

**BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, DC 20554**

In the Matter of)
)
Wireline Competition Bureau Seeks) WC Docket No. 10-90
Comment on Areas Shown as Unserved on)
The National Broadband Map for Connect)
America Phase I Incremental Support)

**COMMENTS OF THE
UNITED STATES TELECOM ASSOCIATION**

Pursuant to the Wireline Competition Bureau’s (Bureau) Public Notice (*Notice*) seeking comment on areas shown as unserved on the National Broadband Map (NBM) for Connect America Phase I (CAF I) incremental support,¹ and the Bureau’s subsequent Public Notice updating the list of potentially unserved census blocks in price cap areas and extending the deadline for comment on the list,² the United States Telecom Association (USTelecom)³ respectfully submits these comments concerning the development of a list of areas that should be eligible for CAF I support.

¹ See Public Notice, “Wireline Competition Bureau Seeks Comment on Areas Shown as Unserved on the National Broadband Map for Connect America Phase I Incremental Support,” WC Docket No. 10-90, Public Notice DA 12-1961 (Wireline Comp. Bur. Dec. 5, 2012).

² See Public Notice, “Wireline Competition Bureau Updates the List of Potentially unserved Census Blocks in Price Cap Areas and Extends the Deadline for Comment on the List,” WC Docket No. 10-90, Public Notice DA 12-2001 (Wireline Comp. Bur. Dec. 10, 2012).

³ USTelecom is the premier trade association representing service providers and suppliers for the telecommunications industry. USTelecom members provide a full array of services, including broadband, voice, data and video over wireline and wireless networks.

While the list of census blocks provided by the WCB may accurately represent the areas identified by the NBM as unserved by fixed terrestrial broadband with advertised speeds of 3 Mbps downstream and 768 Mbps upstream (3/768), it does not accurately represent areas that should be eligible for CAF I funding. Accurate identification of census blocks in which broadband service at speeds of at least 4 Mbps downstream and 1 Mbps upstream (4/1) is provided by neither the incumbent local exchange carrier (ILEC) nor an unsubsidized broadband provider is key to efficiently and effectively using CAF I monies. Excluding census blocks from CAF I eligibility based on the presence of an ILEC and/or an unsubsidized competitor that is not capable of delivering 4/1 or better service would undermine the express goals of CAF Phase I—“to spur immediate” deployment of “robust scalable broadband” meeting the 4/1 standard⁴--and harm rural America.

To that end, the information gathering effort posited in the *Notice* is flawed in three fundamental ways. First, by using 3/768 as a proxy for the 4/1 standards in the *Order*, it potentially excludes from funding eligibility many areas that are served by the ILEC with less than 4/1 broadband. Based on core NTIA data as of end of year 2011 compared with the Commission’s list of unserved census blocks, we estimate that in excess of one million housing units classified as served by broadband at 3Mbps downstream and 768 Kbps upstream are not served by 4 Mbps downstream and 1 Mbps upstream.⁵ Second, the published list may reflect

⁴ See *Connect America Fund*, WC Docket No. 10-90, A National Broadband Plan for Our Future, GN Docket No. 09-51, Establishing Just and Reasonable Rates for Local Exchange Carriers, WC Docket No. 07-135, High-Cost Universal Service Support, WC Docket No. 05-337, Developing an Unified Intercarrier Compensation Regime, CC Docket No. 01-92, Federal-State Joint Board on Universal Service, CC Docket No. 96-45, Lifeline and Link-Up, WC Docket No. 03-109, Universal Service – Mobility Fund, WT Docket No. 10-208, 26 FCC Rcd. 17663 (2011), (*USF/ICC Transformation Order*), at para. 21.

⁵ The estimate is based on census blocks where the ILEC is the sole provider of 3/768 service using ADSL.

overstatement in the NBM of the coverage provided by unsubsidized broadband providers, both cable companies and wireless Internet service providers (WISPs). Third, the eligibility list is being compiled in the absence of any specificity on what it means to be “served,” beyond the simplistic speed definition. These issues are yet to be determined pending the Commission’s decisions with respect to the Further Notice.⁶

Finally, for purposes of determining eligible areas for CAF I, it is important to remember that support is based on locations, not census blocks.⁷ Even a *de minimis* number of locations served by broadband leads to a census block being classified as served,⁸ so even if a census block is shown as being served by 4/1 broadband, it is entirely possible that a number of locations within the census block are not provided such service, and would thus be eligible for CAF I support.

I. The 3/768 Tier is Not a Proper Proxy for Determining Census Blocks Unserved by ILEC DSL Providers at 4/1 – the 6/1.5 Tier Should be Used in the Absence of 4/1 Data

The USF/ICC Transformation Order adopts an initial minimum broadband speed benchmark for CAF recipients of 4 Mbps downstream and 1 Mbps upstream,⁹ and the

⁶ See *Connect America Fund et al.*, WC Docket No. 10-90 et al., Further Notice of Proposed Rulemaking, (rel. Nov. 19, 2012).

⁷ See *Order*, para. 127 “As a first step to delivering robust, scalable broadband to these unserved areas, the first phase of the CAF will provide the opportunity for price cap carriers to begin extending broadband service to hundreds of thousands of unserved *locations* in their territories.” [emphasis added]

⁸ National Broadband Map website, *About, Technical Overview, Assembling the Data*, (available at: <http://www.broadbandmap.gov/about/technical-overview/assembling-the-data>) (stating that “if a provider offers availability to any location within a census block less than two square miles, we estimate household or population coverage will include the entire block, even though it is possible that some areas are not covered.”) (visited January 4, 2013).

⁹ See *USF/ICC Transformation Order* at para. 94.

Commission should be certain that CAF I funding is available for all locations unserved by providers advertising those speeds or faster. Evidence of service at 3Mbps downstream and 768Kbps upstream advertised speeds, which the Bureau has used to exclude census blocks from its eligibility list in the Notice, is not indicative of the presence of service at the CAF benchmark of 4/1. This is particularly true for rural areas served by DSL which in most cases has been engineered to provide an upstream speed of 768 Kbps. In such cases, significant and costly network upgrades would be necessary to provide broadband service meeting the 4/1 CAF benchmark. Therefore, rather than relying on NBM evidence of 3/768 service to exclude areas from CAF I eligibility, the Commission should use the next NBM speed tier—6 Mbps downstream and 1.5 Mbps upstream—as a proxy for 4/1 service.

While there may be some rural DSL deployments that fall into the 3/768 reporting tier but actually have 4/1 or better service, this is not common. Rural broadband deployments typically lack pair bonding,¹⁰ fiber-fed DSLAMs, use of Annex M operation,¹¹ or short loops,¹²

¹⁰ Pair bonding is only feasible if the extra copper loops are available to the customer premises, which may or may not be the case for a specific deployment. Even when the extra loops are available, two-pair bonding doubles the number of ports required in the DSLAM to serve a customer, and it requires equipment that supports bonding both in the DSLAM and in the customer premises modem. These factors virtually double the DSLAM cost and significantly raise the cost for a bonded CPE modem compared to a single loop solution. *See* Comments of ADTRAN Inc., at page 29, (filed April 18, 2012), *Connect America Fund et al.*, WC Docket No. 10-90 *et al.*, Further Notice of Proposed Rulemaking, (rel. Nov. 19, 2012).

¹¹ ITU-T Recommendation G. 992.5 Annex M specifies ADSL2+ operation with extended bandwidth in the uplink direction. Use of this Annex, with sufficient upstream bandwidth, would support 1 Mbps in the uplink up to 12 kilofeet — however; it would do so at a high cost to downlink performance. Over 1 Mbps in downlink performance would be sacrificed in Annex M systems in order to increase uplink performance by less than 250 Kbps. Given the presence of streaming video and other applications with highly asymmetric bandwidth needs, such a tradeoff would be ill advised. Use of Annex M also requires shortening the distance from the DSLAM that enables delivery of 4Mbps downstream and results in spectral interference to other non-Annex M ADSL, ADSL2 or ADSL2+ services (including CLECs providing DLS over UNE-loops). Shifting to Annex M would also cause carriers to have to modify OSS systems to provision the service.

which would be necessary to meet the 1 Mbps upstream standard. When performance is measured under real-world deployment conditions on 12 kilofoot loops, the most commonly used version of ADSL2+ (single pair, Annex A) cannot meet 1 Mbps in the upstream direction.¹³ In other words, as a result of DSL engineering design realities, the proper presumption that should be applied is that census blocks shown on the NBM as served by DSL at the 3/768 tier do *not* have access to 4/1 service and therefore should be categorized as unserved, unless, of course, another provider is offering qualifying broadband service.

Given the harm to rural consumers that would result from using 3/768 as a proxy for 4/1 and thus excluding numerous census blocks from CAF I eligibility even though they lack 4/1 service, the Commission should use 6/1.5 instead as a proxy for 4/1 until 4/1 data is available. Since with 6/1.5 both the upstream and downstream speeds exceed the 4/1 standard, the Commission can be assured that such areas are served. To ensure that ILECs would not be using CAF I funding toward areas that already have 4/1 service, the Commission could require a certification from ILECs that the locations for which they are using CAF I funding are not currently engineered to meet the 4/1 standard. This is consistent with Commission policy as expressed in footnote 231 of the *Order* which states in part that “We acknowledge that some have claimed that the National Broadband Map is not completely accurate. Nevertheless, we find that using it in this way, *along with our requirement that carriers certify that the areas to*

¹² Shortening the maximum loop length supported from 12 kilofeet to as little as 8 kilofeet could require over twice as many distributed DSLAMs to cover the same geographic area as serving areas based on 12 kilofeet, with corresponding increases in installation and maintenance costs and fiber backhaul deployment.

¹³ See Comments of ADTRAN Inc., at page 27, (filed April 18, 2012), *Connect America Fund et al.*, WC Docket No. 10-90 *et al.*, Further Notice of Proposed Rulemaking, (rel. Nov. 19, 2012) (emphasis added).

which they intend to deploy are unserved to the best of each carrier's knowledge, is a reasonable and efficient means to identify areas that are, in fact, unserved, even if there might be other areas that are also unserved.”

II. The Commission Must Allow for Adjustments To Address the NBM's Potential Overstatement of Broadband Coverage by Unsubsidized Providers Such as Cable Companies and WISPs

The most recent version of the NBM, which is the subject of the instant *Notice*, contains obvious errors that have the effect of vastly overstating broadband coverage by unsubsidized providers, whether cable providers, WISPs, or others. Perhaps the most egregious example of the overstatement of service is in Mississippi. Using June 2011 data, the NBM published in February 2012, showed that about 41 percent of the rural population in Mississippi had cable modem service available to them (and 25 percent had cable DOCSIS available). Just a mere six months later, using December 2011 data, these percentages skyrocketed to over 91 percent, placing Mississippi on par with Connecticut and Rhode Island.¹⁴

Where the Commission is placing such heavy reliance on a data source that is apparently flawed in significant respects, it must allow for adjustments to ensure that it is correctly identifying served and unserved census blocks. For example, when the most recent version of the NBM contains such obvious flaws for a particular state, the Commission should expressly permit price cap carriers in those states to rely on the previous version of the NBM, which in the case of Mississippi is the map released in February 2012, for purposes of the carriers' incremental support and frozen support certifications.¹⁵

¹⁴ See Comments of the Mississippi Public Service Commission, *In the Matter of Connect America Fund*, WC Docket No. 10-90 (Jan. 8, 2013) “Upon review of the NBM of the unserved fixed broadband areas in Mississippi, it is evident that the coverage area in Mississippi is grossly misstated.”

¹⁵ See, e.g., 47 C.F.R. §§ 54.312(b)(3), 54.313(c)(2).

In addition, because the NBM relies on self-reporting by broadband providers, the Commission should welcome carriers' use of objective data to verify representations of competitive presence in their service areas. For example, ILECs typically keep aggregate records of customer churn and account number porting—customers switching their phone and broadband service to a competitor—and an ILEC can sort those records by carrier serving area and cross-reference those records with a list of associated census blocks that are shown on the National Broadband Map as served by an unsubsidized competitor at speeds of at least 3/768. Though these census blocks are excluded from the Bureau's list of eligible census blocks by virtue of the NBM, in many areas, encompassing one or more census blocks, the ILEC may be able to demonstrate that it has received no requests over a reasonable historical period from customers for telephone number ports that are accompanied by cancellation of the customer's broadband service from the ILEC. The lack of such porting requests throughout a given area over a historical period provides reasonable evidence that there actually is no competitor providing 3/768 or better service in the census blocks within that area. Thus, there should be a presumption that such census blocks are eligible for CAF Phase I support if the ILEC is not providing 4/1 service there, and any provider claiming that it is competing in the area should be required to present affirmative and verifiable evidence that it is actually providing broadband service in such census blocks.

With respect to areas that are shown on the NBM as served by WISPs, coverage should be independently verified before such areas are considered ineligible for CAF I funding. Like satellite providers, WISPs often have capacity caps¹⁶ and service quality issues, including

¹⁶ Many WISPs impose data caps of less than 25 GB per month, which is the amount of data the average consumer consumes in a month today. This may be a reasonable practice given the constraints of the technology, but is an inadequate level of service to render an area ineligible for

unpredictable degradation from third-party interference from common devices such as cordless phones, garage door openers and microwave ovens when WISPs use unlicensed spectrum. The sustained speeds WISPs offer, particularly during busy times, also tend to be slower than those offered by ILECs, and certainly slower than the 4 Mbps downstream standard required of future recipients of federal funding. Nevertheless, large portions of rural America are shown as served by 3/768 broadband on the NBM because a WISP is claiming to provide service based on generic coverage maps, disregarding that it may be providing inadequate service,¹⁷ or only marketing to business customers. Preventing an ETC from using CAF I in these areas is contrary to the Commission's goal to extend robust broadband to unserved areas as stated in the *USF/ICC Transformation Order*.¹⁸ Therefore, the Bureau should permit the expenditure of CAF I funds on any community that lies within a state that has not independently verified WISP coverage areas shown in the NBM, and objective indicia demonstrate that the WISP could not plausibly serve the areas that the NBM shows it to cover.

CAF I support to build networks reasonably comparable to those in urban areas, which lack such data caps.

¹⁷ Many WISPs lack the capacity to accommodate significant increases in traffic or customers within their service areas. Moreover, WISP services generally do not work absent a line of sight between the customer and the provider's antenna since WISPs commonly use unlicensed spectrum at such high frequencies that they cannot reliably penetrate common obstacles such as trees, buildings, or hills. See CenturyLink Petition for Waiver, at page 8, WC Docket No. 10-90 *et al.* (June 26, 2012) and Letter from Melissa Newman, CenturyLink, to Marlene H. Dortch, FCC, WC Docket Nos. 10-90 *et al.*, at 2 & n. 2 (March 30, 2012).

¹⁸ See *USF/ICC Transformation Order* at page 10 "The goals are: (2) [e]nsure universal availability of modern networks capable of providing voice and broadband service to homes, businesses, and community anchor institutions."

III. The Commission Should Address the Lack of Specificity Around the Meaning of “Served”

The Bureau uses speed as its sole criterion for determining whether an area is eligible for CAF I funding, but the Commission indicated that other performance metrics may be relevant.¹⁹ Resolving what other metrics and other obligations may be part of the definition of broadband for purposes of the CAF is essential both to resolving where qualifying service is currently available and to allowing companies interested in accepting support to provide qualifying service in high-cost areas to understand the precise obligations and costs they would be taking on. All ETCs are required to offer broadband service in their supported area that meets certain basic performance requirements.²⁰ In developing performance requirements, the Commission sought to ensure that the performance of broadband available in rural and high cost areas is “reasonably comparable” to that available in urban areas.²¹ The *Order* listed the technical characteristics of broadband offerings – speed, latency, and capacity – that influence the capabilities afforded to users, and established a standard for speed²², latency²³ but not for capacity other than a reasonable comparability standard.²⁴ The Bureau reemphasized those requirements in footnote 15 in its recent Public Notice proposing procedures to provide an opportunity for parties to

¹⁹ See *USF/ICC Transformation Order*, para. 86.

²⁰ *Id.* at para. 87.

²¹ *Id.*

²² *Id.* at para. 94.

²³ *Id.* at para. 96, “We require ETCs to offer sufficiently low latency to enable use of real-time applications, such as VoIP.”

²⁴ *Id.* at para. 98.

challenge whether census blocks that are identified as eligible to receive CAF II support are in fact unserved by an unsubsidized competitor.²⁵

The NBM may show a census block as served by an unsubsidized broadband provider even if such service does not meet the latency or capacity requirements. So for providers such as WISPs using fixed terrestrial wireless technologies, the NBM may significantly overstate the census blocks in which an unsubsidized broadband provider is present. Further clarity from the Commission as far as the latency and capacity standards, and requiring further information from providers using technologies with known constraints, such as WISPs limitations on capacity, would provide a much clearer picture of the presence or absence of broadband in a census block and would best target CAF I support.

IV. Conclusion

Efficiently and effectively disbursing CAF I monies to advance broadband deployment in rural America requires accurate identification of areas in which 4/1 or better broadband service is provided by neither the ILEC nor an unsubsidized broadband provider. With respect to proper categorization of unserved areas, the *Notice* is flawed in three fundamental ways. First, it potentially significantly overstates the presence of ILEC broadband by using the 768 Kbps upstream and 3 Mbps downstream speeds as a proxy for the 1 Mbps upstream and 4 Mbps downstream standards in the *Order*. Second, the NBM may overstate the coverage provided by unsubsidized broadband providers, both cable companies and WISPs. Third, beyond the

²⁵ See Public Notice, DA 12-2075, *Wireline Competition Bureau Seeks Comment on Procedures Relating to Areas Eligible for Funding and Election to Make a Statewide Commitment in Phase II of the Connect America Fund*, WC Docket No. 10-90, (rel. December 27, 2012).

simplistic speed definition, there is a lack of specificity around what it means to be “served.”
Finally, for purposes of determining eligible areas for CAF I, it is important to remember that support is based on locations, not census blocks.

Respectfully submitted,

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January 9, 2013