Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	)	
	)	
Establishing the Digital Opportunity Data Collection	)	WC Docket No. 19-195
	)	
	)	
Modernizing the FCC Form 477 Data Program	)	WC Docket No. 11-10
	)	

COMMENTS OF NEXT CENTURY CITIES; THE INSTITUTE FOR LOCAL SELF-RELIANCE; BENTON INSTITUTE FOR BROADBAND & SOCIETY; THE NATIONAL DIGITAL INCLUSION ALLIANCE; ACCESS HUMBOLDT; THE CENTER FOR RURAL STRATEGIES, SOUTHERN CALIFORNIA TRIBAL CHAIRMEN'S ASSOCIATION, AND X-LAB

Francella Ochillo
Executive Director
Next Century Cities

Christopher Mitchell
Director, Community Broadband Networks Initiative
Institute for Local Self-Reliance

Andrew Jay Schwartzman
Senior Counsel
Benton Institute for Broadband & Society

September 23, 2019

I. Signatories

Next Century Cities is a nationwide coalition of more than 200 mayors and local government leaders who are committed to ensuring the benefits of fast, affordable, reliable broadband Internet access for their residents. Working together, member communities collaborate on ways to build next-generation networks, increase affordability, and identify unserved or underserved populations.

The Institute for Local Self-Reliance's (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.

The Benton Institute for Broadband & Society is a non-profit organization dedicated to ensuring that all people in the U.S. have access to competitive, High-Performance Broadband regardless of where they live or who they are. We believe communication policy - rooted in the values of access, equity, and diversity - has the power to deliver new opportunities and strengthen communities.[1]

The National Digital Inclusion Alliance (NDIA) is a unified voice for affordable home broadband access, public broadband access, affordable device options and community technology training and support programs. NDIA works 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.

Access Humboldt is a non-profit, community media & broadband access organization serving the residents and local jurisdictions of Humboldt County on the North Coast of California USA, managing resources that include: cable access TV channels; KZZH FM 96.7 community radio; a wide area broadband network with dedicated optic fiber connections to twenty locations serving local jurisdictions and community anchor institutions; broadband access wireless networks; a Community Media Center with studio and other production equipment and training on the Eureka High School campus; and ongoing operational support for public, educational and governmental access media services.

The Center for Rural Strategies works through strategic communications, coalition building, and public information campaigns to help establish a rural America that is more connected, greener, and more inclusive. Rural Strategies coordinates the Rural Assembly, a network of rural advocates, nonprofit agencies, local and state leaders, and policy makers. The Assembly engages in a variety of information-sharing,

[1] These comments reflect the institutional view of the Benton Institute for Broadband & Society, and, unless obvious from the text, is not intended to reflect the views of its individual officers, directors, or advisors.

organizing, convening, and reporting to bring a rural presence to regional and national policy discussions.

X-Lab is a tech policy institute that anticipates the disruptions and potentially dystopian outcomes of different policy options. It aims to help humanity change course through bold policy interventions, privacy-conscious technology development, and novel business models. X-Lab is future-focused: combining visionary leadership, risk tolerance, and technological acumen to influence legislative and regulatory debates and the creation of new technologies. The organization works to ensure that the tinkerers and digital craftswomen of tomorrow are free to develop human-centric, rights-preserving innovations.

II. Introduction

The signatories to these comments would like to thank the Federal Communications Commission ("FCC" or "Commission") for the opportunity to comment on these proceedings and its efforts to make one of the most significant steps forward on broadband data collection that we have seen in years. The Digital Opportunity Data Collection[2] will help the Commission and others who rely on its data to direct resources to areas with the greatest need while reducing overstatement errors.

Overstating the number of Americans with access to fast, reliable broadband has disadvantaged many households that have the misfortune of living on the same census blocks where some level of service is available or even where no service is currently available. Now that there is a consensus that the FCC's maps tell a different story about access than what residents may experience on the ground, this is a unique opportunity to update the process with the benefit of local viewpoints. In fact, incorporating local feedback is an integral part of any long-term solution to collect accurate data.

Though the Commission notes the challenges of translating geospatial maps into addresses, we agree that waiting for that solution should not slow the rollout of this approach. Policymakers around the nation rely on the FCC's maps to allot limited resources and have waited too long for maps with more accurate information.

In encouraging the Commission to proceed with these reforms, we do wish to stress that their adoption will not provide a complete or permanent solution. In particular, the Commission must still rely upon ISPs' good faith in self-reporting, as there is no meaningful enforcement component. More comprehensive and accurate measurement requires further Commission action and, perhaps, legislation.

III. Defining Service Availability

[2] *See generally Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket No. 19-195, 11-10, Report and Order (Aug. 1, 2019)(Digital Opportunity Data Collection).

We support the Commission's proposed definition for service availability, in particular:

> For purposes of the Digital Opportunity Data Collection, service is actually available in an area if the reporting fixed provider has a current broadband connection or it could provide such a connection within ten business days of a customer request, without an extraordinary commitment of resources, and without construction charges or fees exceeding an ordinary service activation fee. [definition continues] … A fixed wireless provider must have already installed enough base stations to cover and meet reasonably anticipated customer capacity demands; the installation of an additional base station, for example, would constitute an extraordinary commitment of resources.[3]

The Commission should maintain this strict definition after reviewing maps developed by Kansas, which also uses polygons.[4] Numerous areas in Kansas show access from wireless providers despite the MLAB speedtest database failing to record a single test from any customer in these regions. In other words, some providers have stretched the Form 477 definition of what is "available" too far. That is why we recommend a separate, voluntary category for service that is feasible, but not currently available.

This Commission's definition is a significant improvement over Form 477 data that has a less stringent definition for service. However, the Commission should consider allowing providers to separately mark areas where they are willing to begin servicing subscribers but may not have already installed a base station, for instance. To the extent these maps may be used by prospective customers, a separate layer may be useful to show where Internet Service Providers ("ISPs") could expand if sufficient demand develops. It is important that this separate layer not be treated as if it provided a geographic area with service for the purpose of determining whether an area is unserved or underserved.

Our review of the Kansas maps also suggests that the FCC is correct to require multiple polygons for different service levels. The Kansas maps suggest that maximum wireless speeds are often available anywhere in the covered footprint, regardless of the distance from the tower or topological features. As such, it is prudent for the Commission to require separate polygons where maximum speeds will vary.[5]

Similarly, this approach should be used for buildings that do not allow an ISP to offer service currently (paragraph 96).[6] The building should not be included in the ISP's filing of where its services are available; however, the ISP should be free to submit data

---

[3] *Id.* at 6, para. 13.
[4] *See* The Kansas Broadband Map (July 31, 2019), https://www.arcgis.com/apps/webappviewer/index.html?id=72ab65f4ac2c4207abd1e575fa148cb4.
[5] Digital Opportunity Data Collection at 6, para. 12.
[6] *Id.* at 41, para. 96.

showing that it would like to offer service there and is currently prevented from doing so. ISPs that find such reporting onerous would not have to submit this layer of data.

To the extent that some service providers may be unable to meet universal demands for service (most common with DSL exhaustion, satellite services, or wireless spectrum limits), the Commission should require disclosure of the maximum capacity of subscribers in a given area. This broadband availability data is being collected in large part for policymakers and other decision-makers to better understand where Internet access is sufficient and where it is not. That determination must be informed by whether the services in any given area can support demand, which continues to grow. Accordingly, the maps must include the limitations of any services that are not equipped to meet expectations in the event of significant demand.

IV. Collecting Latency Data

We encourage the Commission to collect latency data from providers. While we are unable to make detailed suggestions as to how that data should be collected, we recognize that consumer and enterprise applications are increasingly reliant on lower latency or quick response times. As technology continues to improve and the FCC's definition of broadband evolves, latency may become a more important benchmark than measuring the raw megabits per second.

V. Validating Data

a. Expediting Audits

We support the Commission in exploring audits and statistical methods for validating data submitted by the providers, noting that these audits should be conducted expeditiously. Form 477 data takes far too long to become public, resulting in the most recent available data being outdated by 12 to 18 months. Making this data available as soon as is practical is an important goal.

b. Reducing Continual Errors

We strongly support a crowdsourcing mechanism for confirming connectivity and reporting errors. Providers should have warnings, particularly in the early years for unintentional errors of coverage, followed by an escalating series of fines or other sanctions for continued errors, up to being ruled ineligible to receive subsidies from programs run by the Commission.

c. Setting an Error Threshold

The FCC should set a threshold for errors – such as fewer than one half of one percent of the number of premises covered – rather than trying to investigate errors for intentionality as requested by ACA (paragraph 83).[7] Even if providers are eligible for

[7] *Id.* at 35, para. 83.

some small number of warnings (fewer in future years when this data collection approach is more mature), continuous errors should be sanctioned using a simple and transparent scale that escalates based on the number of premises and the proportion to those covered by the service provider. In particular, it is a reasonable assumption that larger providers have greater capacity to comply and submit accurate information due to the greater resources available to them.

Errors should be noted as soon as possible and logged for researchers to understand the changes that are made between reporting windows. We agree with ACA in fearing that smaller providers would find it onerous to respond immediately to each submission (paragraph 90) and believe the Commission could set a threshold of errors over which a provider would have to respond prior to the next window. Below that threshold, small providers could wait to correct their filing but USAC should still flag areas that have been challenged. Conversely, larger providers should have a higher obligation to quickly correct errors because they have more resources to minimize errors and implement remedies.

d. Tracking Complaints & Resolutions

USAC should create a system, as envisioned by the Commission, to transparently track complaints and resolutions. In addition to the information proposed for collection by the Commission in paragraph 91, we would suggest the type of premise: single family, multi-dwelling, business, or other. Regarding information about a location where service is available but may fall short of expectations, we believe the USAC system should create an easy mechanism, such as a web form, for the person or entity reporting the problem to share it with neighbors or relevant parties that could contribute evidence regarding service levels nearby.

USAC's system should allow local governments (including school districts and libraries), tribal authorities, and states to submit bulk data regarding errors. These entities have strong incentives to ensure the maps are correct in the course of their work and they often receive complaints from residents and businesses in areas that lack decent access, giving them unique insight into accuracy.

e. Collecting Insights from Local Governments

Local governments need accurate data to develop local broadband access initiatives. Similar to federal policymakers, local leaders want to avoid deploying resources based on data that is simply inaccurate, outdated, or lacks granularity. It would have a direct impact on its most vulnerable communities. Several Next Century Cities' members, including Louisville, Kentucky; San Jose, California; and Seattle, Washington developed their own data collection methods and independently collected data as part of extensive digital inclusion strategies.

For example, Louisville developed SpeedUpLouisville, a speed test application designed for citizen engagement that helps residents identify where high quality service is available and its city leaders to develop data-driven digital equity strategies based on the specific local connectivity environment.[8] In San Jose, the city partnered with a local nonprofit organization and academics to conduct street interviews to ask questions about access, usage, and barriers to internet adoption for low-income residents with school aged children. Participants were also able to participate in the survey via text on their mobile phones.[9]

States also collect information that can rapidly reveal errors in submitted information, as evidenced recently by Maine's ConnectMe's Twitter thread showing errors in the 477 data that may be used for the Rural Digital Opportunity Fund.[10]

The bulk data should be accompanied by evidence that would allow USAC to rapidly investigate. Such submissions should be accorded higher priority by USAC and be presumed accurate unless the filer abuses the system with inaccurate complaints after warnings. USAC should have discretion in identifying additional organizations that may become trusted bulk data filers – such as foundations or other entities that we may not predict immediately.

VI. Pricing Data

a. Evaluating Reasonable Charges and Affordability

The Commission's proposed rules will make a significant improvement in the data available for researchers, policymakers, potential subscribers, and more to understand the dynamics in one of the most important inputs to the economy. However, the proposal lacks a key ingredient that would dramatically improve the usefulness of this data: pricing information.

It bears emphasis that the Commission's fundamental mandate under Section 1 of the Communications Act is to "make available, so far as possible, to all the people of the United States, ... wire and radio communication service with adequate facilities at reasonable charges, ..." Without comprehensive information about prices, it is

---

[8] Jon Matar*, Louisville Involves Citizens in Effort to Evaluate Internet Service* (Aug 18, 2016), https://nextcenturycities.org/louisville-involves-citizens-in-effort-to-evaluate-internet-service/.

[9] Digital Inclusion Strategy, City of San Jose at 3 (Nov. 2017), https://nextcenturycities.org/wp-content/uploads/digital-inclusion-report-2017.pdf

[10] *See* Connect Maine Authority (@connectmaine), Sep. 17, 2019, 6:40pm. "The point here is that the 477 SERVED definition, which fuels many of the inputs (like CAF2 blocks) to begin with, inadvertently and falsely excludes a lot of Maine homes that should be eligible." https://twitter.com/connectmaine/status/1174090721462087680.

impossible for the Commission to determine whether carriers' charges are, indeed, "reasonable."[11]

Moreover, affordability remains one of the primary barriers to broadband adoption. Local connectivity initiatives are enhanced by understanding where prices are unaffordable for residents. As Seattle, Washington, Next Century Cities member, detailed in its report on equitable access to broadband, "When the City determines that another site or neighborhood needs better or more affordable internet access, it does not need to wait for a private company to do it for them."[12] Thus, pricing data helps cities to develop their own broadband solutions. The Commission should encourage this type of self-reliance.

Consumers need to know what they can buy, and how much it will cost. And they need to be able to compare one product to another. The Commission should collect pricing data to better inform every stakeholder and improve the efficiency of broadband markets. A strong case can be made that this argument applies both to business and residential pricing. However, business pricing tends to have less transparency in broadband markets today. Enterprise customers may also be more sophisticated and in a better position to negotiate. Therefore, we focus these comments on the need for the Commission to collect residential pricing information. We use the term "residential" to mean services that have traditionally been labeled as "mass market," which includes both residential and some small-business users, in contrast to the "enterprise" market in which larger businesses buy services.

The Commission should require each provider to report the total monthly price charged to a residential customer for each distinct broadband plan or tier of standalone broadband service, net of any promotional discount, including mandatory equipment charges, usage-based fees or caps, and fees for early termination of required contracts. This information should be made available as a data set for researchers as well as a layer or series of layers on maps along with the deployment data. In creating tiers, the Commission should ensure that service distinctions reflect meaningful choices presented to consumers. For example, there should be a tier that reflects the provision of 1 Gbps symmetrical service and these tiers should evolve over time (for example as the cable industry deploys its anticipated 10 Gbps service).

The introduction to this NPRM states,

---

[11] 47 U.S.C. § 151(b)(3).

[12] *See* Columbia Telecommunications Corporation, A Plan for Facilitating Equitable Access to Wireless Broadband Services in Seattle at 104 (Feb. 2017), https://www.seattle.gov/Documents/Departments/Broadband/FacilitatingEquitableAccessToWirelessBroadbandServicesInSeattleCTCReport2017.pdf.

> *Accurate broadband deployment data is critical to the Commission's efforts to bridge the digital divide. Effectively targeting federal and state spending efforts to bring broadband to those areas most in need of it means understanding where broadband is available and where it is not.*[13]

Without pricing data, the Commission and other stakeholders cannot know whether its efforts are successfully bridging the digital divide because it will not have insight into pricing trends that make a tremendous difference in whether access is truly available to households or the nature of competition in an area. Understanding where broadband is available and where to target additional support depends significantly on whether the prices charged are reasonable.

As the Commission pursues its mission to ensure all Americans have at least one option for high-quality telecommunications access, policymakers need to understand whether the connectivity available is affordable. Researchers and subscribers should be able to compare prices in one region to another to better evaluate their options.

b. Transparency Improves Data Collections

Opponents of the Commission collecting pricing information have manufactured a series of excuses for why the Commission should allow these markets to operate without transparency, but none are persuasive. Arguments against disclosing price data are broadly similar to those who argued against the FCC disclosing advertised speeds. The Commission has rightly found that these concerns are outweighed by the public benefits from disclosure. In rejecting the opponents of speed disclosure, the Commission explains:

> We expect that disclosing minimum advertised or expected speed data, combined with already publicly available coverage information, will serve the public interest by promoting a more informed, transparent, and efficient marketplace. The dissemination of such information will allow consumers to determine what services are offered in specific geographic areas. It will also enable consumers to compare competing service offerings and make informed decisions regarding service plans and providers.[14]

Subscribers, both consumers and producers, will be far better able to "compare competing service offerings and make informed decisions" if they have access to pricing information. The price is a key – often *the* key – piece of information to comparison shopping.

[13] Digital Opportunity Data Collection at 1, para. 1.
[14] Digital Opportunity Data Collection at 17, para. 38.

The Commission already requires ISPs to disclose prices as well as disclosures such as usage-based and early-termination fees.[15] According to the Commission, "These disclosures inform the Commission, consumers, entrepreneurs, and other small businesses about the parameters of the service, without imposing costly burdens on ISPs."[16] Relying on ISPs alone to disclose pricing is insufficient, just as relying on provider maps on their own web sites is insufficient to understand what options are available in what regions.

For providers who still insist pricing information is some sort of trade secret, the Commission should adopt the same reasoning that it has used to reject claims that location data of where access is available is commercially sensitive.

> We are not persuaded that this coverage and speed data is competitively sensitive. Providers routinely publish and advertise the expected upload and download speeds they offer. Because coverage and speed data are already publicly available, we find that such information is not commercially sensitive, and conclude that its public release will not cause competitive harm to service providers. Most commenters agree that service providers often publicize this information by including it on their websites or in their advertising materials, which shows that they do not consider such information to be confidential or commercially sensitive.[17]

The same reasoning applies here. The data that would be collected is data that ISPs have chosen to make available to the public.

Another argument is that pricing data is dynamic and can change rapidly. That may be the case, but the FCC can share a snapshot just as it does deployment data. Deployment data and subscription rates are in flux, but the snapshot in time provides valuable information that is otherwise only available in expensive databases that are well out of reach of subscribers, policymakers, and most researchers.

In our experience ISPs already track the prices that their competitors offer as a standard business practice to ensure they can offer a competitive product. The Commission can and should improve market efficiency by collecting and publicizing price data, using the same reasoning it has in deciding to publish maps with speed data.

> When balancing the public and private interests at stake, we conclude that public release of these data will not result in competitive harm and that the public interest in releasing coverage and speed information substantially outweighs any

---

[15] *Restoring Internet Freedom*, **Error! Main Document Only.**33 FCCRcd 311, 442 (2017) at para. 223.
[16] *Id*.
[17] Digital Opportunity Data Collection at 17, para. 39.

interest that service providers have in keeping confidential information that is already publicly available.[18]

The only stakeholder that is left in the dark on pricing is the purchaser. That is the stakeholder the Commission should be focused on serving.

Finally, the Commission should require, and for the same reasons, key non-price terms as well as the circumstances in which usage is capped, deprioritized, or otherwise slowed or limited. The existence of such features can be important for a consumer who wants to understand how his/her household will actually be able to use a broadband connection — for instance, to ensure that there is enough data at fast enough speeds at the end of the month to allow a child to finish homework assignments.

VII. Conclusion

There are still too many communities in the United States that are starving for fast, reliable, and affordable broadband access. The aforementioned recommendations are intended to help identify unserved and underserved populations across the nation. Being able to reduce broadband deployment gaps and target limited resources toward those communities will bring the Commission another step closer to its goal of providing universal broadband access to all Americans.

[18] *Id.* at para. 40.