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

REPLY COMMENTS
of
UNITED STATES CELLULAR CORPORATION

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SUMMARY

**Performance Tier and Latency Weights.**—The record in response to the Commission’s Notice of Proposed Rulemaking in the Rural Digital Opportunity Fund proceeding provides support for U.S. Cellular’s position that performance tier weights should be set by striking an appropriate and equitable balance between favoring high-speed services, while also promoting competition and ensuring technological neutrality. U.S. Cellular advocates in its Reply Comments that the Commission should reduce the overall 90-point weight spread proposed in the NPRM, and should do so by narrowing the weight spread among the three proposed performance tiers.

**Using More Accurate Data to Determine RDOF Eligibility.**—There is significant support in the record for delaying the RDOF auction so that the Commission can obtain and utilize data generated by the Digital Opportunity Data Collection to identify areas eligible for RDOF support. Commenters agree with U.S. Cellular that this step is necessary to ensure that rural consumers are not prevented from gaining access to broadband services deployed through the use of RDOF funding, because of the Commission’s reliance on faulty FCC Form 477 broadband coverage data.

**Subscribership Milestones.**—Numerous commenters support U.S. Cellular’s view that the Commission should not adopt its proposed subscribership milestones as a public interest obligation that must be met by RDOF auction winners. The record makes clear that, given that subscribership can be affected by numerous factors, it would be unfair to penalize RDOF support recipients for missing subscribership targets set by the Commission.

**Areas Targeted for RDOF Support.**—There is strong support in the record for the Commission’s proposal to target RDOF support to areas lacking access to both fixed voice service and 25/3 Mbps broadband service.
**Federal-State Partnerships.**—Commenters agree with U.S. Cellular’s suggestion that the Commission should adopt incentives for states to develop broadband funds, which would promote more rapid broadband deployment, and also result in the states sharing the burden of closing the Digital Divide.

**Clear and Unambiguous RDOF Rules.**—U.S. Cellular agrees with arguments in the record that the Commission should strive to adopt clear and unambiguous RDOF rules, that will not be amended after the auction in ways that might materially affect auction winners’ post-auction obligations.

**Ensuring a Sufficient RDOF Budget.**—U.S. Cellular outlines a four-step process that the Commission should follow to ensure that it allocates sufficient funding for the RDOF program.
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United States Cellular Corporation (“U.S. Cellular”), by counsel and pursuant to the Commission’s Notice of Proposed Rulemaking, hereby files these Reply Comments in the above-captioned proceedings.¹

I. INTRODUCTION.

Two central issues emerge from the record in response to the Commission’s NPRM. The first issue is that the success of the Rural Digital Opportunity Fund (“RDOF”) auction will principally depend upon the Commission’s making the best choices in determining the performance tier weights that will apply to auction participants’ broadband services. The Commission’s objective is to provide a bidding advantage to carriers offering higher-speed broadband, but to do so in a way that neither dampens competition among bidders in the auction nor contradicts the Commission’s commitment that the auction will be technologically neutral.

The record is replete with comments that implore the Commission to slant the weighting scheme to provide a preponderant advantage to higher-speed services, without regard to the negative impact this would have on the auction’s competitiveness and technological neutrality. Other commenters, which U.S. Cellular supports, take a more measured approach, aimed at finding a better range of tier weights that will provide carriers planning to offer services in lower-speed tiers with a fair chance to be winning bidders in the auction, while still favoring higher speeds.

Since 25/3 Mbps broadband service can be deployed relatively quickly, and at relatively low cost, in comparison to higher-speed services, U.S. Cellular believes that consumers in unserved rural areas would realize substantial and immediate benefits from gaining access to 25/3 Mbps service. For that reason, and based on the record, U.S. Cellular suggests in these Reply Comments that the Commission should reduce the overall 90-point weight spread proposed in the NPRM, and should do so by narrowing the weight spreads among the proposed Baseline, Above Baseline, and Gigabit tiers.

In U.S. Cellular’s view, taking this approach will still advance the Commission’s objective of favoring higher-speed offerings, but will also ensure that this favoritism does not cloud the prospects for the RDOF auction’s success by undermining technological neutrality and making lower-speed services uncompetitive in the auction.

Preserving the competitiveness of the Baseline tier in the RDOF auction is critically important, because auction participants who will provide 25/3 Mbps broadband represent the best—and perhaps only—realistic means by which RDOF support will be used to bring broadband to areas that currently have no access to broadband at all, or have access only to services with broadband speeds below 10/1 Mbps.
The second issue involves whether the RDOF auction will be tainted from the outset because it will be preordained to deprive many rural consumers of any access to broadband services for more than a decade. This result would be produced by the Commission’s proposal to plunge ahead with the auction, using badly flawed FCC Form 477 (“Form 477”) data to identify geographic areas eligible for RDOF support.

It is widely agreed—by stakeholders as well as the Commission—that Form 477 data is flawed, with numerous parties observing that the data overstates existing broadband coverage. Because of this coverage overstatement, the Commission’s proposed use of Form 477 data would cut off RDOF support to areas that currently have no access to broadband service, sentencing these areas to at least 10 years without broadband.

Numerous commenters have joined U.S. Cellular in suggesting that the Commission should alter its proposed course, in order to avoid this entrapment of rural Americans on the wrong side of the Digital Divide. There is strong advocacy in the record in support of the Commission’s delaying the RDOF auction until it can utilize broadband availability data that will be generated by the Digital Opportunity Data Collection.

This data promises to be much more accurate and reliable than Form 477 data. Importantly, commenters explain that the duration of the delay need not be extensive, and that, in any event, such a delay is worth incurring because the delay is necessary to ensure that the Commission is able to make accurate determinations of RDOF eligibility, thus freeing many rural consumers from their deprivation of broadband services.
II. DISCUSSION.


1. Weights Should Be Designed to Promote Competition and Technological Neutrality.

The Commission has proposed a 90-point spread between Baseline and Gigabit performance tiers,\(^2\) and has proposed to increase the weights for the Baseline and Above-Baseline tiers, compared to the weights for those tiers used in the Connect America Fund Phase II (“CAF II”) auction, expressing its intention to “favor[ ] faster services with lower latency ….”\(^3\) The Commission also seeks comment on whether to increase the 90-point spread.\(^4\)

Based on the record in response to the NPRM, U.S. Cellular has concluded that the overall weight spread proposed by the Commission should be reduced, and that this should be accomplished by narrowing the weight spread among the three proposed performance tiers. The Commission’s taking these steps will further inter-tier and intermodal competition in the auction, and will better serve the Commission’s policy of technological neutrality. As a result, the Commission’s overall policy of closing the Digital Divide\(^5\) will be advanced.

a. The Overall Weight Spread Should Be Reduced.

While the Commission proposes an overall 90-point weight spread, and some parties advocate that the overall weight spread should be increased to tip the balance even more in favor of higher-speed services,\(^6\) U.S. Cellular believes that a weight spread of 90 points or greater would

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\(^2\) Under the Commission’s proposal, a bidder placing a Baseline high latency bid would have a weight of 90, while a bidder placing a Gigabit low latency bid would have a weight of 0.

\(^3\) NPRM, 34 FCC Rcd at 6779 (para. 3).

\(^4\) Id. at 6786 (para. 25).

\(^5\) Id. at 6779 (para. 1) (declaring that “closing the digital divide is the Commission’s top priority”).

\(^6\) See, e.g., Illinois Department of Innovation and Technology (“Illinois DoIT”) Comments at 7; INCOMPAS Comments at 12; Utilities Technology Council (“UTC”) Comments at 10.
provide too great an advantage in the auction to service providers intending to offer higher broadband speeds, at the expense of competition and technological neutrality. Instead, the overall weight spread should be reduced. The record provides support for U.S. Cellular's position.

In order to attract bidders at the Baseline tier speed, the Commission must weight the auction so that more than 0.25% of the available support is made available to that tier, as was the case in the CAF II auction's Minimum speed tier. If prospective bidders at the lowest speed tier believe there is little chance to succeed, they will be discouraged from filing applications, reducing competition.

Moreover, the lowest speed tier, likely to be selected by parties using wireless technologies, has the potential to deliver the most geographic and population coverage for the Commission's support dollar. That is, more people living in remote areas with little or no broadband service are more likely to get broadband from this auction when a bidder specifies a 25/3 Mbps broadband service and has a fair opportunity to win support in the auction.

U.S. Cellular recognizes that establishing a weighted point spread between the highest and lowest speed tiers, in order to provide a bidding advantage to higher-speed broadband services (with higher usage allowances and lower latency), is not problematic per se. The issue is whether the size of the weighted point spread proposed by the Commission, or by various commenters, is reasonable and will best serve the Commission’s policy objectives. The weights should be set so

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7 NPRM, 34 FCC Rcd at 6786 (para. 24 n.38) (noting that, “[i]n the CAF Phase II auction, only 0.25% of locations were awarded at the Minimum performance tier”).

8 The Commission has noted, for example, that “[c]onsumers’ demand for faster speeds has grown dramatically ....” NPRM, 34 FCC Rcd at 6782 (para. 14).
that, although they favor speeds higher than the Baseline speeds, they will not threaten technological neutrality or undercut the competitiveness of the Baseline tier.

Commenters favoring an overall point spread exceeding 90 points fail to make a persuasive case that such an approach would preserve technological neutrality and promote intermodal and inter-tier bidding competition. In fact, in U.S. Cellular’s view, the Commission’s proposed 90-point weight spread would make it exceptionally difficult for fixed wireline and fixed wireless carriers providing 25/3 Mbps broadband to participate competitively in the RDOF Phase I auction, and suggestions by some commenters to increase the weight spread would exacerbate this problem.

In order to preserve technological neutrality and promote competition among bidders in the auction, the overall point spread should be reduced below 90 points. As U.S. Cellular discusses in the following section, the best way to do this is to narrow the point gap between the weights for the highest-speed and lowest-speed tiers.

b. The Weight Spread Among Performance Tiers Should Be Narrowed.

The Commission states in the NPRM that its goal is to conduct an RDOF Phase I auction “that favors faster services with lower latency and encourages intermodal competition.” The Commission also indicates that its proposed performance tiers are intended to be “technology-neutral[,]” and states that it seeks “to promote participation and competition in the auction …

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9 U.S. Cellular agrees with Verizon that “[t]he Commission should adopt performance tier weights that balance its preference for higher speeds with the need to promote bidding for all performance tiers and thereby maximize competition in the auction.” Verizon Comments at 7 (footnote omitted). U.S. Cellular disagrees, however, with Verizon’s conclusion that “[t]he weights proposed in the NPRM are a reasonable starting point …” Id.

10 U.S. Cellular notes that WISPA’s proposal for performance tier weights would have the effect of reducing the overall weight spread below 90. See Wireless Internet Service Providers Association (“WISPA”) Comments at 12 & n.33.

11 NPRM, 34 FCC Rcd at 6779 (para. 3).

12 Id. at 6789 (para. 3).
[B]idders will have to compete across areas for the limited budget. This competition serves our universal service goals and the public interest because the support amounts that result are more cost-effective than the model-based reserve prices.”

U.S. Cellular concludes that neither the Commission’s proposed Performance Tier weights, nor weights proposed by some commenters, are the best path toward achieving the Commission’s stated goals. The Commission proposes a spread of 50 points between the Baseline tier and the Gigabit tier, and a spread of 25 points between the Above Baseline tier and the Gigabit tier. Some commenters argue that the spread between the Baseline tier and the Gigabit tier should be as high as 95 points, and that the spread between the Above Baseline tier and the Gigabit tier should be as high as 35 points.

The Commission’s proposal to make the point spread between the Baseline tier and the Gigabit tier 5 points greater than the CAF II point spread (from 45 to 50 points) would create the risk that the Baseline tier would be less competitive, and would move the Commission further away from achieving its goal of technological neutrality. Proposals made by some commenters

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13 Id. at 6797 (para. 55) (footnote omitted).
14 See id. at 6787 (para. 25) (proposing a Baseline tier weight of 50, an Above Baseline tier weight of 25, and a Gigabit tier weight of 0).
15 See, e.g., ACA Connects–America’s Communications Association (“ACA Connects”) Comments at 9; Buckeye Hills Regional Council (“BHRC”) Comments at 9; Fiber Broadband Association (“FBA”) Comments at 12; National Rural Electric Cooperative Association (“NRECA”) Comments at 7; NTCA–The Rural Broadband Association (“NTCA”) Comments at 7.
16 BHRC Comments at 9.
17 NRECA Comments at 7.
would make matters worse. In addition to BHRC’s proposed 95-point spread between the Baseline and Gigabit tiers, ACA Connects proposes a 75-point spread and FBA proposes a 70-point spread. ACA Connects Comments at 9; FBA Comments at 12.

In U.S. Cellular’s view, increasing the weights for the Baseline and Above Baseline tiers, as proposed by the Commission and some commenters, would have negative consequences for the Commission’s overall universal service policies. Joining other commenters, U.S. Cellular proposes that such an outcome should be avoided by narrowing the weight spread among the three proposed performance tiers. Keeping the weight differential among the performance tiers as small as possible will preserve technological neutrality and increase the competitiveness of the auction. In addition, in U.S. Cellular’s view, narrowing the weight spreads among the tiers should be possible without having an adverse effect on the Commission’s efforts to promote higher-speed services in the RDOF auction.

Focusing on the Baseline tier, if broadband providers planning to provide 25/3 Mbps broadband service are unsuccessful bidders because they cannot overcome a weighting structure that disproportionately favors higher-speed services, or if these 25/3 Mbps service providers perceive that they do not have a realistic opportunity to make winning bids in the auction and therefore

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18 In addition to BHRC’s proposed 95-point spread between the Baseline and Gigabit tiers, ACA Connects proposes a 75-point spread and FBA proposes a 70-point spread. ACA Connects Comments at 9; FBA Comments at 12.

19 In addition to NRECA’s proposed 35-point spread between the Above Baseline and Gigabit tiers, ACA Connects also proposes a 35-point spread and BHRC proposes at 30-point spread. ACA Connects Comments at 9; BHRC Comments at 9.

20 WISPA proposes decreasing the weights for both the Baseline and Above Baseline tiers. WISPA Comments at 12. ADTRAN supports decreasing the weight of the Baseline tier, and FBA supports decreasing the Above Baseline tier weight. ADTRAN, Inc. (“ADTRAN”) Comments at 10; FBA Comments at 12. U.S. Cellular notes that it disagrees with FBA’s proposal to increase the weight proposed by the Commission for the Baseline tier. U.S. Cellular also notes that, while ADTRAN proposes to “decreas[e] the weight for the baseline speed from 50 to 45[,]” ADTRAN Comments at 10, its principal focus is on increasing the high latency weight.
decide not to participate, then competition would be reduced and the auction would likely not be technologically neutral.\textsuperscript{21}

Such a result would deprive rural consumers of access to valuable 25/3 Mbps broadband service that “is sufficiently robust to support most applications, including 4k streaming[,]”\textsuperscript{22} and that can be deployed at a relatively low cost.\textsuperscript{23} Moreover, the Commission has concluded that:

\begin{quote}
[F]ixed services with speeds of 25 Mbps/3 Mbps continue to meet the statutory definition of advanced telecommunications capability; that is, such services enable users to originate and receive high-quality voice, data, graphics, and video telecommunications. Record evidence indicates that our 25 Mbps/3 Mbps benchmark reflects current consumer demand for high-speed broadband services…. [T]he most recent Internet Access Service Report finds that 33% of residential fixed connections are below that [25/3 Mbps] speed.\textsuperscript{24}
\end{quote}

Given the Commission’s endorsement of the value provided to consumers by 25/3 Mbps broadband services, it would seem counterproductive for the Commission to adopt weights for RDOF Phase I performance tiers that would adversely impact the competitiveness of the Baseline tier and the technological neutrality of the auction.

U.S. Cellular also emphasizes that making the Baseline tier uncompetitive—which would be highly likely if the Commission were to adopt its proposed weight spread among the performance tiers, and would be a virtual certainty if the Commission were to adopt larger weight spreads

\textsuperscript{21} U.S. Cellular explains in its Comments that wireless Internet service providers, carriers using unlicensed or TV White Spaces, and small fixed wireless carriers would be likely auction participants in the 25/3 Mbps Baseline performance tier. U.S. Cellular Comments at 7.

\textsuperscript{22} ADTRAN Comments at 5 (footnote omitted).

\textsuperscript{23} See Sacred Wind Communications, Inc. (“Sacred Wind”) Comments at 6 (noting that “the cost for a fixed wireless provider to offer Above Baseline service at 100/20 Mbps to all census block group locations, would be considerably higher than the provision of Baseline service 25/3 Mbps to the same area”).

suggested by some commenters—would leave many rural consumers without any access to broad-
band service or with access to broadband only at speeds below 10/1 Mbps.

RDOF Phase I support will be targeted to “census blocks that are wholly unserved with
broadband at speeds of 25/3 Mbps.”25 Gigabit tier and Above Baseline tier bidders in the RDOF
auction are likely to win in census blocks that are already receiving service between 10/1 Mbps
and 25/3 Mbps speeds, since it will be less costly to upgrade in those census blocks to a higher
speed tier than it would be to deploy higher-speed services in census blocks lacking 10/1 Mbps
service, which are likely to be more rural and higher-cost areas.

Put another way, Baseline tier bidders are more likely to win support in census blocks that
currently do not have access to any broadband or have access only to broadband below 10/1 Mbps
because it will be less costly for them to deploy 25/3 Mbps broadband in those areas than it would
be for other carriers to deploy higher-speed broadband that likely requires fiber or higher-cost
options.

Thus, if Baseline tier bidders cannot compete in the RDOF auction, then consumers cur-
rently without access to broadband, or with access only to broadband below 10/1 Mbps, are more
likely to be abandoned on the wrong side of the Digital Divide. If the Commission’s goal is to
close the Digital Divide, then it should strive to close it for all rural Americans, not just those who
currently lack 25/3 Mbps service.

Finally, U.S. Cellular notes that a lower weight for the Baseline performance tier is justified
because it is consistent with congressional intent.26 Specifically, Section 254 of the Communica-
tions Act of 1934 requires that the Commission, in defining services eligible for universal service

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25 NPRM, 34 FCC Rcd at 6793 (para. 45).
26 See WISPA Comments at 12.
support, must consider the extent to which services “have, through the operation of market choices by consumers, been subscribed to by a substantial majority of residential customers …. “27

U.S. Cellular believes that narrowing the weight spread between the Baseline and Gigabit tiers is justified, as a means of making the Baseline tier more competitive in the RDOF Phase I auction, because a substantial majority of consumers are subscribing to 25/3 Mbps fixed broadband services. Specifically, the 2019 Broadband Deployment Report indicates that, in 2017 (the most recent year for which data is available), 60.2% of consumers nationwide subscribed to 25/3 Mbps fixed broadband services, and 64.0% of consumers residing in urban core areas subscribed to 25/3 Mbps fixed broadband.28

U.S. Cellular urges the Commission to strike a better balance between its preference for higher broadband speeds and its commitment to competition and technological neutrality, by narrowing the weighting spread among the three proposed performance tiers, so that broadband providers planning to offer services below the Gigabit speed—regardless of the technology they will use—have a fair opportunity to compete in the RDOF Phase I auction.

2. The Baseline Tier Should Not Be Eliminated, Nor Should Its Speed Be Increased.

Illinois DoIT argues that “RDOF support should only be available for a minimum of 100/20 Mbps broadband[,]”29 and the Institute for Local Self-Reliance advocates that the Commission “should adopt a baseline tier closer to what Canada has adopted at 50 Mbps download and 10

28 2019 Broadband Deployment Report, 34 FCC Rcd at 3885 (para. 48) (Fig. 12–Adoption Rates for Fixed Terrestrial Services). See NPRM, 34 FCC Rcd at 6782 (para. 14) (noting that “[s]peeds of 25/3 Mbps are widely available”).
29 Illinois DoIT Comments at 5.
Mbps uploads.” These proposals to reduce the auction to two tiers, or to further handicap the Baseline tier by doubling its speed requirement, lack any merit.

An auction limited to two tiers would be less competitive and, with the new Baseline speed set at 100/20 Mbps, the auction would not be technologically neutral. Cutting back competitiveness, and leaving the Commission’s commitment to technological neutrality by the wayside, would not promote a successful auction that maximizes benefits to rural Americans. Even if the proposed Baseline tier were retained, with the download speed doubled to 50 Mbps, ILSR concedes that there would be fears that such “a more aggressive baseline tier would increase costs across the board . . .” U.S. Cellular therefore urges the Commission to reject these proposals.

B. Data Used to Identify Areas Eligible for Rural Digital Opportunity Fund Support.

1. Inaccurate and Unreliable FCC Form 477 Data Should Not Be Relied Upon to Identify Eligible Areas.

The Commission proposes “to use the most recent publicly available Form 477 data to identify” areas eligible for RDOF Phase I support. Numerous parties agree with U.S. Cellular that this is not a good idea.

30 Institute for Local Self-Reliance (“ILSR”) Comments at 3 (footnote omitted).
31 Id. at 3. ILSR argues that “the focus should be on what is best for the Americans living in these [rural] areas and the long term costs.” In U.S. Cellular’s view, however, it would not be sound policy for the Commission to gamble on the potentially favorable long-term outcomes envisioned by ILSR, when taking the steps advocated by ILSR would likely produce short-term deficits, i.e., depriving rural consumers of the opportunity to rapidly obtain access to advanced broadband services that could be provided by auction winners prepared to deploy 25/3 Mbps broadband.
32 NPRM, 34 FCC Rcd at 6794 (para. 48).
33 See U.S. Cellular Comments at 10-11.
34 See, e.g., Frontier Communications Corporation (“Frontier”) Comments at 3 (noting that, “[a]s several members of Congress have observed, the allocation of the next major phase of broadband deployment funding is far too important of a decision to make based on outdated or inaccurate data”) (citing statements made by several members of the U.S. Senate and members of the U.S. House of Representatives).
There is a consensus that Form 477 data is inaccurate and unreliable. As the Pennsylvania PUC explains, “the data the Commission currently uses to populate its broadband maps is neither accurate nor reliable…. [T]he information that the Commission has consistently relied upon to determine broadband availability has not been reported at a sufficiently granular level to make it useful for that purpose.”

U.S. Cellular agrees with commenters that the central problem with Form 477 is that it overstates broadband coverage. As California ETF explains:

[B]roadband mapping reported on FCC Form 477 is not as accurate as it should be to reveal the actual unserved or underserved areas in a census block. Broadband providers may report a census block as served if just a single consumer is served in that census block. This historic overreporting has caused many communities to be stuck on the wrong side of the Digital Divide, unable to qualify their allegedly “served” areas for broadband grant funding.

NTCA explains that there are methodological problems with Form 477 data collections that result in data submissions that are inaccurate and unreliable. NTCA states, for example, that “under current Form 477 standards, a provider can advertise fixed wireless or DSL technologies to offer 25/3 Mbps across a wide swath of rural areas—even if it has neither tested nor vetted the actual reach and limits of using those technologies at that speed.”

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35 Pennsylvania Public Utility Commission, Office of Consumer Advocate, and Office of Small Business Advocate (collectively, “Pennsylvania PUC”) Comments at 12. See California Public Utilities Commission (“California PUC”) Comments at 4 (footnote omitted) (indicating that “broadband mapping inaccuracy ‘undercounts’ (of rural locations eligible for funding) may run as high as 38 percent when current FCC data and mapping protocols are used”); USTelecom Comments at 11 (stating that “[t]he Commission plans to conduct the Rural Digital Opportunity Fund using census block location count information that has proven to be outdated; as a result, a provider will not know exactly how many locations truly exist in the area it is proposing to serve”).

36 California Emerging Technology Fund (“California ETF”) Comments at 7.

37 NTCA Comments at 36 (footnote omitted) (indicating that “a lack of clear norms or direction with respect to how data is reported on Form 477 and how availability is to be measured and reported is a significant weakness that can undermine the accuracy of data even if reported on a granular basis”).

38 Id.
Because of this latitude given to reporting carriers, NTCA argues that “it is quite possible for overstatements of coverage to make a census block appear ‘served’ at 25/3 Mbps when it is in fact ‘wholly unserved’ at that level, and should therefore be included in Phase I of the RDOF.”

BHRC provides information in its comments illustrating coverage overstatements that can result from reliance on Form 477 data. Specifically, BHRC analyzed broadband deployment in its study area (comprised of eight counties in southern and eastern Ohio covering 3,665 square miles and 100,000 households, an average of 27 households per square mile).

Although BHRC lacks data needed to analyze availability across its entire study area, it engaged in extrapolations based on data for two census blocks with CAF II deployments reported through the High Cost Universal Broadband (“HUBB”) portal maintained by the Universal Service Administrative Company. Based on these extrapolations, BHRC concludes that “when the Form 477 data suggests an area of the rural expanse has, as an example, 62% broadband availability, our analysis shows that 6.1% to 13.2% broadband availability [is] a much more accurate estimation.”

U.S. Cellular believes there is wide agreement that, “[t]o close the digital divide, the Commission must ensure that its broadband deployment data is reliable and valid.” The flaws in Form 477 data that have been exposed by commenters, as well as concerns expressed by the Commission

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39 Id. at 36-37. See BHRC Comments at 3 (stating that “[t]he de minimis deployments [by incumbent telephone companies] coupled with the Form 477 mapping process have overstated broadband availability by an order of magnitude in the low population density areas”); Frontier Comments at 6 (noting that, “[a]s government and business leaders throughout the country have pointed out, … the Commission’s data on broadband deployment significantly overstates the extent of actual coverage”); Pennsylvania PUC Comments at 13 (explaining that the Form 477 census block reporting methodology “results in a dramatic overreporting of the number of Americans who actually have access to broadband service”).

40 BHRC Comments at 4.

41 Id. See Frontier Comments at 7-8 (footnotes omitted) (indicating that “[t]he Broadband Mapping Consortium’s pilot program … showed that Form 477 data is imprecise and that many customer locations are misidentified in commercial location geocoding databases. The pilot suggests that there could be as many as 445,000 unserved locations in ‘served’ census blocks in two states alone.”).

42 Pennsylvania PUC Comments at 13.
regarding the sufficiency of Form 477 data, suggest that it would be advisable for the Commission to consider alternative means for identifying geographic areas that will be eligible for RDOF funding.

As the Pennsylvania PUC has noted, “better mapping data will identify gaps in broadband coverage across the nation and will resolve outstanding issues of collecting fixed broadband data that better pinpoint where broadband access services are lacking.” Fortunately, as discussed in the following section, numerous commenters have joined with U.S. Cellular in suggesting a path toward this better mapping data.

2. The Commission Should Use More Accurate Mapping Data to Determine Funding Eligibility.

Numerous commenters advocate that the Commission should not proceed with the RDOF Phase I auction until it takes the steps necessary to ensure that the identification of areas eligible for RDOF support is made on the basis of data that is more accurate and reliable than Form 477 data. U.S. Cellular agrees with the California PUC’s formulation of what needs to be done:

CPUC strongly opposes the launch of the RDOF’s competitive bid, funding award, and disbursement processes for any public funds until the FCC improves the broadband availability data collection process and develops better broadband coverage maps. This is critically important for California, a large state with both significant rural areas and a substantial population living in areas unserved by broadband.

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43 The Commission has conceded that “it has become increasingly clear that the fixed and mobile broadband deployment data collected on the Form 477 are not sufficient to understanding where universal service support should be targeted and supporting the imperative of our broadband-deployment policy goals.” Establishing the Digital Opportunity Data Collection, et al., WC Docket No. 19-195, et al., Report and Order and Second Further Notice of Proposed Rulemaking, 34 FCC Rcd 7505, 7507 (para. 5) (footnote omitted) (2019).

44 Pennsylvania PUC Comments at 13.

45 California PUC Comments at 3. See Frontier Comments at 5 (arguing that the Commission should pursue solutions to the Form 477 data problems “rather than putting money out first and getting data later”); National Association of Counties, National Association of Development Organizations, and Rural Community Assistance Partnership Comments at 1-2 (unpaginated) (asking the Commission “to enact substantive changes to the underlying data collection process prior to Phase 1 of the Rural Opportunity Fund to ensure
U.S. Cellular agrees with Frontier that “[i]t would be inexplicable to begin the process of collecting better data for the purpose of improving the allocation of support, and then allocate the bulk of the next decade’s support without the benefit of the new data.” U.S. Cellular also encourages the Commission to consider Windstream’s suggestion that “the Commission should hold a single RDOF auction after correcting current broadband mapping and location counts.… Holding a single RDOF auction after the Commission has improved coverage and location data will produce far better results—more rural broadband for less USF dollars.”

Other commenters also address steps the Commission should take to obtain more accurate and reliable data, freeing the Commission from the need to rely on Form 477 data which the Commission itself acknowledges to be problematic as a basis for determining eligibility for RDOF support. Frontier, for example, notes that “[t]here is no need for the Commission to rely on existing, demonstrably inaccurate data sets for allocating RDOF support because USTelecom’s pilot has demonstrated that it is possible to obtain concrete and extremely accurate mapping data in a timely and cost-effective manner.”

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these dollars are properly leveraged throughout communities in most need’’); Nebraska Public Service Commission Comments at 4 (recommending ‘‘that more granular broadband coverage data be collected prior to selecting areas for the reverse auction…. We think it is important that the Commission start from a more granular, reliable data set prior to declaring census blocks and/or block groups eligible for the Rural Digital Opportunity Fund Phase I auction…. [T]his will ensure that limited universal service resources are targeted to the right areas and not areas that already have service.’’); WISPA Comments at 16 (arguing that ‘‘it is of utmost importance for the Commission to rely on the most accurate, granular, and current information it has before it establishes the areas eligible for RDOF support’’).

46 Frontier Comments at 6.

47 Windstream Services, LLC (“Windstream”) Comments at 7.

48 Frontier Comments at 8. The USTelecom pilot to which Frontier refers is the Broadband Mapping Initiative, a proof of concept pilot ‘‘in which USTelecom and its members were key partners and participants ….” USTelecom–The Broadband Association (“USTelecom”) Comments at 6. The Commission notes in the NPRM that ‘‘USTelecom and the Broadband Mapping Consortium have developed a proposal to create a ‘Broadband Serviceable Location Fabric,’ which is ‘a consistent location fabric where all serviceable locations (e.g., the house, the small business) are located using a single methodology and thus provide a harmonized reference point for broadband reporting.’’” NPRM, 34 FCC Rcd at 6793-94 (para. 45 n.84) (quoting Letter from B. Lynn Follansbee, Vice President–Law & Policy, USTelecom, to Marlene H.
U.S. Cellular agrees with Frontier’s argument, and endorses the steps suggested by USTelecom for securing more accurate data that can be used in determining eligibility for RDOF support:

The best way to meet these goals is to ensure that the Rural Digital Opportunities Fund is designed to leverage the exponentially better information about rural broadband service availability that the Digital Opportunity Data Collection proceeding is on track to produce, with a combination of the Fabric and more granular shapefile reporting. This data will serve to promote the Commission’s goal of “ensuring that high-speed broadband is made available to all Americans” because, for the first time, we will have a pinpoint view into not just which locations have service available, but which do not. At a minimum, making use of the Fabric would produce a more efficient auction result, decreasing the cost-per-deployment and thereby stretching the Commission’s “broadband buck” as far as possible.49

Windstream argues that the time required to enable the Commission to rely on improved data for making RDOF eligibility determinations need not be substantial, and that the prospect of the Commission’s gaining the ability to make accurate eligibility determinations is worth the wait. Windstream explains that “[i]t is reasonable to assume that, with the right priorities, the Commission and USAC could have new deployment information collected by the end of 2020[,]”50 and

Dortch, Secretary, FCC, WC Docket No. 11-10, et al. (filed Mar. 21, 2019)). WISPA observes that, “[i]n an ideal environment, the fabric would be the mapping tool on which the Commission would rely to set the number of ‘locations’ in a census block (or other geographic area) and to determine the physical location of the ‘locations’ within that area.” WISPA Comments at 17. WISPA also points out that, “[w]ith the [Broadband Mapping Initiative] pilot program finding that 23 percent of ‘locations’ are misassigned to the wrong census block, the potential for subsidized overbuilding is a real concern.” Id. (footnote omitted).

49 USTelecom Comments at 9 (footnote omitted). The goals referenced by USTelecom are specified by the Commission in the NPRM:

(1) ensuring that high-speed broadband is made available to all Americans quickly, and at an affordable price; (2) reducing waste and inefficiency in the high-cost program and promoting the use of incentive-based mechanisms to award support; (3) requiring accountability to ensure that public investments are used wisely to deliver intended results; and (4) minimizing the contribution burden.

NPRM, 34 FCC Red at 6782 (para. 13).

50 Windstream Comments at 8-9.
concludes that “[e]ven if there is an additional six months before the final data are ready, Windstream submits that a six-month wait is a small price for delivering broadband to more rural Americans and using contributors’ funds as efficiently as possible.”51

The Commission has proclaimed that “[t]he universal service challenge of our time is to ensure that all Americans are served by networks that support high-speed Internet access—in addition to basic voice service—where they live, work, and travel.”52 The record in this proceeding presents the Commission with a strong case that, in order to meet this challenge through its use of RDOF funding, the Commission should complete the process of obtaining accurate and reliable mapping data before it begins the process of determining eligibility for RDOF support.

C. Subscribership Milestones.

The Commission proposed in the NPRM to condition a portion of RDOF support on a funding awardee’s meeting subscribership milestones.53 U.S. Cellular has opposed the proposal, explaining in its Comments that “[t] is extraordinarily difficult to plan an entire network in anticipation of a universal service support auction[,]”54 and that “[a]dding a penalty for failing to achieve certain subscribership levels greatly complicates matters.”55

The record provides substantial support for U.S. Cellular’s opposition to the subscription milestone proposal. ADTRAN, for example, argues that it would not be fair “to penalize the RDOF

51 Id. at 9.
52 USF Transformation Order, 26 FCC Rcd at 17668 (para. 5) (emphasis added).
53 NPRM, 34 FCC Rcd at 6792-93 (paras. 41-44).
54 U.S. Cellular Comments at 9.
55 Id.
grantees if subscribership falls short of a Commission-designated level. Subscribership will be affected by numerous factors beyond the control of the broadband service provider ….”

Moreover, other commenters agree with U.S. Cellular’s concern that the imposition of the proposed subscribership milestone requirements would discourage participation in the RDOF action. USTelecom, for example, argues that “[n]ot only is this proposal unnecessary, … it is harmful in that it will materially suppress participation in the Rural Digital Opportunity Fund auction if implemented. In fact, it may not just dampen participation, but drive otherwise willing bidders out of the auction altogether.”

56 ADTRAN Comments at 14. See California Internet, L.P. DBA GeoLinks (“GeoLinks”) Comments at 6; CenturyLink Comments at 17-20; INCOMPAS Comments at 14 (explaining that “[t]ypically, fixed providers are making their own investments (not just relying upon government support), are likely to have local ties to the community, and they have an incentive to market their services and win subscribers for their new network”); ITTA–The Voice of America’s Broadband Providers Comments at 25 (noting that “[a]doption of any subscribership milestone—let alone the suggested proposal to set such milestones at 70 percent of the yearly deployment benchmarks—is misguided and a recipe for failure”); Race Telecommunications, Inc. (“Race Telecom”) Comments at 11; Sacred Wind Comments at 8 (emphasis in original) (stating that “[u]nder no circumstances would adopting subscription targets for the RDOF … be in the public interest as they would work against Tribal, rural and remote areas where not merely the absence of broadband availability, but the absence of affordable broadband, historically has been a major contributing factor to lower take rates”); USTelecom Comments at 36 (explaining that the proposal “will punish carriers for agreeing to deploy broadband in high-cost areas where broadband adoption lags far behind less rural parts of the country and changes the focus of a broadband deployment program to adoption”); WISPA Comments at 21 (emphasis in original) (arguing that, “[i]f adopted, this proposal would effectively make RDOF recipients responsible for broadband adoption, a seismic shift in the deployment objectives of the Commission’s high-cost programs. This proposal has serious statutory, policy and practical problems, and should be rejected.”); id. at 21-26 (discussing eight separate arguments against adoption of the Commission’s subscription milestone proposal).

57 USTelecom Comments at 37. See California ETF Comments at 13-14; GeoLinks Comments at 5; INCOMPAS Comments at 14; Race Telecom Comments at 11-12.
Based on these objections in the record, U.S. Cellular reiterates its concerns regarding the Commission’s subscribership milestone proposal and urges the Commission not to adopt the proposal, which would inappropriately make support recipients responsible for broadband adoption, and which would likely suppress participation in the RDOF auction.


U.S. Cellular supports in its Comments the Commission’s proposal to target RDOF support to areas lacking access to both fixed voice service and 25/3 Mbps broadband service. The record provides strong support for this approach, with ADTRAN noting that “25/3 Mbps is the benchmark selected by the Commission as ‘advanced telecommunications capability’ under Section 706 [of the Telecommunications Act of 1996].”

E. Federal-State Partnerships.

U.S. Cellular proposes in its Comments that the Commission should provide incentives for states to develop broadband funds, because doing so will accelerate broadband deployment and engage the states in sharing the burden of closing the Digital Divide. There is support in the record for U.S. Cellular’s proposal.

California ETF, for example, “recommends that the FCC should prioritize the funding of rural deployment in states in which there are matching dollars provided by the state. This practice

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58 See GeoLinks Comments at 6 (internal quotation marks and footnote omitted) (explaining that “Section 254 of the Communications Act of 1934 specifies that high-cost support can only be used for the provision, maintenance, and upgrading of facilities and services for which the support is intended. This language only contemplates deployment of facilities, not adoption efforts.”).

59 U.S. Cellular Comments at 5 (citing NPRM, 34 FCC Rcd at 6792 (para. 45)).

60 See ACA Connects Comments at 18-19; ADTRAN Comments at 5; GeoLinks Comments at 2; Pacific Dataport, Inc., Comments at 14; UTC Comments at 14.


62 U.S. Cellular Comments at 5.
would maximize[ ] public dollars to achieve specific broadband projects.” The California PUC suggests that one way to encourage states to earmark state funding for rural broadband deployment would be for the RDOF rules to “include an option for states to pursue a federal-state partnering approach, similar to the one authorized for the State of New York” in the CAF II auction.

The New York case cited by the California PUC is a prime example of the steps the Commission should consider taking as it seeks ways for RDOF to facilitate a federal-state partnership. In the CAF II auction, the Commission found that:

New York is uniquely situated to quickly and efficiently further our goal of broadband deployment. New York has committed a significant amount of its own support—at least $200 million—to Phase 3 of its broadband program that is designed to be compatible with and achieve the goals of Connect America Phase II. Moreover, New York is poised to quickly implement the next phase of its program in a matter of months so that deployment of broadband of speeds that meet or exceed the Commission’s baseline requirements for Connect America can be achieved while the Commission is in the process of finalizing and implementing the Connect America Phase II auction.

If the Commission is successful in forging similar partnerships for RDOF, additional state funding could be invested to further the goals of both the Commission and state regulatory commissions for making broadband available to rural consumers.

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63 California ETF Comments at 12.

64 California PUC Comments at 5-6. See ACA Connects Comments at 28 (footnotes omitted) (explaining that, “[a]s demonstrated by the CAF Phase II partnership with New York state, the Commission can enable the deployment of faster broadband services at lower costs by leveraging the additional resources offered by state programs. Federal-state broadband partnerships also have the potential to reduce the overall burden on Universal Service Fund contributors and, ultimately, consumer ratepayers.”).

65 See NPRM, 34 FCC Rcd at 6782 (para. 13).

F. Other Issues.


U.S. Cellular agrees with USTelecom’s argument that “[i]t is essential for the Commission to set clear obligations and rules for auction winners in advance of the auction.” In order for service providers to evaluate whether they should plan to participate in the RDOF Phase I auction, they need to be provided with information, as far in advance of the auction as possible, regarding not only the ground rules for the auction, but also regarding the public interest, reporting, and other obligations that will apply to auction winners. In addition, the Commission should act to alleviate any concerns that the RDOF rules may be amended after the auction in ways that could have a material effect on service providers’ post-auction obligations.

U.S. Cellular supports the suggestion that two steps the Commission should take to provide certainty concerning post-auction rules and obligations would be for the Commission to “address any pending petitions for reconsideration or clarification of relevant rules and requirements before the Rural Digital Opportunity Fund auction begins[,]” and for the Commission “not [to] entertain rule modifications after the auction closes.” USTelecom cited, as a problematic example, a petition filed by Viasat, Inc., “seeking rule changes after the auction closed[,] cast[ing] a shadow of uncertainty over the entire CAF II Auction and set[ting] a poor precedent for future auctions.”

67 USTelecom Comments at 16.
68 Id.
69 Id. at 17.
70 Id. In response to a petition for reconsideration filed by Viacom, Inc., the Wireline Competition Bureau, the Wireless Telecommunications Bureau, and the Office of Engineering and Technology jointly adopted an Order on Reconsideration “refin[ing] the requirements for Mean Opinion Score (MOS) testing and allow[ing] for substantially equivalent testing methodologies” in connection with the Commission’s administration of latency requirements applicable to CAF II auction winners. Connect America Fund, WC Docket No. 10-90, Order on Reconsideration, DA 19-911 (WCB, WTB & OET, Sept. 12, 2019), at para. 2.
If there are any ambiguities concerning the terms of post-RDOF auction rules and requirements, or how they will be applied by the Commission, “[t]his uncertainty ultimately [could] threaten[ ] the timely deployment of broadband service to rural Americans.”71 Given that the Commission proposes to make available at least $16 billion for RDOF Phase I over a 10-year period, it must act to ensure that the governing rules are clear and will not be subject to post-auction modification.


While the Commission has proposed to make $20.4 billion available for RDOF, with at least $16 billion being allocated in RDOF Phase I, U.S. Cellular agrees with USTelecom that the Commission may find that the proposed RDOF budget is not sufficient to fund broadband deployment to all unserved rural locations.72 USTelecom notes that, based on its estimates of unserved locations, the proposed level of RDOF “[s]upport per location becomes insufficient as applied to the Baseline, Above Baseline and Gigabit tiers.”73

U.S. Cellular suggests that the Commission should secure accurate projections of the amount of RDOF funding necessary to meet the Commission’s broadband deployment objectives, take several steps to develop an accurate projection of the size of the RDOF budget, and guard against shortfalls in the budget. First, a critical prerequisite for an accurate budget projection is the Commission’s acquisition of reliable and detailed data identifying areas that currently do not have

71 USTelecom Comments at 17.
72 Id. at 34.
73 Id. at 36.
access to broadband services. As U.S. Cellular has discussed above, data generated by the Commission’s Digital Opportunity Data Collection should provide the Commission with accurate and reliable data concerning unserved areas.

Second, relying on this broadband availability data, the Commission should estimate the total amount of funding needed to deploy advanced broadband networks in the areas identified as currently lacking access to broadband.

Third, the Commission should determine what portion of the total estimated amount of needed support should be funded by broadband service providers, and what portion should be funded through RDOF.

Fourth, the Commission should confirm whether its proposed 10-year funding period for RDOF is a reasonable timeframe for carrying out the funded broadband deployments.

Once these steps have been taken, the Commission will be in position to adopt and implement the RDOF program, funded by a budget sufficient to bring broadband to unserved areas in a reasonable timeframe.

U.S. Cellular also emphasizes that the Commission’s universal service policies underscore the importance of ensuring that the RDOF budget, in tandem with other universal service funding allocations made by the Commission, are sufficient to provide both fixed and mobile broadband to rural Americans. When the Commission adopted sweeping universal service reforms eight years ago, it made clear that these reforms were designed “to ensure that robust, affordable voice and broadband service, both fixed and mobile, are available to Americans throughout the nation.”

The Commission concluded in the *USF Transformation Order* that its universal service reforms were needed because:

[T]oo many Americans today do not have access to modern networks that support broadband…. [M]illions of Americans live, work, or travel in areas without access to *advanced mobile services*. There are unserved areas in every state of the nation and its territories, and in many of these areas there is little reason to believe that Congress’s desire to ensure that all people of the United States have access to broadband capability will be met any time soon with current policies.  

The Commission stressed that its universal service reforms were guided by the principle that called for action to “[m]odernize and refocus USF … to make affordable broadband available to all Americans and accelerate the transition from circuit-switched to IP networks, with voice ultimately one of many applications running over fixed and mobile broadband networks. Unserved communities across the nation cannot continue to be left behind.”

**III. CONCLUSION.**

Two factors are critical for making the Rural Digital Opportunity Fund a success: performance tier weights that are effectively calibrated to promote the Commission’s goals; and accurate data to identify areas eligible for RDOF support.

The record provides useful guidance to the Commission on both these issues. Based on the record, U.S. Cellular respectfully urges the Commission to reduce the overall weight spread for auction bidders, and to accomplish this reduction by narrowing the spread among the proposed performance tiers. These steps will achieve an equitable balance between favoring high-speed services while also enhancing competition and ensuring technological neutrality in the auction.

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75 *Id.* at 17668 (para. 4) (quotation marks and footnote omitted) (emphasis added).

76 *Id.* at 17670 (para. 11) (emphasis added).
U.S. Cellular also urges the Commission to delay conducting the RDOF auction so that the Commission has sufficient time to obtain Digital Opportunity Data Collection data for use in identifying eligible areas. This delay is necessary to avoid rural consumers being left without any access to broadband services for at least a decade as a result of the Commission’s reliance on faulty FCC Form 477 data that overstates current broadband availability.

Respectfully submitted,

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