

BEFORE THE NEBRASKA PUBLIC SERVICE COMMISSION

Nebraska Public Service Commission

In the Matter of the Nebraska Public)
Service Commission, on its own motion,) Application No. NUSF-133
to implement standards for the)
verification of broadband service provider)
coverage and speed data.)

APR 15 2022

Received

COMMENTS OF THE NEBRASKA RURAL INDEPENDENT COMPANIES

The Nebraska Rural Independent Companies (“RIC”)¹ submit these Comments in response to the Order Opening Docket and Seeking Comment entered by the Nebraska Public Service Commission (the “Commission”) on March 1, 2022.² RIC appreciates the opportunity to provide these Comments and looks forward to continuing its participation in this docket regarding the verification of broadband service provider coverage and speed data. Before proceeding to provide responses to the Commission’s requests for comments set forth in the *NUSF-133 Order*, RIC will provide the following analysis of *Neb. Rev. Stat. §§ 86-324.01 and 86-324.02* and will describe RIC’s proposed Speed Testing Protocols which are attached hereto as Exhibit A.

Sections 4 and 5 of LB 338, passed by the 2021 Legislature, are interrelated provisions that have been codified as sections 86-324.01 and 86-324.02 of the Nebraska statutes and amend the Nebraska Telecommunications Universal Service Fund Act.³ Taken together, the Legislature provided that:

¹ Arlington Telephone Company, Blair Telephone Company, Consolidated Telephone Company, Consolidated Telco, Inc., Consolidated Telecom, Inc., The Curtis Telephone Company, Eastern Nebraska Telephone Company, Great Plains Communications, LLC, Hamilton Telephone Company, Hartington Telecommunications Co., Inc., Hershey Cooperative Telephone Company, Inc., K & M Telephone Company, Inc., The Nebraska Central Telephone Company, Northeast Nebraska Telephone Company, Rock County Telephone Company, Sodtown Communications, Inc. and Three River Telco.

² *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, Order Opening Docket and Seeking Comment (Mar. 15, 2022) (the “*NUSF-133 Order*”).

³ *Neb. Rev. Stat. §§ 86-316 to 86-329.*

- Beginning January 1, 2022, the Commission must ensure that NUSF support for construction of new broadband infrastructure shall go to projects that will provide broadband scalable to 100/100 Mbps.
- A recipient of ongoing NUSF support as a result of completion of a broadband project to provide 100/100 Mbps broadband shall submit to speed tests as determined by the Commission.
- Upon Commission request, a recipient of ongoing NUSF support shall conduct speed testing on terms determined by the Commission and report the results of such testing to the Commission.
- Speed tests shall be conducted for one week using a random sample of locations at which consumers subscribe for broadband services provided by use of infrastructure for which ongoing support is received.

In response to these statutory requirements, RIC has prepared the proposed Speed Testing Protocols attached to these Comments as Exhibit A. RIC respectfully requests that in accordance with the delegated authority provided to the Commission by the Legislature pursuant to *Neb. Rev. Stat. § 86-324.02* that these Speed Testing Protocols be approved and adopted by the Commission.

In the following Comments, RIC will first set forth the topic on which comments are requested in the *NUSF-133 Order* followed by RIC's responsive comments.

Request: *The Universal Service Administrative Company ("USAC") is implementing the performance testing framework using a model called the Performance Measures Model ("PMM"). The Commission proposes to adopt this general framework, with some adjustments as set forth below. The Commission seeks comment on this proposal.*

Response: In principle, RIC supports the Commission's proposal to utilize, insofar as possible, USAC's testing model referred to as the PMM to satisfy the directives set forth in *Neb. Rev. Stat. § 86-*

324.02. RIC has incorporated into its proposed Speed Test Protocol those elements of the PMM that RIC believes merit adoption by the Commission.

Request: *Neb. Rev. Stat. § 86-324.02 requires the provider to conduct the speed tests and submit the results to the Commission using a random sample of locations of consumers who subscribe to services provided over infrastructure for which ongoing high-cost support is received. Since ongoing high-cost support is not earmarked to one location or even determined on an exchange basis, the Commission seeks comment on the parameters of meeting this requirement.*

Response: Please refer to RIC's proposed Speed Test Protocol attached as Exhibit A.

Request: *The Commission interprets this statutory language to mean that providers that have completed capital improvement projects and are now eligible for ongoing support through the high cost mechanism must conduct the speed tests and submit the results to the Commission using a random sample of locations. The Commission seeks comment on this interpretation.*

Response: RIC generally agrees with the Commission's interpretation of the provisions of Section 86-324.02. RIC believes that a reasonable interpretation of Section 86-324.02 is that the Legislature intended that speed tests be conducted with regard to broadband infrastructure projects commenced after January 1, 2022, constructed to provide broadband service scalable to 100/100 Mbps through the use of NUSF support. Locations so constructed that become eligible for NUSF ongoing support are subject to the speed testing requirements set forth in Section 86-324.02 as implemented by Commission order.

It is critical that the location and speed test data collected and reported by a recipient of NUSF support be accorded confidential treatment by the Commission and that such data not be available for public inspection or review. In order to assure carriers that reported location and speed data will receive confidential and proprietary treatment by the Commission and its Staff, RIC urges the Commission to take action such as entering a protective order to confirm the confidential treatment of data reported in response to the requirements of Section 86-324.02.

Request: *The Commission seeks comment on how to determine locations for testing and how to identify a statistically valid sample for meeting the requirement in Neb. Rev. Stat. § 86-324.02.*

- *First, the Commission seeks comment on whether it should require carriers to file a list of locations with active subscribers.*

- *If the Commission requires carriers to file a list of active subscribers, how should this be handled?*
- *Should the Commission require carriers to file a list of active subscribers within 3 months after each project completion? Why or why not?*
- *Should the Commission require carriers to file a list of active subscribers on a periodic basis? If so, how often should the list of active subscriber locations be updated?*

Response: RIC does not oppose the Commission's proposal to require carriers to file a list of locations with active broadband subscribers; provided, however, that such lists be accorded proprietary and confidential status and be protected from disclosure.

RIC believes that it would be reasonable for the Commission to require carriers to file by December 31 of each year a list of active subscribers at locations for which the carrier received broadband deployment support ("BDS") for projects during the calendar year.

Request: *Using this list of active subscribers, the Commission would then need to select a random sample of subscribers for testing.*

- *The Commission seeks comment as to what information carriers would need to report to allow the Commission to select a valid random sample.*
- *Should the number of customers receiving service be a self-reported number? If this number is not self-reported, how could it be determined?*
- *Additionally, should the size of the random sample selected for testing be determined by the number of subscribers on the provider's network subscribing to any type of broadband service, or should it be based upon subscribers purchasing a certain speed level?*
- *How should the Commission account for subscribers who are able to purchase faster service but choose to purchase a lower speed tier? If the sample size is determined by the number of subscribers on the provider's network subscribing to services provided over infrastructure, how should that number be determined?*

Response: As described in RIC's proposed Speed Test Protocol, RIC recommends that the random sampling of subscribers should be self-administered by the reporting carrier rather than assigning the task of random sample selection to the Commission Staff. RIC would expect that the administrative burdens associated with (1) carrier reporting of information to enable the Commission Staff to select a valid random sample; (2) the Commission Staff's actual performance of the random sampling from such reported information; and (3) Commission Staff distribution of the random sample data to all Nebraska reporting carriers would be time consuming and would not yield sampling results

superior to those obtained through the method suggested in point 6 of RIC's proposed Speed Test Protocol.

As stated in point 6, RIC proposes that during the speed test of a subscriber's location, if the subscriber has selected a speed tier less than 100/100 Mbps, then the carrier would increase the broadband speeds available at the subscriber's location for the duration of the speed test to at least 100/100 Mbps in order to ensure that the requirements of Section 86-324.01 have been met for locations funded with NUSF BDS subsequent to January 1, 2022.

Request: *The FCC stated that the speed and latency should be measured on each ETC's access network from the end-user interface to the nearest Internet access point, which is the closest peering point between the broadband provider and the public Internet for a given consumer connection.*

- *We seek comment on whether to use the same acceptable end points for testing, or whether we should accept alternative testing parameters.*
- *If we should accept alternative testing parameters, what should they be?*
- *Are there any testing parameters that should be ruled out? If so, why?*

Response: Please refer to RIC's proposed Speed Test Protocol, Exhibit A attached hereto, for responses to these requests for comments.

Request: *The FCC also established a daily testing period requiring carriers to conduct tests between 6:00 p.m. and 12:00 a.m. local time, including weekends.*

- *We seek comment as to whether the Commission should utilize the same daily test period.*
- *In the alternative, should we consider an expanded test period which would include daytime hours such as 9:00 a.m. to 12:00 p.m. local time, in order to capture broadband performance when families may be working or attending school from home? Please explain.*
- *In terms of test intervals, we seek comment on requiring a minimum of one download test and one upload test per testing hour at each subscriber test location. Are these intervals appropriate?*
- *Consistent with Neb. Rev. Stat. § 86-324.02, we seek comment on requiring carriers to conduct one week of testing using the test intervals described above.*

Response: Please refer to RIC's proposed Speed Test Protocol, Exhibit A attached hereto, for responses to these requests for comments.

Request: *Specifically, we seek comment as to how consumer-initiated speed testing might be encouraged and incorporated.*

- *We seek comment on a requirement that providers disseminate information to their subscribers about how they can test their broadband speeds and provide that information to the FCC and to the Commission.*
- *We further seek comment on whether and how to incentivize providers to initiate programs which would encourage consumer-initiated testing.*
- *We also seek comment on whether to encourage, as additional validation, testing from the customers' premises.*
- *Should we incentivize providers to offer equipment that can conduct speed tests in a manner that meets the Commission's standards?*
- *In addition, how can the Commission incentivize the use of pilot programs such as the one brought forth by researchers from the University of NebraskaKearney related to pilot testing devices which measure data from inside a subscriber's premise but on the provider side of the router?*
- *How many tests should be conducted in order for the data to be considered statistically valid?*
- *We seek comment on ways to inform consumers about broadband performance testing and how they can participate in the process.*
- *If consumer-initiated tests are conducted and results are submitted to the Commission, what minimum criteria for validity of data should be adopted? How can the Commission safeguard individual subscriber data?*
- *Once collected by the Commission, is this information that should be shared both publicly with the FCC and other entities considering funding broadband infrastructure projects?*
- *What level of aggregation would be appropriate to protect any specific consumer level information?*

Response: In the first paragraph of the *NUSF-133 Order* the Commission states that the purpose of this docket is "to implement procedures and standards in accordance with Neb. Rev. Stat. § 86-324.02." The requests for comments presented in the *NUSF-133 Order* that precede the foregoing series of inquiries are properly focused on this quoted statement of purpose. However, the requests focusing on consumer-initiated speed testing go beyond a reasonable interpretation of the Legislature's testing requirements as set forth in Section 86-324.02.

The purpose of the testing required by Section 86-324.02 is to provide assurance that the performance of the network constructed through BDS support and eligible for ongoing NUSF support is scalable to one hundred megabits per second or greater for downloading and one hundred megabits per second or greater for uploading, the standards set by the Legislature pursuant to Section 86-324.01. These are the speed standards to be delivered to an FCC-designated internet exchange point ("IXP").

As the Commission recognizes on page 4 of the *NUSF-133 Order*, “[t]he FCC stated that the speed and latency should be measured on each ETC’s access network from the end-user interface to the nearest Internet access point . . .” RIC urges the Commission to accept the IXP as the measurement point for speed testing required by Section 86-324.02. (Point 1 of RIC’s Proposed Speed Test Protocols adopts the IXP concepts set forth in the PMM.)

Consumer-initiated testing necessarily shifts the speed testing to a point that is downstream from the IXP, most likely on the consumer’s computing device. As such, consumer-initiated testing introduces variables into the testing results such as inadequacies in the consumer’s modem or computer hardware that are independent from the capabilities of the broadband network constructed by the carrier to provide Internet access to the consumer. Thus, the testing results are not indicative of the performance capabilities of the network. This does not mean that consumer-initiated speed testing is necessarily bad or should be discouraged. It is simply to state that consumer-initiated speed testing should not be used by the Commission as a measurement of a carrier’s compliance with the speed standards established by Section 86-324.01.

Request: *In addition, the Commission seeks comment on using other subscription-based or publicly collected speed test resources, such as Ookla data, to validate speed test information collected from carriers.*

- *Should the Commission utilize other sources or contract with a third-party vendor to conduct randomized testing?*
- *If so, what vendors should the Commission consider?*

Response: The Commission should approve carriers’ use of vendors or testing resources that the carriers are using to conduct randomized testing that meets the requirements of USAC’s PMM.

However, an entirely different question is posed when the Commission asks whether it should use third party contractors such as Ookla “to validate speed test information collected from the carriers?” RIC believes that the answer to this question is “yes.” Based upon the assumption that the Commission Staff

does not possess internally developed speed test validation tools, it is only reasonable that the Commission would contract with third party vendors to provide these tools.

RIC respectfully submits that in order for the testing program required by Section 86-324.02 to be successful, a carrier submitting speed testing data to the Commission should be provided a “report card” that informs the carrier of the results obtained from the analysis of the speed testing data. Through the provision of these results, carriers will either receive confirmation that the network constructed by the carrier is compliant with legislative requirements or will be informed of any shortcomings in the network so that remedial actions can be implemented to bring the network into compliance with applicable speed requirements.

Request: *Finally, the Commission seeks comment as to the extent to which provider-initiated speed tests may be required.*

- *Is it feasible for a provider to automatically conduct speed testing from the provider’s own premises? If not, why not?*
- *What barriers exist to prevent providers from conducting tests at the provider’s nodes, offices, or directly outside a subscriber’s home?*
- *At what locations can provider-initiated tests feasibly be conducted?*

Response: Please refer to RIC’s proposed Speed Test Protocol, Exhibit A attached hereto, for responses to these requests for comments.

Dated: April 15, 2022.

Arlington Telephone Company, Blair Telephone Company, Consolidated Telephone Company, Consolidated Telco, Inc., Consolidated Telecom, Inc., The Curtis Telephone Company, Eastern Nebraska Telephone Company, Great Plains Communications, LLC., Hamilton Telephone Company, Hartington Telecommunications Co., Inc., Hershey Cooperative Telephone Company, Inc., K & M Telephone Company, Inc., The Nebraska Central Telephone Company, Northeast Nebraska Telephone Company, Rock County Telephone Company, Sodtown Communications, Inc. and Three River Telco (the "Rural Independent Companies")

By: Paul M. Schudel
Paul M. Schudel, NE Bar No. 13723
pschudel@woodsaitken.com
WOODS & AITKEN LLP
301 South 13th Street, Suite 500
Lincoln, Nebraska 68508
Telephone (402) 437-8500
Facsimile (402) 437-8558

CERTIFICATE OF SERVICE

The undersigned hereby certifies that on this 15th day of April 2022, an electronic copy and one paper copy of the foregoing pleading were delivered to the Nebraska Public Service Commission at psc.broadband@nebraska.gov.

Paul M. Schudel
Paul M. Schudel

EXHIBIT A

RIC PROPOSED SPEED TEST PROTOCOLS

Beginning January 1, 2022, a recipient ("Recipient") of Nebraska Universal Service Fund ("NUSF") broadband deployment support ("BDS") for construction of one or more projects that provide broadband infrastructure in the State of Nebraska (each a "Project") shall utilize BDS for construction of new broadband infrastructure to provide broadband service scalable to 100/100 Mbps or greater. When a Project is completed and NUSF ongoing support is provided, the Recipient of such ongoing support shall conduct speed tests in accordance with the following protocols and shall provide the results of such tests to the Commission.

1. The Recipient must use an FCC-designated IXP. A Recipient must test speed from the premises of active subscribers receiving broadband at locations as a result of a Project for which the Recipient is eligible for or is receiving ongoing support to a remote test server located at, or reached by passing through, an FCC-designated Internet Exchange Point ("IXP") which is any building, facility or location housing a public Internet gateway that has an active interface to a qualifying Internet Autonomous System.*
2. Definition of Speed Test. A Speed Test is a single measurement of download and upload speed of 10 to 15 seconds duration between a specific consumer location and specific remote server location that meets the FCC-designated IXP requirements. Speed requirements shall be 100/100 Mbps or greater. Recipients must conduct at least one download test and one upload test during each testing hour at each testing location.*
3. Download and Upload Speed Test Requirements. A Recipient must conduct one (1) down and one (1) up test per hour between 6 p.m. and midnight for one week (seven (7) consecutive days).*
4. Speed Data Upload Template. In conjunction with the speed testing, a Recipient must complete and provide to the Commission a completed Speed Data Upload template for each location tested in the form attached hereto as Attachment A.*
5. Number of Locations to Test. The number of locations to be tested by a Recipient are: (a) if greater than 500 locations were completed by a Recipient as a result of Projects in a calendar year, the Recipient shall test fifty (50) locations; (b) if greater than fifty (50) but less than or equal to 500 locations were completed by a Recipient as a result of Projects in a calendar year, the Recipient shall test ten percent (10%) of the locations; and (c) if fifty (50) or less locations were completed by a Recipient as a result of Projects in a calendar year, the Recipient shall test five (5) locations.*
6. Random Sample of Locations. The Recipient shall randomize the locations at which consumers subscribe to broadband services provided through completed Projects to be speed tested by use of an Excel spreadsheet random sampling tool. To the extent that active subscribers do not subscribe for broadband service at 100/100 Mbps or greater, RIC proposes that the Recipient

would increase the broadband speeds provided to the subscriber location to at least 100/100 Mbps during the testing period in order to ensure that the requirements of Section 86-324.01 have been met for locations funded with NUSF BDS subsequent to January 1, 2022.

7. Speed Test Compliance is 80%. A Recipient shall receive a “passing grade” for its speed tests if 80% or more of the speed test results are at or above the 100/100 Mbps testing threshold.*
8. Frequency of Testing. Once a Recipient has received a “passing grade” for its speed testing of locations, the Recipient shall not be required to repeat testing for such locations.

*Denotes a requirement provided in the Performance Measures Model (“PMM”) issued by the Universal Service Administrative Company (“USAC”). For each element of RIC’s Proposed Speed Test Protocols derived from the PMM, please refer to the PMM further details and explanation of such element.

ATTACHEMENT A

SPEED DATA UPLOAD TEMPLATE

The table below provides the specification for the **Speed Data Upload Template (Speed Testing Template)** CSV file.

Subscriber ID*	The subscriber ID is the unique identifier assigned by the Provider to designate active subscribers that are occupying locations previously reported in the HUBB. If you have multiple Subscriber IDs for a single HUBB location, you MUST use a semicolon ';' instead of a comma ',' before the next Subscriber ID. <u>This field is REQUIRED.</u>	Text	N/A	A-80098678 or A-78694494
Speed Type*	Speed Type = '1' for Download Speed (DL) or '2' for Upload Speed (UL)	Integer	1	'1' or '2'
IP Target*	IP Target = (fully qualified DNS host name or IXP address) of the IXP server that is designated for the test	String	100	'96.45.83.11' Or 'server3.newyork.whamoo.org'
Start Test*	Start Test = ISO 8601 UTC format to include milliseconds AND time zone offset. Ex: yyyy-mm-dd hh:mm:ss:SSS±HH:MM ("+ " for positive UTC timezone offset, "- " for negative UTC timezone offset)	String	50	'2020-03-05 01:03:01:123- 05:00'
End Test*	End Test = ISO 8601 UTC format to include milliseconds AND time zone offset. Ex: yyyy-mm-dd hh:mm:ss:SSS±HH:MM	String	50	'2020-03-05 01:03:01:143- 05:00'

Field (* = required)	Description	Data Type	Max Length	Example
	("+" for positive UTC timezone offset, "-" for negative UTC timezone offset)			
Bytes*	Bytes = total bytes received or sent across all connections or threads	Integer	12	'20000'
Test Status*	Test Status= Status of Test (1=success; 2= test not run due to cross talk traffic; 3= test not run due to other reason)	Integer	1	'1'
Comment (optional)	Text string, not required	Text	500	'This location had faulty testing equipment that was replaced during the test period'