



December 19, 2024

Francella Ochillo
Director, Office of Public Engagement
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave NW
Washington, DC 20230

RE: National Telecommunications and Information Administration Proposed BEAD Performance Measures Guidance

Dear Francella Ochillo:

The Local Initiatives Support Corporation (LISC) thanks the National Telecommunications and Information Administration (NTIA) for the opportunity to provide comments on the Broadband Equity, Access, and Deployment (BEAD) Program: Performance Measures for BEAD Last-Mile Networks to provide Eligible Entities and prospective subgrantees with additional guidance regarding BEAD NOFO performance measurement standards for speed, latency, and reliability of last-mile deployment projects. LISC appreciates NTIA’s ongoing efforts to bridge the digital divide and ensure broadband access for communities across the country.

Background on LISC & Rural LISC

LISC is a nonprofit housing and community organization and certified Community Development Financial Institution (CDFI) with offices in 38 cities nationwide and a rural program with a network encompassing 140 partners serving 49 states and Puerto Rico. LISC’s work supports various activities, including affordable housing, digital inclusion, economic development, building family wealth and incomes, education, community safety, and community health. LISC mobilizes corporate, government, and philanthropic support to provide local community and business development organizations with loans, grants, equity investments, capacity building, and technical assistance.

For nearly three decades, the Rural LISC program has assisted its partners in expanding their services in areas such as affordable housing, financial literacy, workforce development, health, and small business support. We have taken significant steps to incorporate broadband internet access and adoption programs as fundamental elements of our initiatives. This integration is facilitated through Rural LISC’s Broadband Planning Help Hub, which serves as a vital resource within the National Broadband Technical Assistance Marketplace. Our work focuses on enhancing connectivity in rural and unserved areas, providing comprehensive support that includes strategic planning, technical assistance, and community engagement. By prioritizing these efforts, we aim to empower communities and create sustainable solutions that bridge the digital divide.

Based on our extensive experience in community development and digital inclusion, we have identified areas where adjustments to the performance standards could better align with the realities of broadband providers and their communities. Below, we present detailed recommendations that highlight key areas for improvement to the **BEAD Program: Performance Measures for BEAD Last-Mile Networks to provide Eligible Entities and prospective subgrantees:**

Specific Comments

3.3 Committed Speed Tiers and Technologies

1. **Limited adaptability for hybrid setups:** Current testing protocols may not fully accommodate the unique needs of hybrid technology configurations.
 - a. **Recommendation:** Allow for flexibility in alternative technologies to meet or exceed performance benchmarks while ensuring that testing protocols accommodate hybrid setups where different components may affect overall performance.
 - b. **Example:** Continue allowing providers to propose innovative solutions, such as a fiber backbone with fixed wireless last-mile connectivity, and revise testing protocols for the hybrid setup.

- c. **Rationale:** Fosters innovation and reduces costs while maintaining oversight.

3.6 Measurement Methodology

1. **Include jitter measurement in tests:** Evaluating jitter helps identify issues, optimize data transmission, and enhance service quality.
 - a. **Recommendation:** Incorporate jitter measurements alongside download and upload speeds to understand network performance comprehensively.
 - b. **Example:** High jitter in connections meeting latency thresholds may indicate consistency issues, often caused by the mobile nature of LEO satellites. As these satellites traverse the horizon, data transmission must be handed off between them, leading to potential disruptions.
 - c. **Rationale:** High jitter can cause essential applications, such as VoIP (voice-over-internet-protocol), to perform poorly.

3.10 Speed Testing

2. **Reevaluate benchmarks in rural regions:** Existing speed thresholds may not fully consider the infrastructure challenges in remote areas.
 - a. **Recommendation:** Adjust thresholds to address challenges specific to rural and remote regions, particularly where alternative technologies such as unlicensed fixed wireless and LEO satellites are used.
 - b. **Example:** Set speed thresholds to reflect the realities of sparsely populated areas, e.g., 50 Mbps down/10 Mbps up for initial deployments in remote areas.
 - c. **Rationale:** Ensures achievable targets where traditional broadband infrastructure may need to be more feasible and cost-effective.

3.12 Latency Testing

1. **Emergent technologies and rigid thresholds:** Some technologies offer functional usability but may require flexibility with latency requirements.
 - a. **Recommendation:** Introduce functional latency tests for emerging technologies.
 - b. **Example:** If an emerging technology cannot meet the 100ms latency threshold, evaluate latency based on usability metrics (e.g., successful video calls) rather than raw millisecond thresholds as a last resort.
 - c. **Rationale:** Focus on the user experience while accommodating technology-specific limitations like satellite latency.
2. **DNS server response time:** This response time is crucial for the overall performance of internet browsing, as it directly affects how quickly a website can begin to load.
 - a. **Recommendation:** Enhance DNS testing to measure the uptime of DNS servers and the response time for DNS requests.
 - b. **Example:** Inefficient DNS server performance¹ can adversely affect user experiences, potentially resulting in web pages loading slowly or incompletely.
 - c. **Rationale:** Ensures that a weak link in the overall system does not adversely affect performance when throughput, latency, and uptime are acceptable.

3.13 Reliability Tests

1. **Disaster-prone areas:** Reliability standards may not fully address the specific regional risks that could impact performance.
 - a. **Recommendation:** Add tiered uptime requirements based on risk factors.
 - b. **Example:** Disaster-prone areas can meet reduced uptime thresholds but must report contingency measures.
 - c. **Rationale:** Ensures standards remain realistic while incentivizing network resilience.
2. **Economic barriers:** Prioritize broadband affordability to ensure everyone can access reliable internet services without financial barriers.
 - a. **Recommendation:** Incorporate affordability metrics into performance standards.

- b. **Example:** Include metrics to assess the percentage of households with affordable broadband access (i.e., Census ACS data to identify areas with low income, high poverty rates, and a large share of income spent on rent, which may require lower rates to encourage adoption).
 - c. **Rationale:** Ensures BEAD investments also address economic barriers to broadband access.
3. **Power outages:** The framework would improve by integrating strategies to mitigate power outages, such as developing contingency plans, enhancing infrastructure resilience, and implementing advanced monitoring systems. Proactive measures can ensure greater reliability and stability for all users.
- a. **Recommendation:** Encourage deployment of UPS battery backup at end-user locations with a higher risk of power outages.
 - b. **Example:** Fiber, cable, and fixed-wireless connections do not provide power for CPE and end-user equipment, which means that power outages cause customer outages if there is no backup power at the end-user location and the network itself.
 - c. **Rationale:** Internet access is replacing landline phone service as the primary means for 911 and emergency calls. We need to ensure it is as reliable as copper landlines.

3.15 Flexibility Afforded to Eligible Entities

1. **Scheduled test time:**
 - a. **Recommendation:** Speed tests should primarily be conducted during peak user hours, such as during business hours and early evenings.
 - b. **Example:** ISPs have traditionally struggled to provide sufficient speeds during periods of highest usage, such as Friday evenings when many people stream video.
 - c. **Rationale:** Speed tests taken after midnight will likely not reflect the network performance when a heavier usage load occurs.
2. **Compliance timelines:** Current compliance timelines may limit the ability of smaller providers to participate fully.
 - a. **Recommendation:** Provide greater flexibility for compliance timelines.
 - b. **Example:** Allow states to modify timelines to reflect local broadband deployment challenges.
 - c. **Rationale:** Align federal goals with state-specific realities, such as workforce shortages or material delays.
3. **Reporting requirements:** Considerations regarding the reporting obligations for small ISPs may benefit from a review to ensure they are manageable and proportionate.
 - a. **Recommendation:** Simplify compliance requirements for small and emerging providers.
 - b. **Example:** Reduce reporting frequency for providers with fewer than 1,000 customers.
 - c. **Rationale:** Encourages participation from small ISPs without compromising data integrity.
4. **Weather exceptions:** Weather can impact speed test ability and performance.
 - a. **Recommendation:** Include weather-related exceptions in performance benchmarks.
 - b. **Example:** Allow providers to relax benchmarks temporarily during severe weather, provided impact reports are submitted.
 - c. **Rationale:** Acknowledges weather challenges while maintaining accountability and incentivizing resilience.
5. **Weather mitigation:** Explore strategies and procedures for reducing the effects of adverse weather conditions on operations.
 - a. **Recommendation:** Require weather mitigation plans as a part of compliance.
 - b. **Example:** Providers submit plans detailing redundancy measures (e.g., multi-orbit constellations, ground-based signal boosters, backup generators, geographically diverse and redundant fiber routes, or wireless backup backhaul, LTE, or satellite backup options for users).
 - c. **Rationale:** Promotes proactive planning and infrastructure investment to handle adverse weather effectively.

Transparency

1. **Community-level data:** Performance data may benefit from enhanced granularity to provide more meaningful local insights.
 - a. **Recommendations:** Publish granular location-specific performance data on state-operated dashboards.
 - b. **Example:** Display test results on publicly accessible platforms (Reporting at H3 resolution 8 hexagon for rural areas and census block data for urban areas).
 - c. **Rationale:** Enhances transparency and enables communities to monitor broadband performance.
2. **Community input:** Community stakeholders are often not included in the evaluation process, which limits public understanding of how ISPs are meeting customers' needs.
 - a. **Recommendation:** Require community satisfaction metrics and evaluations.
 - b. **Example:** ISPs maintain a standardized satisfaction survey always available to drive transparency.
 - c. **Rationale:** Provides qualitative data to complement quantitative performance metrics.

Compliance

3. **Tiered penalty system:** Adjust penalties for provider size and resource availability.
 - a. **Recommendation:** Implement a tiered penalty system for non-compliance.
 - b. **Example:** Small providers face corrective action plans before financial penalties.
 - c. **Rationale:** Balances accountability with opportunities for improvement.

Conclusion

Our recommendations are designed to align the BEAD performance standards with the specific challenges encountered by rural and unserved communities. Recognizing these areas' distinct obstacles, we propose enhancements to broadband performance standards that accurately reflect real-world conditions, such as geographical barriers, limited infrastructure, and varying population densities.

By implementing more adaptive and innovative performance criteria, NTIA would empower local providers to tailor their solutions to the unique needs of their communities. These improvements would ensure that networks funded through the BEAD program yield significant and sustainable outcomes, bridging the digital divide and enhancing connectivity for all residents in these regions.

NTIA's leadership is instrumental in shaping a future where high-quality broadband access becomes a reality for all. We are eager to support your efforts and collaborate further to advance this critical mission. Thank you for this opportunity to contribute. Should you have any questions or require additional information, please do not hesitate to contact Christa Vinson, Director, Digital Equity & Strategic Partnerships - Rural LISC, at cvinson@lisc.org.

Sincerely,



Matthew Josephs
Senior Vice President for Policy
Local Initiatives Support Corporation (LISC)