In the Matter of 
Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band

REPLY COMMENTS OF PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION AND THE HETNET FORUM, A MEMBERSHIP SECTION OF PCIA

I. INTRODUCTION AND SUMMARY

PCIA – The Wireless Infrastructure Association and The HetNet Forum, a membership section of PCIA (collectively “PCIA”),1 submit these reply comments in response to the Further Notice of Proposed Rulemaking (“FNPRM”) in the above-captioned proceeding seeking comment on proposed rules creating a Citizens Broadband Radio Service in the 3550-3650 MHz band (“3.5 GHz Band”).2 PCIA applauds the Federal Communications Commission’s (“FCC” or “Commission”) continued work on these important issues. While the FCC should primarily focus on freeing up sub-3 GHz spectrum for dedicated, exclusive use, opening up the 3.5 GHz band will encourage the development and deployment of innovative, spectrum-sharing small cell technologies that can alleviate capacity constraints on macro networks and encourage more machine to machine (“M2M”) connections that will make the Internet of Things a reality for

1 PCIA is the national trade association representing the wireless infrastructure industry. PCIA’s members develop, own, manage, and operate towers, rooftop wireless sites, and other facilities for the provision of all types of wireless, telecommunications, and broadcasting services. PCIA and its members partner with communities across the nation to effect solutions for wireless infrastructure deployment that are responsive to the unique sensitivities and concerns of each community. The HetNet Forum is a broad-based PCIA membership section dedicated to the development of distributed antenna systems and other small cell technologies that make up the Heterogeneous Network (“HetNet”), which enables wireless broadband connectivity and added capacity throughout the nation.

consumers. In considering the FNPRM’s proposals, PCIA supports commenters’ suggested revisions to the Priority Access License (“PAL”) tier rules, including adoption of a transitional approach to implementation, and asks the FCC to consider increased power output levels to enable the most flexible use of the band’s potential applications.

II. COMMENTERS SUPPORT REVISIONS TO THE PRIORITY ACCESS LICENSING RULES.

Commenters are generally supportive of the FCC’s proposed rules governing the PAL tier. In particular, PCIA supports the FCC’s framework allowing open eligibility for PALs. Open eligibility will allow full market participation and appropriately guide a still-developing area of technology. PCIA, however, together with other record commenters, supports additional refinements to the FCC’s proposal that will incentivize increased investment in the band. PCIA supports fixed frequency allocations for PALs to ensure greater technical certainty. Additionally, the record supports final rules with include longer license terms, license areas broadened beyond census tracts, and a decreased floor for the required spectrum for the General Authorized Access (“GAA”) tier.

3 See FNPRM ¶ 2 (signaling that the 3.5 GHz Band could be an “innovation band”); accord Comments of AT&T Services, Inc. at 8-11 (filed Jul. 14, 2014) (“AT&T Comments”).


5 See Comments of T-Mobile USA, Inc. at 10 (filed Jul. 14, 2014) (“T-Mobile Comments”); CTIA Comments at 8; AT&T Comments at 18-19; Comments of Ericsson at 6-7 (filed Jul. 14, 2014) (“Ericsson Comments”).

6 See CTIA Comments at 7 (arguing for a multi-year license term of at least five years coupled with renewal expectancy); AT&T Comments at 24-27; T-Mobile Comments at 11; Ericsson Comments at 9.

7 See CTIA Comments at 7; T-Mobile Comments at 9; Ericsson Comments at 9-10 (“In dense urban environments, where small cells are most likely to be needed to provide capacity, census tracts may only cover a few city blocks.”).

8 Comments of Nokia Solutions and Networks at 21 (filed Jul. 14, 2014) (“[T]he GAA floor of 50 percent of available spectrum will similarly not provide enough spectrum to the Priority Access Licensees to encourage them to invest.”).
To drive early investment in the band, PCIA supports a transitional approach to ensure immediate access to the band while implementing this novel spectrum sharing regime. A transitional approach would provide those developing the hardware and network applications for the new Spectrum Access System (“SAS”) to better understand the new system and to phase in new technologies and procedures.

Further, in light of technological advances and real-world use cases, PCIA agrees that a reduction to exclusion zones for incumbent users is necessary. As commenters point out, the exclusion zones proposed by the National Telecommunications and Information Administration (“NTIA”) in 2010 would preclude wireless carriers serving customers representing 60% of the U.S. population, and were designed to protect incumbents from macro network interference without contemplating the FCC’s current proposal to position 3.5 GHz as a small cell solution. In considering a reduction of exclusion zones, commenters rightly suggest the Commission adopt a more flexible “Coordination Zone” model where licensees can provide service “to the extent they have successfully coordinated their operations with the incumbent.”

III. HIGHER POWER OUTPUT LEVELS WILL ALLOW FOR GREATER UTILITY OF THE 3.5 GHZ BAND.

PCIA agrees with commenters that higher power output levels should be considered to ensure the band is available for a variety of use cases. The FCC is right to prioritize small cell

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9 See CTIA Comments at 3-5; Comments of Verizon at 11-15 (filed July 14, 2014) (“Verizon Comments”); AT&T Comments at 11-30; Comments of 4G Americas at 4-6 (filed Jul. 14, 2014).

10 See Comments of the Wireless Internet Service Providers Association at 17-21 (filed July 14, 2014) (“WISPA Comments”) (advocating for interference protection criteria “based on ‘real world’ incumbent use”); see also AT&T Comments at 34-37; T-Mobile Comments at 6; CTIA Comments at 11-13; Comments of Motorola Solutions, Inc. at 9-10 (filed Jul. 14, 2014); Verizon Comments at 5-6 (filed July 14, 2014); Comments of Microsoft Corporation at 6-10 (filed Jul. 14, 2014); Comments of National Cable & Telecommunications Association at 6-8 (filed Jul. 14, 2014); Comments of Qualcomm Inc. at 7-8 (filed Jul. 14, 2014).

11 See Verizon Comments at 5; T-Mobile Comments at 6; AT&T Comments at 35-36; Ericsson Comments at 11.

12 Verizon Comments at 6; see T-Mobile Comments at 7-8; Ericsson Comments at 12.
use in the band, but should not artificially limit other potential applications. First, PCIA supports increasing proposed output levels for systems deployed in rural areas.\textsuperscript{13} Ensuring all options are available for rural deployment will expand broadband access in rural America, helping to close the digital divide and ensuring no community is left out of our nation’s broadband future. At present, however, the FCC’s proposed technical and operating rules “fall short” of enabling this spectrum’s highest and best use.\textsuperscript{14}

Moreover, the FCC should modify its proposed power limits to enable 3.5 GHz to be used for outdoor small cells and backhaul applications. PCIA agrees with commenters proposing raising power limits to meet standards for outdoor small cell use.\textsuperscript{15} Commenters also indicate that higher power levels can enable the band’s use for other necessary wireless services, such as offloading and non-line-of-sight backhaul.\textsuperscript{16} So long as interference is effectively mitigated, the FCC should raise power output levels to allow manufacturers and service providers to utilize the 3.5 GHz Band to bring broadband to rural areas, enable outdoor small cell and DAS use, and power providers’ backhaul needs.

\textsuperscript{13} See \textit{FNPRM} ¶ 74; WISPA Comments at 3-13.
\textsuperscript{14} WISPA Comments at 4.
\textsuperscript{15} See Verizon Comments at 7-11; T-Mobile Comments at 11-12.
\textsuperscript{16} See \textit{FNPRM} ¶ 73; T-Mobile Comments at 12; see also PCIA Licensing PN Comments at 4-5.
IV. CONCLUSION

For the foregoing reasons, the Commission should revise its rules for the PAL tier to ensure predictability and drive investment in the band, and should consider more flexible output standards to guarantee the band is put to its highest and best use.

Respectfully submitted,

PCIA – THE WIRELESS INFRASTRUCTURE ASSOCIATION & THE HETNET FORUM

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