

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

In the Matter of)	
)	
Expanding the Economic and Innovation)	GN Docket No. 12-268
Opportunities of Spectrum Through)	
Incentive Auctions)	
)	
Amendment of the Commission's Rules with)	GN Docket No. 13-185
Regard to Commercial Operations in the)	
1695-1710 MHz, 1755-1780 MHz, and)	
2155-2180 MHz Bands)	

REPLY COMMENTS OF UNITED STATES CELLULAR CORPORATION

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Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions)	GN Docket No. 12-268
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REPLY COMMENTS OF UNITED STATES CELLULAR CORPORATION

United States Cellular Corporation (“USCC”) submits these reply comments in response to the Public Notice released December 11, 2013 in the above-captioned proceedings and the comments filed in response to the Public Notice.¹ In its comments, USCC emphasized the need for the Commission to ensure that small and regional carriers have a reasonable opportunity to participate in the upcoming spectrum auctions for the 600 MHz and AWS-3 bands. USCC explained that, without the participation of these carriers, there will be a continued lack of adequate competition in the wireless industry and reduced network deployments in rural and other underserved areas. USCC then expressed its strong support for two courses of action with respect to the band plans and auction procedures for these spectrum bands.

First, USCC strongly urged the Commission to license the 600 MHz and AWS-3 bands using sufficiently small license areas. USCC explained how Cellular Market Areas (“CMAs”) would be the optimal geographic size to ensure small and regional carriers have an opportunity to acquire licenses, but also noted that the use of Partial Economic Areas (“PEAs”) would

¹ *Wireless Telecommunications Bureau Seeks Comment on a Proposal to License the 600 MHz Band Using “Partial Economic Areas,”* Public Notice, GN Docket Nos. 12-268 & 13-185, DA 13-2351 (Dec. 11, 2013). All comments cited herein were filed on January 9, 2014 in the above-captioned dockets in response to the Public Notice.

promote the public interest far better than licensing the spectrum using Economic Areas (“EAs”). Second, USCC strongly urged the Commission to prohibit all forms of package bidding in the auctions for this spectrum. Notably, both of these proposed actions received overwhelming support in the initial round of comments.

I. INTRODUCTION AND SUMMARY

As USCC detailed in its comments, the various and significant benefits to the public created by broadband services clearly demonstrate the need to ensure that all Americans have access to these vital services. USCC also explained, however, that an unacceptable number of Americans – particular those living in rural areas – continue to lack broadband access, and therefore continue to be deprived of the vast opportunities made possible by broadband services. USCC also detailed the substantial public interest benefits that arise from robust competition amongst broadband service providers. Again, however, these benefits continue to be withheld from too many Americans because the ever-increasing concentration that has arisen in the wireless industry over the last decade has led to a lack of effective competition.

Fortunately, like USCC, various commenters noted that the current proceedings provide the Commission with a crucial opportunity to increase broadband access in rural and other underserved areas and to promote competition in the wireless industry.² But these commenters also stressed that, if the Commission fails to adopt rules that allow carriers of all sizes to participate, the Commission could “squander this opportunity to promote the availability of spectrum-based services to rural Americans”³ and to spur much-needed competition.⁴ As

² See, e.g., Comments of Blooston Rural Carriers (“Blooston Comments”) at 3 (“The 600 MHz spectrum band ... may provide an opportunity for rural telephone companies and small businesses to obtain spectrum that is especially well suited for their needs.”); Marsden, R., LaCasse, C. & Pike, J., *Local and Regional Licensing for the US 600 MHz Band (Incentive Auction)*, NERA Economic Consulting, p. 28 (Jan. 2014) (“NERA Report”), attached to Letter from Richard Marsden, Vice President, NERA, to Marlene H. Dortch, Secretary, FCC, GN Docket Nos. 12-268 & 13-185 (Jan. 7, 2014) (“[S]pectrum auctions provide an important opportunity to influence competition in mobile services, facilitating both expansion by existing operators and potential new entry.”); *id.* at 36 (noting that the 600 MHz band “may emerge as the single most important low-frequency band for mobile broadband”).

³ Comments of Peoples Telephone Cooperative, Inc. (PTC) (“PTC Comments”) at 4.

recognized by the Competitive Carriers Association (“CCA”), “maximizing participation requires ensuring that all carriers have a reasonable opportunity to bid for all licenses...”⁵ In these reply comments, USCC, like the vast majority of commenters, continues to stress that two crucial actions the Commission should take in this respect are licensing the spectrum using sufficiently small license areas and prohibiting any form of package bidding in the auctions for these licenses.

First, USCC again strongly urges the Commission to license these spectrum bands using sufficiently small geographic areas.⁶ USCC, like most commenters, continues to believe that CMAs would best serve the public interest because these smaller license areas would maximize the opportunities for small and regional carriers to acquire licenses, and then to use this spectrum to deploy rural broadband networks and better compete against the dominant national carriers.⁷ The smaller geographic size, and the absence of densely-populated urban areas in many CMAs, make these license areas affordable to smaller bidders. CMAs also are more likely to match the existing service areas of smaller carriers, meaning these carriers would not be forced to purchase significant additional spectrum rights simply to upgrade their existing networks. Notably, large carriers also would benefit from CMAs in this respect because they could target their bidding on urban areas, which provide the greatest economies of scale. At the same time, large carriers seeking expansive geographic service areas could easily aggregate multiple CMAs.

⁴ Supplemental Comments of Cellular South, Inc. on Proposed Use of “Partial Economic Areas” (“Cellular South Comments”) at 2 (“In order to encourage smaller and regional operators to participate ... and to promote auction and market competition generally, those operators must have a substantive opportunity to win licenses.”).

⁵ Supplemental Comments of Competitive Carriers Association Regarding the Use of “Partial Economic Areas” (“CCA Comments”) at 11.

⁶ *See, e.g.*, Comments of the Rural Wireless Association, Inc. and NTCA – The Rural Broadband Association (“RWA/NTCA Comments”) at 7 (“Of particular importance ... is to ensure that small businesses and rural carriers have the opportunity to participate in the Incentive Auction, which ... can only be accomplished through the adoption of smaller geographic licensing areas.”).

⁷ *See, e.g.*, Blooston Comments at 10 (“From the perspective of small and rural carriers, one of the most important policy considerations in ‘getting the incentive auction right’ will be to ensure that CMA licensing is made available for a meaningful portion of the 600 MHz band.”).

If, despite the substantial public interest benefits and record support for CMAs, the Commission nevertheless finds it necessary to adopt larger license areas, USCC continues to believe that PEAs would be the next best option. PEAs would not be as affordable as CMAs for smaller carriers because they encompass more territory, are more likely to include urban areas, and would not match up as well with these carriers' existing service areas. PEAs, however, would address the national carriers' claims that they require license areas that are larger than CMAs and that align with the boundaries of existing EA-based license areas, while also providing many of the benefits of smaller license areas. USCC also stresses that PEAs are far superior to EAs, the size and high population totals of which would effectively foreclose most small and regional carriers from participating in the auctions.

Second, USCC, like most commenters, again strongly urges the Commission to prohibit all forms of package bidding. Package bidding would create substantial exposure risks for smaller bidders because of its potential to reactivate dormant bids, and it would add yet another layer of complexity to the auctions. Package bidding also would increase the likelihood that large bidders will tie-up multiple licenses in large package bids to the exclusion of smaller carriers bidding on individual licenses, while potentially acquiring some of these licenses at a discount. The alternative proposals would do little to address package bidding's inherent harms, and regardless, package bidding is unnecessary because adequate spectrum aggregation opportunities are available under the Commission's standard auction procedures.

For these reasons, adopting sufficiently small license areas and prohibiting package bidding would significantly increase auction participation by providing small and regional carriers a reasonable opportunity to acquire licenses. In addition to allowing these carriers to use the spectrum to serve rural and other underserved areas and to become more effective competitors, commenters emphasized how the increased auction participation would help to

ensure that the “Commission can generate sufficient revenue that can be directed towards other important objectives, such as FirstNet.”⁸

II. THE PUBLIC INTEREST REQUIRES SUFFICIENTLY SMALL LICENSE AREAS

Like USCC, an overwhelming number of commenters stressed that small and regional carriers would be effectively foreclosed from auction participation if the Commission licenses these spectrum bands on the basis of geographic areas as large as EAs. USCC therefore joins these commenters in strongly urging the Commission to license the spectrum using sufficiently small service areas. As detailed below, only by pursuing this licensing approach can the Commission sufficiently leverage the potential for this spectrum to promote competition and increase broadband access in rural and other underserved areas.

A. CMA-Based Licensing Would Best Serve the Public Interest.

USCC agrees with CCA and numerous other commenters that CMAs represent the “optimal geographic license size” for both the 600 MHz and AWS-3 bands.⁹ As CCA emphasized, “many benefits would flow from using CMAs” because these smaller license areas “would maximize opportunities for participation by small, midsize, and rural carriers, many of whom otherwise might be foreclosed from participating.”¹⁰

⁸ PTC Comments at 4; *see* CCA Comments at 11 (“[M]aximizing participation is critical to maximizing auction revenues not only for those licenses competitive carriers ultimately acquire, but also for those licenses that competitive carriers *seek to acquire*, though ultimately don’t.”) (emphasis in original).

⁹ CCA Comments at 4; *see, e.g.*, Comments of King Street Wireless, L.P. (“King Street Comments”) at 9 (“The proper, and the only proper, size for the Incentive Auction is CMAs.”); Comments of Public Service Wireless Services, Inc. (“PSW Comments”) at 3 (urging “the Commission to award spectrum in all upcoming auctions, including the AWS-3 spectrum, on the basis of CMAs”); Joint Comments of Atlantic Telephone Membership Corp., FTC Management Group, Inc., Horry Telephone Cooperative, Inc., Piedmont Telephone Cooperative, Inc., and Sandhill Telephone Cooperative, Inc. (“Carolina Companies Comments”) at 3 (urging “the Commission to award spectrum in all upcoming auctions, including the AWS-3 spectrum, on the basis of CMAs”).

¹⁰ CCA Comments at 3-4; *see* Supplemental Comments of the Wireless Internet Service Providers Association (“WISPA Comments”) at 2 (“[S]maller geographic areas ... will encourage greater participation in the auction.”) (internal quotation marks omitted); Blooston Comments at 11 (urging “the Commission to foster opportunities for rural and independent service providers by adopting CMA licensing”).

In its comments, USCC detailed the various reasons why CMAs would not only permit, but in fact spur, auction participation by small and regional carriers. Most fundamentally, small and regional carriers, who often lack substantial financial resources, could reasonably compete for CMA-based licenses because these license areas do not cover expansive geography and do not necessarily encompass densely-populated urban areas, and thus include lower population totals. Similarly, King Street explained how “[s]maller markets, by and large, are less expensive to acquire than larger ones, and therefore are more available to cash-strapped smaller bidders than are larger ones.”¹¹

In addition to the immediate acquisition costs, a license will only be affordable if bidders also have the ability to cover the expense related to building out the license area, which can be as much, or even more, than a license’s auction price. In this respect, WISPA explained how “the capital requirements for building wireless systems in CMAs ... will be much less than the capital requirements for building out EAs.”¹² In sum, because larger license areas involve both high acquisition costs and substantial deployment expenses, USCC agrees with RWA/NTCA that, “without CMAs, many small businesses and rural carriers [could not] effectively participate in the auction[s].”¹³

Another reason why CMA-based licensing would promote broad participation in the upcoming auctions is that these license areas “are familiar to industry participants based on their use in prior auctions.”¹⁴ The result, WISPA explained, is that “smaller geographic areas [would] afford smaller, regional operators the opportunity to acquire spectrum that more precisely

¹¹ King Street Comments at 4.

¹² WISPA Comments at 7-8; *see* King Street Comments at 4 (“[S]maller markets are more affordable to smaller bidders for a second reason: There is less need to expend construction funds on areas of little or no interest.”); NERA Report at 11 (“Having smaller license areas promotes participation in the auction, because small bidders have the opportunity to bid on lots that match their geographic requirement.”).

¹³ RWA/NTCA Comments at 15; *see* PTC Comments at 2 (“If smaller license areas ... are not offered at auction, we will be severely limited in our ability to offer innovative wireless services...”).

¹⁴ CCA Comments at 4.

overlays existing networks...”¹⁵ In other words, these carriers could acquire the spectrum rights necessary to upgrade their existing networks, and thus better serve those living in their current service areas, without also being responsible for purchasing the rights to and building out additional territory.¹⁶

As USCC detailed in its comments, perhaps most importantly, CMA-based licensing would be the most effective means for the Commission to ensure that licensees use the spectrum to provide broadband service to rural and other underserved areas. The NERA Report similarly found that “[u]sing smaller area licensing is most likely to have a positive impact on competition in less populated areas.”¹⁷ As explained therein, this significant public interest benefit would arise because CMAs “facilitate participation of operators whose business case is focused on underserved regions.”¹⁸ Likewise, CCA stressed how “CMAs are the ideal geographic unit to promote participation by rural carriers and, accordingly, to promote the interests of rural communities.”¹⁹

Commenters also agreed with USCC that, in addition to benefitting small and regional carriers, as well as the rural customers they serve, CMA-based licensing would benefit the large national carriers. As noted by King Street, “[s]maller markets are [] generally free from ‘excess territory,’”²⁰ and thus allow carriers of all sizes to acquire license areas that are tailored to their particular business plans.²¹ For instance, CMAs permit large carriers to focus on highly-

¹⁵ WISPA Comments at 2 (internal quotation marks omitted).

¹⁶ See Comments of Verizon and Verizon Wireless (“Verizon Comments”) at 7 (noting that license areas with boundaries that align with carriers’ current service areas “help wireless providers more efficiently combine the new licenses with ... existing mobile broadband deployments”).

¹⁷ NERA Report at 28.

¹⁸ *Id.*; see PTC Comments at 2 (“If smaller license areas ... are not offered at auction, we will be severely limited in our ability to ... expand the availability of our services to additional, currently unserved residents...”).

¹⁹ CCA Comments at 6.

²⁰ King Street Comments at 4.

²¹ See NERA Report at i (“[T]here is a compelling case for defining smaller areas that are more tailored to the demands of potential bidders.”).

profitable urban areas, while at the same time providing other carriers with a “much greater opportunity to target small and rural areas.”²² These tailored license acquisitions also mean that a carrier can acquire the spectrum rights called for in its particular business plan without also acquiring – and thus preventing a carrier with a different focus from acquiring – the additional, and undesired, territory that would also be included within a larger license area.

In addition, by allowing more targeted spectrum acquisitions, CMAs result in greater efficiencies with respect to license acquisitions, building out networks, and spectrum assignments.²³ As noted by King Street, “[n]o public interest is served by requiring licensees to bid for, then build out, territory that is of no interest to them...”²⁴ This is particularly so given that, as noted, this “excess territory” likely would be of great interest to other bidders with different business plans. Moreover, because of the high acquisition and buildout costs related to larger service areas, such a licensing approach would “dis-serve the public interest by causing less money to be devoted to genuine areas of interest.”²⁵ In contrast, “because CMAs include less area that would [not] be of particular interest to winning licensees generally, be they large or small, there will be fewer areas that are either not constructed or not constructed with quality systems.”²⁶ Thus, not only would the tailored license acquisitions made possible by CMAs help bidders of all sizes avoid excess, and unnecessary, spectrum costs, but they would help to ensure that localized spectrum rights are awarded to those bidders who value them the most, and thus are most likely to put the spectrum to its highest and best use.

USCC’s comments also explained how CMAs, by being smaller, would help to maximize the amount of interference-free spectrum available for both the broadcast incentive and AWS-3

²² *Id.* at 6.

²³ *See* King Street Comments at 7 (“Basic economic theory provides that, when markets are smaller, there is less unwanted or unneeded area that must be both purchased at auction and then built out.”).

²⁴ *Id.*

²⁵ *Id.*

²⁶ *Id.* at 4, n. 11.

auctions. CCA and other commenters likewise described how smaller license areas “would increase the Commission’s ability to map the recovered broadcast spectrum efficiently and would reduce the amount of spectrum lost to international border coordination, resulting in more unencumbered spectrum being available for auction.”²⁷ Similarly, the NERA Report noted how a “more granular [licensing] approach would likely mean that the FCC could license more spectrum not encumbered by potential interference from broadcasters.”²⁸ Accordingly, “smaller license areas would potentially support greater variation in the amount of reclaimed spectrum from area-to-area.”²⁹ And, with respect to the AWS-3 bands, CMAs would result in a greater number of license areas that do not include all or a portion of one of the federal Protection Zones. Thus, in these ways as well, license areas smaller than EAs “would enable more efficient use of [the] spectrum...”³⁰

Another significant benefit noted by commenters is that, “[b]y expanding carrier participation and increasing the amount of unencumbered spectrum available, the use of smaller licenses likely would boost auction revenues.”³¹ Verizon, on the other hand, claims that the exposure risk the few national carriers would allegedly encounter with smaller license areas would reduce the per MHz-POP value of the spectrum.³² But Verizon references only Auction

²⁷ CCA Comments at 4; *see* RWA/NTCA Comments at 7 (“[S]maller markets present an advantage over larger ones in that they further the Commission’s goal of ‘promoting efficiency in converting broadcast television licenses to flexible use mobile channels’ ...”) (quoting *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357, 12403 (2012)); WISPA Comments at 4 (“[A]uctioning spectrum in smaller geographic areas would enable the Commission to auction spectrum in constrained markets to more closely correspond to the affected TV stations’ contours...”).

²⁸ NERA Report at 21.

²⁹ *Id.* at 27.

³⁰ WISPA Comments at 4.

³¹ CCA Comments at 4; *see* Blooston Comments at 2 (noting that, with CMAs, “the Commission can maximize the level of participation,” which would “result[] in greater overall auction revenues”).

³² *See* Verizon Comments at 2-3.

66, while ignoring the fact that Auction 73 produced the exact opposite outcome.³³ Moreover, the very paper cited to by Verizon as support for this broad claim focused on the highly-unusual outcome of Auction 66. Specifically, the authors detailed how “price arbitrage failed so dramatically that [SpectrumCo] was able to purchase essentially a nationwide coverage area for about a third (more than a billion dollars) less than what incumbent carriers paid for equivalent spectrum in the same auction.”³⁴ While the authors praised SpectrumCo for its “ability to alter the relative pace of price increases of the large licenses” and “to forecast final total prices” for the smaller licenses,³⁵ they theorized that the incumbent carriers “devoted less resources to forecasting final prices early in the auction.”³⁶

Similarly, an Analysis Group paper explained that, for Auction 66, the “entire price difference between the large REAG licenses and the smaller EA and CMA licenses may be explained by bidder expectations.”³⁷ As that paper detailed, for numerous reasons, “larger, more expensive licenses tend to be more active earlier in the auction and ... reach their final prices before smaller, less expensive licenses.”³⁸ As a consequence, the largest Auction 66 “bidders stopped bidding on REAG licenses at a time when EA and CMA licenses were significantly cheaper, without knowing the final prices those smaller licenses would reach.”³⁹ In turn, because

³³ See King Street Comments at 6-7 (“CMAs (the smallest market definition) raised the most revenue on a MHz/pop basis; EAs (a larger market definition used) raised less revenue on a MHz/pop basis; and REAGs (the largest market designation) also raised far less than CMAs on a MHz/pop basis.”).

³⁴ Bulow, J., Levin, J. & Milgrom, P., *Winning Play in Spectrum Auctions*, NBER Working Paper No. 14765, p. 1 (Mar. 2009) (“*Bulow/Levin/Milgrom Paper*”).

³⁵ *Id.* at 25.

³⁶ *Id.* at 24.

³⁷ Bazelon, C., *Why the Exclusive Use of Large Licenses in the Upper or Lower 700 MHz Bands Would Reduce the Efficiency of the 700 MHz Auction*, Analysis Group, p. 4 (Apr. 20, 2007) (“*Analysis Group Paper*”).

³⁸ *Id.*; see *Bulow/Levin/Milgrom Paper* at 22 (“[E]arly bidding tends to focus on the largest, most valuable licenses.”).

³⁹ *Analysis Group Paper* at 4.

demand in Auction 66 was “somewhat less than expected,” a “price difference [] emerge[d], even absent any geographic or spectrum aggregation risk premium.”⁴⁰

Thus, contrary to Verizon’s claim, the “evidence indicates that aggregation risk premium [was] not likely [] the main driver for the[] price differences” in Auction 66.⁴¹ Rather, it appears that the incumbent national carriers simply overpaid for the largest licenses, which suggests that the results of Auction 66 were an anomaly, and thus cannot reasonably be used as support for the claim that larger license areas produce greater auction revenues. Also notable is the fact that the paper relied upon by Verizon described how, with respect to the most populous markets, the EA-based licenses in Auction 66 were in fact 21% cheaper – on a per MHz/POP basis – than the CMA-based licenses.⁴² Presumably, this result arose because, as noted, smaller license areas permit targeted spectrum acquisitions, which allow bidders to avoid the cost of purchasing spectrum rights for, and building out, undesired areas. As such, bidders place a higher per MHz/POP value on these smaller, highly-targeted license areas.⁴³

As CCA summarized, for the reasons detailed above, “CMAs would maximize the participation of small and rural carriers, increase the amount of unencumbered spectrum available for auction, speed deployment of next generation wireless products and services to rural America, and likely boost overall auction revenues.”⁴⁴ Consequently, “CMAs would best

⁴⁰ *Id.* (internal citation omitted); *see id.* at 3 (“The mere statement of price [] does not explain how much of these price differences are due to an aggregation risk premium, or whether other factors are at play.”).

⁴¹ *Id.* at 3.

⁴² *See Bulow/Levin/Milgrom Paper* at 25, n. 24 (noting that “in the top five markets ... the B licenses were 21 percent cheaper than the A licenses (9 percent greater cost for areas covering 38 percent more people)”).

⁴³ *See NERA Report* at 6 (“[H]igher numbers of licenses make it possible ... for bidders to express much finer granulated demand for geographic areas...”).

⁴⁴ CCA Comments at 1-2; *see RWA/NTCA Comments* at 9 (“CMAs would [] enhance competition in the auction, likely increase revenue and result in overall better service to the public.”).

serve the public interest,”⁴⁵ and therefore would best “facilitate Commission compliance with its statutory mandates.”⁴⁶

B. Although PEAs Would Not Promote the Public Interest to the Same Extent as CMAs, PEA-Based Licenses Represent a Reasonable Compromise.

For the various reasons detailed above, USCC, like CCA and the vast majority of other commenters, continues to urge the Commission to license both the 600 MHz and AWS-3 bands on the basis of CMAs.⁴⁷ However, USCC also agrees with CCA that, “if the Commission declines to do so, PEAs are the next-best option to promote participation by rural carriers and to further the public interest more generally.”⁴⁸ As CCA explained, its “compromise proposal divides EAs into PEAs, thereby creating certain licenses within an EA that contain population centers along with other licenses that consist of less populous areas.”⁴⁹ In this way, PEAs would provide some of the benefits associated with smaller license areas, even if not to the same extent as CMAs.

For instance, the lower population totals found in PEAs would make them more affordable than larger license areas, which “would promote participation by smaller and rural carriers...”⁵⁰ In turn, this increased activity in the auction room would “lead to higher auction

⁴⁵ CCA Comments at 2.

⁴⁶ King Street Comments at 4; *see* RWA/NTCA Comments at 6 (“Only by adopting geographic areas sufficiently small to accommodate small business and rural carrier participation in the auction can the Commission satisfy the congressional mandates of Section 309(j).”); NERA Report at 11 (“Using small license areas may best fulfill the FCC’s statutory obligations to promote economic opportunity for small businesses and rural areas...”).

⁴⁷ *See* CCA Comments at 7 (“CMAs almost certainly will maximize the relevant benefits – including promoting competition among and broad participation by carriers, increasing the efficient allocation of spectrum, and further increasing auction revenues...”).

⁴⁸ *Id.* at 14; *see* PSW Comments at 4 (“[I]f the Commission declines to auction the 600 MHz band on the basis of CMAs, PSW urges the Commission to adopt CCA’s PEA proposal as a preferable alternative to EAs.”); Carolina Companies Comments at 5 (“[T]he Carolina Companies continue to support licensing the 600 MHz band on the basis of CMAs, but support the use PEAs as an alternative if the Commission determines not to use CMAs.”).

⁴⁹ CCA Comments at 5.

⁵⁰ *Id.*; *see* RWA/NTCA Comments at 15 (“PEAs will generally serve small businesses and rural carriers better than EAs...”); PSW Comments at 4 (“PEAs will promote significantly more opportunity, competition, and license dissemination than auctioning the 600 MHz band spectrum on the basis of EAs.”).

revenues.”⁵¹ PEAs also would permit more targeted spectrum acquisitions than larger license areas. As a result, these license areas “would allow carriers that seek to serve rural and other less populous areas to bid on licenses that contain only such areas,”⁵² which would promote “deployment of services to rural and underserved Americans...”⁵³ At the same time, like with CMAs, large carriers would benefit from PEAs because they could focus their bidding on urban areas, which provide the greatest economies of scale and therefore have the greatest value to these carriers.⁵⁴

For these reasons, USCC believes that CCA’s proposed compromise would benefit the public to a far greater extent than larger license areas. At the same time, PEAs would “reduce the total number of licenses by nearly 50 percent,” which would “help[] to reduce the unprecedented complexity of the forward auction.”⁵⁵ Thus, while USCC, like CCA, “continues to support the use of CMAs,”⁵⁶ it also believes that “PEAs represent a next-best option that preserves many of the benefits of smaller license sizes while reducing the complexity presented by the unique circumstances of the incentive auction.”⁵⁷

If the Commission decides to license the spectrum using PEAs rather than CMAs, USCC joins RWA/NTCA in urging the Commission to release and seek comment on a final set of PEA

⁵¹ CCA Comments at 5.

⁵² *Id.*

⁵³ *Id.* at 6; *see* Carolina Companies Comments at 4 (“PEAs [] will promote deployment to rural areas more rapidly than using EAs.”); RWA/NTCA Comments at 9 (“PEA license areas are closer to CMAs than to EA license areas in accommodating the needs of rural carriers and their customers...”); PSW Comments at 4.

⁵⁴ *See* CCA Comments at 5 (“PEAs would allow larger carriers to bid on more populous areas or to bid on multiple licenses to acquire the geographic coverage that they desire.”).

⁵⁵ *Id.* at 6.

⁵⁶ *Id.*; *see* PSW Comments at 4 (“[A]uctioning the 600 MHz band spectrum on the basis of PEAs will not promote opportunity for rural and small entities to the same extent as auctioning the spectrum on the basis of CMAs...”).

⁵⁷ CCA Comments at 6.

boundaries prior to adopting these license areas.⁵⁸ As noted by RWA/NTCA and several small carriers, “the PEAs currently under consideration are still too large to allow many rural carriers to participate in the auction, particularly those rural carriers located west of the Mississippi River.”⁵⁹ In addition, although to a much lesser extent than with EAs, because the proposed PEAs would not match up with many smaller carriers’ existing CMA-based service areas,⁶⁰ these carriers could be forced to acquire spectrum rights for areas they do not want, and perhaps could not build out, simply to upgrade their existing networks and better serve local residents.⁶¹

One option to help address these concerns would be to maintain state boundaries to the extent possible – *i.e.*, divide PEAs that, as currently proposed, cross state lines. For instance, PTC noted that PEA 261, which overlaps a portion of its current service area in Texas, not only may be too large to acquire and adequately serve, but also includes parts of Oklahoma, where PTC currently does not serve, and does not desire to serve in the future.⁶² Blooston also noted how “many rural and independent service providers have operations that are limited by their bylaws and/or articles of incorporation to operating in one particular state...”⁶³ Even if dividing interstate PEAs prevented some of these license areas from fully “nesting” within the boundaries of EAs, the public interest benefits of this approach likely would far outweigh this minor

⁵⁸ See RWA/NTCA Comments at 9 (“Because the proposed PEA boundaries are tentative and continue to be in flux, before the Commission can adopt them, it will need to finalize and seek public comment on *specific proposed boundaries*.”) (emphasis in original).

⁵⁹ *Id.* at 15; see, e.g., Blooston Comments at 6 (“[R]eview of the proposed PEA boundaries shows that proposed ‘new’ service areas in the Midwestern and Western states are often identical to current EA boundaries.”).

⁶⁰ See CCA Comments at 6 (noting that, while the proposed PEAs “‘nest’ fully within existing EAs,” they only “respect CMA boundaries to the extent possible”); King Street Comments at 2 (noting that “PEAs involve new boundaries”).

⁶¹ See RWA/NTCA Comments at 16 (“[E]ven licenses based on PEAs will result in the Associations’ members bidding on license areas that are larger than their current service areas, which may preclude certain carriers from participating in the auction.”); Blooston Comments at 9 (“[V]aluable and limited spectrum resources would be put to use most efficiently if the geographic license areas for AWS-3 match the geographic areas used for these other services (e.g., CMAs).”).

⁶² See PTC Comments at 2-3; see also Blooston Comments at 5 (noting that, among other states, in comparison to EAs, the PEAs proposed for “New Mexico and Nevada see very small changes, and just about every proposed PEA includes five to seven (or more) CMAs, and often at least one CMA from an adjacent state”).

⁶³ Blooston Comments at 5.

discrepancy. As PTC emphasized, “meeting its statutory duty to make spectrum-based services available to consumers in rural and urban areas, and not addressing very limited ‘nesting’ concerns, should be the primary focus of the Commission.”⁶⁴

C. Smaller License Areas, Whether CMAs or PEAs, Would Promote the Public Interest Far Better Than EAs.

Although, as noted, PEA-based licensing would not promote the public interest to the same extent as using CMAs, USCC joins a large of majority of commenters in emphasizing that PEAs “would be far preferable to using EAs...”⁶⁵ For instance, RWA/NTCA explained how “PEA license areas are closer to CMAs than to EA license areas in accommodating the needs of rural carriers,” and thus would “help[] to resolve concerns about the lack of participation by smaller carriers in the auction.”⁶⁶ And PSW explained how this increased participation by smaller carriers would “promote deployment to rural areas more rapidly than using EAs.”⁶⁷

As USCC detailed in its comments, the expansive geography of EAs, as well as the inclusion of one or more metropolitan areas in each EA, make these licenses prohibitively expensive for most small and regional carriers. Numerous commenters, including RWA/NTCA, similarly explained that, because “EA-based licenses are too large for many small businesses and rural carriers,” the use of EAs would “result in these companies having no meaningful opportunity to participate in the Incentive Auction.”⁶⁸

⁶⁴ PTC Comments at 4.

⁶⁵ CCA Comments at 6; *see* RWA/NTCA Comments at 15 (“PEAs will generally serve small businesses and rural carriers better than EAs...”); PSW Comments at 4; Carolina Companies Comments at 4.

⁶⁶ RWA/NTCA Comments at 9; *see* CCA Comments at 5 (“PEAs would substantially increase the likelihood of participation by smaller and rural carriers in the forward auction, as opposed to EAs.”); Carolina Companies Comments at 4 (“[T]he use of PEAs will promote significantly more opportunity, competition, and license dissemination than auctioning the 600 MHz band spectrum on the basis of EAs.”); PSW Comments at 4.

⁶⁷ PSW Comments at 4; *see* Carolina Companies Comments at 4.

⁶⁸ RWA/NTCA Comments at 20; *see* Blooston Comments at 3 (noting that small and rural carriers “would be foreclosed from any meaningful opportunity to obtain initial 600 MHz licenses if they are assigned on the basis of EAs”); PTC Comments at 2 (“EA-based licenses ... will cover areas too large for any smaller provider to capture.”); Carolina Companies Comments at 2 (“EAs will prevent small, rural and regional entities from acquiring spectrum...”); NERA Report at 16 (“[U]sing larger area licenses, such as EAs, would exclude potential participants from the Forward Auction.”).

USCC again notes that EA-based licenses also would uniquely disadvantage small and regional carriers because their current footprints are far more likely to be structured around CMA-based license areas.⁶⁹ Licensing spectrum on the basis of EAs, therefore, would require these carriers to acquire several licenses – each of which would include a significant amount of excess territory – simply to upgrade their existing networks. Because even individual EAs are prohibitively expensive for many smaller carriers, the need to acquire several EA-based licenses as a consequence of the geographic-mismatch between CMAs and EAs obviously would prevent these carriers from gaining access to the spectrum necessary to better serve local residents. In its comments, USCC summarized several real-world examples previously filed by small carriers which clearly demonstrate this likely outcome. Notably, the NERA Report provided even more real-world examples to this effect.⁷⁰ As explained therein, an analysis of the problems these carriers would face if the Commission licenses the spectrum on the basis of EAs demonstrates that these “geographic areas are too large for the purposes of the auction...”⁷¹

USCC also notes that, while well-intentioned, the opportunity provided by the Commission for smaller bidders to enter into joint bidding agreements or bidding consortium arrangements fails to provide these bidders with a reasonable opportunity to acquire large, EA-based licenses. For instance, because the bidders that require such arrangements in order to participate in an auction generally would only be interested in the rural portions of an EA, it would be difficult to find partners willing to assume the densely-populated urban areas that make EAs prohibitively expensive for these bidders in the first place.⁷² Moreover, as noted in the

⁶⁹ See Blooston Comments at 10 (“EAs virtually never match up with the incumbent service areas of smaller rural telephone carriers, and CMA licensing is far more efficient in this regard.”).

⁷⁰ See NERA Report at 14-15.

⁷¹ *Id.* at 14; see RWA/NTCA Comments at 15 (noting that, if the Commission uses EA-based licensing, Pinpoint Wireless, which currently provides service in eight counties with a total population of 34,473, would need to acquire “four EAs covering 6.24 million Americans in 158 counties” simply to upgrade its existing networks).

⁷² See NERA Report at 16 (noting that the opportunity to enter into bidding consortia “supposes that there are groups of smaller operators who have footprints that together will cover all or most of the population in multiple EAs,” but

NERA Report, “[e]ven where footprints are a good match, coordination may still be a formidable challenge.”⁷³ Thus, either because the portions of an EA desired by smaller bidders do not include the urban area(s) or because coordination amongst these bidders proves infeasible, the only option very well could be to partner with a large carrier. However, even assuming a large carrier, which could independently afford to acquire the license, would be willing to enter into such an arrangement, the smaller bidders would risk having that large carrier dominate the partnership, which would significantly diminish, if not erase, the potential benefits of such an arrangement.

Consequently, EA-based licensing would effectively exclude small and regional carriers from participating in the auctions, which King Street recognized would “mean less competition and more licenses (at less cost) for the largest carriers.”⁷⁴ Even worse, the exclusion of small and regional carriers would significantly reduce the potential for these spectrum bands to increase broadband access in rural and other underserved areas.⁷⁵ As noted by Blooston, in contrast to small and regional carriers, which typically focus on rural areas, the large carriers “primarily interested in securing rights to metropolitan areas within the EA ... may have little or no interest in serving rural portions of the market.”⁷⁶ RWA/NTCA also noted how EA-based licensing, when combined with population-based buildout requirements, would create a “very real risk that this spectrum would be deployed only in population-dense urban areas while sitting

that “this will rarely be the case, as smaller operators typically do not operate in the larger urban areas that typically account for large shares of population in many EAs”).

⁷³ *Id.*

⁷⁴ King Street Comments at 4; *see* PSW Comments at 3 (“Licensing the 600 MHz band on an EA basis would be yet another nail in the coffin for a competitive wireless marketplace.”).

⁷⁵ *See* RWA/NTCA Comments at 15 (“[A]n EA-based licensing scheme will ... delay[] deployment of broadband services to rural areas.”).

⁷⁶ Blooston Comments at 4; *see* PTC Comments at 2 (“EA-based licensing in the 600 MHz band is likely to result in the award of most, if not all, licenses to larger nationwide carriers that serve predominately urban areas.”).

fallow in rural areas.”⁷⁷ This is possible because, as noted by Verizon, “larger geographic licenses offer mobile providers flexibility in deployment...”⁷⁸

Moreover, in contrast to smaller license areas, the use of EAs would create inefficiencies for carriers of all sizes, as well as for licensing the spectrum. For instance, as noted by Blooston, even if we assume that every potential bidder could afford to acquire EA-based licenses at auction, this licensing approach would be “impractical for carriers that have chosen to serve smaller and rural communities”⁷⁹ because they “would be bidding on large urban areas in which they have neither an interest nor adequate resources to serve.”⁸⁰ In contrast, as noted above, smaller license areas permit all carriers, whether large or small, to tailor their license acquisitions to the particular areas they desire to serve. In addition, as explained in the NERA Report, the use of EAs could lead to a less efficient 600 MHz band plan because these large license areas would “significantly constrain the set of geographic licensing outcomes that could result from the Forward Auction.”⁸¹

For these reasons, if the Commission licenses the spectrum on the basis of EAs, not only would it risk various public interest harms, but it could fail to comply with its statutory obligations.⁸² In this respect, USCC agrees with the NERA Report that, by enacting the pro-competition mandates found in Section 309(j) of the Communications Act, Congress placed the burden on those opposing smaller license areas “to provide countervailing evidence as to why larger areas, such as EAs, should be used in light of the arguments by smaller rural carriers that

⁷⁷ RWA/NTCA Comments at 13; *see* FCC, *Connecting America: The National Broadband Plan*, p. 83 (rel. Mar. 16, 2010) (“[E]xisting licensees may not fully utilize or plan to utilize the entire spectrum assigned to them; as a result, a substantial amount of spectrum may be underused, especially in rural areas.”).

⁷⁸ Verizon Comments at 1.

⁷⁹ Blooston Comments at 9.

⁸⁰ *Id.* at 4; *see* RWA/NTCA Comments at 7 (“EA licensing is not sufficiently granular to meet rural and other smaller carriers’ needs...”).

⁸¹ NERA Report at 19.

⁸² *See* RWA/NTCA Comments at i (“EAs are too large to ensure the meaningful participation by small businesses and rural carriers in the Incentive Auction, which violates the statutory mandates of Section 309(j)...”).

they will not be able to participate in the auction if EAs are adopted.”⁸³ The few carriers that support EAs, or even larger license areas, have failed to meet this burden. In fact, the recent comments filed by these carriers clearly demonstrate their lack of adequate justification for larger license areas, as compared to the smaller license areas supported by the vast majority of commenters.

For instance, T-Mobile argued in favor of large license areas because they would allegedly “help[] reduce the exposure risk for carriers that wish to provide service over a larger area.”⁸⁴ At the same time, however, T-Mobile acknowledged that smaller carriers “prefer smaller licenses that cover areas they can efficiently serve and that they can afford to bid on.”⁸⁵ In other words, according to T-Mobile, the potential to reduce a possible financial risk faced only by the largest carriers is more important to the public interest than adopting a licensing approach that would permit other carriers to participate in the auctions at all.

Similarly, Verizon argued that “EAs draw the appropriate balance between enabling the efficient deployment of nationwide and regional services, and facilitating access to spectrum by small providers...”⁸⁶ And AT&T claimed that the choice of a geographic licensing scheme involves a “balancing of the Commission’s public interest goals of encouraging widespread geographic buildout, including in rural areas, and providing licensees with sufficient flexibility to scale their networks.”⁸⁷ In sum, these carriers, who alone support large license areas, contend that the Commission, in deciding how to license this spectrum, should give equal weight to protecting large carriers from a potential financial risk and ensuring that other carriers have a

⁸³ NERA Report at 20.

⁸⁴ Comments of T-Mobile USA, Inc. (“T-Mobile Comments”) at 7.

⁸⁵ *Id.* at 8.

⁸⁶ Verizon Comments at 4.

⁸⁷ Comments of AT&T (“AT&T Comments”) at 3.

reasonable opportunity to even acquire licenses and use this spectrum to serve rural and other underserved areas.

Further undermining this argument is the fact that smaller license areas would create little, if any, exposure risk for the large carriers. Thus, their primary argument in support of large license areas in fact provides little to no justification for the Commission to pursue this course of action. As USCC detailed in its comments, and as stressed by other commenters as well, while EAs would substantially disadvantage small and regional carriers, as well as the rural customers they hope to serve, smaller license areas would not pose the same problem for large carriers, who could acquire, and aggregate, a sufficient number of smaller licenses by outbidding smaller carriers, and who in fact have been able to do so in virtually every major spectrum auction.⁸⁸ Notably, King Street provided various examples which demonstrate that, despite “the purported difficulty that large carriers claim to have in acquiring regional or national footprints,” these carriers nevertheless have the ability to assemble near-nationwide service footprints by aggregating small license areas.⁸⁹ Thus, contrary to Verizon’s claim, the national carriers do not require large license areas in order to “take advantage of economies of deploying across larger contiguous areas.”⁹⁰

On the other hand, commenters agreed with USCC that small and regional carriers likely would never gain access to these spectrum bands if they are shut out of the auctions as a result of EA-based licensing. As RWA/NTCA explained, “[r]elying on small and rural carrier access to spectrum via the secondary market assumes that such a market actually develops and that license

⁸⁸ See CCA Comments at 4 (“[L]icensing spectrum at a relatively granular geographic level would enable rural carriers to participate without being forced to bid on large geographic areas that they cannot efficiently serve, while still allowing larger carriers to acquire larger swaths of spectrum, including nationwide spectrum.”); RWA/NTCA Comments at 14 (“[T]he adoption of CMAs would not keep these large carriers, unlike small businesses and rural carriers that face bidding on EA licenses, from participating in the auction altogether.”).

⁸⁹ King Street Comments at 6.

⁹⁰ Verizon Comments at 1-2.

holders are willing to part with spectrum at reasonable prices.”⁹¹ If most small and regional carriers are excluded from the auctions due to the use of EAs, the secondary market for these spectrum bands obviously would be dominated by the few national carriers. However, for a variety of reasons detailed in USCC’s comments, and as noted in the NERA Report, “there is little recent history of the larger carriers leasing, disaggregating or partitioning large sections of spectrum where they already have service.”⁹² Thus, USCC agrees with RWA/NTCA and others that “the secondary market cannot be relied on to ensure that small businesses and rural carriers have access to [the] spectrum.”⁹³

Moreover, even assuming that the large carriers would prove willing to subsequently enter into secondary market transactions, “obtaining spectrum through secondary markets [] is notoriously time consuming and costly...”⁹⁴ In other words, at a minimum, small and regional carriers are likely to encounter substantial, and perhaps insurmountable, delays and costs in obtaining spectrum in the secondary market. Accordingly, USCC joins RWA/NTCA in stressing that “the secondary market is not a solution to the lack of coverage in rural.”⁹⁵ Nor is the secondary market a solution to the lack of adequate competition in the wireless industry. The Commission therefore must auction the spectrum using small license areas in order to permit

⁹¹ RWA/NTCA Comments at 18.

⁹² NERA Report at 18-19; *see id.* at 18 (explaining that “larger operators may give very low priority to disaggregating small area licenses, given their small value as a proportion of overall holdings,” and that “trades between large and small operators [also] may be frustrated by high transaction costs or by inertia”); RWA/NTCA Comments at 18 (“In reality, the secondary market is a far more effective tool for large operators to consolidate spectrum than it is for small and rural operators to acquire it through partitioning or disaggregation.”).

⁹³ RWA/NTCA Comments at 20; *see* Blooston Comments at 6 (“[I]f small and rural carriers are shut out of any initial licensing opportunity ... it is unlikely that they will ever have an opportunity to participate in the 600 MHz service because large and regional carriers will not be inclined to partition this valuable spectrum in rural areas.”).

⁹⁴ RWA/NTCA Comments at 12; *see* Verizon Comments at 3 (“[E]ven 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.”).

⁹⁵ RWA/NTCA Comments at 18.

carriers of all sizes to bid directly on licenses rather than be forced to rely on problematic secondary markets.⁹⁶

Auction efficiency and revenue also likely would increase by permitting all interested entities to acquire spectrum at auction rather than subsequently attempt to do so in the secondary market. As noted in the NERA Report, “given the mandate from Congress for the FCC to raise revenues from the auction, it would not make sense for the FCC to rely on the secondary market to address inefficiencies caused by geographic licensing if they could instead be addressed in the primary design.”⁹⁷ Specifically, the authors explained how, if “disaggregated spectrum was sold shortly after the auction, this might imply that the auction design had ‘left money on the table.’”⁹⁸ For these various reasons, USCC agrees with RWA/NTCA that “[a]ny public interest benefits that might result from mitigating large carriers’ potential aggregation risks clearly do not outweigh the[] demonstrated public interest harms.”⁹⁹

Finally, USCC notes that the few general arguments that a successful incentive auction requires fewer licenses cannot justify the substantial public interest harms that would result from this licensing approach. As noted by RWA/NTCA and others, “there is no evidence in the record establishing that CMAs would increase auction implementation risks...”¹⁰⁰ Moreover, the NERA Report found that, “while there are implementation risks that increase with an expansion in the number” licenses, “none of these implementation risks appear insurmountable.”¹⁰¹ For instance, “innovations in the auction software and bidding process may be used to help [] bidders

⁹⁶ *See id.* at 12 (“Providing small and rural carriers a meaningful opportunity to obtain initial licenses through the Incentive Auction will [] ensure that the deployment of services to rural areas will not be unnecessarily delayed.”).

⁹⁷ NERA Report at 19.

⁹⁸ *Id.*; *see* Verizon Comments at 6 (“[B]y winning the licenses at auction, the proceeds are available to fund statutory objectives – including FirstNet and deficit reduction.”).

⁹⁹ RWA/NTCA Comments at 15.

¹⁰⁰ *Id.* at ii; *see* King Street Comments at 8 (“[N]o explanation as to why use of CMAs would create any ‘implementation risks’ or planning problems was provided.”).

¹⁰¹ NERA Report at ii.

make effective decisions within a reasonable bidding window.”¹⁰² As a result, the authors concluded that there is “no reason why the auction design proposed by the FCC could not be adapted to support many more license areas than the 176 Economic Areas currently proposed.”¹⁰³ USCC therefore agrees with RWA/NTCA that the record fails to justify the use of EAs based on concerns regarding largely hypothetical auction implementation risks, “particularly considering the record clearly shows that adopting EAs would preclude small businesses and rural carriers from participating in the Incentive Auction.”¹⁰⁴

III. THE COMMISSION SHOULD PROHIBIT ALL FORMS OF PACKAGE BIDDING

USCC again expresses its strong opposition to the use of any form of package bidding in either the 600 MHz or AWS-3 auction. As USCC detailed in its comments, because package bidding significantly biases an auction in favor of the largest bidders, it could effectively eliminate the opportunity for smaller bidders to acquire licenses. USCC therefore cautioned that package bidding procedures could undermine other pro-competition measures taken by the Commission. Similarly, Blooston warned that package bidding could “effectively ‘undo’ any benefit of creating smaller geographic licenses sizes...”¹⁰⁵

Notably, the clear divide between commenters reveals that the industry broadly acknowledges that package bidding gives a competitive edge in bidding to the largest, most dominant carriers while severely disadvantaging small and regional carriers. For instance, only AT&T and Verizon – the nation’s two largest carriers – support the use of package bidding.¹⁰⁶

¹⁰² *Id.* at 26.

¹⁰³ *Id.* at 31; *see* King Street Comments at 8 (“Nor did the NPRM include any discussion of why such ‘implementation risks’ are greater than the many risks that otherwise exists with the auction.”).

¹⁰⁴ RWA/NTCA Comments at 14; *see* Blooston Comments at 4 (“[T]he administrative convenience of using EAs as the basis for Incentive Auction bidding stands at odds with the well documented need of rural telephone companies and other small businesses to have spectrum made available for them in smaller licensing areas.”).

¹⁰⁵ Blooston Comments at 8.

¹⁰⁶ *See* AT&T Comments at 4-8; Verizon Comments at 4-7.

In contrast, numerous small and regional carriers, as well as the only other national carrier which filed comments, oppose package bidding.¹⁰⁷

As USCC detailed in its comments, smaller bidders have neither the resources nor desire to compete for costly, geographically-expansive packages of licenses. Clearly, then, package bidding offers no benefit whatsoever to these bidders, who comprise a large majority of likely auction participants. Smaller bidders' opposition to package bidding, however, does not stem from their inability to benefit from these auction procedures. Rather, their unanimous opposition to package bidding relates to the significant harms it creates for these carriers.

A primary harm caused by package bidding is that it greatly increases the likelihood that large bidders will tie-up multiple licenses in large package bids to the exclusion of smaller bidders focused on individual license areas.¹⁰⁸ Even without package bidding, in spectrum-constrained markets, large bidders' substantial resources could make it quite difficult for smaller bidders to acquire the licenses they need to serve rural areas and become more effective competitors. But at least smaller bidders would have a reasonable opportunity to do so. This is particularly so given that smaller bidders would value the small-market and rural areas they desire to serve as much or more than the largest bidders, which typically focus their auction activity on urban markets. However, with package bidding, these license areas, which are not the focus of large bidders' auction strategy, could be swept up as part of large package bids, and thus be out of reach for smaller bidders.¹⁰⁹

¹⁰⁷ See, e.g., T-Mobile Comments at 9 (“Package bidding may unnecessarily complicate the auction and grant preference to some bidders over others.”); CCA Comments at 7 (“[P]ackage bidding can result in significant competitive harm.”); Cellular South Comments at 4 (“C Spire opposes package bidding for the 600 MHz auction, regardless of the geographic size of the auctioned licenses.”); Blooston Comments at 8.

¹⁰⁸ See CCA Comments at 7 (“Packages [] can lead to foreclosure because smaller carriers might be unable to bid on a package of licenses, even if they would have bid on certain individual components of the package.”).

¹⁰⁹ See NERA Report at 49 (“[L]arge bidders may simply pay little attention to the value of many individual licenses, especially ones with smaller populations, instead only focusing on them as part of a larger package.”).

Although the bids for individual licenses theoretically could defeat a package bid, as USCC detailed in its comments, for a variety of reasons, this outcome is highly unlikely. In particular, package bidding creates the widely-acknowledged “threshold problem” for smaller bidders. This arises because bidders for individual licenses may be restrained in their bidding in the hope that bidders for other individual licenses included in the same package will increase their bids enough to defeat the package bid – *i.e.*, a form of the “free rider” problem. As a result of this restrained bidding, and given that the largest bidders are likely bidding on the package and thus not bidding on individual licenses, the combined total of the individual license bids rarely, if ever, exceeds the package bid.

In addition to withholding individual licenses from smaller bidders, another potential consequence of the threshold problem is a reduction in auction revenue because “large bidders may be able to win packages at low prices when small bidders are unable to coordinate their actions.”¹¹⁰ And this potential to acquire licenses at a discount further encourages the largest bidders to focus on large packages, which increases the likelihood that smaller bidders will always be competing with package bids, and thus further decreases smaller bidders’ likelihood of auction success. In turn, by excluding smaller bidders, package bidding ultimately would harm those living in rural areas, where these bidders otherwise would have concentrated their license acquisitions and buildout efforts.¹¹¹

USCC also again notes that, even with aggressive bidding for the individual licenses, large bidders still may end up acquiring some of the licenses contained within a package at a discount. Specifically, because the individual licenses desired by smaller bidders typically do not include the most densely-populated markets, their aggregate bids almost certainly would not

¹¹⁰ Brunner, C., Goeree, J., Holt, C. & Ledyard, J., *An Experimental Test of Flexible Combinatorial Spectrum Auction Formats*, p. 16 (Sept. 6, 2007) (“*Experimental Test Study*”).

¹¹¹ See Blooston Comments at 8 (“[T]he rights to rural spectrum will not go to companies that truly value this spectrum the most.”).

exceed a package bid, which would invariably also include several high-priced urban license areas. Blooston similarly stressed how the “comparatively larger per-pop valuation that independent and rural carriers tend to put on rural markets will [] be ‘eclipsed’ by high valuation and bidding for metro areas...”¹¹² On the other hand, because large bidders’ focus would remain on the densely-populated license areas in the absence of package bidding, they would compete against each other for these individual licenses rather than for packages encompassing the licenses. Consequently, these individual licenses would sell for approximately the same amount as the large bidders would have valued them as part of a package, while smaller bidders would continue to assign higher valuations to less densely-populated license areas.

As a simple example of this revenue-depressing effect of package bidding, imagine three adjacent license areas, one urban and two rural, and three bidders, one large and two small, who assign the highest values to these licenses. Now suppose that Bidder A, the large carrier, values the urban license, which is its primary focus, at \$50 million, and that this bid would be sufficient to win this individual license. In addition, suppose that Bidders B and C, who are smaller carriers, each value one of the rural licenses at \$10 million, and that these bids would be sufficient to win these individual licenses. In a standard auction format, the Commission would net \$70 million for the three licenses, while also licensing the spectrum to a variety of carriers.

On the other hand, imagine the same three licenses and bidders, but they are now competing in an auction that permits package bidding. Now suppose that Bidder A submits a package bid of \$60 million for all three licenses, only marginally increasing what it would have bid for just the urban license because that license remains its primary focus. As noted, because Bidders B and C are smaller carriers, they have neither the business need nor financial resources

¹¹² *Id.*; see Cellular South Comments at 4 (“[P]ackage bidding enables the largest operators to foreclose competition on a substantial number of licenses that, if auctioned individually, might attract more and higher bids by smaller, regional operators or other auction participants.”); NERA Report at 49 (“[L]ocal bidders may lose out, even if their marginal values are actually above their national rivals.”).

to bid on the urban license. Consequently, the total bids for the individual licenses contained within this package – *i.e.*, the small bidders’ combined \$20 million for the two rural licenses – would not be nearly enough to defeat the large carrier’s package bid. The results, as compared to an auction without package bidding, would be a \$10 million (*i.e.*, 14%) decrease in auction revenue, a failure to disseminate the licenses among a variety of applicants, and the exclusion of those carriers most focused on providing broadband services to rural and other underserved areas. This example clearly refutes AT&T’s contention that its package bidding proposal would “pick[] winners solely on the basis of which combination of bids expresses – and can be presumed to produce – the greatest economic value for consumers,”¹¹³ as well as Verizon’s contention that package bidding would “yield more robust bidding – and thus more revenues...”¹¹⁴

Both AT&T and Verizon base these alleged justifications for package bidding on their claims that, with a standard auction format, they would be forced to reduce their bidding as a result of the “exposure problem,”¹¹⁵ even though the results of past auctions suggest that bidders do not reduce their bids in this way. On the contrary, because smaller carriers have a chance to compete in a non-package auction, more robust competition and higher prices result from auctions with small license areas and no package bidding.

Furthermore, what AT&T and Verizon fail to mention is that the interaction of package bidding procedures and bidding eligibility rules creates a significant, and real, exposure problem for smaller bidders. Accordingly, at best, package bidding would simply shift auction risk from large bidders with substantial financial resources to smaller bidders, many of which could not

¹¹³ AT&T Comments at 7.

¹¹⁴ Verizon Comments at 4.

¹¹⁵ See AT&T Comments at 4 (claiming that package bidding is necessary “to avoid a bid-depressing exposure problem”); Verizon Comments at 4 (claiming that concern over the exposure problem “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”).

simply absorb the consequences of such a risk coming to fruition. Notably, and perhaps ironically, two of the studies relied on by Verizon as support for package bidding explain that the exposure for large bidders, to the extent one exists, can be mitigated by bid withdrawal procedures typically built into the Commission's standard auction framework, but not into auctions that incorporate package bidding.¹¹⁶

In contrast, smaller bidders do not have a similar opportunity to avoid the exposure problem they face in auctions with package bidding. As USCC detailed in its comments, the exposure risks for smaller bidders arise because, in an auction with package bidding, the Commission's auction system considers bids made in previous rounds when determining provisionally winning bids, which can cause a dormant bid for an individual license to become provisionally winning many rounds later. As a consequence, because the Commission does not permit bid withdrawals in auctions with package bidding, once a bid is placed on an individual license, the bidder must choose between two equally undesirable options.¹¹⁷

First, the bidder could pursue another license, which would expose the bidder to the risk that its dormant bid subsequently becomes provisionally winning. If so, the bidder could become financially liable for both its new bid and the reactivated bid, even if it desired only a single license, and even if it lacks the financing to acquire an additional license. If the bidder does lack sufficient financing, the bidder would be subject to a default penalty, and potentially a deficiency payment as well.

¹¹⁶ See Cramton, P., *Simultaneous Ascending Auctions*, p. 7 (Aug. 8, 2004) ("*Cramton Study*") ("To limit the exposure problem, the high bidders can withdraw their bids subject to a bid withdrawal penalty."); *Experimental Test Study* at 12 ("The exposure problem can be alleviated to some extent by the (limited) bid withdrawal provisions built into the SMR bidding rules...").

¹¹⁷ In this respect, T-Mobile noted that yet another reason why package bidders are favored is because they "are able to effectively create a unilateral right to withdraw bids..." T-Mobile Comments at 5. As T-Mobile explained, "because package bidding presumably implies that a package bidder would be allowed to stop bidding on a package as long as there is excess demand for at least one license in the package, package bidders would be given the option to effectively withdraw their bids with less risk of consequence than individual license bidders." *Id.* at 1-2.

Further, even if the bidder has both the resources and desire to acquire the license subject to its reactivated bid, it may lack sufficient bidding eligibility to compete any further for this license. As T-Mobile explained, if “several rounds [] have passed without any activity on one or more of the component licenses in the package,” a bidder may opt to “move[] its eligibility and budget elsewhere...”¹¹⁸ In turn, the bidder’s inability to increase its bid would force other auction participants bidding on individual licenses within the same package to independently counter any subsequent increase in the package bid, which would make it even more likely that the package bidder would win, and perhaps at a discounted price with respect to some of the licenses contained within the package.

Second, the bidder could simply cease auction participation, and thereby forfeit the opportunity to acquire a license, rather than expose itself to significant risk. In addition to the clear harm this would cause the bidder, this outcome would mean less competition in both the auction and wireless industry, and potentially fewer rural deployments using these spectrum bands. Moreover, by forcing a bidder into a corner in this way, package bidding has the effect of presuming that bidders are only interested in specific licenses, and have no desire to revise their strategies to focus on other licenses as an auction progresses. However, as T-Mobile stressed, the reality is that, “[o]nce bidders lose out on a desired license, they must craft a new bidding strategy, particularly with the auction’s activity requirement.”¹¹⁹ T-Mobile further explained that, “[w]hen a bidder forms a new strategy, it may no longer desire the license at the price it previously bid,”¹²⁰ especially if it lacks the financing or bidding eligibility to do so.

Although revising the standard package bidding framework in order to prevent dormant bids from becoming provisionally winning in later rounds would address some of these harms,

¹¹⁸ *Id.* at 3-4.

¹¹⁹ *Id.* at 4.

¹²⁰ *Id.*

T-Mobile noted the detrimental effect this approach could have with respect to auction efficiency and revenue. Specifically, T-Mobile explained how, if a package bidder decided to stop bidding on a package of licenses, this could “generate an excess supply of available licenses in market areas where the package bidder would be the standing high bidder...”¹²¹

By way of example, T-Mobile described a situation where a package encompasses eight licenses and, as the auction proceeds, the high bidders for six of these eight individual licenses drop out, making the package bidder “the only standing high bidder in these markets, which stops the clocks.”¹²² Subsequently, as bidding continues on the two remaining individual licenses, the package bidder decides that the package price has become too high, and thus stops bidding on the package. Consequently, “in the six markets where the other bidders had dropped out, there would be an excess supply of licenses.”¹²³ As noted by T-Mobile, not only would this “excess supply [] be highly inefficient” and “challenging to account for,” but it could “also lead to a large drop in revenues and, consequently, reduce the amount of spectrum cleared at auction.”¹²⁴

In addition, the NERA Report described how this approach to package bidding would significantly reduce auction certainty, which would be particularly detrimental to the incentive auction, which “must raise a certain level of revenues to clear a given supply scenario.”¹²⁵ As explained in the NERA Report, without package bidding, “every bid for every lot in each round [would be] potentially binding, meaning that the FCC [could] always be sure how much revenue it has raised.”¹²⁶ However, if the Commission permits package bidding but does not permit

¹²¹ *Id.* at 3.

¹²² *Id.*

¹²³ *Id.*

¹²⁴ *Id.*

¹²⁵ NERA Report at 49.

¹²⁶ *Id.*

dormant bids to be reactivated in later rounds, this certainty would disappear because “demand for a whole package of lots could disappear, and demand could fall below supply...”¹²⁷ The NERA Report further noted how this “uncertainty for the FCC and for all bidders about whether a supply scenario will clear” would increase in relation to the size of the packages allowed in the auction.¹²⁸

USCC also noted in its comments how package bidding adds significant, and unnecessary, complexity to an auction,¹²⁹ and that this added complexity uniquely disadvantages smaller bidders. Similarly, CCA explained how “package bidding would bias the auction in favor of larger carriers that have greater resources to manage the complexity entailed by such a process.”¹³⁰ Commenters also noted how this additional complexity would be particularly inappropriate for the incentive auction. For instance, T-Mobile explained that, while package bidding “poses a challenging auction design problem even for relatively straightforward auctions,”¹³¹ this harm would be “magnified in the context of the incentive auction’s existing complexity.”¹³² Moreover, the noted potential for a “losing” bid on an individual license to become provisionally winning many rounds later substantially increases package bidding’s inherent complexity because a bidder is forced to also factor in the possibility of dormant bids being reactivated. Not only do the limited resources of smaller bidders make it more difficult to address this complexity, but smaller bidders are those most likely to face this situation, which arises only with respect to bids on individual licenses.

¹²⁷ *Id.*

¹²⁸ *Id.*

¹²⁹ *See Cramton Study* at 5 (“Package bidding also adds complexity.”).

¹³⁰ CCA Comments at 7; *see Cellular South Comments* at 4 (noting that package bidding “injects unnecessary and costly complexity into the bidding process that will disadvantage bidders focused on specific licenses”).

¹³¹ T-Mobile Comments at 2.

¹³² *Id.* at 3; *see King Street Comments* at 9 (“[G]iven the Commission’s concern about not overly complicating the auction process..., Package Bidding should not be available.”); RWA/NTCA Comments at 2 (noting the “difficult task of conducting the first-ever Incentive Auction”); Blooston Comments at 3 (“[D]esigning the world’s first two-way incentive auction is very complex...”).

Given the likely exclusion of all but the largest bidders as a result of the various, and significant, disadvantages package bidding creates for smaller bidders, USCC seriously questions AT&T's claim that its proposal "neither favors nor disfavors package bidders as compared to bidders for individual [licenses],"¹³³ as well as Verizon's claim that package bidding is "likely to increase participation and bidding competition in both the incentive and AWS-3 auctions..."¹³⁴ Notably, all of the studies relied upon by Verizon in support of package bidding also noted the problems package bidding creates for smaller bidders.¹³⁵ In particular, they described how the "threshold problem" noted above can effectively exclude smaller bidders from auction success while permitting package bidders to acquire certain licenses at a discount. For instance, one study described how, "[i]f other bidders are interested in buying different subsets of licenses combined in the package, they might find it hard to coordinate their actions, even if the sum of their values is higher than the value of the package to the large bidder (the threshold problem)."¹³⁶ And another study noted how the "threshold problem can occur in cases where bidders on individual licenses together have a higher valuation than the package bidder, but because of limited competition for the individual licenses, the sum of the bids on individual licenses is lower than the package bid."¹³⁷ As a result, the authors of one study found that "there is no clear presumption that package bidding will improve auction performance."¹³⁸

¹³³ AT&T Comments at 7.

¹³⁴ Verizon Comments at 5.

¹³⁵ See *Cramton Study* at 5 ("Unfortunately, allowing package bids creates other problems."); *Experimental Test Study* at 2 (noting that package bidding "may introduce new problems").

¹³⁶ *Experimental Test Study* at 2.

¹³⁷ Rosston, G., *Implementing Package 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, pp.11-12 (Feb. 5, 2007) ("*Rosston Study*"); see also Goeree, J., Holt, C. & Ledyard, J., *An Experimental Comparison of the FCC's Combinatorial and Non-Combinatorial Simultaneous Multiple Round Auctions*, p. 2 (July 12, 2006) ("Package bidding ... may create other problems if efficient combinations of small bidders are unable to coordinate a response to an aggressive package bid by a large bidder, which is known as the 'threshold problem.'"); *Cramton Study* at 5 ("Package bids may favor bidders seeking large aggregation due to a variant of the threshold problem.").

¹³⁸ *Experimental Test Study* at 2.

According to Verizon, another reason large carriers require package bidding is to ensure that they can “take advantage of the economies of deploying across a larger area...”¹³⁹ However, as USCC detailed in its comments, the Commission’s standard auction rules, along with the ability to outbid smaller bidders, provide large carriers with ample opportunities to aggregate individual licenses in order to assemble expansive geographic service areas. In other words, while package bidding would subject smaller bidders to the various harms detailed above, large bidders do not require package bidding in order to attain their desired economies of scale.¹⁴⁰

In contrast, smaller bidders would be unlikely to ever gain access to these spectrum bands if the Commission enables large bidders to monopolize the auctions through package bidding. As USCC previously detailed, the acquisition of spectrum rights from the national carriers in the secondary market has been, and likely will continue to be, the exception rather than the rule. Moreover, even if large carriers prove willing to enter into secondary market transactions, the smaller bidders that were shut out of the auction as a result of package bidding would be forced to incur substantial transaction costs.

Large bidders, on the other hand, likely would not face secondary market costs because, as noted, they likely could successfully assemble large service areas during the auction. Nevertheless, according to Verizon, shielding large bidders from the potential for secondary market costs further justifies the use of package bidding because it would allow these bidders to “commit more of their resources toward acquiring licenses in the auction...”¹⁴¹ Thus, once again, a justification for package bidding alleged by Verizon would have the effect of removing a potential burden from large bidders while imposing an additional burden on smaller bidders.

¹³⁹ Verizon Comments at 5.

¹⁴⁰ See King Street Comments at 9 (“Most certainly there is no need for it, as large carriers do quite well in cobbling together larger service areas, even in the absence of Package Bidding.”).

¹⁴¹ Verizon Comments at 6.

Commenters also agreed with USCC that AT&T’s hierarchical package bidding (“HPB”) proposal would fail to adequately address the many harms related to package bidding. For instance, T-Mobile noted that, while an HPB framework would help to “limit computational challenges,” the “risk of excessive complexity as well as an intrinsic bias against non-dominant bidders remains substantial.”¹⁴² USCC also explained in its comments how the predefined packages could, in some ways, disadvantage smaller bidders even more than fully flexible package bidding procedures. For instance, these packages would invariably include all of the available license areas within a potentially large swath of territory, not simply those licenses most desired by the largest bidders.¹⁴³ As a result, HPB would make it less likely that smaller bidders have an opportunity to bid on individual licenses that are not also included within package bids. Similarly, the NERA Report explained how the threshold problem, and the preclusive effect this has on smaller bidders, would be “compounded if [the] available packages are inflexible, such that national bidders cannot easily drop individual licenses, without giving up on a broader package option.”¹⁴⁴

In addition, because each package would be of at least a certain size, smaller bidders would have even less chance to compete as package bidders themselves, and it would be even more difficult for bids on individual licenses to collectively exceed a package bid. At the same time, HPB could withhold some of the advantages that package bidding allegedly would otherwise provide to the largest carriers. For instance, a study relied on by Verizon explained how “[o]ne of the problems with predetermined packages is that bidders lose some flexibility in

¹⁴² T-Mobile Comments at 2-3.

¹⁴³ See AT&T Comments at 7 (noting that, under its HPB proposal, a “participant could *not* place a package bid for some subset of multiple EAs within an MEA, for some subset of multiple MEAs within an REA, or for various EAs scattered across the country”) (emphasis in original).

¹⁴⁴ NERA Report at 49.

their bidding because they cannot determine their packages, and because they cannot develop packages during the course of the auction that ‘fit’ with other bidders’ actions.”¹⁴⁵

Finally, USCC notes that CCA deserves credit for putting forth a package bidding framework that could be used if the Commission insists on some form of package bidding, and that this framework would disadvantage smaller bidders, and the public they hope to serve, to a lesser extent than HPB or AT&T’s alternative proposal regarding the top-100 PEA license areas.¹⁴⁶ However, given the substantial public interest harms related to any form of package bidding, the absence of any demonstrated need for package bidding, and the overwhelming opposition to package bidding in both proceedings, USCC continues to strongly urge the Commission to prohibit any use of package bidding.

As CCA noted, even its top-10 PEA proposal would enable the largest carriers to use package bidding to monopolize “almost 30 percent of the population of the United States, a significant number of POPs.”¹⁴⁷ Although not as harmful as AT&T’s top-100 PEA proposal, which “would engulf well over 70 percent of US POPs,”¹⁴⁸ no sound reason exists for the Commission to implement auction procedures that would provide at most marginal benefits to the largest, already-dominant carriers, while effectively eliminating the opportunity for smaller bidders to acquire licenses and use this spectrum to serve rural and other underserved areas and to increase competition in the wireless marketplace.

IV. CONCLUSION

A large majority of commenters agree with USCC that the significant potential of these spectrum bands to increase broadband access in rural and other underserved areas and to promote much-needed competition in the wireless industry will be squandered if the band plans or auction

¹⁴⁵ *Rosston Study* at 10.

¹⁴⁶ *See* AT&T Comments at 8, n. 26.

¹⁴⁷ CCA Comments at 8.

¹⁴⁸ *Id.*

