

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

In the Matter of)	
)	
Promoting Investment in the 3550-3700 MHz Band;)	GN Docket No. 17-258
)	
Petitions for Rulemaking Regarding the Citizens Broadband Radio Service)	RM-11788 (Terminated) RM-11789 (Terminated)

COMMENTS OF NEXT CENTURY CITIES

Next Century Cities
1200 18th Street, NW, Suite 700
Washington, DC 20036
617.251.8358
deb@nextcenturycities.org

Ronald E. Quirk, Esq.
Seth L. Williams, Esq.
Marashlian & Donahue, PLLC
1420 Spring Hill Road, Suite 401
Tysons, VA 22102
(703) 714-1300
req@commlawgroup.com
slw@commlawgroup.com

December 28, 2017

Table of Contents

I. INTRODUCTION AND SUMMARY 1

II. ADOPTING THE *NPRM*'S PROPOSALS WOULD STRAND EXISTING INVESTMENT IN 3.5 GHz BAND, DISPROPORTIONATELY HURTING SMALL AND RURAL COMMUNITIES AND PROVIDERS 3

III. EXPANDING PAL GEOGRAPHIC AREAS WILL DRIVE UP PRICES AND LIMIT INVESTMENT OPPORTUNITIES FOR SMALL AND RURAL PROVIDERS AND INNOVATIVE USERS 6

IV. EXTENDING PAL LICENSE TERMS WILL INCREASE COST, FORECLOSE ACCESS BY SMALLER USERS, AND LOCK IN ADVANTAGES FOR LARGEST CARRIERS 9

V. PROPOSED BIDDING PROCEDURES WILL EXASERBATE *NPRM*'S SHORTCOMINGS WITH RESPECT TO GEOGRAPHIC LICENSE SIZE AND LICENSE TERM..... 11

VI. CONCLUSION 14

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

In the Matter of)	
)	
Promoting Investment in the 3550-3700 MHz Band;)	GN Docket No. 17-258
)	
Petitions for Rulemaking Regarding the Citizens Broadband Radio Service)	RM-11788 (Terminated) RM-11789 (Terminated)

COMMENTS OF NEXT CENTURY CITIES

Next Century Cities (“NCC”) respectfully submits these comments in response to the Commission’s above-captioned Notice of Proposed Rulemaking and Order Terminating Petitions.¹ NCC applauds the Commission’s thoughtful leadership in opening the 3.5 GHz Band to innovative and competitive uses and supports ongoing efforts to encourage deployment in the band. However, the *NPRM*’s proposed changes to the existing 3.5 GHz rules will undermine the current rules’ structure that economically rewards the provision of wireless broadband service to rural America and other less-populated areas in favor of regulations and policies that advance the interests of the largest wireless carriers, which will result in the concentration of Priority Access Licenses (“PALs”) in the hands of those few carriers. Accordingly, for the reasons stated herein, NCC urges the Commission to retain the current 3.5 GHz rules.

I. INTRODUCTION AND SUMMARY

NCC is a 501(c)(3) organization that supports communities and their elected officials as they seek to ensure that their residents have fast, affordable, and reliable broadband internet

¹ *Promoting Investment in the 3550-3700 MHz Band, Notice of Proposed Rulemaking and Order Terminating Petitions*, 32 FCC Rcd 8071 (Oct. 24, 2017) (“*NPRM*”).

service. NCC’s membership includes more than 180 mayors and local government leaders. Collectively, these leaders represent more than 33.9 million Americans across 39 states.

NCC’s members represent small and rural towns and villages, including Ammon, Idaho; Letcher County, Kentucky; and Dahlonega, Georgia, where the manifest digital divide makes access to broadband especially important. The Commission itself has emphasized the critical nature of the urban-rural digital divide, affirming that more than 39 percent of Americans living in rural areas – 23 million people – do not have access to broadband service, whereas 96 percent of urban residents do.² NCC believes fixed wireless technology can play an important role in rapidly expanding rural access to the 25 Mbps downstream and 3 Mbps upstream capacity networks that the Commission rightly describes as the minimum connection necessary for households to take full advantage of modern applications.³

NCC’s members also represent some of the largest cities in the country, including San Francisco and Los Angeles, California; Boston, Massachusetts; and Raleigh, North Carolina as well as communities of every size in between, including medium-sized cities that anchor metro areas (*e.g.*, Champaign-Urbana, Illinois) and communities just outside larger metropolitan areas (*e.g.*, Longmont, Colorado and Shaker Heights, Ohio).

² See *Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act, 2016 Broadband Progress Report*, 31 FCC Rcd 699 at ¶¶ 4, 79, 121 (2016) (“*Broadband Progress Report*”).

³ To further illustrate the critical nature of wireline or fixed wireless broadband access at speeds of at least 25 megabits per second (“Mbps”) for downloads and 3 Mbps for uploads, NCC is helping sponsor the [#MobileOnlyChallenge](#). The Challenge will help illustrate the limitations, lowers speeds, and data caps that come with mobile service. The Challenge also underscores the importance of ensuring fast and reliable broadband access to Americans – disproportionately low-income and rural Americans – who currently lack broadband access.

The leaders of these communities and many others around the country recognize the critical importance of broadband access to their residents, and this understanding underpins NCC’s core principles: 1) High-Speed Internet is Necessary Infrastructure; 2) The Internet Is Nonpartisan; 3) Communities Must Enjoy Self-Determination; 4) High-Speed Internet is a Community-Wide Endeavor; 5) Meaningful Competition Drives Progress; and 6) Collaboration Benefits All.⁴

With these principles in mind, NCC urges the Commission to retain the current, pro-competition rules. Otherwise, the *NPRM*’s proposals would entrench the largest incumbent wireless providers as winners of the 3.5 GHz Band to the detriment of other potential users.

These comments focus on the following proposed rule changes:

- increasing the size and scope of PAL license areas, from small, localized *census tracts* to much larger areas such as Partial Economic Areas (“PEAs”), which will raise the barrier of entry to the 3.5 GHz band, hurting rural areas and limiting opportunities for new, innovative uses of the band;
- extending the PAL license term from the current three-year period to a ten year term with renewal expectancy, which will further limit small operators’ access to the band and will promote spectrum hoarding by large wireless carriers; and
- the proposed PAL auction procedures will exacerbate the problems caused by the *NPRM*’s other proposals.

II. ADOPTING THE *NPRM*’S PROPOSALS WOULD STRAND EXISTING INVESTMENT IN 3.5 GHz BAND, DISPROPORTIONATELY HURTING SMALL AND RURAL COMMUNITIES AND PROVIDERS

Contrary to claims in some petitions that precipitated this *NPRM*,⁵ significant investment is already taking place in the 3.5 GHz Band in reliance on the existing rules. These investments

⁴ Next Century Cities, Our Principles, available at <http://nextcenturycities.org/about/overview/> (last accessed December 18, 2017).

⁵ See, e.g., *In re Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Petition for Rulemaking at 4, FCC GN Docket No. 12-354 (June 19, 2017) (“T-Mobile Rulemaking Petition”).

come from a wide variety of industry stakeholders and represent millions of dollars and countless hours of investment that would be stranded if the Commission adopts the proposals in the *NPRM*.⁶ For example, one technology company, Wireless Telecom Group Inc., has reported that it is in the process of deploying more than a thousand 3.5 GHz-ready base stations to more than 200 predominantly rural carriers in reliance on the current rules.⁷ As described in more detail below, Wireless Telecom Group, and others like it, will not be able to access licensed spectrum under the proposed rules.

Other industry stakeholders, including Wireless Internet Service Providers (“WISPs”), have devoted significant private capital to the 3.5 GHz band in reliance on the existing rules. For example, In The Stix Broadband, LLC, which serves just over 1,000 rural customers in Pennsylvania, reported investing about \$70,000 deploying service in the 3.5 GHz Band.⁸ While a \$70,000 investment may seem insignificant by the standards of large wireless providers, it represents an enormous commitment for a small rural provider with 1,000 customers. This also represents investment at the precipice of the digital divide, and when aggregated with other WISPs across the country, it amounts to millions of dollars in investment in precisely what the Commission asserts is in the public interest, *i.e.*, closing the digital divide for millions of rural Americans who lack broadband access.⁹

⁶ Ex Parte Letter of Wireless Internet Service Providers Association (“WISPA”) at 3, *Promoting Investment in the 3550-3700 MHz Band*, FCC GN Docket No. 17-258 (December 6, 2017) (“WISPA Ex Parte”).

⁷ Comments of Luke Getto, *Promoting Investment in the 3550-3700 MHz Band*, FCC GN Docket No. 17-258 (November 20, 2017) (“Wireless Telecom Group Inc. Comments”).

⁸ Comments of In the Stix Broadband, LLC, *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, FCC GN Docket No. 12-354 (July 24, 2017) (“In the Stix Comments”); *see also* Comments of 3rd Coast Internet, *Promoting Investment in the 3550-3700 MHz Band*, FCC GN Docket No. 17-258 (October 25, 2017) (“3rd Coast Comments”).

⁹ WISPA Ex Parte at 2-3.

The Commission's proposed changes threaten to strand WISPs' to-date investments and discourage future investment in the 3.5 GHz Band. As the Commission has stated,¹⁰ WISPs often operate in rural and underserved areas.¹¹ As a result, WISPs often operate on tight budgets with relatively few subscribers over whom capital investments can be spread. Therefore, because increasing PAL geographic license areas and extending license terms will substantially increase PAL prices, the *NPRM*'s proposed changes will likely price many WISPs out of the 3.5 GHz Band, stranding current investments and chilling future investments. These harms would disproportionately fall on rural communities that rely on WISPs to provide crucial broadband Internet access to all.

Moreover, the Commission's proposed solution of allowing the partitioning of PALs is not an adequate solution.¹² WISPs have explained to the Commission that mobile carriers are often unwilling to make spectrum available on the secondary market to smaller competitive providers,¹³ and even if large wireless carriers (with the inherent negotiating advantages of large companies) do agree to partition larger PALs, those carriers will only offer partitioned licenses on their terms. This is further evidence that the proposed rules will put PALs out of reach for most WISPs and other rural users.¹⁴

¹⁰ See, e.g. Then-Commissioner Ajit Pai, Remarks at WISPAPALOOZA (October 15, 2014), available at https://apps.fcc.gov/edocs_public/attachmatch/DOC-329969A1.pdf (citing the reliance on a WISP of 23,000 people in Southeast Kansas, including Chairman Pai's parents).

¹¹ WISPA Ex Parte at 1.

¹² *NPRM* at ¶ 31.

¹³ WISPA Ex Parte at 2-3.

¹⁴ *Id.*

III. EXPANDING PAL GEOGRAPHIC AREAS WILL DRIVE UP PRICES AND LIMIT INVESTMENT OPPORTUNITIES FOR SMALL AND RURAL PROVIDERS AND INNOVATIVE USERS

Expanding PAL geographic areas from small *census tracts* to PEAs or other larger areas will increase prices with few associated benefits.¹⁵ Even if the only upward pressure on price was due to the aggregation of multiple census tracts in a single PEA, PAL prices will surely increase by an order of magnitude with PEA geographic areas. A simplified thought experiment illustrates the problem. With 416 PEAs,¹⁶ the average cost of a PAL, assuming a nationwide channel valuation of \$1 billion and understanding the 3.5 GHz Band is not currently organized into nationwide channel blocks, would be approximately \$2.4 million. Conversely, with over 70,000 census tracts,¹⁷ a PAL's average cost at the census tract level in this scenario would be approximately \$14,000.

Moreover, the upward pressure on PAL prices caused by PEA license areas likely will not be limited to the sum price of census tract PALs in the PEA. Licensing PALs at the PEA level will push rural areas into the same PAL as metro areas highly sought after by large wireless carriers. Therefore, rural providers, facing very different deployment economics from large wireless carriers, would have to compete with large carriers based on PAL pricing driven by highly sought-after spectrum in the urban areas at the core of a PEA.

¹⁵ *NPRM* at ¶ 24.

¹⁶ Federal Communications Commission, List of Partial Economic Areas with Corresponding Economic Areas, available at https://apps.fcc.gov/edocs_public/attachmatch/DA-14-759A2.pdf (last accessed December 19, 2017).

¹⁷ United States Census Bureau, 2010 Census Tallies of Census Tracts, Block Groups & Blocks, available at <https://www.census.gov/geo/maps-data/data/tallies/tractblock.html> (last accessed December 19, 2017).

For example, In The Stix Broadband provides service predominantly in Indiana, Cambria, and Blair Counties in Pennsylvania.¹⁸ These counties straddle two PEAs, 23 for Indiana County and 121 for Cambria County and Blair County. Indiana County – population density 105 people per square mile – shares a PEA with Allegheny County (population density 1,686 people/sq. mile) and the Pittsburgh metro area. The Commission cannot realistically expect In The Stix Broadband’s 1,000 customers to enable the company to compete for a PAL against large wireless carriers that can spread the capital cost of a PAL across the more than 1.2 million people living in Allegheny County, not to mention people living in other surrounding suburbs of Pittsburgh.

The dilemma faced by In The Stix Broadband is hardly an isolated problem for PEA PALs. An even more striking example concerns PEA 1 (New York City) which would push Litchfield County, Connecticut (194 people/sq. mile), Sullivan County, New York (80 people/sq. mile), and Carbon County, Pennsylvania (168 people/sq. mile) into the same PAL license area as Manhattan (71,998 people/sq. mile), Brooklyn (37,137 people/sq. mile), and the Bronx (13,379 people/sq. mile).¹⁹ In PEA 2 (Los Angeles), the *NPRM*’s proposed changes to PAL license areas would pit potential users in Joshua Tree National Park and Blythe, California – a city of just over 20,000 people on the border of California and Arizona – against users in Los Angeles (almost 4 million residents) and Long Beach (more than 470,000 residents).²⁰

¹⁸ In the Stix Broadband, LLC, Coverage Map, available at <http://www.itxbb.net/coverage.php> (last accessed December 19, 2017).

¹⁹ Given the differences between Manhattan, Brooklyn, and the Bronx, the Commission should not expect effective competition among all the potential users in these three boroughs of New York City, let alone potential users in Litchfield, Sullivan, and Carbon Counties.

²⁰ The population of Blythe, CA was used instead of population density because Blythe is part of Riverside County, CA, which (among other cities) includes Long Beach, CA and has a population of over 2.1 million people.

Smaller PEAs (from a population standpoint) face similar problems too. Edgar County, Illinois (30 people/sq. mile) in PEA 92 borders Vermillion County, Indiana (63 people/sq. mile) in PEA 58. Those two counties also share PEAs with much larger college towns, Champaign-Urbana, Illinois and Terre Haute, Indiana respectively. Similarly, Kanawha County, West Virginia (211 people/sq. mile and home to Charleston, West Virginia) shares PEA 52 with Summers County, West Virginia (37 people/sq. mile) and Nicholas County, West Virginia (40 people/sq. mile). The Commission should no more expect WISPs and other potential rural users to compete for PALs with large wireless carriers in these medium-sized cities than it expects such competition in the country's largest metropolitan areas. And, even if large carriers do not snap up all the available PALs in smaller PEAs, rural users will be left to compete with better resourced potential users, at universities or in state capitals for example, for any remaining PALs.

In short, price increases associated with expanding PAL license areas to PEAs would hurt competition, undermine the innovative spirit of the Commission's 3.5 GHz Band rules, and damage the public interest.

The current 3.5 GHz rules are designed to help bridge the digital divide by making it easier for WISPs and other rural providers to deploy fast, affordable, and reliable broadband services.²¹ The existing rules also drive innovation by encouraging new users, such as hospitals, universities, manufacturing facilities, airports, hospitality venues, and many other potential users, to experiment with and develop novel uses for PA spectrum.²²

²¹ *In re Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, 30 FCC Rcd 3959 at ¶ 6 (2015) ("3.5 GHz Band Report and Order").

²² *Id.*

On the other hand, the changes to the 3.5 GHz Band sought by large wireless carriers, and reflected in the *NPRM*, will benefit only those carriers and will foreclose competition. While large wireless carriers may rejoice at pricing other potential users out of the market, the Commission must consider the public interest, not just the interests of the large wireless carriers. As illustrated by the current investments by rural carriers described above, the current rules are working. Expanding the geographic area of PALs will not speed deployment in the band, and there is no evidence licensing PALs by *census tract* will prove administratively infeasible.²³ Therefore, the Commission should retain its current 3.5 GHz rules to promote competition and innovation in the band.

IV. EXTENDING PAL LICENSE TERMS WILL INCREASE COST, FORECLOSE ACCESS BY SMALLER USERS, AND LOCK IN ADVANTAGES FOR LARGEST CARRIERS

The Commission's proposal to increase PAL terms to 10 years with renewal expectancy will, like the proposed enlarged license areas, dramatically increase the cost of PALs.²⁴ Under the current rules, a bidder could only expect to secure priority access to the 3.5 GHz band for a relatively short period of time.²⁵ Accordingly, a rational bidder would price that expectation into the cost of a PAL. However, under the *NPRM*'s proposals, PALs would have a functionally unlimited lifetime. While extending the term of a PAL to ten years will likely drive up prices on its own, providing PAL holders with a renewal expectancy would incentivize holding the PALs indefinitely, which bidders would reflect through higher initial prices. Thus, the Commission

²³ Ex Parte Presentation of Google LLC at 12, *Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, FCC GN Docket No. 12-354 (October 16, 2017) ("Google Ex Parte").

²⁴ *NPRM* at ¶ 13.

²⁵ 47 C.F.R. § 96.25(b)(3).

should expect significantly higher upfront PAL prices if it extends the license term and creates a renewal expectancy.

The higher upfront costs of longer license terms with a renewal expectancy will price smaller potential users out of the 3.5 GHz Band, allowing large providers (primarily large wireless carriers) to monopolize the band. While longer license terms and renewal expectancies are not inherently negative, the Commission's purpose in opening the 3.5 GHz Band was to promote innovation and competition. Disincentivizing 3.5 GHz participation by small users through higher upfront prices will cut off a large source of innovative, competitive ideas. Absent this competition, PAL auctions may generate less revenue in the long-run despite returning large initial bids.

High upfront prices will also compound competition failures over time because the renewal expectancy will incentivize spectrum hoarding. Many large wireless carriers have a history of acquiring spectrum that they do not fully deploy for the purposes of acquiring and maintaining a valuable future asset, *i.e.* spectrum hoarding.²⁶ The *NPRM*'s proposed rules will incentivize this unproductive behavior in the 3.5 GHz band. Even with no immediate plans to utilize the band, long license periods with a renewal expectancy would push some providers to acquire the spectrum, fulfill the minimum deployment requirements, and then hope to more productively use the spectrum in the future or allow it to appreciate as an asset.

Instead, the Commission should maintain its current three year PAL license term. The three year term reduces upfront capital requirements that would otherwise price most small and rural users of the 3.5 GHz band. As a result, the shorter PAL terms adopted in the 2015 rules maximizes competition. Short license terms also facilitates innovation. A three year license term

²⁶ WISPA Ex Parte at 2-3.

provides an excellent testbed for innovative users of the band. It also improves the flexibility of the band to be put to its most productive and highest use, which often changes over time.²⁷

V. PROPOSED BIDDING PROCEDURES WILL EXASERBATE *NPRM*'S SHORTCOMINGS WITH RESPECT TO GEOGRAPHIC LICENSE SIZE AND LICENSE TERM

The *NPRM*'s proposed bidding procedures would further cement advantages for large wireless carriers created by the Commission's proposed license area and term changes. As noted above, the increased upfront costs caused by the Commission's proposals will inhibit access to the 3.5 GHz Band by small, rural, and innovative potential users. Larger license areas and longer license terms with a renewal expectancy will increase the cost of a PAL, disproportionately favoring the country's four largest wireless carriers. In turn, few small, rural, or innovative users will have the wherewithal to access the band as a PAL licensee.

The Commission's proposal to remove limits on the number of PALs issued in a license area and assign PALs in areas with only a single applicant will exacerbate foreclosure issues for non-wireless carriers created by other proposals in the *NPRM*.²⁸ Because higher upfront costs will ensure large wireless carriers obtain the vast majority of PALs, the Commission's move to distribute all available PALs in a geographic area will simply lead to all of the available spectrum in most geographic area being acquired by and reserved for large wireless carriers.

Moreover, the Commission's proposal to extend the license term and grant a renewal

²⁷ Google Ex Parte at 13.

²⁸ *NPRM* at ¶ 42. NCC does support the Commission's exception for rural areas allowing assignment of a PAL where the FCC received only a single application. *In re Amendment of the Commission's Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, Order on Reconsideration, 31 FCC Rcd 5011, 5023, ¶ 50 (2016). NCC could support removal of the single applicant rule in general, provided the Commission adopts sufficiently effective rules to ensure access to 3.5 GHz Band spectrum by small and rural users and prevent spectrum aggregation in the hands of a single entity or segment of the telecommunications industry (*i.e.* wireless carriers).

expectancy for PALs will encourage large wireless carriers not to relinquish control of a PAL after acquiring it, and the Commission and competitive users (especially small and rural users) will have few *post hoc* tools available to address equitable 3.5 GHz Band spectrum distribution after large wireless carriers monopolize the band.

The Commission is required by law to adopt rules ensuring fair and diverse access to the 3.5 GHz Band. Section 309(j) of the Communications Act requires the FCC to avoid “excessive concentration of licenses” and ensure distribution of licenses “among a wide variety of applicants.”²⁹ The 3.5 GHz Band was not created for use solely or primarily by wireless carriers, and the Commission has not proposed making such a change. Nonetheless, the Commission’s proposals likely will favor large wireless carriers to the disadvantage of other users. Thus, to avoid running afoul of Section 309(j), the Commission must take steps to ensure distribution of PALs among a wide variety of applicants and potential users.

Therefore, the Commission should adopt spectrum aggregation limits in the 3.5 GHz band. The Commission has used spectrum aggregation limits in the past to prevent a user or small group of users from foreclosing the use of a spectrum band by other users. For example, in the Commission’s Spectrum Bands above 24 GHz proceedings, the FCC adopted (and T-Mobile supported)³⁰ spectrum aggregation limits, including *ex ante* spectrum limits, preventing an entity from monopolizing a spectrum band.³¹ Similarly, the Commission should implement rules in the

²⁹ 47 U.S.C. § 309(j)(3)(B).

³⁰ See, e.g., Ex Parte Letter of T-Mobile, *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, FCC GN Docket No. 14-177 (June 20, 2016); Ex Parte Letter of T-Mobile, *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services*, FCC GN Docket No. 14-177 (June 30, 2016).

³¹ *In re Use of Spectrum Bands Above 24 GHz for Mobile Radio Services et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014 at ¶ 184 (2016).

3.5 GHz Band to prevent an entity or single segment of industry from monopolizing PAL access to the band.

Furthermore, absent bidding credits, access limitations to the 3.5 GHz Band will be further exacerbated. While bidding credits will not solve the problems created by the Commission's proposals, bidding credits, whether adopted for use under the current rules or as part of amended rules, will help small and rural providers obtain PALs and secure meaningful access to the 3.5 GHz band. Without bidding credits, the high cost of PALs driven by the *NPRM's* proposals will create insurmountable hurdles to use of the band by small and rural carriers.

Moreover, the Commission's history of successfully using bidding credits suggests that, if it does not retain the current rules, it should at least promulgate appropriate credits for the PAL auctions. Well-crafted bidding credits would serve the public interest by encouraging 3.5 GHz participation. The bidding credits used in the recent incentive auction offer a starting point from which the Commission can consider how best to facilitate participation in PAL auctions by the maximum number of potential users.³² Specifically, maximizing participation will best serve the Commission's goal of opening the 3.5 GHz band to use by innovative and competitive users who are best positioned to help bridge the digital divide and increase access to fast, affordable, and reliable broadband services.

Therefore, because the Commission must avoid license concentration and encourage participation by a wide variety of applicants in the 3.5 GHz Band, it should, if it does not keep the existing rules, adopt spectrum aggregation limits and bidding credits for PAL auctions. NCC

³² *NPRM* at n. 65 (citing *Updating Part 1 Competitive Bidding Rules et al.*, Report and Order, 30 FCC Rcd 7493 (2017)).

reiterates its belief that these steps are insufficient to remedy the *NPRM*'s flaws. However, if the Commission persists in pursuing its current approach, it should adopt bidding procedures and other rules to minimize the harm caused by its proposed rule changes.

VI. CONCLUSION

Universal broadband access is necessary to the twenty-first century economy, which the Commission addressed in crafting its existing 3.5 GHz rules.³³ Unfortunately, the Commission's proposed rules will keep rural areas underserved, strand investment, and promote the concentration of PAL licenses in the hands of a few large wireless carriers.

Therefore, NCC asks the Commission to maintain its existing 3.5 GHz Band rules because those rules encourage innovation, promote competition, and allow access to the 3.5 GHz Band for diverse, community-based, and rural operators.

Respectfully Submitted,

Next Century Cities

By: /s/ Ronald E. Quirk
Ronald E. Quirk
Seth L. Williams
Marashlian & Donahue, PLLC
1420 Spring Hill Road
Tysons, VA 22102
(703) 714-1300

Its Attorneys

December 28, 2017

³³ 3.5 GHz Band Report and Order at ¶ 1.