

**BEK Communications
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September 17, 2019

Via ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission
Office of the Secretary
445 12th Street, SW
Washington, DC 20554

**Re: WC Docket Nos. 19-126, 10-90
BEK Communications
Notice of *Ex Parte***

Dear Ms. Dortch:

On September 16, 2019, Derrick Bulawa of BEK Communications (“BEK” or the “Company”) met with Federal Communications Commission (“FCC”) Chairman Ajit Pai and Preston Wise of the Office of Chairman Ajit Pai, in conjunction with Chairman Pai’s roundtable discussion in Bismarck, North Dakota, hosted by Senator John Hoeven.

During the meeting, BEK discussed its proposed modifications to the performance tiers, latency and weights published in the FCC’s July 11, 2019 Notice of Proposed Rulemaking (“NPRM”), wherein the FCC establishes the Rural Digital Opportunity Fund (“RDOF”).¹ These proposed modifications are outlined in the attachment to this *ex parte* notice and would increase the point spread between the Gigabit tier and the Above Baseline tier (100/20 Mbps) in order to account for several performance and life-span factors such as technology longevity, ubiquity of service and service consistency.

BEK appreciates the Commission’s consideration of this proposal and the time afforded for the discussions. As explained further in the attachment, BEK’s proposal would advance Commission goals by increasing the point spread between the Gigabit tier and the Above Baseline tier to account for the true difference in quality and capacity between a fixed wireless system and a fiber optic system so that RDOF support may be distributed efficiently and effectively. Additional details regarding BEK’s proposal will be submitted in comments in the RDOF NPRM proceeding.

¹ See Notice of Proposed Rulemaking on the Rural Digital Opportunity Fund and Connect America Fund, WC Docket No. 19-126 and 10-90, para. 47 (filed July 11, 2019) (“RDOF NPRM”).

Please let me know if you have questions or would like to discuss further.

Respectfully submitted,

/s/ Derrick Bulawa

Derrick Bulawa
CEO and General Manager
BEK Communications

cc: Ajit Pai
Preston Wise

Attachment

Recommendation by BEK Communications for the Adoption of Weights for the Rural Digital Opportunities Fund Which Will Be Submitted in BEK's Comments

In paragraph 25 of the Notice of Proposed Rulemaking on the Rural Digital Opportunity Fund and Connect America Fund released on July 11, 2019 (FCC 19-77) (RDOF NPRM), the FCC seeks comment on using weights to reflect the Commission's preference for higher speeds, higher usage allowances and low latency. In this context, the FCC provides a table with proposed performance tiers, latency and weights.

BEK Communications supports the use of weights in RDOF; however, urges the Commission to use the modified version of the Performance Tier table shown in the attached. As will be further demonstrated in BEK's comments which the cooperative will be filing in the proceeding, the proposed spread of 25 points between the Gigabit tier and the Above Baseline tier (100/20 Mbps) is too low and should be increased for several performance and life-span reasons.

1. Gigabit speed requires reliable future-proof fiber while some fixed wireless providers purportedly can offer 100/20 Mbps service as was the case in the CAF Phase II auction. Accordingly, the point spread should not merely recognize differences in speed but should also take into account technology longevity, ubiquity of service and service consistency.
 - a. Speed - Fixed wireless cannot achieve and maintain the 100/20 Mbps speed obligations as customers are added to an Access Point, due to the finite amount of spectrum available at that Access Point and the performance variations between subscriber units, which degrade the performance of the whole Access Point. With fiber each customer is provided the unlimited capacity of a single strand of fiber.
 - b. Technology longevity – The fiber optic systems are designed for significantly longer longevity than wireless systems. The fiber life ranges from 35 to 50 years, the central office plant and network plant is designed for 15 years.
 - c. Ubiquity of Service – Due to wireless signal propagation loss and wireless distance sensitivity, the capacity of any wireless Access Point degrades with distance. At 25% of the cell radius the capacity is reduced by 50% and at 37% of the cell radius the capacity is reduced by 77%. This is due to spectral efficiency over distance. With today's fiber optic technology a customer can have 10 Gigabit of internet at nearly 40 miles distance from the central office.
 - d. Service Consistency – Distance, terrain and terrestrial vegetation are huge factor in determining if service can be provided via a wireless technology. Often houses are surrounded by trees and other vegetation providing shelter-belts to protect it from the harsh winter winds. This make is very difficult to gain Line-of-Sight (LOS) or Near-Line-of-Site (NLOS) throughout the cell. Today's fiber technology can deliver the same capacity at 1 mile as it does 40 miles of distance, regardless of terrain or terrestrial vegetation.

2. BEK suggests that a spread of 50 points would sufficiently recognize this distinction and, as described below and in the attached, can be achieved by remaining within the Commission's 90 point spread that was used for the CAF Phase II auction and in the RDOF NPRM.

As shown in the first series of tables in the attached, in the CAF Phase II auction, the FCC adopted a weight of 65 for the lowest performance tier (10/1 Mbps) and a weight of 25 for the high latency tier (see, e.g., *CAF Performance Measurements Order*, 33 FCC Rcd 6509). Accordingly, for the Performance tiers in the CAF Phase II auction, the point spread between the lowest tier and the highest tier (Gigabit) was 65 and the entire spread between the best and least tiers (performance and latency combined) was 90 points.

The proposed Performance Latency tiers and weights set forth in the RDOF NPRM are shown in the second series of tables without any modifications. In the third series of tables, BEK's proposed modifications to the RDOF NPRM's Performance Latency tiers and weights are shown. As shown by the modifications made to the weights, BEK proposes that the spread between the Gigabit tier and the Above Baseline tier (100/20 Mbps) be 50 rather than 25 for the reasons stated above and that the Baseline (25/3 Mbps) be adjusted from 50 to 65. BEK also proposes that the weighting for the latency remain the same as the CAF Phase II auction so that the entire spread between the best and least tiers (performance and latency combined) is 90 points, the same that was in the CAF Phase II auction and in the RDOF NPRM.

CAF Phase II Auction Weights

Performance Tier	Speed	Usage Allowance	Weight
Minimum	≥ 10/1 Mbps	≥ 150 GB	65
Baseline	≥ 25/3 Mbps	≥ 150 GB or U.S. median, whichever is higher	45
Above Baseline	≥ 100/20 Mbps	2 TB	15
Gigabit	≥ 1 Gbps/500 Mbps	2 TB	0

Latency	Requirement	Weight
Low Latency	≤ 100 ms	0
High Latency	≤ 750 ms & MOS of ≥ 4	25

Maximum Point Spread in CAF Phase II Auction Weights = 90 points (65 + 25)

RDOF NPRM Weights

Performance Tier	Speed	Monthly Usage Allowance	Weight
Baseline	≥ 25/3 Mbps	≥ 150 GB or U.S. median, whichever is higher	50
Above Baseline	≥ 100/20 Mbps	≥ 2 TB or U.S. median, whichever is higher	25
Gigabit	≥ 1 Gbps/500 Mbps	≥ 2 TB or U.S. median, whichever is higher	0

Latency	Requirement	Weight
Low Latency	≤ 100 ms	0
High Latency	≤ 750 ms & MOS ≥ 4	40

Maximum Point Spread in RDOF NPRM Weights = 90 Points (50 + 40)

BEK's Proposed Modification to the RDOF NPRM Weights

Performance Tier	Speed	Monthly Usage Allowance	Weight
Baseline	≥ 25/3 Mbps	≥ 150 GB or U.S. median, whichever is higher	50 65
Above Baseline	≥ 100/20 Mbps	≥ 2 TB or U.S. median, whichever is higher	25 50
Gigabit	≥ 1 Gbps/500 Mbps	≥ 2 TB or U.S. median, whichever is higher	0

Latency	Requirement	Weight
Low Latency	≤ 100 ms	0
High Latency	≤ 750 ms & MOS ≥ 4	40 25

Maximum Point Spread in BEK's Proposed Modification to RDOF NPRM Weights = 90 Points (65 + 25)

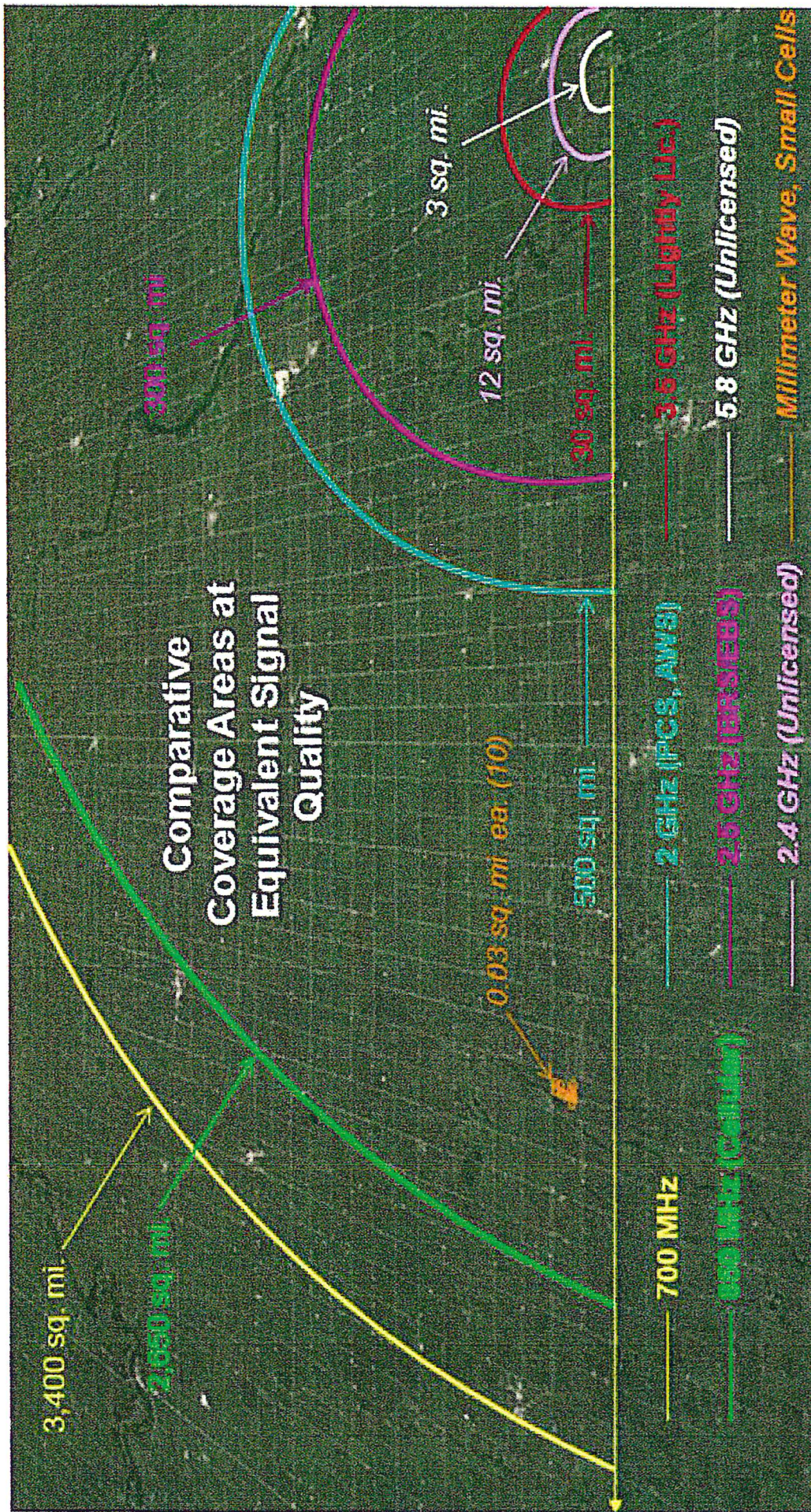


Figure 8 – Spectrum vs. Range Comparison
 (Permitted power per FCC service rules assumed per band) ⁴¹

Distance sensitivity degrades capacity

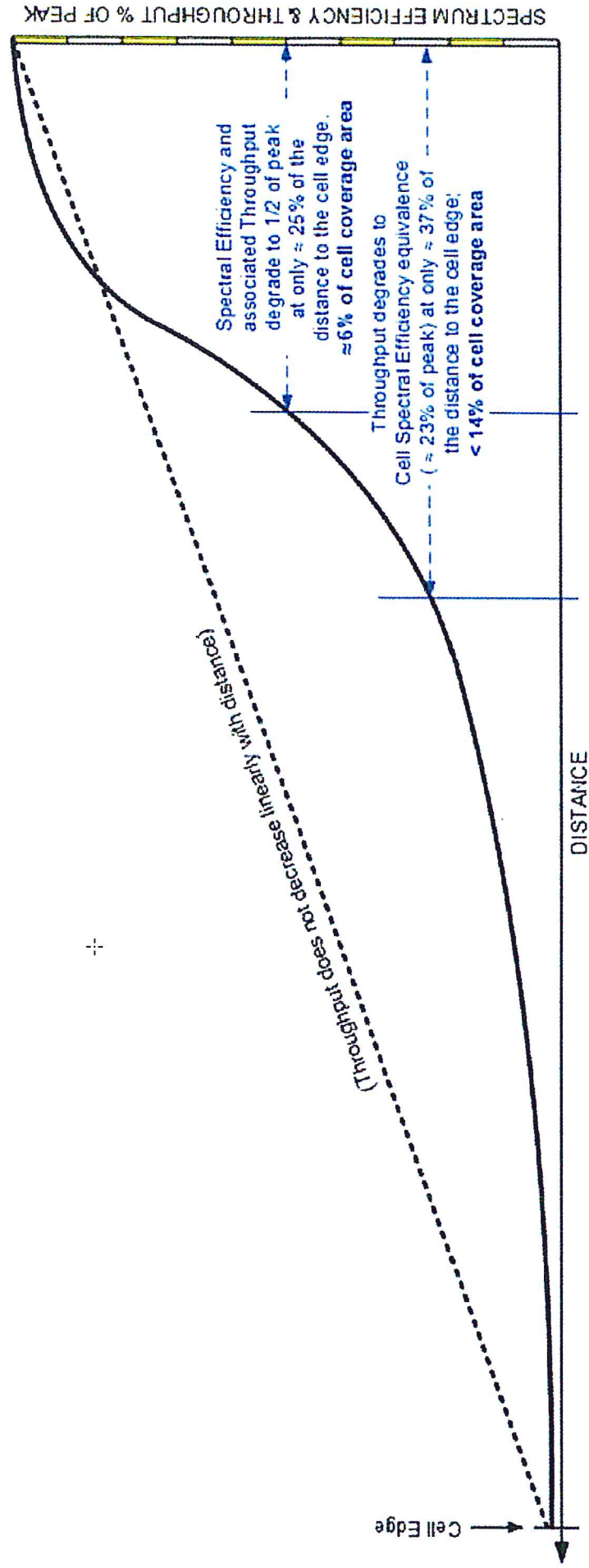


Figure 2 – Typical LTE Throughput vs. Distance

Wireless Access Point Performance Decline
(Radio 3) increase distance from Tower

