

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Wireless Telecommunications Bureau	)	GN Docket No. 12-268
Seeks Comment on a Proposal to License	)	GN Docket No. 13-185
The 600 MHz Band Using “Partial	)	DA 13-2351
Economic Areas”	)	

**COMMENTS OF VERIZON AND VERIZON WIRELESS**

Verizon continues to support the Commission’s proposals to license the 600 MHz and AWS-3 spectrum using Economic Areas (“EAs”) as the best mechanism to meet Congress’s and the Commission’s goals for these spectrum auctions. By licensing this spectrum in EAs and permitting package bidding at the auctions, the Commission would achieve its stated goals of “facilitating access to spectrum by both small and large providers, providing for the efficient use of the spectrum, encouraging deployment of wireless broadband services to consumers, especially those in rural areas, and promoting investment in and rapid deployment of new technologies and services.”<sup>1</sup> If, however, the Commission were to adopt smaller license area sizes, to achieve these goals licenses should “nest” into existing EAs and, as with EAs, auction participants should be permitted to combine licenses through package bids.

As Verizon and other parties have previously demonstrated, larger geographic licenses offer mobile providers flexibility in deployment and the ability to take advantage of economies

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<sup>1</sup> *In the Matter of Amendment of the Commission’s Rules with Regard to Commercial Operations in the 1695-1710 MHz, 1755-1780 MHz, and 2155-2180 MHz Bands*, Notice of Proposed Rulemaking and Order on Reconsideration, 28 FCC Rcd 11479, ¶¶ 50-51 (2013); *see also Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, ¶ 148 (2012).

of deploying across larger contiguous areas.<sup>2</sup> For example, in selecting license areas for the Upper 700 MHz band plan, the Commission noted that “large geographic areas would readily allow aggregation into a nationwide service area and would enable multiple parties to bid on this spectrum for the provision of high-speed wireless data services.”<sup>3</sup> In contrast, as the Commission has noted, “[w]hen [license] areas are inefficiently small, the costs of aggregation during or after the auction in terms of delay and transaction costs may harm both service providers and customers alike.”<sup>4</sup>

With license areas smaller than EAs (*e.g.*, Partial Economic Areas (“PEAs”) or Cellular Market Areas (“CMAs”)), aggregation is especially necessary because national and regional wireless providers generally do not deploy networks on such a localized basis. Instead, they deploy networks to serve certain economically integrated metropolitan areas, regions, or the entire nation. Acquiring a single CMA-sized license, however, often equates to acquiring spectrum in a single county, and PEAs present similar challenges. Therefore, to most efficiently serve a metropolitan area, auction participants must acquire multiple licenses. And if a wireless provider wants to acquire spectrum nationwide at auction, it would need to purchase 734 different CMA-sized or over 350 different PEA-sized licenses, as compared to 176 EA-sized licenses. If an applicant fails to obtain one CMA or PEA license within that wider area, it risks leaving gaps in its desired service area that, post-auction, it could only fill through secondary market acquisitions. Given this exposure, the MHz/POPs value of each individual CMA or PEA

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<sup>2</sup> *See, e.g.*, Verizon Comments in GN Docket No. 12-268 at 60-63; T-Mobile Comments in GN Docket No. 12-268 at 15-17 (supporting Major Economic Areas).

<sup>3</sup> *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to Part 27 of the Commission's Rules*, First Report and Order, 15 FCC Rcd 476, ¶ 60 (2000).

<sup>4</sup> *Id.* ¶ 59.

that makes up the relevant area may be less than the MHz/POPs value of the larger geographic area, as indicated by the Commission's experience with Auction 66, where EAs and Regional Economic Area Groups (REAGs) were valued more highly on a per MHz POP basis than CMAs.<sup>5</sup>

License areas smaller than EAs also complicate wireless providers' deployment, to the detriment of consumers. Given the smaller license size, licensees must manage significantly more potential co-channel interference along their service area boundaries. As a result, licensees must negotiate more service area boundary extensions or, alternatively, more narrowly tailor their service areas to minimize interference with adjacent licensees, which can result in uneven signal strength across more boundaries. In addition, consumers might be more dependent on the availability of roaming arrangements between neighboring licensees, even when traveling within their home markets. When using the home network, network, device and application design and deployment can be coordinated and optimized for the consumer, but that is all complicated in a roaming environment. And even where the adjacent license may become available in the secondary market, the purchaser could incur network integration costs and delays that would have been avoided had it been able to acquire the license at the outset.

For these reasons, licensing spectrum in areas smaller than EAs creates risks and inefficiencies that will harm the consumers that use and rely on these networks, as well as the value of the spectrum at auction. Thus, for both the incentive auction and the upcoming AWS-3

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<sup>5</sup> At auction 66, the REAG licenses sold for an average of \$0.705 per MHz/POP, while CMA licenses sold for \$0.417 per MHz/POP. The EA licenses for Block B sold at \$0.451 and for Block C at \$0.548. See Jeremy Bulow, Jonathan Levin, and Paul Milgrom, *Winning Play in Spectrum Auctions*, at 25 (Mar. 2009), <http://www.stanford.edu/~jdlevin/Papers/AWS.pdf>.

auction,<sup>6</sup> EAs draw the appropriate balance between enabling the efficient deployment of nationwide and regional services, and facilitating access to spectrum by small providers<sup>7</sup> – a conclusion reached by a diverse cross-section of the wireless industry with respect to 600 MHz licenses.<sup>8</sup>

While larger than CMAs or PEAs, a single EA alone is not sufficiently large to establish wide regional or nationwide coverage. When some bidders value a collection of licenses more than the sum of the value of licenses individually, such bidders, in attempting to acquire the full collection, may fail to achieve that goal and can end the auction paying more for a smaller subset of licenses than they are actually worth to the bidder. This is commonly known as the “exposure” problem. Concern about this outcome may lead bidders to bid more conservatively in the incentive and AWS-3 auctions (leading to lower revenues and inefficient outcomes) or deter them from bidding at all. Auctions with package bidding can ameliorate these concerns. A package bid is binding on the bidder if and only if the full package of licenses is acquired, incentivizing bidders to participate knowing that they are not at risk of paying more for a less valuable subset of licenses. For that reason, package bidding that enables a service provider to combine all EA blocks into a regional or nationwide service area can yield more robust bidding – and thus more revenues to support Congress’s public safety and deficit reduction objectives for these auctions.

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<sup>6</sup> See Public Notice, *Wireless Telecommunications Bureau Seeks Comment on a Proposal to License the 600 MHz Band Using “Partial Economic Areas,”* GN Docket Nos. 12-268 & 13-185, DA 13-2351, at 3, n.16 (WTB rel. Dec. 11, 2013) (seeking comment on both AWS-3 and incentive auctions).

<sup>7</sup> See 47 U.S.C. § 309(j)(4)(C); Comments of Verizon Wireless, *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, et al.*, WT Docket No. 06-150, at 9-15 (May 23, 2007).

<sup>8</sup> See Verizon Comments in GN Docket No. 12-268 at 60-62; AT&T Comments in GN Docket No. 12-268 at 54; Cellular South Comments in GN Docket No. 12-268 at 8; CCA Comments in GN Docket No. 12-268 at 14-15; and MetroPCS Comments in GN Docket No. 12-268 at 18-19.

The availability of package bidding is especially critical to the success of these auctions if the Commission were to adopt license area sizes smaller than EAs, such as the PEAs proposed by the Competitive Carriers Association (“CCA”). As license area sizes decrease, the exposure problem increases and the risk of failing to acquire all licenses necessary to a business plan will further inhibit both the level of bids and participation in the auction.<sup>9</sup> Indeed, without package bidding, applicants cannot be assured of significant enough scale to deploy a wireless network across their service area. Further, by allowing the winning bidders to take advantage of the economies of deploying across a larger area, package bidding will facilitate more rapid deployment of the spectrum, which in turn will benefit consumers.

The Commission recognized these public interest benefits for package bidding in Auction 73:

Minimizing the exposure problem with package bidding should facilitate the entry of applicants whose business plans require the economies of scale that only can be obtained with nationwide operation. We anticipate that package bidding can be implemented so as to shield such bidders from a potential significant exposure problem. Importantly, we also anticipate that it can be implemented without imposing disadvantages on parties that wish to bid on individual licenses comprising the nationwide footprint.<sup>10</sup>

While the Commission limited package bidding in Auction 73 to the 700 MHz Upper C Block licenses, these policy considerations are just as relevant to viable and efficient nationwide or regional network deployment of spectrum acquired in the incentive and AWS-3 auctions.

Package bidding also is likely to increase participation and bidding competition in both the incentive and AWS-3 auctions – a factor that is important for both auctions in light of Congress’s FirstNet funding objectives, and particularly for the incentive auction, given that

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<sup>9</sup> See *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands, et al.*, Second Report and Order, 22 FCC Rcd 15289, ¶ 287 (2007).

<sup>10</sup> *Id.* ¶ 290.

more robust bidding in the forward auction may result in more broadcast spectrum being repurposed for mobile broadband use. Package bidding allows auction participants to bid not just on the value of the individual licenses, but also on the value of obtaining spectrum across larger areas over a consistent set of frequencies. Thus, auction participants can commit more of their resources toward acquiring licenses in the auction, rather than trying to meet their goals in the subsequent secondary market. And by winning the licenses at auction, the proceeds are available to fund statutory objectives – including FirstNet and deficit reduction.

The economic literature on package bidding supports its value in maximizing auction participation. For example, after completing more than 64 laboratory sessions that consisted of six to ten auctions each, the authors of a paper prepared for the Wireless Telecommunications Bureau in 2006 found that “the efficiency advantage for package bidding seems to be persistent across environments with high complementarities, which generate the exposure problem that package bidding is intended to alleviate.”<sup>11</sup> As a result, the authors concluded that “the benefits of package bidding might be significant from an economic point of view.”<sup>12</sup> Other economists have reached similar conclusions.<sup>13</sup>

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<sup>11</sup> Jacob K. Goeree, Charles A. Holt, and John O. Ledyard, *An Experimental Comparison of the FCC’s Combinatorial and Non-Combinatorial Simultaneous Multiple Round Auctions*, at 3 (July 12, 2006), [http://wireless.fcc.gov/auctions/data/papersAndStudies/fcc\\_final\\_report\\_071206.pdf](http://wireless.fcc.gov/auctions/data/papersAndStudies/fcc_final_report_071206.pdf).

<sup>12</sup> *Id.*; see also Peter Cramton, *Simultaneous Ascending Auctions*, at 4 (Aug. 8, 2004), <http://www.cramton.umd.edu/papers2000-2004/cramton-simultaneous-ascending-auction.pdf> (“With individual bids, bidding for a synergistic combination is risky. The bidder may fail to acquire key pieces of the desired combination, but pay prices based on the synergistic gain. Alternatively, the bidder may be forced to bid beyond its valuation in order to secure the synergies and reduce its loss from being stuck with the dogs. Bidding on individual items exposes bidders seeking synergistic combinations to aggregation risk.”).

<sup>13</sup> See, e.g., Christoph Brunner, Jacob K. Goeree, Charles A. Holt, and John O. Ledyard, *An Experimental Test of Flexible Combinatorial Spectrum Auction Formats* (Sept. 6, 2007), [http://www.hss.caltech.edu/~jkg/fcc\\_smrpb.pdf](http://www.hss.caltech.edu/~jkg/fcc_smrpb.pdf); Gregory L. Rosston, *Implementing Package*

The package bid, however, must be appropriately designed to ensure that the value of the package can be higher than the value of the sum of its parts. For example, a package bid of the top 10 PEAs (based on population), as proposed by CCA, would not provide sufficient spectrum and the associated economies of scale to alleviate the exposure problem for bidders. Instead, the Commission should establish a package bid of the top 100 PEAs based on population, as suggested by AT&T.<sup>14</sup> Only with the breadth of such a package will applicants be protected against the exposure problem. That package will still leave over 250 individual PEAs across the country available solely for individual bids.

Finally, before adopting any new license area size, the Commission should closely review the proposed areas to ensure they divide the country in the most efficient and logical way, and that economically integrated communities remain intact. In addition, smaller licenses should “nest” within EAs to help wireless providers more efficiently combine the new licenses with existing 700 MHz and AWS mobile broadband deployments. While Verizon continues to review the proposed PEAs, at first glance CCA’s revised proposal does not appear to meet those criteria in all markets. For example, in the Chicago market, the proposed PEA is smaller than the Chicago CMA. In addition, CCA removed Lake and McHenry counties from the Chicago PEA in its revised proposal, even though these counties are an important part of the Chicago market.<sup>15</sup>

As a result, a significant part of the Chicago area would be excluded from that PEA, inconsistent

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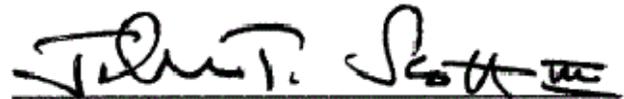
*Bidding in the 700 MHz Band to Improve Consumer Welfare, attached to Access Spectrum, et al.*, Notice of Ex Parte, WT Docket No. 06-150 (Feb. 5, 2007).

<sup>14</sup> See AT&T, *Ex Parte* Presentation, GN Docket No. 12-268, at 3 (Dec. 3, 2013).

<sup>15</sup> See Letter from Rebecca Murphy Thompson, CCA, to Marlene Dortch, FCC, GN Docket No. 12-268, Attachment “Proposed PEA Boundaries” at 30 (Nov. 27, 2013) (including Cook, DuPage, Kane, Kenosha, Lake, McHenry, and Will counties – all counties in CMA003 – in PEA 166); Letter from C. Sean Spivey, CCA, to Marlene Dortch, FCC, GN Docket No. 12-268, Attachment at 30 (Dec. 23, 2013) (including Cook, DuPage, Kane, and Will Counties in PEA 177 and Kenosha, Lake, and McHenry Counties in PEA 182).

with the objective of ensuring that the larger urban areas are included in a PEA and eligible for a package bid. If the Commission decides to create a new license area scheme, there may be other PEAs that should be similarly revised. At a minimum, all PEAs should be no smaller than the associated CMAs.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "John T. Scott III", written over a horizontal line.

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