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**September 10, 2024**

**COMMENTS**

**ON**

**BROADBAND, EQUITY, ACCESS, AND DEPLOYMENT (BEAD) PROGRAM:**

**PROPOSED ALTERNATIVE BROADBAND TECHNOLOGY POLICY NOTICE**

**THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION (NTIA)**

Vertical Bridge appreciates the opportunity to submit comments on the Broadband Equity, Access, and Deployment (BEAD) Program: Alternative Broadband Technology Policy Notice. Vertical bridge is the largest private owner and operator of communications infrastructure in the United States and serves as a neutral host enabler for mobile and fixed wireless services. Vertical Bridge currently owns and operates more than 11,000 towers and 500,000 additional sites nationwide including rooftops, convenience stores, land parcels, utility structures and billboards that serve Commercial Mobile Radio Services (CMRS), Wireless Internet Service Providers (WISPs), public safety, utilities, and broadcasting providers.

Vertical Bridge believes that it is imperative that BEAD Eligible Entities (All 50 states, Washington D.C., Puerto Rico, U.S. Virgin Islands, Guam, American Samoa, and the Commonwealth of the Northern Mariana Islands) provide clarity with respect to how non-fiber technologies, especially terrestrial wireless technologies, can participate in their application process to issue BEAD funding. Further, NTIA needs to provide guidance to Eligible Entities that goes beyond simply encouraging Eligible Entities to exhaust as much BEAD funding as possible on fiber and waiting to see what might be left over to invest in non-fiber options. This approach may lead to inefficient use of funds and delays in deploying appropriate broadband solutions to serve the unserved and underserved. NTIA needs to provide Eligible Entities with guidance that allows them the flexibility and fund BEAD projects that utilize wireless technologies where the Eligible Entities believe fiber

may not be cost-effective and potentially undermine goals to expand broadband coverage swiftly to all unserved and underserved eligible locations.

### **The Essential Role of Wireless**

For many Americans, especially those living in rural and other areas where broadband may or may not be available, their mobile device is their only means to access internet services. A 2021 report found fifteen percent of American households only have access to the internet through their smartphone.<sup>1</sup> As this report indicates, many Americans cannot afford fiber-to-the-home broadband service, particularly those with low and moderate incomes, and their mobile device is what they rely upon. Unfortunately, many coverage gaps remain in our vast country and closing these gaps should be a priority in any U.S. strategy to close the digital divide and address broadband affordability. We recognize that in the BEAD program, NTIA has an expressed preference for fiber broadband solutions. However, the BEAD Notice of Funding Opportunity (NOFO) recognizes that BEAD is not a fiber-only program.

NHIS estimates the percentage of adults who live in wireless-only households (wireless-only adults), for January-June 2021, was 67.2%.<sup>2</sup> They rely on wireless connections for their safety, security and well-being. There are several factors that demonstrate the need to consider wireless solutions including:

**Mobility + FWA:** To the extent BEAD is focused solely on wireline connections, it would tether many unserved residents to accessing the Internet through a wired connection at the home or farmhouse. Wireless technologies are advancing at a phenomenal rate. Mobile 4G LTE and 5G technology provides data rates at or above the data threshold rates in the BEAD program. Some of the national wireless operators have also made tremendous inroads in the broadband market, offering an affordable fixed wireless access (FWA) service over their terrestrial 5G wireless networks. As of the end of 2023, more than 10 million Americans have become subscribers for this FWA service.

The deployment of 5G FWA service provides a cost-effective and reliable, resilient layer of broadband connectivity. 5G FWA is an affordable broadband option that meets the needs of many residential and business customers who cannot afford or are unwilling to pay for fiber service. FWA service is usually offered between \$50.00 to \$70.00 per month. 5G FWA utilizes the same 5G network for mobile service. Projects proposing infrastructure

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<sup>1</sup> <https://www.consumerreports.org/media-room/press-releases/2021/08/broadband-in-the-us-consumer-reports-new-survey-reveals-challenges-for-consumers/#:~:text=Fifteen%20percent%20of%20American%20households%20only%20have%20access,use%20DSL%20or%20dial-up%20to%20access%20the%20internet>

<sup>2</sup> <https://www.cdc.gov/nchs/data/nhis/earlyrelease/wireless202111.pdf>

deployment to expand 5G networks provide the dual benefit of providing an affordable option plus mobile coverage.

**Speed of deployment:** Given the urgent need for broadband in rural areas, the IJJA prioritizes connecting consumers as quickly as possible. NTIA should provide flexibility to state agencies to consider applicants that get networks up and running most rapidly. Consumers should not need to wait for many years by limiting the range of eligible providers. Future proof should not mean awaiting a technology solution to be deployed far in the future. Mobile broadband and FWA offer the advantage of speeding deployment as compared to fiber deployment and can ensure broadband access to unserved and underserved areas quickly.

**Public safety and first responders:** More than 80 percent of all 911 emergency calls are made from mobile devices. Emergencies can happen anywhere and are not confined to fixed locations where fiber is available. First responders rely upon FWA and mobile networks heavily as they go into harm's way to protect the public. Mobile 5G networks provide a resiliency layer providing first responders with assurances in network availability and resiliency. FWA and mobile networks can be restored more promptly in a crisis. First responders' needs are a priority goal.

**Affordability:** Limiting BEAD funding to wireline providers saddles smartphone-only consumers with the need to purchase costly new fiber subscription services many cannot afford and requiring large ongoing federal subsidies. Very few rural consumers are willing to give up mobility. Seventeen percent of rural users rely solely on their smartphones for their broadband connection, and many are among those with the lowest incomes.<sup>3</sup> FWA solutions available now provide a low-cost option for broadband access.

**Cost efficiency:** NTIA should provide consumers with the most megabits for the taxpayer dollar. No single technology is likely to garner a qualified applicant in every unserved area. States need flexibility to consider providers with the most appropriate and cost-effective solution for the given deployment service area. NTIA needs to ensure every awardee can cover its costs to remain a viable provider, so service and quality is sustainable and maintained. Otherwise, the hardest areas to reach will fall into disrepair or remain unserved.

**Agriculture:** Demands on the American farmer to meet the food and fiber needs of consumers domestically and globally has skyrocketed as the world's population continues to grow. According to the FCC USDA Precision Agriculture Task Force Report released in

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<sup>3</sup> <https://www.pewresearch.org/internet/fact-sheet/mobile/#:~:text=Today%2C%2015%25%20of%20American%20adults,have%20traditional%20home%20broadband%20service.&text=2016%202018%202020-,Note%3A%20Respondents%20who%20did%20not%20give%20an%20answer%20are%20not,U.S.%20adults%20conducted%202013%2D2021>

December 2022, the adoption of precision-based technologies and positioning tools are needed to help growers and ranchers stabilize their crop yields and remain financially viable for future generations. American consumers make up less than 5% of the world's population, yet American growers produce about 30% of the world's corn, 30% of soybeans, 13% of cotton, 12% of sorghum, and 8% of wheat.

Precision Agriculture technologies enable farmers and ranchers to monitor and optimize the conditions of their crops, animals, and fields remotely. Precision Agriculture includes global positioning tools, remote sensors, and other wireless capabilities to help growers use real-time data from the field, and to make operational adjustments to increase crop yields per acre. Precision technologies also help farmers reduce greenhouse gas emissions by using less fertilizers, pesticides, herbicides, fuel, and water during their operations.

These technologies depend on the availability of ubiquitous, reliable, and affordable high-speed wireless broadband service delivered to farm fields. We cannot provide precision agriculture for American farms unless we commit to deploy reliable, high bandwidth to areas that are largely unserved.

The availability of 5G technology will allow future agricultural equipment to be highly automated and autonomous. Farm equipment and vehicles can operate autonomously with more precision, thus enabling disabled veterans and others to continue farming. Equipment will be much more precise, using machine learning to track plant health and advanced robotics to treat each individual crop for optimal production.

### **Extremely High Cost Per Location Threshold**

The BEAD NOFO requires grantees to establish an Extremely High Cost Per Location (EHCPLT) threshold as the trigger to entertain alternative technologies to fiber. In Vertical Bridge's review of many Five-Year Action Plans and Initial Proposals established by Eligible Entities, none are establishing a clear EHCPLT. It appears most states are proposing to take the approach of soliciting subgrantee proposals for fiber first and then see how much of their BEAD allocations will be exhausted from fiber applications. Many states are reviewing these first-round applications and then will attempt to establish an EHCPLT. Vertical Bridge believes this approach will lead to inefficiencies and delay deployment of appropriate broadband services to many unserved and underserved locations.

NTIA should provide more clarity and explicit guidance in how states can at least estimate an EHCPLT without first attempting to exhaust their total allocations on fiber only proposals. Below are some suggestions. For example, many Eligible Entities require pre-qualification of subgrantee applicants. In many cases, the pre-qualification criteria include an expression of interest for areas that would be served by the prospective subgrantee.

NTIA should encourage Eligible Entities to use this data and determine that there will be areas where alternative technologies will likely be most appropriate. In these circumstances, Eligible Entities should be encouraged to include subgrantee selection processes that are proposed in Section 4 of this policy guidance.

Finally, NTIA should require states to publicly disclose the EHCPLT and engage in good faith negotiations with service providers, including Reliable Broadband Technologies, regarding BEAD deployment opportunities before using funds for capacity subgrants.

### **Mobility = Resiliency**

One state in particular, Louisiana, has established an innovative approach to include wireless technologies in their BEAD Initial Proposal. As you know, Louisiana's BEAD plan for subgrantees provides bonus scoring points to applicants who include a mobile wireless resiliency layer in their applications that will also deploy fiber. Vertical Bridge strongly supports this approach and encourages NTIA to provide guidance under this policy statement so that consideration is given to applicant's use of alternative technologies as a resiliency layer in their fiber applications.

### **Geolocation Designation**

Another way in which Eligible Entities can decide to use BEAD funding for alternative technologies is to allow Eligible Entities the flexibility to determine specific locations within their territories that they believe will be too inefficient to serve with fiber and designate those specific areas as eligible for alternative technologies. As noted above, many Eligible Entities that have punted on establishing an EHCPLT, instead awaiting the receipt of applications to determine what is inefficient and what is not, will likely lead to unnecessary delays in addressing the needs of some unserved and underserved areas, as well as distributing precious federal funds inefficiently. Requiring Eligible Entities to wait on application rounds to see who might submit fiber proposals imposes an inevitable delay in addressing broadband deployment throughout their territory. Eligible Entities should be able to make early determinations in areas where they have good reason to know that fiber will be too expensive, and they should not be locked into a process that requires them to receive rounds of applications when they know what the result is going to be anyway.

The first paragraph in Section 3 of the Draft BEAD states that "Eligible Entities may consider Alternative Technologies to fulfill their BEAD Program obligations" if,

- (1) no prospective has submitted an offer to deploy Reliable Broadband Service for an eligible project area or

- (2) Subgrantees have submitted proposals to deploy Reliable Broadband Service for a project area at subsidy amounts that exceed the ECHPLT.

This section of the BEAD Alternative Broadband Technology Guidance should also allow Eligible Entities to select alternative broadband technologies to areas where they have good reason to believe – based on their own economic modeling or knowledge of their territory – without being dependent upon receiving proposals. In other words, Eligible Entities should be permitted to designate areas that they believe alternative broadband technologies will be most appropriate in whatever round of funding they chose and not be beholden to fiber applications that may or may not come.

### **Subgrantee Selection Rounds**

Section 4 of the BEAD Alternative Broadband Technology Guidance specifies that Eligible Entities may award subgrants for Alternative Technology projects through:

- (1) A competitive subgrantee selection round open to all types of eligible providers and technologies and
- (2) A competitive subgrantee selection round seeking only Alternative Broadband Technology proposals.

We support this guidance. However, as stated above, we urge NTIA to clarify to Eligible Entities that they may pursue these selection processes at any time and not make this subservient to previous round solicitations.

### **Licensed Versus Unlicensed**

Not all wireless technologies are equal. While we acknowledge that many unlicensed wireless technologies are providing internet access in many hard to serve areas, we do not believe that unlicensed should receive the same status as licensed technologies.

Therefore, we urge NTIA to make it clear in the guidance that state should prioritize licensed wireless technologies over unlicensed technologies.

### **Capacity Grants for LEOS**

If NTIA is going to consider capacity grants for Low Earth Orbiting Systems (LEOS), the same consideration should be provided for other wireless technologies, especially FWA. Capacity grants are very speculative and if NTIA is going to allow them for one wireless technology, namely LEOS, then other wireless technologies should be afforded the same consideration.

## **Conclusion**

We urge the NTIA to enhance this policy guidance on Alternative Technology Selection that goes beyond telling Eligible Entities to take a “wait and see” approach which will result in the delay in deploying appropriate technology options to address serving the unserved and underserved in their territories. Specifically, we recommend the following additions to this policy guidance:

- The lack of clarity with respect to establishing EHCPLT remains a serious problem for the BEAD program. We fear that without more clarity on where the EHCPLT is set for each Eligible Entity is going to create inefficiencies and delays that will undermine the goals of the BEAD program. NTIA should encourage Eligible Entities to utilize pre-qualification data to estimate areas where the EHCPLT will apply and solicit applications for alternative technology projects for those areas in initial rounds of BEAD sub-grantees.
- The draft policy guidance should be amended to explicitly encourage states to include technologies such as 5G mobile and FWA as a resiliency layer in the initial round and subsequent rounds of subgrantee selection processes.
- Amend Section 3 of the policy guidance to allow Eligible Entities the option of funding alternative technologies in the first round of applications from subgrantees. Eligible Entities should have clear guidance that they are not locked in issuing early round of funding that exclude alternative technology projects. The draft policy guidance suggests that Eligible Entities are required to exclude alternative technologies in the initial funding rounds.
- Section 4 of the draft policy guidance should also be clarified to allow Eligible Entities to include subgrantee selection processes in early funding rounds.
- Licensed wireless should be prioritized over unlicensed and capacity grants should be allowed for all wireless technologies, not just LEOS.

Vertical Bridge appreciates this opportunity to provide comments on the draft BEAD Program: Alternative Broadband Technology Policy Notice.

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