

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In the Matter of)	
)	
The Competitive Bidding Procedures and)	AU Docket No. 17-182
Certain Programs for the Connect America)	WC Docket No. 10-90
Fund Phase II Auction (Auction 903))	
)	October 18, 2017

**REPLY COMMENTS OF THE INSTITUTE FOR LOCAL SELF-RELIANCE,
PUBLIC KNOWLEDGE, APPALSHOP, CENTER FOR RURAL STRATEGIES,
ACCESS HUMBOLDT, NATIONAL DIGITAL INCLUSION ALLIANCE,
VIRGINIA RURAL HEALTH ASSOCIATION, TRIBAL DIGITAL VILLAGE,
BROADBAND ALLIANCE OF MENDOCINO COUNTY, CALIFORNIA
CENTER FOR RURAL POLICY, ACCESS SONOMA BROADBAND, AND THE
UTILITY REFORM NETWORK**

I. Introduction

The Institute for Local Self-Reliance (ILSR) mission is to provide innovative strategies, working models, and timely information to support environmentally sound and equitable community development. To this end, ILSR works with citizens, activists, policymakers, and entrepreneurs to design systems, policies and enterprises that meet local or regional needs; to maximize human, material, natural, and financial resources; and to ensure that the benefits of these systems and resources accrue to all local citizens.

Public Knowledge (PK) promotes freedom of expression, an open internet, and access to affordable communications tools and creative works. We work to shape policy on behalf of the public interest. Public Knowledge works at the intersection of copyright, telecommunications, and Internet law, at a time when these fields are converging. PK's experience in all three areas puts it in an ideal position to advocate for policies that serve the public interest.

Founded in 1969, Appalshop brings forth new and often unheard voices and visions from the people of Appalachia and rural communities across America and abroad, demonstrating the power of arts and culture to create meaningful social and economic change. Appalshop's mission is to enlist the power of education, media, theater, music, and other arts to document, disseminate, and revitalize the lasting traditions and contemporary creativity of Appalachia.

At the Center for Rural Strategies, we seek to improve economic and social conditions for communities in the countryside and around the world through the creative and

innovative use of media and communications. We strive to create better opportunities for small towns and rural communities by building coalitions, developing partnerships, leading public information campaigns, and advancing strategies that strengthen connections between rural and urban places. We believe that rural America's fate is interrelated to those of metropolitan and urban America. Building stronger rural communities helps the nation as a whole.

Access Humboldt's mission is "Local voices through community media." We are an innovative, self-sustaining and trusted media resource for residents of Humboldt County. Diverse community members utilize local access media resources to engage in meaningful conversations that increase participation in civic life. Local governments, educational institutions and community-based organizations find AH's services to be indispensable.

The National Digital Inclusion Alliance is a unified voice for home broadband access, public broadband access, personal devices and local technology training and support programs. We work collaboratively to craft, identify and disseminate financial and operational resources for digital inclusion programs while serving as a bridge to policymakers and the general public.

The Virginia Rural Health Association (VRHA) is a 501(c)(3) not for profit organization working for the 2.5 million people who call rural Virginia their home. Our mission is to improve the health of rural Virginians through education, advocacy, and fostering cooperative partnerships.

The Southern California Tribal Chairmen's Association (SCTCA) is addressing the lack of Internet access for its tribal communities, taking their wireless broadband network to the next level of support for its communities, the "tribal home". It has been a long-term goal of the Tribal Digital Village (TDV), an SCTCA program that created the TDV Network (TDVNet) in 2001, to bring Internet services to our key community buildings and programs. We have done the ground work to support key community operations on reservations, and created over 350 miles of point-to-point and point-to-multi-point links supporting 86 tribal buildings, i.e.- tribal administration buildings, EPA departments, fire stations, law enforcement, utilities departments, and Libraries, Schools and Head Start programs. We have the Infrastructure in place to support such an endeavor, and the desire from the people to have access to broadband.

The Broadband Alliance of Mendocino County was founded by Mendocino County government, the Community Foundation of Mendocino County, the Economic Development & Financing Corporation of Mendocino County, and the Mendocino Coast Broadband Alliance. The mission of the Broadband Alliance of Mendocino County is to ensure that the county's population has affordable universal broadband access in their homes, businesses and public places to support economic viability, ensure health and safety, and access educational opportunities.

The California Center for Rural Policy conducts research to inform policy, build

community, and promote the health and well being of rural people and environments. CCRP accomplishes this by using innovative research methods tailored to the study of rural people, environments, and their interactions.

The Sonoma County Economic Development Board Department has formed Access Sonoma Broadband (ASB) to work with residents, businesses and governmental agencies to close the digital divide. ASB has been endorsed by the Sonoma County Board of Supervisors. Broadband deployment throughout the County is supported by the Board's economic development strategy and legislative state and federal legislative platforms.

As California's largest utility consumer advocacy organization, The Utility Reform Networks (TURN) stands up for consumer rights, affordable rates and a more livable California. For more than 30 years we have challenged California's powerful energy and telephone companies, saving consumers and small businesses millions, and demanding reliable service and environmentally sound policies. We advocate for better utility policies, provide consumer assistance, and mobilize people statewide to take action for change.

II. Summary

We believe rural America will be best served by additional safeguards to ensure Connect America Funds return the greatest investment to local residents and businesses.

III. Carriers of Last Resort Guarantee

It is imperative that bidders are able to serve every premise within the relevant blocks, with the possible exception of premises that are not connected to the electric power grid. Any Americans left behind by this process could be permanently left behind and the Commission should only allow such action if absolutely necessary. Given our experience examining rural networks, particularly those of rural cooperatives and of some municipal networks that have expanded into rural areas, serving all premises is challenging but not impossible with the right business model -- which in rural America is often a cooperative approach to solve infrastructure needs. For-profit companies could not connect the entire nation with electricity and neither can for-profit models ensure all of rural America is connected with high-quality Internet access.¹ If for-profit models are unable to connect everyone in a relevant area, the correct answer is to encourage the non-profit cooperative model, not to start leaving families behind.

HughesNet believes bidders should not be required to demonstrate they can serve all premises within an area. "The relevant factor, however, is whether an applicant will be

¹ See also the Rural Electrification Act of 1936.

² See Comments of HughesNet at p.6,
[https://ecfsapi.fcc.gov/file/10918243639377/Hughes%20CAF%20Auction%20Procedures%20Comments%20\(9-18\).pdf](https://ecfsapi.fcc.gov/file/10918243639377/Hughes%20CAF%20Auction%20Procedures%20Comments%20(9-18).pdf).

³ See Comments of GeoLinks at p. 2,
<https://ecfsapi.fcc.gov/file/10919309774647/Comments%20of%20GeoLinks%20CAF%20Phase%20II%20>

able to serve all customers who wish to subscribe in the areas where the applicant is the winning bidder. An applicant may indicate its interest in bidding across a much larger area than it could serve, knowing that it will only be in the winning bidder in a subset of those locations. Moreover, determining up front the precise number of particular locations across the country that a bidder could serve can be a complex undertaking, particularly in the satellite context.”² We reject this claim. The auction is for funds to be distributed from 2020 to 2030. All indications are that demand for broadband Internet access is increasing. We cannot forecast accurately which premises will take access but we can be certain it will be an increasing number over time. Further, we are concerned that satellite firms wish to change this rule because their technology is unable to reach some premises - those with obstructions or other challenges to that technology. Bidders must be prepared to connect any and all premises in a given territory.

Some commenters claim it will not be feasible to serve everyone. “For this reason, GeoLinks suggests that the Commission continue to require that applicants demonstrate that its network can be engineered to serve 95% of all required areas within an eligible census block. If the Commission wishes to encourage additional coverage, GeoLinks suggests that any coverage capability over 95% be taken into account after the other factors (price, speed, latency, etc.) are considered for scoring purposes.”³ We disagree and are concerned that the Commission would back down from the essential goal of 100 percent coverage before necessary. Again, we have seen business models cover every premise in areas that are very high cost areas in Wilkes, North Carolina, central North Dakota, and rural Kentucky.⁴ This map of Fiber-to-the-Home availability in Kentucky shows how much cooperatives and municipalities have invested in very high-cost rural communities. Note, particularly, the universal coverage the Peoples Rural Telephone Co-

² See Comments of HughesNet at p.6, [https://ecfsapi.fcc.gov/file/10918243639377/Hughes%20CAF%20Auction%20Procedures%20Comments%20\(9-18\).pdf](https://ecfsapi.fcc.gov/file/10918243639377/Hughes%20CAF%20Auction%20Procedures%20Comments%20(9-18).pdf).

³ See Comments of GeoLinks at p. 2, <https://ecfsapi.fcc.gov/file/10919309774647/Comments%20of%20GeoLinks%20CAF%20Phase%20II%20Auction.pdf>.

⁴ Eric Cramer, President & CEO of Wilkes Communications and RiverStreet Networks, explained the 7 - 10 year business case to bring Fiber-to-the-Home to rural communities. See Interview with Eric Cramer. Community Broadband Bits Podcast Episode 188. February 2, 2016. MuniNetworks.org/content/north-carolina-coop-fibers-rural-counties-and-more-community-broadband-bits-podcast-188.

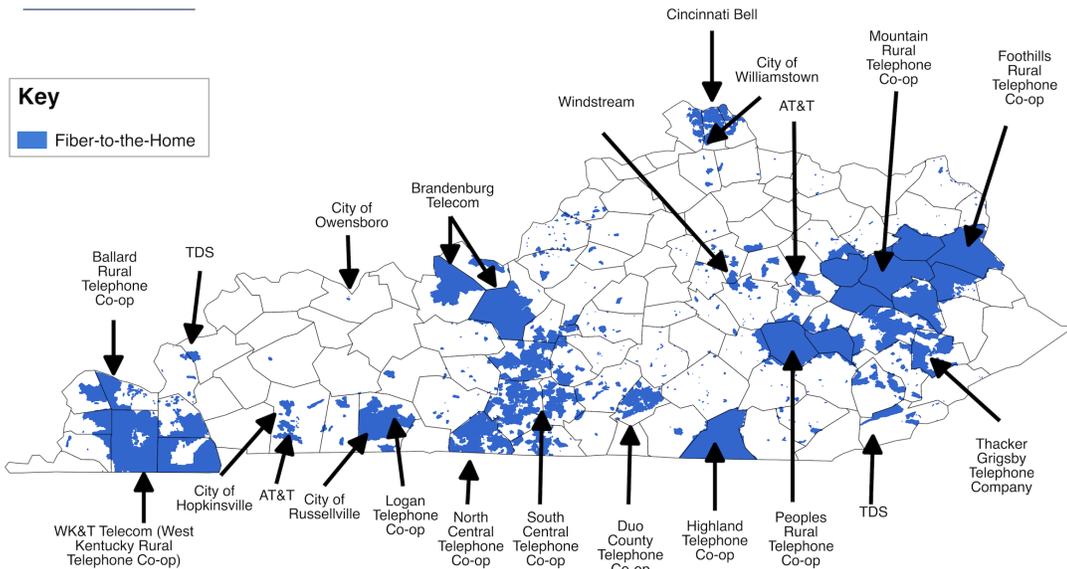
Consolidated Telecom, Dickey Rural Networks, and Polar Communications are just a few of the rural cooperatives that have built out Fiber-to-the-Home networks that can reach all of their members in North Dakota. See USDA North Dakota Broadband Report. 2014-2015. Broadband Capacity Maps. p. 5, https://www.rd.usda.gov/files/ND_BroadbandReport_2014.pdf.

Peoples Rural Telephone Cooperative built a \$50 million Fiber-to-the-Home network out to all of their members in eastern rural Kentucky. The cooperative used \$50 million in grants and loans and has brought 200+ telework jobs to the area. See videos at <http://www.prtcnet.org/gigabit.html>.

op provides in Jackson, County in Kentucky, one of the most economically disadvantaged counties in the entire country.



Kentucky: Fiber-to-the-Home



Made in QGIS from FCC Form 477 Data June 2016 Version 2

MuniNetworks.org

We believe the FCC should only consider bids that cannot cover all premises in the event that there is *no* bidder that can connect all premises.

We agree with Rural Commission on the matter of assuming a subscription rate of 70 percent: “Allowing providers to build networks that will serve fewer than 70% of locations in a census block group while supplying them with support to serve 70% of locations could amount to an unwarranted financial windfall for support recipients—and, just as concerning (and as discussed further below), a lesser assumption could leave thousands of scattered rural consumers ‘stranded’ because their nominal ‘provider of last resort’ lacks the capacity to deliver broadband to them despite receiving federal universal service support to do so.”⁵

We firmly agree with Missouri Electric Cooperatives regarding the need for the Commission to ensure potential bidders are able to provide the promised service to the areas they win. “The members expressed concern that the FCC's proposal, as currently

⁵ See Comments of the Rural Coalition at pp. 21-22, [https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20\(9-18-17\).pdf](https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20(9-18-17).pdf).

structured, lacks sufficient upfront review to prevent bidders from winning and ultimately failing to deliver the service at the appropriate speeds. Such a result would not only lead to waste and fraud of scarce universal service funds but, more importantly, would leave communities in rural Missouri without access to broadband."⁶ We believe the greatest threat to an outcome that leaves premise behind comes from the technology being incapable of 100 percent coverage than the financial or operational capacity of local bidders. The Commission should ensure that bidders are proposing technologies that are capable of meeting the promises made.

IV. Satellite Service & Other Technologies

We continue to have strong concerns about the Commission subsidizing high-latency satellite services that have never achieved any market success. Satellite has its place as a connectivity option: the last hope for those that have been left behind to have some basic access to a fraction of the applications in common use on the Internet at higher prices and lower reliability than common on fixed access. As such, the Commission must ensure that bidders who can provide a high-quality fixed service to areas are preferred over high-latency satellite options.

As noted by ILSR and Next Century Cities in comments on “Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion,” high-latency satellite services have many deficiencies that should disqualify it as a subsidized service where any alternative exists.⁷

Quoting from those comments:

The Commission’s 2016 Measuring Broadband America Fixed Broadband Report notes “...the median latencies of satellite-based broadband services (which range from 599 ms to 629 ms) are much higher than those for terrestrial-based broadband services (which range from 12 ms to 58 ms).”*[see original comment for footnote]*

...

Consider the Netflix Speed Index, attached as appendices *[on the original comment]*, which track 60 ISPs. In the August 2017 report, 50 of the ISPs are clustered between 3 and 4 Mbps of sustained speeds. The next 6 sustain more than 2.5 Mbps. Even those in positions 57 and 58 are well over 2 Mbps. But the two satellite firms, Viasat and Hughes are strong outliers at 1.56 and .98 respectively.

⁶ See Comments of the Honorable Claire McCaskill at p. 1, <https://ecfsapi.fcc.gov/file/1082110078702/2017-08-18%20Letter%20to%20Chairman%20Pai.pdf>.

⁷ See Reply Comments of the Institute for Local Self-Reliance and Next Century Cities on GN Docket No. 17-199 at pp. 2-3, <https://ecfsapi.fcc.gov/file/1006068447752/2017-10-06-ILSR-NCC-Reply-Comments-GN17-199.pdf>.

...
The FCC's own 2016 Measuring Broadband America Fixed Broadband Report [*see original comment for footnote*] notes that satellite offers particularly poor service compared to other options:

“The industry saw an approximate order of magnitude performance increase with the introduction of satellites operating in Ka-band frequencies beginning in late 2011. Performance from these satellites has declined as capacity limits are being reached.”

“The overwhelming majority of ISPs performed within 10% of last year's results. The exception for this was satellite ISPs. Hughes' actual vs. advertised speeds ratio went down from 203% to 152% while Viasat's went down from 107% to 71%. This is likely the result of increased subscribership and consumer usage of these services.”

“In addition, one satellite company (ViaSat) had a significant decline in performance from previous years in this regard with performance significantly below that of advertised speed; suggesting, as noted, that capacity limits are being approached for its current satellite constellation.”

....
Satellite service is not comparable to terrestrial broadband technologies. It offers an important service for people that presently have no other option, but much like a life-raft is not a houseboat, satellite Internet service is not currently capable of providing advanced telecommunications service, much less any appropriate definition of broadband.

To the extent that the Commission allows satellite services to bid, we strongly agree with the Rural Coalition's suggestion of requiring satellite firms to divulge total maximum capacity: “The Commission should require every applicant relying on satellite technology to identify the total capacity for its satellites, and the number of locations that the applicant can serve in a given service tier, given its total capacity. Because the short-form application is to be evaluated on a state-by-state basis, nothing in the Commission's proposed screening procedures would prohibit satellite providers to bid for support to serve more locations than they are technically capable of serving. The result would be that certain locations would be at risk of not receiving any broadband service.”⁸

Finally, we strongly share ADTRAN's concerns regarding the ability of satellite firms to deliver voice services as required by statute: “Thus, ADTRAN sought clarification that if

⁸ See Comments of the Rural Coalition at p. 20, [https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20\(9-18-17\).pdf](https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20(9-18-17).pdf).

an applicant will be selecting the high-latency option, the applicant must be prepared to demonstrate that its service meets the MOS score of four or higher under ITU-T Recommendation P.800 using the Conversational-opinion tests (and not the Listening-opinion tests). Alternatively, if the Commission had intended to allow an applicant to demonstrate compliance with the requirement of an MOS score of four or higher using either the conversational or listening test, ADTRAN sought reconsideration of that decision.”⁹

V. Distribution of funds

We agree with the proposal of the Pennsylvania Public Utility Commission and the Pennsylvania Department of Community and Economic Development regarding a check box for entities that have received support from states for broadband investment: “The Commission should direct an applicant submitting a pre-auction short-form application to include in its application whether it has received any additional resources through the state for broadband deployment. The addition of a simple ‘check box’ for this query in the short-form application proposed by the Commission is all that is necessary.”¹⁰

VI. Financial Health of Applicants

We agree with the Commission and others that the financial health of potential bidders is important but are concerned that the Commission has not developed an accurate measurement for such health that does not discriminate against smaller providers. Smaller providers, particularly rural telephone and electric cooperatives, have a long history of providing high quality services and strong financial health but may not appear as strong as other providers that have a history of providing worse services because they have retained revenues rather than reinvesting them in new services and updated networks. In other Commission activities, requiring a letter of credit from one of the largest 100 banks in the United States has discouraged some providers from participating.¹¹ They do not have spare staff time to seek new relationships with distantly-chartered banks if their existing lending sources fail to meet the Commission criteria.

⁹ See Comments of ADTRAN at p. 4, <https://ecfsapi.fcc.gov/file/1091896320094/Comments%20on%20CAF%20Phase%20II%20Auction%20Processes.pdf>.

¹⁰ See Comments of Pennsylvania Public Utility Commission and the Pennsylvania Department of Community and Economic Development at pp. 5-6, <https://ecfsapi.fcc.gov/file/10918712105975/170918%20Pa%20PUC-DCED%20CAF%20II%20Pre-Auction%20Comments.pdf>.

¹¹ For instance, see the impact on the Rural Broadband Experiments. “Without Big Banks, Rural Broadband Experiments On Hold.” MuniNetworks. May 4, 2016. MuniNetworks.org/content/without-big-banks-rural-broadband-experiments-hold.

We agree with the many commenters that opposed the proposed Times Interest Earned Ratio (TIER) for financial screening prior to the auction, including USTelecom, Sacred Wind, WISPA, and ITTA. In particular, we second ITTA’s concern, “This is because providers of telecommunications infrastructure routinely leverage debt to fund significant capital expenditures to expand and upgrade networks. So, for example, ITTA member CenturyLink – who accepted over one-half billion dollars of Phase II model-based support, the most by any company – would not clear the thresholds for at least the last two metrics proposed by the Public Notice, 11 and if it failed to exceed the specified threshold for one more metric, it would then be subject to the cumbersome “more in-depth review.” This points to the patent disconnect between the reality of the capabilities and resources of certain applicants versus the purported ability of the Public Notice’s specified metrics to ensure these applicants’ financial qualifications.”¹²

We agree with BEK Communications: “BEK believes that the FCC can better determine an applicant’s liquidity and overall financial health by reviewing its audited financial statements, which will be required in the CAF Phase II process. Furthermore, a current ratio of two is exceptionally high compared to industry standards and may penalize applicants who are in exceptional financial condition but also in the process of a buildout or network upgrade that would require substantial use of cash. According to industry standards, a current ratio of one is typically the benchmark; but again, with a broadband provider in the midst of a large-scale deployment project, a ratio of below one may not indicate poor financial shape.”¹³

One of the mechanisms the Commission should consider as part of evaluating the financial health of potential bidders is whether they have received support from a state broadband program, such as Minnesota’s Border-to-Border Fund. The Commission could ensure state programs have a reasonable standard for assessing financial health and accept entities receiving state support are eligible to participate in bidding.

VII. Small Providers & Anti-Collusion rules

We agree with the Rural Coalition comments regarding the importance of smaller providers participating in this auction in order for it to succeed and indeed in order to ensure rural communities are well connected, “Thus, it is essential that the Commission at every turn consider ways to simplify the Auction design in a manner that will enable small businesses to participate meaningfully without undermining the process by which

¹² See Comments of ITTA at p. 4, <https://ecfsapi.fcc.gov/file/10919225016274/ITTA%20Comments%20on%20CAF%20II%20Auction%20PN%20As%20Filed%20091817.pdf>.

¹³ See Comments of BEK at pp. 2-3, <https://ecfsapi.fcc.gov/file/1091829584146/BEK%20Comments%20-%20CAF%20Auctions%20Public%20Notice%209-18-17%20FINAL.pdf>.

support can be distributed at efficient levels.”¹⁴ We are concerned that the Commission has historically shaped rules to fit with the largest carriers, many of whom are much more focused on investing in urban areas than rural regions.

We also agree with Rural Coalition regarding the anti-collusion rules as discussed in their comments at I.B.¹⁵ There simply are not enough third party consultants and similar parties to work with each of the potential small bidders. As such, prohibiting consultants from working with more than one potential bidder will either leave other potential bidders unable to participate or encourage potential bidders to work with lesser prepared consultants. Either approach would be contrary to the public interest in expanding high-quality Internet access to rural America in the most cost-effective manner.

VIII. What areas to include in the auction/how to bid

We agree with other commenters that the Commission should create rules that will allow small and local firms to participate to the greatest extent possible. In our experience, the proximity of a service provider is directly related to the quality of service offered. The largest firms, headquartered the furthest away tend to offer slower speeds, less reliable connections, higher prices, and worse customer service. Local firms are also far more likely to offer services to harder-to-reach areas because those areas are inhabited by their family and neighbors, not just anonymous prospective customers.

Therefore, we agree with Rural Wireless Association on the need to bid by census block rather than tracts: “Unserved areas are spread further apart, and more network infrastructure is required to provide service. If the Commission were to use census tracts, there would be a higher concentration of valuable census blocks in the tracts closer to urban areas than there would be in the more rural tracts, allowing funding to be targeted to these more populated census tracts at a lower bidding cost. In sum, use of census tracts would make it easier for large service providers to bid upon and successfully win the higher value (lower cost) areas than if they were forced to compete using a smaller bidding area.”¹⁶ However, we are concerned about a more granular approach leaving the prospect of individual blocks being left behind and therefore encourage the Commission to prioritize bids that include all blocks in a given region.

We also agree with the West Virginia Broadband Enhancement Council regarding the inclusion of census blocks that have been previously included in the Connect America Fund but have not yet had deployment. “In this regard, the Council requests that census blocks, previously claimed as part of the Connect America Fund, be granted eligibility

¹⁴ See Comments of the Rural Coalition at p. 7, [https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20\(9-18-17\).pdf](https://ecfsapi.fcc.gov/file/10918861230071/Rural%20Coalition%20Comments%20(9-18-17).pdf).

¹⁵ Ibid.

¹⁶ See Comments of the Rural Wireless Association at p. 2, <https://ecfsapi.fcc.gov/file/1091821719530/RWA%20CAFI%20Auction%20Public%20Notice%20Comments-%20FINAL.pdf>.

for inclusion in the Phase II Auction if no deployment of broadband infrastructure has occurred. The Council further requests that previously claimed census blocks be granted eligibility if it can be demonstrated that the level of service delivered within those census blocks fails to meet the standard conditioned within the initial commitment of funding.”¹⁷

Respectfully submitted,
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Appalshop
Center for Rural Strategies
Access Humboldt
National Digital Inclusion Alliance
Virginia Rural Health Association
Tribal Digital Village
Broadband Alliance of Mendocino
County
California Center for Rural Policy
Access Sonoma Broadband
The Utility Reform Network

¹⁷ See Comments of the West Virginia Broadband Enhancement Council at pp. 2-3, https://ecfsapi.fcc.gov/file/10919241192285/FCC_Connect%20America%20Fund%20Phase%20II%20Auction%20903_WC%20Docket%20No%2010-90_AU%2017-182_WV%20Broadband%20Enhancement%20Council_Comment.pdf.