DEPARTMENT OF COMMERCE

National Telecommunications and Information Administration

Broadband Equity, Access, and Deployment (BEAD) Program: Performance Measures for BEAD Last-Mile Networks

ACTION: Notice

SUMMARY:

The Infrastructure Investment and Jobs Act (IIJA) provides funding for robust investment in American infrastructure projects. IIJA established the Broadband Equity, Access, and Deployment Program (BEAD Program), which provides \$42.45 billion of funding to ensure high-speed Internet access 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)(codified at 47 U.S.C. §1701 *et seq.*).

The National Telecommunications and Information Administration (NTIA), as the agency responsible for administering the BEAD Program, provides herein additional guidance for BEAD Eligible Entities (States, Territories, and the District of Columbia) and prospective subgrantees on the performance measurement standards related to speed, latency, and reliability of last-mile deployment projects required under the BEAD Program.

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

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¹ NTIA, Notice of Funding Opportunity, Broadband Equity, Access, and Deployment Program (May 12, 2022), NOFO.pdf.

² This guidance document is intended solely to assist applicants in better understanding the BEAD grant program and the requirements set forth in the NOFO, as modified by the BEAD Restructuring Policy Notice (RPN), 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 requirements set forth in the NOFO, as modified by the BEAD Restructuring Policy Notice (RPN). In all cases, statutory and regulatory mandates, the terms and conditions of the award, and the requirements set forth in the NOFO, as modified by the BEAD Restructuring Policy Notice (RPN), shall prevail over any inconsistencies contained in this document.

Table of Contents

1.	Poli	icy Notice Background & Purpose	3
2.	2. Definitions		
3.	Me	asurement Methodology for Last-Mile Projects	4
3	3.1	Measurement Obligation	4
3	3.2	Sample Size	5
3	3.3	Committed Speed Tiers and Technologies	5
3	3.4	Sampling	6
3	3.5	Annual Measurement Period and Alignment with Semiannual Reports	6
3	3.6	Measurement Methodology	7
3	3.7	Measurement Period	7
3	3.8	No Prioritization of Measurement Traffic	8
3	3.9	Internet Exchange Points	8
3	3.10	Speed Testing	8
3	3.11	Latency Testing	9
3	3.12	Required Download Speed and Required Upload Speed	9
3	3.13	Availability/Reliability Tests	9
3	3.14	Failure of the Test Infrastructure.	10
3	3.15	Flexibility Afforded to Eligible Entities	10
4.	Tra	ansparency	11
5.	Cor	mpliance	11

1. Policy Notice Background & Purpose

This Policy Notice defines the mechanisms Eligible Entities and subgrantees must use to validate that BEAD funded networks comply with IIJA and the NOFO.³ This Policy Notice is consistent with well-established FCC practices and is designed to minimize administrative burdens on Eligible Entities and subgrantees. In response to comments filed in response to the Draft Performance Measures for BEAD Last-Mile Networks Policy Notice for Public Comment published on December 4, 2024, and consistent with the current Administration's goals of reducing regulatory compliance costs, this Policy Notice has been substantially simplified and shortened from the original draft.⁴

BEAD-funded last-mile broadband deployment projects are required to meet specific capacity, latency, and availability standards. Network speeds must reach or exceed 100 megabits per second (Mbps) download and 20 Mbps upload for broadband serviceable locations and 1 gigabit per second (Gbps) for both download and upload for community anchor institutions (CAIs). To comply with the latency standard, a provider's certified test results must show, for each state or territory, that 95 percent or more of all tests of network round-trip latency are at or below 100 milliseconds. Last-mile networks must not be unavailable for more than 48 hours over 365 days.⁵

Because many providers participating in, or likely to participate in, the NTIA BEAD Program are also subject to FCC High Cost Universal Service Fund (USF) rules, the NOFO adopts many attributes of the FCC performance measurement methodologies of the High Cost USF programs. Employing a performance testing methodology already used by many BEAD awardees improves efficiency and minimizes the burdens of BEAD compliance while also protecting American taxpayers from waste, fraud, and abuse. The measurement methodologies for recent High-Cost USF last-mile deployments are described in two FCC orders.⁶

In Section 3, this Policy Notice describes how providers can measure download speed, upload speed, latency, and reliability for BEAD-funded last-mile networks. Section 4 describes how providers may document the methodology, standards, and parameters used for their performance

³ The BEAD performance measures outlined in this document are limited to validating the technical performance of BEAD funded internet services and is not intended to provide guidance on how to validate the construction of infrastructure, per 2 CFR § 200.329.

⁴ See https://broadbandusa.ntia.doc.gov/funding-programs/policies- waivers/Draft Performance Measures for BEAD Last-Mile Networks Policy Notice.

⁵ NOFO § IV.C.2.a, p. 64-5. "Funded Networks shall deliver Reliable Broadband Service with speeds of not less than 100 Mbps for downloads and 20 Mbps for uploads. In addition, 95 percent of latency measurements during testing windows must fall at or below 100 milliseconds round-trip time. ... Funded Network connections to Eligible Community Anchor Institutions shall be capable of delivering service at speeds not less than 1 Gigabit per second for downloads and 1 Gigabit per second for uploads. ... Each Funded Network's outages should not exceed, on average, 48 hours over any 365-day period except in the case of natural disasters or other force majeure occurrence." ⁶ See Connect America Fund, WC Docket No. 10-90, Order, 33 FCC Rcd 6509, 6525-26, paras. 44-46 (WCB/WTB/OET 2018) (CAF Performance Measures Order) at DA-18-710A1.pdf (fcc.gov). See also Connect America Fund, WC Docket No. 10-90, Order on Reconsideration, 34 FCC Rcd 10109, 10119-23, paras. 27-38 (2019) at FCC-19-104A1.pdf. (Performance Measures Reconsideration Order).

measurements of those networks. Finally, Section 5 summarizes the standards for compliance with the guidance in this Policy Notice and the NOFO.

2. Definitions

The following definitions, including defined terms from the NOFO, are applicable to this Policy Notice:

- (a) BEAD location— The term "BEAD location" means a broadband serviceable location (BSL) served by a Funded Network.
- (b) Active subscriber— The term "active subscriber" means a household or business at a BEAD location that is currently subscribing to broadband service delivered over the BEAD Funded Network.
- (c) Committed speed tier— The term "committed speed tier" means the lowest combination of download and upload speeds that a provider has committed to deliver for a specific BEAD project as part of its subgrant conditions. Committed speed tier may not be less than 100 Mbps downstream and 20 Mbps upstream.
- (d) Funded Network— The term "Funded Network" means a broadband network deployed and/or upgraded with BEAD Program funds.⁷
- (e) Test subject— The term "test subject" means an active subscriber who has been randomly selected and chosen to participate in network performance measurement.
- (f) Sample set— The term "sample set" is the collection of all test subjects within the same state or territory, served by the same provider using the same broadband technology subject to the same committed speed tier.

3. Measurement Methodology for Last-Mile Projects

3.1 Measurement Obligation

All Eligible Entities and subrecipients have an obligation to oversee the Federal award and ensure any last-mile broadband network built pursuant to a BEAD project complies with the network performance standards described in the NOFO.

While a subgrantee's obligation to provide broadband service meeting these network performance standards continues for the duration of the Federal Interest Period, 8 the network performance reporting obligations described in this Policy Notice apply only during the period of performance. Subrecipients shall be obligated to perform such testing annually during the period of performance. The Eligible Entity will include a summarized outcome of the subrecipient's

⁷ NOFO § I.C.l. p. 13.

⁸ See Policy Notice: Tailoring the Application of the Uniform Guidance to the BEAD Program, p. 9, https://broadbandusa.ntia.doc.gov/sites/default/files/2023-

^{12/}BEAD Policy Notice of Uniform Guidance Part 200 Exceptions Related Issues.pdf (describing the Federal Interest Period). Accordingly, under certain circumstances, an Eligible Entity may have legitimate basis to request a subgrantee to provide performance data demonstrating its compliance with these performance standards after closeout. This Public Notice does not address any such situation nor the factual circumstances that might warrant such a request.

reported performance with the first BEAD Semiannual Report (SAR) of the calendar year and again prior to close-out of the subgrant. The Eligible Entity may withhold final payments to the subrecipient until performance testing data has been submitted.

A test is defined to be a single, discrete observation or measurement of speed or latency conducted from the customer premises of an active subscriber at a Funded Network location to a remote test server located at, or reached by, passing through an FCC-designated Internet exchange point (IXP).⁹

3.2 Sample Size

The number of subscriber connections to be tested is based on the total number of active subscribers to service plans meeting or exceeding the subgrantee's committed speed tier for each broadband technology at all BEAD locations across the state or territory (see Section 3.3 below). Subscribers are counted across all BEAD-funded projects of a subgrantee in a state or territory for each technology type, not separately for each BEAD project. Subgrantees with 50 or fewer active subscribers at BEAD locations for a committed speed tier and technology will test 5 locations (if there are 5 or fewer active subscribers, all active subscribers are tested); those with 51 through 500 active subscribers must test at least 10 percent of the total subscribed locations; if more than 500 subscribers exist in a sample population, only 50 locations must be tested. The sampled locations sharing the same technology and committed speed tier are referred to as a sample set.

Subgrantees may, if they prefer, include a larger number of locations in their sample sets. If additional locations are included in a sample set, their results must be reported.

3.3 Committed Speed Tiers and Technologies

The committed speed tier for a project is governed by the subgrantee agreement. Eligible Entities may require a commitment in the subgrantee agreement to provide higher speeds where the awardee received points or credits during the application process for committing to deliver a service above the minimum BEAD requirement.

Because the performance and reliability of different last-mile technologies may differ, a subgrantee that offers service relying on multiple different technologies or has committed to multiple different speed tiers must sample locations separately for each committed speed tier for each technology. Technologies are considered different if they are assigned different FCC technology codes. For example, a subgrantee offering service to 1,000 locations by fiber (FCC technology code 50) and to 400 locations by licensed fixed wireless (FCC technology code 71) must sample 50 locations served by fiber and 40 locations served by licensed fixed wireless. And if the subgrantee committed to different speed tiers within the 1,000 fiber locations (or the 400

⁹ See examples of the testing path at the USAC Performance Measures Testing, *available at* https://www.usac.org/wp-content/uploads/high-cost/documents/Tools/PMM-Test-Paths-and-Remote-Server-Locations-1.pdf

¹⁰ The sample sizes are similar to those stipulated by the FCC performance measures orders.

¹¹ See Fixed Technology Codes, FCC, available at https://help.bdc.fcc.gov/hc/en-us/articles/5290793888795-Fixed-Technology-Codes.

LFW locations) then each committed speed tier offering under each technology is sampled separately among subscribers in the applicable projects.

The provider must only use active subscribers at or above the committed speed tier in a sample set. For example, if a provider has committed only to offering qualifying broadband service (100/20 Mbps) but sells service packages for 50/10 Mbps, 100/20 Mbps, and 1000/1000 Mbps, the provider will use a single sample set that includes subscribers of the 100/20 and/or 1000/1000 Mbps tiers. The subscriber count includes all active subscribers for the committed speed tier and higher speed tiers.

3.4 Sampling

Every last-mile subgrantee must test a random sample of their active subscribers, the "test subjects," at grant-supported customer locations annually and at the end of the period of performance. Test subjects must be randomly selected from among the provider's active subscribers in each committed speed tier within each funded technology, as described above, in each state or territory.¹²

Random selection will ensure that providers cannot pick the subscribers likely to have the best performance (e.g., those on more lightly loaded network segments). Carriers may, at their discretion and expense, use inducements to encourage subscribers to participate in testing, but must offer the same inducement to all subscribers randomly selected for testing.¹³

Providers must select the random sample from the locations meeting qualifications to be included in a sample set as described above. Providers may select their own method for ensuring that the selection is random and must describe their method of ensuring random selection as part of the report submission. Providers are encouraged to select more random locations than the required sample size in the event a substitution is necessary – for example, a location, after selection, cannot be used because the customer discontinued service.

3.5 Annual Measurement Period and Alignment with Semiannual Reports

Summary outcomes of performance reporting and compliance becomes part of the first BEAD semiannual report of the calendar year submitted by the Eligible Entity.

Measurement sample sets must rely on the Funded Network locations as reported to the National Broadband Map. The sample set is to be drawn from the locations available for service with an as-of date 7 months prior to the due date of the first semiannual report of the calendar year. For example, the semiannual report due on January 31, 2026, reflects the performance of locations reported to the FCC Broadband Data Collection (BDC) available as of June 30, 2025. ¹⁴

¹² NTIA anticipates that most providers will use their deployed last-mile network management infrastructure to conduct these tests, rather than install hardware measurement devices.

¹³ See CAF Performance Measures Order, § 40.

¹⁴ The FCC publishes the list of locations and their service level approximately four and a half months after the as-of date. Thus, for the example, the provider can create the sample set in July or August 2025. If we assume that

The provider may conduct the performance measurements for one sample set during any single week after generating the list of locations. Eligible Entities must set a deadline for subgrantee reporting that allows time for analysis and inclusion of performance measures results in their BEAD semiannual report and allows the subgrantee ample time to complete testing between the as-of date of the National Broadband Map and the performance measurements submission deadline.

3.6 Measurement Methodology

For privacy and reproducibility reasons, performance metrics are measured by active measurements (i.e., devices or software sending packets to servers located at the edge of the provider network), rather than classical network management systems. Providers may use standardized CPE WAN Management Protocols (CWMP), such as TR-069¹⁵ and TR-369¹⁶, rely on software included on a residential gateway supplied to the customer, or install dedicated network measurement devices at subscriber locations. To minimize the burden on providers and subscribers, providers are encouraged to plan for speed and latency measurements that rely on capabilities built into optical network terminal (ONT) or other customer premise equipment (CPE) such as a residential gateway rather than installing additional measurement devices at subscriber locations. However, providers may choose to deploy separate measurement hardware devices for some or all locations in the sample set. For example, they may use built-in measurement capabilities for subscribers that use a provider-supplied or provider-specified residential gateway and hardware devices for locations with customer-supplied residential gateways.

Providers need to obtain consent from their subscriber to deploy separate measurement specific hardware on customer premises. ¹⁷ Consent cannot be made a condition of service, but providers may offer subscribers a uniform financial incentive. Because performance measurements conducted from the ONT/ONU, CPE, provider supplied residential gateway, etc. impose no burden on the subscriber, do not require a technician visit, and do not collect user data, the provider may perform such tests without obtaining subscriber consent.

Providers shall follow the basic measurement methodology summarized in Appendix A of the FCC *Performance Measures Order*, as modified in this Policy Notice.

3.7 Measurement Period

Speed and latency testing must be conducted for one week, repeated at the measurement intervals detailed below, with a default of one measurement period per year. Testing must be performed during testing weeks between the hours of 6:00 pm and 12:00 am local time each day,

Eligible Entities ask providers to submit relevant data by November 30, 2025, providers have at least three months to deploy measurement hardware, if necessary, conduct measurements, and collect data.

¹⁵ See "TR-069 CPE WAN Management Protocol," Broadband Forum, available at https://www.broadband-forum.org/pdfs/tr-069-1-6-0.pdf (last retrieved May 22, 2024).

¹⁶ See "TR-369 Issue 1: User Services Platform (USP)," Broadband Forum, available at https://www.broadband-forum.org/pdfs/tr-369-1-0-0.pdf (last retrieved May 22, 2024).

¹⁷ See, for example, the FCC consumer FAQ, https://www.fcc.gov/performance-testing-carriers-receiving-high-cost-universal-service-fund-support.

including weekends (testing hours). Testing for all locations in a single committed speed tier in a single state or territory must be performed during the same week. If a provider has more than one committed speed tier in a state or territory, testing for each speed tier may be conducted during different weeks.

3.8 No Prioritization of Measurement Traffic

Providers must not use any technology that prioritizes test traffic or customer connections selected for testing over those of other customers. Test traffic must receive the same priority as non-test traffic and customer connections not selected for testing but traversing the same IXP. Providers may not purposefully influence the route taken by test traffic to explicitly manipulate the test traffic path. Providers may prioritize measurement traffic within the existing provisioned service and/or capacity of the test subject to reduce or eliminate the impact of any customer application traffic.

3.9 Internet Exchange Points

For BEAD performance measures, NTIA adopts the FCC-designated IXP (i.e., any building, facility, or location housing a public Internet gateway that has an active interface to a qualifying internet autonomous system (ASNs)).¹⁸

The qualifying ASNs are listed in Appendix B of the FCC *Performance Measures Reconsideration Order*. ¹⁹

For providers serving non-contiguous areas more than 500 air miles from the contiguous United States, testing must be conducted from the customer premises of an active subscriber to a point in the non-contiguous area where mainland traffic is aggregated for transport from the non-contiguous area.

3.10 Speed Testing

A speed test is a single measurement of download or upload speed of at least 15 seconds duration between a test subject location and a specific remote server location.²⁰

For speed testing, a provider must conduct a minimum of one test per testing hour in each direction (download and upload) and start at the beginning of each test hour. If the consumer application traffic load is greater than 10% of the committed speed tier in the relevant direction,²¹ the provider may defer the affected test for one minute and reevaluate whether the load exceeds the threshold before retrying the test. For example, for a committed speed of 100 Mbps, the default cross-traffic threshold is 10 Mbps. This load check-and-retry must continue at one-

²⁰ NTIA adopts a minimum testing duration of 15 seconds based on recommendation from the FCC, with the purpose of eliminating confusion about valid speed test durations.

¹⁸ FCC Order on Reconsideration 19-104A1, pg. 7, *available at* https://docs.fcc.gov/public/attachments/FCC-19-104A1.pdf.

¹⁹ *Id*.at pg. 40.

²¹ The FCC recommended 10% to better match current usage patterns and expected growth trajectory. The number of "always on" devices in the typical connected home could easily exceed thresholds adopted before the proliferation of Internet of Things and extensive home automation, etc.

minute intervals until the speed test can be run or the one-hour test window ends and the test for that hour is canceled. A provider that begins attempting speed tests within the first fifteen minutes of a testing hour and repeatedly retries and defers the test at one-minute intervals due to consumer load meeting the adopted crosstalk thresholds may report that no test was successfully completed during the test hour because of crosstalk.²²

3.11 Latency Testing

A latency test is a single measurement of latency, often performed using a single User Datagram Protocol (UDP) packet or a group of three Internet Control Message Protocol (ICMP) or UDP packets sent at essentially the same time (as is common with ping tests).²³

For latency testing, a provider must conduct a minimum of one test per minute for each testing hour (i.e., -60 tests per hour).²⁴

To comply with the latency standard, a provider's certified test results must show, for each state or territory, that 95 percent or more of all tests of network round-trip latency are at or below 100 milliseconds when measured between the test subject and a remote server that is located at or reached by passing through an FCC-designated IXP. Providers must record the observed latency for all latency test measurements, including all lost packet tests. Providers may not discard lost packet tests from their test results as these tests count as discrete tests not meeting the standard.²⁵

3.12 Required Download Speed and Required Upload Speed

For all projects, the "required download speed" and "required upload speed" is the greater of 100Mbps download and 20Mbps upload, or the speed that the provider committed to as part of the subgrantee agreement, as described in Section 3.3.

To comply with the speed standard, a provider's certified test results, for each state or territory, technology, and speed tier, must show that 80 percent of the upload measurements are at or above 80 percent of the required upload speed, and 80 percent of the download measurements are at or above 80 percent of the required download speed. For example, for priority projects that have committed to 100/20 Mbps, 80 percent of measurements must meet or exceed 80/16 Mbps.

3.13 Availability/Reliability Tests

The NOFO specifies: "Each Funded Network's outages should not exceed, on average, 48 hours over any 365-day period except in the case of natural disasters or other force majeure occurrence. Each Eligible Entity should ensure a prospective network is designed to meet this requirement and should develop metrics for measuring outages to be utilized in connection with this requirement once the network is operational." Additionally, standing maintenance windows that are published on the provider's Network Management Practices page are excluded, as well

9

²² See Performance Measures Reconsideration Order, § 26.

²³ See CAF Performance Measures Order, § 18.

²⁴ Crosstalk waiver for latency testing was removed based on FCC recommendations and many other commentors who advocated for the merits of loaded latency testing.

²⁵ See CAF Performance Measures Order, § 50.

²⁶ NOFO, § IV.C.2.a, p. 65.

as other scheduled maintenance that has been announced to affected customers in advance. NTIA adopts network availability as the metric for determining reliability. This availability requirement corresponds to an annual uptime of 99.45 percent.

Providers must report network outages exceeding this availability requirement as part of their annual and final report prior to close-out. Reporting is for all BEAD funded locations and should include the number of locations exceeding the requirement along with an explanation for the outage.

Eligible Entities may, as part of their subgrantee agreements, require more detail regarding locations that did not meet the required availability threshold so long as that detail is consistent with the provisions of the NOFO.

Outages are included in the outage time total regardless of whether the subscriber reports the outage to the provider or the provider positively identifies an outage. Providers must report all bona fide outages, starting at the time of customer report or first determination that the outage is the responsibility of the provider.

Power failures and subscriber disconnection of equipment at the subscriber location are not included in the outage periods. Providers need not report outages that occur during or within one month after the end of the activation period of the FCC's Disaster Information Reporting System (DIRS)²⁷ or during the incident period of a Federal Emergency Management Agency (FEMA) "declared disaster."

Providers must compute the availability for the past 365 days preceding the submission of the performance report to the Eligible Entity. To allow for analysis, the subgrantee may choose a 365-day period that ends no more than 30 calendar days before the report submission.

3.14 Failure of the Test Infrastructure

Providers cannot delete, trim, edit, or otherwise exclude any test measurements. If a provider knows or suspects that the testing infrastructure has failed or has negatively impacted test results, the provider must still submit the results and may also submit evidence of the test infrastructure failure with sufficiently detailed information to the Eligible Entity. The Eligible Entity will determine the extent to which any test results should be discarded or adjusted when calculating compliance.

3.15 Flexibility Afforded to Eligible Entities

Eligible Entities must detail in the subgrantee agreement and/or grant conditions the corrective actions to be taken upon a finding of non-compliance with this Policy Notice (*e.g.*, more frequent testing), but the Eligible Entity may not change the requirements detailed in the NOFO, this Policy Notice or subsequent guidance from NTIA.

²⁷ The post-activation period of one-month accounts for the time needed to restore normal network service after disasters.

Eligible Entities may choose how and when they want to receive the performance measurements data from subgrantees but are responsible for submitting complete and accurate semi-annual reports that include required performance measurement reporting.

4. Transparency

Each BEAD subgrantee shall document the methodology, standards, and parameters used to measure the performance of its Funded Networks. This documentation must be provided to the Eligible Entity with each data submission, including a change log of any material changes from the previous submission. Documentation should include information about software, systems, protocols, and standards used in testing to fully describe and validate the effectiveness of the process.

For each round of performance testing conducted, subgrantees must submit detailed per-location files to the Eligible Entity. Subgrantees must also publish on the network management practices page of their website their testing methodology, standards, and parameters used, as well as aggregate testing results for each sample set tested – and Eligible Entities are encouraged to collect and publish this data through the state or territory open data efforts. Providers must retain the measurement data and make it available for inspection by the Eligible Entity or NTIA for the duration of the period of performance.

The MBA technical appendix offers an example of a methodology explanation.²⁸ Different methodologies, such as a different number of concurrent TCP connections, may yield substantially different measurement results under some circumstances.²⁹

The measurement report, including the methodology, standards, parameters, and data, must include an official certification of the accuracy of the information reported.³⁰ The certifying official must be a corporate officer of the service provider with supervisory and budgetary authority over network operations in the relevant service area.

5. Compliance

For speed, NTIA requires that 80 percent of download and upload measurements be at or above 80 percent of the required speed tier. Upload and download tests are counted separately (i.e., both must meet the 80/80 standard individually).

For latency, 95 percent of measurements must be at or below 100 milliseconds.

11

²⁸ Technical Appendix, Technical Appendix to the Twelfth MBA Report, FCC Office of Engineering and Technology (Jan. 2023), *available at* https://data.fcc.gov/download/measuring-broadband-america/2022/Technical-Appendix-fixed-2022.pdf.

²⁹ See, e.g., Kyle MacMillan, Tarun Mangla, James Saxon, Nicole P. Marwell, and Nick Feamster, *A Comparative Analysis of Ookla Speedtest and Measurement Labs Network Diagnostic Test (NDT7)*, Proc. ACM Meas. Anal. Comput. Syst. 7, 1, Article 19 (Mar. 2023), https://doi.org/10.1145/3579448.

³⁰ See 47 CFR § 1.50007(d) and 47 CFR § 9.19(3) for related provisions.

For availability, the provider must show an average outage across its locations below 48 hours per calendar year.

A provider is non-compliant if it fails to meet any of the four thresholds (i.e., download, upload, latency, or availability) for any of the applicable speed tiers and technologies.

A provider is also non-compliant if it fails to use a compliant testing methodology, fails to report measurement results to the Eligible Entity on time, or fails to comply with transparency requirements in accordance with the NOFO and terms and conditions of an award.

Subgrantees must submit their measurement results, including the reliability metrics, by the due date for their annual performance report or for the final report prior to grant close-out and final payment. The CSV file uses the format specified by Universal Service Administrative Company (USAC),³¹ including any updates published by USAC. Because Funded Network locations do not have a High Cost Universal Broadband (HUBB) Location ID, the first column contains the BSL identifier instead. Providers submit a separate file for each technology, committed speed tier; thus, the CSV file does not include the speed tier.

Subgrantees are responsible for reporting any non-compliance to the Eligible Entity within 15 days of completing the measurement cycle or failing to meet the availability benchmarks. The NOFO includes information regarding penalties for subgrantee noncompliance, including Eligible Entities taking necessary and appropriate enforcement action against subgrantees for failing to comply with a program requirement. Eligible Entities should establish a remediation process for subgrantees that fail to comply with this Policy Notice or fail to meet the reliability benchmarks in order to bring them into compliance.

12

³¹ Universal Service Administrative Co., PMM Data Formatting Guide, https://www.usac.org/wp-content/uploads/high-cost/documents/Tools/PMM-Data-Formating-Guide.pdf.