Before the Federal Communications Commission Washington, D.C. 20554

In the Matter of)	
Connect America Fund)	WC Docket No. 10-90
ETC Annual Reports and Certifications)	WC Docket No. 14-58
Rural Broadband Experiments)	WC Docket No. 14-259

To: The Commission

JOINT REPLY COMMENTS OF THE NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION AND THE UTILITIES TECHNOLOGY COUNCIL

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SUMMARY

The comments on the record support weighting to support the deployment of future-proof broadband networks that are capable of providing robust, reliable and affordable broadband services to rural America that are reasonably comparable in terms of quality and cost to the broadband services that are offered in urban areas. UTC and NRECA believe that the Commission should weight the Gigabit Performance Tier to encourage providers to deploy these broadband networks and services, which would make efficient use of available CAF funds by investing in networks that will scale to meet increasing demands. Electric cooperatives and other utilities are already deploying fiber-to-the-home networks and providing Gigabit services in rural areas, and they are proving that these networks and services can be deployed economically and successfully. The Commission should carry that success forward by developing weights for the Phase II auction that support the deployment of broadband networks that provide higher speeds, higher usage allowances, and lower latency.

In addition, as part of the Phase II auction, the Commission should preserve the amount of funding that was made available to the price cap carriers in the statewide offer of model-based support. UTC and NRECA agree with the comments on the record that oppose redistributing funding to other census blocks from the areas where the price cap carriers declined the offer of model-based support. This denies competitive providers from an equal opportunity to funding, and it discourages the deployment of broadband into rural areas by threatening to underfund projects.

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The National Rural Electric Cooperative Association (NRECA) and the Utilities

Technology Council (UTC) hereby submit their Reply Comments in response to the Report and

Order and Further Notice of Proposed Rulemaking in the referenced proceeding. NRECA and

UTC reiterate their support for weighting that would "value higher speeds over lower speeds,

higher usage allowances over lower usage allowances, and lower latency over higher latency."

In short, NRECA and UTC support the Commission's goal of providing rural America with

access to broadband services that are reasonably comparable to the cost and quality of broadband

¹ Connect America Fund et al., WC Docket No. 10-90 et al, Report and Order and Further Notice of Proposed Rulemaking, FCC 16-64, rel. May 26, 2016 (alternatively referred to as either the "Report and Order" or "Further Notice," or both, as applicable).

 $^{^2}$ Id. at ¶16 (also recognizing "the benefits to achieving our other universal service objectives if Phase II service provider will be able to provide broadband adequate to meet the needs of the entire community, including schools, libraries and rural health care providers, potentially reducing the overall cost of USF to consumers.")

services that are available in urban areas.³ We agree with the Commission that rural America should not be left behind, and that consumers in those areas should benefit from innovation and advances in technology.⁴ In fact, rural electric cooperatives and other utilities are proving that it is possible to deploy Gigabit services in rural areas at prices that are comparable to – indeed that are lower than – the prices for the same services in urban areas.

The Commission should carry that success forward by adopting weights that encourage the deployment of future-proof networks that exceed the Commission's minimum performance benchmarks and that also ensure that available funds are prudently invested. It should not award funding to networks that offer marginal speeds at higher prices and that are not scalable to meet increasing demands in the future. Moreover, the Commission is right not to be swayed by the talismanic arguments for competitive neutrality that only serve to hold rural areas back with substandard broadband services that won't promote economic growth, better health care or improved education.⁵ This is a once-in-a-generation opportunity to shape the future of rural America, and the weights that are adopted now will in large part determine whether and to what extent consumers in unserved areas are able to access the kind of broadband services that they need both today and tomorrow.

Consistent with the goal of promoting broadband through a simple, straightforward process for the Phase II auction that provides certainty to prospective bidders, UTC and NRECA

³ *Id*.

⁴ Further Notice at ¶208.

⁵ Report and Order at ¶36 (disagreeing with commenters who argue that "setting performance standards that could potentially exclude certain technologies disserves the public interest because it conflicts with the principle of competitive neutrality," and adding that the "principle of competitive neutrality does not preclude [the FCC] from meeting other reasonable regulatory objectives, including as discussed above, the statutory requirement to ensure reasonably comparable service.")

support the comments on the record that seek to preserve funding in states where the price cap carriers declined the offer of model-based support. UTC and NRECA believe that utilities and other entities that compete in the Phase II auction should have the opportunity to access the same amount of funding that was offered to the price cap carriers under the right of first refusal for model-based support. Reallocating funding outside of these census blocks may leave these areas with insufficient funding for providers to be able to afford to deploy robust, reliable and affordable broadband networks and services. Conversely, retaining funding in these areas will promote regulatory certainty and investment in broadband networks. Therefore, UTC and NRECA support the comments on the record that suggest ways to preserve funding for rural broadband in census blocks where the price cap carriers declined the offer of model-based support to subsidize the high cost of providing broadband to unserved areas.

I. Background and Introduction

Studies have consistently shown that access to broadband promotes economic growth. The Council of Economic Advisors has concluded that there remains a stark digital divide, as evidenced by a divide in income which is matched by a divide in Internet adoption. It found that areas of the country with higher household income exhibit higher home Internet use, and areas of the country with lower household income report lower home Internet use. Recent Pew research indicates that job seekers without broadband at home have a harder time contacting potential employers, filling out online job applications, creating a professional resume, and highlighting employment skills on social media.⁶

Meanwhile, broadband Internet related revenues grew from an estimated \$28 billion in US GDP in 2006 to an estimated \$32 billion in net consumer benefits by 2009, as consumers

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⁶ *Id*. at 7.

converted from dial-up to broadband.⁷ Access to broadband has also been tied to increased wages and economic growth, particularly in industries that are more IT-intensive and in areas with lower populations.⁸ At the same time, broadband has been shown to improve health care, particularly for rural patients who may lack access to medical care, as telemedicine allows them to receive medical diagnoses and patient care from specialists who are located elsewhere.⁹ Finally, broadband has been shown to bring improvements in the quality of education, which also pays dividends by helping to reduce unemployment because broadband Internet at libraries enables people to search for jobs.¹⁰

Rural electric cooperatives and utilities have witnessed the effect of broadband access firsthand. Utilities in Tennessee have deployed broadband and are offering Gigabit services, and have seen significant declines in unemployment and increases in wages over the same period. Utilities that have offered broadband services in other parts of the country have seen similar benefits from deploying future-proof broadband networks and offering robust, reliable

⁷ *Id.* at 5-6.

⁸ *Id.* at 6.

⁹ *Id*.at 6.

¹⁰ Id. at 7. Education Superhighway. 2015. "2015 State of the States. A report on the state of broadband connectivity in America's public schools." November. http://cdn.educationsuperhighway.org/assets/sos/full_report-c2e60c6937930e8ca5cdbf49d45d45c8.pdf.

¹¹ Gigabit Internet Economic Development Booming, at https://www.laserfiche.com/simplicity/gigabit-internet-economic-development-booming/ (reporting that In Chattanooga, the utility EPB has deployed Gigabit networks and is now offering 10 Gigabit service. "In the past three years, the city's unemployment rate has dropped to 4.1 percent from 7.8 percent and the wage rate has also been climbing." Chattanooga has experienced the third highest wage growth of all mid-size U.S. cities and has added many high-tech jobs paying an average of \$69,000 a year. Similarly, other rural electric cooperatives and utilities in Tennessee in Tullahoma and Morristown have reported that companies have increased their staff or relocated to their areas to take advantage of their Gigabit network service offerings),

and affordable broadband services to their communities.¹² Conversely, rural electric cooperatives and utilities also have reported on the record that consumers have resoundingly rejected satellite as an alternative broadband technology, particularly complaining that it won't support their in-home businesses due to slow speeds and data caps.¹³

Yet, some comments deny that there is a digital divide and claim consumers are satisfied with status quo access.¹⁴ These positions are contradicted by other comments on the record that support the deployment of broadband networks that exceed the FCC's minimum requirements.¹⁵

¹² See "Kit Carson Electric Receives 2015 Industry's Top Award" at http://www.kitcarson.com/content/kcec-awards (describing how implementation and rollout began in the fall of 2014, making KCEC the first ISP in northern and central New Mexico to provide 1 Gbps service. The main line construction project is approximately 91 percent complete, with more than 110 businesses and community anchor institutions connected to broadband fiber.") See also "Cedar Valley Broadband Service" at https://www.cedarvalleyalliance.com/cms/313/Broadband-Service (describing how the Gigabit network deployed by Cedar Valley Utilities makes it "one of a handful of U.S. cities connecting every business and home to gigabit broadband with true gigabit speed capacity," including "developed sites in established industrial and office business parks offering fiber connectivity in addition to other necessary utilities to service business facilities.")

¹³ Comments of Midwest Energy Cooperative in WC Docket No. 10-90 (filed Aug. 8, 2014) at https://ecfsapi.fcc.gov/file/7521752379.pdf#viewer.action=download

¹⁴ See e.g. Comments of United States Telecom Association (US Telecom) at 5 (arguing that "the weighting methodology must not overpower the need to keep price and efficiency as the primary driver of auction results," adding that reducing the weighting for the Gigabit Performance Tier is supported by consumer adoption of higher speed services, which show that even though 90 percent of the U.S. population has access to 25/3 Mbps broadband service, the overall national adoption rate for such speeds is only 37 percent.); Comments of the Wireless Internet Service Provider Association at 4 (a very small percentage of consumers receive gigabit download speeds such that the speed component of the Gigabit Performance Tier is not "reasonably comparable" service under the statute.); Comments of ViaSat at 6 (stating that "consumer satisfaction with satellite broadband service has been rising, and is considerably higher, since ViaSat brought its current-generation broadband service into operation four years ago and began offering speeds that are leaps and bounds above those available previously by satellite.")

¹⁵ See e.g. Comments of the American Cable Association at 2 (supporting the Commission's approach for the auction to promote the deployment of high performance networks to rural and less dense areas that are served by ACA's members.); Comments of Fiber to the Home Council

UTC and NRECA believe that the Commission is right to apply weights to higher performance tiers and it is right to reject an approach that would select bids on a dollar per location basis. ¹⁶ Moreover, UTC and NRECA agree with the comments on the record that support investing in future-proof networks, rather than taking an incremental approach that makes inefficient use of available funding. By applying the weights appropriately in this way, the Commission can both maximize the number of consumers served within its finite budget and at the same time, promote access to broadband services that exceed the FCC's baseline requirements during the 10-year term of support. ¹⁷

As Chairman Wheeler succinctly put it, 25/3 mbps speeds are "table stakes" for broadband today, and there will be increasing demand for faster speeds in the future. ¹⁸ Rural America needs access to broadband networks and services that are scalable and that are

at 6 (stating that its surveys have shown that consumers in rural areas want services that are comparable to services that are available in urban areas; that they want broadband networks that can scale to provide services that meet increasing demands; and that "[o]nly the Gigabit Performance tier will have the performance level that can support long-term uncompromised broadband service for most consumers."); and Comments of NTCA – The Rural Broadband Association at 3 (supporting the Commission's approach to weight higher performance tiers, explaining that it goes beyond merely "getting broadband out there" and instead focuses on "future proof" broadband networks and ensures that the networks built with CAF II funds are scalable and sustainable over the long term.)

¹⁶ Report and Order at ¶85 (stating that "bids will be scored relative to the reserve price for the areas subject to the bid with lower bids selected first, taking into accounts the weights, on which we seek comment in the Further Notice," and declining to adopt an approach that would "select bids on a dollar per location basis.").

¹⁷ *Id.* at ¶16.

¹⁸ Prepared Remarks of FCC Chairman Tom Wheeler "The Facts and Future of Broadband Competition" 1776 Headquarters, Washington, D.C. September 4, 2014, available at: https://apps.fcc.gov/edocs_public/attachmatch/DOC-329161A1.pdf; *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*, 2016 Broadband Progress Report, GN Docket No. 15-191, FCC 16-6 (rel. Jan. 29, 2016), statement of Chairman Tom Wheeler ("A 25 Mbps connection has become "table stakes" in 21st century communications.").

reasonably comparable in terms of quality and cost to the types of broadband services that are available in urban areas. Funding cut-rate, marginal broadband services is a poor investment. These marginal broadband services are not reasonably comparable to what is available today and what consumers will need in the future. We can't afford to keep subsidizing networks that barely meet minimum requirements, and then having to spend more money to replace or upgrade them to meet increasing consumer demands. The Commission should not pursue policies premised on planned obsolescence.

UTC and NRECA are mindful of the cost of deploying broadband into rural areas and the need to maximize the number of consumers that are served within the FCC's finite budget – but the Commission should not assume that coverage and quality are mutually exclusive with each other. Rural electric cooperatives and other utilities have been able to economically deploy fiber-to-the-home networks and offer Gigabit services in areas where customer density is less than four homes per mile, and they are offering service to 100 percent of the customers in those areas today. Rural electric cooperatives and other utilities are deploying fiber-to-the-home in areas that the carriers have refused to serve with even 4/1 mbps services, including pockets of communities where, as Commissioner Clyburn observed, "families can literally see from their windows and stoops the power of connectivity, but remain foreclosed, sometimes by less than 2000 yards, from economic opportunities." By adopting weights that recognize the value of higher performance tiers in terms of speed and data allowances, as well as lower latency, the

¹⁹ Report and Order at ¶16 (stating that "[w]e want to maximize the number of consumers served within our finite budget. At the same time, we see the value to consumers in rural markets of having access to service during the 10-year term of support that exceeds our baseline requirements.")

²⁰ Report and Order, Statement of Commissioner Mignon Clyburn at 159.

Commission will cost-effectively advance the goal of broadband access without compromising on quality.²¹

Investing in future-proof networks demonstrates a commitment to rural America that it won't be left-behind, and provides these communities with opportunities for economic growth, better education and improved health care. It provides a solid foundation upon which to build, rather than merely providing the minimum and then upgrading – if at all –at some point in the future. Rural electric cooperatives and other utilities are demonstrating commitment to their communities, because they exist to serve them. The Commission should support this kind of commitment and adopt weighting that encourages utilities and others to deploy future-proof broadband networks and offer services that are reasonably comparable to broadband services that are available in urban areas today and scalable to meet future demands.

II. The Commission Should Adopt Weights That Promote the Deployment of Future-Proof Broadband Networks That Are Scalable to Meet Increasing Demands and That Support Interactive Applications, Including Real-Time Voice Services.

UTC and NRECA reiterate their support for weighting that provides the greatest additional weight for the Gigabit Performance tier as well as significant deductions for high latency, ²² which is echoed by the other comments on the record. ²³ As NTCA explained in its comments, this approach is not only consistent with the statute and the concept of "reasonable"

²¹ Report and Order, Statement of Chairman Tom Wheeler at 156 (stating that "bidders should compete on both cost and performance," adding that "[t]o ensure that rural Americans, like those in McKee Kentucky, can benefit from the innovation and advances in technology available in urban areas, we will give more weight to bids that offer better performance.")

²² Comments of NRECA and UTC at 7-9.

²³ Comments of NTCA – The Rural Broadband Association at 3-10. *See also* Comments of the Fiber to the Home Council at 6 (stating that "[o]nly the Gigabit Performance tier will have the performance level that can support long-term uncompromised broadband service for most consumers.")

comparability," it is also consistent with the concept of "competitive neutrality." As NTCA further explained, "'the competitive neutrality principle does not require all competitors to be treated alike, but 'only prohibits the Commission from treating competitors differently in 'unfair' ways." Moreover, the Commission itself has explained that "[t]he principle of competitive neutrality does not preclude us from meeting other reasonable regulatory objectives, including... the statutory requirement to ensure reasonably comparable service." In addition, the Commission has explained that "[t]he adoption of these technology-neutral tiers of performance standards, which are designed to meet reasonable regulatory objectives, is not objectionable simply because some service providers cannot meet the standards for a particular tier." Thus, UTC and NRECA submit that it is appropriate to weight in favor of the Gigabit Performance tier and against high latency, which is supported by the record and is consistent with the principle of competitive neutrality because it is not unfair and will promote other reasonable regulatory objectives, including economic growth, better education and improved health care.

Specifically, UTC and NRECA reiterate their proposed weights as follows:

Performance Tier Weights

Performance Tier	Speed	Usage Allowances	Proposed Weights
Minimum	≥10/1 Mbps	≥150 GB	0

²⁴ *Id*.at 5.

²⁵ *Id.*, *citing Connect America Fund*, WC Docket Nos 10-90, *et al.*, Report and Order and Further Notice of Proposed Rulemaking (rel. Nov. 18, 2011), aff'd sub nom. In re: FCC 11-161, 753 F.3d 1015 (10th Cir.2014).

²⁶ Report and Order at ¶36.

²⁷ *Id*.

Baseline	≥25/3 Mbps	≥150 GB or U.S. median (higher of)	20
Above Baseline	≥100/20 Mbps	Unlimited	50
Gigabit	≥1 Gbps/500 Mbps	Unlimited	70

Latency Weights

Latency	Requirement	Proposed Weights
Low Latency	ms≤100	30
High Latency	ms≤750 & MOS of≥4	0

As UTC and NRECA explained, these weights are comparable to those proposed by NRECA, UTC and NTCA in their joint ex parte presentation in this proceeding, ²⁸ but are expressed differently to fit within the framework/approach set out in the Further Notice. ²⁹ As UTC and NRECA also explained, the proposed weight for low latency is similar to what was previously proposed by NRECA, UTC and NTCA. ³⁰ These proposed weighting factors are consistent with other comments on the record that suggest weighting in favor of the Gigabit

 $^{^{28}}$ *Id.* ¶ 215, n. 411. Bid Amount (Ratio of the Bid Price to the Reserve Price) – (the Performance Tier Weight % and the Latency Weight %) = Weighted Bid.

²⁹ Further Notice ¶ 210, n. 406.

³⁰ Further Notice ¶ 215, n. 411. See also Comments of UTC and NRECA at 7 (supporting an additional weight of "50" for projects that would provide low latencies of between 40 and 65 ms roundtrip. As UTC and NRECA have previously explained, this level of low latency is necessary for certain telemedicine and smart grid applications. See Letter from Brett Kilbourne, Vice President and Deputy General Counsel, Utilities Technology Council, and Martha A. Duggan, National Rural Electric Cooperative Assoc., to Marlene H. Dortch, Secretary, FCC, WC Docket No. 10-90, et al. at 3 (filed May 18, 2016)(stating that "Sub-50 millisecond latency levels are required for primary communications systems by health care providers. These low-latency requirements are also applicable to support utility communications applications, as well. Substation monitoring and control, electric transmission and distribution teleprotection, and synchrophasors need similar low latency and highly reliable communications systems, which is also a challenge in rural America where there is often a lack of access to suitable communications networks.")

Performance tier.³¹ They are also consistent with the comments on the record that suggest substantial negative weighting for high latency projects.³² Given the support for the Commission to adopt higher weighting for projects that would meet the Gigabit Performance Tier requirements, as well as for projects that would meet the Above Baseline and Baseline service tiers, the Commission should adopt weights for the "Gigabit Performance Tier", as well as the "Above Baseline" and the "Baseline Performance" tiers that are consistent with those proposed by UTC and NRECA. Similarly, the Commission should also deduct weight from high latency projects, consistent with the comments of UTC and NRECA, as well as other parties on the record.

III. The Commission Should Preserve Funding in States Where Carriers Have Declined Model-Based Support.

UTC and NRECA also reiterate their concerns about reallocating funds out of census blocks in areas where price cap carriers have declined the offer of model-based support. As a matter of equity, UTC and NRECA believe that the amount of funding that was offered to the price cap carriers in each of the census blocks under model-based support should be made

³¹ See Comments of NTCA at 10 (suggesting a weighting factor of 50 for gigabit performance tier and 25 for the above baseline performance tier, while suggesting zero for both the minimum and the baseline performance tiers.)

³² Comments of WISPA at 5 (suggesting deducting 75 points for high latency projects). *See also* Comments of the Fiber to the Home Council at 7-8, *quoting* a study by the ITU on user satisfaction at various latency levels (stating that "a one-way delay of 400 ms should not be exceeded for general network planning," but highly interactive tasks, such as many voice calls, require even lower latency.") Comments of the USTA at 5-8 (suggesting deducting 75 points for high latency projects). Comments of ITTA at 10-11 (stating that the Commission should accord negative weighting to high latency).

available for competitive bids under the Phase II auction.³³ UTC and NRECA believe that competitors should have an equal opportunity to the funding that was offered to the price cap carriers through model-based support. To withdraw that funding for the Phase II auction seems fundamentally unfair in the sense that competitors are denied the same opportunity to bid for CAF funding included in the state-wide offers to price cap carriers. While it may be true that the Commission never guaranteed that competitors would be awarded the same amount of funding – and in fact they are likely to receive less than the reserve as they compete at auction with others to bid to provide service in a given area – they should have the same *opportunity* to access the amount of funding that was offered to the price cap carriers through model-based support. Reallocating funding to other census blocks denies them that opportunity.

As a policy matter, UTC and NRECA are also concerned that reallocating the funds out of the census blocks where the carriers declined the offer of model-based support will leave these areas without sufficient funding available to offset the high cost of providing service to those areas. As a result, consumers won't get access to broadband because providers won't compete at the auction to serve those areas.

The Commission may have good intentions in reallocating the available funding to areas that previously had none, but UTC and NRECA are concerned that there won't be enough funding to go around and the money will be spread too thinly to help promote broadband in those areas either. UTC and NRECA suggest that the Commission retain the available funds and

³³ This same principle underlies the Joint Petition for Reconsideration filed by UTC and NRECA that advances the proposition that all census blocks upon which the budget for the Phase II auction was based, including those in qualified, non-winning Category 1 Rural Broadband Experiment applications, should be included in the Phase II auction.

conduct the Phase II auction – setting the reserve based upon the funds that were available under model-based support in each census block. UTC and NRECA believe that the competitive bids in the auction will come in below the reserve (i.e. the amount of money that was offered to the price cap carriers through model-based support). This approach would result in the effective use of the available funds, and would avoid the potential significant risk of preventing the deployment of broadband by spreading the available funds too thin for providers to afford to serve an area.

There is widespread support on the record for preserving the available funding in areas where the price cap carriers declined the offer of model-based support. This would place all communities in areas in which price cap carriers declined model-based support on the same footing: price cap carriers and other interested services providers can bid to provide broadband service to these communities. UTC and NRECA support the proposals by New York and Massachusetts to retain the funding in the census blocks that were declined by the price cap carriers, but suggest that the FCC remove potential barriers (e.g. the precondition of the existence of a state broadband program and partnership, or the precondition that the price cap carrier have declined 80% of the available funding) for entities to participate in the Phase II auction and thereby secure access to the funding that was offered to the price cap carriers through the statewide model-based support.³⁴

³⁴ See Comments of New York State at 2. See also Joint Comments of the Massachusetts Department of Telecommunications and Cable and the Massachusetts Broadband Institute at 2-3.

IN VIEW OF THE FOREGOING, the Commission is respectfully requested to take action consistent with the views expressed herein.

Respectfully submitted,

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