

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

In the Matter of	)	
	)	
Rural Digital Opportunity Fund	)	WC Docket No. 19-126
	)	
Connect America Fund	)	WC Docket No. 10-90
	)	

**COMMENTS OF THE NORTH DAKOTA JOINT COMMENTERS**

The North Dakota Joint Commenters (or “Commenters”)<sup>1</sup> hereby respond to the invitation of the Federal Communications Commission (“FCC” or “Commission”) to comment on its August 2, 2019 Notice of Proposed Rulemaking wherein the FCC establishes the Rural Digital Opportunity Fund (“RDOF”).<sup>2</sup> Specifically, these comments focus on whether the Commission should subject RDOF support recipients to the specific performance tiers, latency and weights proposed in the NPRM (“NPRM Performance Table”).<sup>3</sup> While the Commenters support the use of weights in the RDOF reverse auction, the Commission’s proposed point spread of 25 points between the Gigabit tier and the Above Baseline tier (100/20 Mbps) is too low and does not take into account certain factors such as technology longevity, ubiquity of service and service consistency. As explained herein, a point spread of 50 points would sufficiently account for these distinctions and, when this modification is coupled with other

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<sup>1</sup> The North Dakota Joint Commenters include: BEK Communications; Broadband Association of North Dakota; Dakota Carrier Network, LLC; Midstate Communications and Telephone; Reservation Telephone Cooperative; Northwest Communications Cooperative; Dickey Rural Networks; Polar Communications Mutual Aid Corporation; Consolidated Telcom; Dakota Central Telecommunications; Red River Communications; United and Turtle Mountain Communications; West River Telecommunications Cooperative; Griggs County Telephone Company–MLGC, LLC.

<sup>2</sup> See *Notice of Proposed Rulemaking on the Rural Digital Opportunity Fund and Connect America Fund*, WC Docket No. 19-126 and 10-90, FCC 19-77, (rel. Aug. 2, 2019) (“NPRM”).

<sup>3</sup> *Id.* at para. 25.

modifications to the weights proposed in the NPRM, the Commission will be able to stay within the 90-point spread that was used for the Connect America Fund (“CAF”) Phase II auction.

**I. The NPRM’s proposed point spread between the Gigabit tier and the Above Baseline tier (100/20 Mbps) does not consider technology longevity, ubiquity of service and service consistency.**

While some fixed wireless providers purportedly can offer 100/20 Mbps service, as was the case in the CAF Phase II auction, Gigabit speed requires reliable future-proof fiber.

Accordingly, the point spread between the Gigabit tier and the Above Baseline tier should not merely recognize differences in speed but should also take into account technology longevity, ubiquity of service and service consistency. The NPRM’s proposed 25-point spread is too low to take these factors into account.

First, while it should not be viewed as the sole factor, the point spread must account for speed. A fixed wireless system cannot achieve and maintain the 100/20 Mbps speed obligations as more customers are added to an Access Point. There is a finite amount of spectrum available on an Access Point. The performance variations between subscriber units will degrade the performance of the whole Access Point as more customers are added. Conversely, fiber optic systems can achieve and maintain much higher speed obligations even as more customers join. A fiber optic system provides each customer the unlimited capacity of a single strand of fiber.

Next, technology longevity is an important factor to consider when determining the point spread between the Gigabit tier and the Above Baseline tier. A fixed wireless system’s central office plant and network plant are only designed to last for 15 years. Fiber optic systems are designed for significantly greater longevity than wireless systems. The fiber life ranges from 35 to 50 years.

Ubiquity of service is another crucial factor that should be considered in determining the point spread. Due to wireless signal propagation loss and wireless distance sensitivity, the capacity of any fixed wireless Access Point degrades with distance. At 25% of the cell radius, the capacity is reduced by 50%. At 37% of the cell radius, the capacity is reduced by 77%. This is a result of spectral efficiency over distance. However, the capacity of today's fiber optic systems does not degrade or weaken with distance. With fiber optic technology, a customer can have 10 Gigabit of Internet at nearly 40 miles away from the central office.

Finally, service consistency must be taken into account. Distance, terrain and terrestrial vegetation are often huge factors in determining whether service can be provided to customers via a wireless technology. Often, houses are surrounded by trees and other vegetation that provide shelter-belts to protect it from the harsh winter winds. This makes it very difficult to gain Line-of-Sight ("LOS") or Near-Line-of-Site ("NLOS") throughout the cell, creating spotty and unreliable service. On the other hand, today's fiber optic technology can deliver the same capacity at 1 mile as it does at 40 miles of distance, regardless of terrain or terrestrial vegetation.

When all of these factors are considered, the difference in quality and capacity between a fixed wireless system and a fiber optic system is striking, and this should be reflected in the NPRM Performance Table. When it comes to determining RDOF support recipients, a provider's ability to offer fiber should be of higher importance and should be preferable to a fixed wireless offering. Consequently, the North Dakota Joint Commenters believe that the proposed 25-point spread is too low and should be increased.

**II. A point spread of 50 points would sufficiently account for these distinctions and may still be achieved by remaining within the Commission's 90 point spread that was used for the CAF Phase II auction and proposed in the RDOF NPRM.**

To provide for a spread that more accurately reflects technology longevity, ubiquity of service and service consistency, the North Dakota Joint Commenters propose that the Above Baseline tier (100/20 Mbps) be increased from 25 to 50 and that the Baseline tier (25/3 Mbps) be increased from 50 to 65. The Commenters also propose that the weighting for the high latency category be lowered from the weight of 40, as proposed in the NPRM, to 25 which was the weight used in the CAF Phase II auction for high latency. Making these adjustments would allow the point spread between the Gigabit tier and the Above Baseline tier (100/20 Mbps) to more accurately reflect the technology longevity, ubiquity of service and service consistency while at the same time ensure that the entire spread between the best and least tiers (performance and latency combined) is 90 points.<sup>4</sup> Additional support for these proposed changes have been provided to the Commission in an *ex parte* notice and is herein incorporated by reference.<sup>5</sup>

### **III. Conclusion**

The North Dakota Joint Commenters agree with the FCC that weights should be used in the RDOF to reflect the Commission's preference for higher speeds, higher usage allowances, and low latency. However, when technology longevity, ubiquity of service and service consistency are considered, it is clear that fiber optic technology is not only faster but also is more reliable and offers many more benefits than fixed wireless. In short, fiber optic technology is preferable to fixed wireless technology, especially when limited universal service funding is at stake. Accordingly, the FCC's weights should reflect such. Therefore, the North Dakota Joint Commenters strongly urge the Commission to take these other factors into account and increase

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<sup>4</sup> *Report and Order and Order on Reconsideration*, 32 FCC Rcd 1624 (2017) paras. 19-30. For the CAF Phase II auction, a bidder placing a Minimum high latency bid would have a weight of 90 (65+25) and a bidder placing a Gigabit low latency bid would have a weight of 0.

<sup>5</sup> See Letter from Derrick Bulawa, CEO and General Manager, BEK Communications to Marlene H. Dortch, Secretary, FCC, WC Docket Nos. 19-126, 10-90 (filed Sept. 17, 2019).

the point spread between the Gigabit tier and the Above Baseline tier to 50 points. As described above, this can be done while still maintaining the total 90 point spread between the best and least tiers.

Respectfully Submitted,

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