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 THE UTILITIES TECHNOLOGY COUNCIL

The Utilities Technology Council (UTC) hereby files the following comments in response to the Commission's Notice of Proposed Rulemaking in the above-referenced proceeding.[1] UTC opposes extending the term of priority access licenses (PALs) to ten years and expanding the size of the geographic area of PALs to Partial Economic Areas (PEAs).[2] As UTC previously commented, extending the term and expanding the geographic areas of PALs will make it difficult for smaller entities such as utilities to be able to afford to acquire PALs.[3] For the same reason, UTC believes that the FCC should, consistent with Section 309(j)(6), avoid auctioning PALs as much as possible, and specifically should not auction PALs in rural areas where there is only one applicant.[4] In that regard, UTC echoes the comments

[1] *See* Petition for Rulemaking to Amend the Commission's Rules Regarding the Citizens Broadband Radio Service in the 3550-3700 MHz Band, GN Docket No. 17-258, *Notice of Proposed Rulemaking*, FCC 17-134 (rel. Oct. 24, 2017) (*NPRM*). *See also* Promoting Investment in the 3500–3700 MHz Band, Notice of Proposed Rulemaking, GN Docket No. 17–258, 82 Fed. Reg. 56193 (rel. Nov. 28, 2017).

[2] *See NPRM* at ¶13 and ¶23 (proposing to extend the term of a PAL and inviting comment on expanding the geographic size of a PAL).

[3] Reply Comments of UTC at 4 (filed Aug. 8, 2017).

[4] *See* 47 USC §309(j)(6)(stating that the Commission is obligated "to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings.") *See also NPRM* at ¶45 (asking whether it would be consistent with the FCC's statutory objectives to assign PALs on a non-auctioned basis, or whether alternatively the FCC could nevertheless have authority to assign PALs by auction in these situations [where there is only one applicant] because a PAL for any given area is mutually exclusive to GAA use in that area.)

on the record that are skeptical that partitioning and disaggregation of PALs will undo the damage that would be caused to the public interest by auctioning PALs with extended terms and larger geographic areas.[5] That said, UTC would support partitioning and disaggregation of licenses, particularly if the Commission decides to adopt longer license terms and larger geographic areas for PALs.

UTC also believes that allowing bidders to select frequencies of operation would make inefficient use of the band and could, as the Commission observed, prove counterproductive, if in order to avoid causing interference to an incumbent licensee, a PAL was forced to turn off a frequency instead of shifting to another frequency that was available simply because it was assigned a static frequency by the SAS administrator. Instead, UTC supports continuing to require Spectrum Access System (SAS) administrators to assign the same channels to licensees that hold PALs in contiguous geographic areas, as well as requiring them to assign contiguous channels in areas where the same licensee holds multiple frequencies.[6]

Finally, UTC questions the need to change the emission limits in order to accommodate wider bandwidth operations. If the Commission relaxes the limits, UTC urges the Commission to require PALs to comply with more stringent emission limits near the 3650-3700 MHz band so that those incumbent grandfathered wireless systems in that part of the 3.5 GHz band are protected from interference at least during the extent of the transition period, similar to the level of protection the Commission is proposing for adjacent channels above 3720 MHz and below 3530 MHz. This would appear to represent a reasonable balance between the proposal to relax the emission limits and promote wider channels, while still protecting incumbent systems from interference.

I. Introduction

UTC is the international association for the telecommunications and information technology

[5] *See e.g.* Comments of SouthernLINC at 7 (doubting the practicality of partitioning and disaggregation of PALs because "there is no requirement for any licensee to lease, partition, or disaggregate a license, and even if partitioning or disaggregation were to be permitted in the CBRS band, there would be even less of an incentive for a PAL holder to do so given the lack of any build-out or coverage requirements.")

[6] *See* 47 CFR § 96.59 (b). *See also* 47 CFR § 96.25(b)(1)(i), (2)(i).

interests of electric, gas and water utilities and other critical infrastructure industries. Its members include all kinds of utilities, ranging from large investor-owned utilities that serve millions of customers across multi-state service territories to smaller rural electric cooperative utilities and public power utilities who may serve only a few thousand customers in isolated communities or remote areas of the country. These members all own, manage and control extensive energy and water transmission and distribution networks, which are supported by wireless and wireline communications systems. Owing to the critical nature of the underlying energy and water systems that they support, utility private internal communications systems are designed, built, and maintained to exceptionally high standards for reliability and security. These private internal communications networks are more reliable and resilient than commercial networks, and they are predicated on the need to maintain communications during emergencies, such as power outages in the aftermath of storms, and to communicate in remote areas where commercial networks may not provide coverage. While utilities have extensive and highly reliable communications systems, they need additional suitable spectrum to provide more capacity and coverage to support increasing communications demands due to smart grid and security requirements.

UTC has been an active participant in this proceeding from its inception, and its interest has been and continues to be promoting the opportunity for utilities to access and make effective use of the 3.5 GHz band to support highly reliable mission critical communications. As the Commission is aware, utilities have extensive communications networks in the 3650-3700 MHz (i.e. 3.65 GHz) part of the 3.5 GHz band, which were licensed under the FCC's Part 90 rules and which currently are grandfathered during the transition period to the FCC's Part 96 rules for the Citizens Broadband Radio Service (CBRS). UTC has advocated for policies that would protect these incumbent 3.65 GHz systems from interference from CBRS operations.

Utilities have extensive communications systems in the 3.65 GHz band. Some have thousands of locations. Utilities use the 3.65 GHz band for applications, such as Supervisory Control and Data Acquisition (SCADA), Distribution Automation (DA), Advanced Metering Infrastructure (AMI) and telemetry, which are used to monitor and control the safe, reliable and efficient delivery of essential,

electric, gas and water services to the public at large. Utilities have made substantial investments in these systems and continue to expand existing systems in order to increase capacity and coverage to keep pace with increasing demands and to maintain operational reliability, safety and security. Utilities are also interested in access to additional spectrum in the 3.5 GHz band in order to provide additional capacity to support network expansion. Therefore, UTC provides the following comments in support of rules that will protect utility incumbents in the 3.65 GHz part of the band while at the same time promoting opportunities for utilities and other small entities to access spectrum in the 3.5 GHz band to provide additional capacity and coverage to support a variety of communications services, including private internal communications services that utilities use to ensure the safe, reliable and effective delivery of essential electric, gas and water services to the public at large.

II. The Commission Should Not Extend the Term or Expand the Geographic Size of Priority Access Licenses.

UTC opposes the proposals to extend the term and to increase the geographic size of a PAL. This proposal runs contrary to the Commission's own policy goals for creating a test bed for spectrum sharing that would open up opportunities for smaller entities like utilities to access spectrum to meet their communications needs. By extending the term to ten years and expanding the size of the geographic area of PALs, it may make it harder for smaller entities to acquire a PAL at auction. They may be forced to acquire licenses that may be too large or too long in time for their needs. As numerous parties have observed in their comments, some of the geographic areas could be very large if they were expanded to PEAs, and would be rendered economically unaffordable for smaller entities bidding at auction.[7] Conversely, larger entities could warehouse and/or monopolize PALs contrary to the public interest. Finally, the band is better suited to smaller geographic areas as a technical matter, because of its propagation characteristics and its use of small cell technology; and shorter license terms would provide

[7] Comments of SouthernLINC at 7 ("Under the petitioners' approach, an entity seeking to operate in a limited geographic area such as a single county or across a few census tracts would be compelled to submit the highest bid for the entire PEA, thus foreclosing the PAL as an economically viable option.") *See also* Comments of Vivint at 5 (noting that Southern California has only two PEAs covering the entire Los Angeles and San Diego areas).

greater flexibility to accommodate different users' needs without creating an undue administrative burden, as several comments (including potential SAS administrators) have noted. Changing the rules at this late stage could strand investment rather than promote it, and could delay the timeframe in which the band could be made available to smaller entities that are eagerly interested in using it.

The Commission has already rejected petitioners' claims that larger geographic areas and longer license terms are necessary to support the use of the 3.5 GHz band for 5G services. Specifically, the Commission determined that:

> The combination of fixed channel assignments for PALs and indefinite license renewals [proposed by AT&T, and other major wireless providers and their equipment suppliers] could permanently prevent [General Authorized Access (GAA)] use of certain portions of the band, particularly in regions of high commercial interest, even after the "transition" period concludes. These proposals could also preclude investment from a newer generation of Priority Access Licensees in the future.[8]

The Commission continues to take the view that smaller license areas would (1) "afford[] a licensee the flexibility to develop localized services"; (2) "allow[] for targeted deployments based on market forces and customer demand"; and (3) "facilitate[] access by both smaller and larger carriers."[9] Finally, the Commission intended to "make the 3.5 GHz Band hospitable to a wide variety of users, deployment models, and business cases, including some solutions to market needs not adequately served by our conventional licensed or unlicensed rules."[10] Longer license terms and larger geographic areas for PALs would frustrate the Commission's fundamental purpose to promote flexibility to accommodate the communications

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[8] *CBRS Order*, 30 FCC Rcd 3959 at ¶58.

[9] Comments of Google and Alphabet Access in Response to Petitions for Rulemaking, GN Docket No. 12-354 (filed July 24, 2017), *quoting Use of Spectrum Bands Above 24 GHz for Mobile Radio Services,* Report and Order, 31 FCC Rcd. 8014, ¶¶ 35 (2016)(hereinafter "Spectrum Frontiers Order").

[10] *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 3962 ¶ 6 (2015) ("*2015 CBRS Order*").

needs of both small and large entities.[11] Therefore, UTC urges the Commission to not extend the license terms or the geographic size of PALs.

III. The Commission Should Avoid Auctioning PALs and Should Promote Efficient Use of 3.5 GHz Spectrum.

In the NPRM, the Commission invites comment on competitive bidding procedures for PALs, including the assignment of PALs and bidding on specific PAL licensing blocks.[12] Specifically, the Commission proposes to employ its standard practice for finding mutual exclusivity among accepted applications, and eliminate the rule that limited the number of PALs the Commission would make available.[13] It also proposes to assign PALs even when there is only one applicant in a given license area, assuming the applicant is otherwise qualified.[14] In that regard, the Commission also asks whether a PAL for any given license area is mutually exclusive to GAA use in that area such that the Commission would have the authority to assign PALs by auction in those situations.[15] Finally, the Commission invites comment on whether bidders should be allowed to bid on specific PAL licensing blocks, and if so, how given the other constraints of the band, including the need to protect incumbents.[16] In that regard, the Commission invites comment on what alternative auction methodologies might be appropriate to balance the SAS Administrator's need to dynamically avoid interference with Priority Access licensees' desire for certainty and the ability to aggregate contiguous spectrum.[17]

UTC believes that the Commission should avoid as much as possible the use of auctions to assign

[11] *Id.* (describing how the 3.5 GHz band could be used by carriers, neutral host operators, and manufacturers, utilities, and other large industries.)

[12] *See NPRM* at ¶39-45 and ¶46-49.

[13] *Id.* at ¶42.

[14] *Id.*

[15] *Id.* at ¶42 and ¶45.

[16] *Id.* at ¶49.

[17] *Id.*

PALs. Accordingly, in the event that there is only one applicant, the Commission should not auction that PAL. The Commission established rules that would refrain from auctioning PALs in rural areas where there was only one applicant.[18] UTC supports that decision and believes that the Commission should extend it to apply to other areas, including urban areas as well. This would put the spectrum to effective use by the PAL applicant, and it would satisfy the Commission's obligation under Section 309(c)(6) to avoid auctioning spectrum when possible. UTC does not believe that there would be any mutual exclusivity between GAA and PAL use of the 3.5 GHz band that would trigger the FCC's auction authority. The Commissions rules only permit opportunistic use of PALs by GAA, and it does not otherwise provide GAA operations in PAL spectrum. Therefore, UTC believes that the Commission should assign PAL licenses without auction, particularly when there is only one PAL applicant and there is no mutual exclusivity.

UTC also believes that the Commission should not allow bidders to bid on a specific frequency in a given area. Instead, the SAS administrator should be allowed the flexibility to select an available frequency for a given area based on the bandwidth that the bidder has won. UTC agrees with the underlying interest of the bidder in obtaining contiguous spectrum, and therefore supports the rule that requires the SAS administrator to select contiguous frequencies in a given area and assign the same blocks of spectrum to the same licensee in contiguous geographic areas. However, allowing bidders to bid on a specific frequency would make inefficient use of the spectrum by preventing the SAS administrator the ability to maximize the use of the band. Moreover, as a technical matter, there is nothing that prevents equipment from being capable of tuning over the range of PAL frequencies that would be available in a given geographic area. In addition, as the Commission previously observed,

[18] *Amendment of the Commission's Rules with Regard to Commercial Operations in the3550-3650 MHz Band, GN Docket No. 12-354, Order on Reconsideration and Second Report and Order,* 31 FCC Rcd 5011 at ¶50 (2016). *See also* 47 C.F.R. §96.29(d)(stating that "Except in Rural Areas, when there is only one application for initial Priority Access Licenses in a License Area that is accepted for filing for a specific auction, no PAL will be assigned for that License Area, the auction with respect to that License Area will be canceled, and the spectrum will remain accessible solely for shared GAA use until the next filing window for competitive bidding of PALs. In Rural Areas, when there is only one application for initial Priority Access Licenses in a License Area, that applicant will be granted a PAL if otherwise qualified under the Commission's rules.")

assigning frequencies on a static basis could actually have the counterproductive result of forcing the PAL licensee to shut off its use of that statically assigned frequency (rather than shifting frequencies) to avoid causing interference to an incumbent licensee in the band. Finally, UTC is concerned that changing the rules and allowing bidders to bid for a specific frequency could delay the advent of the period when SAS administrators would be able to provide frequencies for use, which would harm the public interest generally. For all of these reasons, UTC suggests that the Commission refrain from allowing bidders to bid for specific frequencies in PALs.

IV. Increasing the Emission Limits May Not be Necessary, and Should Not be Permitted Adjacent to the 3.65 GHz Part of the Band.

In the NPRM, the Commission invites comment on two proposals to relax the emission limits in the 3.5 GHz.[19] In doing so, the Commission refused to change the existing limits that protect adjacent operations below 3530 megahertz and above 3720 megahertz.[20] It recognizes that relaxing the emissions limits involves tradeoffs between wider bandwidths for 3.5 GHz operations and the possibility for increased interference to users operating on adjacent channels.[21] To potentially address the issue of increased interference, the Commission invites comment on the option of including an attenuation step of -20 dBm/MHz between -13 dBm/MHz and -25 dBm/MHz, between one-half channel (50% of B) and one channel bandwidth (100% of B) from the channel edge.

At the outset, UTC questions whether relaxing the emission limits is even necessary in order to promote wider bandwidth operations. Carriers operate from a false premise that wideband operations cannot be filtered to reduce out of band emissions. In that regard, UTC agrees with the objections by Motorola and Vivint that question the technical basis upon which the petitioners claim that emission limits should be relaxed. Moreover, the Commission should ensure that the emission limits protect

[19] *Id.* at ¶54.

[20] *Id.*

[21] *Id.*¶55.

against interference to other operations in the 3.5 GHz band and adjacent to it. In that regard, it is interesting to note that the Commission refuses to change the emission limits below 3530 megahertz and above 3720 megahertz out of concerns for protecting adjacent bands from interference. Consistent with this approach, if the Commission does relax the emission limits for operations within the 3.5 GHz band, UTC urges the Commission to require CBSDs to meet the same standards of protection for emission limits in operations adjacent to the 3.65 GHz band. This is necessary and appropriate to protect operations in that part of the band, including incumbent grandfathered wireless systems many of which are extensive systems that are operated by utilities and were licensed long before the 3.65 GHz band was combined as part of the 3.5 GHz band.

Conclusion

In conclusion, UTC continues to oppose the proposals to extend the license term and expand the geographic size of PALs, and it urges the Commission to retain the existing CBRS rules for the 3.5 GHz band. UTC is not alone as numerous parties share the concern that changing the rules at this stage – just as the Commission is getting ready to make the 3.5 GHz band available -- would delay access to the band and prevent innovation and investment, as well as threaten to cause interference to existing systems in the 3.65 GHz band, thereby undermining the significant investments that utilities and others have made in these systems.

Respectfully,

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