

**Before the
DEPARTMENT OF AGRICULTURE
Rural Utilities Service
1400 Independence Ave. SW
Washington, D.C. 20250**

In the Matter of)
)
Broadband e-Connectivity Pilot Program) Docket No. RUS-18-TELECOM-0004
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**COMMENTS OF
USTELECOM – THE BROADBAND ASSOCIATION**

I. INTRODUCTION AND SUMMARY

USTelecom — The Broadband Association (USTelecom)¹ submits these comments in response to the Rural Utilities Service’s Notice of Inquiry and Request for Comment (*Notice*) regarding the Broadband e-Connectivity Pilot Program (Pilot).² USTelecom members represent a large proportion of broadband service providers, particularly of those deploying rural broadband. In stepping up to this challenge we have seen first-hand the difficulties that accompany rural broadband deployment and we know that there are rural residents awaiting the ability to connect to the digital world. We use this experience to offer guidance to the Rural Utilities Service (RUS) as it sets the framework for its pilot program.

First, it is essential that RUS target scarce broadband funding to truly unserved areas and work diligently to avoid overbuilding—including coordination with the Federal Communications Commission (FCC) and the National Telecommunications and Information

¹ USTelecom is the premier trade association representing service providers and suppliers for the telecom industry. Its diverse member base ranges from large publicly traded communications corporations to small companies and cooperatives – all providing advanced communications service to both urban and rural markets.

² Rural Util. Serv., U.S. Dep’t Agric., Notice of Inquiry and Request for Comments, 83 Fed. Reg. 35609 (July 27, 2018).

Administration (NTIA)—in an effort to ensure as many Americans as possible can be brought online through the Pilot. Further, as explained below, designing a program around areas not otherwise eligible for other federal funding could allow RUS to evaluate new ways to avoid overbuilding and stimulate broadband deployment exclusively in unserved rural areas—both in lower-cost and extremely high cost unserved areas. Second, RUS should prioritize last mile grants in the Pilot; the remaining unserved areas in America are inherently uneconomic to serve for the last mile and even low-to-no interest loans do not alter that equation. Third, the program should be neutral, both with respect to technology and the entity deploying broadband, in order to maximize efficient participation.

II. IT IS CRITICAL FOR RUS TO FOCUS ITS PILOT ON THE TRULY UNSERVED AND AVOID OVERBUILDING

RUS has a unique opportunity with this Pilot to target completely unserved locations that may not be eligible for near-term funding through other methods. While USTelecom members continue to aggressively deploy broadband to rural America, there remain millions of unserved locations, many of which are either ineligible for, or not yet the subject of, federal funding. In focusing its Pilot on these areas, RUS can ensure that it does not overbuild existing projects and also ensure that it brings broadband to those who are otherwise untargeted at this time.

Overbuilding is inefficient because the benefits of connecting unserved are greater than those of establishing a second connection. In addition, by splitting a small potential subscriber base among additional firms, no firm may be able to obtain sufficient revenues to keep its rural network operational.

A. Eliminating Overbuilding is Essential to the Pilot's Effectiveness

i. RUS Should Avoid Overbuilding Existing Broadband Programs

RUS should take an expansive view of the landscape of current broadband projects, both federal and state, to ensure that it fulfills Congress's intent to avoid overbuilding. The

authorizing statute contains two provisions related to overbuilding: one directs it to ensure that it only funds projects where “at least 90 percent of the households to be served” are “in a rural area without sufficient access to broadband, defined for this program as 10 Mbps downstream, and 1 Mbps upstream”;³ the other provision ensures that Pilot funding shall not be used “to overbuild or duplicate broadband expansion efforts made by any entity that has received a broadband loan from the Rural Utilities Service.”⁴ It is clear from this text that avoiding overbuilding in this Pilot is a Congressional priority. The Pilot does not exist in a vacuum of other government efforts to support rural broadband deployment so RUS must be cognizant of all of the other initiatives working towards the same cause and avoid duplicating the efforts of those programs. Rural broadband deployment is extremely costly so we as a nation cannot afford to have scarce public funding going towards duplicative deployments in uneconomic areas.

The primary program fueling rural broadband deployment today—and for RUS to consider when determining whether overbuilding is occurring—is the FCC’s Connect America Fund (CAF). This program has devoted billions of dollars to fund broadband deployment to millions of Americans since its inception in 2011.⁵ There are many facets to the Connect America Fund, including both wireline and wireless service, and it continues to evolve over time to maximize the service provided and coverage area in rural America. In the second phase of the program, CAF Phase II, fixed broadband CAF participants are required to offer broadband service meeting FCC specifications in FCC-identified eligible census blocks. CAF recipients must report their broadband deployments annually at the geocoded individual

³ Consolidated Appropriations Act of 2018, Pub. L. 115-141, § 779.

⁴ *Id.*

⁵ See FCC, Connect America Fund, <https://www.fcc.gov/general/connect-america-fund-caf> (last visited August 29, 2018).

location level. Though CAF encompasses several different broadband deployment initiatives that have their own objectives and timelines, all fixed broadband participants are required to report their progress in this hyper-targeted manner, which is creating an increasingly granular dataset on a rolling basis.⁶ Participants in the first program out of the gate, CAF Phase II for price cap ILECs, submitted their geolocation information on over 1.4 million high-cost locations with broadband service by March 1, 2018. By this program's end in 2020 or 2021, it will have enabled broadband to over 3.6 million locations⁷ – all of which will be geocoded⁸ – and this is just one of the FCC's CAF programs. In the recently completed CAF II Auction, auction winners will be deploying broadband across known census blocks over the next six years (receiving funding there for 10 years), making it easier to avoid overbuilding those areas.⁹ Smaller “rate of return” carriers are also continually deploying broadband, some through an alternative model based program and some based upon other defined criteria.¹⁰

In addition to the FCC's CAF projects, numerous state and local entities have implemented or are devising plans to support rural broadband deployment. These plans vary in scope and design by state but we recommend that RUS explore state-level coordination as well

⁶ See 47 C.F.R. 54.313(e)(1), (f)(1); 54.316(a) (outlining different geolocation requirements for different CAF programs, including the rural rate of return carriers).

⁷ See FCC, Connect America Fund Phase II Funding by Carrier, State and County, <https://www.fcc.gov/document/connect-america-fund-phase-ii-funding-carrier-state-and-county> (last visited Sept. 10, 2018).

⁸ FCC CAF participants report in to the Universal Service Administrative Co. (USAC), which is the body overseeing CAF reporting compliance. USAC has created a High Cost Universal Broadband (HUBB) portal to administer this reporting and the datasets will be made public. See USAC, Filing Geolocated Broadband Deployment Data, <https://www.usac.org/hc/tools/hubb.aspx> (last visited Sept. 10, 2018) (“Carriers participating in modernized Connect America Fund programs must file deployment data with USAC's HUBB portal showing where they are building out mass-market, high-speed internet service by precise location. This information includes latitude and longitude coordinates for every location where service is available, and USAC will eventually display this information on a public-facing map to show the impact of Connect America funding on broadband expansion throughout rural America.”).

⁹ See 47 C.F.R. 54.310(c).

¹⁰ See *id.* at § 54.308 (defining broadband public interest obligations of rate of return providers).

to avoid redundancies with these programs.¹¹

Given the long lead-time of these existing projects, it is important to avoid overbuilding not just where broadband is today, but where broadband is already planned to exist in the near future under the defined terms of these programs. This is where consultation with the FCC, the states, and other broadband program stakeholders, will be essential in order to fulfill the Congressional intent of the program.¹² To RUS's question of what defines a "sufficient access to broadband," any broadband service that is planned and funded by a government program to expand broadband should be considered "sufficient" to avoid second-guessing other government efforts. Accordingly, RUS should take its mandate not to overbuild previous RUS loans as a starting point, not the end, of its overbuilding analysis and apply that presumption to all existing rural broadband deployment programs.

ii. RUS Should Consult with the FCC and NTIA and Institute a Challenge Process to Avoid Overbuilding Private Deployments

Currently the federal government has imperfect, but generally good, information about where broadband has already been deployed; it is essential that RUS consult with the holders of this information, the FCC and NTIA, as a further check on overbuilding. The FCC's Form 477 process ensures that fixed broadband providers are reporting semi-annually and at a census block level, which is the most granular method of geography that the Census uses.¹³ While the FCC publicly releases its Form 477 data, the publicly-released version is not necessarily the most current. For example the FCC currently has only released data as of December 31, 2016,

¹¹ Such states include California, Colorado, Delaware, Indiana, Maine, Maryland, Massachusetts, Minnesota, Missouri, Nebraska, New Mexico, New York, Tennessee, Utah, Vermont, Virginia, and Wisconsin.

¹² See also Letter from Sen. John Thune and Sen. Roger F. Wicker, to Sonny Perdue, Secretary of Agric. (Aug. 22, 2018) ("It is crucial that RUS plan projects and coordinate the distribution of funds under the pilot program with the FCC, to ensure that the pilot program does not result in overbuilding in areas covered by current and planned CAF deployments.").

¹³ See U.S. Census Bureau, Census Block, https://factfinder.census.gov/help/en/census_block.htm (last visited Sept. 10, 2018).

even though the data has been updated three times since then. In addition, there are currently planned projects for which providers have spent money and resources and these should not be overbuilt either. It is only through proper coordination can RUS be sure to avail itself of the most current data in order to avoid inadvertently greenlighting a project that overbuilds existing broadband.¹⁴

USTelecom generally supports RUS’s proposal to “use the most current data of the National Broadband Map”¹⁵ but RUS should be aware of the limitations associated with the Map as it exists today. Congress recently charged NTIA with updating the National Broadband Map, which has not been updated since 2013, and NTIA is presently exploring how it can do so.¹⁶ NTIA’s mapping improvements will likely still be in process when RUS decides how to award its Pilot projects, so it is important that RUS uses the Map as just one tool, along with the FCC’s and other available data, as it goes about its project selection process.

Finally, USTelecom supports RUS’s proposal to use its “mapping tool [to] publicly post proposed service territories of applicants to allow existing service providers an opportunity to comment if 10 Mbps downstream and 1 Mbps upstream service exists for households in the proposed service area or not.”¹⁷ This proposal is a reasonable step that will allow existing providers sufficient process to determine whether overbuilding would occur and respond appropriately.

B. RUS Can Design a Pilot that Significantly Reduces Risks of Overbuilding from the Outset

¹⁴ Beyond overbuilding concerns, USTelecom advises RUS to consult with the FCC on a number of matters related to general broadband performance standards for the Pilot and for ensuring the affordability of Pilot-funded deployments as the FCC has previously fully evaluated these exact topics. *See, e.g.*, 47 C.F.R. § 54.309(a).

¹⁵ *Notice* at (2).

¹⁶ Dep’t of Commerce, National Telecomm’ns and Info. Admin., *Improving the Quality of Accuracy of Broadband Availability Data*, Notice and Request for Comments, 83 Fed. Reg. 24747 (May 30, 2018).

¹⁷ *Notice* at (2).

One significant way to guard against overbuilding is to target the Pilot towards areas that are not the focus of the FCC's CAF program, which is the nation's largest program enabling rural broadband deployment. By definition, if RUS targets areas that are either ineligible for CAF support or not the focus of the CAF program then it would avoid overbuilding CAF projects. While this approach will not avoid all overbuilding concerns due to state/local projects and private investments, it will resolve a significant portion of the potential overbuild problem in rural areas.

There are two primary categories of unserved areas that are unaffected by CAF: those whose estimated costs to serve are too low to qualify for funding, and those whose estimated costs to serve were too high to fit within the program's goals. In devising CAF Phase II, the program used a broadband deployment model to estimate the costs of deployment.¹⁸ Due to budget limitations, the FCC put parameters on the type of locations it would support, deciding to target "census blocks lacking unsubsidized competitors . . . where the cost of providing service exceeds \$52.50 but is less than \$198.60."¹⁹ In each category (i.e., areas that cost less than \$52.50 to serve and areas that are above \$198.60 to serve according to the model), USTelecom estimates based on FCC Form 477 data that there are millions unserved in rural America.²⁰ This analysis comports with a recent study by the American Action Forum (AAF) that evaluated where populations without broadband access exist.²¹ As the AAF study notes,

¹⁸ The broadband model used was the Connect America Cost Model (CAM) version 4.3. *See Wireline Competition Bureau Announces Connect America Phase II Support Amounts Offered to Price Cap Carriers to Expand Rural Broadband*, Public Notice, 30 FCC Rcd 3905 (WCB 2015).

¹⁹ *Id.* at n.1.

²⁰ CAF Phase II participants were awarded flexibility to serve some of the areas that the model estimated more than \$198.60 (extremely high cost areas) in order to complete their CAF Phase II deployments. Similarly, those extremely high cost areas were also eligible for bid in the CAF Phase II auction. In either case, however, the entity who would be serving the extremely high cost area would have already had to indicate their intention to serve those census blocks to the FCC, thus any potential overbuilds of extremely high cost areas could be avoided through RUS-FCC consultation. *See Wireline Competition Bureau Releases List and Map of Eligible Census Blocks for the Connect America Fund Phase II Auction (Auction 903)*, Public Notice, 32 FCC Rcd 10381 (WCB 2017).

²¹ Will Rinehart, American Action Forum, *A Look at Rural Broadband Economics*, Table 1 (Aug. 14, 2018)

“[m]any news reports focus on how rural areas lack broadband access, but there isn’t a single accepted definition of rural,” giving RUS more flexibility in designing its program for “rural” areas.²² According to this study, the population in “rural areas” (as defined by rural-urban commuting codes) that lack broadband is greater than 3.4 million and there are other areas of the country surrounding micropolitan areas and small towns that have millions of unserved locations:²³

Table 2: The Percent Population Without Broadband Access by Rural-Urban Commuting Codes

Rural-Urban Commuting Code	Population Without Broadband Access	Percent Population Without Broadband Access
Metropolitan area core	2,725,356	1%
Metropolitan area high commuting	5,303,308	17%
Metropolitan area low commuting	813,223	32%
Micropolitan area core	1,085,625	6%
Micropolitan high commuting	2,134,262	29%
Micropolitan low commuting	543,626	37%
Small town core	1,494,225	17%
Small town high commuting	1,041,361	42%
Small town low commuting	501,044	45%
Rural areas	3,491,472	38%

USTelecom estimates that there are 1.4 million unserved locations (as distinct from population) in “rural” areas that are below the \$52.50 benchmark and therefore are ineligible for the CAF program. Given the budget limitation of the Pilot, the substantial number of unserved in this area who are ineligible for the nation’s largest broadband program, and the comparatively lower funding requirements, designing part of the Pilot to target these areas could provide the greatest number of potential locations served for the money. Further, it

<https://www.americanactionforum.org/print/?url=https://www.americanactionforum.org/research/a-look-at-rural-broadband-economics/?print>.

²² *Id.* at 3-4.

²³ *Id.* at Table 2.

would allow RUS to evaluate why these areas have not been served organically despite their lower relative cost. What is lacking in the business case to deploy in these areas? Are there patterns to how these locations exist geographically in relation to served locations that reveals why they have remained unserved? Is there a different expectation for broadband speeds that should be used in these relatively more dense areas?

At the opposite end of the spectrum, RUS could focus a portion of the Pilot on the high cost areas not taken by the CAF 2 Auction. Are there common barriers beyond cost that prevent these areas from being served? Are there geographic similarities amongst the high-cost unserved that makes the case for serving via different technologies than the low cost areas? What is the appropriate trade-off with respect to the service provided (e.g., broadband speed) vs trying to reach the most locations possible with a baseline level of service?

Another area that RUS could explore within this construct, consistent with its desire to “benefit rural industries such as agriculture, manufacturing, e-commerce, transportation, health care and education,” is how deployments in rural counties with different economic types are able to grow via greater broadband deployment. AAF’s study also included an evaluation of income and broadband access by rural county economic type, including non-specialized, farming, mining, manufacturing, government, and recreation.²⁴ The variations in broadband access amongst these county types could produce an interesting view into the challenges with full broadband participation in areas with different economic focuses.

Designing the Pilot to focus on these two disparate ends of the cost spectrum could allow for a window into the universal challenges with deploying to currently unserved areas, as well as highlight the unique challenges that come along with certain types of deployments. Using the CAF model as a springboard also minimizes overbuild issues at the outset.

²⁴ *Id.* at Table 5.

III. THE PILOT PROGRAM SHOULD PRIORITIZE GRANTS FOR LAST MILE BROADBAND DEPLOYMENT

Focusing on grants for last mile broadband deployment is the best way “to ensure that projects funded by the e-Connectivity pilot provide improvements to rural prosperity,” as RUS intends.²⁵ In 2009, responding to the American Recovery and Reinvestment Act, RUS and NTIA set up the Broadband Initiatives Program (BIP) and Broadband Technologies Opportunities Program (BTOP) respectively, with the BIP program primarily addressing last mile issues²⁶ and BTOP focusing on middle-mile projects.²⁷ RUS would be well-served to build upon its previous experience and again focus on last-mile deployments in order to achieve its goals.

First, the last mile is undoubtedly the hardest mile in terms of broadband connectivity; providing middle mile capability alone does not guarantee service to the unserved. Indeed it can be cold comfort that a middle mile facility comes tantalizingly closer to providing broadband but the economics in the last mile still will not enable a connection to the location.²⁸ Second, it is easier to fulfil the statutory mission of preventing overbuilding by focusing on last mile efforts. Middle mile capabilities can be used not just to deploy new technologies in unserved areas, they

²⁵ *Notice* at (3).

²⁶ See U.S. Dept. of Agric., *Advancing Broadband, A Foundation for Strong Rural Communities*, 3 (Jan. 2011) <https://www.rd.usda.gov/files/reports/RBBreportV5ForWeb.pdf> (96% of funding went to last mile projects).

²⁷ See Dep’t of Commerce, National Telecomm’ns and Info. Admin., *Improving the Quality of Accuracy of Broadband Availability Data*, Notice and Request for Comments, 83 Fed. Reg. 3792, 3794 (Jan. 22, 2010) (“NTIA is adopting a ‘comprehensive communities’ approach to award BTOP grants for infrastructure projects that emphasize Middle Mile broadband capabilities and new or substantially upgraded connections to community anchor institutions to maximize the benefits of BTOP funds.”).

²⁸ One exception to the preference for last mile facilities should be for projects based in Alaska, where one of the greatest obstacles to broadband deployment is a lack of affordable middle mile broadband capacity. Unlike rural areas of the lower 48 states, in Alaska, a Bush village itself may be very compact, making last mile deployment relatively straightforward, but the village may be isolated from the rest of the telecom network by large stretches of wilderness. Given these difficulties, funding middle mile projects in Alaska would be appropriate.

can also be used to substantially upgrade capacity in already served areas—including areas in which competition currently exists. Without a firm commitment on providing new last mile service to unserved areas, it is difficult to police the actual use of the facility. Third, it would be most efficient to incorporate the lessons RUS learned from BIP into the Pilot—including lessons on record keeping and validation for last mile projects²⁹—versus starting a brand new broadband deployment type.

It is also important that RUS prioritize using grants, not loans, for the Pilot. Unserved areas generally exist because it is uneconomic to deploy and maintain broadband there and only direct subsidies—here in the form of grants—can change the economic equation for a vast majority of the areas in question. Given the relatively low cost of capital today and the existence of RUS’s Rural Broadband Access Loan and Loan Guarantee program, which already provides “loan and loan guarantees” to fund broadband deployment, there is little to be gained either in experience or serving the unserved through another loan-based program. When Congress authorized the Pilot it specifically provided “authority to make grants for such purposes” of broadband deployment. RUS should focus its efforts on determining how these grants make the most impact in different environments.

IV. THE PILOT SHOULD BE COMPETITIVELY AND TECHNOLOGICALLY NEUTRAL

The Pilot program can best meet the goals of furthering rural broadband deployment by creating a level playing field for all applicants. The limited and experimental nature of the program may not warrant RUS creating an auction mechanism to distribute funding but RUS should define objective criteria for its Pilot that can be met by all participants. RUS seeks

²⁹ See U.S. Gov’t Accountability Office, Recovery Act, USDA Should Include Broadband Program’s Impact in Annual Performance Reports (June 2014), <https://www.gao.gov/assets/670/664129.pdf>.

comment on “how to evaluate the viability of applications that include local utility partnership arrangements, including locally-owned telecommunications companies where possible.”³⁰

USTelecom submits that the FCC’s recently-concluded CAF 2 auction shows that no preferential treatment is needed to incent those types of participants, with the Rural Electric Cooperative Consortium alone receiving over \$186 million, or 12.5 percent, of the awarded funding.³¹ In fact, the CAF 2 Auction winners represent a wide range of different competitive and technological interests, including both very large and very small companies that will offer service via fiber, copper, cable, fixed wireless, and satellite.³² If RUS seeks to maximize participation, and by extension potential broadband deployment, it should take a similar neutral approach to the company and technology it seeks to fund.

V. CONCLUSION

USTelecom appreciates the opportunity to lend its substantial experience with rural broadband deployment to this program. Through a targeted approach that focuses on serving the unserved as described above, RUS has an ability to make substantial progress in ensuring digital connectivity throughout rural America.

Respectfully submitted,

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³⁰ Notice at (3).

³¹ *Connect America Fund Phase II Auction (Auction 903) Closes, Winning Bidders Announced*, FCC Form 683 Due October 15, 2018, AU Docket No. 17-182, WC Docket No. 10-90, Public Notice, DA 18-887 (WCB, WTB Aug. 28, 2018).

³² *Id.* at Attachment A, available at <https://docs.fcc.gov/public/attachments/DA-18-887A2.pdf>.