

Proposed BEAD Alternative Broadband Technology Guidance

The Broadband Equity, Access, and Deployment (BEAD) Program, established by the Infrastructure Investment and Jobs Act (IIJA), provides \$42.45 billion of funding to states, territories, and the District of Columbia (Eligible Entities) for broadband planning, deployment, mapping, equity, and adoption activities. The National Telecommunications and Information Administration (NTIA), as the agency responsible for administering the BEAD Program, issued a Notice of Funding Opportunity describing the program's requirements, including the requirement that each Eligible Entity submit an Initial Proposal describing, among other things, fair, open, and competitive processes for selecting subgrantees. The Extremely High Cost Per Location Threshold is a subsidy cost per location, established by Eligible Entities and utilized during the subgrantee selection process, above which an Eligible Entity may decline to select a proposal for Reliable Broadband Service if use of an alternative technology meeting the BEAD Program's technical requirements would be less expensive.

In response to inquiries from Eligible Entities and other stakeholders, NTIA is proposing to issue:

- A BEAD Alternative Broadband Technology Policy Notice to provide Eligible Entities with additional guidance regarding the use of alternative technologies to serve unserved and underserved locations within their jurisdiction.

NTIA seeks comment from the public on this proposed guidance as well as the issues noted in Appendix A. If you wish to provide comment to NTIA, please submit to **BEAD@NTIA.gov** by **11:59PM ET on September 10, 2024**.

Please note that these are draft documents. Eligible Entities may not rely on NTIA guidance until it is finalized.

DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

Broadband Equity, Access, and Deployment (BEAD) Program: Alternative Broadband Technology Policy Notice

ACTION: Notice

SUMMARY:

The Infrastructure Investment and Jobs Act (Infrastructure Act), enacted in November 2021, includes funding for robust investment in American infrastructure projects. The Infrastructure Act includes the Broadband Equity, Access, and Deployment (BEAD) Program, which provides \$42.45 billion of funding to achieve reliable, affordable, and high-speed Internet coverage throughout the United States. *See* Infrastructure Investment and Jobs Act of 2021, Division F, Title I, Section 60102, Public Law 117-58, 135 Stat. 429 (Nov. 15, 2021). The U.S. Department of Commerce, in keeping with its mission to create the conditions for economic growth and opportunity for all communities, is ready to lead the building of equitable access to universal high-speed Internet coverage in the United States, in partnership with other agencies and Departments.

The National Telecommunications and Information Administration (NTIA), as the agency responsible for administering the BEAD Program, provides herein additional guidance to inform the allocation of BEAD Program funds to projects utilizing an alternative technology that does not meet the BEAD Program's definition of Reliable Broadband Service, but otherwise satisfies the program's technical requirements.

This Policy Notice elaborates on, but does not replace, the BEAD Eligible Entity (States, Territories, and the District of Columbia) requirements outlined in the BEAD Notice of Funding Opportunity (BEAD NOFO or NOFO)¹ that each Eligible Entity must adhere to for the Assistant Secretary of Commerce for Communications and Information to approve its Initial Proposal and Final Proposal.²

Any Eligible Entity that received NTIA approval of Volume II of its BEAD Initial Proposal prior to the publication of this updated guidance and that wishes to modify its Volume II or Initial Proposal Funding Request to reflect this updated guidance should contact its Federal Program Officer for direction.

Version Number: 1.0

Last Modified: 8/26/2024

¹ NTIA, Notice of Funding Opportunity, Broadband Equity, Access, and Deployment Program (2022). Capitalized terms not defined herein will be ascribed the definitions in the NOFO.

² This document is intended solely to assist applicants in better understanding the Broadband Equity, Access, and Deployment (BEAD) grant program and the requirements set forth in the Notice of Funding Opportunity (NOFO) and follow-on policies and guidance for this program. This document does not and is not intended to supersede, modify, or otherwise alter applicable statutory or regulatory requirements, the terms and conditions of the award, or the specific application requirements set forth in the NOFO. In all cases, statutory and regulatory mandates, the terms and conditions of the award, the requirements set forth in the NOFO, and follow-on policies and guidance, shall prevail over any inconsistencies contained in this document.

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1. Policy Notice Background & Purpose

The principal focus of the BEAD Program is to deploy broadband service to all unserved and underserved locations.³ To achieve this goal, funding will support the deployment of a variety of technologies that can satisfy the BEAD Program’s minimum technical requirements of service at speeds of not less than 100 megabits per second (Mbps) for downloads and 20 Mbps for uploads and latency less than or equal to 100 milliseconds.⁴ The BEAD NOFO establishes a clear hierarchy for awarding Unserved and Underserved Service Projects: (1) Priority Broadband Projects (end-to-end fiber); (2) other Reliable Broadband Service projects; and then (3) alternative technology⁵ projects (where the cost to deploy Reliable Broadband Service exceeds the Extremely High Cost Per Location Threshold (EHCPLT) and where the use of an alternative technology would be less expensive).⁶ Where the cost to deploy exceeds the EHCPLT, the BEAD NOFO directs Eligible Entities to seek out “the most robust, affordable, and scalable technologies achievable under the circumstances particular to a location.”⁷ Subject to meeting the requirements outlined in the BEAD NOFO and related guidance,⁸ Eligible Entities may thus fulfill their obligation to serve all unserved and underserved locations within their jurisdiction through the use, in part, of alternative technologies. Examples of alternative technologies include low-earth orbit (LEO) satellite broadband service and unlicensed fixed wireless (ULFW) service.

The purpose of this Policy Notice is to provide Eligible Entities with additional guidance regarding the use of alternative technologies to serve unserved and underserved locations within their jurisdiction.

³ See BEAD NOFO at 7 (May 13, 2022), [BEAD NOFO.pdf \(doc.gov\)](#).

⁴ See Infrastructure Act at Section 60102(h)(4). At minimum, the Infrastructure Act requires subgrantees receiving BEAD funding to provide broadband service that is “at a speed of not less than 100 megabits per second for downloads and 20 megabits per second for uploads; with a latency that is sufficiently low to allow reasonably foreseeable, real-time, interactive applications; and with network outages that do not exceed on average, 48 hours over any 365-day period.” NTIA has interpreted latency sufficient to support real-time interactive applications to mean latency of less than or equal to 100 milliseconds for the reasons articulated by the FCC’s Wireline Communications Bureau in the 2013 Connect America Fund Phase II Service Obligations Order. See also BEAD NOFO n. 17 (citing Connect America Fund, WC Docket No. 10-90, Report and Order, 28 FCC Rcd 15060, 15068-76 paras. 19-38).

⁵ See *infra* Section 2 defining Alternative Technologies as “any broadband access technology that terminates at the end user’s location or premises and does not qualify as Reliable Broadband Service, including ULFW and LEO, but meets the BEAD Program’s minimum technical requirements of speeds of not less than 100 Mbps for downloads and 20 Mbps for uploads and latency less than or equal to 100 milliseconds.”

⁶ See BEAD NOFO at 36-39 and 41. The Extremely High Cost Per Location Threshold “is a BEAD subsidy cost per location to be utilized during the subgrantee selection process described in Section IV.B.7 of the BEAD NOFO above which an Eligible Entity may decline to select a proposal if use of an alternative technology meeting the BEAD Program’s technical requirements would be less expensive.” See also *id.* at 13.

⁷ *Id.* at 39.

⁸ See NTIA, Policy Notice: BEAD Selecting the Most Robust, Affordable, Scalable Technology Policy Notice (June 26, 2024), [BEAD Selecting the Most Robust, Affordable, Scalable Technology Policy Notice | BroadbandUSA \(ntia.gov\)](#).

2. Definitions

The following defined terms in the BEAD NOFO are particularly applicable to this Policy Notice:

- (a) Priority Broadband Project— The term “Priority Broadband Project” means a project that will provision service via end-to-end fiber-optic facilities to each end-user premises.⁹
- (b) Reliable Broadband Service— The term “Reliable Broadband Service” means broadband service that the Broadband DATA Maps show is accessible to a location via: (i) fiber-optic technology; (ii) Cable Modem/Hybrid fiber-coaxial (HFC) technology; (iii) digital subscriber line (DSL) technology; or (iv) terrestrial fixed wireless technology utilizing entirely licensed spectrum or using a hybrid of licensed and unlicensed spectrum.¹⁰
- (c) Underserved Location— The term “underserved location” means a broadband-serviceable location 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; (ii) a speed of not less than 20 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds.¹¹
- (d) Unserved Location— The term “unserved location” means a broadband-serviceable location 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; (ii) a speed of not less than 3 Mbps for uploads; and (iii) latency less than or equal to 100 milliseconds.¹²

NTIA further defines the following term for the purposes of this Policy Notice:

- (a) Alternative Technologies— The term “Alternative Technologies” describes any broadband access technology that terminates at the end user’s location or premises and does not qualify as Reliable Broadband Service, including ULFW and LEO, but meets the BEAD Program’s minimum technical requirements of speeds of not less than 100 Mbps for downloads and 20 Mbps for uploads and latency less than or equal to 100 milliseconds.¹³

Throughout, the term “provider” is used as shorthand for a provider of broadband internet access services, as that term is defined in Section 8.1 of title 47, Code of Federal Regulations, or any successor regulation.¹⁴

⁹ See BEAD NOFO at 14.

¹⁰ See *id.* at 15.

¹¹ See *id.* at 16.

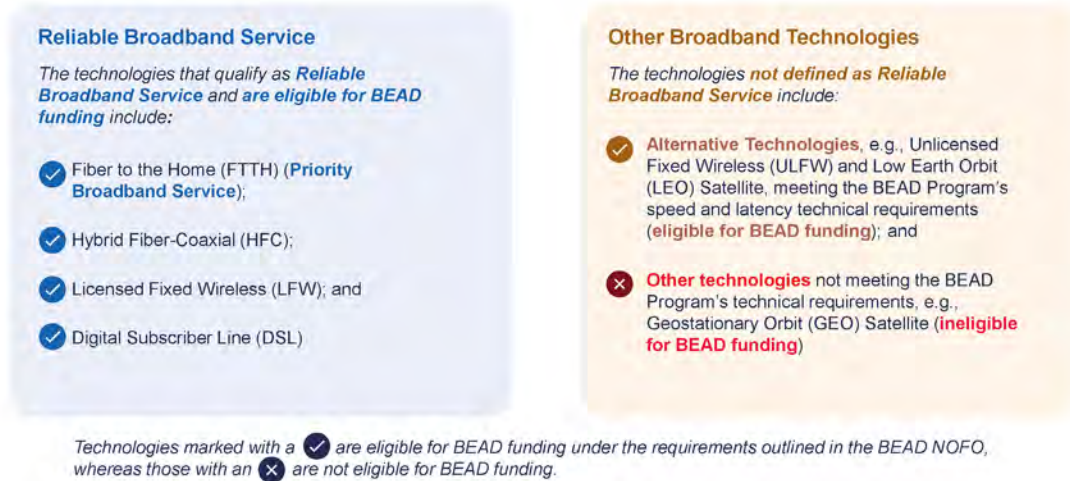
¹² See *id.* at 17.

¹³ NTIA’s definition aligns with the technology codes use by the FCC’s Broadband Data Collection where “technology indicates the portion of the internet access connection that terminates at the end user’s location or premises (for fixed) or device (or mobile), also known as the ‘last-mile’ technology.” Federal Communications Commission, Broadband Data Collection Data Specifications for Biannual Submission of Subscription, Availability, and Supporting Data at 12 (March 30, 2023), available at <https://us-fcc.app.box.com/v/bdcavailability-spec> (BDC Specifications).

¹⁴ 47 CFR 8.1(b).

The figure below shows an illustration of the terms above:

Figure 1: Graphical Illustration of Reliable Broadband Service and Other Broadband Technologies



3. Locations Where Alternative Technologies Already Exist

After deploying the strategies described in the BEAD Selecting the Most Robust, Affordable, Scalable Technology Policy Notice,¹⁵ an Eligible Entity may find itself with project areas for which no prospective subgrantee has submitted an offer to deploy Reliable Broadband Service or project areas for which prospective subgrantees have submitted proposals to deploy Reliable Broadband Service only at subsidy amounts that exceed the EHCPLT. In this situation, Eligible Entities may consider Alternative Technologies to fulfill their BEAD Program obligations, subject to the guidance provided in this section.

BEAD “costs must be reasonable, necessary, allocable, and allowable for the proposed project or other eligible activity.”¹⁶ To minimize funding outlay and comply with this requirement, before selecting Alternative Technology subgrantees, Eligible Entities must determine whether the project areas in question are subject to an enforceable commitment, with ongoing network performance monitoring, to provide Alternative Technology service that meets the BEAD performance requirements, as described below in Section 3.1; or are already served with Alternative Technologies that meet the BEAD performance requirements, as described below in Section 3.2. Under the circumstances described below in Sections 3.1 and 3.2, BEAD investments to those locations will not be considered necessary and therefore, Eligible Entities

¹⁵ See Selecting the Most Robust, Affordable, Scalable Technology Policy Notice.

¹⁶ BEAD NOFO at 81-82.

cannot fund an unserved or underserved deployment project to such locations using Alternative Technologies.¹⁷

Given the service limitations that led to the omission of these technologies from the definition of Reliable Broadband Service, it is particularly important that Eligible Entities carefully consider the capabilities of existing Alternative Technology network services and existing enforceable commitments to deploy such technologies. To accomplish this, Eligible Entities must determine:

- (1) Where an existing or completed enforceable commitment to deploy an Alternative Technology is subject to ongoing network performance monitoring¹⁸ (Section 3.1);
- (2) Where an existing Alternative Technology provider can demonstrate that it currently meets the BEAD Program requirements (Section 3.2).

If neither of the above scenarios apply, locations within the project area may fall into a third scenario (Section 3.3), where the Eligible Entity may identify costs for Alternative Technology projects that are reasonable and necessary to ensure coverage of all unserved and (where financially feasible) underserved locations within their jurisdiction, as required.¹⁹

3.1 Case 1: Enforceable Commitments for Alternative Technologies

To determine whether Case 1 applies, Eligible Entities must first consult the FCC's Broadband Funding Map²⁰ and information collected during the Five-Year Action Plan process and Initial Proposal to determine whether there are enforceable federal, state, or local commitments to deploy Alternative Technologies to some or all locations in the project area.²¹ If an enforceable commitment to deploy an Alternative Technology is present,²² the Eligible Entity must determine whether the funding program includes network performance monitoring that verifies that the service is provided at or above the BEAD Program's benchmark for at least four years²³ after the date of submission of the Final Proposal. When such network performance monitoring is included as part of the Alternative Technology enforceable commitment, NTIA will not consider that BEAD funding for Alternative Technologies as part of a BEAD deployment project is necessary and therefore such costs will not be allowed. The ongoing network performance monitoring and additional oversight provided by these programs is sufficient to mitigate the performance concerns related to Alternative Technologies and to consider these locations served.

¹⁷ The circumstances described below in Sections 3.1 and 3.2 provide a basis for the Eligible Entity to certify that coverage will be provided to these locations as part of the Final Proposal.

¹⁸ Network performance monitoring measures the technical performance of broadband networks, such as their download and upload speed, latency (delay), and reliability, and compares these measurements against the technical requirements for the funding program.

¹⁹ See BEAD NOFO at 47 (Final Proposal Requirement 7).

²⁰ Eligible Entities may instead use the Eligible Entity Planning Toolkit, which leverages the data in the Broadband Funding Map.

²¹ An enforceable commitment for an Alternative Technology exists when the commitment to provide broadband service using an Alternative Technology was made as a condition of grant, loan, or loan guarantee provided by the federal government, a State or Territorial government, or local government to the provider of an Alternative Technology.

²² This applies regardless of the construction status of the project. Enforceable commitment projects may be completed, under construction, or pending the start of construction.

²³ While not a direct correlation, this time frame was chosen to align the period of performance for BEAD subgrants.

Eligible Entities with locations that fall into this scenario should collect documentation that supports this determination and indicate in the Final Proposal that coverage for these locations is provided by the applicable Alternative Technology provider, consistent with Final Proposal submission guidance.

3.2 Case 2: Provider Can Demonstrate that It Currently Meets BEAD Requirements for Alternative Technology Deployments

If Case 1 does not apply to locations within the project area, Eligible Entities must determine whether Case 2 applies. Case 2 requires the Eligible Entity to determine whether an Alternative Technology provider serving some or all locations in the project area can demonstrate that it currently meets the BEAD Program requirements. If Alternative Technology service is already meeting BEAD program requirements, then BEAD funds are not necessary for those locations and will not be allowed. To make this determination, for locations where the National Broadband Map shows an existing Alternative Technology service, Eligible Entities are required to gather more information about the sufficiency of the existing service to determine whether a BEAD deployment project is reasonable and necessary. An Eligible Entity must give an Alternative Technology provider that is currently offering services the opportunity to demonstrate to the Eligible Entity its capability to offer BEAD qualifying services to all locations in the project area. Alternative Technology providers presumably have an interest in demonstrating such a capability to prevent competition with a potential BEAD-funded provider.

To determine whether an existing Alternative Technology provider currently meets the BEAD Program requirements, Eligible Entities must consider two components: (1) whether the existing Alternative Technology provider possesses the financial and managerial capacity to deliver service meeting the BEAD Program’s technical requirements to all locations in the project area, and (2) whether the existing Alternative Technology provider has the technical and operational capacity to deliver service meeting the BEAD Program’s technical requirements to all locations in the project area. While the existing Alternative Technology provider seeking to meet the requirements of Case 2 does not have to comply with the qualifications for BEAD subgrantees described in Section IV.D of the BEAD NOFO, Eligible Entities must consider factors relevant to financial, managerial, technical, and operational capacity that affect the ability of the provider to adequately serve the locations in question.

To show technical capacity, existing Alternative Technology providers must demonstrate that they can provide a capacity²⁴ of at least 5 Mbps or a usage allowance of 2 terabytes (TBs) per month for *each* broadband serviceable location (BSL) in the project area within four years.²⁵ Network capacity includes last-mile facilities (including passive infrastructure, such as towers), as well as shared facilities, such as satellite ground stations or middle mile capacity. Eligible

²⁴ Providers may meet this standard by demonstrating the ability to scale up to provide this capacity within a reasonable timeframe as subscribers increase.

²⁵ The 5 Mbps capacity reflects industry network dimensioning practices. *See, e.g.*, Preseem 2024 Q1 Fixed Wireless Network Report, available at <https://preseem.com/fixed-wireless-network-report/> (Last visited March 11, 2024). The monthly usage allowance corresponds to the “above baseline” and “gigabit” tiers in the FCC Rural Digital Opportunity Fund (RDOF) program.

Entities should carefully evaluate whether the existing Alternative Technology provider can reasonably acquire or lease facilities necessary to serve every BSL in the project area within the same four-year period expected of a Reliable Broadband Service provider/subgrantee.²⁶ The Eligible Entity may establish other criteria for reviewing technical capability, such as requiring evidence consistent with the Eligible Entity Challenge Process standards.²⁷

Eligible Entities must give the Alternative Technology providers currently serving some or all of the project area at least seven days to indicate an interest in qualifying under Case 2. Eligible Entities can either post a public notice or contact all existing providers listed in the National Broadband Map that offer services that do not qualify as Reliable Broadband Service. If no provider responds within that period for some or all locations, an Eligible Entity can proceed to Case 3. If a provider wants to be considered for Case 2, the Eligible Entity shall allow the provider at least thirty days to submit the necessary documentation. If a provider applies for Case 2 consideration, but does not meet the Case 2 criteria, it does not exclude that provider from being considered for Case 3.

NTIA encourages Eligible Entities to provide advance public notice of the processes that will apply under Case 2.

3.3 Case 3: BEAD Investment in Alternative Technologies

If neither of the scenarios above (Cases 1 and 2) apply, Eligible Entities must identify a last-mile broadband deployment project to serve the relevant unserved or underserved locations in order to make the required Final Proposal certification that service will be delivered to all unserved and (as financially feasible) underserved locations. As deployment projects, these investments are subject to the same requirements that apply to all other broadband deployment projects, as discussed in Sections 4 and 5 below.

Alternative Technology providers that were identified as serving locations under Case 2 but did not respond to the Eligible Entity in a timely manner may be determined to be incapable of “carrying out activities funded by the subgrant in a competent manner” and lack the “managerial capacity” to “meet [...] such other requirements as have been prescribed by the Assistant Secretary.”²⁸ In this situation, such providers are ineligible to become BEAD subgrantees for these locations.

4. Awarding Alternative Broadband Technology Subgrants

4.1 Selection Mechanism

The BEAD NOFO authorizes each Eligible Entity to choose its own means of competitively selecting subgrantees for last-mile broadband deployment projects, subject to approval by the Assistant Secretary (during review of the Eligible Entity’s Initial Proposal).²⁹ This authority

²⁶ See BEAD NOFO at 74.

²⁷ For example, the Eligible Entity could require the provider to provide the same type of evidence that would be provided as a rebuttal for an area speed test challenge.

²⁸ BEAD NOFO at 71.

²⁹ *Id.* at 40.

extends to the selection of subgrants for Alternative Technology last-mile broadband deployment projects. Eligible Entities may therefore award subgrants for Alternative Technology projects through a variety of means, including: (1) a competitive subgrantee selection round open to all types of eligible providers and technologies or (2) following a subgrantee selection process open to Priority Broadband Service and Reliable Broadband Service projects, a competitive subgrantee selection round seeking only Alternative Technology proposals. The NOFO also provides that, if, after soliciting proposals, the Eligible Entity has received no proposals to serve a location or group of locations that are unserved, underserved, or a combination of unserved and underserved, the Eligible Entity may engage with existing providers and/or other prospective subgrantees to find providers willing to expand their existing or proposed service areas.³⁰ Consistent with the requirement to run a fair, open, and competitive process,³¹ Eligible Entities may conduct such engagement with existing providers of Alternative Technology broadband service and prospective subgrantees of Alternative Technology projects only when the Eligible Entity previously solicited proposals for Alternative Technology projects. For example, if an Eligible Entity has solicited proposals—including proposals for Alternative Technology projects—but not received any proposals to serve a location or group of locations that are unserved or underserved, it may engage directly with existing providers or prospective subgrantees about Alternative Technology projects.³² In circumstances in which Eligible Entities are directly engaging with existing providers or prospective subgrantees, Eligible Entities must work to ensure that their approach is as transparent as possible.³³

Eligible Entities may select a proposal for an Alternative Technology *only* where there is no Reliable Broadband Service technology meeting the BEAD Program’s technical requirements that would be deployable for a subsidy of less than the EHCPLT at a given location.³⁴ In such cases, an Eligible Entity is authorized to select a proposal involving a less costly technology for that location, even if that technology does *not* meet the statutory definition of Reliable Broadband Service but otherwise satisfies the BEAD Program’s technical requirements.³⁵

4.2 Subgrantee Qualifications

The BEAD NOFO requires Eligible Entities to ensure the qualifications of prospective subgrantees and does not distinguish between prospective subgrantees based on the technologies the subgrantee proposed to deploy in its network facilities.³⁶ Therefore, the subgrantee qualification requirements in the BEAD NOFO, including the specific requirements for subgrantees deploying network projects,³⁷ apply to a prospective subgrantee that seeks to deploy Alternative Technologies using BEAD funds.

³⁰ *Id.* at 38.

³¹ *Id.* at 35.

³² Conversely, Eligible Entities may not engage directly with existing providers or prospective subgrantees about Alternative Technology projects if the Eligible Entity has not yet solicited proposals for Alternative Technology projects.

³³ BEAD NOFO at 38.

³⁴ *Ibid.*

³⁵ *Ibid.*

³⁶ *See id.* at 71-76.

³⁷ *See id.* at 72-76.

At the same time, the showings submitted by prospective subgrantees seeking to deploy Alternative Technologies may reflect the unique nature of those solutions. Eligible Entities should keep such differences in mind when evaluating the capabilities of subgrantees. The Eligible Entity must ensure that the prospective subgrantee has the competence, managerial, and financial capacity to meet the commitments of the subgrant, as well as the technical and operational capability to provide the services promised in the subgrant in the manner contemplated by the subgrant award.³⁸ To meet the minimum technical qualification, a proposed BEAD deployment project relying on Alternative Technologies for the delivery of last-mile service must include a certification and/or documentation that the subgrantee is able to provide at least 5 Mbps of capacity (or 2 TBs of usage per month) to each BSL in the project area where a subscriber requests and is provisioned service.³⁹

4.3 Subgrantee Obligations

As with subgrantee qualifications, prospective subgrantees seeking to deploy Alternative Technology projects with BEAD funds must comply with all obligations articulated in the BEAD NOFO for subgrantees deploying network projects.⁴⁰ These obligations include the speed and latency requirements,⁴¹ network outage limitations,⁴² low-cost broadband service option and other service obligations,⁴³ network management practices,⁴⁴ and cybersecurity and supply chain risk management.⁴⁵ Subgrantees also must be able to initiate broadband service within 10 business days of a request to any covered BSL in the project area, with no charges or delays attributable to the extension of the service.⁴⁶

Prospective subgrantees also must abide by the BEAD network performance and reliability monitoring rules.⁴⁷ Recipients of subgrants for the deployment of Alternative Technologies can use the same network performance and reliability monitoring approaches used for Reliable Broadband Service. Given the higher geographic variability in performance compared to fiber networks, Eligible Entities may require higher spatial sampling ratios for Alternative Technology projects and extend sampling requirements to individual geographic areas rather than the whole

³⁸ See Infrastructure Act at Section 60102(g)(2). See also BEAD NOFO at 71. For example, the technical showings, such as the network design, diagram, project costs, and build-out timeline, of a prospective subgrantee seeking to deploy an Alternative Technology project may look substantially different than the technical showings of a prospective subgrantee seeking to deploy a Reliable Broadband Service project.

³⁹ The 5 Mbps capacity reflects industry network dimensioning practices. See, e.g., Preseem 2024 Q1 Fixed Wireless Network Report, available at <https://preseem.com/fixed-wireless-network-report/> (Last visited March 11, 2024). The monthly usage allowance corresponds to the “above baseline” and “gigabit” tiers in the FCC Rural Digital Opportunity Fund (RDOF) program.

⁴⁰ See BEAD NOFO at 64-71.

⁴¹ See *id.* at 64-65.

⁴² See *id.* at 65.

⁴³ See *id.* at 66-68.

⁴⁴ See *id.* at 68.

⁴⁵ See *id.* at 70-71.

⁴⁶ When evaluating whether to approve Final Proposals, NTIA will use the same standard of availability used in the Challenge Process Policy Notice, which aligns with the FCC’s National Broadband Map standards. See NTIA, Policy Notice: BEAD Challenge Process at 10 (2023), [BEAD Challenge Process Policy Notice \(doc.gov\)](#).

⁴⁷ See BEAD NOFO at 64-65.

state or territory.⁴⁸ Because most modern network termination equipment, such as home gateways, residential radio nodes, or satellite terminals, have built-in network measurement capabilities, such higher sampling ratios do not impose an undue burden on subgrantees.

Finally, it is NTIA's policy to ensure that BEAD funds are used to bring affordable broadband to all Americans.⁴⁹ The acquisition and installation of end-user equipment needed to access Alternative Technologies can be substantially more expensive than the equipment acquisition and installation costs associated with other last-mile broadband technologies. Therefore, to receive approval for its Final Proposal, for a last-mile broadband deployment project in which the subgrantee will deploy an Alternative Technology for the last-mile solution, Eligible Entities must include in any subgrant agreement the cost of any eligible, initial non-recurring fees charged to new subscribers necessary to connect the BSL, such as costs for installation or customer premises equipment (e.g., residential radio nodes or satellite terminals). One-time initial costs such as installation and customer premises equipment are eligible uses of BEAD funds, and including these costs in the subgrant will help ensure installation and equipment costs are not a barrier to adoption for those Americans residing in BSLs served by Alternative Technologies funded through the BEAD program.

Furthermore, as described in Section 4.4, additional obligations will apply for certain types of LEO projects.

4.4 Additional Flexibility for Subgrants for Last-Mile LEO Deployments

The BEAD NOFO identifies the following eligible uses of funding in connection with last-mile broadband deployments:

1. Construction, improvement, and/or acquisition of facilities and telecommunications equipment required to provide qualifying broadband service, including infrastructure for backhaul, middle- and last-mile networks, and multi-tenant buildings.
2. Long-term leases (for terms greater than one year) of facilities required to provide qualifying broadband service, including indefeasible right-of-use (IRU) agreements.
3. Deployment of internet and Wi-Fi infrastructure within an eligible multi-family residential building.
4. Engineering design, permitting, and work related to environmental, historical, and cultural reviews.
5. Personnel costs, including salaries and fringe benefits for staff and consultants providing services directly connected to the implementation of the BEAD Program (such as project managers, program directors, and subject matter experts).
6. Network software upgrades, including, but not limited to, cybersecurity solutions.

⁴⁸ For example, an Eligible Entity might require a sample equal to at least ten percent of the served locations within each census block group or six locations, whichever is larger. (If a census block group has fewer than six subscribers, all are measured.) This roughly corresponds to the threshold used for rebutting area speed test challenges during the BEAD Challenge Process and ensures that performance is measured across all geographic areas.

⁴⁹ See BEAD NOFO at 22.

7. Training for cybersecurity professionals who will be working on BEAD-funded networks.
8. Workforce development, including Registered Apprenticeships and pre-apprenticeships, and community college and/or vocational training for broadband-related occupations to support deployment, maintenance, and upgrades.⁵⁰

For the avoidance of doubt, all of these uses are eligible uses of funding in connection with last-mile broadband deployments using Alternative Technologies.

In addition, for the limited purposes of last-mile deployment projects that rely upon LEO technology to deliver last-mile service to the BSL, NTIA will provide Eligible Entities additional flexibility to use BEAD funds for the reservation of network capacity to meet the capacity requirement previously addressed.⁵¹

NTIA approval of Final Proposals that include a subgrant under which the subgrantee plans to use BEAD funds for the reservation of capacity on LEO networks to deliver last-mile service in connection with a broadband deployment project (“LEO Capacity Subgrant”) will be subject to the following conditions, in addition to all the standard grant requirements.⁵²

First, NTIA will require that the Eligible Entity apply a period of performance for any LEO Capacity Subgrant that concludes ten years after the date upon which the subgrantee certifies to the Eligible Entity that it began providing broadband service to each customer in the project area that desires broadband service. NTIA will issue a no-cost extension of the period of performance for the Eligible Entity’s grant for a similar duration, and provide additional time for award closeout, as further addressed in the following section.

NTIA is applying a ten-year Federal interest period to BEAD subgrants for which the major purpose of the subgrant is a broadband infrastructure project.⁵³ The consumer and taxpayer protections set forth in the NOFO apply to the recipients of these subgrants for the duration of this ten-year Federal interest period.⁵⁴ Extending the period of performance for LEO Capacity Subgrants will help NTIA and Eligible Entities ensure that the consumer and taxpayer protections that apply to all other last-mile deployment projects will apply to LEO Capacity Subgrants for a similar duration.⁵⁵

⁵⁰ *Id.* at 39.

⁵¹ To show technical capacity, existing Alternative Technology providers must demonstrate that they can provide a capacity of at least 5 Mbps or a usage allowance of 2 terabytes (TBs) per month for each broadband serviceable location (BSL) in the project area within four years. Network capacity includes last-mile facilities (including passive infrastructure, such as towers), as well as shared facilities, such as satellite ground stations or middle mile capacity. *See supra* Section 3.2.

⁵² These conditions apply even if only a portion of the BEAD funds under the subgrant goes to reimburse a subgrantee for the reservation of capacity on LEO network to deliver last-mile broadband service.

⁵³ *See* NTIA, Policy Notice: Tailoring the Application of the *Uniform Guidance* to the BEAD Program at 3 (2023), [BEAD Policy Notice: Uniform Guidance Exceptions, Adjustments, Clarifications \(doc.gov\)](#) (“Uniform Guidance Policy Notice”).

⁵⁴ *See* BEAD NOFO at 64-71.

⁵⁵ *See* Uniform Guidance Policy Notice at 3.

Second, as required under Section 60102(h)(4)(C) of the Bipartisan Infrastructure Law, the recipient of a LEO Capacity Subgrant must begin providing broadband service to each customer that desires broadband service not later than four years from the date of the subgrant.⁵⁶ Recipients of LEO Capacity Subgrants must continue to offer access to broadband service to each BSL served by the project throughout the period of performance.⁵⁷ Further, as with Reliable Broadband Service, subgrantees must maintain availability of the service to the *location* throughout the period of performance and the relevant Federal interest period. In other words, if an initial customer moves from the BSL, the LEO provider must continue to offer service to the BSL under the terms of the subgrant.

Third, Eligible Entities must ensure the reasonableness of the cost of the capacity on a per BSL basis for which BEAD funding will be used. NTIA will require Eligible Entities to explain in their Final Proposal how the Eligible Entity calculated the cost of the network capacity per BSL to the recipient of an LEO Capacity Subgrant. NTIA reminds Eligible Entities and prospective applicants that a profit, fee, or other incremental charge above actual cost incurred by a subgrantee is not an allowable cost under the BEAD Program.⁵⁸ However, subgrantees may retain program income without restriction in the case of subgrants whose major purpose is a broadband infrastructure project.⁵⁹

Fourth, Eligible Entities shall reimburse recipients of LEO Capacity Subgrants only for the amount of capacity actually used, such as by reimbursing based on the number of actual subscribers to the broadband service in the project area⁶⁰ in a period of time (e.g., month or year) multiplied by the per BSL cost of capacity. The draw down of the letter of credit (as modified by the Conditional Programmatic Waiver⁶¹) must also be tied to specific subscriber milestones.

As explained in NTIA’s Tailoring the Application of the Uniform Guidance to the BEAD Program Policy Notice, NTIA permits Eligible Entities to issue fixed amount subgrants, subject to certain conditions.⁶² Eligible Entities electing to issue fixed amount subgrants for a LEO Capacity Subgrant must structure the fixed amount subgrant as a maximum payment amount that

⁵⁶ 47 USC 1702(h)(4)(C). *See also* BEAD NOFO at 65.

⁵⁷ *See* BEAD NOFO at 68 (“Operators of Funded Networks shall provide access to broadband service to each customer served by the project that desires broadband service on terms and conditions that are reasonable and non-discriminatory.”).

⁵⁸ *See id.* at 82.

⁵⁹ *See* Uniform Guidance Policy Notice at 4. The Uniform Guidance Policy Notice provides that “broadband infrastructure projects include: last-mile broadband deployment projects, as that term is used in Section IV.B.7.a.ii. of the BEAD NOFO, with the exception that projects for which the major purpose is training or workforce development are not considered broadband infrastructure projects for the purposes of the exceptions addressed in this Policy Notice.” *Id.* at 3. NTIA provides here that LEO Capacity Subgrants constitute broadband infrastructure projects for purposes of the exceptions adjustments, and modifications described in the Uniform Guidance Policy Notice. Therefore, the Uniform Guidance Policy Notice applies to a subgrant whose major purpose is a LEO Capacity Subgrant.

⁶⁰ For purposes of vetting potential BEAD subgrantees planning to deploy Alternative Technologies to serve unserved and underserved BSLs, qualifying broadband to a BSL is a broadband service 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.

⁶² Uniform Guidance Policy Notice at 5-7.

is based on a reasonable estimate of actual cost and that limits reimbursements to actual costs after review of evidence of costs.⁶³

Fifth, Eligible Entities must estimate the amount of BEAD funding that will be needed during the period of performance to reimburse recipients of LEO Capacity Subgrants. An acceptable estimate would be 50 percent of the covered locations within a project area subscribing to broadband service from the date upon which service is available and continuing through the conclusion of the period of performance. Eligible Entities may propose for NTIA approval an alternative estimate of the BEAD funding needed for reimbursement but must demonstrate the reasonableness of the estimated amount in the Final Proposal.

5. Grants Administration Considerations

All grant awards and subawards must follow the rules and regulations listed in the BEAD NOFO, award conditions in the grant agreement(s), and applicable grant requirements. NTIA reminds subgrantees that a profit, fee, or other incremental charge above actual cost incurred by a subgrantee is not an allowable cost under the BEAD Program.⁶⁴ Additionally, as is the case for all other deployment projects, Eligible Entities must distribute funding to subgrantees for all Alternative Technology deployment projects on a reimbursable basis (which allows the Eligible Entity to withhold funds if the subgrantee fails to take the actions the funds are meant to subsidize).⁶⁵

NTIA has provided additional flexibility for Eligible Entities to issue fixed amount subgrants where the major purpose of the subgrant is a broadband infrastructure project.⁶⁶ Eligible Entities must base fixed amount subgrants on a “reasonable estimate of actual cost,” and the Eligible Entity must monitor the reasonableness of the subrecipient costs.⁶⁷ Pursuant to 2 CFR 200.201(b)(1), acceptable forms of payment for fixed amount subawards include, but are not limited to: (a) partial payments of agreed amounts upon meeting milestones or other triggering events identified in the subgrant; (b) payments on a unit price basis, for a defined unit or units, at a defined price or prices identified in the subgrant; or (c) a single payment upon completion of the project.⁶⁸ As previously addressed, Eligible Entities issuing fixed amount awards for LEO Capacity Subgrants must structure the fixed amount subgrant as a maximum payment amount that is based on a reasonable estimate of actual cost and that limits reimbursements to actual costs after review of evidence of costs.

⁶³ *Id.* at 6. “NTIA clarifies that Eligible Entities may elect to treat subawards as fixed amount subawards even if the Eligible Entity requires subrecipients to submit evidence of costs. Eligible Entities thus may treat subawards providing for a maximum payment amount that is based on a reasonable estimate of actual costs (*See* 2 CFR 200.201(b)(1)) as fixed amount subawards, even if the subaward agreement also provides that payments to the subrecipient will be limited to actual costs after review of evidence of costs.”

⁶⁴ *See* BEAD NOFO at 82.

⁶⁵ *See id.* at 51.

⁶⁶ *See* Uniform Guidance Policy Notice at 5.

⁶⁷ *See id.* at 5-6.

⁶⁸ *Ibid.*

Additionally, the Uniform Guidance requires real property and equipment acquired or improved with a subgrant to be held in trust for the beneficiaries of the BEAD Program.⁶⁹ The Federal interest in all real property and equipment acquired or improved as part of a deployment subgrant, including real property and equipment acquired or improved as part of a deployment project using Alternative Technologies, will continue for ten years after the year in which the subgrant for a project has been closed out in accordance with 2 CFR 200.344.⁷⁰ Eligible Entities must ensure that the Federal interest for all real property and equipment acquired or improved with BEAD Program funds is properly recorded in accordance with the terms and conditions of their BEAD grant. Prospective subgrantees should identify any real property and equipment that would be acquired or improved with BEAD Program funds in the application process, and Eligible Entities are required to identify such real property and equipment in the subgrantee agreement to ensure compliance with 2 CFR 200.316. NTIA will not take a Federal interest in the LEO network capacity in a LEO Capacity Subgrant, but it will take a Federal interest in any real property and equipment acquired or improved with such a subgrant, if applicable.

The build out deadline for all last-mile broadband deployment projects remains four years. The period of performance for a LEO Capacity Subgrant will be ten years from the date upon which the subgrantee certifies to the Eligible Entity that it began providing service to each customer in the project area that desires broadband service. NTIA will issue a no-cost extension of the period of performance for the Eligible Entity's grant for a similar duration.

The BEAD NOFO requires Eligible Entities to ensure subgrantee accountability.⁷¹ The BEAD NOFO requires the inclusion of clawback provisions and robust subgrantee monitoring practices.⁷² Eligible Entities must develop a comprehensive process to ensure accountability for all deployment subgrants and should carefully design a process that best reflects unique characteristics of Alternative Technology projects.

⁶⁹ See 2 CFR 200.316.

⁷⁰ See Uniform Guidance Policy Notice at 9.

⁷¹ See BEAD NOFO at 51.

⁷² *Ibid.*

Appendix A: BEAD Alternative Broadband Technology Policy

Notice Additional Areas for Input

In addition to the draft policy notice above, NTIA is also seeking input on the following areas:

1. NTIA strongly believes that LEO Capacity Subgrants should be used to reimburse costs for the actual delivery of service to consumers and businesses. To effectuate this, NTIA is proposing that Eligible Entities base reimbursement to recipients of LEO Capacity Subgrants on the amount of capacity actually used, as measured by subscription rates in the project area. NTIA recognizes that recipients of LEO Capacity Subgrants will need to make upfront capital investments in their networks to ensure the availability of sufficient capacity in a project area. Subscription levels in a project area will likely be relatively stable and predictable for a substantial majority of the period of performance, and LEO providers will be able to reallocate unused capacity, and thus recover the associated capital costs, to non-BEAD BSLs once subscription levels stabilize. However, subscription levels may be less predictable and stable early in the period of performance, potentially requiring the LEO provider to reserve capacity that goes unused. In recognition of this, should NTIA allow Eligible Entities to make a supplemental reimbursement payment to recipients of LEO Capacity Subgrants early in the period of performance? Alternatively, should NTIA allow Eligible Entities to compensate a recipient of a LEO Capacity Subgrant for all BSLs in a project area—regardless of subscription rates—in the early years of the period of performance?
2. Even when subscription rates in a project area stabilize, recipients of LEO Capacity Subgrants will presumably need to hold in reserve a small amount of network capacity to dedicate to new subscribing BSLs in a project area. To account for this, should NTIA allow Eligible Entities to employ a tiered subscription reimbursement structure? For example, in a subscription reimbursement structure based on tiers of 25 BSLs, an Eligible Entity would reimburse a recipient for 25 BSLs if 1-25 of the BSLs in the project area were subscribing, for 50 subscribers if 26-50 of the BSLs in the project area were subscribers, and so on.
3. NTIA is proposing to require LEO providers to dedicate 5 Mbps of capacity (or 2 TBs of usage per month) to each subscribing BSL in a project area under a LEO Capacity Subgrant. The capacity requirement effectively serves as a proxy for ensuring that the LEO provider can meet the statutory speed and latency requirements of the BEAD program. Is there another proxy or measurement that NTIA should use to ensure that subscribers in LEO Capacity Subgrants project areas receive services that meet the speed and latency requirements established by Congress?
4. Are there issues not addressed in this guidance that might dampen participation in the BEAD program by Alternative Technology providers?
5. For Eligible Entities that elect to make LEO Capacity Subgrants, NTIA will issue a no-cost extension of the period of performance for the Eligible Entity's grant. During this extended period of performance, Eligible Entities will close out all of their other subgrants much

earlier than their LEO Capacity Subgrant(s). What actions can NTIA take to reduce the administrative burden associated with BEAD grants after an Eligible Entity has closed out all of the subgrants other than LEO Capacity Subgrants?

6. Reserving LEO capacity is likely to result in substantial additional expenses for LEO providers. This problem is especially acute with LEO providers who could otherwise sell reserved capacity to other customers. The performance requirements of the BEAD program may necessitate that LEO providers reserve capacity for future customers in order to guarantee that those customers could be served within 10 business days if requested. At the same time, subgrantees generally have four years from the date of subgrant award to complete network deployment. LEO providers—because service may be able to be deployed without the construction of additional terrestrial infrastructure—may be able to substantially accelerate that timeline. To account for these considerations, should NTIA consider alternative LEO reimbursement models where LEO subgrantees may begin providing service and receive corresponding grant funds through LEO Capacity Subgrants before certifying the completion of network build out?