

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

<b>CONNECT AMERICA FUND</b>	)	
	)	
<b>REQUEST FOR WAIVER OF</b>	)	
<b>REQUIREMENT FOR PRO RATA</b>	)	<b>Docket No. 10-90</b>
<b>REDUCTION IN CAF II PHASE II</b>	)	
<b>SUPPORT BASED ON LOCATION</b>	)	
<b>DISCREPANCIES</b>	)	

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

To the Commission:

**I. INTRODUCTION**

NTCA-The Rural Broadband Association<sup>1</sup> (NTCA) hereby submits comments in the above-captioned proceeding.<sup>2</sup> In a Petition for Waiver (Petition), a group of 14 carriers authorized to receive support through Connect America Fund (CAF) Phase II request waiver of rules that apply a *pro rata* reduction of high-cost support where the actual number of deployed locations at the state level is less than the Connect America Model (CAM) location count.<sup>3</sup> Instead, the Petitioners request the Commission to apply to CAF Phase II recipients the same

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<sup>1</sup> NTCA represents approximately 850 independent, community-based telecommunications companies and cooperatives and more than 400 other firms that support or are themselves engaged in the provision of communications services in the most rural portions of America. All NTCA service provider members are full service rural local exchange carriers and broadband providers, and many provide fixed and mobile wireless, video, satellite and other competitive services in rural America as well.

<sup>2</sup> See, Public Notice, “Wireline Competition Bureau Seeks Comment on a Petition for Waiver of Connect America Fund Phase II Auction Location Adjustment Rules,” Docket No. 10-90, DA 20-629 (Jun. 15, 2020).

<sup>3</sup> *Connect America Fund: Request for Waiver of Requirement for Pro Rate Reduction in CAF Phase II Support Based on Location Discrepancies*, Docket No. 10-90 (Jun. 10, 2020) (Petition).

standard adopted for participants in the Rural Digital Opportunity Fund (RDOF). In RDOF, location discrepancies will only trigger reductions if the difference between model locations and “actual” locations is 35 percent or higher (“65/35” rule).<sup>4</sup> For the reasons stated herein, NTCA supports the Petition.

## **II. DISCUSSION**

### **A. OVERALL NETWORK COSTS ARE NOT REFLECTED ACCURATELY SOLELY ON A PER-LOCATION BASIS.**

NTCA shares the Commission’s interest in ensuring that high-cost universal service recipients remain accountable to demonstrate that support is applied to the purposes intended. By way of example, notwithstanding certain of the technological and other considerations that arose within the context of performance measurement testing obligations, NTCA consistently supported the intent and goal of that proceeding and accordingly worked with both the Commission and industry to develop solutions that would serve regulatory goals while meeting market realities.<sup>5</sup> Similarly, NTCA does not dispute the propriety of corrective measures where deployment milestones are not met, but rather submits that *pro rata* reductions triggered by a single missed location portend disproportionate penalties and impacts to universal service. Alternatively, NTCA supports the “65/35” margins established in the RDOF proceeding and supports the Petition to apply that standard to the CAF Phase II auction.

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<sup>4</sup> *Rural Digital Opportunity Fund, Connect America Fund: Report and Order*, Docket Nos. 19-126, 10-90, FCC 20-5, at para. 51 (2020).

<sup>5</sup> *Connect America Fund: Performance Measures for Connect America High-Cost Universal Service Support Recipients: Comments of NTCA-The Rural Broadband Association*, Docket No. 10-90, DA 17-1085, at 3 (Dec. 6, 2017) (“NTCA supports the Commission’s effort to ensure that high-cost support results in deployment and operation of networks from which customers can obtain services that are reasonably comparable in both price and quality to those enjoyed by users in urban areas.”)

A strict “unit-for-unit” *pro rata* reduction would result in disproportionately large losses to essential broadband service providers. While it may seem administratively efficient to conjecture that the forfeitable value of any particular location is the quotient of total network value divided by number of locations ( $\{\textit{total network support}\} / \{\textit{number of locations}\} = \textit{penalty}$ ), the realities of network design and construction point to a wholly different outcome. Overall network costs include those that bear little relation to the number of served locations. In the first instance, models aim to predict the costs of deploying a network throughout a supported area, rather than a cost-per-location. This approach represents the breadth of activity that attends network deployment, specifically, those efforts that must be undertaken without a strictly proportional relationship to the number of locations served. These include, but are not limited to, engineering studies; rights-of-way; permitting fees; and labor costs. By way of example, a provider that deploys along a 50 mile stretch of road will incur largely the same overall costs for 25 customers as it will for 50. The prevailing construction costs remain unchanged even if each additional location requires a new drop and optical network terminal (ONT). So, while *per location* costs may drop if additional locations are added, the numerator – the overall cost of the network – remains largely unchanged. A paper by CostQuest Associates – the developers of the A-CAM – illustrates this point.<sup>6</sup>

In July 2018, CostQuest examined the fundamental economics of rural infrastructure deployment across various industries in discussing what kinds of subsidies may be needed to

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<sup>6</sup> See, *i.e.*, Steve G. Parsons, Parsons Applied Economics, and James Stegeman, CostQuest Associates, *Rural Broadband Economics: A Review of Rural Subsidies*, at 12 (2018) (available at: <https://www.costquest.com/uploads/pdf/ruralbroadbandeconomics-areviewofruralsubsidiesfinalv07112018r2.pdf>) (describing a scenario in which while increases in linear density reduce per-user costs, overall network costs remain relatively constant) (CostQuest report).

facilitate and sustain such infrastructure.<sup>7</sup> This study concluded that a significant portion of the cost of deploying broadband arises out of “distance-caused costs (costs that are fixed or insensitive to the number of housing units).”<sup>8</sup> Two diagrams demonstrate how location counts have, at most, a marginal effect on overall deployment costs. Specifically, in Figure 3 of the paper (attached hereto as Exhibit A), CostQuest depicts a hypothetical area with six locations. The overall cost of a fiber deployment project in that area is estimated at \$104,490, or \$17,415 per location and \$34,830 per mile. In Figure 4 (attached hereto as Exhibit B), CostQuest quadruples the density for that same area, assigning 24 locations to it rather than merely six. And, yet, the overall cost of the fiber deployment project of course does not quadruple simply because the locations multiply. Rather, the overall cost increases only approximately six percent (6%) to \$110,340, a difference of just \$5,850 over the original cost. In fact, the only material change comes in the per-location cost of the overall deployment, which drops from \$17,415 to \$4,597 when the number of locations and density quadruple. The only difference in costs between the two figures arises out of the “last mile” deployments – drops and ONTs - to the 18 additional locations in Figure 4.<sup>9</sup> This outcome is illuminated even more intensely “in reverse,” recognizing that removal of the 24 “new” locations (leaving only the six “original” locations to be served) would not ratchet the overall network costs downward by 75%. In sum, *pro rata* reductions make little to no sense when evaluating costs on a total network basis.

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<sup>7</sup> Steve G. Parsons, Parsons Applied Economics, and James Stegeman, CostQuest Associates, *Rural Broadband Economics: A Review of Rural Subsidies* (July 11, 2018) (available at: <https://www.costquest.com/uploads/pdf/ruralbroadbandeconomics-areviewofruralsubsidiesfinalv07112018r2.pdf>).

<sup>8</sup> *Id.* at Figure 2, p. 11.

<sup>9</sup> *Id.* at Figures 3 and 4. But for the costs of 18 additional ONTs and 1,500 additional feet of drop fiber, there is *no difference at all* in the costs incurred to deploy a network throughout the area in question.

In fact, even when the predecessor to A-CAM was first being designed, it was made quite clear from the start that the locations being identified were not actual locations; rather, what was being done was an estimation aimed at scattering as best as possible – but still with room for relatively significant error – the total number of locations that were presumed to exist across census blocks based upon incomplete records.<sup>10</sup> CostQuest has further explained that in developing the “Cost to Serve Module” of its model, costs were identified and estimated to serve entire geographies along road segments and develop “average costs” across “geographic bands” – and to deliver “results by census block” rather than to develop a literal location-by-location estimate of broadband networks in rural areas.<sup>11</sup> Thus, both the model design itself and “real world” network economics confirm that the costs of deploying networks are incurred geographically throughout an area, rather than individual locations. Reducing support on a *pro rata* per location basis accordingly threatens the entire network, rather than only compensate for the single location that was not accounted. Therefore, *pro rata* reductions when a significant number of locations have been built should be avoided.

**B. DISCREPANCIES BETWEEN MODEL AND ACTUAL LOCATIONS INCREASE THE RISK OF PRO RATA DEDUCTIONS.**

The risk of *pro rata* reductions is increased by the likelihood of discrepancies that could under-report the number of locations served. As described herein, the Commission recognized the potential, if not likelihood, for discrepancies between model and actual locations and

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<sup>10</sup> See *Ex Parte* Letter from James W. Stegeman, President, CostQuest Associates, Inc., to Marlene H. Dortch, Secretary, Commission, WC Docket No. 10-90, *et al.* (dated April 17, 2012), at Attachment A, Slide 7 (noting “on average,” a success rate of 80-95% for allocation of geocoded locations “to the street segment,” along with the need to “fall back to an accepted process of surrogation to the roads within a census block” for those records that do not have some geocoding attached”).

<sup>11</sup> See CAF2 Model Overview, CostQuest Associates, at pp. 61 and 91 (available at: [https://transition.fcc.gov/wcb/tapd/universal\\_service/caf/CAF2-Part1.pdf](https://transition.fcc.gov/wcb/tapd/universal_service/caf/CAF2-Part1.pdf)).

implemented a dedicated process to address differences between modeled and actual locations. The Eligible Locations Adjustment Process (ELAP)<sup>12</sup> will provide an opportunity for CAF Phase II recipients to report discrepancies to the Commission. And, yet, while a comprehensive process for reporting discrepancies is on the horizon, it does not resolve the hazard of even a correctly accounted for *pro rata* deduction.

Fortunately, the Commission reflected these concerns in rules that were established for RDOF participants. Rather than impose *pro rata* reductions on a strict unit-per-unit basis, the RDOF Order devised guidelines that look more holistically to the *percentage* of locations deployed, establishing margins that recognize the inherent lack of precision in location models. This approach, which imposes reductions only when a defined margin of locations have not been deployed, recognizes the difference between *network* costs and *per location* costs. This measured approach should avoid unnecessary and unwarranted risk and disruption. Without addressing the effectiveness of any model in particular, the ELAP Order recognizes that as a *general proposition* model recipients will encounter discrepancies with sufficient frequency as to warrant a standard process for resolution. As the Commission explains in the ELAP Order, parties have sought clarification on whether and how funding recipients can “bring to the Commission’s attention any discrepancies between the number of funded locations and the number of actual locations.”<sup>13</sup> The ELAP Order evidences the Commission’s recognition that models can miscount locations. In the Commission’s own words, “. . . [t]he purpose and scope of ELAP [is] a process designed to address the inherent limitations in the model’s underlying data inputs by

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<sup>12</sup> *Connect America Fund: Order*, Docket No. 10-90, DA 11-1165 (2019) (ELAP Order).

<sup>13</sup> ELAP Order at para. 3.

reducing funded location estimates.”<sup>14</sup> Where anticipated incorrect data can wreak disastrous impacts, sufficient margins to steer clear of hazards must be implemented. The 65/35 standard established for RDOF participants should be extended to CAF Phase II.

**C. THE RDOF ORDER STRIKES A REASONABLE BALANCE BETWEEN LOCATION AND TOTAL-NETWORK BASED COSTS.**

The RDOF Order strikes a reasonable balance that ensures rigorous enforcement of the rules while recognizing that a unit-per-unit *pro rata* reduction is untenable. In the RDOF Order, the Commission observes, “the costs of building and operating broadband networks are predominantly governed by the size and characteristics of the *areas served rather than the precise number of locations.*”<sup>15</sup> The Commission accordingly determined that *pro rata* reductions would not accrue until “the new location count is less than 65% of the CAM locations” within each state.<sup>16</sup> This approach reflects appropriately the network-costs focus of the model and echoes the concerns articulated by NTCA in the ELAP proceeding, wherein NTCA demonstrated the difference between overall network and per location costs.<sup>17</sup> Accordingly, given the recognized risk of discrepancies associated with model locations, and given the disproportionate impact that “unit-for-unit” *pro rata* reductions could impose, NTCA supports the Petitioners’ request to amend CAF Phase II processes to match the 65/35 standard adopted for RDOF.

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<sup>14</sup> ELAP Order at para. 21, *citing* Phase II Auction Reconsideration Order at paras. 23, 25, 26.

<sup>15</sup> RDOF Order at para. 45 (emphasis added).

<sup>16</sup> RDOF Order at para. 51.

<sup>17</sup> *See, generally, Connect America Fund: Comments of NTCA-The Rural Broadband Association*, Docket No. 10-90 (Jul. 19, 2019).

In this instance, the RDOF Order offers an opportunity for the Commission to introduce an iterative improvement to a wider range of applications. The margin prescribed in RDOF is sufficient to protect against disproportionate adverse impacts upon a provider. Moreover, it reflects reasoned rulemaking. The Commission observed that most commenters opposed *pro rata* reductions, and “agree[d] . . . [it] will not reduce support if the Bureau’s updated location counts indicate fewer actual locations in the awarded areas in most circumstances.”<sup>18</sup> Given the Commission’s revised understanding of the relationship between *pro rata* reductions and overall network costs, it would be difficult to justify why these rational outcomes should apply only to RDOF recipients but not to CAF Phase II providers, as well.<sup>19</sup> Inasmuch as RDOF rules aim for accountability as do CAF Phase II regulations, the instant petition presents the Commission with the opportunity to seize the benefit of the refreshed approach that as effectively meets Commission goals while avoiding undue adverse impacts. This outcome is as critical as it ever was.

The past several months have informed National understanding of the importance of broadband networks. Previously, undertakings such as telemedicine, distance education and remote work had been perceived and proven empirically to produce positive results.<sup>20</sup> Now,

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<sup>18</sup> RDOF Order at para. 46.

<sup>19</sup> NTCA suggested a similar approach with regard to Letter of Credit requirements. In support of a *Request for Waiver*, NTCA supported the replacement of CAF Phase II Letter of Requirements with more reasonable standards adopted for RDOF. *See, generally, Petition for Rulemaking and Petition for Waiver of the Connect America Fund Phase II Coalition: Comments of NTCA-The Rural Broadband Association*, Docket No. 10-90, RM-11853 (Apr. 13, 2020).

<sup>20</sup> *See, i.e., “Anticipating Economic Returns of Rural Telehealth,”* Rick Schadelbauer, Smart Rural Community (2017) ([https://www.ntca.org/sites/default/files/documents/2017-12/SRC\\_whitepaper\\_anticipatingeconomicreturns.pdf](https://www.ntca.org/sites/default/files/documents/2017-12/SRC_whitepaper_anticipatingeconomicreturns.pdf)); “*Rural Broadband and the Next Generation of American Jobs*,” Joshua Seidemann, Smart Rural Community (2019) (<https://www.ntca.org/sites/default/files/documents/2019-04/SRC%20Middle%20Skills%20Web%20Version.pdf>).



however, perceptions and data are reinforced by experience – the collective experience of patients, students and workers throughout the Nation. A PEW Research study found that 40% of Americans can telework – and that since COVID-19 shuttering began, 40% of Americans have worked remotely.<sup>21</sup> Moreover, employment declines in February and March for telework capable jobs occurred at less than 1/5<sup>th</sup> rate for non-telework capable jobs.<sup>22</sup> In April 2020, a survey found more than 50% of physicians had engaged telehealth, an increase from just 18% in 2018.<sup>23</sup> And, stunningly, in 2000, 45,000 K-12 students nationally were enrolled in online courses.<sup>24</sup> By 2010, that population had increased to about 1.5 million.<sup>25</sup> And by the end of the 2019/2020 school year, more than 55 million public and private school students had been affected by school closures.<sup>26</sup> Finally, broadband has also been demonstrated to play a key role in mitigating the challenges of senior isolation, affirming concepts proposed by the rural broadband industry a

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<sup>21</sup> “Telework May Save U.S. Jobs in COVID-19 Downturn, Especially Among College Graduates,” Rakesh Kochhar, Jeffrey S. Passel, Pew Research Center (May 6, 2020) (<https://www.pewresearch.org/fact-tank/2020/05/06/telework-may-save-u-s-jobs-in-covid-19-downturn-especially-among-college-graduates/>) (last visited May 19, 2020)

<sup>22</sup> Rakesh Kochhar, Jeffrey S. Passel, “Telework May Save U.S. Jobs in COVID-19 Downturn, Especially Among College Graduates,” Pew Research Center (<https://www.pewresearch.org/fact-tank/2020/05/06/telework-may-save-u-s-jobs-in-covid-19-downturn-especially-among-college-graduates/>) (last visited Jun. 19, 2020).

<sup>23</sup> Heather Landi, “Half of Physicians Now Using Telehealth as COVID-19 Changes Practice Operations,” Fierce Healthcare (Apr. 23, 2020) (<https://www.fiercehealthcare.com/practices/half-physicians-now-using-telehealth-as-covid-changes-practice-operations>) (Jun. 19, 2020).

<sup>24</sup> Michael B. Horn, Heather Staker, “The Rise of K-12 Blended Learning,” Innosight Institute, at 1 (2011) (<https://www.christenseninstitute.org/wp-content/uploads/2013/04/The-rise-of-K-12-blended-learning.pdf>) (last visited Jun. 19, 2020).

<sup>25</sup> Matthew Wicks, “A National Primer on K-12 Online Learning, Version 2, International Association for K-12 Online Learning, at 14 (Vienna, VA) (2010) ([https://aurora-institute.org/wp-content/uploads/iNCL\\_NationalPrimerv22010-web1.pdf](https://aurora-institute.org/wp-content/uploads/iNCL_NationalPrimerv22010-web1.pdf)) (last visited Jun. 19, 2020).

<sup>26</sup> “Map: Coronavirus and School Closures,” Education Week, May 15, 2020 (<https://www.edweek.org/ew/section/multimedia/map-coronavirus-and-school-closures.html>) (last visited Jun. 19, 2020).

half-decade ago.<sup>27</sup> National policies aimed toward increasing broadband deployment and connectivity dare not retreat from the successes they have achieved and the profound results they have enabled. For these reasons, and to promote greater consistency among comparable programs where it is logical to do so, NTCA urges the Commission to set aside the form of support reductions as set forth for CAF Phase II and instead implement for those providers the more reasonable measures adopted for RDOF recipients.

### III. CONCLUSION

WHEREFORE the reasons stated herein and above NTCA supports the Petition and urges the Commission to grant the relief requested therein.

Respectfully submitted,

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<sup>27</sup> See, “Aging in Place and the Role of Broadband,” Rachel Brown, Foundation for Rural Service (2016), and “What People are Doing to Help Homebound Seniors,” Julie Jargon, Wall Street Journal (Mar. 31, 2020).

## EXHIBIT A



Figure 3: Ultra Low Linear Density Illustrative Example

Source: Steve G. Parsons, Parsons Applied Economics, and James Stegeman, CostQuest Associates, *Rural Broadband Economics: A Review of Rural Subsidies* (2018).

## EXHIBIT B



Figure 4: Low Linear Density Illustrative Example (4xUltraLow)

*Source:* Steve G. Parsons, Parsons Applied Economics, and James Stegeman, CostQuest Associates, *Rural Broadband Economics: A Review of Rural Subsidies* (2018).