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

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In the Matter of	)	
	)	
Auction of Priority Access Licenses for the	)	AU Docket No. 19-244
3550-3650 MHz band	)	
	)	
Comment sought on competitive bidding procedures for	)	
Auction 105	)	
	)	
Bidding in auction 105 scheduled to begin June 25, 2020	)	

**COMMENTS OF DYNAMIC SPECTRUM ALLIANCE**

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October 28, 2019

## **INTRODUCTION**

The Dynamic Spectrum Alliance (“DSA”)<sup>1</sup> respectfully submits its comments about the auction of Priority Access Licenses (“PALs”) for the 3550-3650 MHz band. The DSA strongly believes that smaller and more affordable license areas are especially important for small wireless internet service providers (“WISPs”) and other market entrants focused on providing local service in rural and less populated counties. For this reason, counties should remain the license area of PALs, because counties are the result of a hardfought stakeholder compromise during the course of the last CBRS rulemaking. Additionally, the DSA further believes that the FCC should reject CMA-level bidding, because that county-level bidding is far better suited for efficient spectrum utilization and encouraging rural broadband. This county-by-county bidding is neither more burdensome nor precludes winning bids in every county in a CMA. Moreover, recalibrating the Commission’s auction procedures to account for county-by-county bidding will not only enable highly efficient spectrum use, but will also inspire the investment necessary to deploy mid-band spectrum by a wide variety of users.

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<sup>1</sup> The Dynamic Spectrum Alliance is a global, cross-industry alliance focused on increasing dynamic access to unused radio frequencies. The membership spans multinational companies, small- and medium-sized enterprises, academic, research, and other organizations from around the world, all working to create innovative solutions that will increase the utilization of available spectrum to the benefit of consumers and businesses alike. A full list of DSA members is available on the DSA’s website at [www.dynamicspectrumalliance.org/members/](http://www.dynamicspectrumalliance.org/members/).

**I. In the 2018 CBRS Order, the Commission Reached a Compromise to Give Smaller ISPs and Other Market Entrants Equal Opportunity to Win PALs at Auction**

The relatively small size of Priority Access License areas was specifically designed – both in the original 2015 Order and in last year’s Order – to allow a diverse set of entities to purchase licenses for 3.5 GHz spectrum for high-speed broadband deployment in rural areas, as well as for a variety of other innovative use cases, such as neutral-host LTE networks. Originally, the Commission unanimously voted to make PALs census tract-sized in 2015, which was itself a compromise intended to ensure auctions for CBRS spectrum were competitive and offered localized access to a wide variety of potential users. When the Commission sought comment to expand the size of PALs, the record showed strong opposition due to the fact that large PALs (such as those for PEAs or MSAs) would be useful and valuable only to the major, nationwide wireless carriers. The Commission eventually expanded the size to counties in the *2018 CBRS Order*. DSA urged the Commission to retain the census tract-sized PALs and reject any proposals to enlarge them. DSA continues to believe census tracts reflect the most common-sense policy for the goals of the CBRS band. However, the Commission should reconsider its CMA bidding proposal, which would completely undermine the purpose of the CBRS framework by creating a market distortion that disadvantages bidders for individual, less populated counties at the periphery of the 172 largest CMAs.

Although the Commission ultimately adopted county-sized PALs in 2018, this represented a hard-fought compromise among the various CBRS stakeholders. The Commission should honor the spirit of the 2018 and 2015 CBRS Orders that sought to allow equal access to mid-band spectrum for smaller ISPs and new market entrants, including hospitals, schools,

entertainment venues, manufacturing campuses, and others that aim to build their own small cell networks. In its *2018 CBRS Order*, the Commission concluded that county-sized PALs are consistent with the goals of the Communications Act because they would “service the needs of rural communities and will allow new and innovative services to reach underserved and unserved communities.”<sup>2</sup> The Commission majority detailed the reasons why they believed county-sized PALs represent an optimal compromise, while underscoring the point that auctioning county-by-county would “still enable the construction of localized, private networks using 3.5 GHz spectrum,” referring to the very essence of the CBRS framework.<sup>3</sup>

The Commission’s current bidding-by-CMA proposal in the 172 MSAs completely contradicts the Commission’s conclusions in the 2018 Order just a year ago. The Commission explicitly acknowledged the harms of increasing the size of PAL areas beyond counties, stating that “the incremental benefit for 5G mobile use of going from counties to MSAs or PEAs would be far less than the incremental costs incurred by other potential users of the band,” while also noting the concerns of WISPs that “the incongruity between PEAs and WISP service footprints will diminish or foreclose their ability to win PALs at auction.”<sup>4</sup>

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<sup>2</sup> Report and Order, GN Docket No. 17-258 (Rel. Oct. 24, 2018), <https://docs.fcc.gov/public/attachments/FCC-18-149A1.pdf> ¶ 27 (“2018 CBRS Order”).

<sup>3</sup> *Id.* at ¶ 37.

<sup>4</sup> *Id.* at ¶ 39 (“We reject arguments that we should adopt PEAs nationwide, as petitioners, T-Mobile, and Verizon support, or MSAs in urban areas, as suggested in multiple hybrid proposals. We believe that the incremental benefit for 5G mobile use of going from counties to MSAs or PEAs would be far less than the incremental costs incurred by other potential users of the band. In particular, we agree with those commenters that cite the potential negative effects of adopting license areas as large as PEAs. Many WISPs express concerns that the incongruity between PEAs and WISP service footprints will diminish or foreclose their ability to win PALs at auction. In response to these concerns, we have decided not to increase the size of the PAL license area to PEAs.”).

The CMA bidding proposal would foreclose, or at least greatly diminish, the ability of competitive and smaller ISPs and other local entities to win PALs in the 172 CMAs. Reducing the number of small ISPs and other entities that can acquire PALs is likely to stifle innovation and undermine efforts by fixed wireless broadband ISPs to deploy more high-capacity and affordable networks in rural and less populated areas. An auction structured to encourage most or all of the PALs to end up in the hands of the highest bidders in the most densely populated county in a CMA is likely to create a market distortion that leads to a more uniform use case – such as wide area mobile cellular deployments – rather than to the more localized, small cell and innovative variety of use cases and market entrants envisioned in previous CBRS orders.

The adoption of county-sized PALs reflected an effort by the Commission to align the Order with the goals of Section 309(j) of the Communications Act - adoption of the CMA - bidding proposal would likely undermine the benefits of county-by-county bidding that the Commission sought to preserve by benefiting large wireless carriers in purchasing PALs. In the *2018 CBRS Order*, the Commission considered its responsibilities under Section 309(j) to change the rules regarding PALs to “more effectively promote competition and ensure the development and rapid deployment of new technologies to consumers, including to those in rural areas, disseminate licenses among a wide variety of applicants, and encourage efficient and intensive use of the spectrum.”<sup>5</sup>

In contrast, the current proposal to auction PALs on a CMA basis for the 172 largest MSAs seems likely to reverse the Commission’s effort to follow Section 309(j), since tying the

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<sup>5</sup> *Id.* at ¶ 7.

licenses for counties near cities all together as one bidding process would not “promote (i) an equitable distribution of licenses and services among geographic areas, (ii) economic opportunity for a wide variety of applications, including small businesses, rural telephone companies, and businesses owned by members of minority groups and women, and (iii) investment in and rapid deployment of new technologies and services.”<sup>6</sup> It is very likely that instead, this will lead to prices going up in counties neighboring city centers and lead to a concentration of spectrum licenses among major mobile carriers.

The original CBRS Order was tailored to make 3.5 GHz spectrum available on a localized and targeted basis to ensure that the spectrum-sharing framework remained user-and industry-neutral. The *2015 CBRS Order* highlighted how making small-cell PALs available and affordable to the largest possible number of users – such as WISPs deploying broadband to rural and sparsely populated areas, private neutral-host LTE networks, office complexes, factories customizing machine-to-machine networks, utilities, airports, entertainment venues, shopping malls, and school campuses – provided the best way to advance the policy goals consistent with Section 309(j).<sup>7</sup> The Commission concluded that larger-sized license areas, such as those in traditional mobile bands, would be “inconsistent with our desire to promote innovative, low power uses in this band, such as small cells, which align well with small, targeted geographic areas such as census tracts.”<sup>8</sup> The Commission further noted that the statutory mandate is

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<sup>6</sup>47 U.S.C. § 309(j)(4)(C).

<sup>7</sup> Report and Order and Second Further Notice of Proposed Rulemaking, GN Docket No. 12-354 (Rel. April 21, 2015) ¶ 100.

<sup>8</sup> *Ibid.*

“particularly compelling in light of the opportunities for participation with much lower capital investment requirements associated with smaller service areas, as we have previously recognized in other services in trying to address the substantial challenges faced by new entrants.”<sup>9</sup> The Commission’s current proposal would directly contradict the goal of the CBRS rules.

The Commission’s proposal is likely to undermine the investment and business plans reliant on the county-by-county PAL size. As the Public Interest Spectrum Coalition noted in comments in 2018, there has already been an “outpouring of collaboration, innovation and investment around this path-breaking approach to unlocking unused prime spectrum capacity,”<sup>10</sup> and rural ISPs were “already deploying base stations for use at 3650 MHz that will require only a software upgrade to deliver 100 Mbps download speeds to customers once the SAS and ESC systems are authorized and the full 150 megahertz CBRS band is available for use.”<sup>11</sup> WISPA has detailed this early investment in the band: “Licensees have deployed thousands of sites serving tens of thousands of customers and made equipment design, investment, and deployment decisions in reliance on the certainty of the CBRS rules.”<sup>12</sup> Federated Wireless announced in

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<sup>9</sup> *Ibid.*

<sup>10</sup> Comments of the Public Interest Spectrum Coalition, GN Docket No. 17-258, GN Docket No. 15-319, GN Docket No. 17-183, GN Docket No. 14-177 (Sep. 11, 2018), [https://ecfsapi.fcc.gov/file/1091216959118/PISC\\_Comments\\_SpectrumPipelineAct\\_FINAL\\_AsFiled\\_091118.pdf](https://ecfsapi.fcc.gov/file/1091216959118/PISC_Comments_SpectrumPipelineAct_FINAL_AsFiled_091118.pdf) at 8.

<sup>11</sup> *Id.* at 15 (“Rural ISPs are also planning on CBRS spectrum to enhance the quality and lower the cost of rural deployments funded by Federal subsidy programs, including especially the Connect America Fund (“CAF”). This is reflected by the large number of WISPs that won at CAF Phase II reverse auction, concluded earlier this year with the results announced in late August.”).

<sup>12</sup> *Ex Parte Letter* of WISPA Counsel Stephen Coran, Amendment of the Commission’s rules with Regard to Commercial Operations in the 3550-3700 MHz Band, GN Docket 12-354 (April 7, 2017), at 11.

Sep. 2019 that it would start its initial commercial deployment in both urban and rural markets in 36 states in the 3.5 GHz band to “accelerate the availability of high-speed, low-cost, wireless access to mobile data.”<sup>13</sup> These early deployments are reliant on GAA spectrum, meaning the auctions, and smaller providers’ ability to win licenses, are even more important to completing the work small providers and new entrants have begun investing in this innovative spectrum sharing experiment.

## **II. The FCC Should Auction PALs on a County-by-County Basis and Not Use Any Form of CMA-level Bidding.**

### **A. CMA-Level Bidding Creates Market Distortions**

Throughout the course of the FCC’s CBRS proceeding, the DSA has consistently argued for policies that lead to efficient spectrum utilization and encourage rural broadband deployments to connect underserved communities. As we stated to the Commission in December 2017, very large area PALs “would be too large and too expensive for anyone except the large national wireless carriers” and would further “be harmful to the goal of encouraging greater rural deployment by raising the costs of spectrum access for rural providers.”<sup>14</sup> The proposed adoption of CMA-level bidding not only raises these very concerns DSA highlighted for the Commission two years ago, but threatens to undermine the principles of efficient spectrum utilization and encouragement of rural broadband deployment.

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<sup>13</sup> Federated Wireless Press Release, “Federated Wireless Announces Industry-first 3.5 GHz CBRS Network to Support Initial Commercial Deployments of Shared Spectrum Services” (Sep. 10, 2019), <https://www.federatedwireless.com/federated-wireless-announces-industry-first-3-5-ghz-cbrs-network-to-support-initial-commercial-deployments-of-shared-spectrum-services/>.

<sup>14</sup> DSA Comments filed December 28, 2017 to In the Matter of Promoting Investment in the 3550-3700 MHz Band, Notice of Proposed Rulemaking and Order Terminating Petitions, FCC-CIRC1710-04 at 5.



Many CMAs by their nature aggregate densely populated urban and suburban counties with less populated outer and rural counties. For example, CMA number 3 (covering the city of Chicago and surrounding counties) is comprised of six counties, including highly urban Cook County with a population of 5,194,675, and the more rural and exurban McHenry County with a population of 308,760, or roughly 6% of the population of Cook County.<sup>15</sup> Under the FCC's proposed CMA-level bidding rules, CMA-level bidders would be barred from bidding at the county level. During the course of the auction, CMA-level bidders would therefore have to bid and win the desired number of spectrum blocks in each constituent county under an ascending clock mechanism in order to win a CMA-sized PAL.<sup>16</sup> Thus, failure to win even a single rural county within a CMA - even in instances where the CMA-level bidder has limited desire, ability, or economic incentive to serve such counties - would result in that bidder's failure to secure any PALs at all within the CMA.

As a result, in order not to lose out on CMA-sized PALs, CMA bidders will -in addition to paying whatever it takes to win PALs in the most populous counties within a CMA- be forced to win PALs in counties that they may not have an economic interest in serving, thereby creating artificial demand for PALs in those counties. This market distortion will mean that county-level bidders in rural or exurban counties within a CMA will pay artificially high prices for those PALs or even be priced out altogether. WISPs and other small providers that serve these communities may be reluctant to deploy CBRS networks using solely GAA spectrum without the

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<sup>15</sup> See Auction 105 Public Notice at Attachment A, available at <https://www.fcc.gov/auction/105>

<sup>16</sup> See Public Notice, Auction of Priority Access Licenses for the 3550-3650 MHz Band, Comment Sought on Competitive Bidding Procedures for Auction 105, Bidding in Auction 105 Scheduled to Begin June 25, 2020, AU Docket No. 19-244, FCC 19-96, ¶¶ 30-32 (rel. Sept. 27, 2019) available at <https://docs.fcc.gov/public/attachments/FCC-19-96A1.pdf> (Auction 105 Public Notice).

protection of PAL spectrum, especially with the threat of future deployments by large carriers using the PAL spectrum they've won at auction. Consequently, communities in less populated counties within CMAs may lose out on any benefits of CBRS as large carriers focus on 5G deployments in population centers and WISPs stay on the sidelines.

In practice, allowing CMA-level bidding will likely play out along these lines in CMA number 3: Two large national carriers elect to bid at the CMA level for the Chicago CMA, bidding on multiple blocks of PALs (e.g., a total of 40MHz). The carriers will pay a high price to win Cook County, in which they will no doubt provide service, but will also have to win bids in McHenry County, even if they have no desire to provide service there. Because the large carriers must also win McHenry County, WISPs that may otherwise seek to win PAL spectrum there will be forced to pay artificially high prices, or more likely, will be priced out altogether. The PAL spectrum in McHenry County is therefore likely to be underutilized going forward as WISPs will be reluctant to deploy networks solely based on GAA spectrum, and the large carriers focus on initial deployments in Cook County and other more populous counties. Residents of McHenry County lose out on the benefits of CBRS in that scenario. Because of the likelihood of these negative outcomes, the DSA believes that county-level bidding--already the result of a major compromise among CBRS stakeholders--is far better suited for efficient spectrum utilization and encouraging rural broadband.

### **B. County-by-County Bidding is Neither More Burdensome Nor Precludes Winning PALs in Every County in a CMA**

The Commission's CMA-level bidding proposal is a solution in search of a problem, the Commission itself provides no justification for the proposal in the *Public Notice*.<sup>17</sup> Presumably

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<sup>17</sup> Public Notice at ¶¶ 29-33.

the proposal is intended to simplify bidding for bidders who seek to aggregate multiple channels across a number of counties, and to help ensure such bidders win the entirety of the geographic area without any gaps. However, CMA-level bidding does not meaningfully address these perceived problems any more than the bidding tools large sophisticated bidders will already use, and as discussed, result in higher prices for smaller bidders.

Large bidders have access to sophisticated auction resources to track auction progress and generate bids that they upload each round into the Commission's bidding system. Every round these bidders will use bidding tools that take in inputs from the previous round results and the prices for the upcoming round to generate a set of bids that the bidder can upload as a CSV to the bidding system. To the extent that a bidder seeks to aggregate counties into CMAs – or any other license area size – they can rely on their existing tools to do so. The Commission's CMA proposal may simplify a piece of code or an algorithmic analysis, but without any gain – bidders will already bid on aggregations of areas if that is how they demand licenses.

Further, the Commission's proposal does not meaningfully increase the probability that a bidder that demands all of the counties in an area wins those counties. The Commission's proposal actually assumes that large bidders are likely to make errors in the bids. Otherwise, there are no legitimate circumstances in which a large sophisticated bidder that demands counties that make up a CMA – or any other geographic area – are incapable of uploading accurate bids every round. For these reasons, instead of focusing on trying to make bidding easier for large bidders – without any evidence or even argument that it is necessary – the Commission should seize this opportunity to establish uniform, reasonable procedures for auctioning this critical mid-band spectrum on a county-by-county basis.

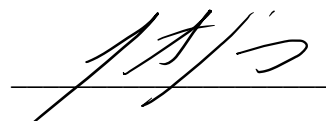
Claims that county-by-county licensing is too burdensome or technically infeasible are likewise unsubstantiated by the record and past precedent. The Commission has a long history of conducting successful spectrum auctions - most recently, its inaugural 600 MHz Incentive Auction, and Auctions 101 and 102. Some of these auctions were relatively complicated and included large numbers of licenses and complex bidding strategies. As experience shows, a successful spectrum auction rests on the Commission's ability to employ reasonable auction procedures that inspire competition and certainty in investment, and bidders are able to build their own tools and strategies for placing their own bids. In this proceeding, smart policies for county-by-county bidding can allow various competitors to acquire license sizes that are appropriate for their service footprint, and also would not preclude those serving larger territories to acquire PALs in every county in a CMA. Recalibrating the Commission's auction procedures to account for county-by-county bidding, therefore, will enable highly efficient spectrum use and inspire the investment necessary to deploy mid-band spectrum by a wide variety of users.

## CONCLUSION

Throughout the course of the FCC's CBRs proceeding, the DSA has consistently argued for policies that lead to efficient spectrum utilization and encourage rural broadband deployments to connect underserved communities. DSA believes that the auction rules of PALs for the 3550 – 3650 MHz band should reflect an appropriate balance between the requirements of diverse types of service providers using different categories of network infrastructure and undertaking innovative use cases, as well as serving the requirements of traditional mobile applications. In this sense, it is important to give smaller ISPs and other market entrants equal opportunity to win PALs at auction.

Additionally, the DSA believes that the FCC should auction PALs on a county-by-county basis and not use any form of CMA-level bidding that might create market distortions and further don't lessen the administrative burden on large bidders.

Respectfully submitted,



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October 28, 2019