

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

In the Matter of	)	
	)	GN Docket No. 17-258
Promoting Investment in the	)	
3550-3700 MHz Band	)	

**COMMENTS OF VIVINT WIRELESS, INC.  
IN RESPONSE TO NOTICE OF PROPOSED RULEMAKING**

Vivint Wireless, Inc. (“Vivint”) hereby submits these comments in response to the Federal Communications Commission (“FCC” or “Commission”) Notice of Proposed Rulemaking (“NPRM”), released October 24, 2017, which seeks comment on and proposes changes to rules governing Priority Access Licenses (“PALs”) utilizing the Citizens Broadband Radio Service (“CBRS”) in the 3550-3700 band (3.5 GHz Band).<sup>1</sup> Vivint urges the Commission to retain the existing census tract license area for PALs with a three-year nonrenewable license term. Any change in direction that implements a traditional cellular licensing model will hinder innovation and may effectively preclude new entrants from the 3.5 GHz band.

**I. BACKGROUND**

Vivint is a leading smart home technology provider, offering home security, energy management, home automation, local cloud storage, and high-speed Internet solutions to more than 1.1 million customers throughout the United States and Canada. Vivint is a competitor (and a potential new entrant) in several markets to traditional broadband providers like cable. Vivint has operational networks in El Paso and San Antonio, TX and in Utah where it provides 50+ Mbps

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<sup>1</sup> *In the Matter of Promoting Investment in the 3550-3750 MHz Band*, Further Notice of Proposed Rulemaking and Order Terminating Petitions, Docket No. GN 17-258, FCC 17-34 (rel. Oct. 24, 2017) (“2017 NPRM”).

residential broadband internet services solutions. Vivint’s unique approach to fixed-wireless broadband uses spectrum for backhaul, which is more cost-effective than fiber to stimulate competition in suburban areas.

CBRS spectrum (both GAA and PAL) is critical to Vivint’s ability to offer a competitive and affordable fixed wireless broadband service to retail customers, principally in underserved suburban markets. As Vivint previously explained, there is a woeful lack of competition in the U.S. for fixed broadband service with most consumers having no more than one or two choices.<sup>2</sup> Current CBRS rules permit the 3.5 GHz band to act as a viable transmission medium for fixed broadband competitors like Vivint while still supporting cellular providers. The Commission should not permit mobile providers to turn the 3.5 GHz band into another cellular band, even with the current focus on developing and implementing 5G services. Rather, the Commission should proceed as planned with the CBRS framework to provide an opportunity to “address the growing demand for fixed and mobile broadband capacity.”<sup>3</sup>

Accordingly, Vivint urges the Commission to retain census tract license area for PALs with a three-year nonrenewable license term. As explained herein, the proposed changes to increase the license term, allow for perpetual renewability, and increase the license area will likely foreclose smaller entities from being able to purchase PALs and leave them with access to General Authorized Access (“GAA”) only. Such a result would defeat the uniqueness of the CBRS three-tiered spectrum sharing structure as an innovative band.

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<sup>2</sup> Vivint Comments, GN Docket No. 12-354, RM-11788, RM-1179 (July 24, 2017).

<sup>3</sup> See *In the Matter of Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-2650 MHz Band*, Report and Order and Second Further Notice of Proposed Rulemaking, Docket No. GN 12-354, FCC 15-47, ¶23 (*emphasis added*) (2015) (“2015 R&O”).

## **II. THREE-YEAR, NON-RENEWABLE LICENSE TERMS ARE NECESSARY FOR INNOVATION**

The Commission has proposed to revise the rules to increase the PAL license term to ten years and to eliminate the automatic termination at the end of the license term and allow PALs to be renewed.<sup>4</sup> As Vivint earlier stated to the Commission, applying a conventional ten year term with an expectation of renewal to PALs would discourage new entrant participation in the auction.<sup>5</sup> Many smaller entrants will not have the initial capital to pay the anticipated higher costs for PALs with longer terms and some may not want to be locked into a ten-year term. The 3.5 GHz band serves as an ideal home for small cell operations where a buildout can occur quite expeditiously and equipment can be amortized within a three-year window. Extending the term to ten years with the expectation of perpetual renewal will favor national cellular carriers and hinder the innovation and flexibility the Commission stated that it hoped to foster in 3.5 GHz spectrum.

The Commission contends that longer license terms will provide licensees with more time to engineer and deploy devices and decrease the risk of stranded investment for some segment of the industry.<sup>6</sup> However, the time between winning a PAL and starting operations will be much shorter than the launch for other previously auctioned licenses because standards and devices for GAA operation should already exist by the time a PAL auction commences. Further, many entities have already invested resources based on the existing rules for a three-year PAL license which should also speed deployment. If the Commission changes the license term to a period longer than three years with the option to renew coupled with a large license area, a segment of the industry may not have any access to PAL spectrum and may not be able to recoup their already-invested resources. This will also have a detrimental impact on fixed wireless broadband deployment to

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<sup>4</sup> 2017 NPRM at ¶13.

<sup>5</sup> Vivint Reply Comments, GN Docket No. 12-354, RM-11788, RM-1179 (August 8, 2017).

<sup>6</sup> 2017 NPRM at ¶13.

suburban and rural areas where deployment costs tend to be higher, making it more difficult for providers to offer affordable broadband.

### **III. INCREASING THE GEOGRAPHIC LICENSE AREA FOR EACH PAL WOULD FORECLOSE SMALLER ENTITIES FROM PARTICIPATION**

The Commission seeks comment on “increasing the geographic licensing area of PALs to stimulate additional investment, promote innovation, and encourage efficient use of spectrum resources.”<sup>7</sup> The Commission expressly requests input on the impact of larger licenses based on Partial Economic Areas (“PEAs”).<sup>8</sup> Further, the NPRM asks whether the ability to disaggregate and/or partition larger PEA PALs might “effectively address the concerns raised by commenters [that support retention of census tract-based licenses] and promote robust deployment in the band?”<sup>9</sup>

Vivint previously emphasized to the Commission that a PEA-based PALs licensing scheme “will create an artificial barrier” to participation in any forthcoming auction by forcing new competitors to raise large amounts of capital to pursue licenses that encompass sweeping tracts of urban, suburban and rural land under a single call sign.<sup>10</sup> Vivint reaffirms its opposition to larger PEA-based licenses in the instant comments. A PEA-based auction would heavily favor nationwide cellular carriers, who would likely opt to deploy discrete in-fill 3.5 GHz networks in dense urban areas while avoiding suburban and rural areas altogether if their respective business plans do not support a more comprehensive buildout, which remains likely given the ample 600 MHz, 700 MHz, 850 MHz and other mid-band spectrum (*i.e.*, cellular bands between 1 GHz and 2.5 GHz) these national service providers control. Conversely, retaining census tract-based PALs

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<sup>7</sup> 2017 NPRM at ¶23.

<sup>8</sup> *See id.* ¶¶24-25.

<sup>9</sup> *Id.* ¶24.

<sup>10</sup> *Comments of Vivint Wireless, Inc.*, GN Docket No. 12-354, at 5 (filed July 24, 2017). For example, Southern California has only two PEAs (PEA002/Los Angeles; PEA0018/San Diego), but within these two PEAs a diverse mix of urban, suburban, rural land use exists.

encourages more varied business plans given that such granular licenses can be flexibly aggregated depending on the licensee's desired network architecture. Licensees seeking rural and/or suburban coverage to deliver service need not acquire high-cost urban census tract licenses. Similarly, a service provider attempting to deploy urban service need not acquire licenses in less densely populated census tracts.

Vivint does not oppose the partitioning and/or disaggregation of PALs licenses. Given that partitioning/disaggregation remains entirely discretionary on the part of the underlying PALs licensee, however, such a mechanism does not represent a viable alternative to the retention of census tract-based licenses. While certain PALs licensees may opt to participate in secondary market transactions, some will almost certainly choose to build out exclusively in urban areas and opt out of making partitioned or disaggregated spectrum in suburban and/or rural areas available through a secondary market mechanism. In such instances, under a PEA-based scheme where a single license can encompass urban, suburban and rural areas, PALs license rights would remain underutilized or perhaps unused altogether.

Retaining census tract-based PALs licenses remains the best option for the Commission to stimulate investment, promote innovation and encourage efficient spectrum use. A PEA-based PALs licensing approach will benefit only a handful of national cellular carriers, and ultimately stifle innovation and chill the already considerable investment made in the 3.5 GHz band.

#### **IV. VIVINT URGES FCC ACTION ON FIRST WAVE SPECTRUM ACCESS SYSTEM AND ENVIRONMENTAL SENSING CAPABILITY APPLICANTS**

Certification of the first wave of Spectrum Access System ("SAS") administrators and Environment Sensing Capability ("ESC") networks represents the only meaningful obstacle to en masse deployment of CBRS services. Vivint urges the Commission to expeditiously move

forward with certification of both systems, and to provide more transparency toward the certification process.

Given the shared nature of the 3.5 GHz band, and the need to protect higher priority coastal radar systems from harmful interference, CBRS service cannot be deployed without certified SAS administrators and ESC networks in place. The Commission, however, has not published meaningful guidance on the status of certification despite the submission of applications from the prospective first wave of SAS administrators in early 2016.<sup>11</sup> At this critical juncture, with service providers deep in the closing stages of designing CBRS/3.5 GHz networks and finalizing capital expenditures for 2018, establishing firm deadlines and providing additional transparency into the certification process would be welcome developments, and further the Commission's goal of ensuring innovation and investment in CBRS and the 3.5 GHz band. As an initial first step toward expediting this process, Vivint supports the recently proposed June 30, 2018 deadline for the certification of the first wave SAS administrator applicants, although Vivint would certainly welcome certification prior to such date.<sup>12</sup>

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<sup>11</sup> See *Wireless Telecommunications Bureau and Office of Engineering and Technology Establish Procedure and Deadline for Filing Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Applications*, GN Docket No. 15-319, Public Notice, 30 FCC Rcd 14170 (2015) (SAS/ESC Proposal Public Notice); see also *Wireless Telecommunications Bureau and Office of Engineering and Technology Extend "First Wave" Filing Deadline for Spectrum Access System (SAS) Administrator(s) and Environmental Sensing Capability (ESC) Operator(s) Proposals*, GN Docket No. 15-319, Public Notice, DA 16-397 (2016).

<sup>12</sup> See *Ex Parte Notice* of Ross Vincenti, Federated Wireless, Inc., GN Docket Nos. 15-319 and 17-258 (Dec. 5, 2017).

**V. CONCLUSION**

For the foregoing reasons, Vivint urges the Commission to retain the rules with shorter terms and census tract-based license areas.

Respectfully submitted,

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