

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

In the Matter of the Nebraska Public
Service Commission, on its Own
Motion, to Implement Standards for the
Verification of Broadband Service
Provider Coverage and Speed Data.

Application No. NUSF-133

**REPLY COMMENTS OF CHARTER FIBERLINK - NEBRASKA, LLC AND TIME
WARNER CABLE INFORMATION SERVICES (NEBRASKA), LLC**

Charter Fiberlink - Nebraska, LLC and Time Warner Cable Information Services (Nebraska), LLC (collectively "Charter") submits these comments in response to the Commission's March 15, 2022 Order seeking comment on issues relating to speed testing for recipients of ongoing NUSF high-cost support. These comments respond to, and largely support, the comments filed by various participants in this proceeding on April 15, 2022.

Charter is not an ETC in Nebraska currently, and does not receive NUSF support. However, Charter does seek to participate in other broadband support programs in Nebraska, like the Broadband Bridge Program. As such, Charter has a direct interest in the Commission's implementation of broadband speed testing programs. In this context, similar to other providers offering comments in this proceeding, Charter urges the Commission to adopt uniform testing standards and methodologies that providers can implement easily and reliably and which customers

and the Commission can understand and compare to results for other Nebraska programs and other states.

Two Areas of Consensus

1. Match FCC Speed Testing Protocols as Closely as Possible.

In the initial round of comments, two key items of consensus emerged. Charter supports these broad areas of agreement. First, nearly every commenter agreed that the Commission should adopt a comprehensive speed testing approach for all Commission-administered programs (such as the NUSF and the Nebraska Broadband Bridge Program) that closely matches FCC programs. Windstream observed: “[S]tate-level speed testing requirements should conform as much as possible to those required by the FCC for Connect America Fund Phase II (‘CAF II’), Rural Digital Opportunity Fund (‘RDOF’), and other federal support programs.”¹ RTCN agreed: “To the extent possible, we suggest the Commission align its testing standards with federal requirements to avoid unnecessary duplication of effort by carriers.”² RIC suggests using the FCC’s PMM methods “insofar as possible.”³ NRBA recommended (1) “consistency with federal HUBB reporting requirements to ensure accurate and representative data while avoiding duplication and unnecessary administrative burdens,” and (2) “Consistency with other programs administered by PSC, such as the Bridge program, NUSF-92, etc.”⁴

¹ *Comments of Windstream*, p. 1-2.

² *Comments of the Rural Telecommunications Coalition of Nebraska*, p. 2.

³ *Comments of the Nebraska Rural Independent Companies*, p. 2.

⁴ *Comments of the Nebraska Rural Broadband Alliance*, p. 4-5.

NPPD noted that it “strongly supports” the FCC approaches,⁵ and suggested using the FCC approaches “not only in administering the NUSF program, but in evaluating every program implemented in Nebraska which distributes or allocates state and federal funds for the deployment and funding of broadband infrastructure and services....”⁶ Cox and Lumen also supported these approaches.

Charter agrees with these comments, and therefore urges the Commission to adopt a testing program – both for NUSF purposes and for other purposes such as the Broadband Bridge Program – that matches the FCC approaches as closely as possible. The FCC testing programs and standards have been subject to significant input and discussion, and provide a common basis for understanding broadband speed and speed testing. Adopting these standards, with a minimum of differentiation necessary for implementation at the state level, would provide benefits for customers and providers alike. A single standard across states and programs promotes a more efficient and reliable implementation process for providers, and allows the Commission and consumers to more readily compare speed testing results from NUSF-supported projects to Broadband Bridge Program projects or projects in other states. Charter also recommends that the Commission regularly monitor FCC testing programs and standards as those evolve, and update Nebraska standards accordingly. . The Commission should give significant weight to any testing protocols or changes adopted for the RDOF program.

⁵ *Comments of Nebraska Public Power District on Order Opening Docket and Seeking Comment*, p. 2.

⁶ NPPD Comments, p. 3.

a. *Use SamKnows Approach Used for Measuring Broadband America Program.*

These federal testing programs that Charter recommends follow two main tracks: (1) the Measuring Broadband America framework, and (2) the Connect America Fund framework. For the Measuring Broadband America testing program, the third-party testing firm SamKnows sends participants “whiteboxes” that measure speed and latency. The test results are then collected and analyzed to produce the annual Measuring Fixed Broadband report.⁷ This is simple, straightforward, administered by a neutral third party, and is the approach that Charter recommends for the Commission’s speed testing programs.

b. *If the Connect America Fund Approach is Used, Allow Providers the Same Options Permitted in the Federal Program.*

The Connect America Fund approach is slightly different, but allows providers to choose from among three options to meet the testing requirements. As the FCC website states:

“Carriers can choose from among three options for speed and latency testing:

- A carrier may leverage existing Measuring Broadband America (MBA) testing infrastructure by using entities that manage and perform testing for the FCC MBA program to conduct network performance testing. The carrier is responsible for all costs required to implement network testing.
- A carrier may use existing network management systems and tools, ping tests and other commonly available performance measurement and network management tools to implement performance testing. This is a list of vendors that are providing services to assist carriers in conducting speed and latency testing and reporting test results to USAC.

⁷ A helpful summary of this testing approach is located at <https://www.fcc.gov/general/measuring-broadband-america-measuring-fixed-broadband>.

- A carrier may develop its own self-testing configuration using software installed on subscriber gateways or in equipment attached to subscriber gateways to conduct speed and latency tests.⁸

Should the Commission determine to use the FCC's Connect America Fund approach, Charter strongly recommends that the Commission explicitly allow providers to choose from the same testing options that the FCC permits, using the language quoted from the FCC summary above.

c. Allow Recipients to Determine Statistically Valid Samples to Avoid Problems with Testing Reliability and Confidentiality Concerns.

Charter believes that it is essential that filing any information regarding active subscribers is done with great care, as RIC notes in its comments.⁹ Subscriber lists contain information that both customers and providers value as confidential, and could be subject to abuse by marketers, bad actors, competitors or others even if confidentiality measures such as protective orders are in place. The identity of customers is not foundational or necessary for any valid speed testing purpose. Indeed, USAC's guide for submitting subscriber data cautions: "Carriers should not use any personally identifiable information" in providing location information to support the FCC's testing program.¹⁰ In addition, random selections of locations or subscribers can be problematic – depending on where testing is to be done – because not all subscribers have the appropriate routers or modems to facilitate reliable testing.

⁸ <https://www.usac.org/high-cost/annual-requirements/performance-measures-testing/> (bullet points in original, hyperlinks removed)

⁹ See RIC Comments, p. 4.

¹⁰ <https://www.usac.org/high-cost/annual-requirements/performance-measures-testing/>

The better solution is for the Commission to require providers to determine statistically valid samples of locations that are capable of delivering reliable test results. In the alternative, Charter urges the Commission to adopt strong confidentiality protections and guidelines to protect against disclosure of any subscriber data, counts, or lists that providers submit.

d. Repeated Testing is Unnecessary Once Compliance is Demonstrated.

Additionally, Charter urges the Commission to adopt RIC's proposal for frequency of testing (Item 8 of RIC's proposed speed test protocols). RIC proposes that "Once a [r]ecipient has received a 'passing grade' for its speed testing of locations, the [r]ecipient shall not be required to repeat testing for such locations." RIC's suggestion makes sense. The purpose of the testing is to ensure that NUSF-supported projects are built to deliver the promised speeds. Once that objective is met, ongoing testing is not required, because upon being built, providers have no incentive to degrade performance on already-built infrastructure. To the contrary, in order to gain and keep customers, providers have every incentive not only to maintain the minimum bandwidth built with NUSF support, but to improve it. Importantly here, the RIC proposal wisely requires a passing grade. Testing that shows infrastructure has not been built to the required specifications must be repeated until the desired results are achieved. For infrastructure that receives a passing grade, additional testing should only be required if the Commission has a reasonable basis to believe that the facilities are no longer capable of providing the required speed. Testing beyond these objectives would be unduly burdensome without any meaningful benefit.

2. While Helpful for Information Purposes, Consumer-Initiated Tests Can be Unreliable for Determining Compliance – Rely on Recipient-Initiated Speed Tests.

The second area of consensus was general agreement that while consumer-initiated and crowd-sourced tests can be useful to some degree to generally inform the marketplace, they should not be used as a regulatory tool to judge compliance, given the significant limitations and error rates that exist in consumer-initiated tests. RIC observed that “consumer-initiated testing introduces variables into the testing results such as inadequacies in the consumers modem or computer hardware that are independent from the capabilities of the broadband networks constructed by the carrier to provide Internet access to the consumer.”¹¹ As a result, RIC observed that consumer-initiated “testing results are not indicative of the performance capabilities of the network.... [and] should not be used by the commission as a measurement of a carriers compliance with speed standards....”¹² Most of the other commenters agreed. As Cox stated, challenges associated with consumer-initiated testing are a significant reason “why the legislature carefully worded the statutes to reflect verification of network speeds shall be completed by funding recipients.”¹³ Lumen noted that adding consumer-initiated testing has caused “additional cost and delay in connection with the Connect America Fund(‘CAF’).”¹⁴

¹¹ RIC Comments, p. 7.

¹² *Id.*

¹³ *Comments of Cox Nebraska Telcom, LLC*, p. 4.

¹⁴ *Comments of Qwest Corporation dba CenturyLink QC and United Telephone Company of the Wwest dba CenturyLink*, p. 1.

Charter also agrees with this point of consensus. Crowd-sourced or consumer-initiated information should be taken seriously, but should also be carefully scrutinized and given appropriate weight, because tests initiated by consumers or third parties may unreliably report provided or available speeds because of networking equipment, network configurations, or devices on the customer side of network demarcation points or interfaces. Charter therefore recommends that the Commission follow NEB. REV. STAT. § 86-324.02 and require that “recipient[s] shall conduct the speed tests and submit the results to the commission.”

Conclusion and Recommendation

Charter appreciates the opportunity to comment on these important matters, and appreciates the Commission’s dedication to reaching unserved Nebraskans with high-quality, high-speed broadband services. Charter urges the Commission to recognize these important areas of consensus in its speed-testing policies for NUSF and other broadband programs it administers: (1) follow FCC program testing rules as closely as possible, preferably using the SamKnows methodology used in the Measuring Broadband America program; (2) utilize recipient speed tests, not consumer-initiated tests, to verify compliance with required speed levels; and (3) limit the duration of testing for recipients with passing grades.

Dated this 4th day of May, 2022.

Charter Fiberlink – Nebraska,
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that on May 4, 2022, an electronic copy of the foregoing Reply Comments of Charter Fiberlink – Nebraska, LLC and Time Warner Cable Information Services (Nebraska), LLC was filed by delivering by electronic mail to the following individuals:

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