

In the Matter of )  
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Spectrum Pipeline Act of 2015 ) GN Docket Nos. 14-177, 15-319,  
 17-183, and 17-258

To: Chief, Wireless Telecommunications Bureau  
Chief, Office of Engineering and Technology

The Wireless Internet Service Providers Association (“WISPA”), pursuant to Sections 1.415 and 1.419 of the Commission’s Rules, hereby replies to certain of the initial comments filed in response to the Public Notice (“*Public Notice*”) in the above-captioned proceeding.<sup>1</sup> The purpose of the *Public Notice* was to solicit comments to inform the Commission’s “analysis of the results of the 2015 rule changes relating to the frequencies between 3550 megahertz and 3650 megahertz [and] an analysis of proposals to promote and identify additional spectrum bands that can be shared between incumbent uses and new licensed and unlicensed services under such rules and identification of at least 1 gigahertz between 6 GHz and 57 GHz for such use,” in order for the Commission to prepare a report to Congress on these issues.<sup>2</sup>

For the Commission’s “analysis of the results of the 2015 rule changes relating to the frequencies between 3550 megahertz and 3650 megahertz” to be accurate and complete, it must address two separate matters: (1) the highly successful results of 2015 rule changes themselves,

<sup>2</sup> *Id.*

as implemented by the *CBRS Order*,<sup>3</sup> and (2) the subsequent negative impact of the *2017 NPRM*<sup>4</sup> on those results. Comments filed in this proceeding demonstrate that these are two distinct chapters in the history of the CBRS band.

The 2015 rule changes “represente[ed] a landmark in forward-thinking spectrum policy”<sup>5</sup> and have led to “a massive success story on the verge of happening.”<sup>6</sup> The *2017 NPRM*, on the other hand, now threatens to pull the rug from under stakeholders who, in reliance on the 2015 rule changes, made significant, long-term investments in preparation for launching innovative products and services – including those targeting rural and underserved markets – utilizing the CBRS band.

In the *CBRS Order*, the Commission recognized the great potential of the CBRS band, dubbing it the “innovation band.”<sup>7</sup> Properly managed, the band “can be a critical part of the foundation for the nation’s 5G future and empower small and rural internet service providers, schools, hospitals, factories, office buildings, IoT and other niche connectivity providers.”<sup>8</sup> With the *CBRS Order*, the Commission “took the commendable step of introducing an innovative sharing framework in the 3.5 GHz band”<sup>9</sup> in an effort to draw in an exceptionally diverse consortium of potential users. The Commission recognized that the key to developing the spectrum was to welcome the widest possible variety of technologies and uses, while keeping

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<sup>3</sup> *Amendment of the Commission’s Rules with Regard to Commercial Operations in the 3550-3650 MHz Band*, 30 FCC Rcd 3959 (2015) (“*CBRS Order*”).

<sup>4</sup> *Promoting Investment in the 3550-3700 MHz Band*, Notice of Proposed Rulemaking and Order Terminating Petitions, 32 FCC Red 8071 (2017) (“*2017 NPRM*”).

<sup>5</sup> Comments of The Open Technology Institute at New America, et al., GN Docket No. 17-258 (filed Sept. 11, 2018) (“PISC Comments”) at 3.

<sup>6</sup> Comments of Federated Wireless, Inc., GN Docket No. 17-258 (filed Sept. 11, 2018) (“Federated Comments”) at 10.

<sup>7</sup> *2017 NPRM* at 8072.

<sup>8</sup> PISC Comments at 3.

<sup>9</sup> Federated Comments at 5.

access to the spectrum “affordable and localized.”<sup>10</sup> The Commission created an innovative system that combines highly localized Priority Access Licenses (“PALs”) with an ample reservation of spectrum access on a Generalized Authorized Access basis. To encourage development and use of the spectrum by smaller, local entities, including rural WISPs, PALs were tied to census tracts. As Federated Wireless aptly summarized, “[t]he CBRS framework accommodates multiple different types of uses in the band, leverages dynamic spectrum sharing technologies to prevent interference to incumbent and priority users, provides needed spectrum to new entrants, and, all the while, exponentially increases the efficiency of spectrum utilization for all potential users.”<sup>11</sup> The result of this carefully considered plan by the Commission was to extend an open invitation to small businesses to experiment, innovate, and invest in the CBRS band.

The record makes clear that the effects of the 2015 rule changes were immediate. An “unprecedented degree and diversity of enthusiasm around and investment in the band commenced.”<sup>12</sup> The “combination of interference protected spectrum (Priority Access Licenses) and effectively unlicensed capacity (General Authorized Access) on an affordable, local-area basis . . . generated interest, investment and innovation from a wide variety of industry sectors and companies.”<sup>13</sup> Users took at face value and accepted the Commission’s invitation to begin developing the band using innovative, localized approaches, and commenced long-term business planning and significant capital investments in support of their plans. Assured by the Commission that they could eventually expand into the 3550-3650 MHz band, users such as rural WISPs, enterprise broadband providers, energy companies, municipalities and government

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<sup>10</sup> PISC Comments at 4.

<sup>11</sup> Federated Comments at 10-11.

<sup>12</sup> PISC Comments at 7.

<sup>13</sup> *Id.* at 6.

agencies, telecommunications cooperatives, private networks, and resorts registered more than 25,000 new locations that utilize the adjacent 3650-3700 MHz band, even though none of those is eligible for grandfathered interference protection.<sup>14</sup> They acquired equipment, constructed facilities, and commenced or expanded service to the public while planning to incorporate the 3550-3650 MHz band into their services. With “every expectation that the rules adopted in 2015 would remain in place,” WISPs invested millions of dollars in LTE-based equipment that is “dual band,” meaning that it can be deployed in the 3650-3700 MHz band now, and then software upgraded at little to no cost to operate in the CBRS band, once the Spectrum Access System is operational.<sup>15</sup> Equipment manufacturers invested capital and resources in support of these projects, and “for deployments specifically tailored for private LTE and ‘neutral host’ mobile service indoors, as well as in hard-to-service locations.”<sup>16</sup>

In sum, and as evidenced by numerous comments filed in this proceeding, the Commission can rightfully recount in its report to Congress that “the results of the 2015 rule changes” were positive and promising. But the story does not end there. If it is to provide a full accounting of the impact of the 2015 rule changes, the Commission must also report on the chilling effect the *2017 NPRM* has had on those changes.

Only two years after it adopted the landmark *CBRS Order*, and “despite all th[e] outpouring of collaboration, innovation and investment around this path-breaking approach to unlocking unused prime spectrum capacity,”<sup>17</sup> the Commission performed an about-face that now threatens to upend the very purpose of CBRS, exclude the entities the Commission has

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<sup>14</sup> Comments of the Wireless Internet Service Providers Association, GN Docket No. 14-177 (filed Sept. 11, 2018) (“WISPA Comments”) at 7.

<sup>15</sup> *Id.* at 10 (internal quotation and citation omitted); *see also id.* at 11.

<sup>16</sup> PISC Comments at 16.

<sup>17</sup> *Id.* at 8.

encouraged to develop the band, and harm the public interest.<sup>18</sup> In 2017, two petitioners, CTIA and T-Mobile, representing the narrow interests of a single group – large, national mobile wireless carriers – effectively asked the Commission to revisit an already settled issue: the geographic scope of PAL licensing. The proposals advanced by the mobile industry – licensing PALs based on geographic areas many times larger than census tracts, such as CMAs, while also expanding PAL license terms to ten years rather than the current three – were nakedly designed to benefit one class of entity: the national mobile wireless carriers themselves. Nonetheless, the Commission issued the *2017 NPRM*, which “closely followed CTIA’s petition.”<sup>19</sup> The results have been as predictable as they are tragic.

Providers and potential users of the CBRS spectrum have grown skittish. The mere “possibility of changes to the CBRS rules as already been disruptive to . . . investment.”<sup>20</sup> Entities that invested millions of dollars into development of the CBRS band are now curtailing deployment and reducing investment, based on the mere threat of the *2017 NPRM*.<sup>21</sup> They fear having the current investments stranded, and are concerned about potentially throwing good money after bad.

If the mobile carriers’ requests are adopted, the results will eviscerate the CBRS band as initially envisioned by the Commission. The impact of the proposed change in PAL size cannot be overstated. Auctioning PALs for areas that are much larger than census tracts will “mean that only large mobile carriers . . . w[ill] have a realistic chance to actually get PALs through auctions.”<sup>22</sup> Adopting the wireless carriers’ proposals, as reflected in the *2017 NPRM*, will

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<sup>18</sup> “Much of the public interest value of the current PAL rules is that virtually any enterprise, rural ISP or public purpose network provider can reasonably hope to acquire PALs at their location.” *Id.* at 19.

<sup>19</sup> *Id.* at 9.

<sup>20</sup> *Id.* at 18.

<sup>21</sup> WISPA Comments at 13-15.

<sup>22</sup> PISC Comments at 18.

ensure that the wide array of intended beneficiaries of the 2015 rule changes are effectively frozen out of using the CBRS spectrum. CBRS was “intended to benefit users ranging from rural and small wireless internet service providers, to utilities, ports and community anchor institutions, to hotels, office complexes and other venues, to utilities, factories, critical infrastructure companies.”<sup>23</sup> Yet if the proposals are adopted, one, and only one group will benefit.<sup>24</sup> The Dynamic Spectrum Alliance sums up the situation succinctly and accurately:

[The] proposed changes to the current rules are unnecessary, counterproductive and have created regulatory uncertainty for commercial deployers....Failure to [ensure that PALs remain properly sized] would undermine CBRS’s promise as an innovation band, strand millions of dollars of investment already made in CBRS, and ‘rig the system’ in such a way that only those business models that prefer large license areas could acquire PALs.<sup>25</sup>

CTIA in its comments attempts to weave a narrative that the 2015 rule changes were merely the first step of a natural progression whereby mobile wireless carriers effectively become the sole stewards of the CBRS band. Repeatedly invoking the specter of the United States losing “the race to 5G,”<sup>26</sup> and implying that only mobile carriers can save the country from losing that race,<sup>27</sup> CTIA encourages the Commission to continue “freeing up . . . spectrum”<sup>28</sup> for its members’ use – that is, evicting and foreclosing other users of the spectrum – this time focusing on the CBRS band. CTIA claims that “[t]he rules as adopted in 2015 launched a path to where we are today,”<sup>29</sup> which, according to CTIA, has led to a situation wherein “the

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<sup>23</sup> PISC Comments at 4.

<sup>24</sup> “*Everyone* except the mobile wireless carriers, the trade associations, and equipment suppliers” objected to the 2017 NPRM. WISPA Comments at 5.

<sup>25</sup> Comments of Dynamic Spectrum Alliance, GN Docket No. 14-177 (filed Sept. 11, 2018) at 2.

<sup>26</sup> Comments of CTIA, GN Docket No. 14-177 (filed Sept. 11, 2018) at 2.

<sup>27</sup> “[W]ireless carriers . . . need access to mid-band spectrum in the near term to maintain and improve America’s position in the global 5G race.” *Id.* at 3.

<sup>28</sup> *Id.*

<sup>29</sup> *Id.* at 4.

nation's interests in the global race to 5G"<sup>30</sup> trumps all other priorities – including, apparently, the ability of the CBRS band to accelerate broadband to rural areas where access and choice are lacking.

Knowing that what it has proposed is a radical restructuring of the entire CBRS licensing regime, CTIA nonetheless trumpets the proposed rule changes as “targeted reforms.” These “reforms” risk turning the “innovation band” into a “5G-only band.”<sup>31</sup> Enlarging PALs beyond census blocks will ensure that national mobile carriers are the only entities that can effectively compete for the spectrum. Moreover, it will disadvantage rural areas that were supposed to benefit from the 2015 rule changes. National mobile wireless carriers would likely use their newfound domination of the CBRS band to bolster their urban, high-density service areas. By gaining licenses with large geographic footprints, and with long-term, renewable licenses, the mobile carriers would tie up usage of the band in less densely populated areas, creating “a recipe for incredibly productive spectrum lying fallow for many years (if not indefinitely) in low-density environments outside of central urban areas and well-trafficked venues.”<sup>32</sup> And under CTIA's plan, once the national carriers gain their CBRS licenses, they would retain them, possibly into perpetuity. CTIA proposes “a 10-year standard license term with an expectancy of renewal”<sup>33</sup> – in other words, allowing the licenses to be held permanently by the wireless providers. Taken together, CTIA's self-serving “targeted reforms” would result in “PALs [being] gifted” to a few large carriers, with the diverse uses predicated on the 2015 rule changes relegated to sharing GAA channels.<sup>34</sup>

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<sup>30</sup> *Id.* at 2.

<sup>31</sup> WISPA Comments at 1.

<sup>32</sup> PISC Comments at 19.

<sup>33</sup> CTIA Comments at 5.

<sup>34</sup> WISPA Comments at 19.

If the Commission is to provide a full and accurate accounting to Congress of the status of CBRS development, it must describe not only how the 2015 rule changes spurred the development of the CBRS band, but also how issuance of the *2017 NPRM* has chilled, and risks halting, that development.

## **II. THE COMMISSION SHOULD DEVELOP THE 6 GHz BAND IN A MANNER THAT PROTECTS INCUMBENTS WHILE ALSO OFFERING NEW ENTRANTS THE OPPORTUNITY TO DEVELOP UNLICENSED SPECTRUM**

In addition to reporting to Congress on the status of the 2015 rule changes for the CBRS band, Congress has charged the Commission with preparing an “analysis of proposals to promote and identify additional spectrum bands that can be shared between incumbent uses and new licensed and unlicensed services under such rules and identification of at least 1 gigahertz between 6 GHz and 57 GHz for such use.”

WISPA agrees with those commenters who believe that the 6 GHz band holds great promise for use by unlicensed devices that will “achieve . . . [the] full potential to connect Americans, drive innovation and economic growth.”<sup>35</sup> WISPA believes, however, that it is critical to the successful development of the 6 GHz to ensure protection of incumbent users of the band. The most straightforward way to do this is for the Commission to adopt spectrum sharing techniques for the 6 GHz band that protect incumbent licensed uses and also enable unlicensed uses to operate on a non-interfering basis.

As a general proposition, WISPA agrees with Echostar and Hughes that “the spectrum sharing model adopted for the 3.5 GHz band should not just be applied to other spectrum bands, unless appropriate,”<sup>36</sup> and that “tailoring sharing rules to each band” based on the protection

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<sup>35</sup> Comments of Wi-Fi Alliance, GN Docket No. 14-177 (filed Sept. 11, 2018) at 5.

<sup>36</sup> Comments of Echostar Satellite Operating Company & Hughes Network Systems, LLC, GN Docket No. 14-177 (filed Sept. 11, 2018) at 5.

needs of incumbents is the best approach.<sup>37</sup> Unlike CBRs, where there is a need for CBSDs to vacate a channel within five minutes of detection of radar by the ESC, changes to incumbent usage on the 6 GHz band occur slowly, no faster than day to day. With respect to the 6 GHz band, WISPA generally concurs with Apple, et al., that the Commission should resist the call to “transfer[] unnecessary sharing from one band to another” and avoid requiring “over-engineering” spectrum solutions when simpler solutions will do the job.<sup>38</sup> Adopting the least complicated sharing model may save years of time in developing dynamic spectrum sharing approaches, delaying service and driving up the cost of equipment to accommodate spectrum management software.

WISPA looks forward to participating in the upcoming rulemaking proceeding that will open up the 6 GHz band for unlicensed operations. WISPA believes that, if the Commission ultimately allows unlicensed operations with appropriate interference protection for licensed use, indoor WiFi and outdoor fixed broadband services can be enabled.

### **Conclusion**

For the foregoing reasons, and based on the comments submitted in this proceeding, WISPA encourages the Commission to report to Congress that while development of the CBRs band showed great initial promise, the present and future development of the band is in doubt due to the *2017 NPRM*. Furthermore, the Commission should report that it will consider innovative ways in which the 6 GHz band can be shared among incumbents and future users, because such sharing would be a highly efficient way to allow spectrum to be used more efficiently to enable consumers to access new wireless services.

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<sup>37</sup> Comments of Apple, Inc., et al., GN Docket No. 14-177 (filed Sept. 11, 2018) at 8.

<sup>38</sup> *Id.*

Respectfully submitted,

**WIRELESS INTERNET SERVICE  
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