Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	**)**	
	)	
Competitive Bidding Procedures and Certain	**)**	**AU Docket No. 20-34**
Program Requirements for the Rural Digital	**)**	
Opportunity Fund Auction	**)**	**WC Docket No. 19-126**
(Auction 904)	**)**	
	)	**WC Docket No. 10-90**

JOINT COMMENTS
of
NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION
and
UTILITIES TECHNOLOGY COUNCIL

The National Rural Electric Cooperative Association ("NRECA") and the Utilities Technology Council ("UTC"), sometimes referred to as the "Joint Parties," submit these Joint Comments in response to the Public Notice adopted by the Commission in the above referenced proceeding,[1] setting out proposed bidding procedures and related rules for the Rural Development Opportunity Fund (RDOF) Phase 1 auction.[2] NRECA and UTC are pleased to submit these Joint Comments as finalization of bidding procedures and related rules are expected to promote maximum participation by electric cooperatives and other entities looking to deploy sustainable, high capacity terrestrial broadband networks in unserved rural areas and thereby bridge the digital divide for unserved communities in rural America.

[1] *Comment Sought on Competitive Bidding Procedures and Certain Program Requirements for the Rural Digital Opportunity Fund Auction (Auction 904),* Public Notice, AU Docket No. 20-34 and WC Docket Nos. 19-126 and 10-90 (FCC 20-21) March 2, 2020 ("*Public Notice*").
[2] *Rural Digital Opportunity Fund; Connect America Fund,* Report and Order, WC Docket Nos. 19-126, 10-90, FCC 20-5 (Feb. 7, 2020) ("*Phase 1 Order*").

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 48 states, or approximately 12 percent of electric customers, including 327 of the nation's 353 (or approximately 93%) "persistent poverty counties". Many cooperatives are considering, planning or have already made investments and committed the resources to deploy fixed broadband networks and to provide broadband service within their existing territories and in some cases to adjacent communities. UTC is the international association for the telecommunications and information technology interests of electric, gas and water utilities and other critical infrastructure industries. Many utilities have deployed broadband networks and are providing wholesale and retail communications services, including unserved and underserved areas. Auction 904 provides an important opportunity for many electric service companies to provide or expand their delivery of broadband services to residential and small business customers in and adjacent to their electric service territories.

DISCUSSION

NRECA and UTC support the Commission's timely release of the *Public Notice* to establish the bidding procedures and related rules for Auction 904 that is scheduled to begin on October 22, 2020, building upon and, as appropriate, refining the bidding procedures followed in the CAF II auction (alternatively referred to as "Auction 903").[3] Importantly, the *Public Notice* implements the revised bid processing and assignment procedures adopted in the *Phase I Order*. These procedures increase the likelihood that a very substantial portion of the available $16.0

[3] The Joint Parties also acknowledge and support the timely release of the preliminary list and map of areas eligible for Auction 904. *Wireline Competition Bureau Releases Preliminary List and Map of Eligible Areas for The Rural Digital Opportunity Fund Phase I Auction*, Public Notice, AU Docket No. 20-34, WC Docket Nos. 19-126 and 10-90, DA 20-275 (rel. March 17, 2020).

billion will be assigned to support the deployment of sustainable, high capacity terrestrial networks in rural areas. During the clearing round, if two bids for the same area are placed at the same price point (below the clearing price point), the bidding software will assign the bid to the bidder proposing a network having the lowest-weighted performance tier and latency combination ("T&L combination").[4]

The Joint Parties support many of the proposals advanced in the *Public Notice*. The proposals to prohibit applicants looking to deploy geostationary and medium orbit satellites from bidding in the Above Baseline and Gigabit Tiers and qualifying for the Low Latency "zero weight" are in the public interest. These are prudent policy determinations, reflecting both the reported performance data[5] and rural communities' interest in securing fixed broadband service comparable to fixed broadband offerings readily available in urban areas that is not reasonably achievable with these satellite broadband offerings. Commission staff should not be obligated to entertain technical proposals in short-form applications that lack meaningful operational history upon which reasonable expectations of performance can be based.

The same logic applies in considering whether to even allow operators of Low Earth Orbit satellite (LEOs) networks to participate in the auction. LEOs have scant, if any, operational history. That the projected latency for LEOs may be better than geostationary orbits is obvious, but LEOs is not a mature technology suitable for USF support at this time.[6] From a public policy perspective, RDOF support should not be made available to underwrite all or even a portion of the

[4] *Public Notice, paras.* 109-110.
[5] *Id.* at paras. 49-50.
[6] Once tested and proven, LEO satellite broadband could prove useful for reaching the most rural and high-cost areas in the United States. And some electric cooperatives, who do not intend or plan to deploy broadband themselves, may want to collaborate with such providers to make sure their rural communities have access to LEO broadband services when no fixed terrestrial service available.

large-scale, global deployment of a nascent technology with staggering upfront costs.[7] Rather, the purpose of the RDOF funding is to enable the deployment of broadband networks built on established and proven technologies focused on delivering high capacity broadband service to the Nation's currently unserved rural areas for several decades.[8]

NRECA and UTC agree with the Commission that in light of the reported performance for fixed wireless systems and DSL technologies, applicants proposing to deploy systems based on these technologies should not be eligible to bid at the gigabit tier.[9] At some point in the future, 5G fixed wireless technology may prove capable of routinely delivering gigabit tier technology in rural areas. Except for 5G systems operating on spectrum below 1 GHz, 5G systems operating on millimeter wave frequency assignments are distance constrained. This solution likely is not well-suited to meet the broadband requirements of households and businesses in the Nation's less densely populated rural areas and certainly not the needs of rural anchor institutions, such as schools, libraries and health care facilities which require reliable low-latency and high-bandwidth services. The Joint Parties recommend that the viability of fixed 5G technology in rural areas first be demonstrated, believing, at most, the technology may be better suited for the Phase 2 auction.

A problematic aspect of the proposed bidding procedures is that the Commission may replace Census Block Groups (CBGs or census block groups) with larger Census Tracts (census tracts) as the minimum bidding area,[10] noting the substantial increase in the number of potential bidding areas for Auction 904 as compared to the eligible bidding areas in the CAF II auction if

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[7] Harry Baldock, *"Starlink's satellite internet won't step on telcos' toes," total telecom (*March 10, 2020), https://www.totaltele.com/505175/Starlinks-satellite-internet-wont-step-on-telcos-toes?mc_cid=c001c92b71&mc_eid=2aa3198f50 *(SpaceX's LEO satellite system will cost $30 billion to deploy 12,000 satellites to provide Internet connectivity in hard to reach areas throughout the world)*.

[8] *Phase 1 Order, para. 2* (the public interest is best served by "encouraging the deployment of networks that will be sustainable even as new advancements are made and which will be capable of delivering the best level of broadband access for many years to come all while keeping funding within the Phase 1 budget.")

[9] *Id.* at para. 51.

[10] *Id*. at para. 11.

CBGs are retained as the minimum bidding areas."[11] This is grounded in the U.S. Census area designations: census blocks "nest" within census block groups and census block groups "nest' within census tracts. NRECA and UTC members that have operated in rural areas for decades are concerned that, by adopting census tracts as the minimum bidding areas, the Commission will dampen interest in Auction 904 because the population densities of rural area census tracts can be noticeably lower than rural area census block groups and census tracts are far less likely to conform to service territories of rural electric service companies.

The spatial areas for census blocks, groups and tracts vary noticeably, though the areas within each census-unit designation are much larger in rural areas as compared to their urban counterparts. The progressive decrease in population densities for rural area census-based geographic units underscores the concern, as outlined below.

1. A census block may encompass a city block bounded by streets on all sides and in rural areas may be large, irregular and bounded by a variety of features. In very remote areas census blocks can extend for several hundred square miles. The population of census blocks range from zero to several hundred.

2. Census block groups generally contain between 600 and 3,000 people, with an optimum size of 1,500 people. There are about 39 census blocks per census group.

3. Census tracts have at least one CBG and generally have between 1,500 and 8,000 people, with an optimum size of 4,000 people. The spatial size of census tracts varies widely depending on population density.[12]

Lower population density over the larger spatial areas inherent in census tracts, as compared to CBGs, can only dampen bidding participation.

Data from the State of Colorado underscore how vast census tracts can be. While in Colorado's more populated areas, the area of a census tract may be less than a square mile, some

[11] *Id.* at para. 10.
[12] Current 360, Research 101: "Census Tracts vs. Census Block Groups," available at: https://current360.com/research-101-census-tracts-vs-census-block-groups/ (last visited Mar. 27, 2020).

census tracts in rural areas cover thousands of square miles. The largest census tract in Colorado covers over 4,500 square miles, the entirety of Moffat County.[13] The total population of this census tract is 1,321, making the population density .03 per square mile of land. Based on 2010 Census Data, there are 29 census tracts in Colorado that each cover more than 1,000 square miles of land.[14] Of these census tracts, only two have a population density of more than 5 people per square mile. The vast land area and low population density of rural census tracts in Colorado illustrate how adopting census tracts as the minimum bidding areas could adversely impact participation in Auction 904.

Several reasons offered for adopting census tracts are not compelling. Electric service providers do not foresee difficulties in "manipulating and uploading large bidding files into the bidding system" if census block groups are used. Assuming Auction 904 will rely on the same bid upload function as Auction 903, bidders will upload bids using a bidding template file which contains only the census block groups (or "items") that a bidder is eligible to bid on in a given state in each round. Bidders edited these bidding template files by entering bid information for each item in Auction 903. Electric service providers recognize that if census block groups are used in Auction 904, the number of items in the bidding template files may increase the number of Auction 903 bidding template files. So long as bidders have enough time between rounds to make changes to those files, members do not foresee any difficulty manipulating and uploading those files into the bidding system during the auction. The challenge of uploading additional files can be mitigated by proxy bidding in which repetitive file uploading is performed by the

[13] ArcGIS Hub, "Population Density (Census Tract)", available at: https://hub.arcgis.com/datasets/2128d5e4260a47c28b3fd124f79008a1_0/data?orderBy=Area_Land_Square_Miles&orderByAsc=false&selectedAttribute=Area_Land_Square_Miles (last visited Mar. 23, 2020).
[14] *Id*.

bidding software.[15] Based on the experience of Auction 903, more bidders likely will utilize proxy bidding in Auction 904.

Contrary to the suggestion in the *Public Notice,*[16] the use of tracts in lieu of census block groups will not burden bidding strategies. All areas within a state are not fungible. Electric service providers are familiar with their current electric service territory footprints and adjacent areas. That census block groups did not overlap with the electric service territory did discourage some electric service providers from participating in the CAF II auction. Moving to the larger census tracts would exacerbate this challenge and lead to less participation by small entities. Even the largest carriers likely will limit their bidding to areas adjacent to their existing service areas. Moreover, the new bid assignment procedures should simplify bidding strategies for all bidders and likely will result in fewer bidding rounds after the clearing as compared to Auction 903.

Compelling reasons for retaining census block groups as the minimum bidding areas are the obligations to construct up to 135% of the locations within assigned areas in which the CAM estimate proved too low[17] and to provide service to all new locations constructed within eight years of bid award.[18] While NRECA and UTC fully support these obligations as a matter of policy, the financial risks to winning bidders are substantially higher if census tracts are the minimum bidding areas. Additional miles of connectivity (fiber or wireless) may be required to serve a new residential community developed in years 5 and 6 in an otherwise isolated area of a census tract. While new locations may be identified in census blocks and new developments built

[15] *Public Notice*, para. 91.
[16] *Id*. at para. 11. The Joint Parties assume the processing capabilities of the bidding system can be enhanced as the auction is not scheduled to begin until October 22, 2020.
[17] *Id*. at para. 49.
[18] *Id*. at paras. 49-50.

in census block groups, the incremental investment to reach these locations will be less costly, more doable. The risk of extensive "middle mile" buildouts arising from the use of census tracts as minimum bidding areas can only dampen interest in Auction 904.

NRECA and UTC have several concerns regarding an overly broad exclusion of areas from Auction 904 that obtain support under state broadband or other federal programs. Foremost, areas obtaining 100% RUS loans under the ReConnect program should not be excluded under any circumstances. These loans should be treated as other sources of funding that a winning bidder includes in its financial showing required for its long-form application.[19] In the CAF II auction, the Commission recognized the benefits and synergies that 100% ReConnect loan awards can bring to enhance winning bidder deployments.

We also believe many areas will inappropriately be rendered ineligible for Auction 904 because the areas have been awarded funding through a state or other federal grant program to provide 25/3 Mbps speeds.[20] This will deny access to broadband in many areas where electric service providers would propose to provide gigabit services using RDOF Phase I funds – far better service than what can be provided through other projects proposing baseline 25/3 Mbps services.[21] Excluding those areas receiving state or other federal funding also overlooks the important interplay between ongoing support through RDOF I and other programs including the Rural Utilities Service ReConnect program that provide financing for construction and other upfront network deployment activities.[22] This may have the practical effect of delaying or

[19] *Phase I Order*, at ¶. 88, Appendix A, Final Rules, Appendix A, §54.804(b)(2)(v) and (vi) (certifications of available funds for all project costs and, among other matters, that the applicant cover necessary debt service payments).
[20] *Phase 1 Order*, at ¶13.
[21] *See* Letter from Timothy R. Johnson, Chief Executive Officer, Otsego Electric Cooperative to Marlene H. Dortch, Secretary, Federal Communications Commission, WC Docket No. 10-90 (Jan. 23, 2020).
[22] *See* Letter from Michael R. Romano, Senior Vice President Industry Affairs and Business Development, NTCA The Rural Broadband Association to Marlene H. Dortch, WC Docket No. 10-90 (Mar. 9, 2020).

denying areas access to robust broadband for telehealth, telework and online education services – which are best supported by the deployment of future-proof technologies that are capable of meeting increased consumer demands and effectively insulated from technology obsolescence for the life of the infrastructure.

For purposes of this issue, NRECA and UTC emphasize the distinction here between projects that have been awarded funding to provide 25/3 Mbps services and those projects that have been awarded funding to provide faster speeds. While it arguably would be an inefficient use of available funds to award RDOF Phase I funding to projects that would only provide 25/3 Mbps services in areas that have already been awarded state or other federal funding for 25/3 Mbps projects, the reasoning should not operate to exclude RDOF Phase I funding for projects that would provide faster speeds than the 25/3 Mbps services that are being funded under state or other federal programs. Nor should it operate to include areas that have been awarded state or other federal funding to provide broadband services that exceed 25/3 Mbps services. In this way, NRECA and UTC are not requesting reconsideration of the FCC's Phase I Order, but merely clarification that the Commission's rules were not intended to prevent funding for better services than what is being funded under state or other federal programs to provide 25/3 Mbps services. Not only will this clarification conserve available funding, but it will up the ante and promote competition to provide better broadband and/or will expand broadband access to areas that would otherwise lack access. Therefore, NRECA and UTC urge the Commission to include areas as eligible that have been awarded funding for 25/3 Mbps services under state or other federal programs.

CONCLUSION

UTC and NRECA applaud the Commission's efforts in moving quickly to finalize bidding procedures for Auction 904. The new bid assignment rules and proposals to limit the eligibility of satellite, fixed wireless, and DSL-based applicants to the lower speed performance tiers, require high latency for geostationary and medium orbit satellites, and foreclose eligibility of LEO satellite providers in Phase I are grounded in operational realities and strong preferences among rural area residents for broadband having the download and upload speeds available in urban areas. The Commission should retain census block groups as the minimum bidding areas so as not to dampen interest in Auction 904 that likely will occur if census tracts are adopted as the minimum bidding areas. We urge the Commission to clarify that areas obtaining ReConnect loans and those that have been awarded grants for 25/3 Mbps services under state or other federal programs are eligible for Auction 904. Finally, the necessity for ubiquitous broadband is being reinforced by the ongoing pandemic. Without robust broadband access, rural area students will be further left behind and adults will not be able to telework. We urge the FCC to bring all available resources to bear to keep Auction 904 on schedule for October.

Respectfully submitted,

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