremely High Cost Threshold will be set prior to any opportunities for applicants to revise proposals to ensure locations do not need a subsidy. At the same time and in the same manner as all other projects, WVDED will accept projects from applicants proposing Reliable Broadband Service Technology but not a technology that would allow them to be Priority applicant. Also, at the same time and in the same manner as all other projects, WVDED will accept projects from applicants not proposing Reliable Broadband Service Technology but otherwise meeting the BEAD program technical parameters.

In the event that all eligible projects competing for a Target Area exceed the Extremely High Cost Threshold and at least one eligible applicant proposing a non-Priority project has a cost per location lower than all eligible Priority projects, WVDED will provide all applicants proposing Priority and non-Priority projects an opportunity not exceeding five business days to revise the cost of their projects to reduce the subsidy required. If no revised Priority projects are lower than either the Extremely High Cost Threshold or the projects of non-Priority applicants, WVDED will make an award to a non-Priority applicant. WVDED will only make an award to an applicant not utilizing a Reliable Broadband Service technology if no other eligible applicants can provide service at or below the Extremely High Cost Threshold.

Notwithstanding this process, WVDED may allow an award to an individual Proposed Project that exceeds Extremely High Cost Threshold if the applicant does not exceed the Extremely High Cost Threshold on average across all an applicant's proposed Project Areas in a single Target Region. WVDED may do this in cases where elimination of the individual Project Area would result in either an orphaned Target Area that receives no award, or elimination of a Priority project due to overlaps with a non-Priority project, or elimination of a project with Reliable Broadband Service technology due to overlaps with a project not having Reliable Broadband Service technology.

2.4.11 Text Box: Describe how the Eligible Entity will ensure prospective subgrantees deploying network facilities meet the minimum qualifications for financial capability as outlined on pages 72-73 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. **Detail how the Eligible Entity will require prospective subgrantees to certify that they are qualified to meet the obligations associated with a Project, that prospective subgrantees will have available funds for all project costs that exceed the amount of the grant, and that prospective subgrantees will comply with all Program requirements, including service milestones. To the extent the Eligible Entity disburses funding to subgrantees only upon completion of the associated tasks, the Eligible Entity will require each prospective subgrantee to certify that it has and will continue to have sufficient financial resources to cover its eligible costs for the Project until such time as the Eligible Entity authorizes additional disbursements.**

As noted in Text Box 2.4.1, WVDED will hold a pre-application phase during which it will require applicants to submit details on their Financial Capacity. This will include an estimate of the amount of capital that the applicant has available and is willing to spend in West Virginia for the purposes of this grant program. Applicants will need to attest to the best effort accuracy of this estimate. They must also certify that this funding will remain available throughout the duration of the grant process and that they have no financial obligations that would preclude them from doing so.

WVDED will require each applicant to certify that it has and will continue to have sufficient financial resources to cover its eligible costs for any project or projects it agrees to undertake until such time as the Eligible Entity authorizes additional disbursements.

WVDED will use this Financial Capacity, also including the letter of credit discussed in 2.4.11 (b), to establish a hard limit on the number and scale of projects that each applicant can be awarded. This will help prevent WVDED from exceeding the financial capacity of the applicants. In other words, WVDED will ensure the Projects eligible for award to an applicant will require no more resources than were previously detailed and certified available by the applicant in pre-application. After the pre-application phase, WVDED will use this hard limit to determine which entities should be assigned additional line extensions, as discussed in Text Box 2.4.7. Furthermore, WVDED will use this information ahead of the full application phase to model potential project outcomes.

All applicants will be required to certify that they will comply with all program requirements including service milestones.

- b. **Detail how the Eligible Entity plans to establish a model letter of credit substantially similar to the model letter of credit established by the FCC in connection with the Rural Digital Opportunity Fund (RDOF).**

As required by NTIA, WVDED will provide applicants with a model letter of credit in advance of the pre-application phase. The model letter of credit will be substantially similar to that established by the FCC in

connection with the Rural Digital Opportunity Fund (RDOF).³⁷ As a part of the pre-application process, WVDED will require that applicants obtain and submit a letter from an eligible bank (defined at the end of this subsection) committing to issue an irrevocable standby letter of credit in the required form to the applicant. The letter shall at a minimum provide the dollar amount of the letter of credit and the issuing bank's agreement to follow the terms and conditions of the model letter established by WVDED.

Prior to entering into any subgrantee agreement, each applicant that has been provisionally awarded shall obtain an irrevocable standby letter of credit that meets the requirements established in the model letter of credit and documentation and in a value of no less than 25% of the subaward amount. At this step, the prospective subgrantee must obtain an actual letter of credit as opposed to the bank's commitment to issue the letter of credit, which is what is required during the application process.

The prospective subgrantee will also be required to provide with its letter of credit an opinion letter from legal counsel clearly stating, subject only to customary assumptions, limitations, and qualifications, that in a proceeding under Title 11 of the United States Code, 11 U.S.C. § 101 et seq. (the "Bankruptcy Code"), the bankruptcy court will not treat the letter of credit or proceeds of the letter of credit as property of the subgrantee's bankruptcy estate under Section 541 of the Bankruptcy Code.

A bank that is acceptable for the letter of credit is:

- 1) Any United States bank
 - a) That is insured by the Federal Deposit Insurance Corporation, and
 - b) That has a bank safety rating issued by Weiss of B- or better; or
- 2) CoBank, so long as it maintains assets that place it among the 100 largest United States Banks, determined on basis of total assets as of the calendar year immediately preceding the issuance of the letter of credit and it has a long-term unsecured credit rating issued by Standard & Poor's of BBB- or better (or an equivalent rating from another nationally recognized credit rating agency); or
- 3) The National Rural Utilities Cooperative Finance Corporation, so long as it maintains assets that place it among the 100 largest United States Banks, determined on basis of total assets as of the calendar year immediately preceding the issuance of the letter of credit and it has a long-term unsecured credit rating issued by Standard & Poor's of BBB- or better (or an equivalent rating from another nationally recognized credit rating agency); or
- 4) Any non-United States bank:
 - a) That is among the 100 largest non-U.S. banks in the world, determined on the basis of total assets as of the end of the calendar year immediately preceding the issuance of the letter of credit (determined on a U.S. dollar equivalent basis as of such date);
 - b) Has a branch office:
 - i) Located in the District of Columbia; or
 - ii) Located in New York City, New York, or such other branch office agreed to by the Commission, that will accept a letter of credit presentation from the Administrator via overnight courier, in addition to in-person presentations;
 - c) Has a long-term unsecured credit rating issued by a widely recognized credit rating agency that is equivalent to a BBB- or better rating by Standard & Poor's; and

³⁷ Per BEAD NOFO, p. 72, citing *Rural Digital Opportunity Fund Order*, 35 FCC Rcd at 773-77, Appx. C. See Appendix C of the RDOF Report and Order (Jan. 30, 2020) for the example model letter of credit: <https://docs.fcc.gov/public/attachments/FCC-20-5A1.pdf>.

- d) Issues the letter of credit payable in United States dollars.

WVDED will consider granting waivers to the BEAD Program letter of credit requirement to potential subgrantees that may be unable to obtain a qualifying letter of credit in the exact manner described above. On October 23, 2023, NTIA published a Notice of Programmatic Waiver concerning the letter of credit, which details how the requirement may be waived and to what extent.³⁸ The Notice provides four avenues for waiving aspects of the letter of credit requirement:

1. Permitting subgrantee use of credit unions that meet certain qualifications;
2. Permitting the use of performance bonds in certain circumstances;
3. Reducing the letter of credit or performance bonds upon completion of milestones; or
4. Reduced alternative initial letter of credit or performance bond percentage.

WVDED will continue to evaluate these options and work alongside NTIA and applicants to determine the best course of action on an applicant-by-applicant basis.


c. Detail how the Eligible Entity will require prospective subgrantees to submit audited financial statements.

During the pre-application phase, each prospective subgrantee shall submit to WVDED financial statements from the prior fiscal year that are audited by an independent certified public accountant. If the prospective subgrantee has not been audited during the ordinary course of business, in lieu of submitting audited financial statements, it must submit unaudited financial statements from the prior fiscal year and certify that it will provide financial statements from the prior fiscal year that are audited by an independent certified public accountant before submitting its applications. WVDED will not approve any grant for the deployment or upgrading of network facilities unless it determines that the documents submitted to it demonstrate the prospective subgrantee's financial capability with respect to the Proposed Project. Accordingly, these materials must be submitted before WVDED establishes provisional award.

d. Detail how the Eligible Entity will require prospective subgrantees to submit business plans and related analyses that substantiate the sustainability of the proposed project.

WVDED will require applicants to submit financial analyses that substantiate potential projects' sustainability at the pre-application phase and after a preliminary award determination has been made but prior to final award. As part of the pre-application phase, WVDED will require applicants to submit one or more preliminary pro forma cash flow statements for a 10-year period representing hypothetical awards of varying scale of awards. WVDED will require applicants to state and define key cost factors that they will use to develop Proposed Project costs when they submit proposed budgets for projects during the application phase. WVDED will require applicants to state key revenue and take-rate assumptions and justify these assumptions using demonstrated experience or other documented evidence. WVDED will require applicants to demonstrate that they have non-grant capital sources that the pro forma indicates would be required, as well as sources to fund any initial operating losses, if applicable. WVDED will use these preliminary pro forma cash flows to make an initial determination about applicant financial sustainability, and as part of its determination of applicant Financial and Relative Capacity.

³⁸ NTIA, Notice of Programmatic Waiver, October 23, 2023, [https://broadbandusa.ntia.gov/sites/default/files/2023-10/BEAD LOC Waiver Notice 10.23.23.pdf](https://broadbandusa.ntia.gov/sites/default/files/2023-10/BEAD_LOC_Waiver_Notice_10.23.23.pdf).



After preliminary award decisions, WVDED will require prospective subgrantees to complete a final pro forma cash flow analysis for a 10-year period based on the Project Areas prospectively to be awarded, which will be similar in form and content to the preliminary pro forma cash flows. In addition, WVDED will require prospective subgrantees to submit a business plan for the prospectively awarded areas that includes a plan for marketing and customer acquisition and standing up any new or additional required operational capabilities in the prospectively awarded areas. WVDED will allow prospective subgrantees 21 days to complete these analyses, which may be extended at WVDED's discretion. It will review these to confirm sustainability of the prospective project prior to final award.

2.4.12 Text Box: Describe how the Eligible Entity will ensure any prospective subgrantee deploying network facilities meets the minimum qualifications for managerial capability as outlined on pages 73 – 74 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. Detail how the Eligible Entity will require prospective subgrantees to submit resumes for key management personnel.**
- b. Detail how it will require prospective subgrantees to provide a narrative describing their readiness to manage their proposed project and ongoing services provided.**

Prospective subgrantees will be required to submit resumes for all key management personnel and any necessary organizational chart(s) detailing all parent, subsidiaries, and affiliates in their applications. Each applicant must also provide a narrative describing their readiness to manage a broadband services network. This narrative should describe the experience and qualifications of key management for undertaking this project, its experience undertaking projects of similar size and scope, recent and upcoming organizational changes including mergers and acquisitions, and relevant organizational policies.

WVDED will not approve any grant for the deployment or upgrading of network facilities unless it determines that the documents submitted to it demonstrate the applicant's managerial capability with respect to the Proposed Project. WVDED, at its discretion, may require an applicant to agree to special grant conditions relating to maintaining the validity of representations an applicant has made regarding its organizational structure and key personnel.

These materials will be collected as a part of the pre-application phase. As noted in Text Box 2.4.1, WVDED will use this information to generate a soft relative capacity limit. Applicants will be assigned a scale of project in which they fall: 1-3. WVDED may elect not to award additional Target Areas to an applicant that has reached and exceeded its relative capacity while there are still applicants with capacity in a lower category.

2.4.13 Text Box: Describe how the Eligible Entity will ensure any prospective subgrantee deploying network facilities meets the minimum qualifications for technical capability as outlined on page 74 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. Detail how the Eligible Entity will require prospective subgrantees to certify that they are technically qualified to complete and operate the Project and that they are capable of carrying out the funded activities in a competent manner, including that they will use an appropriately skilled and credentialed workforce.**

WVDED will request materials verifying that each applicant is technically qualified to complete and operate any potential project and that they will use an appropriately skilled workforce. The former will be requested as a part of the pre-application phase and will include a request for information demonstrating experience carrying out projects of a similar manner and size to those that the applicant anticipates submitting for award. This will include information demonstrating that each applicant is technically qualified for and will

be able to properly complete the requirements outlined in Requirement 15 on climate assessment submitting for award.

WVDED will also require that applicants submit during the pre-application phase a plan demonstrating that they will have and use an appropriately skilled and credentialed workforce. This plan should include, at a minimum:

- The ways in which the applicant will ensure the use of an appropriately skilled workforce, e.g., through Registered Apprenticeships or other joint labor-management training programs that serve all workers;
- The steps that will be taken to ensure that all members of the project workforce will have appropriate credentials, e.g., appropriate and relevant pre-existing occupational training, certification, and licensure;
- Whether the workforce is unionized;
- Whether the workforce will be directly employed or whether work will be performed by a subcontracted workforce; and
- The entities that the applicant plans to contract and subcontract with in carrying out the proposed work.

If the project workforce or any applicant's, contractor's, or subcontractor's workforce is not unionized, the applicant must also provide with respect to the non-union workforce:

- The job titles and size of the workforce (FTE positions, including for contractors and subcontractors) required to carry out the proposed work over the course of the project and the entity that will employ each portion of the workforce;
- For each job title required to carry out the proposed work (including contractors and subcontractors), a description of:
 - safety training, certification, and/or licensure requirements (e.g., OSHA 10, OSHA 30, confined space, traffic control, or other training as relevant depending on title and work), including whether there is a robust in-house training program with established requirements tied to certifications, titles; and
 - information on the professional certifications and/or in-house training in place to ensure that deployment is done at a high standard.

b. Detail how the Eligible Entity will require prospective subgrantees to submit a network design, diagram, project costs, build-out timeline and milestones for project implementation, and a capital investment schedule evidencing complete build-out and the initiation of service within four years of the date on which the entity receives the subgrant, all certified by a professional engineer, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the Project.

During the application process, applicants will be required to submit materials to demonstrate the plan and their ability for completing their deployment projects. These materials will include, at a minimum, a network design, diagram, project costs, build-out timeline and milestones for project implementation. It also includes a capital investment schedule evidencing complete build-out and the initiation of service within

four years of the date on which the entity receives the subgrant. All materials must be certified by a professional engineer, stating that the proposed network can deliver broadband service that meets the requisite performance requirements to all locations served by the project.

WVDED will not approve any grant for the deployment or upgrading of network facilities unless it determines that the materials submitted to it demonstrate the applicant's technical capability with respect to the Proposed Project.

WVDED will also require that applicants certify that they will ensure complete service to multi-dwelling units.

2.4.14 Text Box: Describe how the Eligible Entity will ensure any prospective subgrantee deploying network facilities meets the minimum qualifications for compliance with applicable laws as outlined on page 74 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. Detail how the Eligible Entity will require prospective subgrantees to demonstrate that they are capable of carrying out funded activities in a competent manner in compliance with all applicable federal, state, territorial, and local laws.**
- b. Detail how the Eligible Entity will require prospective subgrantees to permit workers to create worker-led health and safety committees that management will meet with upon reasonable request.**

WVDED will require that applicants certify that they will comply with all applicable federal, state, and local laws relevant to carrying out their grant agreement. To that end, applicants must demonstrate in narrative form which relevant laws they plan on complying with and their compliance plans. Applicants do not need to provide an exhaustive list of all relevant laws and regulations; however, they must demonstrate that they have a plan and capacity to comply with any related to construction, labor and workforce, finances, and any other topic covered in this section. Applicants will also be required to provide notices of any instances of failure to comply with any federal, state, or local relevant laws or regulations.

WVDED will also require attestation that applicants will permit workers to create worker-led health and safety committees that management will meet with upon reasonable request. This will be incorporated into the other labor standards and protections requirements discussed at greater length in Section 7.

WVDED will account for the following state and federal laws, among others:

- Build America, Buy America Act (BABA)
- Secure and Trusted Communications Networks Act
- Clean Air Act
- Federal Water Pollution Control Act
- West Virginia Division of Highways (DOH) General Guidelines for Fiber Optic Permitting in the ROW
- Dig Once Policy – Underground installations in the WV DOH right of way are subject to the State Dig Once Policy (W. Va. Code § 17-2E-5) unless they qualify for an exception in that policy.

2.4.15 Text Box: Describe how the Eligible Entity will ensure any prospective subgrantee deploying network facilities meets the minimum qualifications for operational capability as outlined on pages 74 –

75 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

a. Detail how the Eligible Entity will require prospective subgrantees to certify that they possess the operational capability to qualify to complete and operate the Project.

To demonstrate operational capacity, WVDED will require that applicants include a clear summary of their operating history, financial information, business size and stability, and more. Some of this information will be requested as a part of the pre-application phase as outlined in 2.4.1. The materials requested will include, among others:

- Organization history;
- Documented past performance of similarly-sized projects;
- Demonstration of financial stability;
- Risk management plan;
- Relevant licenses and certifications to carry out any deployment projects in West Virginia;
- Number of subscribers on a state-by-state basis;
- History of participation and successful completion of grant programs, whether federal, state, or local;
- Staffing and management capacity; and more.

These materials will be collected as a part of the pre-application phase. As noted in Text Box 2.4.1, WVDED will use this information to generate a soft relative capacity limit. Applicants will be assigned a scale of project in which they fall: 1-3. WVDED may elect not to award additional projects to an applicant that has reached and exceeded its relative capacity while there are still applicants with capacity in a lower category.

All applicants will be required to certify that they have the operational capability required.

b. Detail how the Eligible Entity will require prospective subgrantees to submit a certification that have provided a voice, broadband, and/or electric transmission or distribution service for at least two (2) consecutive years prior to the date of its application submission or that it is a wholly owned subsidiary of such an entity, attests to and specify the number of years the prospective subgrantee or its parent company has been operating.

Applicants will be required to attest to and prove that they have provided voice, broadband and/or electric transmission or distribution service for at least two consecutive years prior to the application date or that it is a wholly owned subsidiary of such an entity. New entrants to the broadband market operating fewer than two years may satisfy this requirement by satisfying the condition listed in 2.4.15(e) Text Box.

c. Detail how the Eligible Entity will require prospective subgrantees that have provided a voice and/or broadband service, to certify that it has timely filed Commission Form 477s and the Broadband DATA Act submission, if applicable, as required during this time period, and otherwise has complied with the Commission's rules and regulations.

If the applicant has provided voice and/or broadband service, WVDED will request that it certify that it has timely filed Commission Form 477s and the Broadband DATA Act submission. If the applicant has not, it should provide any explanations for pending, missing, or otherwise improperly submitted Forms.

- d. Detail how the Eligible Entity will require prospective subgrantees that have operated only an electric transmission or distribution service, to submit qualified operating or financial reports, that it has filed with the relevant financial institution for the relevant time period along with a certification that the submission is a true and accurate copy of the reports that were provided to the relevant financial institution.**

WVDED will require that applicants that have operated only an electric transmission or distribution submit qualified operating or financial reports that they have filed with relevant financial institutions for the relevant period along with certification that the submission is a true and accurate copy of the reports.

- e. In reference to new entrants to the broadband market, detail how the Eligible Entity will require prospective subgrantees to provide evidence sufficient to demonstrate that the newly formed entity has obtained, through internal or external resources, sufficient operational capabilities.**

For new entrants that do not have a history of operating in the broadband market, WVDED will require that they provide a detailed prospectus and pro forma detailing their business plans, expected revenue, subscriber targets, staffing and management levels, resumes of key personnel, relevant existing project descriptions, and commitments or narratives from contractors or subcontractors.

2.4.16 Text Box: Describe how the Eligible Entity will ensure that any prospective subgrantee deploying network facilities meets the minimum qualifications for providing information on ownership as outlined on page 75 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. Detail how the Eligible Entity will require prospective subgrantees to provide ownership information consistent with the requirements set forth in 47 C.F.R. § 1.2112(a)(1)-(7).**

WVDED will ensure that applicants provide information on ownership that is consistent with 47 C.F.R. § 1.2112(a)(1)-(7) during the pre-application phase. This information is outlined below.

Each applicant will be required to provide:

1. List the real party or parties in interest in the applicant or application, including a complete disclosure of the identity and relationship of those persons or entities directly or indirectly owning or controlling (or both) the applicant;
2. List the name, address, and citizenship of any party holding 10 percent or more of stock in the applicant, whether voting or nonvoting, common or preferred, including the specific amount of the interest or percentage held;

3. List, in the case of a limited partnership, the name, address and citizenship of each limited partner whose interest in the applicant is 10 percent or greater (as calculated according to the percentage of equity paid in or the percentage of distribution of profits and losses);
4. List, in the case of a general partnership, the name, address and citizenship of each partner, and the share or interest participation in the partnership;
5. List, in the case of a limited liability company, the name, address, and citizenship of each of its members whose interest in the applicant is 10 percent or greater;
6. List all parties holding indirect ownership interests in the applicant as determined by successive multiplication of the ownership percentages for each link in the vertical ownership chain, that equals 10% or more of the applicant, except that if the ownership percentage for an interest in any link in the chain exceeds 50% or represents actual control, it shall be treated and reported as if it were a 100% interest; and
7. List any FCC-regulated entity or applicant for an FCC license, in which the applicant or any of the parties identified in paragraphs (a)(1) through (a)(5) of this section, owns 10 percent or more of stock, whether voting or nonvoting, common or preferred. This list must include a description of each such entity's principal business and a description of each such entity's relationship to the applicant (e.g., Company A owns 10 percent of Company B (the applicant) and 10 percent of Company C, then Companies A and C must be listed on Company B's application, where C is an FCC licensee and/or license applicant).

Additionally, each applicant must provide in its application:

1. List the names, addresses, and citizenship of all officers, directors, affiliates, and other controlling interests of the applicant, as described in § 1.2110, and, if a consortium of small businesses or consortium of very small businesses, the members of the conglomerate organization;
2. List any FCC-regulated entity or applicant for an FCC license, in which any controlling interest of the applicant owns a 10 percent or greater interest or a total of 10 percent or more of any class of stock, warrants, options or debt securities. This list must include a description of each such entity's principal business and a description of each such entity's relationship to the applicant;
3. List all parties with which the applicant has entered into agreements or arrangements for the use of any of the spectrum capacity of any of the applicant's spectrum;
4. List separately and in the aggregate the gross revenues, computed in accordance with § 1.2110, for each of the following: The applicant, its affiliates, its controlling interests, and the affiliates of its controlling interests; and if a consortium of small businesses, the members comprising the consortium;
5. If claiming eligibility for a rural service provider bidding credit, provide all information to demonstrate that the applicant meets the criteria for such credit as set forth in § 1.2110(f)(4); and
6. If applying as a consortium of designated entities, provide the information in paragraphs (b)(1)(i) through (v) of this section separately for each member of the consortium.

As an exhibit, applicants must:

1. List the names, addresses, and citizenship of all officers, directors, and other controlling interests of the applicant, as described in § 1.2110;
2. List any FCC-regulated entity or applicant for an FCC license, in which any controlling interest of the applicant owns a 10 percent or greater interest or a total of 10 percent or more of any class of stock,

warrants, options or debt securities. This list must include a description of each such entity's principal business and a description of each such entity's relationship to the applicant;

3. List and summarize all agreements or instruments (with appropriate references to specific provisions in the text of such agreements and instruments) that support the applicant's eligibility as a small business under the applicable designated entity provisions, including the establishment of de facto or de jure control. Such agreements and instruments include articles of incorporation and by-laws, partnership agreements, shareholder agreements, voting or other trust agreements, management agreements, franchise agreements, spectrum leasing arrangements, spectrum resale (including wholesale) arrangements, and any other relevant agreements (including letters of intent), oral or written;
4. List and summarize any investor protection agreements, including rights of first refusal, supermajority clauses, options, veto rights, and rights to hire and fire employees and to appoint members to boards of directors or management committees;
5. List separately and in the aggregate the gross revenues, computed in accordance with § 1.2110, for each of the following: the applicant, its affiliates, its controlling interests, and affiliates of its controlling interests; and if a consortium of small businesses, the members comprising the consortium;
6. List and summarize, if seeking the exemption for rural telephone cooperatives pursuant to § 1.2110, all documentation to establish eligibility pursuant to the factors listed under § 1.2110(b)(4)(iii)(A).
7. List and summarize any agreements in which the applicant has entered into arrangements for the use of any of the spectrum capacity of the license that is the subject of the application; and
8. If claiming eligibility for a rural service provider bidding credit, provide all information to demonstrate that the applicant meets the criteria for such credit as set forth in § 1.2110(f)(4).

2.4.17 Text Box: Describe how the Eligible Entity will ensure any prospective subgrantee deploying network facilities meets the minimum qualifications for providing information on other public funding as outlined on pages 75 – 76 of the BEAD NOFO. If the Eligible Entity opts to provide application materials related to the BEAD subgrantee selection process, the Eligible Entity may reference those to outline alignment with requirements for this section. The response must:

- a. **Detail how it will require prospective subgrantees to disclose for itself and for its affiliates, any application the subgrantee or its affiliates have submitted or plan to submit, and every broadband deployment project that the subgrantee or its affiliates are undertaking or have committed to undertake at the time of the application using public funds.**

As a part of the pre-application phase, WVDED shall require each applicant to disclose, for itself and for its affiliates, any application the applicant or its affiliates have submitted or plan to submit, and every broadband deployment project that the applicant or its affiliates are undertaking or have committed to undertake at the time of the application using public funds, including but not limited to funds provided under: the Families First Coronavirus Response Act (Public Law 116- 127; 134 Stat. 178); the CARES Act (Public Law 116-136; 134 Stat. 281), the Consolidated Appropriations Act, 2021 (Public Law 116-260; 134 Stat. 1182); or the American Rescue Plan of 2021 (Public Law 117-2; 135 Stat. 4), any federal Universal Service Fund high-cost program (e.g., RDOF, CAF), or any Eligible Entity or local universal service or broadband deployment funding program. For each broadband deployment project, WVDED shall require the disclosure of:

- a. the speed and latency of the broadband service to be provided (as measured and/or reported under the applicable rules),

- b. the geographic area to be covered,
- c. the number of unserved and underserved locations committed to serve (or, if the commitment is to serve a percentage of locations within the specified geographic area, the relevant percentage),
- d. the amount of public funding to be used,
- e. the cost of service to the consumer, and
- f. the matching commitment, if any, provided by the applicant or its affiliates.

b. At a minimum, the Eligible Entity shall require the disclosure, for each broadband deployment project, of: (a) the speed and latency of the broadband service to be provided (as measured and/or reported under the applicable rules), (b) the geographic area to be covered, (c) the number of unserved and underserved locations committed to serve (or, if the commitment is to serve a percentage of locations within the specified geographic area, the relevant percentage), (d) the amount of public funding to be used, (e) the cost of service to the consumer, and (f) the matching commitment, if any, provided by the subgrantee or its affiliates.

WVDED will require each applicant to disclose, for itself and for its affiliates, any application the applicant or its affiliates have submitted or plan to submit, and every broadband deployment project that the applicant or its affiliates are undertaking or have committed to undertake at the time of the application using public funds, including but not limited to funds provided under: the Families First Coronavirus Response Act (Public Law 116- 127; 134 Stat. 178); the CARES Act (Public Law 116-136; 134 Stat. 281), the Consolidated Appropriations Act, 2021 (Public Law 116-260; 134 Stat. 1182); or the American Rescue Plan of 2021 (Public Law 117-2; 135 Stat. 4), any federal Universal Service Fund high-cost program (e.g., RDOF, CAF), or any Eligible Entity or local universal service or broadband deployment funding program.

WVDED will require the disclosure, for each broadband deployment project, of: (a) the speed and latency of the broadband service to be provided (as measured and/or reported under the applicable rules), (b) the geographic area to be covered, (c) the number of unserved and underserved locations committed to serve (or, if the commitment is to serve a percentage of locations within the specified geographic area, the relevant percentage), (d) the amount of public funding to be used, (e) the cost of service to the consumer, and (f) the matching commitment, if any, provided by the applicant or its affiliates.

Applicants must commit at least \$500 of matching funds per location passed, for both Target and non-Target Locations, except in cases where WVDED has designated locations exempt. Additionally, each applicant must match 25% of the total cost of all its Proposed Projects, with the costs of any locations designed by WVDED as exempt reduced from this total cost. WVDED will enforce the 25% match requirement based on the aggregated project cost, not on an individual project. WVDED If an individual project is provisionally awarded and does not meet the 25% match requirement but the applicant offers a higher than 25% match in another project(s) and the additional match makes up for the value difference in the former so that the aggregate project match meets the requirement, then this is acceptable to WVDED. This meets the spirit of the 25% match requirement as established by NTIA in the NOFO. Table 13 provides an example of such an acceptable situation. Note that the match will be waived for High-Cost areas, as defined in Section 60102(a)(2)(G) of the NOFO.

Table 13: Example of Acceptable Match Amount Scenario

Project	Total cost (\$)	Match	
		Amount (\$)	%
A	\$2,000,000	\$600,000	30%
B	\$1,100,000	\$150,000	14%
C	\$3,200,000	\$900,000	28%
Total	\$6,300,000	\$1,650,000	26%

Additionally, WVDED may require a fixed minimum match per Target Location passed.

WVDED will include these requirements in its published program procedures prior to the pre-application and full application process. WVDED will include these requirements in its program procedures that will be released prior to the pre-application and full application process. During any meetings with prospective applicants before the release of the notice of funding opportunity, WVDED will raise, where appropriate, this requirement.

WVDED will not permit in-kind match generally but will permit it for utility partners in limited circumstances, such as a “donated” IRUs. WVDED will further detail the conditions under which it will permit such in-kind contributions in its program procedures.

5. Non-Deployment Subgrantee Selection (Requirement 9)

WVDED will designate funding to non-deployment activities, including digital equity implementation, after first funding affordable, high-speed broadband service to all unserved and underserved locations, as well as eligible Community Anchor Institutions, within West Virginia. WVDED will prioritize digital equity and workforce development in non-deployment BEAD activities. The process WVDED will use for selecting non-deployment subgrantees, developing these initiatives, and allocating funding is described below.

2.5.1 Text Box: Describe a fair, open, and competitive subgrantee selection process for eligible non-deployment activities. Responses must include the objective means, or process by which objective means will be developed, for selecting subgrantees for eligible non-deployment activities. If the Eligible Entity does not intend to subgrant for non-deployment activities, indicate such.

WVDED will develop objective means for evaluating applications, including scoring criteria, for each grant program and publish the application review and evaluation processes prior to accepting applications.

West Virginia's proposed non-deployment grant process includes:

- Finalization of the scoring rubrics listed below
- Announcement and Public Notice of grant opportunities: WVDED will leverage its internal marketing team and its Digital Equity and BEAD partners to promote non-deployment grant opportunities. As noted below, WVDED will allow for 30 days of public notice of the application period.
- Webinar or other engagement opportunities: WVDED may hold a webinar or host other opportunities for prospective applicants to engage with WVDED on topics such as eligibility, program activities, and reporting.
- Communication of scoring rubric: WVDED will ensure applicants understand the scoring rubric.
- Grant Review: WVDED will ensure reviewers have expertise needed to fairly and accurately evaluate applications. If reviewers differ in their assessments of an application, WVDED will use a fair process to assess those differences and determine an agreed upon score.
- Transparency and Public Input: The subgrantee selection process will be transparent, with clear communication throughout.

To safeguard against collusion, bias, conflicts of interest, and arbitrary decisions, WVDED and its partners will confirm all application reviewers are free of conflicts of interest and will not enter business or actions that result in conflicts of interest. WVDED will disqualify an application if applicants or any of their representatives attempt to inappropriately influence the grant process or collude in any way.

To enable participation by a wide variety of potential applicants, WVDED will provide at least 30 days public notice of the competitive application period for any non-deployment subgrants. WVDED will announce the application period via the Internet for All West Virginia and broadband.wv.gov websites and leverage continued coordination with community organizations and other stakeholders throughout the State.

Applications for non-deployment programs will undergo a competitive review process to verify an application's merit and alignment with program goals and federal requirements. Applications will be scored based upon a competitively neutral evaluation criteria that does not favor one applicant over another.

Program and Selection Process:

In line with the State Digital Equity Plan and allowable BEAD Non-Deployment Activities, WVDED intends to engage in three non-deployment initiatives: a digital literacy/digital navigator program, a device distribution program, and a workforce development program.

Digital Literacy and Digital Navigator Program:

As documented further in the West Virginia State Digital Equity Plan, public benefit organizations across West Virginia, including nonprofit and community benefit organizations, public libraries, and regional and local governments, have spent considerable time and resources developing and providing specific, culturally-sensitive digital literacy trainings, digital navigation services, and other similar community service offerings. To effectively build upon the hard-earned trust and relationships of these partners and community anchor institutions, WVDED intends to provide additional BEAD non-deployment funding to these organizations already involved in providing these digital navigation or similar services to all West Virginians.

WVDED will utilize a competitive process for eligible organizations that is structured for maximum local autonomy and flexibility. As with the Device Program (to follow), WVDED will conduct a competitive procurement process to solicit eligible state or regional organizations interested in receiving state contracts to oversee digital navigator services in a wide geographic area. These organizations may include but are not limited to: Regional Planning and Development Councils, the West Virginia Library Association, WVU Cooperative Extension, school districts, or other large organizations that support and oversee digital navigation services in a wide area. Regional entities may conduct their own digital navigator activities, but must additionally grant to smaller, local entities that offer further digital navigator services in their geographic coverage area.

WVDED will additionally conduct an RFP process for an entity to manage distribution and align processes across subgrantees, compile and distribute best-practices and training materials where applicable and facilitate semi-annual convenings of digital navigators.

Finally, WVDED will conduct a competitive grant process to provide non-deployment grants to interested organizations engaged in digital literacy and digital navigator activities across West Virginia. A preliminary rubric for digital literacy and digital navigator subgrantee selection is included in Table 14.

Table 14: Digital Literacy and Digital Navigator Subgrantee Selection Rubric

Maximum points	Category	Description
50	Prior Digital Literacy or Digital Navigator Program Experience	<p>Priority will be given to organizations with existing, cost-effective digital navigator, digital literacy, or other digital education programs that have a track record of demonstrated success.</p> <p>Points Schedule:</p> <ul style="list-style-type: none">• 50 points: Organization has carried out existing, cost-effective digital navigator, digital literacy, or other digital education programs that have a track record of demonstrated successes in West Virginia.

		<ul style="list-style-type: none"> • 40 points: Organization has carried out existing, cost-effective social services or education programs that have a track record of demonstrated success OR organization has a track record of conducting successful public benefit programs and has begun offering existing, cost-effective digital navigator, digital literacy, or other digital education programs less than one calendar year prior to the issuance of a final version of this document. • 30 points: Organization has previously carried out cost-effective digital navigator, digital literacy, or other digital education programs that have a track record of demonstrated successes less than 5 years prior to the issuance of a final version of this document OR organization has carried out existing, high-cost digital navigator, digital literacy, or other digital education programs that have a track record of demonstrated successes OR organization has a track record of meaningfully engaging community stakeholders and successfully incorporating community input in West Virginia and organization has a track record of conducting successful and relevant public benefit programs in West Virginia. • 20 points: Organization has previously carried out high-cost digital navigator, digital literacy, or other digital education programs that have a track record of demonstrated successes less than 5 years prior to the issuance of a final version of this document • 10 points: Organization has previously carried out high-cost social services or education programs that have a track record of demonstrated successes less than 5 years prior to the issuance of a final version of this document • 0 points: Organization does not submit record of past experiences.
20	Planned Staffing Capacity	<p>Has demonstrated capacity or has demonstrated ability to scale to meet capacity requirements, for digital literacy or digital navigation services in _____ planned _____ service _____ area.</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> • 20 points: Organization has demonstrated current capacity to offer digital literacy or digital navigation services in planned service area • 15 points: Organization has demonstrated ability to scale within 6 months of receiving grant funds to meet all staffing capacity requirements needed to offer digital literacy or digital navigation services in planned service area • 10 points: Organization has demonstrated ability to scale within 12 months of receiving grant funds to meet all staffing capacity requirements needed to offer digital literacy or digital navigation services in planned service area • 0 points: Organization has not demonstrated ability to scale.

20	Populations Covered	<p>Priority given to organizations with a demonstrated ability to serve covered populations, as defined in DE Plan, without sufficient nearby digital navigation assets.</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> • 20 points: Organization has demonstrated both an ability to serve covered populations and insufficient nearby digital navigation assets for these covered populations • 10 points: Organization has demonstrated an ability to serve covered populations but has not demonstrated insufficient nearby digital navigation assets • 0 points: Organization has not demonstrated an ability to serve covered populations.
10	Community Coordination	<p>Points Schedule:</p> <ul style="list-style-type: none"> • 10 points: Has both demonstrated community engagement and outreach plan that involves commitments from community stakeholders AND demonstrates meaningful coordination with additional social service providers • 5 points: Has demonstrated community engagement and outreach plan that involves commitments from community stakeholders OR demonstrates meaningful coordination with additional social service providers • 0 points: Demonstrates neither a community engagement and outreach plan that involves commitments from community stakeholders NOR demonstrates meaningful coordination with additional social service providers

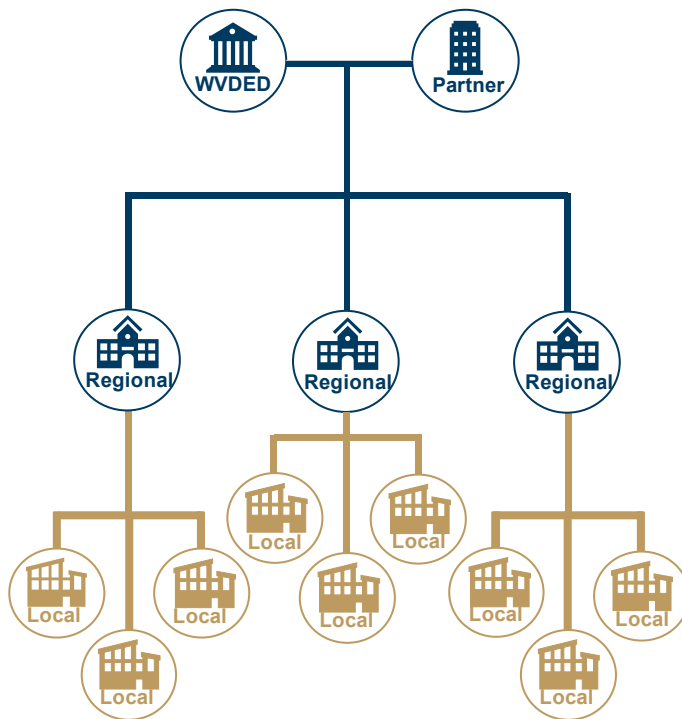
Organizations at all levels conducting digital navigator programs are encouraged to apply with activities that will maximize active community participation and high-quality, face-to-face interactions. Educational entities (e.g., K-12 schools, school districts, library associations, or higher education institutions) engaged in digital literacy education activities are encouraged to apply with activities that supplement or expand their digital literacy, privacy, and cybersecurity education offerings. Entities may apply for grants that include both digital literacy and digital navigator activities but will be evaluated on both their previous experience in digital literacy and their experience with digital navigator programs.

WVDED recognizes that the effectiveness of digital navigator activities varies by unique factors, such as culture and population density, and therefore will encourage local organizations to specify outreach plans and funding needs as part of their subgrantee application. Entities involved in on-the-ground digital navigator implementation should expect to partner with regional digital device distribution entities to identify residents with device needs and facilitate device distribution.

Digital literacy education funding requests may include but are not limited to: basic digital literacy and cybersecurity training for middle and high school students; computer science, coding, or cybersecurity programs in K-12, vocational, or higher learning institutions; remote learning support; or supplemental digital navigation training for individuals in higher-learning institutions engaged high-touch social work (or equivalent).

This potential digital literacy and digital navigator program subgrantee structure is demonstrated in Figure 22.

Figure 22: Digital Literacy & Digital Navigator Subgrantee Structure



Device Distribution Program:

WVDED intends to extend existing state networks of support to include device distribution, where each device beneficiary will have the full cost of their device covered by the program. WVDED is planning a program structure that utilizes the ongoing trust and relationships with partners and community anchor institutions, including regional organizations, libraries, and senior centers, to provide device access.

WVDED will conduct a competitive procurement process for eligible state or regional organizations interested in contracting with the State of West Virginia. Eligible organizations include but are not limited to: Regional Planning and Development Councils, the West Virginia Library Association, WVU Cooperative Extension, school districts, and organizations that support covered populations to distribute internet-enabled devices.

Regional entities will serve as conduits for logistics and warehousing of devices, returns and replacement of devices, licensing and acquisition of devices and software, and have the opportunity to serve as the first point of contact for technical troubleshooting of devices. Regional entities will serve as device distributors

to local Digital Navigator Program subgrantees and, at WVDED’s request, other qualifying local digital literacy programs. Regional entities should expect to engage with local digital navigator programs, local and regional governments, and other stakeholders prior to implementing the device distribution program to understand and document the region’s unique device needs. A preliminary rubric for device distribution regional contractor selection is included in Table 15.

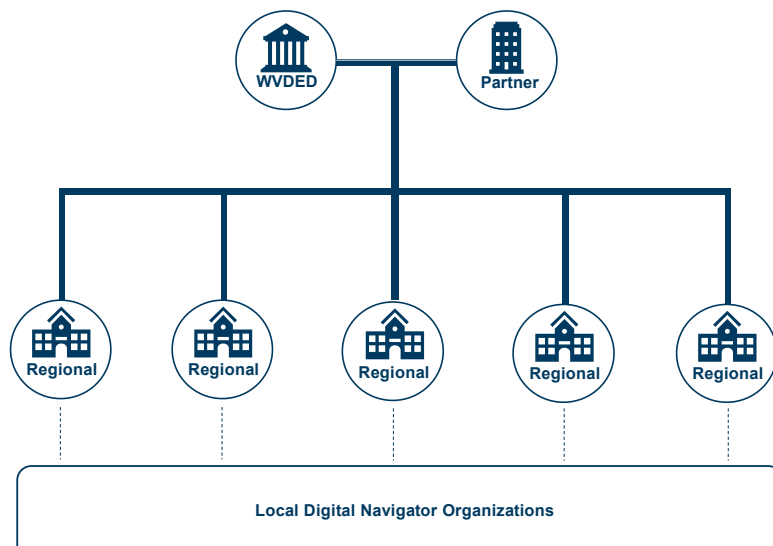
Table 15: Device Distribution Regional Contractor Selection Rubric

Maximum points	Category	Description
40	Fulfillment Capacity	<p>Priority given to organizations with a demonstrated capacity to process and fulfill digital device orders from local organizations.</p> <p>Points Schedule</p> <ul style="list-style-type: none"> • 40 points: Organization has demonstrated experience and capacity to process and expediently fulfill digital device orders from local organizations in West Virginia • 30 points: Organization has demonstrated experience and capacity to process and fulfill digital device orders from local organizations in West Virginia • 20 points: Organization has demonstrated experience and comprehensive plan to scale to meet all capacity and device fulfillment needs within 6 months of receiving grant funds • 10 points: Organization has demonstrated experience and comprehensive plan to scale to meet all capacity and device fulfillment needs within 12 months of receiving grant funds • 0 points: Organization has neither demonstrated experience nor presented a comprehensive plan.
30	Efficacy and Efficiency	<p>Demonstrates a cost-effective and expeditious plan to distribute devices within the region.</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> • 30 points: Organization demonstrates both a cost-effective and expeditious plan to distribute devices within region. • 15 points: Organization demonstrates cost-effective plan to begin distributing devices within region within 12 months of receiving grant funds • 0 points: Organization does not demonstrate cost-effective plan to distribute devices
20	Coordination	<p>Demonstrates a track record of prior coordination with small and medium sized nonprofit entities with federal and/or state compliance requirements in the region.</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> • 20 points: Organization demonstrates a track record of prior coordination with small and medium sized nonprofit entities with federal AND state compliance requirements in the region

		<ul style="list-style-type: none"> • 15 points: Organization demonstrates a track record of prior coordination with small and medium sized nonprofit entities with federal OR state compliance requirements in the region • 10 points: Organization demonstrates a track record of prior coordination with small and medium sized nonprofit entities in the region • 0 points: Organization does not demonstrate prior coordination.
10	Community Engagement	Points Schedule: <ul style="list-style-type: none"> • 10 points: Demonstrates strategy to evolve device procurement based on identified community needs and feedback

This potential device program structure is demonstrated in Figure 23.

Figure 23: Device Distribution Program Structure



Workforce Development Grant Program:

As described in Requirement 12, WVDED is committed to developing its broadband industry workforce through regularly convening and coordinating stakeholders and encouraging public private partnerships. WVDED will work across the talent pipeline to ensure that employers have the workers they need in a timely manner.

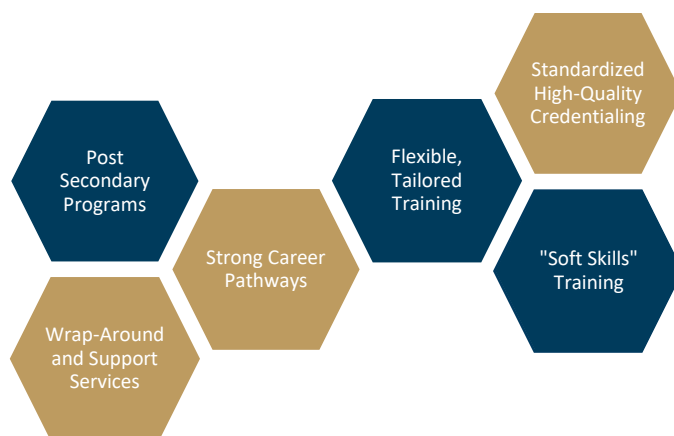
The goal of the workforce development grant program is to empower West Virginia institutions to build or expand training opportunities for West Virginians to enter the broadband industry.

Entities eligible to apply for workforce subgrants include:

- a) Higher education institutions in West Virginia;
- b) Career and Technical Education institutions and Career and Technical Education student organizations;
- c) Public-private partnerships;
- d) County Boards of Education;
- e) K-12 schools, and K-12 school districts;
- f) Workforce development organizations;
- g) Industry associations; and
- h) Employers.

Eligible workforce development activities include but are not limited to developing: certificate programs; postsecondary programs; wraparound support services; flexible, tailored training; soft skills training; and registered apprenticeship programs. Figure 24 demonstrates the network of eligible programs.

Figure 24: Eligible Programs



A preliminary rubric for workforce development subgrantee selection is included below:

Table 16: Workforce Development Subgrantee Selection Rubric

Maximum points	Category	Description
30	Credential of Value	<p>Result in a credential of value to the broadband industry</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> 30 points: Results in a transferrable credential of value to the broadband industry 0 points: Does not result in a transferrable credential of value
30	Joint Development	<p>Points Schedule:</p> <ul style="list-style-type: none"> 30 points: Developed in partnership between training providers and employers, and which includes ISPs participating in BEAD deployment grant programs. 20 points: Developed in partnership between training providers and employers 0 points: Not developed in partnership between training providers and employers
20	Efficiency & Efficacy of Program	<p>Are cost effective and can be completed in a reasonable time.</p> <p>Points Schedule</p> <ul style="list-style-type: none"> 20 points: Program is demonstrably cost effective and can be completed in a reasonable time.* 0 points: Program is not demonstrably cost effective. <p>*If applicant is applying to fund an existing program, graduation and job placement will be considered.</p>
20	Cost to Participants	<p>Points Schedule:</p> <ul style="list-style-type: none"> 20 points: Program offered at no cost to the participant AND includes paid work experience 10 points: Program offered at no cost to the participant 0 points: Program not offered at no cost to the participant
10	Wrap-Around Services	<p>Ensure participants have the supports they need to successfully complete the program.</p> <p>Points Schedule:</p> <ul style="list-style-type: none"> 10 points: Participants offered any wrap-around services needed to successfully complete the program 0 points: No wrap-around services offered

Workforce grant applicants will be required to satisfy all NTIA BEAD program subgrantee requirements listed in Requirement 9.4, Requirement 11 and in Box 8.8.2 in the Workforce Readiness section below,

Requirement 12. For more information about WVDED’s workforce development plans and future programs, please see Requirement 12.

2.5.2 Text Box: Describe the Eligible Entity’s plan for the following:

a. How the Eligible Entity will employ preferences in selecting the type of non-deployment initiatives it intends to support using BEAD Program funds;

WVDED anticipates that sufficient funds will remain following the completion of BEAD deployment requirements but is not yet able to determine that this is definitively the case.

The following projected funding schedule assumes that WVDED will indeed have sufficient funds and is conditional on the total amount of funds available. WVDED is prioritizing the remaining BEAD funds, up to \$50 million for workforce development efforts. Any funding in excess of \$50 million will be distributed to the other priorities, as reflected in Table 17.

Table 17: Contingent Non-Deployment Program Funding Schedules

If Available Non-Deployment Amounts Fall Between...	Funding Waterfall:
\$0 million - \$50 million	Provide funds for Workforce Development Program, up to \$50 million total
\$50 million - \$80 million	Provide funds for Digital Literacy and Digital Navigator Program, up to \$30 million total
\$80 million - \$90 million	<ol style="list-style-type: none"> 1. Provide funds for Digital Literacy and Digital Navigator Program, up to \$30 million total; then... 2. Provide funds for Digital Device Program, up to \$10 million
Exceed \$90 million	<ol style="list-style-type: none"> 1. Provide funds for Digital Literacy and Digital Navigator Program, up to \$30 million total; then... 2. Provide funds for Digital Device Program, up to \$10 million; then... 3. Apportion funds by ranking relative strength of Digital Literacy & Digital Navigator Program and Digital Device Program by rubric score, apportioning funds by no greater than a 3:1 literacy/navigator to device split and no less than a 1:1 literacy/navigator to device split.

b. How non-deployment initiatives will address the needs of residents within the jurisdiction;

Each BEAD non-deployment program outlined above aligns with a combination of Five-Year Action Plan and State Digital Equity Plan strategic goals and objectives:

- a) the Digital Literacy and Digital Navigator Program aligns with Objectives 2.2 and 3.1 of the State Digital Equity Plan and Goals 2.1, 2.2, 2.3, 2.4, 3.1.2, and 3.1.4 of the Five-Year Action Plan;
- b) the Digital Device Program aligns with Objectives 2.1 and 2.2 of the State Digital Equity Plan and Goal 2.4 of the Five-Year Action Plan; and
- c) the Workforce Development Program aligns with Goal 1.4 and 3.1.2 of the Five-Year Action Plan.

Additional details justifying these strategic goals and objectives across the State of West Virginia can be found in the West Virginia Digital Equity Plan and Five-Year Action Plan.

c. The ways in which engagement with localities and stakeholders will inform the selection of eligible non-deployment activities;

WVDED is committed to the development of locally driven strategies that acknowledge the link between broadband access and digital equity. WVDED has developed these early plans for digital equity and workforce development initiatives from ongoing coordination with state, regional, and local stakeholders throughout planning. For more information on members of WVDED's committees and a full list of local coordination activities, see Requirement 4. WVDED will continue to consult with stakeholders to inform the final selection of non-deployment activities and program designs.

d. How the Eligible Entity will determine whether other uses of the funds might be more effective in achieving the BEAD Program's equity, access, and deployment goals.

As stated above in Non-Deployment Subgrantee Selection (Requirement 9) and Eligible Entity Implementation Activities (Requirement 10), WVDED intends to fund two non-deployment programs and several Implementation Activities in addition to its Deployment Subgrantee Selection program. Please refer to these sections for further details on how this use of funds is anticipated to achieve stated BEAD Program goals.

2.5.3 Text Box: Describe the Eligible Entity's plan to ensure coverage to all unserved and underserved locations prior to allocating funding to non-deployment activities.

WVDED will verify the existence of deployment obligations for all unserved and underserved locations in West Virginia with BEAD funds, as well as verifying the existence of deployment obligations to provide gigabit service for community anchor institutions, prior to formally awarding non-deployment funding. Additional details about this process may be found in Requirement 8.

Table 18 below provides the total project and grant cost estimates to provide universal broadband service in West Virginia. Please refer to Section 5 of the Five-Year Action Plan for the methodology of WVDED's estimated cost for universal service.

Table 18: Estimated Cost of Universal Broadband in West Virginia

	Theoretical	Likely			Theoretical
	Lower bound	Lower bound	Average	Upper bound	Upper bound
Total project cost	\$866 million	\$939 million	\$1.11 billion	\$1.28 billion	\$1.42 billion
Grant amount	\$693 million	\$751 million	\$888 million	\$1.02 billion	\$1.14 billion

Source: WVDED analysis, BEAD Five-Year Action Plan

While some projects may be exempt from a matching requirement, in most cases WVDED will grant up to approximately 75% of the total project cost. WVDED estimates providing up to \$1.14 billion to cover the total cost of projects.

If West Virginia can achieve deployment costs closer to the likely or lower range estimates, more BEAD funding will be made available for non-deployment activities. While WVDED is not yet able to determine exact funding availability, of West Virginia's BEAD of \$1,210,800,969.85, WVDED estimates \$70 million to \$517 million will remain after deployment for the initiatives described above.

2.5.4 Text Box: Describe how the Eligible Entity will ensure prospective subgrantees meet the general qualifications outlined on pages 71 – 72 of the NOFO.

WVDED will ensure that prospective non-deployment subgrantees have the competence, managerial and financial capacity to meet the commitments of the subgrant and any requirements of their respective programs, as well as the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award. The following describes how WVDED will evaluate non-deployment subgrantee qualifications.

Compliance

WVDED will ensure that any prospective non-deployment subgrantee is capable of carrying out activities funded by the subgrant in a competent manner in compliance with all applicable Federal, State, and local laws.

Prospective subgrantees must certify that they comply with all occupational and legal requirements for their respective organization. To determine if a prospective subgrantee meets the necessary standards, WVDED will:

- Determine a minimum level of experience required for each program and
- Evaluate applicant materials to confirm previous compliance with all applicable laws.

Evidence WVDED may accept in making its determination includes but is not limited to:

- a) The organization's West Virginia Articles of Incorporation
- b) Description of past performance in a similar program
- c) Past compliance reporting
- d) Program plans and related analyses.

Financial and Managerial Capacity

WVDED will ensure that any prospective non-deployment subgrantee has the financial and managerial capacity to meet the commitments of the subgrantee under the subgrant, the requirements of the program and such other requirements as have been prescribed by the Assistant Secretary or WVDED.

Prospective subgrantees must certify that they:

- a) Are financially qualified to meet the obligations associated with a program
- b) Have available funds for all project costs that exceed the amount of the grant
- c) Can sustainably deliver the promised services over the course of the program
- d) Will comply with all program requirements.

To determine if a prospective subgrantee meets the necessary standards, WVDED will:

- a) Consider the organizational capacity of the applicant to operate the program
- b) Evaluate proposed budgets from applicants in relation to estimated program costs.

Evidence WVDED may accept in making its determination includes but is not limited to:

- a) Proposed budget
- b) Explanation of project's sustainability plan if/when grant funds are no longer available
- c) Audited financial statements from the prior fiscal year
- d) Resumes for all key management personnel
- e) Organizational charts detailing all parents, subsidiaries, and affiliates

- f) Narrative detailing experience and qualifications of key management and relevant organizational policies.

Technical and Operational Capacity:

WVDED will ensure that any prospective non-deployment subgrantee has the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award.

Prospective subgrantees must certify that they:

- a) Will ensure the use of an appropriately skilled workforce
- b) Can maintain the workforce throughout the program
- c) Have demonstrable experience operating similar programs.

To determine if a prospective subgrantee meets the necessary standards, WVDED will:

- a) Utilize case studies of digital equity and workforce development programs to develop minimum technical standards
- b) Set minimum credentials for employees or contractors to provide services for each program
- c) Consider subgrantee plans for partnerships with other entities throughout the State
- d) Evaluate detailed and measurable outcomes provided by the prospective subgrantee.

Evidence WVDED may accept in making its determination includes but is not limited to:

- a) Program design, personnel diagram, project costs, timeline, and milestones for implementation
- b) Description of the professional certifications and/or in-house training in place to deliver the promised services
- c) Narrative that describes relevant operational experience for any new programs.

WVDED will continue to develop plans for non-deployment subgrantee selection and determine final application materials following submission of this proposal.

6. Eligible Entity Implementation Activities (Requirement 10)

2.6.1 Text Box: Describe any initiatives the Eligible Entity proposes to implement as the recipient without making a subgrant, and why it proposes that approach.

As the eligible entity and grant recipient, WVDED is responsible for the development, oversight, and management of all deployment and non-deployment activities related to the BEAD and Digital Equity Programs. WVDED has opted to carry out some related activities without making a subgrant. This necessitates, among other activities, seeking input from and coordinating with stakeholders across the State. These stakeholders include state and local government agencies, educational institutions, the telecommunications industry, and community organizations. To carry out these activities, WVDED will require additional staffing capacity to coordinate BEAD and Digital Equity programs. Furthermore, WVDED has identified a need to provide capacity to three additional key groups of stakeholders to scale their efforts and meet the demands of planned projects.

The remainder of this response to 2.6.1 explains why WVDED proposed to implement the initiatives without making a subgrant.

BEAD Grant Administration Activities

West Virginia will utilize both its staff and contractor support to undertake administrative activities over the life of BEAD and Digital Equity programs.

State Challenge Process

West Virginia will utilize both its staff and contractor support to design and implement a challenge process to ensure locations needing broadband service are correctly identified and that broadband funding is appropriately allocated to ensure Internet for All without duplication of funds. For more information on the Challenge Process that will be implemented, see Initial Proposal Volume 1.

Subgrantee Selection

As described in Requirement 8, the State has developed a phased subgrantee selection process that will include pre-application, application, review, scoring, and project alignment and selection phases. WVDED will utilize both its staff and contractor support all phases of subgrantee selection.

Timely review and scoring of applications will be critical to ensuring implementation and deployment projects begin swiftly. West Virginia anticipates utilizing an electronic portal across each of its competitive subgrantee programs for both deployment and nondeployment activities. The review and scoring activities are detailed extensively in 2.4.2.

Webinars and Public Outreach

WVDED will utilize both its staff and contractor support to develop effective materials on the process and requirements for participation in competitive subgrantee programs as part of the BEAD and Digital Equity implementation plans.

Grants Management System

West Virginia will utilize both its staff and contractor support to design and implement a grant management system across each of its competitive subgrantee programs for both deployment and nondeployment activities. The system encompasses a defined process for eligibility review, technical review, financial review, and impact review, application scoring, and provisional awards.

The system includes the development and implementation of an application portal to both ensure equitable and uniform process for application review and streamline the evaluation and scoring process.

Post-Award Compliance, and Project Reporting

West Virginia will rely on both its staff and contractor support to design and carry out post-award compliance and project reporting efforts throughout the life of the project. This process ensures subgrantees comply with all relevant program guidelines and ensures West Virginia achieves the objectives established by the BEAD program. WVDED post-award process includes phased review: Desktop Review, Technical Review, Spending Analysis and Field Review. These reviews ensure that awarded subgrantees fulfill obligations established in grant agreements, and comply with local, state, and federal law and ensures timely implementation of awarded projects.

Permits and Licensing Coordination and Capacity

In line with goals established in the West Virginia Five-Year Action Plan, WVDED will establish a Permits and Licensing Coordination and Capacity Initiative (PLCC) to address identified deployment barriers and promote coordination between stakeholders. Chaired by WVDED, the PLCC's committee will include: State agencies, such as the West Virginia Division of Highways, West Virginia Public Service Commission, and West Virginia Division of Environmental Protection, State Historic Preservation Office; county governments in Target Areas; pole owners; and deployment subgrantees.

WVDED intends to utilize a limited portion of BEAD funds to provide state and local government agencies a temporary surge of broadband deployment permits and licensing staffing capacity for the length of the program to the extent permitted by state and federal law. WVDED will hire a staff point person and engage a qualified contractor for additional support. The qualified contractor will assist in troubleshooting permitting issues and may provide supplementary expertise and capacity to governmental permitting agencies under an memorandum of understanding with WVDED or may assist deployment subgrantees with expertise and capacity needed to complete permit applications required for awarded projects to be constructed in a timely manner.

WVDED is best positioned to implement the PLCC and its committee because the program requires centralized control and coordination in jurisdictions throughout the State. As a government entity, WVDED has both the existing relationships with local governments and the administrative experience to navigate barriers to infrastructure deployment.

Expedient permit approvals will support broadband deployment throughout the State. Additional staff or contracted capacity at relevant State agencies and in local governments will be critical to eliminating bottlenecks for upcoming projects and ensuring the government has the needed resources to expedite its response to the surge of permit requests. For permits and clearances outside of State jurisdiction, the WVDED will request assistance from NTIA to ensure timely review and approval by Federal agencies. For more information on WVDED's measures to reduce costs and barriers, see Requirement 14.

Oversight of Non-Deployment Programs

As detailed in Requirement 9, WVDED plans to undertake monitoring of subgrantee and partner oversight throughout the implementation of non-deployment programs. These programs include a digital literacy and navigator program, device distribution program, and workforce development program. In each of these cases, WVDED will procure a partner organization to assist in coordinating these programs because they rely on leveraging relationships with regional and local organizations across the State and specialized knowledge. However, WVDED will oversee all of these efforts, including the RFP processes and subgrantee selection process. Furthermore, WVDED will oversee the implementation of the programs, ensuring they meet their KPIs and targets.

Workforce Development

Throughout BEAD planning, WVDED has coordinated with State agencies, community and technical colleges, and internet service providers to develop a plan for equitable workforce development across the State. To meet the current moment and ensure West Virginia is meeting its ambitious goals, WVDED will dedicate additional staff to focus on workforce development as a core activity of the office and regularly convene workforce partners. For more information on WVDED's workforce partner coordination, see Requirement 12.

MBE/WBE Directory

WVDED may seek to utilize non-deployment funds to enable the SBDC to re-institute and revitalize this MBE/WBE directory in coordination with the Herbert Henderson Office of Minority Affairs.

7. Labor Standards and Protection (Requirement 11)

2.7.1 Text Box: Describe the specific information that prospective subgrantees will be required to provide in their applications and how the Eligible Entity will weigh that information in its competitive subgrantee selection processes. Information from prospective subgrantees must demonstrate the following and must include information about contractors and subcontractors:

- a. Prospective subgrantees' record of past compliance with federal labor and employment laws, which:
 - i. Must address information on these entities' compliance with federal labor and employment laws on broadband deployment projects in the last three years;
 - ii. Should include a certification from an Officer/Director-level employee (or equivalent) of the prospective subgrantee evidencing consistent past compliance with federal labor and employment laws by the subgrantee, as well as all contractors and subcontractors; and
 - iii. Should include written confirmation that the prospective subgrantee discloses any instances in which it or its contractors or subcontractors have been found to have violated laws such as the Occupational Safety and Health Act, the Fair Labor Standards Act, or any other applicable labor and employment laws for the preceding three years.
- b. Prospective subgrantees' plans for ensuring compliance with federal labor and employment laws, which must address the following:
 - i. How the prospective subgrantee will ensure compliance in its own labor and employment practices, as well as that of its contractors and subcontractors, including:
 1. Information on applicable wage scales and wage and overtime payment practices for each class of employees expected to be involved directly in the physical construction of the broadband network; and
 2. How the subgrantee will ensure the implementation of workplace safety committees that are authorized to raise health and safety concerns in connection with the delivery of deployment projects.

As part of its application process for subgrantees, WVDED will ask prospective subgrantees to describe how they will follow strong labor standards. WVDED will require the following information from subgrantees in the application process:

- The prospective subgrantees' record of past compliance with federal labor and employment laws, specifically regarding broadband development projects in the last three years. WVDED will collect data on the prospective subgrantee's historical use of contracting and subcontracting arrangements, including staffing plans, and at least one example of each contractor and subcontractor's past performance in the context of a similar project;
- A certification from an Officer/Director-level employee (or equivalent) of the prospective subgrantee evidencing consistent past compliance with federal labor and employment laws by the subgrantee, as well as all contractors and subcontractors; and

- Written confirmation that the prospective subgrantee discloses any instances in which it or its contractors have been found to have violated laws such as the Occupational Safety and Health Act, the Fair Labor Standards Act, or any other applicable labor and employment laws for the preceding three years.

Furthermore, in the application process, WVDED shall require the following information from prospective subgrantees:

- How the prospective subgrantee will ensure compliance in its own labor and employment practices, as well as that of its contractors and subcontractors, including:
 - Information on applicable wage scales and wage and overtime payment practices for each class of employees expected to be involved directly in the physical construction of the broadband network; and
 - How the subgrantee will ensure the implementation of workplace safety committees that are authorized to raise health and safety concerns in connection with the delivery of deployment projects.

Each of the above responses regarding a prospective subgrantee's record of past compliance will be factored into WVDED's review of each application to the program. WVDED shall give priority to fair labor practices, based on prospective subgrantees' records of and plans for compliance with federal labor and employment laws. WVDED will review compliance with fair labor practices as an item in its application review scoring criteria. Along with other primary criteria details such as project cost, and affordability of Proposed Projects, WVDED will review applications and award up to 25 points for a subgrantee's demonstrated track record of fair labor practices, and up to 25 points for applicants that do not have a prior track record, but who have a strong plan for compliance with federal labor and employment laws.

2.7.2 Text Box: Describe in detail whether the Eligible Entity will make mandatory for all subgrantees (including contractors and subcontractors) any of the following and, if required, how it will incorporate them into binding legal commitments in the subgrants it makes:

- Using a directly employed workforce, as opposed to a subcontracted workforce;
- Paying prevailing wages and benefits to workers, including compliance with Davis-Bacon and Service Contract Act requirements, where applicable, and collecting the required certified payrolls;
- Using project labor agreements (i.e., pre-hire collective bargaining agreements between unions and contractors that govern terms and conditions of employment for all workers on a construction project);
- Use of local hire provisions;
- Commitments to union neutrality;
- Use of labor peace agreements;
- Use of an appropriately skilled workforce (e.g., through Registered Apprenticeships or other joint labor-management training programs that serve all workers, particularly those underrepresented or historically excluded);
- Use of an appropriately credentialed workforce (i.e., satisfying requirements for appropriate and relevant pre-existing occupational training, certification, and licensure); and
- Taking steps to prevent the misclassification of workers.

As the State of West Virginia is a right-to-work state, WVDED does not plan on incorporating the full list of requirements detailed in the 2.7.2 Text Box question. Rather, it plans on mandating a modified subset of these requirements. WVDED shall make mandatory the following for all subgrantees and their contractors and subcontractors:

- a. Paying federal prevailing wages and benefits to workers, including compliance with Davis-Bacon and Service Contract Act requirements, where applicable (i.e., projects over \$5,000,000), and collecting the required certified payrolls;
- b. Commitments to union neutrality;
- c. Use of an appropriately skilled workforce;
- d. Use of an appropriately credentialed workforce (i.e., satisfying requirements for appropriate and relevant pre-existing occupational training, certification, and licensure); and
- e. Taking steps to prevent the misclassification of workers, in accordance with any applicable provisions of the West Virginia Employment Law Worker Classification Act, W. Va. Code § 21-5I-1, et seq. (setting forth standards for proper employment classification of independent contractors and employees).

NOTE: For new entrants/applicants/subgrantees without a record of labor and employment law compliance, WVDED shall, in accordance with the BEAD NOFO, allow such prospective subgrantees to make specific, forward-looking commitments to strong labor and employment standards and protections.³⁹

Additionally, these labor standards and protections will be detailed in the subgrantee's grant agreement to be executed with WVDED. As a precondition to receiving grant funding for eligible projects, WVDED shall include provisions to which all prospective subgrantees must agree. Such provisions will contain language that subgrantees must prioritize in their procurements employers with high labor standards, no recent violations of federal or state labor and employment laws, and that offer wages at or above the federal prevailing rate on projects exceeding \$5,000,000. In addition, WVDED will include language in its subgrantee agreements that will require compliance with Davis-Bacon and Service Contract Act Requirements, where applicable.

Further, WVDED shall make available to all subgrantees a subrecipient compliance and reporting guide, within which the various requirements related to labor standards and protections from the BEAD NOFO will be captured and communicated to subgrantees. This subgrantee reporting and compliance guide will be published at WVDED's website related to the implementation of its BEAD programs.

Following the award to subgrantees, WVDED will also distribute information in a Post-Award Guidance document which will further detail the requirements for ensuring subgrantee compliance with the required labor standards as outlined in the NTIA's BEAD NOFO.

Compliance with labor standards and protections will be a significant focus of WVDED's process for regular subgrantee reporting requirements. As part of WVDED's monthly reporting requirements for subgrantees, all subgrantees are required to complete a Labor Reporting Form. Depending on whether the Davis-Bacon reporting threshold of \$5 million is reached, WVDED prescribes different levels of labor reporting and what is required of subgrantees. For example, if the \$5 million threshold is not exceeded, there are a few questions to answer and then a certification/signature. This is only a one-time submission requirement for

³⁹ See BEAD NOFO, p. 43.

projects that do not cross the threshold for reporting. Should the \$5 million threshold be exceeded, WVDED requires subgrantees to complete and submit the full labor reporting form with every grant disbursement request or quarterly report, whichever one is submitted first. Thereafter, WVDED requires subgrantees to submit the Labor Reporting Form on a monthly basis for projects that exceed the \$5 million reporting threshold (based on expected total cost).

A template for the labor reporting form shall be provided to subgrantees by WVDED in its application and reporting portal, where subgrantees are to upload their quarterly reporting workbooks containing relevant reporting information.

WVDED shall communicate in its guidance materials to subgrantees the encouragement from NTIA/Commerce to subgrantees that capital projects incorporate strong labor standards. WVDED's Guidance, in accordance with the BEAD NOFO, will emphasize that if a subgrantee does not pay at or above the federal prevailing wage on projects exceeding \$5,000,000, the wages paid to staff must be reported.⁴⁰

Notwithstanding the above, in terms of reporting requirements, WVDED in its post-award guidance will provide information for subgrantees for projects over \$5 million (based on expected total cost), subgrantees may provide a certification that, for the relevant project, all laborers and mechanics employed by contractors and subcontractors in the performance of such project are paid wages at rates not less than those prevailing, as determined by the U.S. Secretary of Labor in accordance with subchapter IV of chapter 31 of title 40, United States Code (commonly known as the "Davis-Bacon Act"), for the corresponding classes of laborers and mechanics employed on projects of a character similar to the contract work in the civil subdivision of the State in which the work is to be performed.

If such certification is not provided, a subgrantee must provide a Project Employment and Local Impact report detailing:

- The number of employees of contractors and sub-contractors working on the project;
- the number of employees on the project hired directly and hired through a third party;
- the wages and benefits of workers on the project by classification;
- and whether those wages are at rates less than those prevailing. (As determined by US Secretary of Labor in accordance with subchapter IV of chapter 31 of Title 40, United States Code ("Davis-Bacon Act").

WVDED will emphasize to subgrantees that they must maintain sufficient records to substantiate the above information upon request.

In addition, for projects meeting the \$5 million expected cost threshold, subgrantees may provide a certification that a project includes either a project labor agreement, meaning a pre-hire collective bargaining agreement consistent with section 8(f) of the National Labor Relations Act (29 U.S.C. 158(f)). If the subgrantee does not provide such a certification, the subgrantee must provide a project workforce continuity plan, detailing:

1. how the recipient will ensure the project has ready access to a sufficient supply of appropriately skilled and unskilled labor to ensure high-quality construction throughout the life of the project, including a description of any required professional certifications and/or in-house training;

⁴⁰ BEAD NOFO Section VII.E.2.

2. how the recipient will minimize risks of labor disputes and disruptions that would jeopardize timeliness and cost-effectiveness of the project; how the recipient will provide a safe and healthy workplace that avoids delays and costs associated with workplace illnesses, injuries, and fatalities, including descriptions of safety training, certification, and/or licensure requirements for all relevant workers (e.g., OSHA 10, OSHA 30);
3. whether workers on the project will receive wages and benefits that will secure an appropriately skilled workforce in the context of the local or regional labor market;
4. and whether or not the project has completed a project labor agreement.

Once the above detailed information is provided, subgrantees must proceed to review, complete, and sign the certification box and signature section at the conclusion of the Labor Reporting tab certifying and acknowledging the accuracy and completeness of the information provided.

8. Workforce Readiness (Requirement 12)

Introduction and Workforce Background

For West Virginia to achieve Internet for All, it will need a well-trained, highly-skilled workforce of broadband industry professionals spanning many different disciplines.

The Fiber Broadband Association predicts that the fiber industry will need to fill more than 205,000 new jobs to maintain and operate the networks being built over the next five years.⁴¹ More immediately, the nation faces a serious shortage of trained fiber-optic installers and front-line electrical workers, as well as network and cybersecurity professionals.⁴² This shortage stems from a combination of a tight labor market across the county, skills gap, and dearth of standardized training and credentialing for fiber optic technicians.⁴³ Policymakers and employers nationwide continue to contend with these challenges. According to an FCC broadband workforce working group, employers report that absorbing the costs of both in-house and external training while bearing the risk of losing newly trained employees to competition presents one of their biggest challenges.⁴⁴

Although there are successful programs for workforce development in the telecommunications industry, there are not enough to meet workforce demands. The FCC Working Group on Broadband Workforce describes an “identity crisis” in the broadband industry, meaning that many potential workers and students do not know what broadband career paths are, or how to enter the industry. More consistency in job titles and the associated skills and clearer goals for workers to achieve are needed. Much of the broadband industry agrees—a lack of standardized and nationwide training programs negatively impacts potential workers’ awareness of industry career paths.⁴⁵

West Virginia has a strong workforce development system that can be leveraged to strengthen the broadband workforce. For example, *West Virginia’s Learn and Earn Program* helps workers gain access to associate degrees at the state’s community and technical colleges and pays them for the training they complete in an associated part-time job. During Fiscal Year 2022, 270 students participated in Learn and Earn with 81 businesses. The program provides significant financial benefits to businesses while helping connect skilled West Virginian workers with quality employment opportunities. In line with existing, successful efforts, WVDED will invest BEAD funds to meet employers’ needs and prepare West Virginians to successfully enter the telecommunications field.

⁴¹ Fiber Broadband Association (FBA)

⁴² Telecommunications Interagency Working Group Report January 2023

⁴³ *ibid* FBA

⁴⁴ FCC’s Broadband Infrastructure Deployment Job Skills and Training Opportunities Working Group report, 2020. Accessed at: <https://bit.ly/FCCWorkingGroup>

⁴⁵ *ibid* FCC working group

WVDED engaged in a collaborative process to develop its workforce development plans. This process included: forming a workforce planning team, creating a Broadband Workforce Council, and understanding the workforce landscape.

Sections 8.1-8.4 describe the other specific WVDED is taking to ensure a highly skilled workforce, including sector-based partnerships, equitable on ramps, engagement, job quality, and diversity of workers.

Workforce Planning Teams & Broadband Workforce Council

WVDED has prioritized the development of the State’s broadband industry workforce by forming a Workforce Planning Team consisting of WVDED staff members and contracted partners. The Workforce Planning Team members overlap with the WVDED Core Planning Team that focuses on both the BEAD and Digital Equity grant programs. The Workforce Planning Team supports and facilitates WVDED’s Broadband Workforce Council (Workforce Council). The Council has met monthly since January 2023. Meetings are structured to inform the Council of the scope of the BEAD and Digital Equity initiatives; discuss the landscape of the existing workforce and projected needs in the future; and make recommendations for the Initial and Final Proposals.

As the Workforce Council progresses from initial concepts to implementation, work will be coordinated with the West Virginia Broadband Enhancement Council. This alignment will enable the WVDED to coordinate workforce development activities with the Broadband Council, capitalizing on the Broadband Council’s existing framework and resources. The following boxes list the organizations represented on the Broadband Enhancement Council and Workforce Development Council.

Members of the Broadband Enhancement Council

- West Virginia Department of Economic Development
- West Virginia Higher Education Policy Commission
- West Virginia Senate, Republican and Democratic Parties
- West Virginia House of Delegates, Republican and Democratic Parties
- West Virginia Office of Technology
- West Virginia Department of Education
- Rural Business Users
- Rural Residential Users
- Urban Business Users
- Urban Residential Users
- Users of a Large Amount of Broadband Service

Members of the Workforce Development Council

- Appalachian Regional Commission
- Blue Ridge Community and Technical College
- Chancellor of the Community and Technical College System
- CityNet
- Communications Workers of America
- Community and Technical College Systems of West Virginia
- Eastern West Virginia Community & Technical College
- Generation West Virginia
- Micrologic, Inc.
- National Electric Contractors Association (West Virginia/Ohio Valley Chapter)
- New River Community and Technical College
- Pierpont Community & Technical College Center for Workforce Education
- Randolph County Development Authority
- Southern West Virginia Community and Technical College
- State of West Virginia Governor's Office
- Three Sixty Strategies, LLC
- U.S. Department of Labor
- West Virginia Department of Commerce
- West Virginia University at Parkersburg
- West Virginia Broadband Enhancement Council
- West Virginia Department of Economic Development
- West Virginia Department of Education - Career Technical Education
- West Virginia Department of Veterans Assistance
- West Virginia Herbert Henderson Office of Minority Affairs
- West Virginia Higher Education Policy Commission
- West Virginia Northern Community College
- West Virginia University
- Workforce Development Board of Kanawha County
- WorkForce West Virginia
- WVCTA - The Internet and Television Association

Understanding the Workforce Landscape

To better understand the workforce landscape, the Core Planning Team researched and compiled demographic and labor force data. The State's [Five-Year Action Plan](#) provides data on West Virginia's:

- a) Population change per year
- b) Age and working age characteristics
- c) Civilian labor force
- d) Workforce participation rates
- e) Unemployment
- f) Percentage of hires to job openings
- g) Annual mean wage by select occupations
- h) College-going rates
- i) College completion rates
- j) High-demand occupations
- k) Broadband industry jobs.

The datasets described above show that a shortage of trained, highly skilled workers in West Virginia presents challenges in maintaining a sufficient broadband workforce needed to meet projected infrastructure development and maintenance demands that will result from BEAD projects. Population

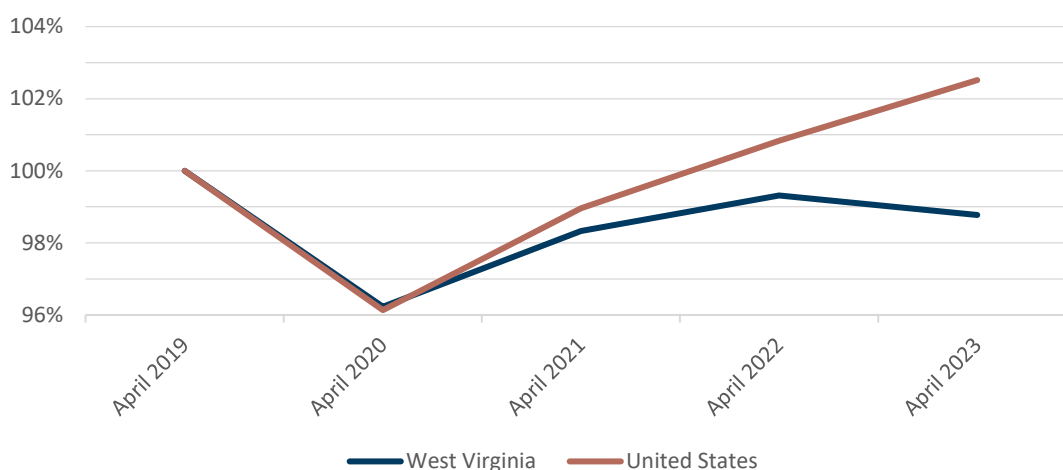
stagnation and aging, further impacted by lower workforce participation rates, have reduced the overall pool from which West Virginia can draw workers. Wage gaps may suggest a limit to the State’s ability to attract workers from other states, although these gaps are less prevalent for the fields of “Construction and Extraction” and “Installation, Maintenance and Repair.”

The State of West Virginia will strive to increase labor force participation rates by attracting West Virginians to high-demand occupations and broadband industry jobs.

West Virginia’s Civilian Labor Force

West Virginia’s “civilian labor force” provides a look at the pool of potential workers and employees.⁴⁶ The figure below displays the size of the civilian labor force as a percentage of the size in April 2019. As can be seen, both West Virginia and the United States’ civilian labor force declined by roughly 4% from April 2019 to April 2020, coinciding with the beginning of the COVID-19 pandemic. As the nation began to recover from the COVID-19 pandemic, West Virginia recovered at a slower rate. As of April 2023, overall civilian labor force participation in the United States exceeds pre-pandemic levels by approximately 3%, while West Virginia has begun to trend lower relative to April 2019.

Figure 25: Civilian Labor Force as a Percentage of 2019 Size for West Virginia and the United States



Investments in the State’s broadband workforce may help improve labor force participation rates. Given that these jobs offer competitive wages and, in some cases, do not require more than a high school diploma (or GED) and on-the-job training, they are accessible to a diversity of West Virginians.

Table 19 shows West Virginia’s in-demand occupations and education and training requirements.

⁴⁶ For the purposes of this report, the civilian workforce is defined as all working-age persons in the civilian noninstitutional population classified as either employed or unemployed seeking employment.

Table 19: West Virginia Demand Occupations, 2016-2026

SOC	Description	Demand	Education	Training
49-2022	Telecommunications Equipment Installers and Repairers Except Line Installers	Moderate	Post-secondary	Moderate OJT
49-9052	Telecommunications Line Installers and Repairers	Moderate	HS or GED	Long-term OJT
47-2061	Construction Laborers	High	< HS	Short-term OJT
49-9051	Electrical Power-Line Installers and Repairers	Moderate	HS or GED	Long-term OJT
15-1256	Software Developers and Software Quality Assurance Analysts and Testers	-	-	-
49-1011	First-Line Supervisors of Mechanics Installers and Repairers	High	HS or GED	N/A
17-2072	Electronics Engineers Except Computer	Limited	Bachelor's	N/A
15-1231	Computer Network Support Specialists	-	-	-
47-2073	Operating Engineers and Other Construction Equipment Operators	High	HS or GED	Moderate OJT
47-1011	First-Line Supervisors of Construction Trades and Extraction Workers	High	HS or GED	N/A
15-1241	Computer Network Architects	-	-	-
15-1244	Network and Computer Systems Administrators	-	-	-
15-1232	Computer User Support Specialists	-	-	-
47-2111	Electricians	High	HS or GED	Apprenticeship

Source: Escobari, Gandhi, Strauss, How Federal Infrastructure Investment Can Put America to Work, March 2021.

Source: Kent Sowards, Marshall University, March 2023 presentation to the Workforce Development Council

Broadband industry jobs in West Virginia:

- Make up approximately 5% of total employment in West Virginia (31,000 jobs)
- Account for roughly 6% of total payroll (\$1.7 billion)
- Pay, on average, 22% more than the State average (\$56,679 vs. \$46,489)
- Have a projected growth of at least 7% over the next decade
- Have high variability among regions both in employment and wages⁴⁷

West Virginia DED's Five-Year Action Plan includes the information above as well as an assessment detailing workforce needs across infrastructure programs, barriers to work and training for groups historically underrepresented in the telecommunications workforce, and a workforce asset inventory. The asset inventory includes detailed information on training providers, community and technical colleges with related programs, industry recognized credentials, manufacturers and other resources.

To address these needs and barriers, West Virginia will require concerted and coordinated preparation to address infrastructure project demands. For successful implementation, industry best practices,

⁴⁷ Sowards, Kent. Marshall University. Presentation to the WVDED Workforce Council on March 28, 2023.

education, and training systems already in place across West Virginia must be leveraged to their utmost potential.

West Virginia is known for its loyal workforce. West Virginia's lower cost of living, high rate of home ownership, and plentiful opportunities for outdoor recreation, make the State an attractive location for growing economic sectors, including advanced manufacturing, automotive, technology, and aviation.

Figure 26: Distance from West Virginia

The Mountain State is within a one-day drive of 50% of the U.S. population and a third of the Canadian market. West Virginia's location gives businesses strategic access to major metropolitan centers without the high costs and inconveniences. Washington, D.C., New York City, Baltimore, Pittsburgh, Charlotte, Raleigh, Columbus, Chicago, Lexington and Atlanta are just a short distance away. Transportation corridors include:

- More than 1,900 route miles of railways.
- Six major interstates
- Nearly 420 miles of navigable waterways. Five navigable rivers connect to international shipping ports.
- Eight commercial air service and 25 general aviation airports.



Like many rural states, West Virginia faces challenges—such as a lack of public transportation options in rural areas and reduced population in certain regions due to the decline of major industries.

In keeping with its economic development strategy, West Virginia must be intentional in its efforts to train, attract, and retain a sufficient workforce. The opportunities presented by the BEAD program increase the demand for skilled labor. This demand is intensified by other large-scale Federal and State infrastructure investments.

A concerted effort to prepare for infrastructure project demands is needed, but these challenges should be viewed as opportunities rather than obstacles. For successful implementation of the BEAD program, industry best practices, education, and training systems already in place across West Virginia must be leveraged to their utmost potential.

The following sections describes how WVDED and its subgrantees will advance equitable workforce development and job quality objectives to develop a skilled, diverse workforce. Each of the following four descriptions (a-d) respond to NTIA's BEAD Notice of Funding Opportunity (NOFO).

8.1 Highly Skilled Workforce

2.8.1 Text Box: Describe how the Eligible Entity and their subgrantees will advance equitable workforce development and job quality objectives to develop a skilled, diverse workforce. At a minimum, this response should clearly provide each of the following, as outlined on page 59 of the BEAD NOFO:

- a. description of how the Eligible Entity will ensure that subgrantees support the development and use of a highly skilled workforce capable of carrying out work in a manner that is safe and effective.**

As the lead economic development agency for the State of West Virginia, WVDED prioritizes the creation of job opportunities for West Virginians. Already, the coordination efforts of the Broadband Workforce Council are laying the groundwork for ensuring that West Virginians get the training they need—both to develop their skills and to be safe on the job.

WVDED will ensure that its subgrantees support the development and use of a highly skilled workforce capable of carrying out work in a manner that is safe and effective by ensuring employers follow State and Federal law. This will be achieved through coordination with the West Virginia Division of Labor and NTIA's Federal Program officer.

Ensuring worker protections for the broadband workforce in West Virginia is vital to maintaining a safe, fair, and productive work environment. WVDED interviewed broadband employers in West Virginia during the development of the State's Five-Year Action Plan. During the interviews, employers recognized their workers are put in dangerous situations (e.g., working in an exposed right of way, climbing poles, and entering peoples' homes) and reported prioritizing safety education and ensuring that new employees also receive training for specific projects.

By implementing and enforcing appropriate labor standards and policies, WVDED will support the well-being of West Virginia's workforce, increase job satisfaction, and contribute to the successful implementation of broadband infrastructure throughout West Virginia.

To ensure protections for the workforce in West Virginia, WVDED will:

1. Consult with industry leaders and stakeholders and implement best practices in worker safety, benefits and pay, and workplace satisfaction;
2. Engage employers on safety issues at WVDED's Broadband Workforce Summits; and
3. Ensure compliance with state and federal provisions set forth in Requirement 11 above.

West Virginia's Division of Labor will be a key partner in ensuring that the State's highly skilled workforce that is capable of carrying out work in a manner that is safe and effective.

8.2 Sector Based Partnerships

2.8.1 Text Box (cont.): b. A description of how the Eligible Entity will develop and promote sector-based partnerships among employers, education and training providers, the public workforce system, unions and worker organizations, and community-based organizations that provide relevant training

and wrap-around services to support workers to access and complete training (e.g., child care, transportation, mentorship), to attract, train, retain, or transition to meet local workforce needs and increase high-quality job opportunities.

The challenge of coordination and partnership in the workforce development system is not unique to West Virginia or to the broadband sector at large. WVDED assembled a Broadband Workforce Council to serve as a sector-based partnership. Together, WVDED and the Council took intentional steps to engage a range of partners in building the foundation for collaborative, sector-based partnerships. These steps included:

- a) Engaging internet service provider employers through focused interviews
- b) Surveying a range of workforce partners to better understand West Virginia's education and training assets
- c) Focused conversations with state agency leaders
- d) Leveraging higher education partners
- e) Hosting a broadband summit
- f) Connecting with other industry partners.

Engaging Internet Service Provider Employers

The Workforce Planning Team conducted 19 structured interviews with Internet Service Providers in West Virginia to establish a baseline of the current workforce and projected needs through the perspective of West Virginia firms. Employers shared concerns regarding recruitment, training, credentialing, and relationships with the West Virginia workforce development system. Employers indicated they tend to operate independently with little or no relationship with existing education and training providers or state level workforce services.

These interviews not only provided critical information that informed the recommendations described in the Five-Year Action Plan but also opened important dialogue and grew relationships between WVDED and Internet Service Providers.⁴⁸ WVDED's continued engagement with employers and partners will ensure that the educational opportunities, services, available funds, programs and other workforce development opportunities are known and leveraged by employers.

Survey

WVDED conducted a survey of organizational partners, state and local government, community-based organizations, educational institutions and others to build its asset inventory. The survey included questions about workforce development and digital equity assets. Findings were also used in the State's Digital Equity and BEAD Plans.

⁴⁸ Interviews conducted in partnership by WVDED and Marshall University in Spring 2023.

Engagement with State Agencies

The Workforce Planning Team met with both state agencies to understand their perspectives on broadband workforce development and to learn more about existing education and workforce programs. The state agency interviews included representatives from:

- Department of Education
- Division of Labor
- Department of Veteran's Assistance
- Bureau of Senior Services
- Department of Transportation
- Department of Tourism
- Herbert Henderson Office of Minority Affairs
- Department of Environmental Protection
- Department of Homeland Security
- The Independent Living Council.⁴⁹

Both the Division of Labor and WorkForce West Virginia will be key partners in this work. As described in the section above, the Division of Labor will help in ensuring that West Virginia broadband industry workers will be capable of carrying out work in a manner that is safe and effective.

WorkForce West Virginia will partner in supporting equitable on ramps, increasing the diversity of workers and meeting the other requirements described in sections 8.3 and 8.4. WorkForce West Virginia is a State agency funded through the U.S. Department of Labor that oversees the state unemployment insurance program as well as a network of workforce development services designed to provide West Virginia's citizens and employers the opportunity to compete in today's global economy. WorkForce West Virginia is the Mountain State's center for workforce resources; including job opportunities, unemployment compensation, training, tax incentives and labor market information. All services are available at 13 comprehensive career centers located throughout the State.

WorkForce West Virginia maintains a series of websites containing resources for individuals seeking to engage in job searching and skills development. The "Path to Employment" contains suggestions and additional information generally falling into categories covering job skills, career interests/pathways, training and education, and job seeking.⁵⁰ The "EMPOWER WV Initiative" describes a program, recently expanded statewide, that connects individuals to employment and education through mentoring and individually-guided and innovative career pathways.⁵¹ WorkForce West Virginia also maintains an "Employer Resources" site consolidating resources on a variety of services for business looking to hire.⁵² These assets are summarized in Table 20.

⁴⁹ Interviews conducted in partnerships by WVDED and Startup West Virginia in the Spring of 2023.

⁵⁰ <https://workforcewv.org/individuals/jobs/>

⁵¹ <https://workforcewv.org/individuals/empower-wv-initiative/>

⁵² <https://workforcewv.org/employers/employment-resources/>

Table 20: Types of Assets Included on WorkForce West Virginia's Employer Resources Site

Category	Resources
Skills and Job Etiquette	
Technical and soft skills	Career One Stop sponsored by the U.S Department of Labor http://careeronestop.org/
	O*NET Online https://www.onetonline.org/
	College for West Virginia https://secure.cfwv.com/
Adult Education	WV Adult Ed SPOKES (Strategic Planning in Occupational Knowledge for Employment and Success) https://wvde.us/adult-education/
Career interest research	
Interest Surveys	My Next Move https://www.mynextmove.org/
Labor market information	WorkForce WV LMI http://lmi.workforcewv.org/default.html
Starting your own business	West Virginia Small Business Development Center (WVSBDC) https://wvsbdc.com/
Training and Education	
Educational requirements of career fields	WorkForce WV LMI http://lmi.workforcewv.org/default.html
	West Virginia Community and Technical College System https://wvctcs.org/
Apprenticeships	West Virginia Joint Apprenticeship Programs https://wvapprenticeships.com/
Assistance with Employment Challenges	West Virginia Division of Rehabilitative Services (DRS) http://wvdrs.org/
	Credentials Matter https://credentialsmatter.org/data-exploration/in-which-career-clusters-are-students-earning-credentials/none/
	Charleston Job Corps Center https://charleston.jobcorps.gov/
	Harpers Ferry Job Corps Civilian Conservation Center https://harpersferry.jobcorps.gov/
	Mid-Atlantic Career Consortium (MACC) http://macc.workforcewv.org/Employer/EmployerIdentificationDetail.asp
Federal Bonding Program (FBP)	https://forms.workforcewv.org/FederalBondRequestForm/

Employer resources	
	State Information Data Exchange (SIDES) https://workforcewv.org/sides/
	One Stop Business Portal https://business4.wv.gov/
	Military Incentive Program (MIP) Act of 1991 tel:1-800-252-5627

WVDED will partner with WorkForce West Virginia to ensure that workers receive the wrap-around services and other support they need to be successful throughout training and employment.

Additional partnerships will be explored to facilitate access to wrap-around services in childcare and transportation that will help ensure that West Virginia's broadband workforce has the necessary support system to facilitate access to training and employment opportunities along their career pathway. This includes working with:

- The Division of Early Care and Education at the West Virginia Department of Health and Human Resources (WVDHHR) to provide students, trainees, and existing workers with access to resources related to childcare provider locations, processes, and financial assistance. The Division maintains a listing of childcare providers by type and location (accessible at <https://dhhr.wv.gov/bfa/ece/pages/providersearch.aspx>) as well as a number of referral and programmatic resources focused around health, well-being, and educational supports. These include:
 - Supplemental Nutrition Assistance Program (SNAP)
 - Utility Assistance\Low Income Energy Assistance Program (LIEAP)
 - Temporary Assistance for Needy Families\WV Works
 - West Virginia Women, Infants and Children (WIC)
 - WV State Statewide Afterschool Network (WVSAN).
- The West Virginia Bureau of Social Services for maintaining participation, or entry into, the labor force for individuals needing assistance with the care of children, the elderly, and those requiring specialized care. This could be supported through programs such as Adult Residential Services program and via educational and training vouchers through the Transitional Living program.
- The West Virginia Family Resource Network, a 501(c)(3) non-profit corporation, and the 47 Family Resource Networks in West Virginia, to disseminate information concerning and assistance to accessing a variety of supportive services.
- West Virginia 211, another 501(c)(3) non-profit corporation with support from the United Way, to make use of their database that compiles health and human services available online, including their eligibility requirement and intake requirements. Data from the corresponding 2-1-1 Counts initiative (<https://wv.211counts.org/>) can help WVDED identify areas of the state that may additional outreach and assistance.
- The WV Public Transit Association, and the 18 public transit agencies serving 32 of West Virginia's 55 counties, providing services to citizens on fixed routes, deviated fixed routes, demand response and non-emergency medical transportation services.
- The West Virginia Department of Transportation (WVDOT) to leverage their Transportation Providers Directory (<https://transportation.wv.gov/publictransit/Pages/OnlineDirectory.aspx>)

that provides contact information and profiles of public transit systems, specialized transportation providers such as county aging programs, sheltered workshops, community mental health centers, etc., and taxi companies that operate in each county.

Small, Women- and Minority-Owned Businesses as an Employing Resource

In addition to partnering with entities like the West Virginia Small Business Development Center (SBDC) to help ensure the identification and utilization of minority and women business enterprises (discussed in Section 9 and covering Requirement 13), WVDED looks to leverage existing synergies to expand opportunities for these firms to provide additional employment opportunities for the West Virginia broadband workforce. This may come in the form of improving outreach to (and business coaching for) these firms as well as redevelopment of the State's MBE/WBE directory.

Engaging Higher Education Partners

West Virginia's higher education institutions will continue to play a large role in building West Virginia's broadband workforce. The State's 22 community colleges and 12 four-year public institutions governed by the West Virginia Higher Education Policy Commission will continue to be key partners in developing additional workforce programs that meet employers' needs.

Specifically, West Virginia will benefit from and partner closely with the State's nine existing telecommunications-related community college programs. It will also coordinate with its 19 career and technical education facilities, including its technical training programs which are located in comprehensive high schools. While they are not specifically designed with the broadband and 5G sectors in mind, they serve as a strong foundation from which to build upon:

1. The certification obtained through Bridge Valley Community and Technical College's Building Industry Consulting Service International BICSI Installer Program is recognized globally.
2. Five Community and Technical Centers offer Cyber Security programs providing an Associate's Degree in the Applied Science of Computer Information Technology, an emerging need in the broadband industry.
3. The Mountwest Community and Technical College Utility Construction program offers both a one-year certificate and a two-year associate degree.
4. New River Community and Technical College offers a 30-credit hour Electric Distribution Engineering Technology certificate program.
5. Three West Virginia Department of Education Career and Technical Centers offer CISCO certification.
6. Four West Virginia Department of Education Career and Technical Centers offer commercial driving license programs.
7. West Virginia Department of Education Career and Technical Centers offer CompTIA ITF+ certifications.
8. West Virginia Department of Education Schools of Diversion and Transition offer Cable Management certifications in four facilities. Certifications include Telecommunications Technology, Copper-Based Systems; Network Cabling: Fiber-Optics-Based Systems; and Wireless Systems.

Continued engagement with West Virginia's higher education institutions will ensure that they remain critical partners in addressing the State's broadband industry workforce needs.

Broadband Summit

WVDED hosted a two-day broadband summit to bring together relevant stakeholders to discuss current issues, workforce data and WVDED's workforce development strategies. Summit participants included key workforce stakeholders, state leaders, Federal representatives, and Federal agencies including NTIA, the Federal Communications Commission, the Appalachian Regional Commission, and the U.S. Department of Agriculture. WVDED will continue to host broadband summits to convene key broadband stakeholders and coordinate workforce development efforts.

Industry Partners

WVDED maintains excellent working relationships with the telecommunications industry firms (many of whom are also current subgrantees under other state and federal programs). WVDED is also dedicated to furthering those relationships and developing more with new and entering industry partners. The Communication Workers of America (CWA) is supporting the planning process as well as providing data on job descriptions, wages, issues and forecasts. The Wireless Infrastructure Association (WIA) and Telecommunications Industry Registered Apprenticeship Program (TIRAP) are also providing information and guidance throughout the process. Additionally, WVDED and the Broadband Workforce Council will partner with other entities that provide training opportunities available to West Virginians, including:

- International Union of Operating Engineers
- Construction Industry Training & Certification Academy
- WV Carpenter Training Center
- Safety LMS
- Satellite Broadcasting & Communications Association
- Telecommunication Workforce Center
- In-building Wireless Solutions
- Telecommunications Education Center
- NATE National Association of Tower Erectors
- WIA Broadband Workforce resources
- Warriors 4 Wireless
- Regional Optical Communications
- Broadband Fiberforce WV
- C-Tech
- Telecom Tech School
- ATS Specialized Training
- Fiber Broadband Association
- Power & Communication Contractors

Together, these efforts have developed WVDED's understanding of West Virginia's broadband industry needs and informed its broadband strategies and actions described in this section.

Looking ahead

WVDED and the Broadband Workforce Council will continue to bring together local workforce investment boards, employers, secondary and post-secondary educators, organized labor, partner organizations, and others to:

1. Align on the goals and needs of West Virginia’s broadband workforce;
2. Collaborate on the development of relevant and timely training programs and pathways that lead to careers in the telecommunications field;
3. Endorse and assist with the expansion of existing training programs; and
4. Monitor and evaluate programs and approaches.

Some of the programmatic activities include:

- Designing curriculum that incorporates needed “key skills”
- Engaging all levels of the education and career pathways (K-12 to higher education)
- Offering training in areas beyond technicians and engineers.

Some of the communication activities include:

- Transparent and clear communication
- Continuous engagement as industry grows and changes
- Recurring broadband workforce summits.

Convenings will occur through multiple mechanisms, such as regional or statewide training events or conferences. WVDED will engage a partner organization to support this level of coordination of broadband industry stakeholders and organizations that support diverse populations, or offer social support services and wrap-around services for adult workers. This partner organization will coordinate work between Internet Service Providers, training partners, national entities (such as the US Department of Labor’s American Jobs Centers) and peer states and will be critical in the process of building West Virginia’s broadband industry workforce.

By establishing clear communication channels and regular meetings with partners across a variety of platforms, West Virginia will ensure that all stakeholders work toward the same goal and efficiently leverage available resources and programs.

8.3 Equitable On Ramps, Engagement and Job Quality

2.8.1 Text Box: c. A description of how the Eligible Entity will plan to create equitable on-ramps into broadband-related jobs, maintain job quality for new and incumbent workers engaged in the sector; and continually engage with labor organizations and community-based organizations to maintain worker voice throughout the planning and implementation process;

Throughout the BEAD planning process, West Virginia Department of Economic Development and its partners inventoried successful programs that create on-ramps into broadband-related jobs or could be expanded upon to do so, including the assets listed in section 8.2, Sector Based Partnerships. Existing Community College, Career Technical Education (CTE) and four-year degree programs and other programs may be strengthened and targeted to address emerging broadband career paths and high-demand skills.

Additionally, as West Virginia builds its broadband workforce, WVDED will ensure that its broadband deployment subgrantees follow all BEAD requirements and will:

- a) Support the development and use of a highly skilled workforce capable of carrying out work in a manner that is safe and effective;
- b) Develop and promote sector-based partnerships among employers, education and training providers, the public workforce system, unions and worker organizations, and community-based organizations that provide relevant training and wrap-around services to support workers to access and complete training (e.g., child care, transportation, mentorship), to attract, train, retain, or transition to meet local workforce needs and increase high-quality job opportunities;
- c) Plan to create equitable on-ramps into broadband-related jobs, maintain job quality for new and incumbent workers engaged in the sector; and continually engage with labor organizations and community-based organizations to maintain worker voice throughout the planning and implementation process; and
- d) Ensure that the job opportunities created by the BEAD Program and other broadband funding programs are available to a diverse pool of workers.

Both deployment and non-deployment subgrantees will be responsible for working with WVDED to meet the requirements listed above.

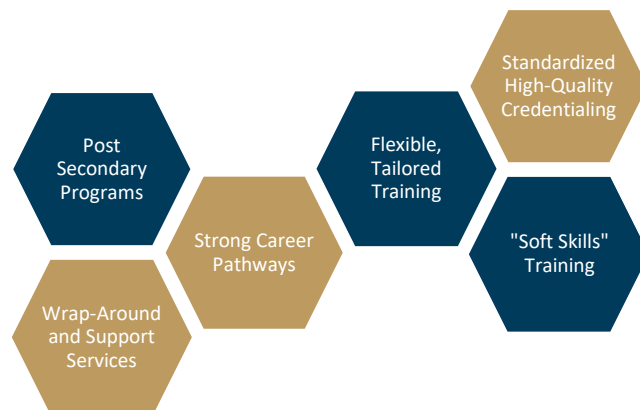
WVDED will also continually engage with labor organizations and community-based organization by ensuring their representation on the Workforce Development Council and inclusion in the annual Broadband Summit and/or other training events and meetings.

The programs listed below will provide on ramps for West Virginians and make progress towards meeting the requirements listed above in Textbox 2.8.1 (c):

Training programs

WVDED and the Broadband Workforce Council will support the coordination of industry and training programs to develop new academic curricula, programs, and work-based learning opportunities. WVDED will partner with subject matter experts and institutions of higher learning and consider best practices and relevant case studies. Programs may include the opportunities presented in Figure 27.

Figure 27: Training Programs



WVDED will encourage the development and use of proven curriculum models that training providers can stand up to begin scaling training efforts, including for industry-centered registered apprenticeships.

Apprenticeships

WVDED will leverage existing Registered Apprenticeship (RA) programs and braid together Federal and State funds to expand opportunities for RAs in the broadband sector. These funds may include grant funding from the Appalachian Regional Council (ARC) and the U.S. Department of Labor Employment and Training Administration apprenticeships grant, administered through WVDED's Apprenticeship in Motion office. In the spirit of the Digital Equity Act, WVDED will engage with historically disadvantaged communities to encourage accessing existing wrap-around services for participants in broadband-related training programs through partner organizations. Furthermore, any programs created will commit to engaging historically disadvantaged populations to provide them with opportunity, access and support to RA programs.

Throughout WVDED's workforce development efforts, the Broadband Workforce Council, State agencies and other partners will provide equitable on-ramps, maintain job quality for new and incumbent workers engaged in the sector; and continually engage with labor organizations and community-based organizations to maintain worker voice throughout the planning and implementation process.

8.4 Diversity of Workers

2.8.1 Text Box (cont.): d. A description of how the Eligible Entity will ensure that the job opportunities created by the BEAD Program and other broadband funding programs are available to a diverse pool of workers.

Recruiting women, people of color, and members of NTIA's Covered Populations is an important first step in creating a diverse workforce.⁵³ In addition to encouraging recruitment, WVDED will ensure that BEAD subgrantees provide an inclusive work environment and offer equal opportunities for skill development.

The successful implementation of each of these workforce-specific strategies requires targeted and ongoing outreach and engagement with citizens, community organizations, and industry groups. WVDED will work with the organizations listed in Requirement 13, Textbook 2.9.1 to recruit diverse workers. Through annual broadband summits, convenings, and formal advisory groups, WVDED will gain valuable insights and support the development of a skilled, inclusive workforce that will advance the goal of expanded broadband access across West Virginia.

Additionally, WVDED will partner with WorkForce West Virginia and other workforce entities to reach a diverse pool of workers and simplify the job-finding process in the broadband field. The WorkForce West Virginia database, for example, is a platform where individuals can view available job openings and be informed when jobs become available that meet an individual job seeker's career interest, salary range, education and experience. The database can be used online or through or local WorkForce offices that provide assistance from staff relating to job openings, training opportunities and services provided by partner agencies.⁵⁴ Additionally, the Governor's Guaranteed Work Force Program provides new or expanding companies training funds and technical assistance to support employee training strategies.⁵⁵ Alignment with this program will further support the broadband sector's reach to a diverse pool of workers.

Together with state agency partners like WorkforceWV, the Secretary of State's Office, the West Virginia Division of Labor, the Department of Revenue and the West Virginia Tax Division, the West Virginia Small Business Development Center, the West Virginia Department of Veterans Assistance, the West Virginia Division of Corrections and Rehabilitation, the Herbert Henderson Office of Minority Affairs, and education providers, WVDED will encourage broadband industry employers to participate in job fairs and other recruiting mechanisms. As required by the BEAD program, WVDED will give preference to subgrantees that prioritize hiring local workers and are committed to recruiting underrepresented populations.

Finally, throughout each phase of growing West Virginia's broadband workforce, WVDED and its partners will be mindful about increasing diversity and inclusivity throughout each stage of the BEAD grant program. WVDED will require its Workforce Development Grant subgrantees to report on the diversity of students and participants in their programs and will require its deployment subgrantees to report on the composition of its workforce.

⁵³ As defined in Section I.C. of the Digital Equity NOFO, Covered Populations are: Individuals who live in covered households; Aging individuals (60 and above); Incarcerated individuals, other than individuals who are incarcerated in a Federal correctional facility; Veterans; Individuals with disabilities; Individuals with a language barrier, including individuals who are English learners; and have low levels of literacy; Individuals who are members of a racial or ethnic minority group; Individuals who primarily reside in a rural area.

⁵⁴ <https://workforcewv.org/individuals/jobs/find-a-job/>

⁵⁵ West Virginia DED's Governor's Guaranteed Workforce Program: <https://westvirginia.gov/incentives-and-programs/workforce-programs/>

8.5 Required Subgrantee Information

2.8.2 Text Box: Describe the information that will be required of prospective subgrantees to demonstrate a plan for ensuring that the project workforce will be an appropriately skilled and credentialed workforce. These plans should include the following:

- a. The ways in which the prospective subgrantee will ensure the use of an appropriately skilled workforce, e.g., through Registered Apprenticeships or other joint labor-management training programs that serve all workers;
- b. The steps that will be taken to ensure that all members of the project workforce will have appropriate credentials, e.g., appropriate and relevant pre-existing occupational training, certification, and licensure;
- c. Whether the workforce is unionized;
- d. Whether the workforce will be directly employed or whether work will be performed by a subcontracted workforce; and
- e. The entities that the proposed subgrantee plans to contract and subcontract with in carrying out the proposed work.

If the project workforce or any subgrantee's, contractor's, or subcontractor's workforce is not unionized, the subgrantee must also provide with respect to the non-union workforce:

- a. The job titles and size of the workforce (FTE positions, including for contractors and subcontractors) required to carry out the proposed work over the course of the project and the entity that will employ each portion of the workforce;
- b. For each job title required to carry out the proposed work (including contractors and subcontractors), a description of:
 - i. Safety training, certification, and/or licensure requirements (e.g., OSHA 10, OSHA 30, confined space, traffic control, or other training as relevant depending on title and work), including whether there is a robust in-house training program with established requirements tied to certifications, titles; and
 - ii. Information on the professional certifications and/or in-house training in place to ensure that deployment is done at a high standard.

WVDED will require that prospective subgrantees demonstrate a plan for ensuring that the project workforce will be an appropriately skilled and credentialed workforce. Subgrantees must:

- a. Ensure the use of an appropriately skilled workforce, e.g., through Registered Apprenticeships or other joint labor-management training programs that serve all workers;
- b. Ensure that all members of the project workforce will have appropriate credentials, e.g., appropriate and relevant pre-existing occupational training, certification, and licensure;
- c. Discuss whether the workforce is unionized;
- d. Clarify if they will be directly employing workers or whether the work will be performed by a subcontracted workforce; and
- e. List the plans to contract and subcontract with in carrying out the proposed work.

If the project workforce or any subgrantee's, contractor's, or subcontractor's workforce is not unionized, the subgrantee must also provide with respect to the non-union workforce:

- a. The job titles and size of the workforce (FTE positions, including for contractors and subcontractors) required to carry out the proposed work over the course of the project and the entity that will employ each portion of the workforce;
- b. For each job title required to carry out the proposed work (including contractors and subcontractors), a description of:
 - i. Safety training, certification, and/or licensure requirements (e.g., OSHA 10, OSHA 30, confined space, traffic control, or other training as relevant depending on title and work), including whether there is a robust in-house training program with established requirements tied to certifications, titles; and
 - ii. Information on the professional certifications and/or in-house training in place to ensure that deployment is done at a high standard.

While the broadband industry faces unique workforce challenges, WVDED will rely on research-based principles and best practices to develop its skilled workforce and encourage subgrantees to consider the following recommendations from America Achieves' Broadband Equity, Access, and Deployment (BEAD) Program Playbook:

- Partner with employers to align training and career support
- Match participants to learning programs and job opportunities most likely to lead to success through effective, proactive career coaching
- Drive competitiveness and equity by expanding the pool to traditionally underserved people with transferable, certified skills and job referrals aligned with employer needs; and
- Provide intensive career counseling and wraparound support services that are integrated into the training program, including childcare, transportation support, emergency funds legal assistance, mental and behavioral health counseling, literacy training, and ongoing intensive coaching during training, job placement, and on-the-job employment.⁵⁶

WVDED will define skilled workforce requirements and guidance for its subgrantees that will shape the experiences of workers on-site who will build and service high-speed internet infrastructure.

8.6 Implementation and Capacity

The scope and scale of West Virginia's workforce needs necessitate increased capacity and continued stakeholder engagement. To meet these needs, WVDED plans to do the following:

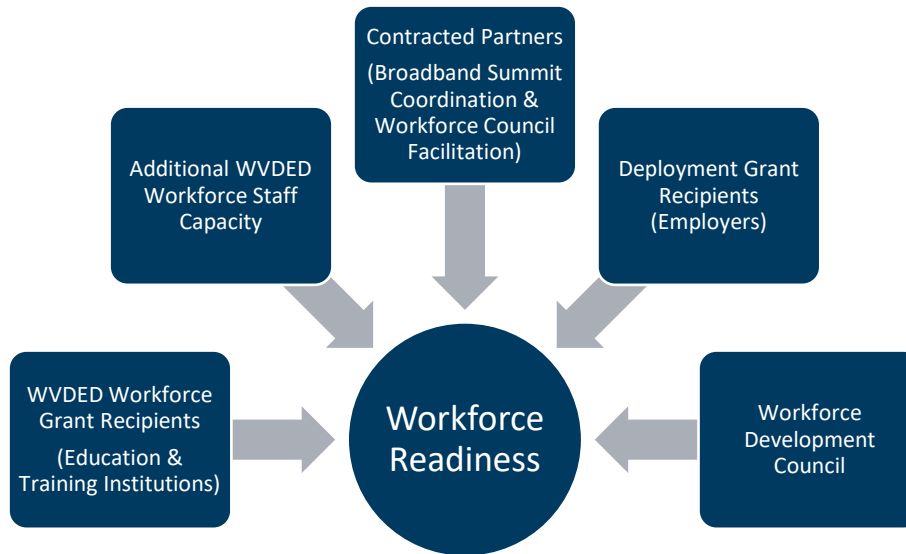
- Develop a Broadband Workforce Grant program as described in Section 5 (Non-Deployment Subgrantee Selection).
- Hire an additional staff person at WVDED who can support the administration and oversight of WVDED's Workforce Grant program. See Section 6 (Eligible Entity Implementation Activities section) for additional details.

⁵⁶ *Creating and Expanding a Diverse Broadband Workforce with Good Jobs and Career Pathways*, America Achieves, <https://americaachieves.org/wp-content/uploads/2022/06/America-Achieves-Broadband-Workforce-Report-June-2022.pdf>

- Engage a partner to coordinate the continuation of the Broadband Workforce Council. See Introduction section above for a description of the Workforce Council.
- Contract with a West Virginia partner to coordinate additional stakeholders and organize regular workforce summits, as described in Section 8.3 above.
- Prioritize workforce readiness for deployment grant applicants. See Section 4 (Deployment Subgrantee Selection section). More specifically, this is captured in the Community Impact criterion, which is discussed in full detail in Appendix A.1 Deployment Subgrantee Select Rubric.

Figure 28 illustrates these activities.

Figure 28: WVDED's Planned Efforts to Address West Virginia's Workforce Needs



9. Minority Business Enterprises/Women's Business Enterprises/Labor Surplus Area Firms Inclusion (Requirement 13)

2.9.1 Text Box: Describe the process, strategy, and the data tracking method(s) the Eligible Entity will implement to ensure that minority businesses, women-owned business enterprises (WBEs), and labor surplus area firms are recruited, used, and retained when possible.

WVDED Process

WVDED will have a comprehensive approach to recruitment, utilization, and retention of minority businesses, women's business enterprises, and labor surplus area firms as described in greater detail below.

WVDED will utilize the State's economic development and community organizations in an effort to create more awareness of opportunities related to the construction and maintenance of BEAD-funded broadband networks. Included in these types of organizations are the Small Business Administration, Minority Business Development Agency (MBDA), and the West Virginia Division of Highways (DOH). Included in the list of organizations WVDED will seek to leverage to this end are chambers of commerce, minority-serving institutions, additional local colleges and universities, local, state, and regional economic development organizations, and other industry and business-based organizations.

Some of the specific groups WVDED will seek to work with in creation of awareness and opportunity include the following:

- The West Virginia Women's Business Center
- The West Virginia Women's Commission
- The West Virginia Small Business Development Center
- The West Virginia Small Business Administration (WV SBA)
- United Way Women United
- The Herbert Henderson Office of Minority Affairs
- West Virginia Women Work

Strategy and Tracking Methods

WVDED certifies that it, as the Eligible Entity will take all necessary affirmative steps to ensure minority business, women's business enterprises, and labor surplus area firms are used when possible.

WVDED Strategy

2.9.2 Check Box: Certify that the Eligible Entity will take all necessary affirmative steps to ensure minority businesses, women’s business enterprises, and labor surplus area firms are used when possible, including the following outlined on pages 88 – 89 of the BEAD NOFO:

Solicitation Lists

a. Placing qualified small and minority businesses and women’s business enterprises on solicitation lists;

WVDED or one of its consulting partners will conduct virtual and in-person outreach events throughout the state in an effort to share project opportunities and provide information on contracting with WVDED. Qualified small and minority businesses and WBE’s in attendance at such events will have the opportunity to be added to the solicitation list.

Potential Source Solicitation

b. Assuring that small and minority businesses, and women’s business enterprises are solicited whenever they are potential sources;

In order to ensure that qualified WBE, MBE, and disadvantaged and labor surplus area-owned businesses are included on solicitation lists, WVDED may utilize the West Virginia Division of Highways (WVDOT) published list of MBE/WBE registered companies, and publish any open solicitations for projects related to the construction and maintenance of the expanded broadband network. WVDED will also collaborate with the WV Purchasing Division to utilize its developed lists as well. Additionally, WVDED will encourage qualified businesses to register with the West Virginia Secretary of State’s office to market their services and products.

Additionally, the West Virginia Small Business Development Center (SBDC) has previously maintained a minority and women-owned business directory, which was discontinued. However, WVDED may seek to utilize non-deployment funds to enable the SBDC to re-institute and revitalize this directory in coordination with the Herbert Henderson Office of Minority Affairs. Alternatively, WVDED may utilize any lists developed by the WV SBA as a source of certified MBEs and WBEs.

Division of Total Requirements to Permit Maximum MBE, WBE Participation

c. Dividing total requirements, when economically feasible, into smaller tasks or quantities to permit maximum participation by small and minority businesses, and women’s business enterprises;

Whenever it is economically feasible to do so, and in compliance with procurement regulations, WVDED may divide total program requirements into smaller tasks or quantities so as to facilitate maximum participation by MBE’s and WBE’s. It shall accomplish this by identifying particular competencies of such MBE’s and WBE’s and creating requirements which align with the services and products of the qualified MBE’s and WBE’s on the solicitation lists.

In an effort to facilitate this, WVDED will seek to minimize consolidation of procurements for goods and services into one contract when such consolidation is unnecessary and not justified, and require prime vendors to strengthen their subcontracting plans and goals for small and diverse business participation through provisions in WVDED’s contracts with prime vendors. In compliance with procurement

regulations, WVDED will regularly assess and require regular reporting by prime vendors so as to lessen the likelihood that contracts will be “bundled” or consolidated into a single contract without justification. In instances where it is necessary and justified that contracts be bundled/consolidated, WVDED will encourage groups of small business entities to compete for such contracts.

Establishing Delivery Schedules

d) and e): Establishing delivery schedules, where the requirement permits, which encourage participation by small and minority businesses, and women's business enterprises; Using the services and assistance, as appropriate, of such organizations as the Small Business Administration and the Minority Business Development Agency of the Department of Commerce;

WVDED shall accommodate, establish, and provide for delivery schedules that will encourage participation by small and minority businesses and women’s business enterprises.

As part of this, WVDED will ensure organizational compliance with the Federal Acquisition Regulations (FAR) subpart 11.4 (Regarding Delivery and Performance Schedules, sections 11.401-11.404), relating to contracting officer compliance.⁵⁷

WVDED shall utilize the services and assistance of the Small Business Administration (SBA) and the Minority Business Development Agency (MBDA) of the Department of Commerce.

f) Requiring subgrantees to take the affirmative steps listed above as it relates to subcontractors.

In communications with subgrantees, WVDED shall require that subgrantees must take the affirmative steps detailed above to MBE and WBE recruitment related to subcontractors of the subgrantee. WVDED shall accomplish this throughout the administration of BEAD subgrants, from the application process, subgrantee selection process, and award administration, monitoring, and compliance processes. WVDED will do this by incorporating these requirements in its application questions, informational webinars and award orientation materials and programs, and through the inclusion of provisions in its grant agreements requiring subgrantees to take each of the affirmative steps detailed above with regard to solicitation lists, active solicitation, division of program requirements, favorable delivery schedules, and the use of the SBA and MBDA.

In addition, WVDED will require subgrantees to have a plan of action that may include but is not limited to the following:

- Formal commitment letters from the subgrantee confirming the organization’s commitment to supplier diversity;
- An outreach plan for awareness and providing information and contacts related to supplier diversity, including information sessions (virtual or in-person), email campaigns, social media posts, or other activities;
- Deployment/enhancement of the subgrantees internal supplied diversity program demonstrating subgrantee commitment to supplier inclusion and equitable procurement practices.

⁵⁷ https://www.acquisition.gov/far/part-11#FAR_Subpart_11_4


WVDED Data Tracking Methods

WVDED will additionally incorporate provisions in its grant agreements with subgrantees whereby, in addition to agreeing to other nondiscrimination provisions in the grant agreement, it and its subgrantees will recruit, use, and retain, minority business enterprises (MBE), women-owned business enterprises, (WBE) and labor surplus area firms when possible. WVDED will also incorporate a “good faith efforts” approach in assessing subgrantee recruitment, use, and retainment of MBE’s, WBE’s, and labor surplus firm utilization whenever possible from the State’s list of certified MBE, WBE, and labor surplus firms. In employing this good faith efforts approach, WVDED will communicate this to subgrantees in the grant agreement and supplemental compliance information—including but not limited to subgrantee compliance guidance. WVDED will require that the subgrantee and its contractors demonstrate that each has made good faith efforts. Among the items and factors that WVDED will consider in its evaluation of good faith efforts are:

1. Copies of any solicitations of certified minority- and/or women-owned business enterprises listed in the West Virginia directory of certified businesses, and any responses thereto;
2. If responses to the contractor’s solicitations were received, but a certified minority- or woman-owned business enterprise was not selected, the specific reasons that such enterprise was not selected;
3. Copies of any advertisements for participation by certified minority- and women-owned business enterprises timely published in appropriate general circulation, trade and minority- or women-oriented publications, together with the listing(s) and date(s) of the publication of such advertisements;
4. Information describing the specific steps undertaken to reasonably structure the contract scope of work for the purpose of subcontracting with, or obtaining supplies from, certified minority- and women-owned business enterprises.

In addition to the information above, WVDED will also establish MBE and WBE utilizations plans consistent with its Initial and Final Proposal. The plan may include consideration of the following steps to determine whether the subgrantee/contractor/subcontractors have demonstrated good faith efforts:

1. whether the subgrantees/contractors submitted an alternative utilization plan consistent with the subcontract or supplier opportunities in the contract;
2. the number of certified minority- and women-owned business enterprises in the region listed in the directory of certified businesses that could, in the judgment of WVDED, perform work required;
3. The actions taken by the subgrantee/contractor to contact and assess the ability of certified minority- and women-owned business enterprises located outside of the region in which the grant agreement scope of work is to be performed to participate on the project;
4. whether the subgrantee/contractor provided relevant plans, specifications or terms and conditions to certified minority- and women-owned business enterprises sufficiently in advance to enable them to prepare an informed response to a contractor request for participation as a subcontractor or supplier;
5. the terms and conditions of any subcontract or provision of suppliers offered to certified minority- or women-owned business enterprises and a comparison of such terms and conditions

- 
- with those offered in the ordinary course of the subgrantee/contractor's business and to other subcontractors or suppliers of the subgrantee or contractor; and
6. any other information that is relevant or appropriate to determining whether the subgrantee/contractor has demonstrated a good faith effort.

10. Cost and Barrier Reduction (Requirement 14)

2.10.1 Text Box: Identify steps that the Eligible Entity will take to reduce costs and barriers to deployment. Responses may include but not be limited to the following:

- a. Promoting the use of existing infrastructure;**
- b. Promoting and adopting dig-once policies;**
- c. Streamlining permitting processes;**
- d. Streamlining cost-effective access to poles, conduits, easements; and**
- e. Streamlining rights of way, including the imposition of reasonable access requirements.**

Reducing costs and barriers to broadband deployment continues to be a high priority for West Virginia. WVDED will assist State, local, and private partners and ensure BEAD program funds are utilized efficiently and without delay. Priorities for West Virginia include:

- a) Promoting and adopting dig-once policies;
- b) Streamlining permitting processes;
- c) Encouraging expedited pole attachment application processes;
- d) Identifying early efforts to reduce delays and future opportunities;
- e) Coordinating across jurisdictions

Dig Once Policy

To facilitate permits and licensing, WVDED will support improvements to the State's Dig Once⁵⁸ policy. Because these improvements are outside the jurisdiction of WVDED, the improvements are yet to be determined. WVDED is undergoing planning with its partners to detail improvements that will have a significantly positive impact on West Virginians. WVDED will also support the establishment of guidelines for laying conduit during major highway construction or reconstruction. This will include ensuring professional, responsive management of open conduit available for use.

⁵⁸ West Virginia Division of Highways "Dig Once" Guidance: <https://broadband.wv.gov/wp-content/uploads/2021/08/Dig-Once-Guidance-2021-06-28.pdf>

Streamlined Permitting

WVDED will advocate for all State and local permitting process and franchises to have:

- clear, up-to-date, and publicly accessible standards,
- certainty regarding common construction methods, and
- swift permit approvals.

WVDED is in continuous coordination with local and regional entities in order to find the best proposals that will aid this effort.

Expedited Pole Attachment Applications

To address pole attachment delays, WVDED will collaborate with pole-owning utilities and the West Virginia Public Service Commission to expedite the pole attachment application process, decreasing delays and eliminating unnecessary costs.⁵⁹

Identification of Efforts


WVDED will complete a Guide to Broadband Construction in West Virginia, which will detail applicable permits, clearances, and policies related to broadband construction. WVDED has dedicated funding to completing a Middle Mile Infrastructure Study (Middle Mile Study) for the State of West Virginia that will also assist in the development of these policy recommendations through a collaborative process under the State's existing IJJA working group. Among other deliverables, this study will produce a complete assessment of current aerial and buried middle mile broadband assets in the State, to include but not be limited to, a detailed gap analysis, opportunities for interconnection, a comprehensive strategy for future fiber investments, and policy recommendations for new fiber construction standards. This will include a review of existing Dig Once policies. The study will be used by WVDED and other state agencies to inform policy, guide investment decisions, maximize resources, and facilitate the expansion of broadband connectivity throughout West Virginia.

Coordination

Taking these steps will require coordination with other state agencies, local governments, and, where necessary, executive and legislative action.

WVDED will formalize and chair a Permits and Licensing Coordination Committee that also includes the West Virginia Division of Highways, West Virginia Public Service Commission, and West Virginia Division of Environmental Protection, State Historic Preservation Office; county governments in Target Areas; pole owners; and deployment subgrantees.

⁵⁹ While improvements are underway through WVPSC Show Cause Petition, Case No. 22-088-E-T-SC, continued coordination is essential to the expansion of broadband in West Virginia.



To ensure the success of this committee and ensure that projects get the approvals they need in a timely fashion, West Virginia will utilize a small portion of BEAD funding for a temporary surge in staff or contracted capacity at the State agencies listed above. For more information on capacity grants, see Requirement 10.

With the added capacity BEAD funding provides, WVDED and its partners will facilitate broadband deployment projects and ensure transformational investment for the State and its residents. For permits and clearances outside of State jurisdiction, the WVDED will request assistance from NTIA to ensure timely review and approval by Federal agencies.

11. Climate Assessment (Requirement 15)

2.11.1 Text Box: Describe the Eligible Entity’s assessment of climate threats and proposed mitigation methods. If an Eligible Entity chooses to reference reports conducted within the past five years to meet this requirement, it may attach this report and must provide a crosswalk narrative, with reference to page numbers, to demonstrate that the report meets the five requirements below. If the report does not specifically address broadband infrastructure, provide additional narrative to address how the report relates to broadband infrastructure.

Identify the geographic areas that should be subject to an initial hazard screening for current and projected future weather and climate-related risks and the time scales for performing such screenings; Characterize which projected weather and climate hazards may be most important to account for and respond to in these areas and over the relevant time horizons; Characterize any weather and climate risks to new infrastructure deployed using BEAD Program funds for the 20 years following deployment;

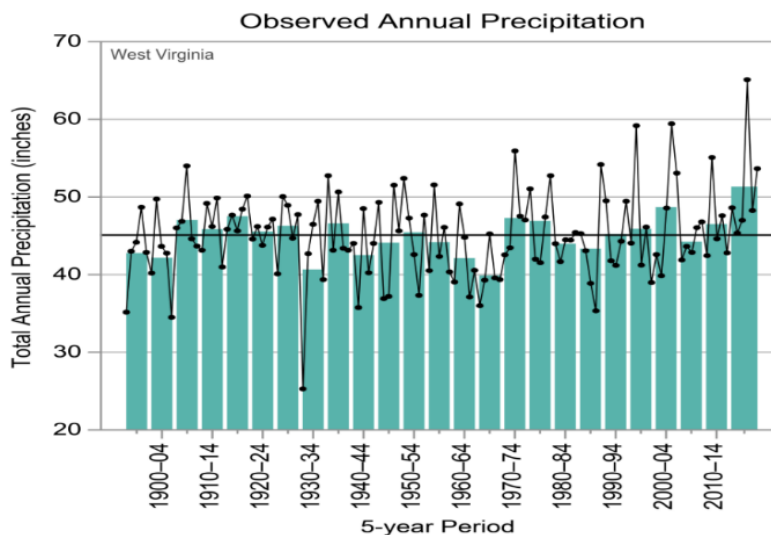
If rising temperatures, stronger storms, and wetter weather patterns were to occur over the next 20 years, those changes could impact West Virginia’s environment, communities, and infrastructure.⁶⁰ These changes could also lead to population migrations from other areas of the country to resettle within the State of West Virginia. The State must be prepared to establish reliable and resilient infrastructure to withstand future developments.

In the event of increased rainfall and warmer temperatures, greater evaporation will occur, leading to more water vapor in the atmosphere. Such changes could lead to additional rainfall, ground saturation, runoff, and ultimately a greater risk of flooding and landslides within the State.⁶¹ Figure 29 depicts the annual precipitation compared to Five-year periods of precipitation.

⁶⁰ Climate Change Risk Ratings for West Virginia - <https://climatecheck.com/westvirginia#:~:text=People%20in%20West%20Virginia%20will,over%20the%20next%2030%20years>

⁶¹ NOAA State Climate Summary for West Virginia - <https://statesummaries.ncics.org/chapter/wv/>

Figure 29: Annual Precipitation Compared to 5 Year Periods of Precipitation



Floods are one of West Virginia’s most frequent and costly disasters. According to storm data from NOAA, every county in the State reported floods between 1991 and 2016. Kanawha County reported the highest number of floods during the interval: 69 floods.⁶² Areas that experience mountainside runoff or are along major water channels are impacted the most by floods. Typically, these areas tend to be located within the Federal Emergency Management Agency’s (FEMA’s) NFIP maps in 1% annual chance floodplain. These factors need to be considered when putting together an initial hazard screening for new infrastructure.

West Virginia is also prone to landslides. At least 70% of the State falls within a high incidence area. Geology, soil type, coal mining, and higher precipitation rates are the leading causes as to why West Virginia has more than its fair share of landslides. Areas of the State that are prone to landslides tend to be in the southern portion of the State within the Appalachian Mountains as well as in the western portion of the State in the Central Allegheny Plateau. When working in these areas, steps will need to be taken to prevent debris flow movement.⁶³

During the winter months, a majority of West Virginia may experience polar vortexes brought on by the weakening jet stream which can cause significant drops in temperature for prolonged periods of time. This drop in temperature can put strain on utilities and public works infrastructure. Subfreezing temperatures cause power outages and water line breaks. Also, underground infrastructure risks damage from ground shifting caused by temperature normalization after a subfreezing period.

Eastern West Virginia is also impacted by coastal winter storms called Nor’easters that originate from the Atlantic and form when combining with cold air from the arctic. With warmer ocean temperatures, these storms could potentially dump even heavier amounts of precipitation (Rain and Snow) in a short amount

⁶² FEMA – Lessons Learned 2016 June Flood

https://www.fema.gov/sites/default/files/documents/Region_III_WV_FloodReport.pdf

⁶³ West Virginia Landslide Risk – Central Allegheny Plateau

https://data.wvgis.wvu.edu/pub/RA/_resources/Landslide/Landslide_Characteristics_CentralAlleghanyPlateau_ML_RA.pdf

of time. This uptick in the frequency of storms could cause additional strain on power and telephone lines. Additionally, these storms could cause ice which can down trees and power lines.

Each of these factors need to be accounted for when planning out infrastructure in the State.

2.11.1 Text Box (cont.): Identify how the proposed plan will avoid and/or mitigate weather and climate risks identified

As part of ongoing planning initiatives at the Local, State and Federal levels of government, the State of West Virginia has produced a 'Statewide Hazard Mitigation Plan'⁶³ every five years. This plan includes pre-disaster risk reduction strategies that were intended to help reduce the loss of property, injury, and life to State residents. The plan will be updated in 2024. This plan provides tools on how to develop local mitigation planning, plan maintenance, a statewide mitigation strategy, and assurances that the State will comply with statutes, regulations, and any revisions during any natural disaster. Each of West Virginia's 11 Regional Planning and Development Councils all create their own local plans which are then reviewed and approved by West Virginia Homeland Security and Emergency Management before eventually being incorporated into the statewide plan, which is officially updated and re-released every five years. In evaluating risk and potential hazards the WVDHSEM (West Virginia Homeland Security and Emergency Management) reviewed regional mitigation plans and data pulled from NCEI storm database and other federal sources over a historical review period. This information was used to develop scoring criteria for evaluating hazards which were categorized into seven categories: Property Damage, Geographic Area Impacted, Population Vulnerability, State Infrastructure Damage, Death or Injury, History of Occurrence, Regional HMP Ranking. Each category is rated on a scale from 0-5 with zero being the lowest and 5 being the highest. These scores are then multiplied by the probability of occurrence to determine an overall risk of low, medium, or high for each for the eight identified hazards within the state and broken down by county. The process that's listed above follows the Disaster Mitigation Act (DMA) and further defined in Final Rule CFR Section 206.401(c)(2)(i) as part of the Stafford Act and FEMA mitigation grants. Additionally, with funding from FEMA the State of West Virginia in partnership with West Virginia University developed a GIS web map called the West Virginia Flood Map <https://www.mapwv.gov/flood/>. This public web map interface allows anyone to view 100-year flood plain maps, at risk properties that sit within a floodplain, properties that have applied for aid federal aid, properties that have successfully completed local hazard mitigation programs and even land slide occurrences. Other reference layers can show potential property loss for homes within the floodplain, elevated structures and related information. This information can be used to forecast a potential cost of disaster.

To ensure that any infrastructure that's being deployed under the use of BEAD funding is hardened and resilient over the next 20 years and as a part of the pre-application phase, outlined in 2.4.1 and throughout Requirement 8, WVDED will require that applicants demonstrate that they will comply with industry-standard network resiliency, hardening, risk mitigation, and other climate-related standards. These should address, at a minimum:

- flood-prone areas;
- landslide mitigation; and
- snowstorm and ice mitigation.

Examples of specific considerations related to these challenges are included in Appendix A.2. To address these, applicants will be required to meet, at a minimum, the following standards:

- Telcordia Blue Book – Manual of Construction Procedures – SR-1421
- FEMA Building Resource Library
 - FEMA P-348 – Protecting Building Utility Systems from Flood Damage
 - FEMA P-2181 – Flood Mitigation Handbook for Public Facilities
 - FEMA 182, Landslide Loss Reduction: A Guide for State and Local Government Planning
- West Virginia State and Regional Planning & Development Council Hazard Mitigation Plans.

Additionally, applicants will be required to demonstrate the technical knowledge, experience, and capacity to meet these requirements and to develop an emergency plan and preventative maintenance plan. Applicants will need to provide and receive approval from WVDED on these plans prior to operating their deployed projects. Failure to comply with these standards may result in disqualification from the program.

Furthermore, WVDED will strongly recommend that applicants meet or exceed any resiliency-related recommendations developed by the Federal, State, and Local agencies. To accomplish this, projects demonstrating resiliency and scalability, as defined by WVDED, may have their average grant cost per targeted location, defined in the rubric provided in Annex A.1, reduced for the purposes of evaluation by up to \$2,000. See the complete rubric in Annex A.1 and relevant scoring criteria in Annex A.3 for more details.

To ensure that any infrastructure that's being deployed under the use of BEAD funding is hardened and resilient over the next 20 years, WVDED recommends that all subgrantees use both the West Virginia Floodplain Map and the Regional Hazard Plan to identify areas of concern when applying for BEAD funding. Additionally, the following recommendations should be considered when building in the following areas. Note that all flood-, landslide-, and snowstorm/ice-prone areas should be subject to initial hazard screenings for current and future weather- and climate-related risks. WVDED identifies these areas in the following subsections. WVDED will provide information on the time scale for such screenings to potential applicants and will update these and other materials, such the West Virginia Floodplain map, using the latest information contained in the forthcoming 2024 West Virginia Statewide Hazard Mitigation Plan—depending on its release date. Furthermore, provisional subawardees will be required to perform or provide WVDED with information to perform an environmental review.

Flood-Prone Areas

Building in areas that are prone to flooding presents a unique challenge when trying to preserve the longevity and usefulness of a network asset. While weighing the factors that could put an asset at risk, planning and taking the appropriate measures will ensure that this asset has a prolonged life span. In reviewing the West Virginia Statewide Hazard Mitigation 2018 Plan⁶⁴, all 55 counties within the State are considered “High Risk” to flooding type events. As such, these should be subject to an initial hazard screening for current and future weather- and climate-related risks.

The following lists factors that should be considered when planning to deploy in flood prone areas.

⁶⁴ West Virginia Statewide Standard Hazard Mitigation Plan Update 2018, November 2018, <https://emd.wv.gov/MitigationRecovery/Documents/WV%20State%20Hazard%20Mitigation%20Plan%20FINAL%2011-2018.pdf>.

1. Consult the regional hazard mitigation plan and local authorities to identify any known problem areas within the Regional Planning Districts.
2. Review West Virginia Flood Map to identify if any unserved, underserved, or CAI falls within a FEMA defined Special Flood Hazard Area (SFHA)
3. Consult FEMA P-348, Edition 2 – Protecting Building Utility Systems from Flood Damage.
4. Deploy buried infrastructure.
 - a. When deploying manholes or handholes, plan for drainage to expedite water draining, install covers that can be tightly sealed during flood events, and use non-corrosive materials.
 - b. Ensure conduits are water-resistant, and where conduits penetrate vaults, handholes, buildings or risers, the proper seal must be used to prevent water infiltration.
5. Anchor and Harden Infrastructure.
6. Consider the following when deploying electrical components:
 - a. Install at a height recommended per local zoning regulations and guidelines.
 - b. If a component is installed outdoors or has the potential to be submerged in water, please ensure that the components are placed in a waterproof enclosure or cabinet.
 - c. If components are exposed to flood waters, use National Electrical Manufacturers Association (NEMA) rated 6 or 6P type enclosures if possible.
7. Consider the following when deploying cabling or passive components:
 - a. Fiber optic cabling and other water-resistant materials are preferred.
 - b. Use IP68 rated connectors and components.
8. Consider the following when deploying buildings, communication huts, or tower locations:
 - a. Building on higher ground is preferred.
 - b. If the building is constructed in or near a flood area, dry floodproofing measures need to be implemented to protect equipment and cabling.
 - c. Enclose cabling in conduits to prevent damage from water.
 - d. Surround racking, equipment, and generators with dry flooding measures such as raised flooring.
 - e. Install electrical wiring using corrosion-resistant raceway systems that facilitate replacement of conductors exposed to flooding.

Landslides

The State's Hazard Mitigation Plan from 2018⁶⁵ identified the following 12 counties as "high risk" to landslide-type events:

- Barbour
- Boone
- Braxton
- Clay
- Gilmer
- Kanawha
- Lewis
- Putnam
- Randolph
- Tucker
- Upshur
- Wyoming

As such, these should be subject to an initial hazard screening for current and future weather- and climate-related risks.

When constructing new infrastructure in areas prone to landslides it's important to evaluate and plan out the potential risks and threats to the newly constructed network assets. By taking the necessary precautions, this will significantly diminish the impact of these risks, thus ensuring the resilience and longevity of the constructed infrastructure. Below are some high-level recommendations made by WVDED.

1. Review West Virginia Flood Map Landslide layer to identify the following:
 - a. Cabling routing of new infrastructure nearby landslide prone areas.
2. Develop an emergency response plan.
 - a. Set up a list of personnel, processes, and procedures that allow your team to quickly act in the event of a landslide event.
 - b. Establish contingencies to reroute network traffic and service disruptions to prevent extended outage windows.
3. Consult with geotechnical engineering and planning personnel about the following develop cost effective measures for more resilient infrastructure:
 - a. Native vegetation placement
 - b. Drainage improvements such as installing permeable membranes.
 - c. Slope stabilization practices such as retaining walls and lessening slopes.
4. Constructing redundant routes to mitigate major outages.

Snowstorms and Ice

Snowstorms are a common occurrence within the State of West Virginia. With warming temperatures ice might become an emerging threat to infrastructure as the weather transition between snow/sleet and ice begins to creep north.

The West Virginia Statewide Hazard Mitigation Plan⁶⁶ identified the following 35 counties as "high risk" to severe winter weather type events:

⁶⁵ West Virginia Statewide Standard Hazard Mitigation Plan Update 2018, November 2018, <https://emd.wv.gov/MitigationRecovery/Documents/WV%20State%20Hazard%20Mitigation%20Plan%20FINAL%2011-2018.pdf>.

⁶⁶ Ibid.

- Barbour
- Berkely
- Boone
- Braxton
- Clay
- Doddridge
- Fayette
- Gilmer
- Greenbrier
- Harrison
- Jackson
- Jefferson
- Kanawha
- Lewis
- Marion
- Marshall
- Mercer
- Monongalia
- Monroe
- Morgan
- Nicholas
- Ohio
- Pocahontas
- Preston
- Putnam
- Randolph
- Roane
- Summers
- Taylor
- Tucker
- Upshur
- Webster
- Wetzel
- Wood
- Wyoming

As such, these should be subject to an initial hazard screening for current and future weather- and climate-related risks.

Below are some high-level recommendations made by WVDED.

1. Develop an emergency response plan.
 - a. Set up a list of personnel, processes, and procedures that allow your team to quickly act.
 - b. Establish contingencies to reroute network traffic and service disruptions to prevent extended outage windows.
 - c. Have adequate spare parts, tools, and personnel to address outages.
2. Establish preventive maintenance plans.
 - a. Perform vegetation maintenance to prevent overgrowth from impacting the infrastructure.
 - b. Conduct regular inspections of the outside plant (OSP) to ensure infrastructure is in good standing:
 - i. Check to make sure cable plant is not sagging and pole attachments are secure to poles.
3. All aerial plant are recommended to be constructed utilizing the latest version National Electric Safety Code (NESC) parameters. Preferably, the plant should meet or exceed the current standard.
4. Proper insulation must be used on any cabinets or building sites.
5. De-icing treatments can be used on critical infrastructure.
6. Tower infrastructure must be reinforced to withstand heavy loading and extreme ice.

2.11.1 Text Box (cont.): Describe plans for periodically repeating this process over the life of the Program to ensure that evolving risks are understood, characterized, and addressed, and that the most up-to-date tools and information resources are utilized.

To ensure that the infrastructure funded through the BEAD program funds will be resilient and hardened over the duration of the network's life. WVDED may request additional requirements not listed above to

accommodate unforeseen changes with the weather within the State of West Virginia. The recommendation of WVDED would be to work with State of West Virginia's Department of Emergency Management and Regional Planning and Development Council's to ensure a clear strategy across all relevant departments. The recommended time frame would be to review the hazard mitigation plan every five years and update any necessary adjustments to reflect conditions in the State. Additionally, during this revision period, WVDED will cross-reference any updates with the state hazard mitigation plan against subgrantee project progress and notify the subgrantee if any additional changes are required. This approach will ensure that when events do occur, WVDED is prepared to respond effectively to potential events.

2.11.1.1 Optional Attachment: Optional Attachment: As an optional attachment, submit any relevant reports conducted within the past five years that may be relevant for this requirement and will be referenced in the text narrative above.

[NA]

12. Low-Cost Broadband Service Option (Requirement 16)

2.12.1 Text Box: Describe the low-cost broadband service option(s) that must be offered by subgrantees as selected by the Eligible Entity, including why the outlined option(s) best services the needs of residents within the Eligible Entity's jurisdiction. At a minimum, this response must include a definition of low-cost broadband service option that clearly addresses the following, as outlined on page 67 of the BEAD NOFO:

- a. All recurring charges to the subscriber, as well as any non-recurring costs or fees to the subscriber (e.g., service initiation costs);
- b. The plan's basic service characteristics (download and upload speeds, latency, any limits on usage or availability, and any material network management practices);
- c. Whether a subscriber may use any Affordable Connectivity Benefit subsidy toward the plan's rate; and
- d. Any provisions regarding the subscriber's ability to upgrade to any new low-cost service plans offering more advantageous technical specifications.

With the challenges presented by affordability in mind, and recognizing that "NTIA emphasizes that access to affordable broadband is among the Infrastructure Act's objectives," WVDED will require that subgrantees offer a low-cost broadband service plan to those who qualify for and/or are enrolled in the FCC's Affordable Connectivity Program (ACP).⁶⁷ As noted in the specifications further below, the cost of the plan must not exceed \$50 per month, inclusive of all taxes, fees, and charges.

Each subgrantee will be required to present a proposed low-cost broadband service option plan as a part of their application process. Subgrantees will also be required to present their process for marketing this option to potential subscribers. Furthermore, subgrantees will be required to provide metrics related to the uptake of this plan, including, but not limited to, the number of individuals that have subscribed to the plan and the locations of these individuals at a county level.

These plans must meet the minimum requirements outlined by WVDED below, but applicants are welcome to generate plans that suit their particular business models. These plans must remain in place for the useful life of the network assets. Applicants should only provide a single low-cost and single middle-class offering that applies to all its awarded programs under BEAD as opposed to different plans depending on the location of service provided in West Virginia. Applicants are encouraged, but not required, to provide these same low-cost plans to their existing broadband deployments not associated with the BEAD program.

WVDED selected the following requirements for low-cost broadband plans because they meet the spirit of the BEAD program while giving providers flexibility to customize them to meet their business needs and potentially use the differences as selling points between providers. Moreover, an equitable and

⁶⁷ Eligibility criteria for the Affordable Connectivity Program are available here:
<https://www.affordableconnectivity.gov/do-i-qualify/>.

robust low-cost service option promotes the uptake of BEAD funded broadband networks among residents of varying socioeconomic and geographic backgrounds. It also encourages subscribers to make use of the FCC's Affordable Connectivity Program (ACP).

The service characteristics outlined in the proposed plan include speeds and latency requirements that must be met in accordance with the FCC's 80/80 metric.⁶⁸ That is, if WVDED or any other entity assigned by WVDED tests the end user speeds of these plans, the requirements will only be met if 80% of tests meet or exceed 80% of the required speeds and 95% of latency measurements must be at or below 100 milliseconds round trip. For instance, if WVDED runs 100 speed tests at a selection of locations that subscribe to low-cost broadband service plans, then at least 80 of those speed tests must meet 80% of the speed requirements and 95 latency measurements must meet requirements. ... For the purposes of these specifications, "typical" download or upload speeds mean that 80% of speed tests must demonstrate at or above 80% of such speeds. Furthermore, 95% of latency tests must demonstrate no more than 100 milliseconds of latency.

Subgrantees must include in their offerings a plan that meets the following specifications.

1. **Total cost.** Plan must not exceed a cost of \$50 per month, including of all taxes, fees, and charges.
2. **ACP participation.** The plan must be made available to users eligible for and/or enrolled in ACP.
3. **Offering time period.** The plan must be offered for at least ten years from service turn-up.
4. **Price increases.** Applicants are only permitted to increase prices of this plan: a) commensurate to year-over-year changes in the Consumer Price Index for All Urban Consumers: All Items Less Food & Energy (also known as Core CPI) as defined by the U.S. Bureau of Labor Statistics; or b) due to new or increased government mandated taxes and fees imposed on the consumer, not providers.
5. **Service characteristics.** The plan must provide the greater of (a) typical download speeds of at least 100 Mbps and typical upload speeds of at least 20 Mbps, or the fastest speeds the infrastructure is capable of if less than 100 Mbps/20 Mbps or (b) the performance benchmark for fixed terrestrial broadband service established by the Federal Communications Commission pursuant to Section 706(b) of the Communications Act of 1934, as amended.⁶⁹
6. **Upgrades permitted.** In the event the provider later offers a low-cost plan with higher speeds downstream and/or upstream, permits Eligible Subscribers that are subscribed to a low-cost broadband service option to upgrade to the new low-cost offering at no cost. By way of example, if a customer is subscribed to a low-cost broadband service option that provides service at 100/20 Mbps and the customer's service provider offers a new low-cost broadband service option at 200/20 Mbps after the FCC issues a new report pursuant to section 706(a) of the Communications Act of 1934, as amended, the customer would be allowed to upgrade to the 200/20 Mbps offering at no charge.

⁶⁸ FCC. Measuring Fixed Broadband – Twelfth Report, January 6, 2023. <https://www.fcc.gov/reports-research/reports/measuring-broadband-america/measuring-fixed-broadband-twelfth-report>

⁶⁹ 47 U.S.C. § 1302(b). The current performance benchmark for fixed terrestrial broadband service is 25 Mbps for downloads and 3 Mbps for uploads. See Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, Fourteenth Broadband Deployment Report, GN Docket No. 20-269, 36 FCC Rcd 836, 841 para. 12 (2021).

To develop a maximum price for the low-cost plan, WVDED performed an informal assessment of available low-cost plans provided by incumbent internet service providers. Many of these providers did not have publicly available prices online and WVDED also recognizes that an exhaustive assessment would require significant more time and collaboration with providers; while WVDED is open to such efforts, the current time frame does not allow for this. Based on the information collected, WVDED found that many of incumbent providers already offer low-cost plans that falls under \$50 per month. Also based on this review, WVDED found that a required price below this amount, such as the \$30 per month provided in NTIA's example, would potentially reduce the likelihood of a wider range of entities applying to the program because they may deem it economically unfeasible. As such, WVDED set the maximum low-cost price at \$50 per month as this strikes a balance between what is economically feasible for providers of various sizes and how to best support residents of West Virginia.

Furthermore, WVDED found this price point to be affordable for many ACP eligible residents. The income guideline for ACP eligibility is 200% or less than the Federal Poverty guidelines. Using a household size of one since the income limit increases based on the household size, income limit (i.e., 200% of the 2023 Federal Poverty Guidelines) is \$29,160; per month, this is \$2,430. In 2016, the Federal Communications Commission (FCC) began utilizing a benchmark of 2% of monthly household income for broadband affordability while acknowledging the benchmark serves "as a clear yardstick for charting changes, not as an inherently meaningful level."⁷⁰ Though best used for measuring changes, it still provides a starting point for assessing affordability. With that in mind, 2% of the \$2,430 maximum monthly income for ACP would establish an affordable benchmark of \$48.60. That is approximately the unsubsidized cost of this proposed plan. Once the ACP subsidy is applied, bringing the cost down to \$20 per month, it falls well within the benchmark for many ACP-eligible individuals. As such, the plan will serve the needs of residents.

Unfortunately, WVDED does not have control over whether ACP will expire and whether a successor program will be established. This low-cost plan will help ensure some level of end-user price stability in the event either of the preceding take place because these plans would be capped at \$50 per month, which, as noted above, leaves room to still be considered affordable for many. However, to provide greater end-user price stability would require a program of equal or greater size and scope—which is outside of the remit of WVDED and not financially feasible for it.

WVDED will consider updating minimum pricing requirements and other conditions of the low-cost service option at least twice within the next ten years after service turn-up based on changes in economic and market conditions per updated NTIA guidance on 2 CFR 200. Public comments will be solicited at those times. In the event that WVDED seeks to update the minimum pricing requirements and other considerations of the low-cost service option, WVDED will—at a minimum—consult with NTIA and execute a public notification and participation process. The details of this public notification and participation process will be described in later documentation provided by WVDED.

⁷⁰ FCC, FCC 16,38, April 27, 2016, <https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf>.

13. Middle Class Affordability Plans (Requirement 20)

2.13.1 Text Box: Describe a middle-class affordability plan that details how high-quality broadband services will be made available to all middle-class families in the BEAD-funded network’s service area at reasonable prices. This response must clearly provide a reasonable explanation of how high-quality broadband services will be made available to all middle-class families in the BEAD-funded network’s service area at reasonable prices.

Subgrantees will be strongly encouraged to offer middle-class broadband service plans, and affordability will constitute 25 out of 100 of available points for proposals. Applicants seeking points from this criterion shall submit the prices for plans that they plan to offer all residential Target Locations in their Target Areas. These plans must fall in either or both of the following categories: 1/1 Gbps or better for priority projects or 100/20 Mbps or better for non-priority projects.

These plans must have no data cap or data overage charges, inclusive of all fees, taxes, and charges. Furthermore, applicants must certify that they will adhere to the following rules for these plans:

- The plan must be offered for ten years from service turn-up;
- The latency for these plans must not exceed 100 milliseconds;
- WVDED will permit annual price increases commensurate to year-over-year changes in the Consumer Price Index for All Urban Consumers: All Items Less Food & Energy (also known as Core CPI) as defined by the U.S. Bureau of Labor Statistics; and
- WVDED will permit cost changes due to new or increased government mandated taxes and fees imposed on the consumer, not providers.

These prices shall be rounded by WVDED to the nearest whole number (e.g., \$65.99 would be rounded to \$66 for the purposes of this calculation). WVDED shall award points according to the following schedule:

- Priority Project Scoring: One point for every \$2 below \$115 per month for plans offering 1/1 Gbps or better (max 25 points)
- Non-Priority Project Scoring: One point for every \$2 below \$85 per month for plans offering 100/20 Mbps or better (max 25 points)

As noted in NTIA’s BEAD Initial Proposal Guidance document, the middle-class affordability plan should be “...designed to ensure that a BEAD-funded network’s service area provides high-quality broadband service to all middle-class households at reasonable prices...”⁷¹ WVDED sought to meet this requirement while recognizing that establishing a lower-cost 1/1 Gbps plan may not be economically viable for many potential applicants and could deter participation. The latter understanding arose from an informal review of existing plans and internet service provider capabilities throughout the State. WVDED further recognizes that greater consumer choice in the market empowers residents to choose the best type of

⁷¹ NTIA, “BEAD Initial Proposal Guidance – Volumes I and II”, July 2023, [https://broadbandusa.ntia.doc.gov/sites/default/files/2023-07/BEAD Initial Proposal Guidance Volumes I II.pdf](https://broadbandusa.ntia.doc.gov/sites/default/files/2023-07/BEAD%20Initial%20Proposal%20Guidance%20Volumes%20I%20II.pdf).

high-speed broadband plan for their needs. To that end, the affordability criterion contains two tiers for how to earn points: plans that offer either 100/20 Mbps or 1/1 Gbps.

NTIA emphasizes that access to *affordable* broadband is among the Infrastructure Act's objectives, and WVDED has sought to keep with the spirit of this objective. Regarding the benchmark prices that WVDED has established, in 2016, the Federal Communications Commission (FCC) began utilizing a benchmark of 2% of monthly household income for broadband affordability while acknowledging the benchmark serves "as a clear yardstick for charting changes, not as an inherently meaningful level" (see FCC, FCC 16,38, April 27, 2016, <https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf>).⁷² Though best used for measuring changes, it still provides a starting point for assessing affordability. The five-year median household income in West Virginia in 2021 dollars was \$50,884.⁷³ Dividing the median income by 12 would set affordable broadband in the State at \$84.80. As such, it is reasonable that WVDED set the benchmark for a plan aimed at middle-class affordability at \$85 and award points for entities that can offer 100/20 Mbps plans below this amount. Regarding the 1/1 Gbps plan, this is intended to incentivize applicants to look toward and offer plans that will meet the growing broadband needs of residents while using a benchmark that is still achievable for those seeking to earn points from this criterion. Furthermore, the entire set of affordability points are not mandatory and applicants can earn full points in the criterion without including a 1/1 Gbps plan. With that in mind, WVDED started with the FCC's 2023 Broadband Reasonable Comparability Benchmark, which is derived from its Urban Rate Survey Data.⁷⁴ The Benchmark calculator, lists a 1/1 Gbps plan with an unlimited data allowance as costing \$142.59. To create a reachable but still forward-looking price, WVDED reduced this number by 20%, which equates to \$114.07. For ease of scoring, WVDED rounded this figure to \$115 for the purpose of the 1/1 Gbps plan.

Subgrantees will be required to provide metrics related to the uptake of these plans, including, but not limited to, the number of individuals that have subscribed to them and the locations of these individuals at a county level.

⁷² FCC, FCC 16,38, April 27, 2016, <https://docs.fcc.gov/public/attachments/FCC-16-38A1.pdf>.

⁷³ United States Census Bureau, "QuickFact West Virginia," accessed December 8, 2023, <https://www.census.gov/quickfacts/fact/table/WV/PST045222>. This is the median of the "Past 12 Months – Income of Households" metric provided by The U.S. Census Bureau. Specifically, this includes the income of the householder and all other individuals 15 years old and over in the household, whether they are related to the householder or not.

⁷⁴ FCC, "Urban Rate Survey Data & Resources," United States 2023 Broadband Benchmark Calculator, <https://www.fcc.gov/economics-analytics/industry-analysis-division/urban-rate-survey-data-resources>. Accessed December 11, 2023.

14. Use of 20 Percent of Funding (Requirement 17)

2.14.1 Text Box: Describe the Eligible Entity's planned use of any funds being requested, which must address the following:

- a. If the Eligible Entity does not wish to request funds during the Initial Proposal round, it must indicate no funding requested and provide the rationale for not requesting funds.
- b. If the Eligible Entity is requesting less than or equal to 20 percent of funding allocation during the Initial Proposal round, it must detail the amount of funding requested for use upon approval of the Initial Proposal, the intended use of funds, and how the proposed use of funds achieves the statutory objective of serving all unserved and underserved locations.
- c. If the Eligible Entity is requesting more than 20 percent (up to 100 percent) of funding allocation during the Initial Proposal round, it must detail the amount of funding requested for use upon approval of the Initial Proposal, the intended use of funds, how the proposed use of funds achieves the statutory objective of serving all unserved and underserved locations, and provide rationale for requesting funds greater than 20 percent of the funding allocation.

West Virginia requests 100% of the total funding allocation (\$1,210,800,969.85) upon approval of the Initial Proposal. WVDED believes 100% allocation is necessary to position West Virginia to swiftly implement the initiatives described throughout this proposal. As noted in the Initial Proposal Funding Request, WVDED has already established a clear schedule for the use of \$13,656,574.09 of these funds to be used prior to submission of the Final Proposal. WVDED does not intend to use the requested funds for deployment projects; however, it will use some of the funds for the deployment subgrantee selection process and having these funds in advance is important to ensure the program is not delayed and stays on target. Although WVDED will not use these funds for deployment projects, it certifies that it will communicate EHP and BABA requirements to prospective subgrantees as a part of its application process.

WVDED has determined that the State has approximately 167,965 unserved and underserved locations and anticipates a significant number of extremely high-cost locations with justify a greater initial allocation of funding. By having the complete allocation prior to submission of the Final Proposal, WVDED will be able to provide greater certainty that funds will be available for the swift execution of grant agreements without delays that arise from waiting for funds. This will likely encourage greater participation in WVDED's BEAD program and therefore help bridge the digital divide in the State.

Using the methodology detailed in in Section 5.3 of the Five-Year Action Plan, Figure 30 and Table 21 provide the total project and grant cost estimates to provide universal broadband service in West Virginia.

Figure 30: Estimated Total Grant Cost of Universal Broadband in West Virginia

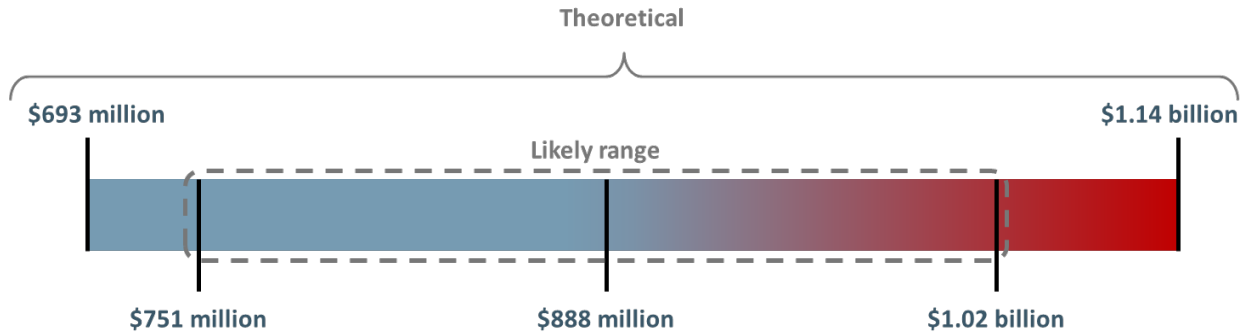


Table 21: Estimated Cost of Universal Broadband in West Virginia

	Theoretical	Likely			Theoretical
	Lower bound	Lower bound	Average	Upper bound	Upper bound
Total project cost	\$866 million	\$939 million	\$1.11 billion	\$1.28 billion	\$1.42 billion
Grant amount	\$693 million	\$751 million	\$888 million	\$1.02 billion	\$1.14 billion

The exact final cost of the program cannot be determined, which is one reason why NTIA has a funding priority waterfall, which WVDED will abide by. That said, large scale deployments depend on momentum, by having all resources available, projects can maintain consistent progress. A higher initial allocation of funding enables WVDED to distribute the immediate surge of resources to support swift initiation of deployment and nondeployment broadband projects. Full upfront allocation also lessens the burden on state and local agencies through the Permits and Licensing Coordination and Capacity Initiative and enables West Virginia to better determine distribution of ARC discretionary matching funds, described in greater detail in Requirement 9. A 100% allocation also ensures project continuity throughout the lifecycle and gives WVDED planners greater flexibility to avoid budget overruns.

WVDED intends to utilize up to 2% of the total BEAD on general operating and administrative expenses including supporting the necessary operations to fulfill the universal service mandate.

Programmatic Costs

WVDED intends to use the remaining funds in its requested BEAD allocation on a combination of funding for personnel costs, continued technical assistance support from contractors, technology acquisition, licensing, and/or maintenance costs, data acquisition and/or licensing costs, communications and awareness costs to support the implementation competitive subgrantee programs for both deployment and nondeployment projects. WVDED will comply with all rules and requirements around the use of deployment and nondeployment funding prior to the acceptance of the Initial Proposal.

15. Eligible Entity Regulatory Approach (Requirement 18)

2.15.1 Text Box:

- a. **Disclose whether the Eligible Entity will waive all laws of the Eligible Entity concerning broadband, utility services, or similar subjects, whether they predate or postdate enactment of the Infrastructure Act that either (a) preclude certain public sector providers from participation in the subgrant competition or (b) impose specific requirements on public sector entities, such as limitations on the sources of financing, the required imputation of costs not actually incurred by the public sector entity, or restrictions on the service a public sector entity can offer.**
- b. **If the Eligible Entity will not waive all such laws for BEAD Program project selection purposes, identify those that it will not waive (using the Excel attachment) and their date of enactment and describe how they will be applied in connection with the competition for subgrants. If there are no applicable laws, note such.**

To date, there are no laws of the State of West Virginia concerning broadband, utility services, or similar subjects, whether they predate or postdate enactment of the Infrastructure Act that either:

- preclude certain public sector providers from participation in the subgrant competition, or
- impose specific requirements on public sector entities, such as limitations on the sources of financing, the required imputation of costs not actually incurred by the public sector entity, or restrictions on the service a public sector entity can offer.

As such, there are no laws of the State that shall need to be waived by WVDED in the implementation of the BEAD program.

16. Certification of Compliance with BEAD Requirements (Requirement 19)

2.16.1 Check Box: Certify the Eligible Entity's intent to comply with all applicable requirements of the BEAD Program, including the reporting requirements.

WVDED will comply with all applicable requirements of the BEAD Program, including the reporting requirements.

2.16.2 Text Box: describe subgrantee accountability procedures, including how the Eligible Entity will, at a minimum, employ the following practices outlined on page 51 of the BEAD NOFO:

- a. Distribution of funding to subgrantees for, at a minimum, all deployment projects on a reimbursable basis (which would allow the Eligible Entity to withhold funds if the subgrantee fails to take the actions the funds are meant to subsidize);**

WVDED will prescribe in its published program procedures a process by which subgrantees shall be reimbursed for eligible expenses up to a maximum project cost identified in WVDED's award to that subgrantee. In addition, WVDED will prepare and distribute to subgrantees a "Post-Award" guideline document by which it will detail steps in the post-award process for ensuring subgrantee accountability. Following the execution of subgrantees' Grant Disbursement Agreement with WVDED, and following submittal of the required documentation in order to obtain a notice to proceed with non-construction activities from WVDED, WVDED will conduct project meetings to review the requirements needed for the subgrantee to obtain a Notice to Proceed with Construction Activities (NTPC).

Notice to Proceed with Exempt/Design Activities (NTPE)

Prior to a subgrantee making any eligible expenditures, subgrantees must obtain a Notice to Proceed with Exempt Activities (NTPE) from WVDED. As part of this process, WVDED shall require subgrantees to provide, as part of their Grant Disbursement Agreement, required documentation comprising a "Request for Approval of Evidentiary Materials" to be uploaded within WVDED's online grant administration portal. Included in this packet of evidentiary materials are items such as the signed grant agreement with WVDED, subgrantee debarment review form, proof of establishment of a separate project bank account by the subgrantee, a completed environmental law applicability checklist, information related to subgrantees' financial management system and record retention policies as applicable, information regarding subgrantees' procurement policies and internal controls, copies of legally binding agreements between subgrantees and any private partners or subcontractors, information regarding subgrantees' review compliance plan, conflict of interest certification, and subgrantee certification that they have reviewed State Division of Highways guidelines regarding fiber optic installations in the State rights-of-way. Additionally, the required evidentiary materials shall include the subgrantee's certification of review of potentially applicable Federal and State laws, and evidence of consultation with the State Historic Preservation Office and required clearances.

Once the NTPE is issued to subgrantees by WVDED, subgrantees may then begin pre-construction activities, which involves expenditures on “soft cost” items such as engineering functions, permit applications/right-of-way practices, and associated logistical efforts.

Budget Amendments/Initial Budget Breakdown

WVDED will provide a Budget Amendment Form as an Excel workbook, ensuring subgrantees are provided a standard form by which to submit any budget adjustment of eligible reimbursement costs for WVDED approval. Prior to subgrantees’ first request for grant disbursement, subgrantees must submit this form, which details different funding types by cost category within an awarded project. Upon full execution of a subgrantee’s grant agreement with WVDED, WVDED will require subgrantees to submit their Budget Amendment Form, which provides an initial breakdown of the approved budget between matching funds, other funds, and grant funds by eligible cost category. WVDED will utilize this breakdown in ongoing performance reporting. Upon approval by WVDED, this will serve as the new budget baseline and will be used by WVDED in setting up a Matching Funds Report for all matching funds spent.

The submission of subsequent Budget Amendment Forms may be required for reasons related to:

1. Modification of Grant Awarded Amount – Subgrantee requesting the modification of the originally awarded grant amount (up to 10%), for which the subgrantee must submit documentation describing costs that could not reasonably have been foreseen at the time of their grant application.
2. Modification of Grant Awarded Area – If subgrantee requests the modification of the grant awarded area that results in a change to the grant amount, WVDED requires that the Budget Amendment form be submitted along with Proposed Project route documentation.
3. Budget Amendment to Reconcile Variances – If a subgrantee requests to re-allocate costs between cost categories or totals of other funding sources, WVDED requires the subgrantee to submit a Budget Amendment Form and a narrative and supporting documentation for such changes.

Engineered Design Requirements

Following the issuance by WVDED of a Notice to Proceed with Exempt Activities (NTPE), but prior to requesting a Notice to Proceed with Construction (NTPC), WVDED requires its subgrantees to submit an engineered design to WVDED. Included in this NTPC, WVDED requires subgrantee to provide copies of any DOH permits, any other applicable permits, clearances, applicable Dig Once Notifications, pole attachment agreements, and applicable bonds as well. Should a subgrantee’s project occur on private property or property outside of the ROW, WVDED requires the subgrantee to provide evidence of any required easements or clearances as well. For projects requiring underlying municipal, county, or State, or Federal agency approvals, WVDED requires subgrantees to submit evidence of such documentation.

Furthermore, WVDED shall provide subgrantees with specific Engineered Design Requirements detailing guidelines for the designs required to be submitted. Included in this process, and in order to request an NTPC from WVDED, subgrantees must provide a Network Design Certification form, a Design Project Checklist, and a Detailed Design Checklist. WVDED requires designs be prepared under the review of a Professional Engineer (P.E.), or an engineer with substantial demonstrated experience. WVDED requires credentials to be submitted as part of this.

Regarding matching funds policies, WVDED requires that matching funds be spent by subgrantees prior to reimbursement by grant funds. WVDED allows that such matching funds may be spent by subgrantees on “soft costs” as soon as the grant performance period begins but cannot be spent on any construction costs prior to the subgrantee receiving a NTPC from WVDED.

Once the subgrantee has received the NTPC and all matching funds have been spent and approved by WVDED, subgrantees may then use grant funds for construction.

Submitting Invoices

To ensure accurate and organized processing of invoices, WVDED requires subgrantees to adhere to the following submission guidelines:

1. Requiring use of equipment and materials in a project prior to subgrantee submitting invoices for such items;
2. Requiring subgrantees to submit invoices in a sequential order corresponding to subgrantee Matching Funds Report or Grantee Disbursement Form;
3. In cases where an invoice is not 100% used in a single Matching Funds Report or Grant Disbursement, the subgrantee must include a clear running total marked-up on the invoice.

Grant Disbursement Requests

WVDED allows subgrantees to request grant disbursements once all matching funds have been spent, the matching funds budget has been reconciled, and all forms have been submitted and approved by WVDED. In the grant disbursement request, WVDED requires from subgrantees submission of proof of expenditures on eligible costs for review prior to reimbursement and also requires lien waivers for each invoice greater than or equal to \$2,500. The lien waiver form, signed by the subgrantee and its vendor(s) is an attestation that all construction invoices have been paid in full and that there are no outstanding claims against the subgrantee or its vendor. If WVDED determines, based on audits, reviews, or monitoring of the Grant Agreement that any amounts or prior payments made are not allowable under the terms of the Grant Agreement, any applicable Federal or State Laws, program regulations, public policy, or administrative requirements, the subgrantee’s invoice shall be subject to reduction by WVDED.

Generally, in order to be eligible for grant disbursements, subgrantees:

1. must comply with post-award monitoring and reporting requirements;
2. are responsible for active technical, financial, and project management of the awarded project; and
3. must cooperate with technical and financial monitoring and review.

Subgrantees may make requests for monthly reimbursements. WVDED will work with applicants to determine what method of grant distribution is most viable for their projects in compliance with applicable program procedures.

Compliance Reporting

Additionally, as part of subgrantee accountability, WVDED places reporting requirements upon subgrantees upon execution of the Grant Agreement between a subgrantee and WVDED. Included among

these requirements are the BEAD NOFO's specified subgrantee reporting requirements.⁷⁵ WVDED will require subgrantees to provide reports on a quarterly basis so as to ensure that both WVDED and subgrantees meet all reporting requirements as prescribed in NTIA/Commerce BEAD program guidelines. As with other Federal broadband grant reporting administered by WVDED to ensure subrecipient accountability, WVDED shall build reporting forms conforming to BEAD program requirements and provide compliance guidance to subgrantees regarding requirements and methods of submittal to WVDED. Included in such reporting compliance shall be guidance related to required, monthly labor reporting for projects over \$5 million in expected total costs as detailed in the BEAD NOFO. The information that will be required as part of such reporting is included above in this Initial Proposal Volume II, in the section labeled, "Requirement 11, Labor Standards and Protection". To the extent that the \$5 million expected total costs threshold is exceeded by a combination of BEAD grant funding and in-kind matching funds, each below \$5 million, but together in excess of \$5 million, WVDED will also monitor such funds to ensure that subgrantees comply with labor reporting requirements as well.

Ready to Serve Review/Field Review

WVDED generally conducts a "ready-to-serve" review for each phase of a project. This process ensures that any new BEAD funded constructed networks are compliant with construction/engineering standards and meet the BEAD program's minimum speed and service requirements. This will be accomplished through regular progress meetings with subgrantees and shall involve the submission to WVDED of as-builts documentation, and report of miles completed, addresses passed, and speed/latency data. Further, when projects approach 50% completion, WVDED's consulting engineers may reconcile invoices with as-builts to confirm project alignment with approved construction plans and spending estimates. At this point, and at close-out as well, desktop and field reviews will be scheduled between WVDED and subgrantees. The desktop and field review process will include an ongoing high-level verification that the design on the plant and the actual construction of the network are in compliance with grant requirements and in accordance with industry best practices. The review will also verify that targeted addresses designated in the grant are serviceable within a certain amount of time of an order for service being placed.

Additionally, as part of this field review process, on-site reviews will be conducted to visually inspect and examine central offices, headend, remote hut, outside plant, and hub and subscriber installation deployments, as applicable. WVDED's technical reviewers will verify the consistency of the plant observed with the project's scope as defined in subgrantee's contracting materials with WVDED and note general quality observations.

In conjunction with the field review described above, the field validation team will prepare a mid-construction field review report which shall include the outputs from the field review, photographs, and identify any discrepancies or issues, should they exist. Following this, subgrantees shall have a prescribed period of time in which to cure or provide proof of corrective actions taken to remedy any discrepancies or issues and provide a revised report to WVDED for review.

Upon a project's completion, WVDED requires subgrantees to submit a closeout package with required documentation for review and approval of the final 10% of the grant retained which WVDED will release following approval of all closeout documentation and final field reviews. Included in the closeout package

⁷⁵ See BEAD NOFO pgs. 89-92.

documentation shall be all as-built files and any OTDR test results not already provided by the subgrantee. A field review will be conducted for a sample of the completed network at this point and a field review report (construction complete) shall be prepared by the field team, similar to the field review report (mid construction) described above. As with the mid-construction field review, subgrantees shall have a prescribed amount of time to remedy discrepancies or issues identified in the construction complete field review report.

Speed Testing

WVDED generally shall require of subgrantees compliance with the standards and testing protocols for speed and latency established by the FCC in prior grant programs, requiring of subgrantees that such testing be performed from the customer premises of an active subscriber to a remote test server at an end-point consistent with the requirements for a Commission-designated IXP.⁷⁶

2.16.2 Text Box: b. The inclusion of clawback provisions (i.e., provisions allowing recoupment of funds previously disbursed) in agreements between the Eligible Entity and any subgrantee

In general, WVDED shall have provisions in its grant agreement with subgrantees stating that WVDED may deduct amounts or withhold payments invoiced by the subgrantee if the subgrantee fails to comply with any requirements of the grant agreement. Further, WVDED will have provisions stating that funds withheld due to unsatisfactory project performance or failure to comply with the terms and conditions of the grant agreement may be restored upon the subgrantee's satisfactory remedy of the condition that caused the withholding. Lastly, in general WVDED shall retain 10% of any grant award until project completion, including approval of all closeout documents and reporting requirements.

WVDED, in its grant agreements with subgrantees, shall have provisions addressing the right of WVDED to disallow costs and recover funds disbursed on the basis of audit or review, even following closeout of the Grant Agreement. The provisions specify that subgrantees shall be obligated to return any funds due as a result of later refunds, corrections, or other transactions. Additionally, WVDED's grant agreements with subgrantees will have provisions relating to subgrantee performance measures, with language stating that subgrantee achievement and compliance with performance measures will be evaluated based upon project plan information submitted with the subgrantee's application. WVDED's intent is that the project plan and performance measures established therein will establish the goals against which performance under the Grant Agreement can be measured and evaluated during regularly scheduled monitoring visits and reviews by WVDED. Among the provisions in its agreements with subgrantees, WVDED will specify that failure to substantially meet the above performance measures may result in suspension of reimbursement payment, termination of the Grant Agreement with WVDED, and/or prohibit the subgrantee from being eligible to submit an application for future allocations until such time as the failures are resolved. Included in these provisions are an outline of the process for a subgrantee's failure to comply with its project plan. As part of this process, WVDED shall provide notice and an opportunity for subgrantees to cure any failures or deficiencies within 30 days or such other reasonable

⁷⁶ Id. at pgs. 64-65.

time as may be specified in the notice. If the subgrantee should fail to cure during the designated period, WVDED shall have the discretion to take one or more actions, such as:

1. requiring additional project monitoring to ensure compliance with the subgrantee's project plan;
2. requiring the subgrantee to obtain technical or management assistance in order to ensure compliance with the project plan;
3. reducing the program funds to be disbursed under the Grant Agreement in an amount not to exceed the difference between the full amount of the subgrantee award and the total amount for which the subgrantee has submitted a reimbursement request that is consistent with the progress made in complying with the project plan as of the date of the expiration of the cure period.

With regard to recapture provisions in the subgrantee agreement with WVDED, WVDED shall reserve the right to recapture funds remaining due to cost underruns.

2.16.2 Text Box (cont.): c. Timely subgrantee reporting mandates

As an exhibit to its grant agreement with subgrantees, WVDED will require a form that complies with the BEAD NOFO's regular financial and performance reporting requirements for subgrantees.⁷⁷ WVDED will specify in its grant agreement and compliance guidance materials that subgrantees submit the information in this form on at least a semi-annual basis or greater frequency to WVDED for the duration of the subgrant. Typically, WVDED will require the first such submission by subgrantees in the initial quarter in which the grant agreement is signed. Within WVDED's grant agreement, it shall have provisions governing such quarterly compliance reporting that subgrantees must comply with. In particular, subgrantees shall certify as part of entering the grant agreement with WVDED that they will comply with all applicable reporting and record retention requirements, the source of which may be federal and State laws, programmatic regulations, public policy, and/or administrative requirements, including but not limited to quarterly project or expenditure reports in the form of WVDED's worksheet provided as an exhibit to the grant agreement.

In addition to the periodic reporting requirements communicated to subgrantees, WVDED shall also convey any record retention requirements, and shall build into its grant agreements with subgrantees the requirement that subgrantees provide any necessary information to WVDED as may be requested to fulfill any additional annual performance reporting requirements as well. In this section of the grant agreement with subgrantees, WVDED will also condition any final disbursement payment on subgrantees agreeing to provide WVDED final as-built network documentation in a manner and format to be approved by WVDED.

Regarding record retention requirements, WVDED will prescribe that subgrantees retain financial records, supporting documents, and any other records pertinent to the grant agreement for a period of five years from the date of submission of the final expenditure report or payment of final invoice with extensions to this period in the event of litigation, claims, or audits beginning prior to end of the five-year period.

Regarding WVDED's access to records, WVDED shall incorporate into its grant agreements with subgrantees provisions detailing the right of WVDED and the Federal Awarding Agency, Inspector General, Comptroller General, State Auditors, program auditors, and other duly authorized representatives the

⁷⁷ See BEAD NOFO, p. 90-92.

right of timely and unrestricted access to books, documents, papers or other records as well as reasonable access to past and present personnel for purposes of audits, examinations, and the like. As for duration of the right of access to subgrantee records, WVDED will communicate that the right of access will last throughout the required retention period or as long as records are retained, if longer.

Regarding closeout, WVDED conditions closeout of the subgrantee award on receipt from the subgrantee's final semi-annual report, has determined that all monitoring and audit findings have been formally addressed and resolved; and has received a final project review. WVDED requires subgrantees to provide any outstanding financial, performance, or other required reports within 90 days after the end date of the period of performance.

2.16.2 Text Box (cont.): d. Robust subgrantee monitoring practices.

Regarding audits, reviews, and monitoring, WVDED will require subgrantees to agree as a condition of the award and as part of subgrantees' grant agreement with WVDED that subgrantees will cooperate with both WVDED and NTIA/Dept. of Commerce with respect to any audit or review of WVDED's programs or the award. Additionally, WVDED will require subgrantees to review, understand, and comply with the West Virginia State Accountability requirements of the West Virginia Code Section 12-4-14. Public, non-profit subrecipients expending federal awards of \$750,000 or more in the subgrantee's fiscal year will be required to conduct a single or program-specific audit in accordance with 2 CFR 200 Subpart F. Additionally, unless otherwise specified in the terms and conditions of the award, entities that are not subject to the Subpart F audit requirements (i.e. for-profit, commercial subrecipients) that expend \$750,000 or more in grant funds in their fiscal year must submit to either a financial related audit in accordance with Generally Accepted Government Auditing Standards; or a program-specific audit in accordance with the requirements contained in 2 CFR § 200.507.

2.16.3 Text Box: Certify that the Eligible Entity will account for and satisfy authorities relating to civil rights and nondiscrimination in the selection of subgrantees.

Civil Rights Compliance (IP Guidance, p. 92)

WVDED certifies that its selection of subgrantees will account for and satisfy each of the following authorities:

- Parts II and III of Executive Order 11246, Equal Employment Opportunity
- Executive Order 13166, Improving Access to Services for Persons with Limited English Proficiency
- Executive Order 13798, Promoting Free Speech and Religious Liberty

WVDED shall, prior to distributing any BEAD funding to a subgrantee, require all subgrantees to agree, by contract or other binding commitment, to abide by the nondiscrimination requirements set forth in the following legal authorities, to the extent applicable, and to acknowledge that failure to do so may result in cancellation of any award and/or recoupment of funds already disbursed:

- Title VI of the Civil Rights Act

- Title IX of the Education Amendments of 1972
- The Americans with Disabilities Act of 1990
- Section 504 of the Rehabilitation Act of 1973
- The Age Discrimination Act of 1975
- Any other applicable non-discrimination law(s)

Cybersecurity and Supply Chain Risk Management (IP Guidance, p. 93)

WVDED certifies that it will ensure subgrantee compliance with the following cybersecurity and supply chain risk management requirements, and that WVDED will require prospective subgrantees to attest to the following Cybersecurity and Supply Chain Risk Management Requirements:

Cybersecurity

1. The prospective subgrantee has a cybersecurity risk management plan (the plan) in place that is either:
 - a. operational, if the prospective subgrantee is providing service prior to the award of the grant; or
 - b. ready to be operationalized upon providing service, if the prospective subgrantee is not yet providing service prior to the grant award;
- 2) The plan reflects the latest version of the National Institute of Standards and Technology (NIST) Framework for Improving Critical Infrastructure Cybersecurity (currently Version 1.1) and the standards and controls set forth in Executive Order 14028 and specifies the security and privacy controls being implemented;
- 3) The plan will be reevaluated and updated on a periodic basis and as events warrant; and
- 4) The plan will be submitted to the Eligible Entity prior to the allocation of funds. If the subgrantee makes any substantive changes to the plan, a new version will be submitted to the Eligible Entity within 30 days.

Supply Chain Risk Management (SCRM)

- 1) The prospective subgrantee has a SCRM plan in place that is either:
 - (a) operational, if the prospective subgrantee is already providing service at the time of the grant; or
 - (b) ready to be operationalized, if the prospective subgrantee is not yet providing service at the time of grant award;
- 2) The plan is based upon the key practices discussed in the NIST publication NISTIR 8276, Key Practices in Cyber Supply Chain Risk Management: Observations from Industry and related SCRM guidance from NIST, including NIST 800-161, Cybersecurity Supply Chain Risk

Management Practices for Systems and Organizations and specifies the supply chain risk management controls being implemented;

3) The plan will be reevaluated and updated on a periodic basis and as events warrant; and

4) The plan will be submitted to the Eligible Entity prior to the allocation of funds. If the subgrantee makes any substantive changes to the plan, a new version will be submitted to the Eligible Entity within 30 days. The Eligible Entity must provide a subgrantee's plan to NTIA upon NTIA's request.

WVDED shall also, to the extent a BEAD subgrantee relies in whole or in part on network facilities owned or operated by a third party (e.g., purchases wholesale carriage on such facilities), require such subgrantees to obtain the above attestations from its network provider with respect to cybersecurity practices and supply chain risk management practices.

WVDED does not plan to impose any additional cybersecurity or supply chain risk management requirements on subgrantees.

17. Volume II Public Comment

2.17.1 Text Box: Describe the public comment period and provide a high-level summary of the comments received during the Volume II public comment period and how they were addressed by the Eligible Entity. The response must demonstrate:

- a. The public comment period was no less than 30 days; and**
- b. Outreach and engagement activities were conducted to encourage feedback during the public comment period.**

WVDED held the 30-day public comment period from October 20 to November 20. WVDED and its partners promoted this opportunity via internet publication, in-person public meetings, and meetings conducted by West Virginia's Regional Planning and Development Councils. West Virginians were encouraged to share their criticisms, suggestions, ideas, and requests to help WVDED align the Initial Proposal with the State's broadband needs. The State received **41 comments**. Table 22 provides a categorical breakdown of the comments; note that neither the quantity nor percentage of comments in the table equals the total amount of comments because many comments expressed sentiments applicable to more than one category and have been categorized under each topic addressed.

Table 22: Public Comment Categorization

Category	# of comments	% of comments
Industry, Advocacy Group, and Delegate Comments	21	52.5%
Infrastructure Deployment and Internet Service Issues	10	24.4%
Education and Workforce	6	14.6%
Affordability of Internet Service	2	4.9%
Other	8	19.5%

Comments from industry entities, government entities, advocacy groups, and partners are grouped together under the title "Industry, Advocacy Group, and Delegate Comments" because they tend to take a different structure from the other comments. They often express many diverse concerns and specific requests. The "Other" category contains comments that either stand alone in their expressed concerns, contain requests outside the scope of the Initial Proposal Volume 2 draft, express general opinion, or otherwise do not fit into the more concretely defined categories.

17.1 Non-Industry or Government Comments

Infrastructure Deployment and Internet Service Issues

WVDED received 10 comments pertaining troubles with internet service, concern for infrastructure deployment location prioritization, concern for infrastructure capacity, and alternative strategies for satisfying West Virginian broadband needs. Nine comments expressed difficulties with low-quality,

unreliable internet service or a complete lack of service to their home. This speaks to the existing goals of WVDED's BEAD program. Any unserved or underserved commenters who have made their location clear to WVDED have been noted and will be eventually served in the implementation phase.

One commenter expressed worry that BEAD deployment would not reach rural areas. WVDED is aware that many rural areas suffer from inadequate infrastructure deployment and made sure to factor their needs into BEAD funding prioritization strategies. The goal to achieve "broadband for all" in West Virginia has always extended to those in rural areas. Those seeking further information on the State's deployment prioritization can find it in Section 4: Subgrantee Selection Process of this Initial Proposal Volume 2 and Section 5.2 of West Virginia's BEAD Five-Year Action Plan.

One commenter raised the issue that quality infrastructure designed without sufficient capacity may still fail to serve the people in its area. Infrastructure capacity issues were found to be a significant barrier during WVDED's Digital Equity outreach, oftentimes causing ISPs to impose restrictive data caps on their customers. The requirements included in Initial Proposal Volume 2, especially the focus on end-to-end fiber, will address issues related to sufficient bandwidth and in turn reduce service provider reliance on data caps.

One commenter recommended alternative strategies for meeting West Virginian needs: Wireless Internet Service Provider (WISP) deployment and the creation of a "free Wi-Fi initiative." As required by NTIA, WVDED cannot prioritize WISP technology over fiber in its BEAD activities. However, WISP could have effective supplementary applications and WVDED is encouraging entities, especially CAIs, to deploy free Wi-Fi access points.

Education and Workforce

WVDED received six comments pertaining to education and workforce issues. These comments focused on the topics of apprenticeships, wage requirements, workforce scoring criteria, and the importance of broadband for students of all ages.

Three comments requested the requirement of Davis Bacon and Prevailing Wage standards. WVDED has already included these standards, as required by NTIA, in Initial Proposal Volume 2. See Section 7 for details.

Two comments requested the requirement of federally registered and approved apprenticeship programs. WVDED considered the value of employing federal programs to design an effective "skilled workforce" requirement. It determined that, while effective for ensuring a skilled workforce, requiring the use of workers who have undergone training through federally approved programs may prove overly restrictive for a project of such grand scale and potentially excludes other programs that offer an equal quality of training. Additionally, WVDED's outreach to relevant industry entities prefer to train their own workers, at least in part, and do so successfully. WVDED's strategy is designed to ensure that workers are appropriately skilled while minimizing barriers to field entry and as such it requires that subgrantees employ a credentialed workforce, provide certification of a project labor agreement, and detail their plans to ensure the project has ready access to a supply of appropriately skilled labor throughout the life of the project. For details on WVDED's BEAD labor standards, see Sections 4 and 6 of this Initial Proposal Volume 2.

Two comments acknowledged the importance of quality internet service for the educational needs of West Virginians. WVDED is proud to work with numerous partners to support West Virginia students and agrees that the forthcoming infrastructure deployment will provide tremendous benefits for scholars of all ages.

Two comments proposed workforce-oriented revisions to the scoring process. Both comments suggest that “Compliance with Fair Labor Practices” should account for a larger portion of the potential score. Workforce issues such as fair labor practice adherence and alignment with WVDED’s workforce initiatives are also reflected in two categories: “Compliance with Fair Labor Standards” and “Community Impact.” The combined points total for these categories is 45 for priority projects and 40 for non-priority projects. WVDED has clarified this overlap by adding text to Text Box 2.4.2. Furthermore, WVDED includes many labor and workforce requirements as pass/fail conditions of participation in the program.

One comment expressed concern that the budget allocation for workforce needs would prove inadequate to satisfy West Virginia’s workforce needs. This comment’s main point rests upon the assumption that West Virginia’s BEAD Program only has \$50 million allocated for workforce development, per the Initial Proposal Volume 2. This is not the case. The \$50 million noted in the non-deployment funding waterfall table only includes a portion of the total funds that may be used for these efforts. After WVDED completes the deployment portion of the BEAD program—which NTIA prioritizes—it will consider allocating additional funds to non-deployment efforts with the remaining funds.

Affordability of Internet Service

Two commenters noted that they perceive many internet service plans available in West Virginia to be overpriced for their quality. WVDED is aware that it can be a struggle for some to afford their internet service plan. It is already a goal of West Virginia’s BEAD and Digital Equity Plans to lessen the burden of internet service affordability. See Section of West Virginia’s Digital Equity Plan for details on the plan to make internet service more affordable.

Other

WVDED received eight comments that either did not fit into a category, stood alone in its topic, or addressed something outside the scope of the Initial Proposal Volume 2.

Three comments did not make suggestions but instead offered their approval for this Initial Proposal Volume 2. These comments did not affect the Initial Proposal Volume 2’s text. WVDED is proud to serve West Virginia, and thanks these individuals for their positive feedback.

Three comments made offers for collaboration to WVDED. These comments did not affect the text of the Initial Proposal Volume 2. WVDED appreciates the interest and will reach out if it is determined that partnership is the most viable and effective option for accomplishing a BEAD goal.

One comment expressed apprehension toward the widespread proliferation of broadband internet service. As stated by the NTIA, access to the internet plays a critical and growing role in American work, education, health care, and democracy. The BEAD Grant Program has presented a monumental opportunity to expand the benefits of these fields to people who have historically faced larger barriers in accessing them. Put simply, access to broadband connections will significantly increase the quality of life for many West Virginians. Of course, all individuals are free to decide whether they want to take advantage of this opportunity or abstain.

One comment was concerned with infrastructure resilience. This individual claimed to have experience with broadband infrastructure that was unable to provide quality service due to being in a state of disrepair, so they wanted to ensure WVDED has measures in place to keep deployed infrastructure working into the future. In addition to providing standards for infrastructure deployment, WVDED awards points to projects that demonstrate further resiliency and scalability in its scoring phase. See Section 11 and A.1 in the appendix for details on the plan to ensure infrastructure resilience.

17.2 Industry, Advocacy Group, and Delegate Comments

17.2.1 Requirement 8: Deployment Subgrantee Selection

Project Creation

Five comments recommended removal of the concept of Target Areas and Regions, elaborating that they believe applicants would be best off designing their own project areas independently. These commenters also cite a worry that the Target Areas and Regions condition will encourage “breaking up projects across Target Regions.” This appears to be a misconception. As detailed in West Virginia’s Deployment Program Procedures, Target Areas cannot be broken up across Target Regions. If an applicant includes a Target Area within a Target Region, they must also include all other Target Areas within the Target Region. Furthermore, the Target Areas and Regions condition is designed to ensure that BSLs are not left out of independently designed projects.

Two commenters were concerned about mixed-use technologies, requesting clarification whether non-priority projects count as disqualified. Non-priority projects are not disqualified; however, per NTIA requirements, priority (end-to-end fiber) projects receive priority. WVDED has amended Text Box 2.4.2 to clarify that projects proposing a mix of priority and non-priority technologies will be ranked as non-priority.

One commenter was concerned about Multi-Dwelling Units (MDUs), recommending measures to ensure that subgrantees adequately serve all MDUs in a BSL. WVDED acknowledges the importance of ensuring service to MDUs and has added a requirement to Text Box 2.4.1 that applicants certify that they will adequately service all MDUs within their awarded projects.

One comment sought clarification on the definition of “adjacent” in the context of mandatory line extensions should some Target Regions not receive proposals. In Text Box 2.4.7, WVDED has removed the reference to “adjacent” and added text clarifying the factors that it will use to determine how line extensions may be assigned.

Match Requirement

One commenter suggested it may be unclear whether the 25% match requirement is based on proposed projects or provisionally awarded ones. While the 25% match requirement applies during the proposed project creation stage, it is enforced once projects are selected for preliminary award. Furthermore, the \$500 minimum match applies regardless of whether the 25% match is met already. WVDED has added clarifying text to Text Box 2.4.17 (b).

One commenter recommended that investment in a utility provider for middle mile should count toward the match requirement. To ensure that match funds are not being overspent on items that are not directly related to serving West Virginians in need of broadband access, WVDED will not permit in-kind match generally. However, it will permit in-kind match for utility partners in limited circumstances, such as “donated” Indefeasible Rights of Use. WVDED has added clarifying language to Text Box 2.4.17 (b) and will include the terms under which such match will be accepted in its published program procedures.

Three comments encouraged WVDED to implement the NTIA’s language from the Notice of Programmatic Waiver issued to modify the Letter of Credit requirement. NTIA’s notice was published after the public comment draft of Initial Proposal Volume 2, so WVDED did not have the opportunity to include it before. As such, WVDED has added reference to this in Text Box 2.4.11 (b).

Scoring

One comment requested that speed to deployment be weighted higher in the scoring rubric. NTIA requires that three quarters of all points go to the Primary Criteria, which does not include this criterion. That leaves 25% of points available for this and any other Secondary Criteria. WVDED is also balancing the needs of local communities by incorporating community support and impact as other criteria, along with speed of network and other technical capabilities. In taking a holistic approach to which criteria can have the greatest positive impact on residents of West Virginia, WVDED has found that the current Secondary Criteria point allocations offer the optimal arrangement. While speed to deployment is extremely important, many of the delays associated with it are outside of the control of service providers, such as those related to permitting and pole attachment; WVDED is already addressing the former by supporting local governments in expediting their permitting processes. Once those factors are accounted for, WVDED has found that it is highly unlikely to deploy faster than 18 months. Conversely, community support and community impact empower local communities to have a greater effect on the deployment of infrastructure and will create longer-term change. As such, WVDED has modified the speed to deployment criterion to encourage faster deployment but has kept the point allocations the same.

Six comments wanted to make further changes to the scoring rubric, either raising or lowering criteria. The explanation in the above paragraph also accounts for these comments. WVDED is balancing the needs of local communities by incorporating community support and impact as other criteria, along with speed of network and other technical capabilities. It benefits West Virginians most to leave the rubric balanced as is.

One comment recommended removing open access as a component of resiliency and scalability. The varied definitions of open access and difficulties presented in developing a definition that can apply to all potential network designs and business considerations appears to outweigh the potential benefits of including this in the criteria. As such, WVDED has removed this component.

One comment notes that the speed of network and other technical capabilities category is designed to be for non-priority projects, but the actual criteria are not suited for non-fiber deployments. Right now, they only award points for networks scalable to 1/1 Gbps for non-CAI BSLs, which is not viable for almost any non-fiber projects. As such, WVDED has modified this criterion to accommodate non-priority projects by awarding five points to projects expected to be scalable to speeds of 500/20 but less than 1 Gbps / 35 Mbps and 10 points to projects expected to be scalable to speeds of at least 1 Gbps / 35 Mbps—both must have BEAD-defined low latency.

Mobile Coverage

Two comments recommended encouraging the deployment of mobile service as either a method of satisfying resiliency requirements or a method of earning community impact points. WVDED has found that increased mobile deployment across the State would provide a dual benefit of increasing resiliency and providing greatly needed mobile coverage for potentially thousands of residents. As such, WVDED has modified the scalability and resiliency criteria to provide credits for applicants that will deploy—in parallel to end-to-end fiber—mobile service infrastructure.

Financial Details

Two comments suggested that the Initial Proposal Volume 2's requirements for applicant financial details were extensive beyond what the NOFO recommends and should be simplified. The financial requirements in the Initial Proposal Volume 2 are designed to fully ensure that prospective subgrantees can meet the General Qualifications detailed on page 71 of the NOFO. The requirements adhere to the NOFO and alternatives, also in line with the NOFO, are provided for applicants who feel they cannot meet the core requirements.

One comment requested removal of the pre-application pro forma requirement, noting worry that the financial "stress tests" pose extra work for applicants. The financial "stress tests" are not performed by the applicant, but by WVDED and its partners. The applicant's only obligation on this front is to provide WVDED with the information it requests. This comment also suggested that the financial requests related to applicant submissions to other programs is inappropriate. This requirement is in line with the BEAD NOFO.

Labor Practices

Two comments identified that the condition of prioritizing hiring local workers is not required by NTIA. They also note that many of the labor requirements included by WVDED are considered optional by NTIA and therefore should be considered for removal. Upon review, WVDED has decided to amend this section to reduce unnecessary burden on applicants and comply with State laws.

High Cost Threshold

Two commenters suggested that WVDED either raise or lower the Extremely High Cost Threshold. WVDED's "floating" approach to the Extremely High Cost Per Location Threshold is designed to prioritize fiber technology to the greatest extent feasible. Additionally, considering the "priority vs. non-priority" system and the ability for applicants to revise their project costs, there are sufficient qualifiers in place to ensure the best technologies are deployed.

Grant Distribution

One commenter recommended that WVDED structure its grant distribution processes to reimburse subgrantees on a monthly or quarterly basis. This was not disallowed in the previous draft of Initial Proposal Volume 2, but WVDED has clarified applicants may make requests for monthly reimbursement and that WVDED will work with applicants to determine what method of grant distribution, within the parameters of reimbursement, are most viable for their project.

Build America Buy America

One commenter recommended West Virginia require BEAD grant applicants to select all non-waived products from the NTIA list of vendor compliant Buy America products for ease of Buy America compliance verification. WVDED is already in the process of planning a Build America Buy America assessment to be

included with all project applications. The specific recommendation cannot be made because it may place an unassessed burden on applicants and has not been reviewed or discussed by NTIA.

Workforce Scoring Rubric

One comment expressed concerns that the Credential of value is overweighted in the rubric and suggests participant program completion be a higher priority. Based on this comment and feedback from NTIA and other partners, WVDED has amended the point distribution system and provided more specific criteria.

17.2.2 Requirements 16 & 20: Low Cost Broadband Option and Middle Class Affordability

Four comments expressed concern about the maximum price of a middle-class plan for which points will be received, for how long applicants must offer such a plan, and the ability to make reasonable price increases. In an effort to support the potential future subgrantees, and in close discussion with NTIA, WVDED has modified the Deployment Scoring Rubric and Text Box 2.13.1 to better accommodate the needs of West Virginia residents. These changes include creating two categories of plans that can earn points for non-CAI Target Locations: 100/20 Mbps and 1/1 Gbps. Furthermore, it has modified the benchmark prices to align with the FCC's 2% of average income benchmark and provided clarification on the conditions under which these plans must be provided.

Four comments focused on the Low Cost Plan, expressing concerns about who is eligible for this plan, how long applicants must offer it, the ability to make reasonable price increases, and the proposed cost of the plan. For similar purposes as the modifications to the middle-class affordability section, WVDED has modified the Low Cost Plan included in Text Box 2.12.1.

One comment identified that the speed requirements for both the middle class and low cost affordability plans require that the proposed speeds be met for 95% of tests, however the NTIA guidance for speed testing suggests adhering to the 80/80 metric. WVDED agrees that the speed testing requirement should match NTIA's recommendation and it has made the appropriate modifications to Text Box 2.12.1.

17.2.3 Requirement 19: Certification of Compliance with BEAD Requirements

Three comments proposed plans and consequences for ensuring that projects are completed in compliance and on time. Suggestions included withholding funds, ensuring projects stick to projections, and the creation of a checklist to determine when projects can be considered successful. Fund withholding is already a non-compliance consequence built into the Initial Proposal Volume 2, see item b. of 2.16.2 Text Box. The initial proposal also already requires compliance reporting on a regular basis, see Section 16 for details. These reports will be used to determine whether the project is on track for efficient completion. Regarding the suggested checklist, WVDED is in the process of designing its field review report for BEAD projects. The checklist will be factored into this report if it is found to be the most viable method of ensuring compliance.

17.2.4 General

Confidentiality

One comment requested protections for applicant and subgrantee proprietary and confidential information. It has always been WVDED's intention to protect the privacy of BEAD applicants and subgrantees to the greatest extent allowed under West Virginia law. All of WVDED's partners are subject to non-disclosure agreements. The text has been modified to clarify this.

Clarifications

One commenter provided a list of suggested informative clarifications. WVDED has added some of the requested clarifications to Text Boxes 2.4.5, 2.4.11, and 2.4.15 and the Requirement 12 introduction.

Miscellaneous

One comment recommended clarifying the use of the word "may" as this commenter felt the language was too permissive and created ambiguity. The uses of the word "may" in Initial Proposal Volume 2 were often intentional: each instance either sets up a concept to be further developed in the Program Procedures documents or indicates a possible outcome to be decided at WVDED's discretion and after NTIA's approval of the Initial Proposal. That said and where possible, WVDED has amended many of these to make them more definitive.

One comment suggested West Virginia should use some BEAD funding to expand the alternative timing solution known as the Nationwide Integration of Timing Resiliency for Operation (NITRO). WVDED already has plans to ensure infrastructure resiliency in place.

One comment recommended adding language to raise the bar for challenges made through the challenge process on the grounds of Planned Service. These measures have already been taken in Initial Proposal Volume 1's Appendix A.

Appendices

A.1 Deployment Subgrantee Select Rubric

Minimal BEAD Program Outlay	Max points	
Category: Primary	Priority: 100	Non-priority: 100
<p>The difference between zero and the sum of the CostQuest Associates FTTH Greenfield deployment NPV estimates for all of the Target Locations contained within a Proposed Project equals the expected total BEAD program outlay. If the expected total BEAD program outlay is less than or equal to zero—meaning the aggregate NPV was positive—WVDED will consider the expected total BEAD outlay for the Proposed Project to be \$0. Therefore, the minimum expected total BEAD outlay is considered to be \$0.</p> <p>WVDED will then divide the total BEAD funding that the applicant requests by this calculated expected total BEAD outlay to establish a percentage figure. WVDED will then assign points for this category as follows: Projects falling below 50% of the expected BEAD outlay will be rounded to 50%; projects falling above 150% of the expected BEAD outlay will be rounded to 150%. For every percentage point less than 150%, one point will be awarded, up to and including 50%. If the expected total BEAD outlay for the Proposed Project is \$0, WVDED will award the full 100 points to applicants that request \$0 of BEAD funding for the Project and zero points to applicants that request any amount of BEAD funding for the Project.</p> <p>As an example, if the sum of the CostQuest Associates FTTH Greenfield deployment NPV estimates for all of the Target Locations in a Proposed Project equals -\$1,000,000 (i.e., negative \$1,000,000), and an applicant proposes a total BEAD funding amount of \$750,000, then the resulting percentage will be $\\$750,000 / \\$1,000,000 = 75\%$. The applicant will then earn $150 - 75 = 75$ points for the Proposed Project. If the applicant proposed a total BEAD funding amount of \$450,000, the percentage would be 50% because the original percentage of $\\$450,000 / \\$1,000,000 = 45\%$ would be rounded to 50%, as described above. In this case, the applicant would earn $150 - 50 = 100$ points for the Proposed Project.</p> <p>Projects demonstrating resiliency and scalability, as defined by WVDED, may have their average grant cost per Target Location reduced for the purposes of evaluation by up to \$2,000. WVDED will determine the specific amount based on the rubric covered in Appendix A.3. Only priority projects are eligible for this credit. As an example, consider a Proposed Project for which the sum of the CostQuest Associates FTTH Greenfield deployment NPV estimate is -\$1,000,000 (i.e., negative \$1,000,000), the applicant's proposed total BEAD funding amount is \$750,000, and the number of Target Locations in the Proposed Project is 150. Note that this would result in an original average BEAD funding amount per Target Location of \$5,000. If an applicant demonstrates sufficient scalability and resiliency to earn a credit of \$2,000 then the average BEAD funding amount per Target Location will be reduced for evaluation purposes by \$2,000 resulting in an average cost per Target Location of $\\$5,000 - \\$2,000 = \\$3,000$. Applied to all 150 Target Locations, this would result in total BEAD funding amount of $\\$3,000 \times 150 = \\$450,000$. Using this new total BEAD funding amount for evaluation purposes, in the same manner described earlier, the resulting evaluation percentage would be $\\$450,000 / \\$1,000,000 = 45\%$. It would then be rounded to 50% as described above, resulting in the Proposed Project earning $150 - 50 = 100$ points.</p>		

WVDED will provide guidance ahead of the pre-application phase for what demonstrations of resiliency and scalability, beyond those already required by the program, will qualify applicants for either of these deductions.

Explanation for Why NPV is Used and How it Correlates to Match

In general, the NPV, or net present value, of a project represents the difference between the present value of a project's cash inflows and the present value of its cash outflows over a period of time. A negative NPV means there is not a sufficient return on investment to cover the costs of a project, a zero NPV means the project breaks even, and a positive NPV means there is a positive return on investment. As such and in the context of this program, the difference between zero and CostQuest Associates FTTH Greenfield deployment NPV estimates for all of the Target Locations contained within a Proposed Project represents the amount of additional cash inflow needed to make a given Project economically viable. If, for instance, a Project has an NPV of -\$500,000 (i.e., negative \$500,000), then the applicant would need \$500,000 in present-day cash to break even on it. If the NPV is zero or positive, then the Project already breaks even or is profitable, respectively.

As demonstrated in the preceding paragraph, the CostQuest NPV provides an educated estimate of the minimum additional capital that an applicant would require to make a given Project economically viable. Per the methodology in this criterion, WVDED compares the total amount of BEAD funding requested by the applicant to the CostQuest NPV. This answers: What percentage of the expected needed capital is the applicant requested?

To demonstrate how this methodology incentivizes applicants to increase their match, we will build on the example of a Project with a CostQuest NPV of -\$500,000 (i.e., negative \$500,000). In this example, consider that the total Project cost—including both match and the requested amount of BEAD funds—is equal to \$1,000,000. If the applicant were to match 25% of the total Project cost, it would match \$250,000 and request \$750,000 of BEAD funding. Using the comparison methodology discussed in the previous paragraph and earlier in the criterion methodology, this would mean it is requesting 150% (i.e., \$750,000/\$500,000) of the estimated minimum additional capital that it requires to make the Project economically viable. This would earn the applicant $150 - 150 = 0$ points. If the applicant were to instead match 50% of the total Project cost for \$500,000, then it would only be requesting \$500,000 in BEAD funds. The applicant requesting \$500,000 in BEAD funds equates to it requesting 100% (i.e., \$500,000/\$500,000) of the estimated minimum additional capital that it requires to make the Project economically viable, therefore earning it $150 - 100 = 50$ points. Thus, applicants are incentivized to increase match to earn more points in this criterion.

Affordability	Max points	
Category: Primary	Priority: 25	Non-priority: 25
Applicants seeking points from this criterion shall submit the prices for plans that they plan to offer all residential Target Locations in their Target Areas. Affordability will be evaluated using the price of 1/1 Gbps service for Priority Projects and 100/20 Mbps service for Non-Priority Projects.		
These plans must have no data cap or data overage charges, inclusive of all fees, taxes, and charges. Furthermore, applicants must certify that they will adhere to the following rules for these plans:		
<ul style="list-style-type: none"> • The plan must be offered for ten years from service turn-up; • The latency for these plans must not exceed 100 milliseconds; 		

- WVDED will permit annual price increases commensurate to year-over-year changes in the Consumer Price Index for All Urban Consumers: All Items Less Food & Energy (also known as Core CPI) as defined by the U.S. Bureau of Labor Statistics; and
- WVDED will permit cost changes due to new or increased government mandated taxes and feed imposed on the consumer, not providers.

These prices shall be rounded by WVDED to the nearest whole number (e.g., \$65.99 would be rounded to \$66 for the purposes of this calculation). WVDED shall award points according to the following schedule:

- Priority Project Scoring: One point for every \$2 below \$115 per month for plans offering 1/1 Gbps or better (max 25 points)
- Non-Priority Project Scoring: One point for every \$2 below \$85 per month for plans offering 100/20 Mbps or better (max 25 points)

For details on how WVDED arrived at the benchmark rates, see Section 13.

Compliance with Fair Labor Practices	Max points	
Category: Primary	Priority: 25	Non-priority: 25
Applicants shall be awarded 25 points by WVDED for demonstrating a track record of Fair Labor Practice compliance.		
Applicants without a demonstrated track record of Fair Labor Practice compliance shall be awarded up to the full 25 points based on WVDED's determination of the strength of their Fair Labor Practice compliance plan.		

Speed to Deployment	Max points															
Category: Secondary	Priority: 15	Non-priority: 10														
To qualify for any points in this section, applicants must commit to providing WVDED its final network design(s) within six months of award.																
In addition to the above requirement, WVDED shall award points to projects that have a credible plan to deployment for the timeframes listed in the below schedule. Note that WVDED will exclude periods of expected delay, as defined by WVDED, such as those related to pole attachment approvals, design approval, federal environmental clearances, and other tasks to be outlined in program procedures.																
<table border="1"> <thead> <tr> <th rowspan="2">Timeline for deployment (less than or equal to)</th><th colspan="2">Points</th></tr> <tr> <th>Priority</th><th>Non-priority</th></tr> </thead> <tbody> <tr> <td>18 months</td><td>15</td><td>10</td></tr> <tr> <td>24 months</td><td>10</td><td>7</td></tr> <tr> <td>36 months</td><td>5</td><td>5</td></tr> </tbody> </table>			Timeline for deployment (less than or equal to)	Points		Priority	Non-priority	18 months	15	10	24 months	10	7	36 months	5	5
Timeline for deployment (less than or equal to)	Points															
	Priority	Non-priority														
18 months	15	10														
24 months	10	7														
36 months	5	5														

Demonstrated Community Support	Max points	
Category: Secondary	Priority: 15	Non-priority: 10

Applicants should demonstrate that their project has community support. Support may be shown in multiple ways, such as active partnerships, planning, or financial support, but at a minimum must be a formal expression of support from the leadership of the proposed communities.

As an example, projects with a formal expression of support from the leadership of the proposed communities served will be awarded five points. Applicants which have obtained a meaningful financial contribution, as determined by WVDED, from proposed communities to be served shall be awarded an additional five points.

Community Impact		Max points	
Category: Secondary		Priority: 20	Non-priority: 15
<p>WVDED intends to prioritize projects with high community impact. Factors that contribute to high community impact include:</p> <ul style="list-style-type: none"> • The project would provide service that supports a major economic development initiative identified by a regional planning or development council or economic development authority, or the project supports or implements a recent broadband planning initiative in a county or region (5 points) • The project participates in or otherwise supports WVDED and/or other State of West Virginia workforce development initiatives, including equitable workforce development and job quality. (5 points) • The Target Area's location in an area of low or moderate income, high poverty, high unemployment, or economic distress. (3 points) • The project supports a credible plan to increase broadband adoption and improve digital literacy in the affected communities, especially among populations that have experienced inequities in access to work, education, and health care or health information. (3 points) • The project is coordinated with or builds upon other, nearby non-BEAD deployment projects that will provide regional benefit. (3 points) • The project has strategic partnerships involved in the proposed Target Area(s), for example, electric utilities, universities, and federal, state, or local agencies. (3 points) • The project supports adopted state plans or priorities not otherwise addressed by other prioritization factors. (3 points). <p>No more than the maximum number of points shall be awarded under this criterion. For instance, if a priority projects is scored to receive 25 points under these community impact formulae, then it shall be awarded the maximum available number of 20 points.</p>			

Speed of Network & Other Technical Capabilities		Max points	
Category: Secondary		Priority: NA	Non-priority: 15
<p>WVDED shall award 5 points to projects with a demonstrated useful life for major components greater than 8 years.</p> <p>WVDED shall additionally award 5 points to projects expected to be scalable to speeds of 500/20 but less than 1 Gbps / 35 Mbps, and it shall award 10 points to projects expected to be scalable to speeds of at least 1 Gbps / 35 Mbps—both must have BEAD-defined low latency.</p>			

A.2 Examples of Climate-Related Considerations

Flood Prone Areas:

Building in areas that are prone to flooding presents a unique challenge when trying to preserve the longevity and usefulness of a network asset. While weighing the factors that could put an asset at risk, planning and taking the appropriate measures will ensure that this asset has a prolonged life span. The following lists considerations that should be taken into account when planning to deploy in flood prone areas.

1. Consult the regional hazard mitigation plan and local authorities to identify any known problem areas within the Regional Planning Districts.
2. Review West Virginia Flood Map to identify if any unserved, underserved, or CAI falls within a FEMA defined Special Flood Hazard Area (SFHA)
3. Have an emergency preparedness plan in place to deploy resources before and after a major rain event.
4. Consult FEMA P-348, Edition 2 – Protecting Building Utility Systems from Flood Damage.
5. Perform hydrological survey to determine the best course of action for building constructing new infrastructure.
6. Identify higher areas on the flood plain when possible, for route planning.
7. Deploy buried infrastructure.
 - a. When deploying manholes or handholes, plan for drainage to expedite water draining, install covers that can be tightly sealed during flood events, and use non-corrosive materials.
 - b. Ensure conduits are water-resistant, and where conduits penetrate vaults, handholes, buildings or risers, the proper seal must be used to prevent water infiltration.
8. Anchor and Harden Infrastructure.
 - a. Foundations need to provide stability to withstand hydrological flow pressures.
 - b. Use concrete footings that are the correct size and depth to prevent movement.
 - c. Reinforce bases with steel or composite materials to enhance their strength and resistance to water movement.
 - d. When using tie downs. Implement a system that connects to nearby structures or anchor points to prevent movement.
9. Consider the following when deploying electrical components:
 - a. Install at a height recommended per local zoning regulations and guidelines.
 - b. If a component is installed outdoors or has the potential to be submerged in water, please ensure that the components are placed in a waterproof enclosure or cabinet.
 - c. When possible, choose electrical components that are rated for flood prone environments.
 - d. If components are exposed to flood waters, please use NEMA rated 6 or 6P type enclosures if possible.
10. Consider the following when deploying cabling or passive components:
 - a. Fiber optic cabling and other water-resistant materials are preferred.
 - b. Redundant pathways need to be built in and out of the flood area.
 - c. Use IP68 rated connectors and components.

11. Consider the following when deploying buildings, communication huts, or tower locations:
 - a. Building on higher ground is preferred.
 - b. If the building is constructed in or near a flood area, dry floodproofing measures need to be implemented to protect equipment and cabling.
 - c. Risers need to be installed on the most sheltered side of the building, on the downstream side of columns, pilings, and posts.
 - d. Enclose cabling in conduits to prevent damage from water.
 - e. Surround racking, equipment, and generators with dry flooding measures such as raised flooring.
 - f. Install electrical wiring using corrosion-resistant raceway systems that facilitate replacement of conductors exposed to flooding.
 - g. Electrically isolating components installed in areas subject to flooding from components at higher elevations.
 - h. Installing separate branch circuits or feeders that are isolated from the rest of the electrical system and protected using ground fault circuit interrupters (GFCIs).
 - i. Use non-corrosive materials.

Landslide Mitigation

When constructing new infrastructure in areas prone to landslides it's important to evaluate and plan out the potential risks and threats to the newly constructed network assets. By taking the necessary precautions, this will significantly diminish the impact of these risks, thus ensuring the resilience and longevity of the constructed infrastructure. Below are some high-level recommendations made by WVDED.

1. Consult the regional hazard mitigation plan and local authorities to identify any known problem areas within the Regional Planning Districts.
2. Review West Virginia Flood Map Landslide layer to identify the following:
 - a. Unserved, Underserved, or CAI location that fall nearby landslide activity areas.
 - b. Cabling routing of new infrastructure nearby landslide prone areas.
3. Develop an emergency response plan.
 - a. Set up a list of personnel, processes, and procedures that allow your team to quickly act in the event of a landslide event.
 - b. Conduct regular trainings to ensure team members are prepared and can act.
 - c. Establish contingencies to reroute network traffic and service disruptions to prevent extended outage windows.
4. Consult with geotechnical engineering and planning personnel about the following to come up with cost effective measures for more resilient infrastructure:
 - a. Native vegetation placement
 - b. Drainage improvements such as installing permeable membranes.
 - c. Slope stabilization practices such as retaining walls and lessening slopes.
 - d. Debris removal.
 - e. Design foundations that can withstand ground movement and ensure stability.
5. Constructing redundant routes to mitigate major outages.

Snowstorm / Ice Mitigation

Snowstorms are a common occurrence within the State of West Virginia. With warming temperatures ice might become an emerging threat to infrastructure as the weather transition between snow/sleet and ice begins to creep north. Below are some high-level recommendations made by WVDED.

1. Consult the regional hazard mitigation plan and local authorities to identify any known problem areas within the Regional Planning Districts.
2. Develop an emergency response plan.
 - a. Set up a list of personnel, processes, and procedures that allow your team to quickly act.
 - b. Conduct regular trainings to ensure team members are prepared and can act.
 - c. Establish contingencies to reroute network traffic and service disruptions to prevent extended outage windows.
 - d. Have adequate spare parts, tools, and personnel to address outages.
 - e. Ensure that you have adequate backup generators and fuel to restore services.
3. Establish preventive maintenance plans.
 - a. Perform vegetation maintenance to prevent overgrowth from impacting the infrastructure.
 - b. Conduct regular inspections of the OSP plant to ensure infrastructure is in good standing:
 - i. Check to make sure cable plant is not sagging and pole attachments are secure to poles.
 - ii. Inspect cables and conduits for any vulnerabilities.
 - iii. Wireless components are secure to towers or poles and that there is no signs of damage or corrosion.
4. All aerial plant must be constructed utilizing the latest version NESC parameters. The plant should meet or exceed the current standard.
5. Proper insulation must be used on any cabinets or building sites.
6. De-icing treatments can be used on critical infrastructure.
7. Tower infrastructure must be reinforced to withstand heavy loading and extreme ice.

A.3 Resiliency and Scalability Credits

WVDED will assess whether Proposed Projects demonstrate sufficient scalability and resiliency to earn a reduction on average grant cost per Target Location according to the method detailed in this section. Applicants proposing an end-to-end fiber technology will receive credits for four categories of assessment and according to how well resiliency and/or scalability are demonstrated in each. The categories are:

- Technology,
- Network Topology,
- OSP Design, and
- Capacity Design.

As an example, networks that comprise 80% or more of technology components listed in the associated “Best” category will be awarded three credits.

At the end of the assessment, WVDED will combine the total number of credits and will then reduce the average grant cost per Target Location by a specific amount.

Category	Scoring Criteria and Definitions		
Technology	Projects will earn up to three credits according to the following schedule:		
	% of network using this level of components		Category credit
	Best	Good	
	>= 80%	=< 20%	3
	>= 50%	<= 50%	2
	< 50%	>= 50%	1
	< 50%	< 50%	0

Best

- Fiber: Active ethernet
- Fiber: XG-PON, XGS PON and NG-PON or better.
- Fiber: 10G EPON and NG-EPON or better

Good

- GPON
- EPON

Applicants that include in their applications agreements with third parties for wholesale transmission capacity will be awarded all three category credits from this criterion if they also commit to the following:

- infrastructure in Target Areas with CAIs must include at least one interconnection point that is within 500 feet of each CAI; and
- infrastructure in all Target Areas must include at least one interconnection point for each segment of no more than 0.5 route miles that is within 500 feet of a road that is classified by the U.S.

Department of Transportation as either a collector road or non-controlled access arterial road.

Network Topology	<p>Networks that are designed using a topology listed under Best will earn three credits. Networks designed using a topology under Good will earn two. Projects with topologies that fall outside of these Good and Best will earn zero credits.</p> <p><u>Best</u></p> <ul style="list-style-type: none">• Horseshoe (Rainbow) – Node / Cabinet is connected by two separate paths, but each path goes back to a different Hub/ POP.• Mesh – Node / Cabinet has multiple paths with different technologies all leading back to a Hub / POP. <p><u>Good</u></p> <ul style="list-style-type: none">• Ring – Node / Cabinet is connected two separate paths that lead back to the same Hub / POP
OSP Design	<p>Projects that meet all the criteria listed under Good and Best will earn three credits. Projects that meet all the criteria under Good and some under Best will earn two credits. Projects that meet either some of the Best but none of the Good or all of the Good criteria will earn one credit. All others will earn zero.</p> <p><u>Best</u></p> <ul style="list-style-type: none">• Design for future growth and scalability. This includes deploying spare capacity in the fiber cable, handholes and vaults, and equipment. It also includes using a distributed split architecture and deploying multiple distribution points.• Use redundant equipment and systems. This ensures that the network can continue to operate even if there is a failure in one part of the system.• Use high-quality materials and construction methods. This will help to ensure the long-term reliability of the network. <p><u>Good</u></p> <ul style="list-style-type: none">• Follow industry best practices. This will help to ensure that the network is designed and built correctly.• Use appropriate technologies for the specific needs of the network. This includes factors such as the type of traffic that will be carried on the network and the distance that the network needs to span.• Consider cost-effectiveness. It is important to design a network that is affordable to build and operate.
Capacity Design	<p>Projects that meet all the criteria listed under Good and Best will earn three points. Projects that meet all the criteria under Good and some under Best will earn two credits. Projects that meet either some of the Best but none of the Good or all of the Good criteria will earn one credit. All others will earn zero.</p> <p><u>Best</u></p>

- Deploying high-density fiber with spare capacity
- Building spares for long haul and short haul portions of the network
- Using a distributed split architecture to serve the local area
- Deploying redundant power systems to maintain uptime on the network
- Using low split ratios to allow for future grow

Good

- Deploying single mode loose tube or ribbon fiber.
- Using a cascaded split architecture to serve the local area.
- Deploying multiple distribution points to ensure available capacity when needed.

Applicants proposing an end-to-end fiber technology plus new mobile coverage that can supplement the fiber service during severe weather and disasters in Target Areas currently lacking access to 3G service may also receive credits. Applicants who do not propose end-to-end fiber to all Target Locations in a proposed project may not receive these credits. Proposed new mobile service must supplement, not substitute for proposed fiber service. WVDED will identify Target Areas eligible for these credits prior to application. Applicants may receive credits for commitments to achieve new mobile wireless coverage in the eligible Target Areas if Target Locations in the eligible Target Areas represent at least 50% of the Target Locations in the proposed project.

WVDED will base the number of credits on the level of coverage commitment that the applicant makes at the time of application. The minimum coverage commitment that an applicant must make to be eligible for credits is 40% of the Target Locations in the eligible Target Area, which earns 1 credit. One additional credit may be earned for each 5 percentage points of additional coverage commitment. At the time of application applicants must present a high-level design and propagation prediction sufficient to achieve the proposed coverage commitment. However, awardees who have made such a commitment must demonstrate achievement of the commitment at completion of construction through drive testing using commonly-deployed consumer handsets showing 4G or better service with speeds at or exceeding 25/3 Mbps at Target Locations, or the nearest point on the road serving Target Locations. Predicted coverage is not sufficient to demonstrate compliance. Networks deployed must be scalable to 5G service.

To be eligible for credits based on mobile coverage commitments, towers must be outfitted with fiber for backhaul. Fiber connections must be survivable redundant deployments to support multiple tenant traffic. Survivable redundant fiber provides a durable connection to the tower site with at least two paths from the site to the local transit aggregation point. If the tower site does not initially use fiber backhaul, the tower must be located within 1000 feet of a fiber access node.

Awardees making coverage commitments must provide not less than 80% of the new coverage from towers meeting the following scalability and resiliency standards:

- Attachable Space/Tower Height – funded towers serving wireless deployments (including fixed wireless technologies) shall be designed to support multi-tenant attachments. The tower must provide at least 60 feet of vertical space to be used by additional tenants above the minimum tower height necessary for the funded service. The attachable tenant envelopes within the

vertical space must be at least 10 feet. Best practice should provide 15 feet of vertical space for attachable tenant envelopes.

- Structural Integrity – towers must be constructed from galvanized steel poles anchored to structural concrete pads. Both tower and foundation must be designed for wind load standards of 40 Kips sq/in for the top attachment and 30 Kips sq/in for the lower three attachments. Structural integrity must be sufficient to support 4 colocators
- Power – sites shall be designed and installed with a 4-gang meter bank with an 800 amp single phase, equivalent to 200 amps for each carrier.
- Tower siting – multi-use towers shall be coordinated with possible tenants to identify appropriate areas for the various users.

Not more than 20% of new mobile coverage may come from smaller infill towers not meeting these standards. This percentage is based on Target Locations reached.

The schedule of discount applied according to the total number of credits earned is listed below.

Total credits earned	Discount applied
8-12	\$2,000
6-7	\$1,500
4-5	\$1,000
2-3	\$500
0-1	\$0

No additional discount is applied for greater than 12 credits.