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

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EXECUTIVE SUMMARY

UTC and NRECA strongly endorse the principles advanced in the *Further Notice* that (1) the Phase II auction be structured to "value higher speeds over lower speeds, higher usage allowances over lower usage allowances, lower latency over higher latency," and (2) weights be assigned to each proposed performance tier and latency option to calibrate the net price for each bid. Weights are necessary to conduct a single-round competitive bidding process among entities that may propose to employ different technologies and service performance tiers and for the Commission to evaluate these bids.

The Commission should assign the greatest weights to the Gigabit performance tier and to low latency option proposed in the *Further Notice*. By contrast, the Minimum performance tier and the high latency should be entitled to zero ("0") weights, individually and collectively. Parties offering this tier and latency option should be required to compete exclusively on price.

NRECA and UTC propose the Usage Allowance be adjusted in two respects. First, the highest usage allowance should include a "good faith" obligation that a bidder has a commercially reasonable expectation that a substantial percentage of its prospective customers will subscribe to the maximum usage plan for the bid tier. Second, the Commission should require a minimum usage allowance plan of 50 gigabytes (GB) for all tiers. All subscribers should receive a reasonable baseline level of service at a fixed rate. A third, very low latency metric based on latency available from at least one major carrier should also be adopted.

Bidding based on these principles will maximize the value of the limited funds available for the CAF II auction by bridging the "digital divide" between rural communities and urban areas over the ten-year period of support; meeting the needs of the entire community, including schools, libraries, and rural health care providers, potentially reducing the overall cost of the USF to consumers; and enabling rural subscribers to obtain access to the sophisticated broadband applications currently offered by leading edge providers as well those that will be offered in the future.

UTC and NRECA recommend the Commission not look to Form 477 data to help refine the weights for the Phase II auction. Among other reasons, these data, in the aggregate, reflect the investment decisions, pricing strategies and overhead cost structures of the largest services providers operating in high and low density markets and having multiple lines of business. By contrast, the entities involved in the Phase II auction will be focused on estimating costs and deciding on technologies for delivering broadband service over new or existing facilities in rural areas.

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The National Rural Electric Cooperative Association (NRECA) and the Utilities Technology Council (UTC) hereby submits their Comments in response to the Report and Order and Further Notice of Proposed Rulemaking in the referenced proceeding.[1] NRECA and UTC support many decisions adopted in the Report and Order as they maximize the opportunity of rural electric cooperatives to participate in the Connect America Fund Phase II reverse auction ("Phase II auction") and are pleased the Further Notice proposes that the Phase II auction be structured to "value higher speeds over lower speeds, higher usage allowances over lower usage allowances, lower latency over higher latency."[2]

[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] *Report and Order* ¶ 16.

STATEMENT OF INTEREST

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. Rural electric cooperative infrastructure covers 75% of the land mass of the United States. NRECA's members include approximately 65 Generation and Transmission ("G&T") cooperatives and 840 Distribution cooperatives. 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, non-profit entities that are owned and governed by the members to whom they deliver electricity. Electric cooperatives are democratically governed and operate according to seven Cooperative Principles.[3]

Created in 1948, UTC is the global trade association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries ("CII"), such as pipeline companies.[4] Its members include large investor-owned utilities that serve millions of customers, often across multi-state service territories; and its members include smaller cooperative or municipal utilities that may serve only a few thousand customers in rural areas or isolated communities. All of these members own, manage or control extensive private internal communications networks that they use to support the safe, reliable and efficient delivery of essential services to the public at large. These communications networks are used both for voice and data communications for routine dispatch

[3] 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.

[4] *See* www.utc.org.

as well as emergency response during service restoration in the aftermath of hurricanes, storms and other natural disasters, which can affect large areas for extended periods.

UTC and NRECA have been involved in this proceeding for several years, focusing on the criteria for selecting winning bidders under the Rural Broadband Experiments program and the Phase II auction. With regard to each of these innovative approaches for providing support for broadband Internet access to rural communities, NRECA and UTC have focused on FCC rules and policies that enable full participation by interested electric cooperatives. These rural utilities are committed to delivering high speed Internet access to the residential customers and small businesses, schools and libraries, and rural health care providers located in or adjacent to the communities to which they provide electric service. Many electric cooperatives submitted letters of interest to participate in the Rural Broadband Experiments program. Approximately eighteen (18) electric cooperatives have been designated either as authorized grantees, provisionally selected winning bidders or potential "next-in-line" bidders under the Rural Broadband Experiments program. Presently, many cooperatives across the country are either analyzing or moving forward with plans to deploy facilities to support high-speed broadband Internet access to their communities.

UTC and NRECA are pleased that the Report and Order added the National Rural Utilities Cooperative Finance Corporation (CFC) to the financial institutions eligible to issue Letters of Credit (LOCs) to RBE grantees and to winning bidders under the Phase II auction and that the Commission limited the obligation to maintain LOCs for the period until a services provider completes the buildout of its network. The Report and Order also adopts the NRECA and UTC proposal that electric cooperatives may establish their technical qualifications to participate in the Phase II auction based on their experience in operating electric transmission

and distribution networks by submitting copies of annual reports filed with either the Rural Utilities Service ("RUS"), CFC or CoBank. UTC and NRECA also support extending to 180 days the period within which an announced Phase II auction winning bidder must obtain its Eligible Telecommunications Carrier (ETC) designation from a state commission or the FCC, as applicable. The Report and Order makes a modest change to determining the census blocks to be included in the Phase II auction by requiring high cost and extremely high cost locations be averaged "at the census block level" so that bidders can readily determine all supported locations within each census block.

The troubling aspect of the Report and Order is the exclusion from the Phase II auction of census blocks served by a price cap ILEC offering 10/1 broadband service based on Form 477 data. This decision was made without notice or opportunity for comment, significantly reduces the census blocks in non-winning category one Rural Broadband Experiment applications,[5] notwithstanding the Commission's explicit policy determination in the *December 2014 Connect America Order* that these census blocks would be included in the Phase II auction.[6] Over and above the lack of notice, this action adversely impacts numerous rural communities in which electric cooperatives plan to provide high capacity broadband service. Accordingly, NRECA and UTC are submitting separately a Joint Petition for Reconsideration of this aspect of the Report and Order.

[5] *Report and Order* ¶¶ 70 and 72, n. 144.
[6] *Connect America Fund et al*, Report and Order, 29 FCC Rcd 15644, 15675, ¶¶ 84-85 (2014) ("*December 2014 Connect America Order*").

DISCUSSION

A. The Commission Should Assign Weights that Extend Support to Bidders Proposing Higher Speeds over Lower Speeds, Higher Usage Allowances over Lower Usage Allowances and Lower Latency over Higher Latency

The Report and Order adopts a multi-round auction format in which persons utilizing different broadband technologies, various broadband speeds and different measures of latency will bid against each other. More particularly, the Report and Order sets

(1) Four technology-neutral performance tiers with varying speed and usage allowances,

(2) For each tier, bidders may designate either a high or a low latency option, and

(3) A single, multi-round auction under which "all bids will be considered simultaneously. . . [using] weights to take into account the differing attributes of different types of service performance." [7]

Tithe weights to be assigned to each service tier and latency option are intended to "alter the initial cost-effectiveness of the each bid."[8] Thus, "a bid closer to the reserve price but for higher performance levels could be selected based on its 'weighted score,' even if another bidder seeks less actual support to provide the minimum level of service." [9]

NRECA and UTC agree with the a central premise of the Further Notice that bidding rules should fully reflect the value of "higher speeds over lower speeds, higher usage allowances over lower usage allowances, lower latency over higher latency." [10] This principle is central to the Commission's longstanding objective to bridge the "digital divide" that often separates rural communities from their urban counterparts. It is also central to rural electric cooperatives' interests in both the Rural Broadband Experiments and the Phase II auction: to provide robust

[7] *Further Notice* ¶ 206.
[8] *Id.* ¶ 210.
[9] *Id.* ¶ 211.
[10] *Id.* ¶16.

broadband service in rural communities to enable the growth and prosperity of these communities; to deliver high capacity broadband service to local schools and libraries and rural health care providers; and to attract and retain substantial investments of established corporations, start-ups and government agencies in these communities.

The Further Notice proposes a bidding framework that looks to extend the limited funds remaining under the CAF II program, providing meaningful on-going support for robust, future-proof broadband networks in rural areas of the United States. The single, multi-round reverse auction adopted in the Report and Order coupled with meaningful weights for higher performance tiers and low latency maximizes the prudent use of the remaining CAF II funds and furthers the policy objective of "higher speeds over lower speeds, higher usage allowances over lower usage allowances, lower latency over higher latency."

NRECA and UTC propose modifications to the proposed minimum usage allowances for each speed tier. First, there should be a "good faith" obligation associated with the maximum usage allowance for each performance tier. That is, the highest usage allowance plan for a given performance tier should be based on the bidder's commercially reasonable expectation that a substantial percentage of its prospective customers will subscribe to this usage plan. Second, the Commission should require a minimum usage allowance plan of 50 gigabytes (GB) for all tiers. All subscribers should receive a reasonable baseline level of service at a fixed rate. These proposed qualifications to the usage allowance factor are designed to safeguard against "gaming" the auction, to maximize realistic, aggressive bids for all performance tiers and ensure all supported locations have access to a reasonable baseline of service.

The charts below propose weights for the performance tiers and modified usage allowances:

Performance Tier Weights

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

These weights are comparable to those proposed by NRECA, UTC and NTCA in their joint ex parte presentation in this proceeding,[11] but are expressed differently to fit within the framework/approach set out in the Further Notice. [12] NRECA and UTC also endorse a lower latency weight, as previously proposed by NRECA, UTC and NTCA.[13] In the *Technology Transition* proceeding, AT&T indicated that wireline broadband Internet service could be provided with latencies between 40 and 65 ms.[14] Thus, NRECA and UTC propose a weighting of "50" for this "very low" latency tier.

NRECA and UTC propose the most significant weights for the Gigabit performance tier for several reasons:

[11] *Id*. ¶ 215, n. 411.
[12] *Further Notice* ¶ 210, n. 406. Bid Amount (Ratio of the Bid Price to the Reserve Price) – (the Performance Tier Weight % and the Latency Weight %) = Weighted Bid.
[13] *Further Notice* ¶ 215, n. 411.
[14] Letter from Daniel L. Talbot, Assistant Vice President, Federal Regulatory, AT&T Services, Inc., Letter to Marlene H. Dortch, Secretary, FCC, GN Docket 13-5 and GN Docket No. 12-353, Attach. 1 at 5 (filed May 31, 2016).

(1) In terms of "bang per buck", the Gigabit performance tier delivers the highest, most sustainable value. Gigabit services are typically delivered over fiber-based networks having useful economic lives in excess of 20 years and supported by a dynamic technology ecosystem that has consistently enhanced the derivable bandwidth from discrete fibers. Delivering such long-term value from an auction relying upon Connect America Cost Model (CAM) reserve prices provides an unparalleled opportunity to maximize the return on the limited funds available for the Phase II auction.

(2) This tier is the best option for bridging the "digital divide" between rural communities and urban areas over the ten-year period of support as winning bidders for each service tier "will be deemed in compliance" with obligation to meet evolving broadband speeds even if the Commission imposes more rigorous performance standards at the expiration of the six-year funding term for the accepted model-state offers.[15]

(3) Networks offering the higher speed tiers coupled with readily achievable latency support the sophisticated broadband applications currently offered by leading edge providers as well those that will undoubtedly mature over the next ten years.

(4) This tier is most capable of meeting "the needs of the entire community, including schools, libraries, and rural health care providers, potentially reducing the overall cost of the USF to consumers." [16]

Conversely and in light of these overarching considerations, it is appropriate to assign a "zero weight" to the Minimum speed tier and high latency option and, when a bidder proposes both the Minimum speed and the high latency option, its bid should be based solely on cost. The Commission could assign a "negative weight" to the low latency option because the high

[15] *Report and Order* ¶ 18.
[16] *Id*. ¶ 16.

latency option is detrimental to interactive applications such as voice and the Mean Opinion Score (MOS) scheme is inherently suspect. This proposed modification to the latency factor is consistent with prior Commission findings that low latency is required to support a diverse range of applications.[17]

B. The Commission Should Not Look to Form 477 Data to Determine Weights for the Phase II Auction

Use of Form 477 data to determine more realistic weights for the Phase II auction is problematic from several perspectives. The process could be time consuming and any analysis of the possible factors would, themselves, be "weighted" to achieve a party's preferred outcome. The Report and Order and the Further Notice, along with the yet-to-be-released *"Auction Procedures Public Notice,"* have made or will make decisions necessary for the Commission to initiate the auction. Consideration of even more variables should not be undertaken at this juncture. In addition, the Form 477 data have limited relevance to the Phase II auction. These data, in the aggregate, reflect the investment decisions, pricing strategies and overhead cost structures of the largest services providers operating in high and low density markets and having multiple lines of business: video, wireless, content, enterprise services and wireline broadband Internet access service. The entities involved in the Phase II auction will be focused on estimating costs and deciding on technologies for delivering broadband service over new or existing facilities in rural areas.

[17] *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, 2016 Broadband Progress Report, GN Docket No. 15-191, ¶ 62 (FCC 16-6, rel. January 29, 2016) (latency is important for a variety of applications, including Voice over Internet Protocol (VoIP), video calling, distance learning, and online gaming which may be effectively unusable over high latency connections, regardless of the download/upload speeds being offered).

C. All Remaining CAF II Funds Should Be Available in All States under the Phase II Auction

The Further Notice raises equity concerns over the possible loss of CAF II funds in states in which the price cap carrier declined state wide offers. [18] The underlying concern is that the funds allocated to unserved, high cost locations in states in which the price cap carrier declined model-based support might not be distributed in substantial proportion to the manner in which the aggregate budget for the Phase II auction was developed. Even more compelling concerns and interests are implicated by the exclusion of a substantial number of the census blocks in the applications of qualified, non-winning Category 1 bidders from the Phase II auction. As noted in the Joint Petition for Reconsideration filed separately by NRECA and UTC, this is an abrupt departure from the *December 2014 Connect America Order* in which the Commission explicitly held that these census blocks would be included in the Phase II auction.[19] Moreover, the approximate $215 Million in annual funding available under the Phase II auction includes the CAM-based costs of the declined state-wide offers and the estimated costs for all of the census blocks in the qualified, non-winning Category 1 applications.[20]

The Commission should include all of these census blocks in the Phase II auction as there is a reasonable likelihood that most, if not all, of these areas will be included in competitive bids. To the extent any of these census blocks are not included in Phase II auction bids, the monies could be set aside for those states under the remote area fund auction.

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[18] *Further Notice* ¶¶ *217-224.*
[19] *December 14 Connect America Order*, ¶ 85 ("excluding these areas from the offer of model-based support and instead making them available in the Phase II competitive bidding process should enable us to stretch our finite Connect America budget even further.").
[20] *Further Notice* ¶¶ 76-79.

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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