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

In the Matter of	)	
	)	
Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion	)	GN Docket No. 19-285

COMMENTS OF NEXT CENTURY CITIES

I. Introduction

Next Century Cities is a nationwide coalition of more than 200 municipalities that recognize that broadband is essential infrastructure. Each member is committed to ensuring the benefits of fast, affordable, reliable broadband internet access for its residents. Many of the populations represented within our coalition are in constant pursuit of solutions that bring high-speed connectivity within reach for areas that have been overlooked and remain unserved or underserved.

II. Summary

Every year, the Federal Communications Commission ("FCC" or "Commission") has an opportunity to assess whether its policies are helping to achieve its Congressional mandate to ensure that every American has access to broadband.[1] During this review process,[2] it is essential to identify ongoing barriers to both access and adoption.

Over the years, the Commission has made significant steps towards its goal, however, there is widespread agreement that the data used to measure progress tells a vastly different story than local accounts.[3] The digital divide continues to have a disproportionate impact on marginalized, rural, and low-income communities.[4] Affordability remains an insurmountable hurdle for

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[1] 47 U.S.C. § 151(b)(3).
[2] *See generally Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in Reasonable and Timely Fashion*, Notice of Inquiry, GN Docket No. 19-19-285, Notice of Inquiry (Oct. 4, 2019)(Broadband Deployment NOI), https://docs.fcc.gov/public/attachments/FCC-19-102A1.pdf.
[3] *See generally* John Kahan, *It's time for a new approach to mapping broadband data to better serve Americans* (Apr. 8, 2019), https://blogs.microsoft.com/on-the-issues/2019/04/08/its-time-for-a-new-approach-for-mapping-broadband-data-to-better-serve-americans/.
[4] *See* Ross Schulman, Georgia Bullen, Nick Thieme, *The United States of Broadband Map:*

millions of Americans,[5] which is compounded by the fact that approximately one-fourth of the population still has only one choice in broadband provider.[6] Further, serious questions remain as to whether the minimum speeds of 25 Mbps download/3 Mbps upload (25/3 Mbps) for fixed services[7] are still adequate for Americans to compete in a global digital economy.

Local leaders are highly aware that the broadband availability has a direct impact on economic mobility, educational outcomes, and health management systems. It has a residual impact on home values, transportation, population growth, and revenues, which all have a trickle-down effect on quality of life for residents. Thus, it is critical to support baseline connectivity in addition to putting policies in place that support next-generation networks.

III. Pricing Information is Essential to this Evaluation

As the Commission evaluates whether advanced telecommunications are progressing in a timely manner, it must consider whether these services are not only physically but economically accessible. Until the Commission analyzes pricing of advanced telecommunications networks, it cannot fully answer the question at the heart of this inquiry – to bring "economic, educational, healthcare, social, and civic benefits of connectivity to all Americans."[8]

Pricing data cannot be separated from this analysis. It tells a story that goes beyond the physical presence of wireline. For instance, if all Americans who cannot access broadband in their homes today were suddenly able to connect to a fixed network charging $1,000 per month, should those populations be counted as served? In this scenario, pricing data would allow the Commission to determine where access is truly available on reasonable terms.

Understanding general pricing information is also central to determining whether there is timely and reasonable broadband deployment to low-income households. The digital divide continues to punish low-income households.[9] Too often, families living on the margins have to choose

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Mapping the Gulf Between the Broadband Speeds That ISPs Report and Those Measured by Consumers (July 17, 2019), https://www.newamerica.org/oti/reports/united-states-broadband-map/.

[5] *See* Jonathan Sallet, Broadband for America's Future: A Vision for the 2020s at 66 (2019), https://www.benton.org/sites/default/files/BBA_full_F5_10.30.pdf.

[6] *See* FCC Communications Marketplace Report, The State of Mobile Wireless Competition, Status of Competition in the Market for the Delivery of Video Programming, Status of Competition in the Marketplace for Delivery of Audio Programming, Satellite Communications Services for the Communications Marketplace Report, GN Docket No. 18-231, WT Docket No. 18-203, MB Docket No. 17-214, MB Docket No. 18-227, IB Docket No. 18-251, Figure D-3 at 97 (Dec. 12, 2018), https://docs.fcc.gov/public/attachments/FCC-18-181A1.pdf.

[7] FCC, 2018 Broadband Deployment Report (Feb. 2, 2018), https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2018-broadband-deployment-report.

[8] Broadband Deployment NOI, para. 1 at 1.

[9] *See generally* Monica Anderson and Madhumitha Kumar, *Digital divide persists even as lower-income Americans make gains in tech adoption* (May 7, 2019), https://www.pewresearch.org/fact-tank/2019/05/07/digital-divide-persists-even-as-lower-

between paying other bills and staying connected, especially after promotional rates expire.[10] Additionally, the Commission should collect data on how many households have access to service in excess of 25/3 Mbps speeds yet only subscribe to the minimum.

Approximately nine million Americans rely on Lifeline, a program that helps low-income households afford voice and broadband services.[11] According to the Universal Service Administrative Company, the program administrator, even though the overall number of participants in the program continues to decrease, the number of participants who rely on the program for broadband access steadily increases each year.[12] Without programs like Lifeline, these low-income subscribers could easily be shut out of digital opportunities.

Local governments such as Wilson, North Carolina, and Fort Collins, Colorado, are implementing innovative programs to ensure that their municipal networks have low-cost options so that all households, regardless of income, have an opportunity to connect. Wilson provides a 40 Mbps symmetrical service tier to low-income households for $10 per month,[13] and has also developed a pay-ahead option so that poor credit does not act as a barrier to receiving service.[14] In Fort Collins, the city is working to implement low-income qualified credits for broadband service, which would make a gigabit symmetrical available for $19.95 per month.[15]

Local leaders across the country understand that the presence of broadband itself is not enough. In order to make broadband truly available to all, it is essential to consider the cost of service while working to ensure that affordable options are widely available.

IV. Mobile Access Is not a Substitute for Fixed Service

Though the capacity and reliability of mobile services continue to increase, the vast majority of households that have mobile internet access concurrently subscribe to a fixed access service provider. Many of these homes have "cut the cord" on fixed telephone service, yet they do not find a fixed broadband subscription to be duplicative. Even as more Americans use their phones

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income-americans-make-gains-in-tech-adoption/.

[10] *See* S. Derek Turner, Digital Denied at 104 (2016), https://www.freepress.net/sites/default/files/legacy-policy/digital_denied_free_press_report_december_2016.pdf.

[11] *See* Universal Service Admin. Co., 2018 Annual Report at 6 (2019), https://www.usac.org/wp-content/uploads/about/documents/annual-reports/2018/2018-Annual-Report.pdf.

[12] Ibid.

[13] *See* Kate Svitavsky, *Wilson's Greenlight Provides Affordable Internet Access To Public Housing Residents* (Dec. 15, 2016), https://muninetworks.org/content/wilsons-greenlight-provides-affordable-internet-access-public-housing-residents.

[14] *See* Will, Aycock, *Wilson Tackles Digital Divide with Pay Ahead Option - Community Broadband Bits Podcast 291* (Jan. 31, 2018), https://muninetworks.org/content/wilson-tackles-digital-divide-pay-ahead-option-community-broadband-bits-podcast-291.

[15] *See* Jacy Marmaduke, *Fort Collins Connexion plans big discounts on gig-speed internet for low-income residents* (Sept. 29, 2019), https://www.coloradoan.com/story/news/2019/09/29/fort-collins-connexion-plans-discounts-low-income-residents/3787212002/.

to go online for news, social media, and other content, the vast majority of data usage travels over Wi-Fi or local fixed connections rather than on a mobile network.[16]

Last year, individuals across the country participated in the #MobileOnly Challenge, an online campaign led by Next Century Cities that drew attention to the significant limitations of mobile-only internet service.[17] As part of the campaign, Mayor Sly James of Kansas City, Missouri, tweeted: "Have you tried writing a research paper on a smart phone? Data caps, battery limitations, and unreliable service can mean the difference for students. A mobile device is NOT the same as a home internet connection. I'm going #MobileOnly today, because OUR students deserve more."[18] Clearly, mobile broadband is not a substitute for fixed service. To suggest otherwise, as Mayor James pointed out, ignores significant limitations such as the unreliable service, data caps, and limited accessibility of mobile-only service.

Moreover, the Commission currently has no way of measuring where mobile access is available within buildings and residences. For mobile access to be considered a substitute, households must be able to use the network in distinctly similar ways. However, mobile access today – whether in a building in Manhattan or a home in eastern Washington – is consistently inconsistent.

V. Advanced Telecommunications Definition

The Commission's definition of basic broadband service at 25/3 Mbps is an outdated standard that should be increased. In the five years since this definition was updated, both usage and reliance has exponentially increased.

For example, the Internet Archive tracks the size of all the resources requested by the pages it is archiving. Since the start of 2015, the average size of web pages has increased by nearly 33 percent for desktop browsers and 50 percent for mobile browsers (which, again, tend to be connected to Wi-Fi networks using fixed connections).[19] 4K streaming is gaining popularity, with Comcast, among others, seeing significant increased usage.[20] Netflix recommends a

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[16] *See* Chris Neiger, *Here's How Much Smartphone Data Americans Are Using — and Why It Matters to Wireless Carriers*, (Oct. 28, 2018), https://www.fool.com/investing/2018/10/28/heres-how-much-smartphone-data-americans-are-using.aspx.

[17] *See* Next Century Cities, The #MobileOnly Conversation (Feb. 1, 2018), https://nextcenturycities.org/mobile-only-wrap-up/.

[18] Sly James (@mayorslyjames), "Have you tried writing a research paper on a smart phone? Data caps, battery limitations, and unreliable service can mean the difference for students. A mobile device is NOT the same as a home internet connection. I'm going #MobileOnly today, because OUR students deserve more." Twitter, Jan. 26, 2018, 1:12pm, https://twitter.com/MayorSlyJames/status/956998215479545857?ref_src=twsrc%5Etfw%7Ctwcamp%5Etweetembed%7Ctwterm%5E956998215479545857&ref_url=https%3A%2F%2Fnextcenturycities.org%2Fmobile-only-wrap-up%2F.

[19] Http Archive, *Report: State of the Web*, https://httparchive.org/reports/state-of-the-web?start=2016_05_15&end=latest&view=list, (last visited Nov. 21, 2019).

[20] *See* Jon Brodkin, *Comcast usage soars 34% to 200GB a month, pushing users closer to data*

connection of 25 Mbps to stream 4K content, which leaves very little capacity for other applications during such streams.[21] Disney+ will offer subscribers four simultaneous 4K streams in a bid to compete with established streaming platforms.[22] Educational content cannot be far behind, e.g., using the benefits of Ultra HD to better illuminate biological functions and other intricate details.

High speed connectivity should allow users to "originate and receive high-quality voice, data, graphics, and video services."[23] Video streaming, the higher quality the better, is essential for the hearing impaired and of growing importance for telehealth applications. Popular apps like Duo and Facetime on mobile devices (but most frequently using fixed networks via Wi-Fi), as well as video assistant apps that now feature easy video chat, require a robust upstream component.

As more people work from home or engage in online education courses, the requirement of multi-tasking while participating on an HD video conference will overwhelm that 3 Mbps capacity, even if no other devices in the household are attempting to share the network. Devices like Nest cameras, Ring doorbells, and other security monitoring devices are more common and placing greater strains on upstream capacities in ways not anticipated by the 2015 broadband standard.

The rise of 4K gaming is still another sign that households using commonly-used applications need more than 3 Mbps for all the applications to run concurrently. Gaming and 4K streaming may seem superfluous for this type of assessment, but the Commission should seriously consider that entertainment features like this are a key reason that homes with robust internet connections sell faster and at higher prices than homes that lack more advanced access. Notably, households using these common applications will rapidly congest a 25/3 Mbps network, leading to increased latency that decreases the utility of services like digital assistants that depend on low latency connections to function properly.

The Commission should revise the baseline for broadband service to reflect increased numbers of devices, applications, and the increased appetite of each application. A standard of at least 50/10 Mbps will help to ensure that households are not limited by inadequate connections.

Mobile Advanced Telecommunications

Given the importance the Commission has placed on winning the "race to 5G," the Commission should adopt 5G standards as the current definition for advanced telecommunications. It is confusing as to why the Commission would emphasize the importance of 5G and then set a

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cap (April 26, 2019), https://arstechnica.com/information-technology/2019/04/comcast-usage-soars-34-to-200gb-a-month-pushing-users-closer-to-data-cap/.

[21] *See* Netflix, *Can I stream Netflix in Ultra HD?*, https://help.netflix.com/en/node/13444 (last visited Nov. 22, 2019).

[22] *See* Nick Statt, *Disney+ will give subscribers four simultaneous streams and free 4K* (Aug. 23, 2019), https://www.theverge.com/2019/8/23/20830586/disney-plus-four-simultaneous-streams-4k-pricing-features-benefits.

[23] FCC, *2018 Broadband Deployment Report* (Feb. 2, 2018), https://www.fcc.gov/reports-research/reports/broadband-progress-reports/2018-broadband-deployment-report.

definition for advanced mobile telecommunications based on an old standard that undermines local efforts to support new small cell deployments.

Setting our "advanced" standard at the old 4G LTE technological capacities could actually guarantee a loss in the race to 5G. Market queues, such as an advertisement from T-Mobile that states that 5G "will support up to 10x faster speeds for mobile broadband,"[24] illustrates why the Commission should consider increasing the requirement for mobile advanced telecommunications to 10 times the current standard.

VI. FCC Data Overstates Coverage

The Commission is aware that its reliance on the 477 data collection overstates the number of households with broadband coverage and notes that a recent report from George Ford estimated a 3 percent overstatement.[25] A detailed analysis by the state of Georgia suggests the overstatement by landmass may well be over 100 percent in many rural counties, though it is not clear what that equates to in percentage of population.[26]

We support the Commission's effort to establish a more accurate data collection via the Digital Opportunity Data Collection.[27] To date, limitations in the FCC methodology suggest it cannot state with any certainty how many Americans lack this service. We suspect the direction is generally positive, with more households gaining access over time. However, that is no comfort to the countless Americans who still lack broadband access.

VII. Geostationary Satellite Access is Irrelevant

The vast majority of Americans – nearly everyone – could purchase satellite internet access. Still, well under 2 percent of Americans do, which is stunning given the number of Americans who lack reliable access in rural areas. Consequently, for the purposes of this analysis, geostationary satellite internet options have been categorically rejected by the market and should have no bearing on whether advanced telecommunications access is being deployed on a reasonable and timely basis.

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[24] T-Mobile, *What is 5G?*, https://www.t-mobile.com/5g/what-is-5g (last visited Nov. 22, 2019).
[25] *See* Broadband Deployment NOI, para 17 at 7.
[26] *See* Emma Hurt, *Georgia Rural Broadband Situation Worse Than FCC Maps Showed, New Mapping Underway* (Sept. 13, 2019), https://www.wabe.org/georgia-rural-broadband-situation-worse-than-fcc-maps-showed-new-mapping-underway/.
[27] *See generally* Next Century Cities, Institute for Local Self-Reliance, Benton Institute for Broadband & Society, National Digital Inclusion Alliance, Access Humboldt, Center for Rural Strategies, Southern California Tribal Chairmen's Association, and X-Lab Comments, WC Docket Nos. 19-195 and 11-10 (Sept. 23, 2019), https://ecfsapi.fcc.gov/file/1092505707624/Final%20Comment%20-%20Digital%20Opportunity%20Data%20Collection%20-%20Filed%20on%2009.23.19.pdf.

VIII. Conclusion

Next Century Cities appreciates the Commission's efforts to conduct meaningful analysis on the digital divide and hopes to partner in that endeavor. Local leaders know that high-speed connectivity can revitalize communities, creating new opportunities for everyone in the ecosystem. They are also an integral resource in ensuring that the Commission achieves its goal of universal broadband access in every community.

Respectfully submitted,

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