

**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

**COMMENTS
OF
NTCA–THE RURAL BROADBAND ASSOCIATION**

I. INTRODUCTION & SUMMARY

NTCA–The Rural Broadband Association (“NTCA”)¹ hereby submits comments in response to the Further Notice of Proposed Rulemaking in the above-captioned proceedings.² The *Further Notice* seeks comment on additional procedures for the Connect America Fund (“CAF”) Phase II competitive bidding process. In particular, the *Further Notice* seeks comment on applying additional weighting factors in terms of scoring bids made in the CAF II competitive bidding process within the four performance tiers adopted by the *Report and Order*.

The Commission should adopt CAF II competitive bidding procedures that actively encourage the deployment of “future-proof” broadband facilities that can stand the test of time and meet an evolving level of universal service. NTCA proposes herein a CAF II bidding

¹ NTCA represents nearly 900 rural rate-of-return regulated telecommunications providers (“RLECs”). All of NTCA’s members are full service local exchange carriers and broadband providers, and many provide wireless, video, satellite, and/or long distance services as well.

² *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, *Report and Order* and *Further Notice of Proposed Rulemaking*, FCC 16-64 (rel. May 26, 2016) (“*Further Notice*” or “*Report and Order*”).

mechanism that awards additional weight to bids that meet a higher set of performance standards (speed, usage, and latency). This approach is consistent with, and indeed substantially furthers, the Section 254 principles of “reasonable comparability” and universal service as an “evolving level of service.”³ It places additional value on the use of limited Universal Service Fund (“USF”) dollars to go 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. NTCA’s proposal is a “network- focused” approach to universal service that looks to consumer demands and the capability of the technology to be deployed for the long-haul rather than focusing on near-term deployment costs alone. It is also consistent with the concept of “competitive neutrality,” as nothing in the statute or previous Commission orders requires the use of “technology blind” universal service policies that ignore the very real limitations of certain technologies.

II. THE COMMISSION SHOULD BE SEEKING TO OBTAIN THE BEST RETURN FOR CONSUMERS AND RATEPAYERS OVER THE LIFE OF INVESTMENTS THAT ARE MADE LEVERAGING UNIVERSAL SERVICE RESOURCES

The Commission should seek at every turn to make the most efficient and cost-effective use of limited universal service dollars in ensuring that every American has access to “reasonably comparable” services at “reasonably comparable” prices. Given that broadband speeds of 25/3 have been defined as “table stakes” in today’s world,⁴ and given that consumer

³ 47 U.S.C. § 254.

⁴ 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

need for broadband of higher speeds and lower latency is increasing rapidly,⁵ this must translate for purposes of this proceeding to CAF II competitive bidding procedures that actively encourage the deployment of “future-proof” broadband facilities that can stand the test of time and meet an evolving level of universal service.

The *Further Notice* seeks comment on methods by which CAF II bids can be “weighted” consistent with the Commission’s commitment to place a greater value on higher-quality levels of broadband that are “reasonably comparable” to those available in urban areas.⁶ NTCA supports the Further Notice proposal to establish weights that “represent the relative benefits of service that provides higher speeds higher usage allowances, and/or lower latency over service that meets lower requirements.”⁷ Under this approach, a bid that is close to the reserve price (and seeks a greater amount of support) but proposes to provide a higher speed broadband service to rural consumers would be given additional weight in comparison with (and possibly selected over) a bid that seeks a lesser amount of support but proposes a lower speed broadband

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.”).

⁵ *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, FCC 15-10 (rel. Feb. 4, 2015) (finding that “having ‘advanced telecommunications capability’ requires access to actual download speeds of at least 25 Mbps and actual upload speeds of at least 3 Mbps” and increasing the benchmark “up from the 4 Mbps/1 Mbps benchmark used in the previous three Reports”). *See also*, *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. 09-137, A National Broadband Plan for Our Future, GN Docket No. 09-51, Sixth Broadband Deployment Report, FCC 10-129 (rel. Jul. 20, 2010) (adopting the 4 Mbps/1 Mbps benchmark),

⁶ Further Notice, ¶ 208.

⁷ *Id.*, ¶ 211.

service. As the *Further Notice* indicates, a specific value of weights must be applied to the four tiers of service adopted by the *Report and Order*. As discussed further below, NTCA supports a point scale for scoring bids that propose to deliver service at speed, usage, and latency levels that exceed certain minimum requirements.

As an initial matter, a CAF II bidding mechanism that awards additional weight to bids that meet a higher set of performance standards (speed, usage, and latency) is consistent with, and indeed substantially furthers, the Section 254 principles of “reasonable comparability” and universal service as an “evolving level of service.” This approach places a premium on a “long term” versus a “short term” view of universal service and makes more productive use of limited CAF II dollars, choosing to place additional value on the use of limited USF dollars to go beyond merely “getting broadband out there.” Instead, such a framework would help ensure that the networks built are scalable and sustainable over the long term and can deliver quality voice right now, rather than just awarding support to the lowest per-location bidder for a network and corresponding set of services that will be unable to deliver reliable voice service even today and will in just a few years seem antiquated, insufficient, and incapable of satisfying consumer demand. This “network-focused” approach to universal service – one that looks to consumer demands and the capability of the technology to be deployed for the long-haul rather than focusing myopically upon near-term deployment costs alone – represents the most efficient and cost-effective use of universal service dollars. More specifically, this would better ensure that rural consumers throughout the nation have access *now, and for the long term*, to reasonably comparable broadband service that supports applications (such as video and quality voice, the latter being sensitive to latency as discussed below) that require a robust and scalable broadband connection.

By ensuring that rural consumers have access to a robust and scalable broadband connection in the areas in question in this proceeding, the approach as supported by NTCA herein is not only consistent with the statute and the concept of “reasonable comparability,” it is also consistent with the concept of “competitive neutrality.” Indeed, as the Commission itself has said, “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.’”⁸ The Commission went on in that same Order to state that “neither the competitive neutrality principle nor the other section 254(b) principles impose inflexible requirements for the Commission’s formulation of universal service rules and policies.”⁹ Rather, the “promotion of any one goal or principle should be tempered by a commitment to ensuring the advancement of each of the principles in section 254(b).”¹⁰ In short, nothing in Section 254 specifically or the concept of “competitive neutrality” more generally requires the Commission to be “technology blind.” Such an inflexible view – placing one principle, competitive neutrality, above all others – would require the Commission to virtually ignore the limitations of certain technologies and will ultimately undermine any attempt to ensure that the principle of reasonable comparability can be maintained over time through the use of USF resources.

For these reasons, a weighting system that prudently assigns values to the capabilities of a network “paid for” via USF dollars is at once both legally permissible and necessary. The facts are clear that certain technologies, even if “cheaper” on the front end, will cost more in the

⁸ *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)

⁹ *Id.*

¹⁰ *Id.*

long run (certainly as measured on a per-capacity-unit basis) and/or ultimately will be incapable of providing “reasonable comparability” in the form of required voice and broadband services offered atop the network. For example, as NTCA has previously noted,¹¹ inherent limitations such as latency and weather interference hinder widespread reliance on satellite technology for next-generation communications services as consumer demand evolves. Due to a satellite’s “distance from the earth, voice and broadband applications have latency that exceeds industry standards and is more than 20 times the latency of typical landline communications.”¹² Even a latency level of 500 to 600 milliseconds could significantly hamper or even limit altogether consumers’ ability to utilize real-time applications such as Voice over Internet Protocol (“VoIP”), and given the Commission’s recent emphasis on the significance of continuity of voice service¹³ and the reliability of voice networks in terms of consumers’ ability to access emergency services,¹⁴ the inherent latency that comes with the use of satellite technology must be considered in a comprehensive analysis of what consumers and ratepayers are getting for their USF dollars.

¹¹ Vantage Point, *Analysis of Satellite-Based Telecommunications and Broadband Services*, (November 2013), attachment to Letter from Michael R. Romano, NTCA, to Marlene H. Dortch, FCC, WC Docket No. 10-90 (filed Nov. 7, 2013).

¹² *Id.*, p. 1.

¹³ *Ensuring Customer Premises Equipment Backup Power for Continuity of Communications*, PS Docket No. 14-174, Report and Order, FCC 15-98 (rel. Aug. 7, 2015), ¶ 3 (adopting “backup power obligations on providers of facilities-based fixed, residential voice services that are not line-powered to ensure that such service providers meet their obligation to provide access to 911 service during a power outage”); *Technology Transitions*, GN Docket No. 13-5, *et al.* Declaratory Ruling, Second Report and Order, and Order on Reconsideration, FCC 16-90 (rel. Jul. 15, 2016), ¶ 5 (adopting “a three- pronged test for determining whether a new service qualifies as an adequate replacement for a legacy voice service as part of [the Commission’s] Section 214 discontinuance application process” to “ensure that consumers can continue to expect strong service quality, *access to critical applications such as 911*, and interoperability with other key applications and functionalities”) (emphasis added).

¹⁴ *Improving 911 Reliability*, PS Docket No. 13-75, *Reliability and Continuity of Communications Networks, Including Broadband Technologies*, PS Docket No. 11-60, Report and Order, FCC 13-158 (rel. Dec. 12, 2013).

Capacity too is something that must be factored into an analysis of the “value” of services and networks “paid for” leveraging USF resources (in addition to being a required consideration in whether services are in fact “reasonably comparable” in the first instance). Shared capacity on individual satellites and a limit on the number of satellites that can be placed into orbit constrains the bandwidth capability of satellite broadband. In an era when consumers are increasingly using their broadband connections for data-hungry applications, (video, as just one example), satellite broadband connections simply cannot keep up. Wireless networks may face similar constraints. While wireless technologies are an essential tool in the provider toolkit for responding to consumer demand, and many NTCA members proactively employ wireless solutions in seeking to reach and serve consumers in rural areas, spectrum capacity limitations (including both cost and congestion), as well as wireless tower and backhaul investments needed to deliver wireless broadband services, cannot be overlooked in considering the “effectiveness” of any bid.¹⁵ In any case, nothing in NTCA’s proposal should be taken to assert that wireless and satellite technologies are not important options (or “tools in a toolkit”) to address consumer needs in certain areas of the nation where providers are unwilling or unable to deploy more robust networks or where providers choose such alternatives for small portions of their service areas where other options are not feasible. Rather, the proposal here is simply intended to capture the idea that, as a general public policy matter, universal service demands in the first instance “reasonable comparability” as a matter of law – and any system adopted must as a matter of law look to deliver on that promise in the first instance before looking to other options as fallbacks where needed to deliver a minimal level of coverage.

¹⁵ Vantage Point, *Wireless Broadband is Not a Viable Substitute for Wireline Broadband*, (March 2015), attachment to Letter from Michael R. Romano, NTCA, to Marlene H. Dortch, FCC, WC Docket No. 10-90 (filed Mar. 10, 2015).

In short, rural consumers deserve – and the principle of “reasonable comparability” demands – that the availability of quality voice service, reliable access to emergency services, and the ability to use the same bandwidth intensive applications as are available to urban consumers are not sacrificed in rural areas by a rigid adherence to “competitive neutrality” that does not take reasonable and realistic account of the limitations of certain technologies. The Commission’s CAF II competitive bidding procedures should therefore be guided by the understanding that the agency is, in a manner of speaking, “buying a network” – that is, the Commission is using high-cost USF dollars over a 10-year term to help facilitate investments, and in doing so, it must take into account the value delivered both to consumers that benefit from the network and those ratepayers that fund it. As a prudent “investment” of USF dollars, the value to be obtained – like any investment in a long-term asset – must account for the use of the network both now and as that network is utilized by consumers both within and even beyond the 10-year term of support. Such value, on a “total cost of ownership” basis, is best found in the deployment of “future proof” services that can stand the test of time. A “total cost of ownership” approach would look beyond the initial direct costs of network deployment and take account as well of the indirect costs that are part of networks that lack the necessary scalability. These indirect costs include, for example, ongoing upgrade costs (additional spectrum, towers and fiber backhaul or satellites, for example) necessary to meet consumers’ bandwidth needs over time – to the extent that such upgrades can even be made rather than requiring redundant deployment of a new network in just a few years’ time. Moreover, any valuation must account for the fact that, even as initially deployed, latency-sensitive networks fail to enable rural consumers to utilize the very same applications as can be used by urban broadband consumers. Ultimately, “future proof” facilities that promise higher speeds and lower latency clearly deliver

better value on a cost-per-megabit over the life of the supported network assets than alternatives that lack the ability to quickly and easily scale over time to meet consumers' needs both during and after the 10-year term of support.

The Commission should also place additional value on the community-wide benefits of CAF II support for services that are enabled by fiber network facilities. This is particularly important considering the Commission's recent focus on improving the broadband speeds available to anchor institutions.¹⁶ The promotion of future-proof and scalable networks in areas where CAF II resources will be directed can have an immediate impact on the schools, libraries and rural health care facilities (as well as Lifeline-eligible consumers) that will benefit in the first instance from the availability of a high-capacity network. The availability of a robust network can in turn be leveraged by beneficiaries of the Schools and Libraries and Rural Health Care mechanisms, ensuring that CAF II funds can have the widest community impact as possible.

To effectuate the above-discussed promotion of value for rural consumers and all ratepayers, NTCA proposes the use of weights as applied to speed, usage, and latency that would provide additional points to CAF II bids proposing to deploy networks that will exceed the minimum requirements of each of the four performance tiers as established by the Report and Order.

¹⁶ *Modernizing the E-rate Program for Schools and Libraries*, WC Docket No. 13-184, *Connect America Fund*, WC Docket No. 10-90, Second Report and Order and Order on Reconsideration, FCC 14-189 (rel. Dec. 19, 2014), ¶ 1 (adopting significant changes and increased funding for the Schools and Libraries program in order to “close the high-speed connectivity gap between rural schools and libraries and their urban and suburban counterparts, and provide sufficient and certain funding for high-speed connectivity to and within all eligible schools and libraries”).

Performance Tier	Speed	Usage Allowance	Additional Points Awarded
Minimum	≥ 10/1 Mbps	≥ 150 GB	0
Baseline	≥ 25/3 Mbps	≥150 GB or U.S. median, whichever is higher	0
Above Baseline	≥100/20 Mbps	Unlimited	25
Gigabit	≥ 1 Gbps/500 Mbps	Unlimited	50

Within each of the four performance tiers, the Commission should also more heavily weight bids in the “low latency” ($\leq 100\text{ms}$) category. As noted above, latency is a key metric in terms of consumers’ ability to use VoIP applications and have reliable access to emergency services. Thus additional weight as applied to this metric advances both the goal of “reasonably comparability” and the Commission’s continued commitment to public safety. Bids within each performance tier proposing to provide service with latency less than 100ms should receive an additional 25 points above and beyond the weights as proposed in the table above.

Latency	Requirement	Additional Points Awarded
Low Latency	$\text{ms} \leq 100$	25
High Latency	$\text{ms} \leq 750$ & MOS of ≥ 4	0

Finally, the Commission should also consider a reduction in points (a “negative weighting”) for bids using the Mean Opinion Score (“MOS”) in place of the millisecond measurement for latency. This approach has been called into serious question by several parties, and given once again the primacy the Commission has placed on voice services in other contexts, the system developed in this proceeding should not countenance substandard service for rural consumers unless there is truly no other option by which to reach those consumers.

III. CONCLUSION

For the reasons discussed above, the Commission should adopt CAF II competitive bidding procedures that actively encourage the deployment of “future-proof” broadband facilities that can stand the test of time and meet an evolving level of universal service.

Respectfully Submitted,

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