

Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of)	
)	
Inquiry Concerning Deployment of Advanced)	GN Docket No. 18-238
Telecommunications Capability to All Americans)	
In a Reasonable and Timely Fashion)	

To: The Commission

**COMMENTS OF
THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION**

The National Rural Electric Cooperative Association (“NRECA”) hereby submits its Comments in response to the Fourteenth Broadband Deployment Report Notice of Inquiry in which the Commission is soliciting comment and information to assist in best determining the current state of broadband deployment and to assess whether advanced telecommunications capabilities are being deployed to all Americans in a reasonable and timely fashion,¹ focusing on the availability of advanced telecommunications capabilities in rural areas.

INTRODUCTION

NRECA is the national service organization for more than 900 not-for-profit rural electric cooperatives that provide electric energy to approximately 42 million people in 47 states or approximately 12 percent of electric customers, including 327 of the Nation's 353 "persistent poverty counties" (93%). Of the 42 million Americans served by cooperatives, an estimated 4 million live in persistent poverty counties. Rural electric cooperatives serve 88% of counties of

¹ *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 18-238, Fourteenth Broadband Deployment Report Notice of Inquiry, FCC 18-119 (rel. Aug. 9, 2018) (*NOI*). The Commission extended the due date for filing Comments to September 7 and Reply Comments to Oct. 1. *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, Order, GN Docket No. 18-238, Order, FCC 18-119 (rel. Aug. 17, 2018).

the United States. Rural electric cooperatives were formed to provide safe, reliable electric service to their member-owners at the lowest reasonable cost. Rural electric cooperatives are dedicated to improving the communities in which they serve; management and staff of rural electric cooperatives are active in rural economic development efforts. Electric cooperatives are private, not-for-profit entities that are owned and governed by the members to whom they deliver electricity. Electric cooperatives are democratically governed and operate according to the seven Cooperative Principles.²

NRECA and its members are intensely interested in the deployment of advanced telecommunications capabilities within the rural communities and areas in which electric cooperatives provide electric service.³ In many of our members' communities, incumbent service providers do not offer fixed broadband service that meets the current fixed broadband benchmark of 25 Mbps download/3 Mbps upload (25/3 Mbps), prompting many electric cooperatives to undertake the investments and commit the resources to deploy fixed broadband services within these communities. Over 100 NRECA members provide fixed broadband service today, deploying fiber-based, fixed wireless or combination fiber and fixed wireless networks. Forty-two rural electric cooperatives participated in the Connect America Phase II auction ("CAF II Auction"),⁴ though a far greater number of NRECA members carefully assessed participation in the auction. A consortium of 22 rural electric cooperative-related entities and 13 individual cooperatives were winning bidders,⁵ securing over \$225,000,000 in support over ten years.⁶

² The seven Cooperative Principles are: Voluntary and Open Membership, Democratic Member Control, Members' Economic Participation, Autonomy and Independence, Education, Training and Information, Cooperation Among Cooperatives, and Concern for Community.

³ NRECA and its members are focused on fixed broadband service.

⁴ See *Connect America Fund Phase II Auction Closes*, WC Docket No. 10-90, Public Notice, FCC 18-887, Attachment A (rel. Aug. 28, 2018) (*Auction 903 Results*).

⁵ *Id.*

⁶ *Id.*

COMMENTS

NRECA supports the Commission's continuing efforts "to close the digital divide"⁷ and agrees that "continued forward progress toward universal deployment is imperative if all Americans are to enjoy the full promise of our economy." Countless communities served by electric cooperatives remain on the unserved/underserved side of the digital divide. The outcome of the CAF II auction indicates the digital divide will be bridged in many communities. The deployment of fixed broadband service (at or above 25/3 Mbps) in rural communities would increase incomes, improve education, and provide better access to healthcare services. The absence of robust fixed broadband services in rural communities imposes a high economic cost as reported in two recent studies - one assessing the nationwide impact and the second assessing the impact on the rural communities served by seven electric cooperatives in Indiana. The nationwide study performed by NRECA staff concluded that the lack of fixed broadband in 6.3 million electric co-op households translates to more than \$68 billion in lost economic value measured over 20 years.⁸ These findings were echoed in a 2018 Purdue University study of the rural communities served by seven electric cooperatives in the State of Indiana.⁹ The report calculates an aggregate benefit of \$12.0 billion measured over twenty-years from fiber-based broadband deployment in these communities. These benefits are attributed to expanded telemedicine and education opportunities, consumer savings; increased farm income; general

⁷ NOI at para. 4 (reaffirming the conclusions of the Commission's 2018 Broadband Deployment Report, *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 17-199, 2018 Broadband Deployment Report, 33 FCC Rcd 1660, (2018)).

⁸ NRECA, Business & Technology Report, *Unlocking the Value of Broadband for Electric Cooperative Consumer-Members*, at 3 (Sept. 2018) available at http://www.electric.coop/wp-content/uploads/2018/09/Unlocking-the-Value-of-Broadband-for-Co-op-Consumer-Members_Sept_2018.pdf (NRECA Broadband Report).

⁹ Purdue University, *Research & Policy Insights: Estimation of the Net Benefits of Indiana Statewide Adoption of Rural Broadband* (Aug. 2018), available at <https://www.pcrd.purdue.edu/files/media/006-RPINsights-Indiana-Broadband-Study.pdf> (Purdue Broadband Study).

economic development; and increased state sales and income tax revenues. Taken as a whole, these benefits provide a 4:1 return on broadband infrastructure investment.¹⁰

1. Section 706 Reports Should Continue to Assess the Availability of Fixed and Mobile Broadband Separately

The Commission should continue to assess fixed and mobile broadband separately in determining whether advanced telecommunications capabilities are being deployed to all Americans in a reasonable and timely fashion.¹¹ NRECA supports the Commission's proposal to evaluate fixed and mobile services, but the value of distinguishing between "fixed *and* mobile LTE" versus "fixed *or* mobile LTE" is not useful. On the other hand, NRECA believes the Commission's *2018 Broadband Report* understated the major differences between these types of service in observing that "both fixed and mobile services can enable access to information, entertainment, and employment options, but there are salient differences between the two technologies," and "there are clear variations in consumer preferences and demands for fixed and mobile services."¹²

A major difference between fixed and mobile broadband service are monthly usage limits. While mobile broadband service plans with "unlimited" data have been advertised by the four major wireless carriers since 2017,¹³ these service plan data offerings are not actually unlimited. Under these plans, as monthly usage approaches certain levels (typically between 20 and 50GB), download speeds are throttled.¹⁴ This is not the case for high capacity fixed broadband services.

¹⁰ *Purdue Broadband Study* at 12-15.

¹¹ *NOI* at para. 7.d.

¹² *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 17-199, *2018 Broadband Deployment Report*, 33 FCC Rcd 1660, 1662, 1708, paras. 6, 94 (2018) (*2018 Report*).

¹³ Mike Dano, 'Alarming' Unlimited Data Usage: 31.4 GB Per Month and Rising, FierceWireless (Jan. 3, 2019) <https://www.fiercewireless.com/wireless/alarming-unlimited-data-usage-31-4-gb-per-month-and-rising> (last visited on Sept. 11, 2018).

¹⁴ Mike Dano, *Editors Corner – 5G is Operators' Chance to Correct Their 'Unlimited' Mistake*, FierceWireless (Aug. 28, 2018) <https://www.fiercewireless.com/5g/editor-s-corner-5g-operators-chance-to-correct-their-unlimited->

For example, when a customer subscribes to Comcast’s DOCSIS 3.1 service under a two-year contract, no usage restrictions apply and one terabyte (TB) per month is the usage cap for DOCSIS 3.1 subscribers that elect month-to-month service.¹⁵ Verizon FiOS-branded promotions for triple play packages or standalone Internet offerings are offered with “no data cap[s].”¹⁶ For the CAF II Auction “Baseline” performance tier, the minimum monthly usage cap was the higher of (i) equal to or greater than 150 GB or (ii) the U.S. median speed; for the “Above Baseline” and “Gigabit” tiers the usage limit was equal to or greater than 2 TBs.¹⁷ For a rural family, the difference is substantial.

Pricing schemes vary significantly. Mobile pricing is device-specific, although pricing plans for multiple devices often offer noticeable discounts. Conversely, fixed broadband service pricing is not device-specific. Individuals and households typically have multiple devices--laptops, tablets, and even smartphones – that access the Internet via on-premise WiFi routers or Ethernet cables enabled by fixed broadband services delivered to the premises. A recent report by OpenSignal, which analyzed a 90-day period beginning on Dec. 1, 2017, stated that smartphone users consumed data using WiFi about half the time.¹⁸ Moreover, telecommuters, persons subscribing to remote education services, and remote work groups collaborating on complex

[mistake](#) (last visited Sept. 11, 2018) (*Unlimited Plans Not Really Unlimited*) One of the most significant and egregious cases of throttling was widely reported just last month, when the Santa Clara County Central Fire Protection District suffered from heavy throttling until the department paid Verizon more, despite its subscription to an unlimited data plan. The County Fire Chief stated that during deployment to the Mendocino Complex Fire, the largest in California’s history, an incident response unit used to coordinate all local government resources had its data rates reduced to 1/200 or less than previous speeds. Jon Brodtkin, *Verizon Throttled Fire Department’s “Unlimited” Data During Calif. Wildfire*, ARS Technica <https://arstechnica.com/tech-policy/2018/08/verizon-throttled-fire-departments-unlimited-data-during-calif-wildfire/> (last visited Sept. 11, 2018).

¹⁵ *Unlimited Plans Not Really Unlimited*.

¹⁶ *Verizon FIOS Deals and Promotions*, <https://broadbandnow.com/Verizon-Fios-deals> (last visited Sept.12, 2018) (*Verizon-FiOS Deals*).

¹⁷ *Connect America Fund Phase II Auction Scheduled for July 24, 2018 Notice and Filing Requirements and Other Procedures for Auction 903, Public Notice, FCC 18-6, at para. 12 (rel. Feb. 1, 2018)*.

¹⁸ Diana Groovaerts, *Report: Sprint, T-Mobile Customers Connect to Internet on 4G the Most, While Verizon Users Opt for WiFi*, ECN (Feb. 17, 2017) <https://www.ecnmag.com/data-focus/2017/02/report-sprint-t-mobile-customers-connect-internet-4g-most-while-verizon-users-opt-wifi> (last visited on Sept. 11, 2018).

engineering or database development tasks will not be conducting these activities over smartphones.

2. NRECA Wholeheartedly Endorses the Commission's Current and Planned Universal Service Initiatives

As noted above, NRECA believes the CAF II Auction is an extremely positive development for rural broadband deployment.¹⁹ NRECA looks forward to the Remote Area Fund auction and recommends the Commission allocate the approximate \$500M in annual support that was not assigned in the CAF II Auction to the Remote Area Fund.²⁰ These actions are forward-looking, as compared to the state-wide offers extended to the price cap carriers in 2015 for which the performance targets were set at 10 Mbps download/1Mbps upload. NRECA recommends that as those state-wide offers expire in 2021, the Commission should include those areas not obtaining service at the then current broadband benchmark in a reverse auction structured along the lines of the CAF II Auction. These steps are important because the major service providers do not appear interested in extending service to rural areas as the price cap ILECs secured less than 2.5% of the assigned support in the CAF II auction.²¹ Policies adopted in early August to

¹⁹ Press Release "FCC Approves \$225,000,000 million for 35 Electric Cooperatives to Provide Rural Broadband," August 28, 2018, <https://www.electric.coop/fcc-approves-220-million-33-electric-cooperatives-provide-rural-broadband/> ("Today's auction results highlight the power of cooperative partnerships and collaboration as electric co-ops work to bring broadband to unserved communities in rural America," said NRECA CEO Jim Matheson. "We thank the FCC for allowing electric co-ops to participate in this auction and look forward to building on this success moving forward. We are committed to continuing the rural broadband conversation and working with policymakers at the federal, state and local level on technology and funding solutions that will enrich the lives of rural American families and businesses.")

²⁰ *220 Applicants Qualified to Bid in the Connect America Fund Phase II Auction (Auction 903) Bidding To Begin On July 24, 2018*, Public Notice, DA 18-658 (WTB/WCB June 25, 2018), para. 1 (Up to \$1.98 billion to made available over ten years).

²¹ *Auction 903 Results*, pp. 1- 11. *Over 50% of the support awarded to price cap ILECs was assigned to Hawaiian Telecom, Inc. Id.* at p. 4.

promote wireline broadband may have a positive impact in urban areas,²² but the reality is that the major service providers have shown little interest in extending their networks into rural areas.²³

3. Form 477 Data Overstates the Availability of Broadband

NRECA does not share the Commission's view that the FCC Form 477 broadband deployment data for fixed broadband service provides reliable and comprehensive data for assessing the availability of fixed broadband services.²⁴ Rather, NRECA agrees with the National Telecommunications and Information Administration ("NTIA") that the Form 477 data substantially overstates the availability of broadband, particularly to rural America.

A provider offering service to any homes or businesses in a Census block is instructed to report that block as served in its Form 477 filing, even though it may not offer broadband services throughout most of the block. This can lead to overstatements in the level of broadband availability, especially in rural areas where Census blocks are large.²⁵

Unfortunately, this flaw in the Form 477 data (an entire census block is deemed served, if one location obtains 10/1 Mbps or greater service) was built into and provided the basis for including and excluding census blocks from the CAF II reverse auction.²⁶ Not surprisingly, the U.S.

²² *Accelerating Wireline Broadband Deployment by Removing Barriers to Infrastructure Investment and Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*, Third Report and Order and Declaratory Ruling, WT Docket Nos. 17-84 and 17-79, FCC 18-111 (rel. Aug. 3, 2018).

²³ As NRECA previously reported, at least one service provider admitted in a public discussion on pole attachment rates that it had little interest in expanding beyond its proposed network deployment to more rural areas of a cooperative's service territory, noting it "would not extend its services further into the co-op's rural areas even if the pole attachment rate were zero." See Reply Comments of the National Rural Electric Cooperative Association, *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure*, WT Docket No. 17-79, at 9-10, Filed Jul. 17, 2017.

²⁴ *NOI* at para. 16.

²⁵ *Improving the Quality and Accuracy of Broadband Availability Data*, Request for Comment, Docket No. 180427421-8421-01, 83 Fed. Reg. 24747 (May 30, 2018). (*NTIA Request for Comment*).

²⁶ See NRECA Comments of the National Rural Electric Cooperative Association, *NTIA Request for Comment*, p.4 (from a "boots on the ground perspective," NRECA members could not fathom that many areas within or adjacent to their electric service territory were deemed "served" per the FCC Form 477 data); See also, Sam Bloch, *The FCC says all of Iowa has access to broadband internet. Speed tests tell a different story*, New Food Economy, June 20, 2018 <https://newfoodeconomy.org/rural-iowa-broadband-data-fcc/> (last visited on September 13, 2018 (analysis of internet speeds in some rural Iowa counties were well below what the FCC's broadband map released in December 2017 and updated in February 2018 (setting the eligible areas for CAF II competitive auction) foreclosing these areas from the CAF II auction.)

Government Accountability Office reached a similar conclusion regarding the overstatement of broadband available on Tribal lands.²⁷

This flaw can be remedied by making modest changes to the Form 477 Data. First and foremost, the percent of served locations in a census block must be disclosed, preferably utilizing 10% decrements. Without this information, Form 477 data will either persistently overstate broadband availability or provide information too opaque to support reasonable policy assessments, particularly for rural census blocks that typically encompass more area than urban census blocks. Second, rather than specify all download/upload speeds for each census block, reporting should be streamlined. Reported speeds should be based on the download/upload speed provided to the majority of locations or the largest subset of locations within the census block. Under this approach, census blocks in which service is offered below the current benchmark would be reported as “below benchmark;” areas at the current benchmark would be reported as “at benchmark;” and for areas in which the speeds exceed the benchmark, the actual speeds for each of these offerings would be identified. Areas in which the support recipient has not yet satisfied its buildout requirement would be reported as “Supported Area Implementing Service.” The Commission could audit a limited number of Forms 477 to validate the reported information. The possibility of an audit, by itself, may incentivize more carefully reviewed submissions.

²⁷ U.S. Gov’t Accountability Office, GAO-18-630, Broadband Internet: FCC’s Data Overstate Access on Tribal Lands at 14.

4. Systematizing Benchmark Adjustments

In an increasingly digital world, the fixed broadband benchmark must keep pace with evolving technology. Relying on the average or median of all locations served at all broadband performance tiers will unduly limit benchmark adjustments in terms of frequency and performance tier. This is a concern for rural areas in which one or multiple broadband providers offering fixed broadband service at or above the current benchmark is far less common than in urban areas. In many urban areas, at least one if not multiple service providers are providing service well above the current benchmark. Symmetrical offerings are also prevalent in urban areas and may provide the basis for fixed broadband benchmarks.²⁸

A far better approach is to adjust the benchmark based on a percentage of the census blocks or served locations at which the reported performance tiers exceed the current benchmark as compared to the total number of areas or locations that are unserved, below the benchmark and at the benchmark. Our proposed modifications to the FCC Form 477 would provide data that would enable rational benchmark assessments. In addition, fixed broadband benchmark adjustments should be assessed with some regularity; at least once every two or three years. The current benchmark has been in place since 2015;²⁹ a comprehensive review is long overdue.

CONCLUSIONS

The social, educational and economic benefits of broadband in rural America are tangible and real, as highlighted in recent studies by NRECA and the Indiana cooperatives, respectively. The Commission continues to make meaningful strides in supporting rural broadband

²⁸ See [Verizon FiOS Offerings](#) (Verizon's fixed broadband offerings include 100/100 Mbps and 300/300Mbps).

²⁹ *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act*, GN Docket No. 14-126, 2015 Broadband Progress Report and Notice of Inquiry on Immediate Action to Accelerate Deployment, 30 FCC Rcd 1375 (2015).

deployment. The CAF II Auction is a major step forward. That many rural electric cooperatives will capitalize on the opportunity confirms NRECA's long held belief. To maintain this momentum, NRECA respectfully requests that the Commission improve the data collected on the FCC Form 477. The concept that a census block should be deemed served in terms of fixed broadband service if one location in a census block is served is no longer viable as it overstates broadband availability; does not comport with reality; and, does not provide a rational basis for making USF support decisions and related policy determinations.

NRECA proposed modifications to the Form 477 will elicit data that more accurately reflect the availability of broadband service throughout the country, particularly in rural areas. These modifications will provide the related benefit of actionable data for periodic adjustments to the fixed broadband service benchmark. NRECA looks forward to working with the Commission to achieve these goals.

Respectfully submitted,
National Rural Electric Cooperative Association

/s/

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Dated: September 17, 2018