

*Before the*  
NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION  
Washington, D.C.

*In the Matter of*

Proposed BEAD Alternative Broadband  
Technology Guidance

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**COMMENTS OF THE WIRELESS INFRASTRUCTURE ASSOCIATION**

The Wireless Infrastructure Association (“WIA”)<sup>1</sup> submits these Comments in response to the National Telecommunications and Information Administration’s (“NTIA”) Proposed Guidance for Alternative Broadband Technology (“Proposed Guidance”).<sup>2</sup> As an initial matter, WIA appreciates NTIA’s continued commitment to ensuring the rules for the BEAD program will encourage the maximum number of providers to apply. As WIA has previously noted, bridging the digital divide will take a blend of technologies.<sup>3</sup> WIA also appreciates the provisions in the proposed guidance that will ensure that limited federal funds are not spent where adequate service already exists or where another existing commitment will cover that location.

However, WIA also cautions NTIA against over emphasizing a single technology, even among “alternative” broadband technologies. It is important to maximize competition among and between various service providers in the BEAD program, while recognizing that, particularly among alternative broadband providers, fixed wireless continues to provide best in class home broadband service. Relevantly, BEAD funded projects that utilize wireless connectivity will have

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<sup>1</sup> The Wireless Infrastructure Association (“WIA”) represents the businesses that build, develop, own, and operate the nation’s wireless infrastructure. Members include infrastructure providers, wireless carriers, and professional services firms that are responsible for telecommunications facilities around the globe.

<sup>2</sup> *Proposed BEAD Alternative Broadband Technology Guidance*, NTIA (last modified Aug. 26, 2024), <https://www.ntia.gov/other-publication/2024/proposed-bead-alternative-broadband-technology-guidance>.

<sup>3</sup> See, e.g., *Comments of WIA to NTIA*, RIN 0596-AD44 (Feb. 4, 2022), <https://www.regulations.gov/comment/NTIA-2021-0002-0515>.

the dual benefit of also deploying infrastructure that supports mobile wireless coverage, a key consideration for achieving truly ubiquitous connectivity.

Additionally, WIA has concerns that the process set forth in the Proposed Guidance could quickly become overly burdensome to Eligible Entities, particularly those who are planning to award grants through an iterative process. WIA believes that by retooling the Guidance to emphasize terrestrial networks and recognizing practical constraints faced by Eligible Entities, the Proposed Guidance will be a helpful step forward in ensuring states can accept proposals from a diverse blend of service providers and ensure the goals of delivering universal service.

**D) Maximizing Terrestrial Wireless Connectivity Will Best Enable NTIA's Connectivity Goals.**

It is no secret that Fixed Wireless Access (“FWA”) continues to be the driving force in home broadband connectivity. Its soaring adoption rates in areas with multiple traditional competitive choices prove that FWA is a top-tier connectivity option. Yet, the Proposed Guidance goes to extremes to develop a subsidization scheme for a satellite connectivity option that already exists today;<sup>4</sup> it should change course. Instead, prioritizing unlicensed FWA over satellite options would provide a simpler approach that yields better connectivity benefits. For areas that do not receive applications for “reliable broadband,” NTIA should refocus its alternative technology guidance to prioritize funding unlicensed fixed wireless service over satellite.

For more than a year, relying primarily on licensed spectrum, FWA has been the fastest growing home broadband technology.<sup>5</sup> Spurred by improvements in wireless infrastructure and investments in spectrum, along with the deployment of the 5G standard in networks, providers are

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<sup>4</sup> *Proposed BEAD Alternative Broadband Technology Guidance*, Sec. 4.4 Additional Flexibility for Subgrants for Last-Mile LEO Deployments.

<sup>5</sup> *5G Home Broadband Continues to Bring Real Competition to Cable*, CTIA (Jan. 31, 2024), <https://www.ctia.org/news/5g-home-broadband-continues-to-bring-real-competition-to-cable>.

able to deliver high-quality service across the country to rural, urban, and suburban communities.<sup>6</sup> Consumers are rapidly embracing the technology, with surveys showing that consumers view FWA as an equivalent to legacy wireline solutions,<sup>7</sup> while customer satisfaction with the service is higher than any other technology on the market.<sup>8</sup> FWA is also often one of the most affordable forms of broadband. Fixed wireless often presents the added benefit of deploying infrastructure that can support mobile service, doubling the connectivity value of scarce BEAD funds in areas lacking essential coverage. This is particularly important for the significant portion of Americans that choose to only subscribe to a mobile service regardless of fixed broadband availability. States like Louisiana have realized the resiliency and affordability value of this added mobile connectivity and made it part of their five-year plans.<sup>9</sup> NTIA should use this opportunity to also offer explicit guidance to states that building in mobile resiliency via the BEAD program is not only permissible but encouraged.

While FWA over fully licensed networks have taken off, unlicensed, or a combination of licensed/unlicensed FWA services are also increasingly being deployed, delivering greater speed and capacity than satellite broadband service (which is already available today to those who wish to subscribe). For example, Tarana, a provider of FWA solutions, has demonstrated that it can provide low-latency service at speeds in excess of the BEAD minimum requirements for many of

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<sup>6</sup> See *T-Mobile Delivers Industry-Leading Customer, Service Revenue and Profitability Growth in Q1 2024, and Raises 2024 Guidance* (Apr. 25, 2024), <https://www.t-mobile.com/news/business/t-mobile-q1-2024-earnings> (reporting an additional 405,000 subscribers to its FWA offering in the first quarter of 2024 bringing total subscribers over 5 million); *Verizon Begins 2024 With Strong Wireless Service Revenue Growth, Solid Cash Flow And Continued Momentum In Broadband* (Apr. 22, 2024), <https://www.verizon.com/about/news/verizon-begins-2024-strong-wireless-service-revenue-growth-solid-cash-flow-and-continued> (providing 3.4 million FWA subscribers at the end of Q1 2024).

<sup>7</sup> See Ericsson, *Capturing The 5G FWA Opportunity In The US: A Household View* at 6-7, <https://na.experiences.ericsson.net/fwa-consumerlab-usa> (last visited September 10, 2024) (demonstrating that consumers view FWA as a wireline equivalent).

<sup>8</sup> Carl Weinschenk, *J.D. Power: 5G Fixed Wireless Has the Highest Consumer Satisfaction*, TELECOMPETITOR, (Apr. 23, 2024), <https://www.telecompetitor.com/j-d-power-5g-fixed-wireless-has-the-highest-customer-satisfaction/>.

<sup>9</sup> Louisiana Vol. 2 at 29 <https://connect.la.gov/media/3gylvrge/bead-vol-2-final.pdf>.

its FWA-enabled sites, regularly delivering consumers over 400 Mbps upload and 100 Mbps download, even miles away from the original connection point.<sup>10</sup> This capability far surpasses the BEAD requirements and more importantly, provides capabilities well beyond those of the most popular form of Low-Earth Orbit (“LEO”) satellite service, which states that its “users typically experience download speeds between 25 and 220 Mbps, with a majority of users experiencing speeds over 100 Mbps. Upload speeds are typically between 5 and 20 Mbps.”<sup>11</sup> Further, terrestrial wireless ISPs can provide this fiber-like performance at a fraction of the cost of fiber with some examples showing that fiber would be ten times more expensive.<sup>12</sup> And established mobile service providers are already moving to adopt this technology. Indeed, UScellular, a major nationwide mobile carrier, recently announced a deal to use Tarana’s equipment to improve its network’s capacity for FWA.<sup>13</sup>

Given the benefits of terrestrial FWA—affordability, mobility, cost to deploy, and broadband service capabilities—NTIA should rethink its alternative technology guidance to prioritize unlicensed FWA over satellite service. The Proposed Guidance creates complicated formulas that will warehouse scarce BEAD funding reserving capacity for satellites that may or may not ever be needed, all because satellites can quickly deplete their service capacity. Instead,

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<sup>10</sup> Tarana, Real World Results, <https://www.taranawireless.com/product/#real-world-results> (last visited Sept. 10, 2024) (demonstrating Tarana achieves these performance metrics even in low visibility and high-congestion areas).

<sup>11</sup> *Starlink Specifications*, <https://www.starlink.com/legal/documents/DOC-1400-28829-70> (last visited Sept. 10, 2024).

<sup>12</sup> See Tarana, *Comparative Digital Divide Deployment Costs Example* at 6 (Jan. 18, 2024), [https://learnerresources.s3.eu-west-1.amazonaws.com/114710/learner\\_resource\\_uploads/e2d9a554632b8a15b25406b98a/dd-network-economics-bonner-county.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAQZVLRHER6MLZQEAI%2F20240909%2Feu-west-1%2Fs3%2Faws4\\_request&X-Amz-Date=20240909T152940Z&X-Amz-Expires=5400&X-Amz-SignedHeaders=host&X-Amz-Signature=e7fc03dfba09e4b09c1bb94a1843be078a2147399cc8c5e3b2f7ab0b45a566ed](https://learnerresources.s3.eu-west-1.amazonaws.com/114710/learner_resource_uploads/e2d9a554632b8a15b25406b98a/dd-network-economics-bonner-county.pdf?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=AKIAQZVLRHER6MLZQEAI%2F20240909%2Feu-west-1%2Fs3%2Faws4_request&X-Amz-Date=20240909T152940Z&X-Amz-Expires=5400&X-Amz-SignedHeaders=host&X-Amz-Signature=e7fc03dfba09e4b09c1bb94a1843be078a2147399cc8c5e3b2f7ab0b45a566ed).

<sup>13</sup> Press Release, *UScellular and Tarana Partner to Enhance Home and Business Internet in Missouri* (Aug. 22, 2024), <https://newsroom.uscellular.com/uscellular-and-tarana-partner-to-enhance-home-and-business-internet-in-missouri/> (“[Tarana’s] ngFWA offers enhanced consistency and performance, is significantly faster and more reliable than satellite service and outperforms many other legacy technologies in both dense and hard-to-reach areas.”).

BEAD funding should be used to create new infrastructure wherever possible, which also creates additional benefits. For example, adding a new tower to support even unlicensed FWA creates a new piece of infrastructure that can readily support mobile providers in areas that were previously cost-prohibitive for deployment due to the lack of infrastructure. BEAD is an infrastructure program—it springs from the Infrastructure, Investment and Jobs Act. While recognizing the goal of 100% connectivity, NTIA’s starting point for any guidance should be prioritizing new infrastructure, not subsidizing existing satellite solutions.

## **II) Limiting Overbuilding Will Ensure the Efficient Usage of Limited Federal Funds.**

The Proposed Guidance critically recognizes that BEAD funds should not be allocated to locations currently being served by sufficient broadband connectivity, or where service can be reasonably expected in the near future.<sup>14</sup> While Congress has allocated historic funding to bridge the digital divide, these funds are not inexhaustible and must be used responsibly. Importantly, the Proposed Guidance evaluates existing commitments on a technology-neutral basis, focusing instead on the proposed or demonstrated service metrics.<sup>15</sup> This is an important consideration as BEAD is a relative outlier in federal broadband programs by prioritizing connectivity over a specific technology and will help ensure BEAD funds are not used to duplicate non-fiber efforts.

Additionally, WIA supports the use of the FCC’s Broadband Funding Map to identify existing commitments.<sup>16</sup> Data-driven decision making is key to ensuring the efficient deployment of funds. Through the FCC’s Broadband Data Collection and subsequent tools utilizing this dataset, the federal government currently has access to extremely precise information on where broadband is deployed and funded. It is imperative that states use every tool available to inform

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<sup>14</sup> *Proposed BEAD Alternative Broadband Technology Guidance* at 6-9.

<sup>15</sup> *Id.* at 7-8.

<sup>16</sup> *Id.* at 7.

their broadband spending. However, it is also critical that this data be continuously validated and updated. WIA appreciates the efforts NTIA has taken to ensure the timely flow of information between government agencies<sup>17</sup> and urges it to continue these efforts throughout the BEAD program.

### **III) NTIA Must Recognize Practical Challenges Eligible Entities and Providers May Face.**

While WIA supports increasing transparency for all applicants, NTIA should also provide Eligible Entities with the flexibility needed to maximize participation and react quickly to their specific challenges and opportunities in overseeing these programs. Applicants proposing to deliver connectivity over non-fiber networks are at a distinct disadvantage to fiber providers in initial rounds of applications. This may preclude some providers from submitting sub-grant applications until they can ascertain what funds a state may have for non-fiber deployments. At a minimum, the sequencing in the Proposed Guidance could produce additional delays and create challenges for Eligible Entities who are obligated to get funds deployed in a timely matter. However, if the Eligible Entity, or NTIA, concludes that these rounds were not open to non-fiber applicants, the Eligible Entity will be prohibited from soliciting additional applications for these rounds and will need to institute subsequent application rounds.<sup>18</sup>

To help remedy this, NTIA should strongly encourage Eligible Entities to make all rounds available to all providers instead of only soliciting bids for “priority” or “reliable” services at the outset. This in turn should enable Eligible Entities to more quickly set the Extremely High-Cost

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<sup>17</sup> See, *NTIA lays out path toward greater interagency coordination across high-speed Internet programs* (Sept. 6, 2024) <https://www.ntia.gov/blog/2024/ntia-lays-out-path-toward-greater-interagency-coordination-across-high-speed-internet-programs>.

<sup>18</sup> *Proposed BEAD Alternative Broadband Technology Guidance* at 10 (“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.”).

Threshold (“EHCT”) because they will have a total view of the locations for which it receives a bid and the price associated, allowing it to make reasonable tradeoffs for the appropriate EHCT amount. Eligible Entities that begin with only a solicitation of “priority” and “reliable” broadband may not have a true picture of their potential coverage options. Additionally, Eligible Entities may benefit from clarification that they are able to directly solicit non-priority broadband applications where an application round was open to those providers, even if the Eligible Entity did not receive applications for those specific types of technologies in that round.

Eligible Entities will also benefit from additional guidance and technical assistance in setting their EHCT. This will be a highly technical and economic analysis and one that will have far-ranging impacts on the Eligible Entity’s ability to achieve universal service. To date, the only guidance NTIA has given states is that the EHCT should be set “sufficiently high enough to encourage maximum fiber deployment.”<sup>19</sup> WIA has heard from state officials that many are still unsure at what point this threshold should be set. While WIA generally supports an iterative process that encourages maximum participation,<sup>20</sup> NTIA should ensure that Eligible Entities have the technical and economic information to quickly establish an EHCT that supports the right blend of broadband technologies. As WIA has previously stated, setting this threshold too high will have significant negative impacts on a states’ ability to deliver universal service and must be carefully considered.<sup>21</sup>

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<sup>19</sup> NTIA, BEAD Notice of Funding Opportunity, <https://broadbandusa.ntia.doc.gov/sites/default/files/2022-05/BEAD%20NOFO.pdf>.

<sup>20</sup> See, Mike Saperstein, *Maximizing Participation is the True Model for Planning BEAD Projects*, WIA (Aug. 30, 2023), <https://wia.org/maximizing-participation-is-the-true-model-for-planning-bead-projects/>.

<sup>21</sup> WIA, *Wireless Industry Urges States to Allow Maximum Flexibility in Choosing Broadband Technologies for BEAD Grants* (Dec. 21, 2022), <https://wia.org/wireless-industry-urges-states-to-allow-maximum-flexibility/>.

#### **IV) Conclusion.**

Achieving our nation's shared goal of delivering universal connectivity will require a blend of technologies to reach every American. WIA appreciates NTIA continuing to provide guidance to Eligible Entities to ensure that this blend of technology is available to each state. However, as discussed above, WIA has serious concerns that the Proposed Guidance over-emphasizes LEOs, potentially to the detriment of consumers. Entities should be given the flexibility to utilize all the tools in their toolbox to bridge the digital divide, but NTIA should not continue to put its thumb on the scale in favor of a particular technology. Accordingly, we urge NTIA to reevaluate its Proposed Guidance to more evenly evaluate alternative broadband technologies, encourage maximum competition, and use scarce federal funds more efficiently. We appreciate this opportunity to provide the input of the wireless infrastructure industry and stand ready to provide additional feedback to NTIA to ensure the success of this program.

Respectfully submitted,

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