

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

In the Matter of)	
)	
<i>Establishing a 5G Fund for Rural America</i>)	GN Docket No. 20-32
)	
<i>Universal Service Reform – Mobility Fund</i>)	WT Docket No. 10-208 (closed)
)	

COMMENTS OF NEXT CENTURY CITIES

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I. Introduction

Next Century Cities (“NCC”)¹ submits these comments in response to the Federal Communications Commission’s (“FCC” or “Commission”) request for input on establishing a 5G fund for rural America in the above captioned dockets.² Americans, regardless of zip code, deserve access to the benefits of high-speed connectivity. Communications technologies play a critical role in keeping us connected and local economies strong. Whether we are working, learning, starting businesses, creating content, obtaining healthcare, or connecting with friends and family, access to affordable and reliable broadband has a direct impact on education, economic well-being, health outcomes, and civic engagement.

Ideally, the Commission’s proposal will help to deploy wireless technologies to areas of the country that have historically struggled with high-speed connectivity. However, to do this, the Commission must employ strategies that provide adequate broadband speeds in addition to

¹ Next Century Cities is a nonprofit and nonpartisan 501(c)(3) coalition of over 200 member municipalities that works with local leaders to provide reliable and affordable broadband access in every community while helping others realize the economic, societal, and public health benefits of high-speed connectivity.

² *In the Matter of Establishing a 5G fund for Rural America*, GN Docket No. 20-32, FCC 20-52 (GN 2020) (5G Fund Order).

having clear definitions of what will constitute an eligible area, which relies on accurate mapping data. Being able to reduce broadband deployment gaps and target limited funding resources toward communities with the greatest need will accelerate effective deployment of wireless technologies, bringing the Commission another step closer to its goal of providing universal broadband access to all Americans.

II. The Proposed Speeds Are Not a Meaningful Departure from Current Minimums

The Commission seeks comment on the minimum speeds that 5G fund recipients should be required to provide to rural consumers. One proposal would require fundees to provide minimum speeds of 35 Mbps downstream and 3 Mbps upstream,³ a low standard for what is branded as a revolutionary technology. While these speeds show a slight increase in download speed from the current benchmark, it does not provide enough of a meaningful change to meet current or future marketplace demands. The slight increase to the download speed minimum falls short of the proposed high throughput, low latency benefits the FCC has touted regarding 5G. Moreover, this standard would not address the increasing need to improve minimum upload speeds at a time when online learning, telework, and telehealth mandates continue to be introduced in the wake of the Coronavirus (COVID-19) pandemic. Consumers are now being asked to contribute to the digital ecosystem in ways that they were not previously required to do so. Now that the rate at which data is transferred to the consumer has become just as important as

³ See 5G Fund Order at para. 97.

the rate at which data is transferred from the consumer to the online ecosystem,⁴ 3 Mbps upstream is already an outdated standard.

The Commission has also proposed a higher speed tier of 50 Mbps downstream and 5 Mbps upstream.⁵ Again, this is a departure from current FCC minimums, however, these increases will not have the desired effects of providing those in rural areas the high-speed access that has become essential, more so in recent months. It reflects a much-needed increase from the current minimum download speed, yet the upload proposal is simply inadequate. Building broadband networks, some years in the making, based on an anemic standard is not an effective solution for communities that continue to struggle with connectivity. Instead, the Commission should take a forward-looking approach and impose a minimum standard of at least 100 Mbps symmetrical in order to provide the most opportunities for rural consumers.

Often a slow connection is functionally equivalent to no connection at all. The current minimums were not designed to accommodate, for example, various members of a household completing online educational classes, video conferencing, and other daily digital functions concurrently. As households become more reliant on digital access for an increasing number of high-bandwidth applications, namely telework, healthcare, and distance learning, faster broadband speeds are critical. Additionally, at a time when rural communities are working desperately to attract new residents and businesses, local officials are constantly searching for ways to provide high-speed connections that allow new residents to contribute to, rather than consume in, the digital ecosystem.

⁴ U.S. Govt. Accountability Office, GAO-15-363, *Broadband Performance: Additional Actions Could Help FCC Evaluate Its Efforts to Inform Consumers* 4 (2015), available at <http://www.gao.gov/assets/670/669739.pdf>.

⁵ *Id.*

It is also important to note that while wireless technologies are not substitute for a wireline connection, some communities have no other choice than to rely on wireless and cellular service to connect them to the internet. In fact, in 2019, approximately 17% of adults in the U.S. relied on their smartphones to get online from home.⁶ Approximately 37% of U.S. adults said that they mostly use a smartphone when accessing the internet, a share that has nearly doubled since 2013.⁷ Populations who cannot afford fixed broadband subscriptions also rely heavily on mobile phones to get online. That includes residents in rural areas in which 24% of adults view getting access to high-speed internet as a major problem.⁸

Americans who do not have access to high-speed connectivity share many of the same frustrations and are desperate for digital opportunities, regardless of where they live. That is why it is so important for the Commission to roll out wireless technologies to unserved and underserved communities in rural, urban, and mid-sized cities alike. In rural areas, in particular, low population density and the high cost of fixed broadband connections keeps competition low and prices high. Thus, having affordable high-speed connections that compete with the speeds available in metropolitan areas will help rural communities to adapt to, for instance, distance learning, telework models, and online storefronts. For some, they will have remote access to healthcare for the first time.

Naturally, if the goal is to provide rural residents with equal digital opportunities as their urban counterparts, then the Commission should be willing to embrace ambitious goals including

⁶See *Internet/ Broadband Fact Sheet*, Pew Research Center (June 12, 2019), <https://www.pewresearch.org/internet/fact-sheet/internet-broadband/>.

⁷See Monica Anderson, *Mobile Technology and Home Broadband 2019*, Pew Research Center (June 13, 2019), <https://www.pewresearch.org/internet/2019/06/13/mobile-technology-and-home-broadband-2019/>.

⁸See Andrew Perrin, *Digital gap between rural and nonrural America persists*, Pew Research Center (May 31, 2019), <https://www.pewresearch.org/fact-tank/2019/05/31/digital-gap-between-rural-and-nonrural-america-persists/>.

a new minimum standard of at least 100 Mbps symmetrical. Setting the minimum required speeds for the program at at least 100 Mbps symmetrical will provide rural communities the same ability to utilize multiple high-bandwidth applications that Americans with affordable and reliable broadband often take for granted. Surely it will help increase productivity for residents living in rural communities who are currently unable, or must painstakingly wait, to complete routine tasks online. It will also help usher in new opportunities for video conferencing, precision agriculture applications, and real-time data uploads, all of which require vast amounts of data be pushed from the user onto the internet.

In short, a 100 Mbps symmetrical standard is not only a reasonable standard, but helps support innovation in rural economies.

III. The Commission Must Adopt a Sufficiently Broad Definition of “Rural”

Next Century Cities agrees with the Commission’s Option B to base eligibility for rural 5G deployment funds on areas that have not historically had 4G LTE service, and where mapping data shows there is a lack of 5G service as well.⁹ However, the Commission should work closely with state, local, and Tribal officials to determine the areas that have historically lacked 4G LTE coverage and are unlikely to see rapid deployment of 5G technology. This will ensure that areas unserved with wireless technology see rapid deployment of wireless connectivity.

Determining eligibility along these lines will also provide communities that may have 4G LTE connectivity but are underserved by this technology confidence that they will be able to

⁹ See 5G Fund Order at para. 38.

better connect their communities. This confidence is a critical element in the adoption and diffusion process for high-speed wireless technology. As rural communities are able to provide the services and digital conveniences that can compete with their urban counterparts, it allows local businesses to thrive and gives residents new incentives to stay in rural areas. Individuals do not have to leave for areas with better connectivity when they are able to access modern day conveniences online. Additionally, businesses that were once severely limited by low bandwidth connections will be able to operate and/or expand in rural areas. Ultimately, industries are able to flourish, fewer economies suffer population loss, and the brunt of that impact that affects the quality of life for rural residents will be significantly reduced.¹⁰

The Commission has stated that they are committed to providing connectivity solutions to rural America and preventing them from falling behind.¹¹ To that end, the Commission has begun to put into place numerous programs that are intended to connect and keep connected Americans across the country.¹² This aligns with the Commission’s mandate from the Telecommunications Act “make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nationwide, and world-wide wire and radio communication service.”¹³

Staying true to its charge to make available high speed reliable 5G service to rural Americans requires taking a broad approach in determining eligibility. It is not enough for the

¹⁰ See Charles Neal, et al., *The Promise of Smart Rural Communities*, Deloitte (Sept. 27, 2019), <https://www2.deloitte.com/us/en/insights/industry/public-sector/the-promise-of-smart-rural-communities.html>.

¹¹ *Id.* at para. 1.

¹² *Bridging The Digital Divide For All Americans*, Federal Communications Commission, <https://www.fcc.gov/about-fcc/fcc-initiatives/bridging-digital-divide-all-americans>; *The FCC’s 5G Fast Plan*, Federal Communications Commission, [https://www.fcc.gov/5G#:~:text=Under%20Chairman%20Pai%2C%20the%20FCC.\(3\)%20modernizing%20outdated%20regulations](https://www.fcc.gov/5G#:~:text=Under%20Chairman%20Pai%2C%20the%20FCC.(3)%20modernizing%20outdated%20regulations).

¹³ 47 U.S.C. § 151 (1996).

Commission to direct funding only to areas that have historically lacked 4G LTE service. Rather, it must take an expansive view of which areas that do not have current 5G connectivity. The combination of lack of historic 4G LTE and current lack of 5G service will allow the Commission to provide 5G service to the largest amount of unserved and underserved communities.

Additionally, taking an expansive approach to eligibility will prevent the Commission from falling into the trap of picking winners and losers as to which rural communities will see meaningful increases to wireless access. As Joanne Schindelheim, a resident of Durham, New York, stated:

At a minimum, government-managed funds—Universal Service Funds (USF) and other allocated taxpayer dollars--must be earmarked to connect every residence with a school-aged child to the internet at 100Mbps speed. Given that providers have had sole control of billions in funding for decades, and millions of American in rural communities are still without internet access, it is time to adopt a new model and new rules that will better serve unserved and underserved rural communities. Whether wired or wireless, the solution must be reliable, affordable, internet access service on par with what children in cities are receiving.

If eligibility is centered around lack of historical access to 4G LTE alone, communities that may have access to 4G but have not widely adopted the technology or have found that it is simply not enough to provide a meaningful connectivity solution will be unable to entice providers to bring technological innovation to their communities.

Chairman Ajit Pai rightly stated that we can no longer relegate rural America to playing catch-up with wireless technology.¹⁴ We should not be utilizing Universal Service Funds to promote and deploy outdated technologies that will do nothing to close the digital divide.¹⁵ This is an opportunity to take a visionary approach that targets as many people and providers as

¹⁴ 5G Fund Order at 114-115 (Statement of Chairman Ajit Pai).

¹⁵ *Id.*

possible. Commissioner Brendan Carr was also accurate in his assessment that, in many rural areas, there is no business case for building a 5G network.¹⁶ For instance, looking at how connectivity impacts precision agriculture, it has been reported that as many as 25% of farms across the nation do not have access to the internet at all. If 5G is deployed to these areas, it has the power to bring real-time information to agriculture so that farmers can monitor their land and livestock to improve yield and make production more efficient.¹⁷ This example is one of the many reasons why the Commission must step in and create incentives for traditional and community-based providers to deploy as widely as possible.

A broad approach in determining eligibility will also help ensure that no rural communities slip through the gaps. Moreover, in order for the Commission to determine which areas have not had historic 4G LTE service or are not likely to garner 5G support in the future, it must invest the time and resources into creating new, granular, broadband coverage maps. That is the only way to ensure that limited resources actually reach populations in need.

IV. Accurate and Reliable Broadband Mapping Data Is a Prerequisite for Efficient Deployment

To adequately deploy 5G the Commission must know which areas are not served and which areas are underserved by 4G LTE technologies. Currently, the only data set the Commission can rely on for this data is Form 477 data, which has time and time again been shown to be inaccurate, unreliable, and inherently flawed. Protocols for submitting Form 477 data allow broadband providers to self-report on the location they serve and the speeds they

¹⁶ 5G Fund Order at 118 (Statement of Commissioner Brendan Carr).

¹⁷ Catherine Sbeglia, 5G might make the city smart, but it can also make the country clever, RCR Wireless (Sept. 18, 2019), <https://www.rcrwireless.com/20190918/5g/five-rural-use-cases-5g>.

provide without any independent verification. This is only compounded by outdated procedures for determining service. Under current service definitions, if at least one person in a census tract is able to be served without extraordinary commitment of resources.¹⁸ These shortcomings in data collection allow providers to provide a much more optimistic picture of where service is available, and obfuscating areas where it is not.

The Commission's most recent Broadband Deployment report highlights that as of 2018 99.4% of the United States' rural population is served by mobile LTE at advertised speeds of 5 Mbps downstream and 1 Mbps upstream.¹⁹ The report also notes that, as of 2018, 83.3% of rural Americans have access to mobile LTE at speeds of 10 Mbps downstream and 3 Mbps upstream.²⁰ However, an FCC investigation into U.S. Cellular, T-Mobile, and Verizon found that all had overstated their 4G LTE coverage in rural areas across the country.²¹

Commission staff conducted drive test routes to measure on the ground network performance and found that only 62.3% of their tests achieved the minimum speeds predicted by coverage maps. Even more troubling, FCC staff was unable to obtain any 4G LTE signal for 38% of drive tests on U.S. Cellular's network, 21.3% of tests on T-Mobile's network, and 16.2% on Verizon's, despite each carrier reporting that coverage in the relevant areas.²² If the Commission is to push forward with this program using carrier submitted data, it will leave open

¹⁸ See Fed. Comm'n's Comm'n, *FCC Form 477 Local Telephone Competition and Broadband Reporting Instructions for Filings as of December 31, 2019 and Beyond* at 34 (2019) available at <https://us-fcc.app.box.com/v/Form477Instructions>.

¹⁹ See *Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion*, GN Docket No. 19-285, 2020 Broadband Deployment Report, FCC 20-50, at 20 (June 8, 2020).

²⁰ *Id.*

²¹ See Fed. Comm'n's Comm'n, *Mobility Fund Phase ii Coverage Maps Investigation Staff Report* at 2 (2019), <https://docs.fcc.gov/public/attachments/DOC-361165A1.pdf>.

²² *Id.*

the possibility that carriers will not admit there are areas they do not cover with LTE service. In turn, some communities will inevitably be overlooked because of unreliable service data.

The Commission needs to work with various stakeholders to maximize the reliability and accuracy of coverage mapping. In fact, the Broadband Data Act charges the Commission to work with state, local, and Tribal governments to collect the data to be used in creating new broadband maps, noting that the procedures for the data submission are to be crafted by the Commission. As Next Century Cities has stated previously:

This is an opportunity for the agency to work with state and local officials to create submission procedures that include challenge processes that are easy to use and promote participation among state and local governments in addition to industry stakeholders and consumers as well. Only by collecting a totality of the information will the FCC get an accurate depiction of broadband deployment across the nation.²³

Furthermore, according to the Mobility Fund Phase II Coverage Maps Investigation Staff Report, “[t]he Commission and the public must be able to rely on the deployment data that providers submit to the Commission. Inaccurate data jeopardize the ability of the Commission to focus our limited universal service funds on the unserved areas that need the most support.”²⁴ If the Commission blindly moves forward without garnering new mapping data, it risks falling into the very trap it has already uncovered.

We appreciate the Commission’s efforts to help close the digital divide and connect rural Americans. Here, the best course of action is the proposed Option B to pause deployment until

²³ Ryan Johnston, *Form 477 Data Undermines Conclusions in the 2020 Broadband Deployment Report*, Next Century Cities (May 8, 2020), <https://www.google.com/url?q=https://nextcenturycities.org/form-477-data-undermines-conclusions-in-the-2020-broadband-deployment-report>.

²⁴ See supra note 19 at 2.

better mapping data is collected. This will certainly allow a more accurate picture of the eligible areas. It will also allow the Commission to disburse USF funds efficiently and effectively.

V. Conclusion

Rural Americans often find themselves struggling with connectivity issues, and the Commission's dedication to providing these areas with wireless service is to be commended. Residents in rural areas also need the Commission to set standards to ensure that technologies that are not obsolete from the outset. The Commission must also take the necessary steps to provide cutting edge high-speed technologies that will allow for easy upgrades and will not relegate millions of people to playing catch-up.

Additionally, the Commission must take an expansive approach to determining which areas are eligible for deployment under this program. Targeting areas that have historically not had access to 4G LTE technology as well as areas that are unlikely to see quick 5G deployment will allow the largest number of communities to see the benefits of 5G deployment. Finally, the Commission must wait and collect accurate, granular coverage data to best determine which areas are served and which areas are not. It is clear that the Commission's current mapping data is unreliable at best and using it is certain to leave many communities without the ability to utilize the Universal Service Fund to close the digital divide.