

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90

COMMENTS OF AT&T

Cathy Carpino
Gary L. Phillips
David L. Lawson

AT&T Services, Inc.
1120 20th Street, N.W.
Suite 1000
Washington, D.C. 20036
(202) 457-3046 - telephone

November 7, 2018

Its Attorneys

Table of Contents

I.	INTRODUCTION AND SUMMARY	1
II.	DISCUSSION	2
A.	The Bureaus Should Grant Joint Petitioners’ Request for Clarification That CAF Recipients May Test to the Nearest Internet Access Point.	2
B.	The Bureaus Should Harmonize Latency and Speed Testing Requirements and Compliance.	6
1.	The Joint Petitioners Are Correct That the Bureaus’ Once-Per-Minute Latency Testing Requirement Violates the APA and Is Arbitrary and Capricious.	6
2.	Requiring CAF Recipients to Test Separate Subscribers for Speed and Latency Is Administratively Burdensome and Unnecessary.	8
3.	The Compliance Framework Should Be Identical for Both Speed and Latency Testing.	9
C.	The Bureaus Should Adjust Their Performance Compliance Framework to Align with the Commission’s Interim Deployment Compliance Framework as Recommended by the Joint Petitioners.....	11
D.	The Bureaus Should Grant Joint Petitioners’ Request to Reconsider the Decision to Exclude Test Results That Demonstrate CAF Recipients Are Providing Faster Speeds to Customers than Advertised.	13
III.	CONCLUSION.....	14

I. INTRODUCTION AND SUMMARY

The Wireline Competition Bureau, Wireless Telecommunications Bureau, and the Office of Engineering and Technology (collectively, the Bureaus) released an order in July establishing a framework for measuring broadband speed and latency performance for recipients of high-cost support that serve fixed locations.¹ No party would disagree with the Bureaus' stated goal of having a broadband performance testing and compliance framework to "maximize the benefits consumers reap from [the Commission's] high-cost universal service programs in even the hardest-to-reach areas, thus making the best use of [its] Universal Service Fund (USF) dollars and further closing the digital divide."² However, many of the Bureaus' performance measurement decisions are counterproductive to that goal and were not subject to notice and comment. For these reasons, numerous parties filed petitions for reconsideration and applications for review of the Bureaus' *Performance Measurements Order*.³ AT&T Services, Inc., on behalf of its affiliates that are CAF Phase II (CAF II) recipients (collectively, AT&T),

¹ *Connect America Fund*, WC Docket No. 10-90, Order, DA 18-710 (rel. July 6, 2018) (*Performance Measurements Order*). According to the Bureaus, the following recipients of high-cost support are subject to this framework: "recipients of Connect America Fund (CAF) high-cost universal service support, including price cap carriers, rate-of-return carriers, rural broadband experiment (RBE) support recipients, Alaska Plan carriers, and CAF Phase II auction winners." *Id.* at ¶ 1. We refer to these covered entities as "CAF recipients" in these comments.

² *Id.* at ¶ 2.

³ See, e.g., Application for Review and Request for Clarification of NTCA, WC Docket No. 10-90 (filed Sept. 19, 2018) (NTCA Appeal); WTA Application for Review, WC Docket No. 10-90 (filed Sept. 19, 2018); Hughes Network Systems, LLC Petition for Clarification or, in the Alternative, Reconsideration, WC Docket No. 10-90 (filed Sept. 19, 2018); Petition for Reconsideration of Viasat, Inc., WC Docket No. 10-90 (filed Sept. 19, 2018); Micronesian Telecommunications Corporation Petition for Partial Reconsideration, WC Docket No. 10-90 (filed Sept. 19, 2018).

submits these comments in support of USTelecom, ITTA, and the Wireless Internet Service Providers Association's joint petition for reconsideration or clarification.⁴

AT&T urges the Bureaus to grant the Joint Petition and make the following adjustments to the broadband performance testing and compliance framework: (1) clarify that CAF recipients may test to the nearest Internet access point, regardless of whether that Internet access point is located in one of the sixteen cities the Bureaus identified as an "FCC-designated Internet Exchange Point" (IXP); (2) harmonize the latency and speed testing requirements and compliance by (a) adopting a once-per-hour testing requirement for both speed and latency, (b) permitting CAF recipients to test the same subscribers for both speed and latency, and (c) applying the same "80/80" compliance framework to both speed and latency testing; (3) align the Bureaus' "Level 1" performance compliance framework with the Commission's "Tier 1" interim deployment milestone compliance framework; and (4) reconsider the decision to exclude speed test results that demonstrate CAF recipients are providing subscribers with faster speeds than advertised. We discuss each of these issues below.

II. DISCUSSION

A. The Bureaus Should Grant Joint Petitioners' Request for Clarification That CAF Recipients May Test to the Nearest Internet Access Point.

In its 2011 order establishing the Connect America Fund to award high-cost funding to providers offering broadband service meeting certain speed and latency requirements in unserved areas, the Commission also decided that CAF recipients should be subject to performance testing and reporting.⁵ The Commission reasoned that requiring such testing and reporting will

⁴ USTelecom, ITTA, and Wireless Internet Service Providers Association Petition for Reconsideration and Clarification, WC Docket No. 10-90 (filed Sept. 19, 2018) (Joint Petition).

⁵ *Connect America Fund et al.*, 26 FCC Rcd 17663, ¶ 109 (2011) (*USF/ICC Transformation Order*).

strengthen its ability to ensure that CAF recipients are providing at least the minimum broadband speeds, thereby using CAF support for the intended purpose.⁶ In that 2011 order, the Commission clearly and unambiguously stated that CAF recipients are required to test their CAF customers' broadband performance from the "end-user interface *to the nearest Internet access point*."⁷ The Commission explained that the "nearest Internet access point" is "the Internet gateway, the closest peering point between the broadband provider and the public Internet for *a given consumer connection*."⁸ Subject to these and other guidelines, it directed the Bureaus to finalize the performance testing and reporting requirements.⁹

The Bureaus' *Performance Measurements Order*, which finalizes testing and reporting requirements as per the Commission's 2011 directive, ignored the Commission's clear direction that performance tests should run to the "nearest Internet access point," and, instead, required CAF recipients to test speed and latency from the customer premises to a "remote test server located at or reached by passing through an FCC-designated IXP."¹⁰ To make matters worse, the Bureaus named just sixteen cities as "FCC-designated IXPs" in this order,¹¹ significantly increasing in some, if not many, cases the distances over which tests are performed, and thereby artificially reducing measured network performance. AT&T supports the joint petitioners' request that the Bureaus clarify that CAF recipients may perform such testing from the customer

⁶ *Id.* at ¶ 110.

⁷ *Id.* at ¶ 111 & Figure 3 (emphasis added).

⁸ *Id.* at ¶ 111 (emphasis added).

⁹ *Id.* at ¶ 112.

¹⁰ *Performance Measurements Order* at ¶ 18.

¹¹ *Id.* at ¶ 20.

premises to the nearest Internet access point, which may or may not be located in one of Bureaus' identified cities. As the joint petitioners explain, such a clarification is consistent with Commission's determination in 2011 that CAF recipients are required to test between the customer premises and the "nearest Internet access point"¹² without reference to any specific city.

The Bureaus never explained why a CAF recipient must test only at remote servers located in one of their identified cities, as opposed to a remote test server located at "the nearest Internet access point," as required by the Commission. AT&T understands that, initially, the Wireline Competition Bureau (WCB) selected the same cities used for the Measuring Broadband America (MBA) program.¹³ For that program, the Commission selected these cities as a convenience to its MBA vendor, SamKnows. But, as the joint petitioners note, performance testing for CAF will be conducted and controlled by individual eligible telecommunications carriers, unlike the MBA testing framework.¹⁴ Staff offers no reason why CAF recipients should drag their CAF customers' test traffic to servers located in certain cities simply because those cities happen to host SamKnows servers used for the MBA program when these carriers otherwise would route this traffic to an IXP that is hundreds of miles closer to the customer.

In adopting this particular requirement, the Bureaus explained that they want a CAF recipient's testing to "show whether that customer is able to enjoy high-quality real-time

¹² Joint Petition at 20 (citing *USF/ICC Transformation Order* at ¶ 111).

¹³ *Connect America Fund*, 28 FCC Rcd 15060, ¶ 23 & n.63 (WCB 2013) (*CAF II Price Cap Carrier Service Obligations Order*) (also adding Denver to the MBA/SamKnows list of cities so that "all contiguous areas in the USA are within 700 miles of an IXP").

¹⁴ Joint Petition at 21.

applications. . . .”¹⁵ But determining whether customers can enjoy “real-time” applications of course requires broadband performance testing that measures the real-world experience of broadband customers. By requiring CAF recipients to route test traffic to an Internet access point located in one of just sixteen staff-identified cities, rather than the nearest point, the Bureaus’ testing methodology will significantly increase the distance over which tests are performed – potentially by hundreds of miles. For example, today, AT&T routes Internet-bound traffic from a wireline broadband customer in Louisiana to an Internet access point in New Orleans. It follows this routing for broadband customers in CAF II-eligible census blocks, as well as for customers in non-CAF II-eligible census blocks in that state. Absent reconsideration by staff, AT&T will instead be required to re-route test traffic for selected CAF II customers in Louisiana to Dallas, Texas or Atlanta, Georgia for performance testing. This routing adds an additional 450-500 miles. Requiring AT&T to re-route these customers’ test traffic in this fashion will not provide the Commission with an accurate picture of the broadband speeds and latency that such customers normally obtain. Indeed, the Bureaus acknowledge that increasing the distance to the nearest IXP adversely affects broadband performance.¹⁶

In the example provided above, requiring AT&T to re-route a CAF customer’s traffic so that it may test that Louisiana customer’s broadband performance in Dallas or Atlanta is inconsistent with the Commission’s directive that we test this customer’s service at “the closest peering point between the broadband provider and the public Internet for [that customer’s] connection.”¹⁷ For an AT&T wireline broadband customer in Louisiana, the closest Internet

¹⁵ *Performance Measurements Order* at ¶ 19.

¹⁶ *See, e.g., id.* at ¶ 21 (stating that the “distance between a carrier and its nearest IXP affects latency and may affect speed as well”).

¹⁷ *USF/ICC Transformation Order* at ¶ 111.

access point is in New Orleans. To be sure, for many AT&T broadband customers, the nearest Internet access point will be in one of the sixteen cities identified by staff. However, as we demonstrate above, that is not always the case.

For these reasons, AT&T respectfully requests that the Bureaus grant the Joint Petition and clarify that CAF recipients may test from the customer premises to the nearest Internet access point, regardless of whether that IXP is located in one of Bureaus' identified cities.

B. The Bureaus Should Harmonize Latency and Speed Testing Requirements and Compliance.

The Joint Petition highlights a number of discrepancies between the Bureaus' speed and latency testing requirements. These differences, discussed below, will cause CAF recipients to conduct separate tests with separate customers and will subject them to different compliance frameworks. The Bureaus fail to explain why the resulting increase in burden is justified.

1. The Joint Petitioners Are Correct That the Bureaus' Once-Per-Minute Latency Testing Requirement Violates the APA and Is Arbitrary and Capricious.

Without notice and comment or any record support, the Bureaus unilaterally decided in their *Performance Measurements Order* to require CAF recipients to test latency *at least* once-per-minute for each of the testing hours.¹⁸ By contrast, and consistent with the Bureaus' prior proposal, the Bureaus require CAF recipients to test broadband customers' speed once an hour.¹⁹ The joint petitioners urge the Bureaus to reconsider the frequency of latency testing and, instead, harmonize it with the once-per-hour speed testing requirement.²⁰ AT&T agrees. Though not

¹⁸ *Performance Measurements Order* at ¶ 27.

¹⁹ *Id.* at ¶ 28.

²⁰ Joint Petition at 4-9.

entirely clear, the Bureaus' sole rationale for excessive latency testing seems to be, "[t]he data usage load for latency testing is minimal."²¹ Even if that is true, and AT&T does not concede it is, it says nothing about why once-per-minute latency testing is necessary for the Commission to determine if a CAF recipient's customer "is able to enjoy high-quality, real-time applications. . . ."²² The Bureaus' draconian once-per-minute latency testing is arbitrary and capricious because the Bureaus failed to "articulate a satisfactory explanation for [their] action including a rational connection between the facts found and the choice made."²³

The joint petitioners documented the various requests for comment the Bureaus have sought over the years on the frequency of speed and latency testing.²⁴ While the Bureaus have sought comment on *hourly* testing, nowhere have they sought comment on or otherwise signaled that they were contemplating a minimum of once-a-minute latency testing. As the joint petitioners explain, this lack of notice violates the Administrative Procedure Act (APA).²⁵ In addition to being arbitrary and capricious and violating the APA, AT&T shares the joint petitioners' practical concern that such excessive testing could overload some testing methods and could cause testing to be disrupted.²⁶ Finally, we do not believe the Bureaus' decision to obtain 2,520 once-a-minute latency test results each quarter, as opposed to 42 once-an-hour test results per quarter, could survive the Office of Management and Budget's (OMB's) Paperwork

²¹ *Performance Measurements Order* at ¶ 27.

²² *Id.* at ¶ 19.

²³ *See Verizon Tel. Cos. v. FCC*, 570 F.3d 294, 301 (D.C. Cir. 2009).

²⁴ Joint Petition at 7-8.

²⁵ *Id.* at 5.

²⁶ *Id.* at 9.

Reduction Act (PRA) review. As the Bureaus know, they will have to demonstrate to OMB that there is some practical utility to obtaining 60 times more test results for latency than for speed over the same period of time.²⁷ In light of the Bureaus' failure to offer any explanation for the exponential increase in latency testing, coupled with their failure to "minimize the paperwork burden" on CAF recipients,²⁸ AT&T also believes the Bureaus' once-per-minute latency testing regime could not receive OMB approval.

2. Requiring CAF Recipients to Test Separate Subscribers for Speed and Latency Is Administratively Burdensome and Unnecessary.

Another unexpected and ill-advised decision in the Bureaus' *Performance Measurements Order* is the requirement that CAF recipients test *separate* subscribers for speed and latency performance.²⁹ We agree with the joint petitioners that there is no reason why CAF recipients should not use the same subscribers to test for both speed and latency.³⁰ Like their once-per-minute latency testing decision discussed above, the Bureaus never sought comment on, let alone proposed, requiring CAF recipients to conduct these performance tests using separate customers. Current and prospective CAF recipients thus had no opportunity to explain how burdensome it will be to test twice as many subscribers than anticipated. Moreover, recognizing the efficiencies with testing both speed and latency at the same time, AT&T developed a testing solution to do precisely that. We expect other providers have similarly made the investment to develop testing

²⁷ Consistent with the requirements of the PRA, prior to providing approval of an information collection, OMB must determine "whether the collection of information by the agency is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility." 44 U.S.C. § 3508.

²⁸ 44 U.S.C. § 3501(1).

²⁹ *Performance Measurements Order* at ¶ 40.

³⁰ Joint Petition at 22.

solutions that examine speed and latency together. Requiring providers with these integrated testing solutions to suppress either speed or latency testing may not be feasible, at least not without additional development work. In the absence of any explanation as to why CAF recipients should not test the same, randomly-selected subscribers for both speed and latency, CAF recipients should not be required to expend additional resources modifying already developed testing solutions. For these reasons, AT&T recommends that the Bureaus clarify that CAF recipients may test the same subscribers for both speed and latency performance, as requested by the joint petitioners.³¹

3. The Compliance Framework Should Be Identical for Both Speed and Latency Testing.

The Bureaus reasonably concluded that CAF recipients should be held to an “80/80” compliance standard for speed testing. This means, to be in compliance with the Commission’s broadband speed requirements applicable to a particular CAF recipient, the Bureaus require 80 percent of that carrier’s download and upload measurements be at or above 80 percent of the CAF-required speed tier.³² Unfortunately, the Bureaus did not extend this balanced approach to latency testing. Specifically, the Bureaus require CAF recipients to meet the latency standard (*i.e.*, 100 ms round-trip) 95 percent of the time, or a “95/100” standard.³³ AT&T supports the joint petitioners’ request that the Bureaus reconsider these disparate compliance frameworks.³⁴

³¹ See also NTCA Appeal at 22 (requesting the same clarification as the joint petitioners).

³² *Performance Measurements Order* at ¶ 51.

³³ *Id.* at ¶ 50.

³⁴ Joint Petition at 10-12.

Specifically, AT&T supports the Bureaus applying the same “80/80” compliance standard to both speed *and* latency test results. Doing so would simplify Commission and USAC review and enforcement. For a CAF II recipient required to comply with the Commission’s 10/1 broadband speed requirement, that recipient would have to demonstrate through testing that at least 80 percent of the time, it is providing broadband speeds of at least 8 Mbps download and .8 Mbps upload, along with latency that is no greater than 120 ms round-trip. The Bureaus’ justification for adopting disparate speed and latency compliance standards is that “no parties have challenged the Commission’s reasoning for the existing 100 ms latency standard.”³⁵ But, as the joint petitioners convincingly argue, the WCB established its 95 percent requirement years before any carrier was offered CAF II support and thus “no future recipient could have been expected to assess the appropriateness of this prematurely adopted requirement.”³⁶ Joint petitioners further explain how the Commission has amended its CAF rules over the years in response to informed carrier input.³⁷ The Commission should do so again here, with respect to the latency compliance standard.

If the Bureaus decline to extend their 80/80 compliance framework to latency testing, at a minimum, the Bureaus should adopt the joint petitioners’ recommended “95/175” compliance standard for latency, wherein a CAF recipient “must meet 175 percent of the latency standard at least 95 percent of the time.”³⁸ The WCB selected 100 ms round trip as the latency standard

³⁵ *Performance Measurements Order* at ¶ 50.

³⁶ Joint Petition at 10.

³⁷ *Id.* (explaining how the Commission modified its CAF II interim deployment milestones to better reflect the reality of major network builds).

³⁸ *Id.* at 12.

based on an ITU standard that found “consumers are ‘very satisfied’ with the quality of VoIP calls up to a mouth-to-ear latency of approximately 200 ms.”³⁹ The WCB, in turn, converted that statistic to 100 ms round-trip and adopted it as the CAF II latency requirement.⁴⁰ As the joint petitioners note, this same ITU standard also concluded that consumers were “satisfied” with the quality of VoIP calls up to a mouth-to-ear latency of approximately 275 ms (or 175 ms round-trip using the WCB’s calculations).⁴¹ Adjusting the compliance standard as recommended by the joint petitioners will more accurately reflect the range of latency that consumers find satisfactory.⁴²

C. The Bureaus Should Adjust Their Performance Compliance Framework to Align with the Commission’s Interim Deployment Compliance Framework as Recommended by the Joint Petitioners.

Rather than adopting the same compliance framework for performance measurement testing as the Commission adopted for CAF II build-out milestones, the Bureaus inexplicably adopted a more stringent framework that could impede, not promote, broadband deployment. For that reason, we agree with the joint petitioners that the Bureaus should reconsider this decision.⁴³ In 2014, the Commission modified its rules to give CAF II recipients additional time to complete their broadband deployments. Initially, the Commission believed carriers should complete 85 percent of their build within three years.⁴⁴ However, upon further input from

³⁹ *CAF II Price Cap Carrier Service Obligations Order* at ¶ 20 (citing ITU Standard G.114).

⁴⁰ *Id.* at ¶ 22.

⁴¹ Joint Petition at 11.

⁴² *Id.* at 12.

⁴³ *Id.* at 12-14.

⁴⁴ *USF/ICC Transformation Order* at ¶ 161.

carriers, the Commission revisited that decision, determining that CAF II recipients should complete 40 percent of their broadband build by the end of year 3 of their CAF II service term, 60 percent by the end of year 4, 80 percent by the end of year 5, and 100 percent by the end of year 6.⁴⁵ It adopted a similar phased-in approach to compliance with these build milestones. If a CAF II recipient misses its interim build-out milestone by 5 percent to less than 15 percent, it will be subject to quarterly reporting, and if it misses that milestone by less than 5 percent, no additional monitoring is necessary.⁴⁶ By contrast, if a CAF recipient's performance compliance is above 85 percent but less than 100 percent, the Bureaus directed USAC to withhold 5 percent of that carrier's monthly funding.⁴⁷

According to the joint petitioners, under Level 1 of the Bureaus' framework, a carrier that reports a minor latency compliance gap of 6 percent would have 5 percent of its funding withheld but another CAF recipient reporting a 14.9 percent build-out compliance gap would be subject only to quarterly reporting under the Commission's Tier 1.⁴⁸ We agree with the joint petitioners that it makes little sense to punish a carrier more severely for a minor latency compliance gap than for a build-out compliance gap. If the Commission thought a less than 5 percent build milestone gap was not concerning and did not warrant additional monitoring and a build milestone gap of up to 14.9 percent requires quarterly monitoring, it is inconsistent for the Bureaus to penalize a carrier for a minor and easily correctable latency compliance gap by withholding 5 percent of its funding. Instead, as advocated by the joint petitioners, the Bureaus

⁴⁵ *Connect America Fund et al.*, 29 FCC Rcd 15644, ¶ 36 (2014).

⁴⁶ *Id.* at ¶ 147.

⁴⁷ *Performance Measurements Order* at ¶ 64.

⁴⁸ Joint Petition at 12.

should reconsider Level 1 of their performance compliance framework and align it with the Commission's Tier 1 interim build milestone compliance framework.⁴⁹

D. The Bureaus Should Grant Joint Petitioners' Request to Reconsider the Decision to Exclude Test Results That Demonstrate CAF Recipients Are Providing Faster Speeds to Customers than Advertised.

One of the most perplexing decisions in the *Performance Measurements Order* is the Bureaus' determination that speed test results demonstrating that CAF recipients provided faster speeds to their customers than advertised should be discarded as "likely invalid."⁵⁰ That simply is incorrect. AT&T and other carriers routinely provide faster broadband speeds to customers than advertised. This occurs for a number of reasons including those identified in the Joint Petition: providers may "design[] broadband networks to minimize stalling or congestion, allow for scaling beyond initial low demand on newly deployed facilities, and [for] network management efficiencies."⁵¹ If not reconsidered, the Bureaus' decision to exclude test results that show speeds faster than 150 percent of the advertised speed will punish CAF recipients for complying with the Commission's rules, which require CAF II recipients, for example, to offer broadband service at speeds of "*at least* 10 Mbps downstream/1 Mbps upstream."⁵² The Commission's rules establish broadband speed floors, not ceilings, and the Bureaus lack authority to modify the Commission's rules through their "advertised speed" decision. Finally, we agree with the joint petitioners that there are numerous procedural flaws with this misguided

⁴⁹ *Id.* at 13-14.

⁵⁰ *Performance Measurements Order* at n.145.

⁵¹ Joint Petition at 17.

⁵² 47 C.F.R. § 54.309(a)(1) (emphasis added).

decision including, the Bureaus failed to comply with the notice and comment requirements of the APA, the Bureaus lack authority to impose “truth-in-advertising” requirements, and the Bureaus’ decision to include speeds below the given thresholds while simultaneously excluding speeds that are above that threshold is arbitrary and capricious.⁵³ For all of these reasons, the Bureaus’ should grant the joint petitioners’ request to reconsider the decision to exclude test results that show speeds faster than the advertised speeds.⁵⁴

III. CONCLUSION

For the reasons provided above, AT&T urges the Bureaus to grant the Joint Petition and reconsider or clarify decisions contained in the *Performance Measurements Order*.

Respectfully Submitted,

/s/ Cathy Carpino
Cathy Carpino
Gary L. Phillips
David L. Lawson

AT&T Services, Inc.
1120 20th Street NW
Suite 1000
Washington, D.C. 20036
(202) 457-3046 – phone

November 7, 2018

Its Attorneys

⁵³ Joint Petition at 16-19.

⁵⁴ *See also* NTCA Appeal at 18-20 (requesting the same clarification as the joint petitioners).