

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

|                                       |   |                   |
|---------------------------------------|---|-------------------|
| In the Matter of                      | ) |                   |
|                                       | ) |                   |
| Expanding the Economic and Innovation | ) | Docket No. 12-268 |
| Opportunities of Spectrum Through     | ) |                   |
| Incentive Auctions                    | ) |                   |

**REPLY COMMENTS OF UNITED STATES CELLULAR CORPORATION**

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## TABLE OF CONTENTS

|   |    |
|---|----|
| EXECUTIVE SUMMARY.....  | i  |
| I. THE PUBLIC INTEREST REQUIRES AN INTEROPERABILITY REQUIREMENT FOR THE 600 MHz BAND.....   | 3  |
| II. THE COMMISSION SHOULD MAXIMIZE THE AMOUNT OF SPECTRUM MADE AVAILABLE THROUGH THE REVERSE AUCTION AND REPACKING PROCESS.....                           | 7  |
| A. A Properly Structured Reverse Auction Will Maximize Broadcaster Participation, and Thus the Amount of Repurposed Spectrum.....                         | 9  |
| B. An Efficient Repacking Process Will Help to Maximize the Amount of Repurposed Spectrum.....  | 15 |
| III. THE COMMISSION SHOULD ESTABLISH 5 MHz BLOCKS AND PAIR THESE BLOCKS TO THE MAXIMUM EXTENT POSSIBLE.....   | 17 |
| IV. THE COMMISSION SHOULD PROHIBIT TIME DIVISION DUPLEX OPERATIONS IN THE 600 MHz BAND.....   | 20 |
| V. THE COMMISSION SHOULD ADOPT A MIX OF SMALL GEOGRAPHIC LICENSE AREAS.....   | 22 |
| VI. IF THE COMMISSION OFFERS GENERIC LICENSES IN THE FORWARD AUCTION, THEY MUST BE TRULY FUNGIBLE AND THE ASSIGNMENT PROCESS MUST BE ENTIRELY RANDOM..... | 24 |
| VII. THE COMMISSION SHOULD ADOPT AN AUCTION-SPECIFIC SPECTRUM AGGREGATION LIMIT.....  | 27 |
| VIII. THE COMMISSION SHOULD NOT IMPOSE ADDITIONAL LICENSE RENEWAL STANDARDS.....  | 31 |
| IX. THE COMMISSION SHOULD NOT IMPOSE UNDULY STRINGENT BUILD-OUT REQUIREMENTS OR DRACONIAN PENALTIES.....  | 32 |
| X. THE COMMISSION SHOULD NOT ALLOW COMBINATORIAL BIDDING FOR ANY 600 MHz LICENSES IN THE FORWARD AUCTION.....   | 38 |
| XI. THE COMMISSION SHOULD REJECT THE USE OF BLIND BIDDING.....  | 41 |

|       |  |    |
|-------|--|----|
| XII.  | THE COMMISSION SHOULD TAKE STEPS TO CLEAR THE 600 MHz SPECTRUM OF BROADCASTERS AS QUICKLY AS POSSIBLE..... | 48 |
| XIII. | THE COMMISSION SHOULD TAKE IMMEDIATE ACTION IN ORDER TO CLEAR CHANNEL 51.....                              | 50 |
| XIV.  | CONCLUSION.....  | 52 |

## EXECUTIVE SUMMARY

USCC continues to urge the Commission to focus on three primary goals, all of which received substantial record support, in order to fully realize the public interest benefits made possible by repurposing the 600 MHz band for wireless broadband services. First and foremost, the Commission should adopt interoperability requirements for the 600 MHz band. Otherwise, it would risk a situation like that in the Lower 700 MHz band, which has stranded investment and drastically delayed the deployment of advanced services to many rural and underserved areas. Here, an interoperability requirement would expand roaming opportunities, enhance economies of scale, promote network deployment, and increase competition in the wireless industry, which would spur investment and innovation and lower costs for consumers.

Without a regulatory requirement of interoperability, the financial incentives of the largest carriers, who drive device development, would drastically reduce the likelihood of an interoperable 600 MHz band. For that reason, interoperability in the 600 MHz band, and the substantial benefits it would create, will only become a reality through an express requirement. The experiences of Lower 700 MHz A Block licensees aptly demonstrate this unfortunate fact. Adopting an interoperability rule at this stage also is necessary so that potential bidders that are not large enough to drive device development will know in advance that the 600 MHz band will conform to the Commission's traditional model of full interoperability. In other words, if the Commission declines to adopt an interoperability requirement, this failure would deter auction participation by all but the largest carriers, and thus harm the competitiveness of the forward auction.

Second, the Commission should strive to maximize the amount of paired spectrum made available for wireless broadband services. Key to maximizing the amount of spectrum available

in the forward auction is a reverse auction framework that encourages participation by broadcasters. In addition to making the reverse auction process as simple and transparent as possible, providing adequate compensation to broadcasters is essential for maximizing their participation. Specifically, because a significant amount of spectrum can be made available in smaller markets through repacking alone, perhaps the most important action the Commission can take to maximize the total amount of relinquished spectrum is to establish high initial prices for broadcasters located in large, spectrum-limited markets. Another way to potentially increase broadcaster participation is by establishing additional bid options, but the Commission should ensure that any additional bid options do not complicate the reverse auction to such an extent that they could deter participation. Finally, an efficient repacking of the remaining broadcast television stations is crucial for maximizing the amount of repurposed spectrum.

Third, the Commission must ensure that the forward auction and 600 MHz band plan provide adequate opportunities for small and regional carriers and new entrants. Without the participation of these carriers, there will be a continued lack of competition in the wireless industry and reduced network deployments in rural and other underserved areas. Several licensing and auction rules are critical to ensure adequate opportunities for these carriers. Specifically, the Commission should license the 600 MHz band using small geographic service areas, or risk shutting small and regional carriers out of the auction process. At the same time, carriers of all sizes would benefit because small license areas would allow more targeted spectrum acquisitions, while not discriminating in favor of any business plan.

Further, if the Commission auctions generic licenses in the forward auction, this process must adequately protect smaller carriers. For instance, the generic licenses should be as similar and technically interchangeable as possible, and the Commission should establish only two

classes of generic licenses – those for paired spectrum blocks and those for supplemental, downlink-only blocks. Not only would additional subdivisions further complicate the auction, they would make interoperability less likely because the largest carriers could dominate a particular subdivision to the exclusion of other bidders. In addition, the subsequent license assignment process should be entirely random. If the Commission instead incorporates any preferences into this process, it would greatly advantage the largest carriers, who will be both more likely to have multiple blocks in the same market and licenses in adjacent markets. The result could be to force all other 600 MHz licensees into one or more pass bands devoid of the largest carriers and their ability to drive the device ecosystem. Even more important, under no circumstances should the Commission establish an assignment process that involves additional bids. Because smaller bidders would not be able to outbid a large carrier focused on acquiring particular frequencies in a market, much of the spectrum purchased by smaller carriers could end up being assigned to pass bands lacking any of the largest carriers. An additional round of bidding also could decrease forward auction revenue because bidders naturally would reduce their initial bids in anticipation of the second-stage bidding process.

Another action necessary to ensure competition is for the Commission to adopt an auction-specific spectrum aggregation limit that prohibits any applicant from acquiring more than 25 percent of the 600 MHz spectrum made available in a single market. Absent such a limit, the Commission would risk another Auction 73, which was dominated by AT&T and Verizon and which resulted in a lack of interoperability among Lower 700 MHz band handsets and the “stranding” of 700 MHz A Block licenses. The Commission should impose this limit in advance of the forward auction, which would deter applicants from acquiring more spectrum than they can use, and thereby prevent smaller bidders from acquiring the spectrum. Allowing

post-auction divestitures also would enable the largest carriers to choose among the competitors to which to divest their spectrum, which could further harm competition.

In addition, the Commission should apply its well-established “substantial service” standard to 600 MHz licensees, rather than inflexible construction benchmarks, which are unnecessary, arbitrary, and ignore market realities. They also weigh most heavily on new entrants and small and regional carriers, who often lack existing infrastructure that can serve as a foundation for meeting these requirements, and who typically lack the economies of scope and scale of carriers serving large urban populations. However, if the Commission nevertheless prescribes uniform construction obligations, it should adopt a reasonable population-based, rather than geography-based, end-of-term benchmark. Geography-based benchmarks force carriers to divert capital into areas where it is uneconomic to provide additional services, and thereby deprive investment where it would otherwise best serve the public interest. The Commission also must avoid imposing draconian penalties, such as automatic license termination, for a licensee’s failure to meet a build-out requirement because such penalties would strand good faith investments and risk leaving consumers without services that they may have been relying on for years.

Prohibiting the use of combinatorial bidding is another action necessary to ensure competition because it could effectively foreclose participation by smaller bidders by skewing the auction in favor of the largest bidders, who could end up acquiring licenses at a discount. Package bidding also would add another layer of complexity to the forward auction, further disadvantaging smaller bidders. At the same time, package bidding is unnecessary because adequate spectrum aggregation opportunities are available under the Commission’s standard auction procedures. Similarly, if the Commission is seeking a robust auction that will truly allow

the spectrum to be sold at its highest value, all participants should know the other bidders, their bid amounts, and their eligibility. Particularly for smaller bidders, license valuations depend on certain technical considerations – *e.g.*, the availability of interoperable devices and adequate roaming opportunities – that require sufficient information on the identities of likely other licensees. At the same time, the advantages of blind bidding are largely theoretical and marginal, making it unnecessary.

Finally, the Commission must ensure that those carriers requiring additional spectrum in order to effectively compete gain access to this crucial resource as soon as possible. For instance, the Commission should take steps to quickly clear the 600 MHz band of broadcasters. The Commission also should take immediate action to facilitate the voluntary relocation or relinquishment of Channel 51 broadcast operations in advance of the incentive auction. Lower 700 MHz A Block licensees, who are primarily small and regional carriers, have already been substantially hampered by the continuing presence of Channel 51 broadcast operations, and should not be forced to wait years longer before they can deploy innovative wireless broadband services using this spectrum.

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**REPLY COMMENTS OF UNITED STATES CELLULAR CORPORATION**

United States Cellular Corporation (“USCC”) submits these reply comments in response to the Notice of Proposed Rulemaking (“NPRM”) released October 2, 2012 in the above-captioned proceeding and the comments filed in response to the NPRM.<sup>1</sup> In its comments, USCC applauded the Commission’s significant efforts and progress thus far in implementing the incentive auction process made possible by the Middle Class Tax Relief and Job Creation Act of 2012 (“Spectrum Act”).<sup>2</sup> USCC’s comments primarily urged the Commission to focus on three crucial goals, all of which received substantial record support, in order to ensure that the incentive auction process advances the public interest to the greatest extent possible.

First and foremost, it is imperative that the Commission adopt an interoperability requirement so that 600 MHz licensees do not suffer the same harms plaguing Lower 700 MHz A Block licensees. As Commissioner Clyburn noted, “[t]he current lack of interoperability, in the lower 700 MHz band, is impeding the deployment of competitive options for consumers.”<sup>3</sup> Access to interoperable devices by all 600 MHz licensees would expand roaming opportunities, enhance economies of scale, increase deployment of wireless broadband services to rural and

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<sup>1</sup> *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd 12357 (2012). Unless otherwise noted, comments cited herein are those filed on January 25, 2013 in Docket No. 12-268 in response to the NPRM.

<sup>2</sup> Pub. L. No. 112-96, 125 Stat. 156 (2012).

<sup>3</sup> NPRM, 27 FCC Rcd at 12553 (Statement of Commissioner Clyburn).

other underserved areas, and promote competition, which would lead to greater investment and innovation and lower costs for consumers. Although several of USCC’s other proposals would help to encourage interoperability, in and of themselves, they would be wholly insufficient to ensure interoperability in the 600 MHz band. The reality is, absent a regulatory requirement, the largest carriers, who alone can drive device development, have an incentive to create custom-made or “boutique” band classes capable of operating only on their licensed frequencies. USCC therefore joins a majority of commenters in agreeing with Commission Clyburn that, in order “[t]o ensure that this incentive auction yields the greatest possible benefits for consumers,” the Commission “must consider whether [it] should mandate interoperability...”<sup>4</sup>

Second, the Commission should strive to maximize the amount of paired spectrum made available in the forward auction for wireless broadband services.<sup>5</sup> Specifically, the Commission should establish a reverse auction framework that sufficiently encourages participation by broadcasters, and then efficiently repack the remaining broadcast television stations into spectrum below the 600 MHz band.

Third, the Commission must ensure that the forward auction framework and 600 MHz band plan provide adequate opportunities for small and regional carriers, as well as new entrants, to acquire spectrum, which would advance the public interest by spurring competition and promoting the deployment of rural networks.<sup>6</sup> Specifically, the Commission should license the

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

<sup>5</sup> *See, e.g.*, Comments of CTIA – The Wireless Association at 18 (“Perhaps the most critical issue surrounding the incentive auction process is the development of a new band plan that would maximize the amount of spectrum made available for wireless broadband services...”); *id.* at 20 (“Given the desirability of paired spectrum ... the Commission should emphasize pairing spectrum bands... [P]aired spectrum is more valuable than unpaired or downlink-only spectrum, and the Commission should attempt to allocate as much as possible.”).

<sup>6</sup> *See, e.g.*, Comments of Competitive Carriers Association (“CCA”) at 3 (“The Commission also must ensure that its incentive auction rules are procompetitive and give all carriers, in particular competitive carriers, a meaningful opportunity to acquire spectrum where needed.”); Comments of Leap Wireless International, Inc. and Cricket Communications, Inc. (“Leap/Cricket”) at 2 (“The Commission should put a premium on ensuring that small,

600 MHz band using only small geographic service areas, establish an entirely random assignment process if generic licenses are used in the forward auction, adopt an auction-specific aggregation limit, resist calls for overly stringent build-out requirements or draconian penalties, and reject the use of combinatorial or blind bidding.

## **I. THE PUBLIC INTEREST REQUIRES AN INTEROPERABILITY REQUIREMENT FOR THE 600 MHz BAND**

As detailed in USCC's comments, ensuring interoperability in the 600 MHz band will be essential to achieving the extraordinary potential of this spectrum to greatly expand access to wireless broadband services.<sup>7</sup> Accordingly, USCC joins other commenters and again strongly urges the Commission to adopt an interoperability requirement for the 600 MHz band.<sup>8</sup>

Specifically, the Commission should require that: (1) all mobile devices designed to operate on 600 MHz paired spectrum, including asymmetrically paired 600 MHz spectrum, must tune to all such 600 MHz paired frequencies; and (2) all 600 MHz networks operating on such 600 MHz paired frequencies must permit the use of such devices.

The unfortunate experience of Lower 700 MHz A Block licensees aptly demonstrates the need for an interoperability requirement here. Specifically, as noted by CCA, "the balkanization of the 700 MHz band has resulted in a device ecosystem controlled by one carrier, AT&T, in a

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midsize, and regional carriers have access to spectrum as a critical input so that they can provide more meaningful competition to the largest carriers."); Comments of Cellular South, Inc. at 2 ("The Commission's incentive auctions must include structural mechanisms that will ensure competitive wireless network operators and new entrants have a meaningful opportunity to acquire usable spectrum, enhance competition, and provide consumers with viable alternatives to the Bell duopoly.").

<sup>7</sup> See Comments of USCC at 23-30; NPRM, 27 FCC Rcd at 12415 ("Interoperability has often been important in ensuring rapid and widespread deployment of mobile devices in a new spectrum band.").

<sup>8</sup> See, e.g., Comments of T-Mobile at 21 ("The Commission should require interoperability across all paired 600 MHz band channels."); Comments of CCA at 16 ("CCA strongly urges the Commission to require interoperability throughout the 600 MHz band..."); Comments of Leap/Cricket at 7 ("Leap [] strongly believes that the Commission should ensure interoperability across the entire 600 MHz band..."); Comments of Cellular South at 9 ("[T]he Commission has the power to protect the 600 MHz band from balkanization by requiring interoperability – requiring that all devices deployed on the 600 MHz spectrum support all channel blocks with the band – in the 600 MHz band plan and service rules.").

manner that has sharply impeded competition and has slowed deployment of LTE services to consumers.”<sup>9</sup> In the Commission’s recent Lower 700 MHz interoperability proceeding, USCC and others detailed the numerous and substantial benefits that an interoperability requirement would provide Lower A Block licensees and the public.<sup>10</sup> Commenters in this proceeding similarly noted the benefits of interoperability. For instance, T-Mobile explained that, “[f]or consumers, interoperability promises increased competition in pricing and services through a greater ability to switch among competing carriers.”<sup>11</sup> And, “[f]or competitive carriers, interoperability can enhance economies of scale, expand roaming opportunities, and increase deployment of next-generation broadband services across the country, especially in rural areas.”<sup>12</sup> Because of these substantial benefits of interoperability, USCC joins others in strongly urging the Commission to learn from the Lower 700 MHz A Block experience and “ensure that this does not happen again in the 600 MHz Band...”<sup>13</sup>

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<sup>9</sup> Comments of CCA at 16; *see* Comments of Leap/Cricket at 7 (“The lack of interoperability in the 700 MHz band has had serious adverse effects on the device ecosystem in that band, and consequently on the ability of carriers to deploy facilities in the lower portion of the band.”); Comments of MetroPCS Communications, Inc. at 28 (“[T]he lack of interoperability across the Lower 700 MHz Band has significantly delayed deployment... Competitive carriers, who are starved for spectrum, are unable to use the spectrum already in their hands, while their customers are denied the benefits of improved coverage or advanced wireless services that such spectrum would provide.”); Comments of Cellular South at 8 (“Operators who have sought to incorporate Lower A Block spectrum into their deployments have been thwarted by an inability to acquire devices from vendors that could interoperate across all Lower 700 MHz networks.”).

<sup>10</sup> *See* Comments of United States Cellular Corporation, WT Docket No. 12-69 (June 1, 2012); Reply Comments of United States Cellular Corporation, WT Docket No. 12-69 (July 16, 2012); *see also Application of AT&T Inc. and Qualcomm Incorporated for Consent to Assign Licenses and Authorizations*, Order, 26 FCC Rcd 17589, 17619 (2011) (“*AT&T/Qualcomm Order*”) (“Promoting interoperability in the 700 MHz band may bring substantial public interest benefits, such as encouraging the affordability and availability of 4G equipment, enhancing competition by facilitating consumer choice, and facilitating the widespread deployment of broadband services and competition, including access to broadband in rural and underserved areas. Interoperability may also create greater roaming opportunities between 700 MHz licensees.”).

<sup>11</sup> Comments of T-Mobile at 21.

<sup>12</sup> *Id.*; *see* Comments of MetroPCS at 28 (interoperability “will serve to reduce equipment costs for competitive carriers, encourage deployment and ultimately will better promote the public interest.”).

<sup>13</sup> Comments of MetroPCS at 28; *see* Comments of Cellular South at 9 (“The Commission should not allow this to happen again.”).

In addition to ensuring that smaller carriers and the public receive the benefits of interoperability, an interoperability requirement would provide the Commission greater flexibility in formulating an optimal 600 MHz band plan. For instance, in order to maximize the amount of spectrum repurposed for wireless broadband services, which the record overwhelmingly supports, the Commission would need to adopt its “extended families” band plan concept, which would include “two downlink band plans from the outset.”<sup>14</sup> As the Commission noted, “[s]upporting two band classes [] results in additional interoperability concerns.”<sup>15</sup> An interoperability requirement would permit the Commission to avoid this type of cost/benefit analysis, and instead focus solely on creating a band plan that maximizes the potential of the 600 MHz spectrum. In other words, by adopting USCC’s interoperability proposal, the Commission could ensure the benefits of interoperability in the 600 MHz band while also pursuing other important band plan proposals designed to maximize the amount and utility of the repurposed spectrum.<sup>16</sup>

Even if the Commission could formulate a band plan that encourages interoperability while still maximizing the potential of the 600 MHz spectrum, this approach would be wholly insufficient to ensure interoperability. Simply put, absent a regulatory requirement, the largest carriers, who alone can drive device development, have no incentive, and in fact have a disincentive, to offer interoperable equipment. Because these carriers are the preferred customers of device manufacturers, and because they are sufficiently large to independently benefit from economies of scale, they would gain little, and perhaps lose much, by voluntarily

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<sup>14</sup> NPRM, 27 FCC Rcd at 12408.

<sup>15</sup> *Id.* at 12409.

<sup>16</sup> See Comments of CCA at 16 (“To the extent that multiple band classes or multiple pass filters prove necessary, the Commission should ensure interoperability across band classes within the 600 MHz band, for example by requiring devices to support all channel blocks within the band.”).

agreeing to full interoperability. For instance, interoperability would enhance the competitiveness of small and regional carriers by affording them the ability, through roaming, to offer customers geographic coverage comparable to that offered by national carriers. In contrast, because large carriers operate geographically extensive networks, the potential incremental coverage available to them and their customers via roaming would be small. Further, to the extent that customers of the large carriers possess devices that are compatible with rival carriers' networks, interoperability would reduce customer switching costs and thus enhance the potential for increased churn by making it easier for customers to migrate to rival providers.

Adopting a clear interoperability requirement at this stage also is necessary so that potential bidders in the forward auction that are not large enough to drive device development will know in advance that the 600 MHz band will conform to the Commission's traditional model of full interoperability.<sup>17</sup> Otherwise, the potential for a lack of interoperability, and the significant harms that would impose upon these bidders, would deter their auction participation, and thus the competitiveness of, and revenue derived from, the forward auction. In addition, because these smaller carriers are more likely to serve rural and other unserved or underserved areas, their decreased auction participation could cause these areas to continue to lack access to wireless broadband services.<sup>18</sup> Adopting an interoperability requirement at this stage also would prevent those carriers who oppose interoperability from resisting future interoperability efforts by claiming detrimental reliance<sup>19</sup> or a lack of Commission authority.<sup>20</sup>

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<sup>17</sup> See *id.* (“The Commission should protect the 600 MHz band from such harms by implementing an interoperability mandate as part of its initial band plan and service rules, rather than waiting to attempt to resolve interoperability concerns that inevitably will arise in the future.”).

<sup>18</sup> See Comments of Leap/Cricket at 7 (“Such steps can guarantee interoperability *ex ante* rather than leaving the Commission, carriers, and most importantly, consumers struggling to deal with potential threats to interoperability in the future.”).

<sup>19</sup> See Comments of AT&T Services Inc., WT Docket No. 12-69, p. 20 (June 1, 2012) (“[T]he imposition of this mandate would destroy reliance interests of participants throughout the wireless ecosystem.”); *compare with*

## II. THE COMMISSION SHOULD MAXIMIZE THE AMOUNT OF SPECTRUM MADE AVAILABLE THROUGH THE REVERSE AUCTION AND REPACKING PROCESS

Numerous commenters joined USCC in urging the Commission to maximize the amount of spectrum repurposed for wireless broadband services through the incentive auction process. It can no longer be disputed that our nation lacks sufficient spectrum to successfully accommodate the wireless broadband revolution, and that this spectrum crunch will only worsen as demand for broadband services continues to increase exponentially.<sup>21</sup> Accordingly, USCC agrees with various commenters that the Commission should establish an incentive auction process that will maximize the amount of spectrum made available in the forward auction.<sup>22</sup> In order to do so, the Commission must take full advantage of its incentive auction authority because, as noted by

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Comments of T-Mobile at 21 (“The benefits of requiring interoperability are great and cost little to nothing, especially at the outset of band development.”).

<sup>20</sup> See Comments of AT&T Services Inc., WT Docket No. 12-69, p. 37 (June 1, 2012) (arguing that an interoperability requirement would be “an unlawful retroactive modification of the B Block licenses”); *id.* at 40 (“Even if the proposed Band 12 mandate did not violate Section 309, no provision of the Communications Act permits the Commission to promulgate such a requirement.”).

<sup>21</sup> See, e.g., *Policies Regarding Mobile Spectrum Holdings*, Notice of Proposed Rulemaking, 27 FCC Rcd 11710, 11716 (2012) (“The rapid adoption of smartphones, as well as tablet computers and the wide-spread use of mobile applications, combined with deployment of high-speed 3G and 4G technologies, is driving more intensive use of mobile networks.”); NPRM, 27 FCC Rcd at 12547 (Statement of Chairman Genachowski) (“U.S. mobile data traffic grew almost 300% last year, and driven by 4G LTE smartphones and tablets, traffic is projected to grow an additional 16-fold by 2016.”); Comments of CTIA at 8 (“[T]he spectrum crunch is likely more dire than even the startling statistics on mobile data usage suggest...”); Comments of Verizon and Verizon Wireless (“Verizon”) at 3 (“Chairman Genachowski warned just last fall that the National Broadband Plan targets of 300 MHz and 500 MHz in five and ten years may be insufficient given data usage trends.”); Comments of Cisco Systems, Inc. at 7 (“Smartphones, which in 2011 consumed 200 megabits of mobile data per month, will in 2016 consume 4520 megabits of mobile data per month – *exclusive of Wi-Fi use.*”) (emphasis in original); Comments of Telecommunications Industry Association (“TIA”) at 2 (“[N]early half of all wireless phones sold in 2011 were smartphones, a share that is expected to increase to more than two-thirds by 2015.”); Comments of Consumer Electronics Association (“CEA”) at 7 (“The number of consumer devices using spectrum in the U.S. is growing rapidly... CEA projects that nearly 132 million smartphones will be sold in 2013 alone.”); Comments of Nokia Siemens Networks US LLC at 5 (“[B]y 2020 a typical user could be consuming a gigabyte (GB) of data per day.”).

<sup>22</sup> See Comments of CTIA at 2 (“[T]he Commission should make the provision of new licensed spectrum its top priority.”); Comments of Nokia Siemens at 7 (“[T]he amount of spectrum that is to be auctioned for licensed commercial use should be maximized...”); Comments of Verizon at 1 (“[S]trongly support[ing] the Commission’s effort to design an auction that will maximize the amount of repurposed spectrum...”); CCA at 12 (“The Commission’s overarching goal in designing the band plan for the 600 MHz band should be to maximize the amount of licensed spectrum available for mobile broadband services.”); see also NPRM, 27 FCC Rcd at 12547 (Statement of Chairman Genachowski) (noting that a core goal of the proceeding is “[m]aximizing the amount of spectrum freed up for flexible use”).

CTIA, “the Commission only has one opportunity under Section 6403 to conduct a reverse auction or repacking.”<sup>23</sup>

By helping to address the current spectrum crunch through the incentive auction process, the Commission will do far more than simply allow wireless carriers to meet the social and entertainment needs of their subscribers.<sup>24</sup> For instance, CEA noted that “approximately 54% of the US workforce use wireless services in their job,”<sup>25</sup> which “contributed an estimated \$33 billion in productivity improvements for US businesses in 2011.”<sup>26</sup> And, beyond assisting our nation’s current workforce, “[o]ne study estimates that for every 10 MHz of additional spectrum assigned to wireless providers, there will be more than 7,000 new wireless industry jobs...”<sup>27</sup> In addition, T-Mobile noted a study which “estimates that every ten additional megahertz of spectrum available for wireless broadband use increases the United States’ gross domestic product by \$1.739 billion.”<sup>28</sup> Mobile broadband also substantially improves access to healthcare and education, and drives unprecedented levels of civic engagement.<sup>29</sup> Moreover, “maximizing the amount of licensed spectrum made available will result in a more successful forward

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<sup>23</sup> Comments of CTIA at 13; *see* Comments of Nokia Siemens at 7 (“The statutory structure of the incentive auction as a one-time opportunity amplifies the importance of it being a success.”).

<sup>24</sup> *See* Comments of Verizon at 3-4 (“Maximizing the amount of newly licensed mobile broadband spectrum through the incentive auction of broadcast spectrum is an essential component of the Federal government’s policy of achieving the economic benefits and the transformative capabilities of wireless technologies and services.”)

<sup>25</sup> Comments of CEA at 10.

<sup>26</sup> *Id.* at 11.

<sup>27</sup> *Id.* at 10; *see* Comments of TIA at 3 (“Devoting more spectrum to digital mobile uses also will help to propel new investment in critical wireless network infrastructure, which in turn should lead to thousands of new jobs...”).

<sup>28</sup> Comments of T-Mobile USA, Inc. at 3.

<sup>29</sup> *See* Comments of CEA at 11-12.

auction,”<sup>30</sup> which will help “to ensure the realization of Congressional objectives such as the funding of a nationwide public safety network and reducing the national budget deficit.”<sup>31</sup>

The availability of large amounts of additional spectrum also is crucial for promoting competition because robust competition requires strong competitors with access to spectrum resources.<sup>32</sup> The excellent propagation characteristics of the 600 MHz band make it particularly important in this respect. As CCA explained, “[t]he superior propagation characteristics of spectrum below 1 GHz provide the network economics essential to building coverage in light suburban and rural markets.”<sup>33</sup> Thus, in addition to permitting small and regional carriers to more effectively compete, the 600 MHz band will permit the deployment of broadband services in rural areas that could not be served economically using higher-frequency spectrum bands.

**A. A Properly Structured Reverse Auction Will Maximize Broadcaster Participation, and Thus the Amount of Repurposed Spectrum.**

Key to maximizing the amount of spectrum available in the forward auction is establishing a reverse auction framework that sufficiently encourages participation by broadcasters.<sup>34</sup> One way to increase participation in the reverse auction is to make the process as

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<sup>30</sup> Comments of CTIA at 13.

<sup>31</sup> Comments of Nokia Siemens at 7.

<sup>32</sup> See Comments of CCA at 2 (“[T]he wireless industry has undergone a period of significant consolidation.”); Comments of Cellular South at 1 (“[T]he Commission has a chance to address further concentration of spectrum in the wireless industry...”).

<sup>33</sup> CCA at 2; see *AT&T/Qualcomm Order*, 26 FCC Rcd at 17610 (“The more favorable propagation characteristics of lower frequency spectrum (*i.e.*, spectrum below 1 GHz) allow for better coverage across larger geographic areas and inside buildings.”).

<sup>34</sup> See Comments of CCA at 3 (“To create a successful auction, the Commission should do everything in its power to maximize participation by broadcasters to repurpose spectrum for licensed wireless uses.”); Comments of CTIA at 30 (“The Commission should design a reverse auction framework that maximizes broadcaster participation so as to produce significant spectrum for wireless use.”); Comments of Verizon at vii (“Maximizing broadcaster participation will in turn maximize the amount of spectrum cleared, consistent with Congress’s objectives.”); Comments of T-Mobile at 36 (“The Commission should adopt rules that permit and encourage broad participation in the reverse auction among broadcast television licensees.”); Comments of Expanding Opportunities for Broadcasters Coalition (“Broadcasters Coalition”) at 2 (“Congress’s goals hinge upon the completion of a successful incentive auction, where an indispensable component is participation by willing sellers.”); Comments of TIA at 13 (“If this

simple and transparent as possible for broadcasters.<sup>35</sup> For instance, the “short-form” application should require only the minimum necessary information. As CTIA explained, because “[t]he reverse auction differs from other Commission auctions in that all of the participants already are Commission licensees,” “[n]o additional information, such as ownership information and a showing of qualification, should need to be collected as has been past practice.”<sup>36</sup> Further, the Commission should ensure that the reverse auction itself is straightforward and simple in order to “foster participation by smaller broadcasters who may be unwilling to put together an elaborate team of auction experts to help them navigate a complicated process.”<sup>37</sup>

Another way to potentially increase broadcaster participation is by establishing additional bid options.<sup>38</sup> For instance, the Commission should consider allowing UHF to VHF bidders to limit their bids to high VHF channels, which would increase auction participation by ensuring that these broadcasters would not be disadvantaged by the propagation challenges associated with the low VHF spectrum.<sup>39</sup> In addition, to ensure that sufficient high VHF spectrum is available for these bidders, the Commission could allow current VHF broadcasters to participate

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first-ever incentive auction is to fulfill policymakers’ hopes, it must begin by attracting a significant number of broadcasters...”).

<sup>35</sup> See NPRM, 27 FCC Rcd at 12547 (Statement of Chairman Genachowski) (noting that a core goal of the proceeding is “[m]aximizing broadcaster participation in the auction, including by making the auction process as transparent and easy-to-understand as possible”); Comments of CTIA at 4 (“The Commission can encourage maximum involvement by providing interested parties with as much clarity as possible regarding the auction process, and by making participation as simple as possible.”); Comments of Verizon at 20 (“The design of the reverse auction and repacking requirements should be as simple and transparent as possible...”); Comments of CCA at 3 (the Commission can maximize participation by broadcasters “by providing clarity and transparency in its bidding rules”); Comments of TIA at 13 (the Commission should “fashion[] reverse auction rules that are ‘simple’ in the sense of being fair, transparent, and readily understandable”).

<sup>36</sup> Comments of CTIA at 32-33.

<sup>37</sup> Comments of MetroPCS at 5.

<sup>38</sup> See Comments of CTIA at 33 (“CTIA supports the Commission’s efforts to maximize participation through the establishment of additional bid options for broadcasters.”); Comments of TIA at 14 (“The Commission also should consider how to afford some additional options for broadcasters who wish to remain in the industry while also monetizing some part of their licensed spectrum’s value.”).

<sup>39</sup> See Comments of Motorola Mobility LLC at 7.

in the auction by relinquishing a high VHF channel in exchange for a low VHF channel.<sup>40</sup> And, to encourage broadcasters to pursue these bids options, the Commission could favor requests for waivers of the VHF power and height limits.<sup>41</sup> Various commenters in addition to USCC also supported the Commission’s proposal to allow broadcasters to bid to accept additional interference from other broadcast stations or reduce their service areas or populations served.<sup>42</sup> Harris Broadcast noted that these additional bid options could strengthen the broadcast industry because, in return for slightly less coverage, financially struggling stations could use the auction proceeds to remain economically viable, and thus stay on the air, and to invest in their broadcast operations and programming.<sup>43</sup> Despite these potential benefits of establishing additional bid options for the reverse auction, USCC agrees that the Commission “should assess whether the rules needed to implement those additional choices can be kept relatively simple and transparent.”<sup>44</sup> As TIA explained, because “[a]n overly complex, multi-layered decision tree may be intimidating for some broadcasters,” the Commission should “balance the value of

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<sup>40</sup> See Comments of Verizon at 32 (“The Commission should consider allowing broadcasters the opportunity to submit a variety of VHF relocation bids in the reverse auction.”).

<sup>41</sup> See Comments of Motorola Mobility at 7 (“[T]o encourage relocation to either the low or high VHF channels, the Commission should be flexible when considering requests for waivers of the VHF power and height limits for any winning UHF-to-VHF bidders to address unusual significant coverage issues on their new VHF channels.”); Comments of Verizon at 33.

<sup>42</sup> See Comments of Verizon at 33 (“Verizon supports allowing broadcasters to accept additional interference or a reduced service area as a method of encouraging additional broadcaster participation in the reverse auction.”); Comments of TIA at 14 (“[C]ompensating broadcasters for accepting additional interference or voluntarily agreeing to reduce either their protected service contours or population coverage may help to increase the amount of spectrum that can be repurposed.”).

<sup>43</sup> See Comments of Harris Corporation, Broadcast Communications Division at 23 (“This option may be particularly attractive to stations struggling financially, including those owned by minorities or serving unserved or underserved populations, who could use the auction proceeds to better serve their audiences.”); see also Comments of Verizon at 33 (“This option could appeal to broadcasters that view a percentage loss in over-the-air covered POPs as a calculable percentage loss in their business, and even to larger stations that do not rely on their must carry rights for cable TV carriage and view their over the air viewers separately.”); NPRM, 27 FCC Rcd at 12555 (Statement of Commissioner Rosenworcel) (“By offering incentives to share channels and incentives to relocate from the UHF to VHF band, this auction can mean new resources for broadcasters to develop new programming and deploy new services.”).

<sup>44</sup> Comments of TIA at 15.

pursuing all possible auction options against the possibility that a complicated auction may discourage some TV licensees from participating or, even if they do engage, from opting for less than a full exit from broadcasting.”<sup>45</sup>

Providing adequate compensation to reverse auction bidders also is essential for maximizing broadcaster participation. As USCC detailed in its comments, a significant amount of spectrum can be made available in smaller markets simply by repacking the existing broadcast television stations.<sup>46</sup> However, in “many markets, including those where demand for wireless spectrum is the greatest, repacking alone simply cannot clear sufficient channels to achieve a meaningful transfer of spectrum.”<sup>47</sup> USCC therefore agrees with the Broadcasters Coalition and others that “the payments to broadcasters in the very biggest markets are the key to unlocking the value of the spectrum assembled in most of the country through repacking.”<sup>48</sup> As a result, perhaps the most important action the Commission can take to maximize the total amount of relinquished spectrum is to establish high initial prices for broadcasters located in large, spectrum-limited markets.<sup>49</sup> Simply put, “[i]f the auction sets opening prices lower than the broadcaster’s subjective value of the license, broadcasters will not participate.”<sup>50</sup>

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<sup>45</sup> *Id.*; see Comments of CTIA at 33 (urging the Commission to “strike an appropriate balance between simplicity and ensuring maximum flexibility for broadcasters”).

<sup>46</sup> See Comments of USCC at 4.

<sup>47</sup> Comments of Broadcasters Coalition at 2.

<sup>48</sup> *Id.* at ii; see Comments of Nokia Siemens at 7 (“[T]he Commission should maintain an acute focus on major markets where the mobile broadband spectrum demand will be highest.”); Comments of TIA at 15 (“The importance of attracting the participation of broadcasters in the largest markets cannot be overstated – fully clearing many stations from the TV band in top markets is essential to the success of the forward auction.”).

<sup>49</sup> See Comments of T-Mobile at 38 (“[H]igh initial prices would attract many broadcast incumbents at the outset of the bidding.”); Comments of CEA at 30 (the Commission “should start the auction with prices that are sufficiently high to generate significant broadcaster interest”); Comments of TIA at 13 (the Commission should “set[] opening prices high enough to operate as real incentives”); Comments of CTIA at 21 (“[T]he Commission should give strong consideration to ensuring that a minimum amount of spectrum is provided in the top markets for the incentive auction to be successful.”).

<sup>50</sup> Comments of T-Mobile at 46; see Comments of Broadcasters Coalition at 4 (“[B]roadcasters will only relinquish their spectrum if the available price fulfills their expectations.”).

On the other hand, there is no risk in setting high initial bid amounts because, “[i]n those markets where the supply of spectrum exceeds the Commission’s clearing target, the price offered would decline in subsequent rounds until the proper market price is identified.”<sup>51</sup> In other words, “[t]he incentive auction mechanism [] will identify an efficient price for the offered spectrum, obviating the need for the agency to artificially limit the initial amounts offered.”<sup>52</sup> Moreover, the substantial revenue expected from the forward auction makes it unlikely that even high reverse auction prices for the largest markets would prevent the Commission from meeting the Spectrum Act’s closing conditions. As detailed in the economic analysis attached to USCC’s initial comments, auctioning 120 MHz of spectrum could create a forward auction surplus of approximately \$24.7 billion to be split between the Public Safety Trust Fund and the U.S. Treasury, auctioning 102 MHz could create a surplus of approximately \$23 billion, and auctioning 84 MHz could create a surplus of approximately \$20.9 billion.<sup>53</sup>

USCC also supports other reverse auction bidding rules proposed by T-Mobile in order to encourage broadcaster participation, and thus maximize the amount of spectrum available for the forward auction. Specifically, T-Mobile urges the Commission to use Vickrey pricing to determine the amount paid to winning broadcasters. As T-Mobile explained, “[u]nder this framework, all winning broadcasters in a market would receive the amount equal to what they could have bid and still had their bids accepted in the reverse auction.”<sup>54</sup> For instance, in a market with five winning bids, each of the five broadcasters, including the fifth-lowest bid,

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<sup>51</sup> Comments of Broadcasters Coalition at 10; *see id.* at 9 (“[T]he Spectrum Act already establishes a ceiling for reverse auction prices, given that the total forward auction revenues must exceed all payments to broadcasters, costs of administering the auction, and costs of the broadcaster relocation fund.”).

<sup>52</sup> *Id.* at 4; *see* Comments of T-Mobile at 46 (“Prices in the reverse auction can fall, but they cannot increase.”).

<sup>53</sup> *See* Comments of USCC at 22; *see also* Comments of Broadcasters Coalition at 9 (“The spectrum relinquished in the largest markets as a result of this approach will allow the FCC to unlock the value of spectrum assembled in the rest of the country through repacking alone, resulting in the greatest reallocation of spectrum for mobile broadband use and the largest surplus to fund the public safety broadband network and deficit reduction.”).

<sup>54</sup> Comments of T-Mobile at 45.

would receive a uniform payment equal to the lowest losing bid in that market.<sup>55</sup> This approach has two significant benefits. First, it would eliminate the incentive for broadcasters to demand more than they are willing to accept, which would increase the number of winning bids. Second, it would simplify the auction process because broadcasters would not have to engage in complicated bidding strategies, which would increase the number of broadcasters willing to participate in the auction.<sup>56</sup>

In addition, USCC supports T-Mobile's proposal that the Commission's Round 0 prices factor in the effect of clearing a station on other markets, even if the station is located in a market where sufficient spectrum could be made available through repacking alone. T-Mobile aptly described this situation with the following example: "If, for instance, clearing a low-population, low-value station in Maine proves critical to allowing a high-population, high-value station in New York to exit the band due to the 'daisy-chain' interference effect of multiple stations in close proximity to one another, the auction may benefit from establishing a higher price for the Maine station than might otherwise be warranted if considering only the population covered and relative spectrum values."<sup>57</sup> In other words, in addition to setting high initial prices for stations located in large, spectrum-congested markets, the Commission could help free up spectrum in large markets by rewarding smaller-market stations that otherwise would impair large markets. Finally, USCC agrees with commenters that the Commission could increase broadcaster participation by ensuring that winning bidders receive prompt payment.<sup>58</sup>

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<sup>55</sup> *See id.*

<sup>56</sup> *See id.* at 45-46.

<sup>57</sup> *Id.* at 49.

<sup>58</sup> *See* Comments of Broadcasters Coalition at 23 ("Establishing a policy of prompt payments to winning bidders will encourage reverse auction participation by minimizing the risk of business disruption for winning bidders."); Comments of TIA at 16 ("The Commission could augment these types of incentives by also adopting auction procedures that entitle winning broadcast bidders to receive their payments as quickly as possible.").

**B. An Efficient Repacking Process Will Help to Maximize the Amount of Repurposed Spectrum.**

An efficient repacking process also is crucial for maximizing the amount of repurposed spectrum. In this respect, while USCC supports reasonable efforts to preserve broadcasters' existing coverage areas and populations served, it opposes any firm requirements to precisely replicate stations' current coverage areas or to ensure service to all of the specific viewers that currently receive stations' over-the-air broadcast signals.<sup>59</sup> Notably, Congress expressly refrained from imposing such a requirement, instead opting for a flexible "reasonable efforts" standard.<sup>60</sup> In doing so, Congress wisely provided the Commission with the discretion necessary "to help ensure that as much spectrum as possible is made available."<sup>61</sup> Accordingly, "the Commission should [] avoid reading into the operative legislation any unnecessary *legal* constraints on efficient repacking."<sup>62</sup> As AT&T notes, "[w]hen Congress instructs an agency to take 'reasonable' steps to accomplish any goal, it grants the agency considerable discretion to apply that term to suit the circumstances, and courts will grant the agency 'substantial deference' when it does so."<sup>63</sup> Here, because the clear objective of the Spectrum Act is to maximize the amount of spectrum reallocated for mobile broadband services, "it is hardly *unreasonable* for the Commission to repack spectrum as efficiently as possible to free up the most spectrum for

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<sup>59</sup> See Comments of CTIA at 35 ("CTIA supports action to ensure that existing broadcaster coverage is reasonably replicated, but strongly opposes any efforts to precisely replicate coverage.").

<sup>60</sup> See Spectrum Act §6403(b)(2); Comments of TIA at 7 ("[T]he statute affords the Commission flexibility here that it lacked in the past. Thus, for example, the agency plainly need not precisely replicate every square foot of a station's pre-repacking footprint."); Comments of CTIA at 34 ("[T]he repacking model must not be overly conservative but instead should strike the balance memorialized in the statute.").

<sup>61</sup> Comments of Nokia Siemens at 8.

<sup>62</sup> Comments of AT&T Inc. at 76 (emphasis in original); see Comments of CTIA at 34 ("CTIA does not believe 'reasonable efforts' means that broadcast TV station contours must be exactly the same following repacking..."); Comments of CEA at 32 ("[B]y requiring the FCC to make 'all reasonable efforts,' the Spectrum Act does not require the FCC to 'replicate' existing service areas and populations.").

<sup>63</sup> Comments of AT&T at 77.

mobile broadband.”<sup>64</sup> Moreover, precise coverage replication would be impossible given the fact that stations will be moving to new channels with different propagation characteristics.<sup>65</sup>

Further, USCC again urges the Commission to take full advantage of this lone opportunity to conduct a repacking of the broadcast television bands in order to maximize the amount of spectrum repurposed for innovative wireless broadband services. Specifically, the Commission should not decline to repack a station simply because a certain amount of spectrum could be made available in a market without relocating the station to a new channel. As detailed in USCC’s comments and the economic analysis attached thereto, this approach would not create a risk that insufficient funds would exist to reimburse broadcasters being relocated to new channels because the costs of repacking are estimated to add up to only \$775 million, which is far short of the \$1.75 billion allocated for this purpose.<sup>66</sup> Similarly, USCC again urges the Commission not to shut out a willing reverse auction participant simply because its market could produce a sizeable amount of spectrum through repacking alone. In addition to failing to maximize the amount of repurposed spectrum, in some cases, this approach could be financially unwise. As USCC detailed in its comments, the estimated costs of repacking a full-power or a low-power Class A station – \$885,500 and \$267, 375, respectively – exceed the market value of many stations.<sup>67</sup> As a result, in some instances, a station’s voluntarily participation in the reverse auction could cost less than the involuntary relocation of the station.

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<sup>64</sup> *Id.* (emphasis in original).

<sup>65</sup> See Comments of CTIA at 35 (“Changes in UHF frequency will necessarily mean that there will be changes in coverage that are unavoidable.”); Comments of CEA at 5 (“[S]ervice areas are based on theoretical radio frequency calculations, and therefore exact duplication is not possible...”).

<sup>66</sup> See Comments of USCC at 8-9 & Attachment B at 1.

<sup>67</sup> See *id.*

### **III. THE COMMISSION SHOULD ESTABLISH 5 MHz BLOCKS AND PAIR THESE BLOCKS TO THE MAXIMUM EXTENT POSSIBLE**

USCC joins the vast majority of commenters in supporting the Commission's proposal to "license the 600 MHz spectrum in 5 megahertz 'building blocks.'"<sup>68</sup> The record details various benefits that would arise from this approach. For instance, Verizon noted that "5 MHz blocks can support a variety of Frequency Division Duplex (FDD) wireless technologies, including LTE, which is the likely technology of choice for 600 MHz broadband licensees."<sup>69</sup> In addition, CCA noted that "creating 5 MHz blocks comports with current industry practices and with the block sizes used in other bands."<sup>70</sup> USCC also agrees with MetroPCS that "5 MHz blocks are an ideal size for competitive carriers and new entrants into a market, while larger spectrum blocks tend to favor the resource-rich, largest carriers."<sup>71</sup>

USCC also supports the Commission's proposal "to pair these blocks wherever possible..."<sup>72</sup> Although USCC agrees with the Commission that there are benefits to offering "unpaired downlink spectrum ... as supplemental downlink expansion for FDD operations,"<sup>73</sup> it joins other commenters in strongly urging the Commission to "allocate excess spectrum to

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<sup>68</sup> NPRM, 27 FCC Rcd at 12403; *see* Comments of CTIA at 20; Comments of CCA at 12; Comments of MetroPCS at 19; Comments of T-Mobile at 14; Comments of Leap/Cricket at 12; Comments of Verizon at 15; Comments of Nokia Siemens at 9; Comments of Motorola Mobility at 15.

<sup>69</sup> Comments of Verizon at 15; *see* Comments of Motorola Mobility at 13 ("5 MHz blocks will align with a variety of wireless broadband technologies...").

<sup>70</sup> Comments of CCA at 12; *see* Comments of Leap/Cricket at 5 ("Using 5 MHz block sizes is consistent with common industry practice..."); Comments of CTIA at 20 ("5 MHz building blocks is more in line with other CMRS spectrum allocations."); Comments of Nokia Siemens at 9.

<sup>71</sup> Comments of MetroPCS at 19.

<sup>72</sup> NPRM, 27 FCC Rcd at 12401; *see* Comments of MetroPCS at 21 (strongly recommending "that spectrum be licensed in paired 5 MHz blocks whenever possible"); Comments of CTIA at 22 ("The Commission should [] emphasize pairing spectrum bands and should seek to maximize the amount of paired spectrum made available."); Comments of AT&T at 18; Comments of CEA at 20.

<sup>73</sup> NPRM, 27 FCC Rcd at 12405.

downlink operations only after it has maximized the number of paired blocks in a market.”<sup>74</sup>

This approach is necessary to maximize the various benefits related to paired spectrum. For instance, paired blocks would be “in keeping with the leading mobile broadband technologies.”<sup>75</sup>

As a result, “pairing spectrum, where possible, will allow mobile broadband providers to deploy and expand 4G wireless broadband services quickly and efficiently.”<sup>76</sup> MetroPCS also noted that paired blocks are “critical to support new entrants” because “having both uplink and downlink spectrum is an obvious necessity, and auctioning spectrum in unpaired blocks risks discouraging new entrants from bidding in the auction, lest they become stranded with a lone block of uplink or downlink spectrum.”<sup>77</sup> Accordingly, as noted by T-Mobile, “[m]aximizing the availability of paired spectrum increases the likelihood of robust competition by allowing both established licensees ... and new entrants ... to acquire all the critical spectrum inputs needed for their business at once.”<sup>78</sup>

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<sup>74</sup> Comments of Leap/Cricket at 6; *see* Comments of Cellular South at 7 (“[T]he Commission should offer unpaired spectrum *only after* the Commission has paired as many blocks as possible in a market.”) (emphasis in original); Comments of CCA at 13 (“Only after the Commission has paired as many blocks as possible in a market should the Commission offer excess spectrum as an unpaired downlink block.”); Comments of CTIA at 20 (the Commission “should not allocate spectrum for supplemental downlink unless no pairing option is feasible”).

<sup>75</sup> NPRM, 27 FCC Rcd at 12401; *see* Comments of AT&T at 18 (“Today, almost all LTE providers use Frequency Division Duplexing (‘FDD’) technologies and thus need separate, dedicated uplink and downlink spectrum to provide LTE service.”); Comments of CEA at 20 (“Most mobile broadband technologies operate on paired spectrum allocations, with one block dedicated to uplink communications, and the other dedicated to downlink communications.”).

<sup>76</sup> NPRM, 27 FCC Rcd 12405; *see* Comments of CCA at 13 (“[P]airing licensed spectrum where possible will result in faster, more efficient deployment of 4G services.”); Comments of T-Mobile at 5 (“Pairing the spectrum allows mobile broadband providers to deploy and expand their next-generation services more quickly and efficiently.”); Comments of CEA at 20 (“Paired allocations will [] best facilitate the deployment of new wireless broadband services.”); Comments of Cellular South at 6 (“Wherever possible, licensed spectrum should be paired to allow for the fastest and most efficient deployment of mobile broadband services on the auctioned spectrum.”)

<sup>77</sup> Comments of MetroPCS at 21; *see* Comments of T-Mobile at 5-6 (“Absent a paired allocation, new and expanding entrants would need to spend considerable resources acquiring the downlink portion without any assurance that they could acquire the return-link spectrum in other bands. The resulting exposure risk would deter auction participation...”).

<sup>78</sup> Comments of T-Mobile at 5.

In sum, because the record clearly demonstrates that “paired spectrum is more valuable than unpaired or downlink-only spectrum,”<sup>79</sup> the Commission should allocate as much paired spectrum as possible. Accordingly, the Commission must reject AT&T’s proposal to limit the “degree of market-by-market variation in blocks of clear uplink spectrum,” which AT&T admits would lead to “less paired spectrum.”<sup>80</sup> Instead, USCC supports Verizon’s proposal to minimize potential co-channel cross-market interference issues. Specifically, Verizon proposes that, “to the extent broadcast operations in low-clearing markets will unavoidably compromise mobile spectrum in higher-clearing adjacent markets, the broadcasters should be located so they affect only supplemental downlink as opposed to paired spectrum.”<sup>81</sup>

In fact, USCC believes that the Commission’s goal should be to ensure that all paired spectrum be made available on a nationwide basis and that all such paired spectrum be free from broadcast interference in every market. This approach is necessary to ensure that a common band can be used in every market across the country. A lack of cleared paired spectrum utilizing a common band would greatly decrease the likelihood of interoperable devices being made available for these portions of the 600 MHz band, which could strand the investments of forward auction winners and prevent, or at least delay, service deployments using this spectrum. In addition, eliminating the risk of fragmentation and ensuring interoperability will maximize participation in the forward auction. This approach also avoids major interference concerns for uplink operations by precluding high-powered broadcast television operations on uplink spectrum in geographically overlapping service areas.

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<sup>79</sup> Comments of CTIA at 20.

<sup>80</sup> Comments of AT&T at 35. AT&T’s proposed band plan clearly demonstrates its substantial preference for unpaired spectrum. For instance, the most highly-cleared market in AT&T’s proposed band plan would have 70 MHz of downlink spectrum but only 25 MHz of uplink spectrum. *See id.* at 32, Figure 4. This approach obviously is in conflict with the record which, as noted, overwhelmingly supports a maximum amount of paired spectrum.

<sup>81</sup> Comments of Verizon at 7.

#### IV. THE COMMISSION SHOULD PROHIBIT TIME DIVISION DUPLEX OPERATIONS IN THE 600 MHz BAND

USCC joins other commenters<sup>82</sup> in urging the Commission to prohibit Time Division Duplex (“TDD”) operations in the 600 MHz band because the costs of allowing TDD technologies in this band would far outweigh any potential benefits.<sup>83</sup> The Commission has previously recognized that “[t]he presence of base *and* mobile transmissions in the same band ... creates the possibility for certain types of adjacent channel interference scenarios which are not present when base and mobile transmissions are situated in spectrum far apart from one another.”<sup>84</sup> For instance, base-to-base interference “occurs when transmissions from one base station cause interference to another station attempting to receive on an adjacent channel.”<sup>85</sup> But far more problematic is the potential for mobile-to-mobile interference, which is a systemic, recurring problem without an adequate remedy.<sup>86</sup> Although mitigating interference typically is accomplished through geographic and frequency separation, with mobile devices, a licensee has no way of ensuring geographic separation, and there would be no frequency separation if TDD mobile operations were permitted at the edge of a band adjacent to FDD operations.

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<sup>82</sup> See, e.g., Comments of AT&T at 19 (“The Commission should [] reject any proposal to permit Time Division Duplexing (‘TDD’) operations in the 600 MHz band.”); Comments of Qualcomm Incorporated at 15 (“Qualcomm is concerned about the technical feasibility of a band plan that would allow Time Division Duplex (‘TDD’) operations in this band.”)

<sup>83</sup> See NPRM, 27 FCC Rcd at 12423.

<sup>84</sup> *Service Rules for Advanced Wireless Services in the 2155-2175 MHz Band*, Notice of Proposed Rulemaking, WT Docket No. 07-195, FCC 07-164, ¶ 51 (2007) (emphasis in original); see *Service Rules for Advanced Wireless Services in the 1.7 GHz and 2.1 GHz Bands*, Report and Order, 18 FCC Rcd 25162, 25203 (2003) (“AWS-1 R&O”) (“We are concerned about the possibility that certain interference conditions could occur if base and mobile stations were permitted to operate in the same AWS bands.”).

<sup>85</sup> *AWS-1 R&O*, 18 FCC Rcd at 25203.

<sup>86</sup> See *id.*; Comments of Verizon at 17-18 (“Authorizing TDD would also create substantial technical issues including co-existence of TDD and FDD mobile devices.”).

The Commission has noted that the only sure way to address this potential for harmful interference is to “require the implementation of costly measures.”<sup>87</sup> For example, if the Commission permits TDD operations in the 600 MHz band, it “would likely have to impose tighter out-of-band (OOBE) limits and lower power levels, and possibly even require guard bands and interference zones.”<sup>88</sup> But the Commission has previously concluded that such measures would be, at best, suboptimal:

Stricter OOBE limits would require licensees to employ more expensive transmitting equipment; implementing interference zones would result in a loss of coverage within a licensee’s authorized area of operation; and guard bands would result in a waste of usable spectrum. The additional costs associated with equipment that provides stricter emission limits is certainly not a requirement we would want to impose on future licensees... And we do not believe that the potential loss of spectrum and coverage area that would result from the use of guard bands and interference zones are conditions we should necessarily accept in our efforts to manage the spectrum and provide wireless service to the public.<sup>89</sup>

Accordingly, permitting TDD operations in the 600 MHz band could violate the Spectrum Act’s restrictions relating to guard bands,<sup>90</sup> as well as conflict with the Commission’s separate statutory obligation “to prevent interference between stations...”<sup>91</sup> In addition, because such mixed use of the 600 MHz band could cause the spectrum to be undervalued at auction,<sup>92</sup> permitting TDD operations could violate the Commission’s obligation to recover “a portion of the value of the public spectrum resource made available for commercial use...”<sup>93</sup> Moreover, TDD operations in the 600 MHz band would be counter to the Commission’s “good neighbor”

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<sup>87</sup> *AWS-1 R&O*, 18 FCC Rcd at 25204.

<sup>88</sup> *Id.*

<sup>89</sup> *Id.*; see Comments of Verizon at 17 (“TDD operation on this (and any band) would require guard bands between the bands, reducing the amount of spectrum that could be auctioned to licensees for mobile broadband use.”).

<sup>90</sup> See Spectrum Act §6407(b) (“Such guard bands shall be no larger than is technically reasonable to prevent harmful interference between licensed services outside the guard bands.”).

<sup>91</sup> 47 U.S.C. §303(f).

<sup>92</sup> See Comments of Verizon at 18 (“[A]uction bidders will value the reclaimed spectrum the most if employed for FDD use.”).

<sup>93</sup> 47 U.S.C. §309(j)(3)(A).

policy, which emphasizes the need to “group technically compatible systems and devices in close spectrum proximity” because “incompatibility can require additional constraints in the form of guard bands, consuming valuable spectrum, or expensive filtering systems to avoid adjacent band interference.”<sup>94</sup> In sum, if the Commission were to permit TDD operations in the 600 MHz band, it would be grouping together incompatible uses, resulting in not only an increase in potentially harmful interference but also an inefficient use of spectrum.

## **V. THE COMMISSION SHOULD ADOPT A MIX OF SMALL GEOGRAPHIC LICENSE AREAS**

In its comments, USCC strongly urged the Commission to license the 600 MHz band using only small geographic service areas, such as Economic Areas (“EAs”) or Cellular Market Areas (“CMAs”), in order to promote competition and ensure the deployment of rural networks.<sup>95</sup> The record contains broad support for licensing the 600 MHz band on the basis of CMAs and/or EAs.<sup>96</sup> In contrast, only one commenter proposed license areas larger than EAs.<sup>97</sup>

USCC continues to believe that CMA-based licenses would best preserve opportunities for small and regional carriers, as well as new entrants, to provide an important source of competition.<sup>98</sup> As RTG noted, licensing the 600 MHz band on the basis of service areas larger than CMAs could shut rural carriers out of the forward auction because “EAs often include densely populated urban areas and typically cover larger geographical areas than the rural areas

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<sup>94</sup> Spectrum Policy Task Force, *Report*, ET Docket No. 02-135, p. 22 (Nov. 2002).

<sup>95</sup> See Comments of Cellular South at 7 (“In order to promote competition and the broadest possible deployment of mobile broadband services, the Commission must auction licenses that cover relatively small geographic areas.”).

<sup>96</sup> See Comments of Leap/Cricket at 4 (supporting the use of EAs but also urging the Commission to “consider smaller block sizes, such as MSAs and RSAs”); Comments of The Rural Telecommunications Group, Inc. (“RTG”) at 2 (supporting licensing on a CMA basis); Comments of CCA at 14-15 (“FCC should license the spectrum in geographic blocks no larger than EAs...”); Comments of Cellular South at 8 (supporting EA-based licensing); Comments of Verizon at 60 (supporting EA-based licensing); Comments of MetroPCS at 18 (supporting EA-based licensing).

<sup>97</sup> See Comments of T-Mobile at 15.

<sup>98</sup> See Comments of USCC at 11.

that rural carriers serve.”<sup>99</sup> In contrast, the opportunity afforded by CMA-based licenses for smaller carriers to participate in the auction would foster service to rural and other underserved areas, where these carriers often focus their deployment efforts.<sup>100</sup> At the same time, however, USCC agrees with MetroPCS that EAs would be affordable for most carriers because they “generally will not cover more than one major metropolitan area.”<sup>101</sup>

Under no circumstances should the Commission license any portion of the 600 MHz band on the basis of service areas larger than EAs. Only T-Mobile supports license areas larger than EAs (specifically, on the basis of Major Economic Areas), and USCC seriously questions T-Mobile’s claim that “[m]ost carriers today are interested in creating a large regional or nationwide service footprint...”<sup>102</sup> Rather, this approach would exclude most carriers because “large geographic areas would give significant and unwarranted advantages to the largest nationwide carriers at the expense of smaller carriers...”<sup>103</sup> Moreover, contrary to T-Mobile’s claim,<sup>104</sup> USCC and other commenters detailed why secondary market transactions are not viable options for parties interested in smaller license areas, and therefore cannot overcome the substantial disadvantages created by licensing spectrum in geographic areas larger than EAs.<sup>105</sup>

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<sup>99</sup> Comments of RTG at 2; *see* Comments of Leap/Cricket at 4 (“Smaller licenses give smaller carriers better opportunities to obtain financing for new projects, and enable a range of companies to participate in the auction and acquire ‘beachfront’ spectrum, which increases their incentive and ability to innovate.”).

<sup>100</sup> *See* Comments of RTG at 2 (“RTG supports licensing on a CMA basis because smaller license areas would create economic opportunities for small and rural carriers to deploy competitive wireless broadband service in rural areas...”).

<sup>101</sup> Comments of MetroPCS at 18.

<sup>102</sup> Comments of T-Mobile at 15-16.

<sup>103</sup> Comments of CCA at 14; *see* Comments of Leap/Cricket at 5 (“Leap urges the Commission not to adopt larger geographic license sizes, which historically have advantaged the largest carriers.”); Comments of Cellular South at 7 (“[C]ompetitive operators, Designated Entities, and virtually all other new entrants cannot realistically participate in the bidding for the largest geographic license areas.”).

<sup>104</sup> *See* Comments of T-Mobile at 17.

<sup>105</sup> *See* Comments of USCC at 15-17; Comments of RTG at 5 (“The redistribution of spectrum throughout geographic areas should not be contingent on large carriers entering into secondary market arrangements with small entities or giving up unused spectrum.”).

In contrast, small license areas allow for targeted spectrum acquisitions, and thus can accommodate a variety of business plans, both large and small.<sup>106</sup> Also in contrast to large license areas, small license areas would permit the Commission to license additional spectrum that is not encumbered by remaining broadcast operations.<sup>107</sup>

**VI. IF THE COMMISSION OFFERS GENERIC LICENSES IN THE FORWARD AUCTION, THEY MUST BE TRULY FUNGIBLE AND THE ASSIGNMENT PROCESS MUST BE ENTIRELY RANDOM**

If the Commission conducts the forward auction using generic licenses, USCC agrees with CTIA and others that it “must configure the 600 MHz band in a way that will make the 600 MHz spectrum blocks as similar and technically interchangeable as possible.”<sup>108</sup> In this way, the Commission could reduce the level of complexity by establishing only two classes of licenses for the forward auction – those for paired spectrum blocks and those for supplemental, downlink-only blocks. Any additional subdivisions, or “object classes,” would effectively defeat the only potential benefit of generic licenses – namely, speeding up the forward auction. At the same time, absent an interoperability requirement, various classes of generic licenses would make device interoperability less likely because they would afford national carriers opportunities to bid for licenses based on the unique band clearing characteristics of these subdivisions. In other words, by aggregating spectrum in this manner, national carriers would be uniquely positioned in the forward auction to assemble spectrum holdings as custom or boutique band classes. And

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<sup>106</sup> See Comments of Leap/Cricket at 4 (EAs can be used by carriers “effectively to deploy wireless services consistent with their business plans”); Comments of MetroPCS at 18 (“EAs will allow carriers to add needed capacity in select major metropolitan areas rather than forcing them to purchase licenses which cover large swaths of territory where additional capacity is unnecessary.”); Comments of RTG at 3 (“[S]maller license areas would [] result in greater auction and market efficiency because it would allow bidders to tailor their auction strategy and spectrum acquisitions to meet a wider variety of business plans.”).

<sup>107</sup> See NPRM, 27 FCC Rcd at 12411; Comments of USCC at pp. 12-13 & Attachment A; Comments of Verizon at 61 (“Using REAGs ... could limit the Commission’s flexibility to provide the most amount of spectrum in as many geographic areas as the repacking methodology will allow.”); Comments of RTG at 4.

<sup>108</sup> Comments of CTIA at 23; see Comments of Verizon at 44 (“For a generic bidding approach to succeed, [] the Commission must design the auction and the 600 MHz band plan service rules in a manner that ensures that licenses are sufficiently similar.”); Comments of T-Mobile at 19; Comments of AT&T at 41.

smaller bidders would be powerless to prevent this from happening because the national carriers would drive up the prices for the class or classes of generic licenses they believe have the greatest value such that others would be effectively excluded from bidding on these licenses.

USCC also strongly urges the Commission, if it utilizes generic licenses, to establish an entirely random assignment process for the specific licenses subsequently granted to winning bidders. Otherwise, absent an interoperability requirement, generic licenses would pose significant interoperability risks, which would severely disadvantage smaller carriers lacking the market power to drive the device ecosystem. As T-Mobile explained, a random assignment process “would encourage interoperability. Because no one carrier would hold all the spectrum on a particular frequency, no one carrier could create a custom-made or ‘boutique’ band class capable of operating only on its licensed frequencies after the close of the auction.”<sup>109</sup> In contrast, “[a]bsent precautions to preserve interoperability in the 600 MHz band, multiple boutique band classes may emerge that reduce the incentive for device manufacturers to develop handsets that are available to all licensees in the band.”<sup>110</sup>

Although T-Mobile also supports a “quasi-random” assignment process, under which efforts would be made to assign carriers the same frequencies across different geographic license areas,<sup>111</sup> this approach would not sufficiently protect smaller bidders. Even worse for smaller bidders would be the proposals by AT&T and Verizon that also would build in an assignment preference for contiguous spectrum blocks within the same license area.<sup>112</sup> As USCC detailed in its comments, because the large national carriers likely will bid aggressively in the forward

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<sup>109</sup> Comments of T-Mobile at 22; *see* Comments of Cellular South at 8 (urging the Commission “to ensure that the largest operators cannot create essentially exclusive wireless ecosystems by acquiring nationwide licenses utilizing only a few spectrum blocks.”).

<sup>110</sup> Comments of T-Mobile at 22.

<sup>111</sup> *See id.* at 21-22.

<sup>112</sup> *See* Comments of AT&T at 58-61; Comments of Verizon at 45-47.

auction, and because these carriers would be both more likely to have multiple blocks in the same market and licenses in adjacent markets, an assignment procedure that is not truly random could lead to one or more pass bands being occupied primarily, or even exclusively, by the national carriers. This could force all other 600 MHz licensees into one or more pass bands largely devoid of national carriers and their ability to drive the device ecosystem. Amazingly, Verizon appears to favor this exact outcome, proposing that “‘solo’ blocks [] be assigned to particular portions of the 600 MHz band (*e.g.*, placing winners of contiguous blocks in the lower part of the applicable bands and solo blocks in the higher part, or vice-versa).”<sup>113</sup> Even if the assignment process used only AT&T’s “threshold complementarities,”<sup>114</sup> the effect would be the same because national carriers still could end up dominating a single pass band, and thus excluding all other carriers from that pass band, which would greatly reduce the likelihood that these smaller carriers would have access to interoperable devices.

Finally, under no circumstances should the Commission establish an assignment process that involves additional bids. This approach would seriously disadvantage smaller bidders, who could not outbid a large carrier focused on acquiring particular frequencies in a market. As a result, much of the spectrum purchased by smaller carriers could end up being assigned to pass bands devoid of the largest carriers. Because only the largest carriers have the scale to meaningfully drive device development, this situation would create significant interoperability risks. An additional round of bidding also could decrease forward auction revenue. As T-Mobile explained, “[f]orward auction bidders that face not one, but *two*, separate forward auctions – one for acquisition and another for assignment – will reduce their initial acquisition

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<sup>113</sup> Comments of Verizon at 46.

<sup>114</sup> See Comments of AT&T at 58 (addressing “the complementarities that providers can derive from winning rights ... to two or more blocks *somewhere* in the same object class of 600 MHz spectrum within a given EA (whether those blocks are adjacent or not).”) (emphasis in original).

auction prices based on the level of bids and bidding activity anticipated in the assignment auction.”<sup>115</sup> In turn, by depressing bidding in the forward auction, an assignment process using additional bidding would make it more difficult to maximize the amount of spectrum reclaimed by broadcasters and/or risk a failure to meet the closing conditions.<sup>116</sup>

## **VII. THE COMMISSION SHOULD ADOPT AN AUCTION-SPECIFIC SPECTRUM AGGREGATION LIMIT**

In its comments, USCC supported the Commission’s proposal to adopt an open eligibility standard for the 600 MHz band, but also strongly endorsed a 25 percent limit on the percentage of 600 MHz spectrum any one applicant or affiliated applicants may acquire in a single market in the forward auction.<sup>117</sup> USCC discussed the Commission’s previous *laissez faire* approach to acquisition of “greenfield” spectrum in wireless auctions and its negative consequences for the public interest. USCC drew attention to Auction 73 in 2008, which auctioned Lower 700 MHz licenses. Its dominance by AT&T and Verizon resulted in a lack of interoperability among Lower 700 MHz band handsets in separate band classes and the “stranding” of 700 MHz A Block licenses. Though USCC recognized the complexity of the Commission’s task in developing a workable 600 MHz plan due to uncertainty about what spectrum will be available in each market, USCC nonetheless urged the Commission to avoid an auction result similar to

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<sup>115</sup> Comments of T-Mobile at 22 (emphasis in original). Notably, even the two largest carriers would prefer an assignment process that does not include additional bidding. *See* Comments of AT&T at 42; Comments of Verizon at 46.

<sup>116</sup> *See* Comments of T-Mobile at 23 (“[T]he reduced acquisition auction revenue also risks thwarting the important public policy goal of clearing the maximum amount of encumbered spectrum for next-generation broadband use.”).

<sup>117</sup> *See* Comments of USCC at 30-34. USCC does not mean to imply that establishing such a limit will be easy given the enormous variations in the proposed band plans now before the Commission. As a general matter, however, establishing meaningful limits on spectrum aggregation in the forward auction will be facilitated by band plans in which paired spectrum predominates. Paired spectrum can be more easily subdivided than unpaired spectrum, an additional reason for the Commission to adopt the proposal of USCC and others to maximize the amount of paired 600 MHz band spectrum.

that in Auction 73 by imposing reasonable limits on spectrum aggregation in the forward auction, noting the great importance of access to this spectrum by Tier II and III carriers.

Limits on spectrum aggregation received strong support by other commenters. Sprint, for example, argues that, if the Commission “fails to adopt spectrum aggregation rules regarding concentration of low-band spectrum in the context of its Mobile Spectrum holdings proceeding, it is *critically important* that the Commission adopt eligibility restrictions in the 600 MHz forward auction.”<sup>118</sup> Sprint notes that such limitations would be especially important if, as now appears likely, the Commission adopts an FDD band plan, in which less bidirectional spectrum will be available than if a TDD band plan were adopted. If an FDD band plan is adopted, Sprint recommends that the Commission prohibit any operator already holding more than one third of available spectrum below 1 GHz from acquiring more than one-sixth of available 600 MHz spectrum.<sup>119</sup> Sprint also recommends a variety of alternative approaches designed to prevent excessive spectrum concentration.<sup>120</sup>

T-Mobile’s comments reflect similar concerns. It would prohibit any party from acquiring in the forward auction more than one-third of the commercial mobile spectrum below 1 GHz available in a single market.<sup>121</sup> T-Mobile also stresses the unique value of the 600 MHz spectrum and the strong support for Commission action placing limits on spectrum aggregation found in both the Communications Act and the Spectrum Act.<sup>122</sup>

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<sup>118</sup> Comments of Sprint Nextel at 8 (emphasis added).

<sup>119</sup> *See id.* at 9.

<sup>120</sup> *See id.* at 9-10. USCC notes that it has not endorsed a strict limit on the aggregation of “under 1 GHz” spectrum. USCC supports the Commission ensuring access to critical spectrum, such as the 600 MHz band, by small and mid-sized carriers at the time such spectrum is auctioned. After auctions, USCC believes that the secondary market should operate freely, subject to individualized determinations by the Commission and the Department of Justice regarding whether a specific assignment or transfer would be anti-competitive.

<sup>121</sup> *See* Comments of T-Mobile at 27.

<sup>122</sup> *See id.* at 28-29.

T-Mobile concludes by emphasizing the critical importance of Commission action *in advance* of the incentive auction. Establishing spectrum limits before the auction will deter applicants from acquiring more spectrum than they can use, thus preventing small and mid-sized competitors from acquiring the spectrum they need to compete. Also, allowing post-auction divestitures would enable the largest carriers to choose among the competitors to which to divest their spectrum, which may have the effect of harming competition.<sup>123</sup> USCC adds that such divestitures can sometimes result years later in the ultimate reacquisition of the divested spectrum by the largest carriers.<sup>124</sup>

Leap/Cricket and Cellular South would solve the spectrum aggregation problem another way. They suggest applying a newly-configured spectrum screen to the incentive auction, which would incorporate limits on aggregation of spectrum under 1 GHz.<sup>125</sup> USCC shares their concerns, but, as noted, believes that a universally applicable rule concerning 1 GHz spectrum aggregation, also applying to secondary market transactions, may sweep too broadly. However, USCC agrees that limits should be applied here. Access to this spectrum is what is crucial to smaller and mid-sized carriers, so that is where the Commission's focus should be.

AT&T and Verizon, however, oppose any attempt to impose *ex ante* limits on spectrum aggregation.<sup>126</sup> Verizon stresses the importance of open eligibility for this spectrum, a position with which USCC agrees. However, Verizon also opposes any restrictions on spectrum acquisition in the forward auction, arguing that such limitations would not serve the statutory goals of promoting competition and “disseminating licenses among a wide variety of

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<sup>123</sup> See *id.* at 30-31.

<sup>124</sup> See *AT&T Inc. and Atlantic Tele-Network, Inc. Seek FCC Consent to the Transfer of Control and Assignment of Licenses, Spectrum Leasing Authorizations, and an International 214 Authorization*, Public Notice, DA 13-352 (Mar. 5, 2013).

<sup>125</sup> See Comments of Leap/Cricket at 7-8; Comments of Cellular South at 5-6.

<sup>126</sup> See Comments of Verizon at 38-43; Comments of AT&T at 79-80.

applicants.”<sup>127</sup> In support of that position, Verizon cites the widespread availability of competitive wireless service to most Americans, the alleged need to allow spectrum to be allocated to those who “value” it most, potential losses to the U.S. Treasury from “suppressed” demand at auction, and the facilitation of “arbitrage” by allowing bidders to buy licenses at “below market” prices.<sup>128</sup> Both AT&T and Verizon argue that any limits on spectrum acquisition should only be applied after the auction, and that auction winners should be allowed to choose what spectrum to divest.<sup>129</sup>

All of those arguments, however, fail to deal with the most important issue – namely, the great importance to the future of competition in the wireless industry of allowing all auction participants to have a fair chance to access 600 MHz spectrum. Neither AT&T nor Verizon mentions the outcome of Auction 73, with good reason, since it reveals their highly abstract arguments’ lack of connection to the real world. Given their resources, AT&T and Verizon would certainly dominate the 600 MHz auction, just as they dominated the last 700 MHz auction, unless the rules establish reasonable limits on their ability to do so. USCC does not ask for a ban on their ability to participate, but only a reasonable limit on how much spectrum one carrier may acquire. USCC’s proposal would still allow Verizon and AT&T collectively to hold *50 percent* of available 600 MHz spectrum in a given market. That is not too much to ask.<sup>130</sup>

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<sup>127</sup> Comments of Verizon at 39-40

<sup>128</sup> *See id.* at 39-42.

<sup>129</sup> *See* Comments of AT&T at 79-80; Comments of Verizon at 43.

<sup>130</sup> USCC notes that the Commission’s Canadian counterpart agency, Industry Canada, has imposed a comparable spectrum limitation in its upcoming November 2013 700 MHz auction. Specifically, Industry Canada has placed an upper limit of two paired spectrum blocks amounting to 24 MHz of an available 56 MHz on all auction participants in each of the 14 market areas. However, “large wireless carriers,” defined as those companies with either 10 percent or more of the national market or 20 percent or more of the relevant provincial market, will be limited to one paired spectrum block per market area, amounting to 12 MHz of an available 44 MHz. The latter limitation especially is quite close to what USCC has proposed for the incentive auction. *See*, Industry Canada, *Licensing Band Framework for Mobile Broadband Services (MBS) – 700 MHz Band*, Gazette Notice DGSA-001-13 (March 2013) (available at [www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10591.html](http://www.ic.gc.ca/eic/site/smt-gst.nsf/eng/sf10591.html)).

## VIII. THE COMMISSION SHOULD NOT IMPOSE ADDITIONAL LICENSE RENEWAL STANDARDS

In its Comments, USCC strongly opposed the Commission's proposal to apply here the "renewal paradigm" proposed in the *WRS Renewals NPRM and Order*.<sup>131</sup> USCC argued that the renewal standards proposed in that proceeding are profoundly ill-advised and contrary to the public interest. By separating renewal requirements from build-out standards and by imposing additional and subjectively-evaluated renewal requirements not found in the Commission's rules, the proposed standards would generate enormous and unnecessary paperwork burdens for affected licensees. They would also create investment-killing uncertainty concerning the security of all wireless licenses, including 600 MHz licenses, as there would be no reasonable expectation that a license would be renewed even if a licensee had met all applicable build-out requirements, however onerous, and had otherwise complied with all Commission rules. USCC also noted that the Commission still has not acted on the *WRS Renewals NRPM* after two and a half years, which indicates substantial problems with its recommended rules.

Perhaps reflecting the fact that 600 MHz renewal applications likely will not be filed for 10-15 years, not many comments focused on license renewal issues. Verizon endorsed a "substantial service" renewal standard and a "renewal expectancy," as was adopted in the *700 MHz First Report and Order*.<sup>132</sup> USCC agrees with that proposal, and notes that the approach taken by the Commission in the *700 MHz First Report and Order* is not similar to the onerous requirements proposed in the *WRS Renewals NPRM*. Specifically, in the *700 MHz First Report and Order*, the Commission simply listed a "variety of factors" encompassed by the substantial

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<sup>131</sup> See Comments of USCC at 37-38.

<sup>132</sup> See Comments of Verizon at 67; see also *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Report and Order and Further Notice of Proposed Rulemaking, 22 FCC Rcd 8064, 8093-99 (2007) ("*700 MHz First Report and Order*").

service determination in the renewal context.<sup>133</sup> In contrast, in the *WRS Renewals NPRM*, the Commission proposed a detailed and onerous “renewal showing” that would require the filing of a “detailed description of the applicant’s provision of service during the entire license period and address” various other factors that would be subjectively judged by the Commission to determine a licensee’s level of service to the public.<sup>134</sup> As such, the *700 MHz First Report and Order* does not, in fact, “form the basis of the renewal paradigm proposed in the *WRS Renewal NPRM and Order*.”<sup>135</sup> In fact, the renewal proposals in the *700 MHz First Report and Order* are quite different and far more reasonable than those contained in the *WRS Renewals NPRM and Order*. USCC therefore agrees with Verizon and urges the Commission to adhere to the principles set forth in the *700 MHz First Report and Order* and reject the application of the unworkable proposals now before the Commission in the WRS proceeding.

#### **IX. THE COMMISSION SHOULD NOT IMPOSE UNDULY STRINGENT BUILD-OUT REQUIREMENTS OR DRACONIAN PENALTIES**

In its comments, USCC detailed why the Commission’s well-established “substantial service” standard, rather than inflexible construction benchmarks, sufficiently ensure adequate spectrum utilization and rapid deployment of new wireless services.<sup>136</sup> Even absent Commission-imposed performance requirements, economic realities already provide carriers every incentive to deploy networks as soon as practicable, and a substantial disincentive to warehouse spectrum for any considerable period of time.<sup>137</sup> As MetroPCS noted, the substantial

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<sup>133</sup> See *700 MHz First Report and Order*, 22 FCC Rcd at 8093 (“[I]ncluding the level and quality of service, whether service was ever interrupted or discontinued, whether service has been provided to rural areas, and any other factors associated with a licensee’s level of service to the public.”) (internal citation omitted).

<sup>134</sup> See *WRS Renewals NPRM and Order*, 25 FCC Rcd 6996, 7043-44 (2010) (setting forth proposed rule 47 C.F.R. §1.949(c)).

<sup>135</sup> NPRM, 27 FCC Rcd at 12492.

<sup>136</sup> See Comments of USCC at 38.

<sup>137</sup> See *id.* at 39-40.

sums spent by licensees to acquire spectrum at auction provide “a strong natural incentive to turn those bare licenses into operating wireless businesses.”<sup>138</sup> In contrast, “artificial buildout requirements [] force a licensee to make decisions based on a government-mandated, one-size-fits-all construction requirement, rather than based on the needs of the particular market that they are serving.”<sup>139</sup> The result is to discourage new investment, limit service to the public, force suboptimal network deployments, and diminish auction participation and revenues.

USCC also detailed how uniform construction timetables and benchmarks, particularly if they are unnecessarily stringent, weigh most heavily on new entrants and on small and regional carriers seeking to expand their existing footprints.<sup>140</sup> MetroPCS likewise noted that “[i]ncumbents are in a preferred position since constructing an additional channel at existing sites is generally much easier and less costly than constructing completely new sites.”<sup>141</sup> Inflexible build-out requirements also favor large carriers because they “are able to spread the diseconomic construction cost over a greater number of subscribers than smaller carriers or new entrants.”<sup>142</sup> As a result, stringent, uniform construction benchmarks likely would further decrease competition to the already dominant national carriers and materially diminish investment and innovation to the detriment of the very public these obligations are meant to assist.

If, despite the harms caused by inflexible build-out requirements, the Commission nevertheless decides to prescribe uniform construction obligations, USCC again supports the Commission’s proposal to measure build-out progress according to percentage of population

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<sup>138</sup> Comments of MetroPCS at 22.

<sup>139</sup> *Id.*

<sup>140</sup> *See* Comments of USCC at 42-44.

<sup>141</sup> Comments of MetroPCS at 23.

<sup>142</sup> *Id.*

served within a license area, and continues to strongly oppose the use of geography-based build-out requirements.<sup>143</sup> Such an approach would be consistent “with the Commission’s long-standing policy of utilizing population-based construction benchmarks.”<sup>144</sup> This approach also would better serve the public interest. For instance, like USCC, Verizon noted that “[w]ireless providers offer services for the benefit of consumers, making alternative build-out requirements, such as coverage of land mass, a poor measure of the public benefit.”<sup>145</sup> In contrast, “[a] population-based build-out requirement will ensure that licensees provide wireless broadband services where consumers actually will use them and need them.”<sup>146</sup>

Geography-based build-out requirements also ignore the stark disparities in population densities across the country, which can force carriers to build systems where no population exists, and thereby divert limited capital away from areas that would better serve the public interest.<sup>147</sup> Geographic benchmarks also fail to account for differences in terrain. As MetroPCS explained, “the time and resources required to serve a fixed geographic area in the Rocky Mountains is substantially different from the time and resources required to serve that same fixed area in the plains of Nebraska.”<sup>148</sup> As such, geography-based performance requirements could have the unintended consequence of discouraging applicants from acquiring licenses in harder to serve areas, or cause viable bidders to avoid the auction altogether. Construction of new networks also is subject to a number of uncertainties beyond a licensee’s control (*e.g.*, local zoning issues) that may make it impossible to meet geographic build-out requirements. A

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<sup>143</sup> See Comments of USCC at 44.

<sup>144</sup> Comments of Verizon at 66.

<sup>145</sup> *Id.*

<sup>146</sup> *Id.*; see Comments of MetroPCS at 24 (“A POPs-based buildout requirement is a far more accurate measure of useful coverage in a market, as opposed to an arbitrary geographic percentage determined by regulatory fiat.”).

<sup>147</sup> See Comments of USCC at 45.

<sup>148</sup> Comments of MetroPCS at 24.

geographic build-out requirement therefore could cause carriers to lose licenses in areas where they have every intention and desire to build, and also would discriminate against carriers entering a market for the first time.

With regard to specific population-based benchmarks, if the Commission believes that they are necessary, it must ensure that these requirements are not overly stringent, but rather strike an appropriate balance between incentivizing deployment and affording licensees the flexibility necessary to put spectrum to its highest and best use. In its comments, USCC urged the Commission to avoid imposing an interim build-out requirement, as it has done in the past.<sup>149</sup> Similarly, MetroPCS noted that “interim construction benchmarks ... are unnecessary and are counter-productive.”<sup>150</sup> If the Commission nevertheless seeks to establish an interim benchmark, USCC proposes that it be no stricter than 35 percent population coverage within 5 years. As USCC detailed in its comments, this approach would help to counter some of the inherent harms of interim benchmarks, particularly for small and regional carriers, while still sufficiently incentivizing prompt construction.<sup>151</sup> With regard to a final construction benchmark, USCC continues to propose that the Commission require coverage of two-thirds of the population in a license area by the end of the expected ten-year 600 MHz band license term, which would mirror the Commission’s approach with respect to broadband PCS licensees.<sup>152</sup>

USCC also continues to believe that any build-out requirements should not begin to run until the repurposed 600 MHz band spectrum has been cleared of all broadcast operations. No matter how smoothly the repacking process goes, it is likely that the 600 MHz band will not be free from broadcast interference for at least two years following the auctions, and quite possibly

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<sup>149</sup> See Comments of USCC at 47.

<sup>150</sup> Comments of MetroPCS at 22.

<sup>151</sup> See Comments of USCC at 47-49.

<sup>152</sup> See *id.* at 49.

much longer. The result would be that the true timeframe for meeting any construction milestones would be reduced by this potentially substantial amount of time, which likely would provide insufficient time for licensees to meet the various deployment challenges. For instance, infrastructure equipment and handsets for this new spectrum allocation will not be immediately available to even the largest licensees. In addition, space on existing towers is becoming increasingly scarce, and the ability to build new towers is becoming increasingly difficult due to zoning, environmental, and aesthetics concerns. Verizon also noted that delaying the start of any performance requirements would “provide mobile broadband providers with added certainty that they will have prompt access to unencumbered frequencies, thereby enhancing the value of the spectrum to forward auction participants.”<sup>153</sup> Finally, this approach would be consistent with the Commission’s performance requirement rules for the AWS and 700 MHz bands.<sup>154</sup>

With respect to a failure to meet a construction benchmark, USCC again proposes that a failure to meet the interim benchmark should accelerate the final build-out requirement by only one year, which would disadvantage smaller carriers to a lesser extent than a harsher penalty. With respect to a failure to meet the final build-out requirement, USCC urges the Commission to adopt a “keep-what-you-use” penalty. This approach would provide a sufficient incentive for 600 MHz licensees to meet their performance requirements, but would not risk leaving consumers without services that they may have been relying on for years. It also would treat 600 MHz licensees consistently with wireless operators in other commercial mobile bands.<sup>155</sup>

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<sup>153</sup> Comments of Verizon at 68.

<sup>154</sup> See Comments of CTIA at 39 (“Consistent with the Commission’s past actions with AWS and 700 MHz spectrum, the Commission should develop its buildout deadlines based on the actual date the television repacking is completed and these bands are cleared.”) (internal citations omitted); Comments of Nokia Siemens at 21 (“As was the case with AWS and 700 MHz spectrum, the build out deadlines should be based on the actual date the licenses are cleared.”).

<sup>155</sup> See, e.g., 47 C.F.R. §§22.947, 22.949, 27.14(h)(1)-(2).

The established “keep-what-you-use” approach would be far more reasonable than a novel, and potentially harmful, “use-it-or-share-it” penalty, which could interfere with a licensee’s ability to continue building out its network. For instance, in voicing its opposition to this approach, CTIA explained that, because a licensee must engage in extensive construction and testing prior to launching service, “[r]equiring the licensee to share its spectrum with other uses while in the process of expanding into new geographic areas would undermine or delay the provision of service in these areas.”<sup>156</sup> Moreover, “[b]y permitting unlicensed access to exclusively licensed spectrum, the Commission would be creating substantial uncertainty for the licensee as to whether it would be able to clear the band when needed.”<sup>157</sup> Verizon also noted that such an approach would be difficult to administer because, while “[t]he Commission has substantial experience with reclaiming unused spectrum for re-auction,” it has “little experience judging whether a licensee has entered into ‘good faith negotiations with third parties expressing an interest’ in either leasing or using unused spectrum.”<sup>158</sup> Another drawback noted by Verizon is that, absent sufficient incentive for the spectrum sharer “actually to build-out the spectrum, the rules do not address the heart of the problem: the spectrum has not been put to use.”<sup>159</sup>

Finally, under no circumstances should the Commission adopt a draconian penalty such as automatic license termination for failure to meet the final construction benchmark. This penalty would be excessively punitive, and could unnecessarily harm both licensees and the public. Particularly for small and regional carriers, network deployment is a massive financial and logistical undertaking which involves numerous variables – *e.g.*, equipment delays and tower

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<sup>156</sup> Comments of CTIA at 40.

<sup>157</sup> *Id.*; *see id.* (“The result would be a substantially hindered or delayed deployment of service to consumers, an outcome that plainly contravenes the public interest.”).

<sup>158</sup> Comments of Verizon at 67.

<sup>159</sup> *Id.*

siting issues – that can unexpectedly derail even the most well-intentioned construction plans. A licensee could spend considerable resources constructing a network and providing service to tens of thousands of customers and still fail to meet the final build-out requirement, which would strand its good faith investments and cause its customers to suddenly lose service. The excessive risk created by such a penalty likely also would depress auction participation and auction revenues because the value of each license would decrease and because potential bidders would find it far more difficult, or at least far more costly, to obtain the necessary financing. An automatic license termination penalty, therefore, could reduce the incentive auction’s potential to increase investment and competition in the mobile broadband marketplace, and could make it more difficult for the forward auction proceeds to meet the Spectrum Act’s closing conditions.

**X. THE COMMISSION SHOULD NOT ALLOW COMBINATORIAL BIDDING FOR ANY 600 MHz LICENSES IN THE FORWARD AUCTION**

In its comments, USCC expressed its strong opposition to any use of combinatorial, or package, bidding in this extremely high stakes auction because of the bias, complexity, and minimal real world experience related to package bidding.<sup>160</sup> The divide amongst those carriers who commented on this issue is very telling. Specifically, every carrier who supports package bidding – *i.e.*, Verizon, AT&T and T-Mobile – has a nationwide service footprint. But this divide should not come as a surprise considering that “combinatorial bidding procedures would create significant and unwarranted biases in favor of the largest bidders.”<sup>161</sup> The obvious

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<sup>160</sup> See Comments of USCC at 51-57.

<sup>161</sup> Comments of Leap/Cricket at 9; see Comments of MetroPCS at 13 (“[C]ombinatorial bidding substantially benefits the largest carriers over smaller competitive carriers and allows them to skew outcomes with superior purchasing power.”); Comments of RTG at 9 (“[P]ackage bidding would be helpful only to nationwide carriers seeking broad swaths of spectrum and decidedly unhelpful to small carriers.”); Comments of CCA at 18 (package bidding “can bias the auction in favor of larger carriers with greater resources.”).

outgrowth of this bias is that package bidding “would harm small, rural, and competitive carriers and prospective new entrants.”<sup>162</sup>

For instance, MetroPCS noted that, “[g]iven the real-time complexity that the forward auction already presents to bidders, combinatorial bidding would add an unnecessary layer of complexity whose benefits are outweighed by the costs.”<sup>163</sup> This added complexity would particularly disadvantage smaller bidders, who lack the resources to hire game theorists.<sup>164</sup> Package bidding also would increase the likelihood that large bidders will tie-up multiple licenses in nationwide or super-regional package bids, and thereby exclude smaller carriers with targeted business plans from acquiring the spectrum necessary to serve rural areas.<sup>165</sup> Further, package bidding “may allow larger bidders to acquire certain licenses at a discount.”<sup>166</sup> This outcome is possible because, even if a smaller bidder assigns a higher value to a particular license, “this higher valuation by the smaller carrier can be completely undercut by a national carrier that is able to include that piece as part of a much larger package bid that includes urban areas.”<sup>167</sup> In such a case, package bidding would be “inconsistent with Section 309(j) of the Act which prohibits unjust enrichment through competitive bidding...”<sup>168</sup> The Commission therefore must reject package bidding in order to ensure that “bidders who value particular blocks of

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<sup>162</sup> Comments of MetroPCS at 14; *see* Comments of RTG at 9 (“[P]ackage bidding ... would fundamentally disadvantage small and mid-sized companies...”).

<sup>163</sup> Comments of MetroPCS at 13.

<sup>164</sup> *See* Comments of CCA at 18 (“[P]ackage bidding can add significant complexity to the bidding process, which can bias the auction in favor of larger carriers with greater resources.”).

<sup>165</sup> *See* Comments of MetroPCS at 14 (“[C]ombinatorial bidding allows large incumbent licensees to acquire spectrum at the expense of new entrants who may have a more targeted approach to a specific geographic area.”).

<sup>166</sup> *Id.* at 13; *see* Comments of Leap/Cricket at 9 (“[P]ackage bidding may enable a large carrier to obtain valuable licenses at a significant discount from the actual prices at which it values the individual licenses.”).

<sup>167</sup> Comments of RTG at 9; *see* Comments of CCA at 18 (“Combinatorial bidding tends to create opportunities for the largest carriers to ‘game’ the system to acquire highly desirable licenses at a discount by packaging them with the most valuable licenses, thereby shielding from other bidders the true value that they ascribe to the licenses.”).

<sup>168</sup> Comments of RTG at 9.

spectrum [] have the opportunity to acquire that spectrum, rather than be squeezed out by the largest carriers who seek to acquire a bundle of licenses.”<sup>169</sup>

USCC also notes that the package bidding proposals put forth by AT&T and Verizon, which would require that every package of licenses be of at least a certain size,<sup>170</sup> would make it even more difficult for the aggregated bids of smaller carriers to exceed a national carrier’s bid for one of these large packages, which would invariably include one or more densely-populated metropolitan areas. Because small and regional carriers typically focus on smaller and rural markets, they likely will not be bidding on licenses for large urban markets. Without bids by small and regional carriers for the most valuable licenses contained within a package, it would be nearly impossible for the aggregated total of these bids to exceed the package bid of a national carrier. This is particularly so because the only likely bidders for urban markets would be the few national carriers who support package bidding. In other words, the aggregated total of all bids for individual licenses contained within a package likely would not even include the most valuable license(s) in that package, making it highly improbable, if not impossible, that the total bids for individual licenses would exceed the package bids of the national carriers.

Given these harms imposed upon on all but the national carriers by package bidding, USCC seriously doubts the validity of AT&T’s claim that its proposal “will create no advantage for package bidders vis-à-vis bidders for individual EAs.”<sup>171</sup> Similarly unpersuasive is the claim by national carriers that package bidding would “increase forward-auction participation and thus

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<sup>169</sup> Comments of CCA at 18.

<sup>170</sup> See Comments of Verizon at 49 (proposing that a package would have to include all EAs on an REAG- or nationwide-basis); Comments of AT&T at 55 (proposing that a package would have to include all EAs on an MEA-, REA- or nationwide-basis).

<sup>171</sup> Comments of AT&T at 54.

the odds of meeting the closing conditions for any given target level of spectrum clearing...”<sup>172</sup> Instead, package bidding would decrease auction participation by everyone but the largest carriers. It is a well-settled economic principle that decreased participation leads to lower auction revenues. In addition, as noted, package bidding could allow the national carriers to acquire licenses for smaller markets at a discount, while likely paying approximately the same amount for the large market licenses as they would have if they were competing for these individual licenses only amongst one another. Accordingly, contrary to the claims of the national carriers, package bidding would in fact decrease the odds of meeting the closing conditions. Finally, USCC again notes that package bidding is unnecessary because adequate spectrum aggregation opportunities are available to large carriers under the Commission’s standard auction procedures or through the secondary market.<sup>173</sup> Accordingly, there is no reason to subject smaller bidders to the bias and strategic burdens caused by package bidding.

## **XI. THE COMMISSION SHOULD REJECT THE USE OF BLIND BIDDING**

If the Commission is seeking a robust auction that will truly allow the spectrum to be sold at its highest value, it is imperative to hold a transparent auction where all bidders have knowledge of other bidders, their bid amounts and their eligibility. USCC therefore joins other commenters in urging the Commission not to “employ blind bidding procedures in the incentive auction.”<sup>174</sup> Not only would this approach be consistent with the Commission’s past practice in

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<sup>172</sup> *Id.* at 51-52; *see* Comments of Verizon at 50; Comments of T-Mobile at 20.

<sup>173</sup> *See* NPRM, 27 FCC Rcd at 12411 (“[L]icensees may aggregate or otherwise adjust their geographic coverage through auction or through secondary markets.”).

<sup>174</sup> Comments of CCA at 18; *see* Comments of MetroPCS at 10 (“[T]he Commission should conduct an open, as opposed to blind, auction, which will improve the flow of information among all bidders and improve the prospects for success of the competitive carriers that were shut out of Auction 73.”); Comments of Leap/Cricket at 8 (“It is critical that potential bidders (and financing sources) be able to access as much information regarding licenses as possible, including information about competing bidders and their valuation of spectrum.”).

most spectrum auctions,<sup>175</sup> but it would promote the well-known benefits of a transparent auction process. For instance, the Commission has noted that “publicly disclosing the identity of other bidders may encourage vigorous bidding for licenses.”<sup>176</sup> Increased bidding leads to greater auction revenue, which is particularly important here to ensure sufficient funds to both incentivize a substantial number of broadcasters to participate in the reverse auction and to ensure that the forward auction meets the Spectrum Act’s closing conditions.

In addition, as noted by MetroPCS, “[a]uctions are intended to establish a spectrum allocation process that will deliver licenses to those that value them most because they are in a position to put the licenses to the highest and best use.”<sup>177</sup> This outcome is only possible, however, “if bidders have sufficient information about the market being entered to make an intelligent valuation decision.”<sup>178</sup> For instance, bidder valuations depend at least in part on who else wins licenses and how many bidders win licenses in a market, as well as how much

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<sup>175</sup> See *Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments and Other Procedures for Auction No. 66*, Public Notice, 21 FCC Rcd 4562, 4602 (2006) (“*Auction 66 April Notice*”) (“With a single early exception, the Commission has elected not to limit such information.”); *Auction of Advanced Wireless Services Licenses Scheduled for June 29, 2006; Comment Sought on Reserve Prices or Minimum Opening Bids and Other Procedures*, Public Notice, 21 FCC Rcd 794, 799 (2006) (“*Auction 66 January Notice*”) (“With certain exceptions, the Bureau has generally opted to make bidders’ license selections public at the conclusion of the application process, as well as to release the identities of all bidders and their bid amounts at the conclusion of each round during the auction.”).

<sup>176</sup> *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Second Memorandum Opinion and Order, 9 FCC Rcd 7245, 7252 (1994) (“*Competitive Bidding 2nd MO&O*”); see *Auction 66 January Notice*, 21 FCC Rcd at 799 (“[B]idders may bid more confidently if they know the bids of their potential competitors.”); *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, Second Report and Order, 9 FCC Rcd 2348, 2375 (1994) (“Maximizing the information available to bidders minimizes bidder uncertainty and thus may increase bids by alleviating the winner’s curse.”).

<sup>177</sup> Comments of MetroPCS at 11.

<sup>178</sup> *Id.*; see *Competitive Bidding 2nd MO&O*, 9 FCC Rcd at 7252 (“Revealing bidder identities may facilitate awarding licenses to those who value them most highly by providing more information to bidders. More accurate valuation of licenses by bidders can thus improve the efficiency of license assignments.”); *Auction 66 April Notice*, 21 FCC Rcd at 4603 (“[T]he information that has typically been provided during FCC auctions may be of value in helping bidders to form more accurate and confident assessments of license values, thus allowing them to participate more effectively in the auction.”).

spectrum each bidder has.<sup>179</sup> License valuations also depend on certain technical considerations that require sufficient information on the identities of likely other licensees. This is especially true for small and regional carriers. Because these “carriers rely on roaming arrangements and device ecosystems largely controlled by larger competitors, they have a particular need to evaluate the bids of such competitors, including bids in adjacent markets, to accurately assess the value of particular licenses.”<sup>180</sup> If the Commission withholds the identities of other bidders, smaller carriers would not know whether they would have sufficient opportunities to enter into roaming arrangements or to acquire interoperable devices. Because these opportunities are essential for a smaller carrier’s network to be economically viable, a lack of such information would create substantial risks for these bidders, likely reducing or eliminating their participation in the forward auction.

A transparent auction process is particularly important for small and regional carriers for other reasons as well. For instance, CCA explained how “[t]he process of valuing spectrum is extremely complex and challenging, all the more so here because of the uncertainty about what spectrum will be available in the forward auction.”<sup>181</sup> In this way, smaller bidders face additional risks from the use of blind bidding because they lack the more sophisticated market

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<sup>179</sup> See *Competitive Bidding 2nd MO&O*, 9 FCC Rcd at 7252 (“Bidders’ valuations of licenses may also be highly dependent on knowing the identity of neighboring carriers, especially regional leaders and competitors...”); Comments of MetroPCS at 11 (“Perhaps the most important market information is knowing who the competitors are, what spectrum they are acquiring, and how much spectrum they have.”).

<sup>180</sup> Comments of Leap/Cricket at 8; see Comments of CCA at 18 (“[B]ecause of the importance of obtaining roaming arrangements and access to interoperable devices, it is critical that smaller carriers have an opportunity to learn how the largest carriers value spectrum in adjacent markets to facilitate their own valuation of spectrum blocks.”); *Auction 66 January Notice*, 21 FCC Rcd at 799-800 (“[I]nformation on the identities of likely other licensees may provide useful technical information, such as ... the potential for negotiating roaming agreements...”); *Competitive Bidding 2nd MO&O*, 9 FCC Rcd at 7252 (“Bidders’ valuations of licenses may also be highly dependent on knowing ... the manner in which complementary licenses are likely to be used and the compatibility of standards both inside and outside their desired service areas.”).

<sup>181</sup> Comments of CCA at 18.

intelligence and analytical capabilities of the larger bidders.<sup>182</sup> An open auction therefore would help to level the playing field, as well as to provide information that is uniquely beneficial to smaller bidders. For instance, because smaller bidders may have less experience with spectrum auctions and lack the resources used by large carriers in making valuation decisions, smaller bidders often find it helpful to take note of how larger carriers value spectrum. Smaller bidders also may assign a lower value to a market in a region dominated by a few larger carriers, compared to a region with several other smaller carriers. Because blind bidding prevents these carriers from knowing this information, they face greater risks in the auction process compared to large bidders, and therefore rationally reduce their level of participation and the size of their bids. For these reasons, USCC agrees with CCA that “the information disparities created by blind bidding will have a disproportionately adverse effect on smaller bidders.”<sup>183</sup>

Providing bidder information is even more important to smaller carriers and new entrants who will be relying on outside financing to support their bidding or subsequent build-out. As a matter of business practice, financial institutions want and need to know as much as possible in order to accurately gauge the level of risk involved.<sup>184</sup> For instance, the valuation decisions of the few market leaders significantly impact the perception of financial institutions regarding the value of particular spectrum, and thus the amount they are willing to loan smaller bidders.<sup>185</sup>

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<sup>182</sup> See *Competitive Bidding 2nd MO&O*, 9 FCC Rcd at 7252 (“Concealing bidder identities may give an advantage to larger bidders that have the resources to devote to discovering other bidders’ identities.”); Comments of CCA at 18 (“Shielding information about how carriers value spectrum will only increase the complexity of the process, again advantaging the largest carriers.”).

<sup>183</sup> Comments of CCA at 18.

<sup>184</sup> See Joint Reply Comments of Madison Dearborn Partners, LLC and TA Associates, Inc., AU Docket No. 06-30, pp. 3-4 (Feb. 28, 2006) (“Madison/TA Joint Reply Comments”) (“As financial institutions, MDP and TA have a bias in favor of receiving as much market information as they can before investing money in a license acquisition.”).

<sup>185</sup> See Joint Comments of Columbia Capital LLC and MC Venture Partners, AU Docket No. 06-30, p. 6 (Feb. 14, 2006) (“Columbia/MC Joint Comments”) (“[A] bid by a major carrier with a history of building out its network and providing service to the public may provide stronger evidence of the appropriate value for a given license than a bid by an entity regarded in the industry as a speculator.”).

Notably, in past Commission proceedings, financial institutions have confirmed that blind bidding has a chilling effect on their willingness to finance auction participants. For instance, in the Commission’s AWS-1 proceeding, venture capital firms explained that “[i]nformation concerning the number and identity of different competitors in a market, their respective spectrum holdings, their regional or national market positions, etc., are critical determinants of the amount [they] will invest.”<sup>186</sup> As a consequence, “[i]n the absence of a solid basis for evaluations, financial investors will either withdraw or reduce the amount of their investments because they have been forced to factor in additional elements of uncertainty and risk.”<sup>187</sup>

Further, while blind bidding gives rise to substantial public interest harms, its advantages are largely theoretical and marginal, making blind bidding unnecessary. There have been no serious allegations of collusive bidding in recent auctions, and, since the early auctions that were affected by collusion, the Commission and the Department of Justice have revised their standards and pursued enforcement actions. As a result, the Commission has found that “concealing bidders’ identities may not be critical to preventing collusion during an auction [because] existing antitrust laws and the FCC’s collusion rules should be adequate to prevent collusive conduct.”<sup>188</sup> In other words, because laws, rules and policies already exist to guard against collusion, the Commission possesses both the statutory incentives and regulatory tools necessary to create an open auction environment where information which has legitimate value to smaller bidders is not withheld. And publicly disclosing bidding information actually assists the

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<sup>186</sup> Madison/TA Joint Reply Comments at 3-4; *see* Columbia/MC Joint Comments at 6-7 (“In evaluating the value of a broadband license, there are a series of relevant factors that must be taken into consideration including the demographics of the service area, the number of existing carriers serving the market, the comparative spectrum holdings of the market participants and their respective business and marketing plans.”).

<sup>187</sup> Madison/TA Joint Reply Comments at 4; *see* Columbia/MC Joint Comments at 6 (“The most important reason for the Commission to abandon its ‘blind bidding’ proposal is that it will have a chilling effect on financial investors...”).

<sup>188</sup> *Competitive Bidding 2nd MO&O*, 9 FCC Rcd at 7252.

Commission with enforcing its anti-collusion rules because the Commission is most likely to learn of collusive behavior by being alerted to suspicious activity by other auction participants. In contrast, when participants are denied bidding information, they are less likely to be able to identify and disclose suspicious bidding patterns.

Conducting an open, as opposed to blind, auction is especially important if the Commission permits any form of package bidding in the forward auction, which USCC strongly opposes. A blind auction would magnify the harms that package bidding places on smaller bidders because it would unfairly burden or foreclose the attempts of bidders for parts of a package from outbidding a provisionally winning package bid. Bidders on individual licenses are precluded from coordinating their bids, yet their bids must be sufficient, in aggregate, to defeat a single unified package bidder. This situation creates a unique interdependency in which possible bidders for parts of a package need to be able to observe the bidding behavior of similarly-situated bidders to avoid risky guesses about valuations and about the prospects for encouraging other bidders to increase their bids for parts of a package. In other words, knowing which bidders have previously bid on parts of a package, what values they currently attach to comparable licenses, and on what licenses they currently have standing high bids could be decisive when trying to decide whether to increase a standing high bid for a part of a package. Under anonymous bidding – *i.e.*, in circumstances where none of this information is available – the risks of foregoing other potentially promising bidding strategies for other licenses will be simply too great because a bidder lacks adequate information to gauge whether continuing to bid for a part of a package is a viable strategy. The ultimate result is that anonymous bidding, when coupled with package bidding procedures, makes it even less likely that small bidders will

overcome the threshold problem. For these reasons, the Commission has in the past declined to limit the amount of information made available where the auction included package bidding.<sup>189</sup>

Finally, USCC notes that blind bidding is particularly unnecessary here because, assuming the Commission establishes an auction framework that sufficiently promotes the opportunity for carriers of all sizes to participate, the forward auction likely will be highly competitive. The Commission has previously recognized that, “[a]ssuming other factors are consistent, a higher level of competition in the auction may reduce the potential for bidders to use bidding information in an anti-competitive manner.”<sup>190</sup> As a result, with regard to highly-competitive auctions, the Commission has concluded that “the benefits to bidders from making information available are likely to outweigh the potential harms from facilitating collusive behavior.”<sup>191</sup>

If the Commission has specific concerns about whether the forward auction will be adequately competitive, it should, at most, rely on its ability to gauge the anticipated competitiveness of the auction using an eligibility ratio, above which the Commission would consider the auction sufficiently competitive and thus subject to open bidding rules.<sup>192</sup> If the Commission takes this approach, based on past auctions and given the serious disadvantages that information restrictions create for smaller bidders, it should avoid setting an unnecessarily high ratio. USCC specifically proposes an eligibility ratio of 2.5. In Auction No. 66, the Commission

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<sup>189</sup> See *Auction 66 January Notice*, 21 FCC Rcd at 800.

<sup>190</sup> *Service Rules for the 698-746, 747-762 and 777-792 MHz Bands*, Second Report and Order, 22 FCC Rcd 15289, 15390 (2007) (“700 MHz Second R&O”).

<sup>191</sup> *Auction 66 April Notice*, 21 FCC Rcd at 4603; *id.* at 4601 (“If we determine that the auction is likely to be highly competitive based on the number of bidders and upfront payments, and therefore, that the risk of successful collusion is low, we will make available bidding information that we typically have made available in previous Commission auctions.”).

<sup>192</sup> See *700 MHz Second R&O*, 22 FCC Rcd at 15390 (“In prior auctions, the Commission has adopted anonymous bidding procedures and made final implementation of those procedures contingent on a pre-auction measure of the likely competitiveness of the auction.”).

established an eligibility ratio of 3.0, which proved to be unnecessarily high.<sup>193</sup> Although Chairman Martin described Auction No. 66 as the “biggest, most successful wireless auction in the Commission’s history,”<sup>194</sup> the actual eligibility ratio exceeded the Commission’s 3.0 trigger by only a small fraction.<sup>195</sup> The success of Auction No. 66 demonstrates that the Commission was initially too conservative in setting an eligibility ratio of 3.0. The results of Auction No. 66 also demonstrate that blind bidding is not required for an auction to be highly successful and for a large number of smaller bidders to successfully compete.<sup>196</sup>

For the above reasons, USCC strongly believes that disclosing the bids and bidders in each round promotes the legitimate needs of smaller bidders and the maximization of auction revenues. In contrast, “[b]lind bidding is unnecessary, will introduce uncertainty, and will adversely affect smaller bidders’ risk, and accordingly their level of participation.”<sup>197</sup> In the end, blind bidding would do much more harm than good, and thereby severely jeopardize the ultimate success of the forward auction.

## **XII. THE COMMISSION SHOULD TAKE STEPS TO CLEAR THE 600 MHz SPECTRUM OF BROADCASTERS AS QUICKLY AS POSSIBLE**

Numerous commenters joined USCC in supporting the Commission’s proposal to clear the 600 MHz band of broadcast operations “promptly in order to get the reclaimed spectrum into the hands of the new licensees to address spectrum needs and allow them to serve their

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<sup>193</sup> See *Auction 66 April Notice*, 21 FCC Rcd at 4601.

<sup>194</sup> *Statement of Chairman Kevin J. Martin on the Conclusion of Advanced Wireless Services Auction*, News Release (Sept. 18, 1006) (“*Chairman Martin Statement*”).

<sup>195</sup> See *Auction of Advanced Wireless Services Licenses, 168 Bidders Qualified to Participate in Auction 66; Information Disclosure Procedures Announced*, Public Notice, 21 FCC Rcd 8585 (2006).

<sup>196</sup> See *Chairman Martin Statement* (“I am particularly pleased that more than half of the winning bidders were small businesses.”).

<sup>197</sup> Comments of Leap/Cricket at 9.

customers.”<sup>198</sup> Like USCC, these commenters proposed several reasonable steps the Commission should take in order to ensure a prompt transition. First and foremost, “it is critical that winning reverse auction bidders and stations that will remain on the air after repacking be subject to a date certain by which they must cease broadcasting in the 600 MHz band.”<sup>199</sup> With respect to a deadline for stations to relocate to a new channel, the record supports the Commission’s finding that the typical three-year construction permit period is unnecessary here, and that an 18-month deadline would be both appropriate and reasonable.<sup>200</sup> However, with respect to stations that relinquish their spectrum rights in the reverse auction, “the Commission should require a far more rapid transition.”<sup>201</sup> Commenters noted that, because “broadcasters that are vacating particular channels will not be constructing new facilities,”<sup>202</sup> there is “no need for these stations to remain on the air in their previously assigned channels once the auction has closed and payments have been rendered.”<sup>203</sup> This shorter deadline is necessary because “[q]uickly moving these reverse auction winners off the air will facilitate and expedite the

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<sup>198</sup> NPRM, 27 FCC Rcd at 12464; *see, e.g.*, Comments of Verizon at 67 (“[T]he Commission should afford 600 MHz licensees access to this spectrum as expeditiously as possible...”); Comments of CTIA at 34 (“[T]he Commission should adopt measures that make the repacking and band transition proceed as quickly as possible.”); Comments of Nokia Siemens at 20 (urging “the adopting of policies that could make the transition as quick as possible”); Comments of TIA at 17 (“[T]he FCC should provide for the earliest possible repacking and reclaiming of broadcast spectrum after the auction concludes.”); Comments of CEA at 5 (“[T]he Commission must establish an efficient post-auction process, with concrete milestones and deadlines as soon as possible after completion of the auction, in order to deliver newly-freed spectrum to consumers in a timely manner.”).

<sup>199</sup> Comments of Verizon at 67; *see* Comments of AT&T at 78 (“[T]he Commission should establish a clear and expeditious timetable for the repacking process once the auction is complete.”).

<sup>200</sup> *See* NPRM, 27 FCC Rcd at 12464; Comments of CTIA at 34 (“[T]hree years is too long to transition the UHF band to wireless use...”); Comments of Leap/Cricket at 10 (“[T]he typical three year period to complete construction is not appropriate here.”); Comments of Nokia Siemens at 20 (“[T]hree years is too long to transition the UHF band to broadband wireless use...”); Comments of TIA at 8 (“[T]he three-year period for building out typical broadcast construction permits is neither necessary nor desirable in this context.”).

<sup>201</sup> Comments of Leap/Cricket at 10.

<sup>202</sup> *Id.*

<sup>203</sup> Comments of CEA at 34.

subsequent changes that will have to be made by both reverse auction winners and repacked stations that remain on the air.”<sup>204</sup>

Another way for the Commission to expedite clearing of the 600 MHz band is to adopt its proposal to permit broadcasters to receive upfront reimbursements for their repacking costs based on estimated costs.<sup>205</sup> As CEA noted, “such expedited reimbursement procedures could provide very necessary financial assistance to broadcasters who are relocated,”<sup>206</sup> and thereby accelerate the repacking process because it would avoid the drawn-out budgeting process required by some stations before they could begin constructing new facilities. USCC also agrees with the Broadcasters Coalition and others that prompt payment of auction revenues to winning reverse auction bidders could help “facilitate the expeditious reallocation of relinquished spectrum.”<sup>207</sup> Finally, USCC again expresses its support for the Commission’s proposal to allow a station to operate with temporary facilities in order to transition to a new channel while it completes construction.<sup>208</sup>

### **XIII. THE COMMISSION SHOULD TAKE IMMEDIATE ACTION IN ORDER TO CLEAR CHANNEL 51**

Numerous commenters joined USCC in strongly urging the Commission to immediately facilitate the voluntary relocation or relinquishment of Channel 51 broadcast operations in advance of the incentive auction and subsequent repacking process.<sup>209</sup> Such actions are

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<sup>204</sup> *Id.*

<sup>205</sup> *See* NPRM, 27 FCC Rcd at 12468; Comments of CEA at 6 (“[T]he rules and procedures governing reimbursement for relocation expenses should fairly and timely reimburse broadcasters for their reasonable expenses – perhaps by paying estimated costs before the transition.”).

<sup>206</sup> Comments of CEA at 35.

<sup>207</sup> Comments of Broadcasters Coalition at 23; *see* Comments of TIA at 16 (“Expeditious payments to winning broadcast bidder also should help to expedite the partial clearance and repacking of the TV band.”).

<sup>208</sup> *See* NPRM, 27 FCC Rcd at 12466.

<sup>209</sup> *See, e.g.*, Comments of MetroPCS at 29 (“[T]he Commission should make every effort to encourage voluntary Channel 51 relocation *prior to* holding the incentive auction.”) (emphasis in original); Comments of CCA at 13

necessary in order to remedy the significant technical challenges to deploying wireless broadband services by Lower 700 MHz A Block licensees.<sup>210</sup> The public interest harms caused by this situation are magnified because a majority of these licenses are owned by small and regional carriers, who require additional spectrum in order to effectively compete and who are more likely to serve rural areas, where wireless broadband services currently are most lacking.<sup>211</sup> Accordingly, as noted by CCA, “[c]learing Channel 51 is another way that the Commission can help level the playing field and support rural, mid-size and regional carriers...”<sup>212</sup>

Fortunately, “[t]his proceeding presents a perfect opportunity to clear channel 51 of broadcast operations.”<sup>213</sup> In its comments, USCC expressed its support for a variety of Commission actions that would accelerate the clearing of Channel 51, and the record supports these proposals.<sup>214</sup> For instance, the Commission should allow private agreements calling for a broadcast licensee to vacate Channel 51 either through channel sharing or ceasing operations while retaining the right to participate in the reverse auction based on its previous Channel 51

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(“[T]he Commission should seize the opportunity to immediately clear Channel 51...”); Comments of CTIA at 28 (“CTIA [] encourages the Commission to promote the expedited relocation of Channel 51 incumbents to alternate channels...”); Comments of Alcatel-Lucent at 18 (“Alcatel-Lucent urges the Commission to make addressing channel 51 – clearing that channel of broadcast television operations – a priority.”).

<sup>210</sup> See Comments of Leap/Cricket at 10-11 (“[I]nterference concerns with Channel 51 have proven to be an impediment to effective deployment in the Lower 700 MHz band, as the Lower 700 MHz A Block is adjacent to Channel 51.”); Comments of Verizon at 37 (“Many A Block licensees cannot provide coverage throughout their licensed service areas due to significant adjacent-channel interference challenges.”); Comments of AT&T at 38 (“[T]he presence of broadcast operations on Channel 51 prevents the full deployment of wireless broadband operations in the adjacent A Block spectrum.”).

<sup>211</sup> See Comments of Leap/Cricket at 11 (“Small, midsize, and regional carriers have borne the brunt of this problem because they are the principal holders of Lower 700 MHz A Block licenses.”); Comments of CCA at 13 (“[R]ural, mid-size and regional carriers ... own many of the Lower 700 MHz A Block licenses that have been stranded by the ongoing concerns related to Channel 51.”).

<sup>212</sup> Comments of CCA at 13.

<sup>213</sup> Comments of Alcatel-Lucent at 18; see Comments of Leap/Cricket at 11 (“[T]he incentive auction gives the Commission a critical opportunity to remove an ongoing obstacle to wireless broadband deployment in the 700 MHz band by clearing Channel 51.”).

<sup>214</sup> See Comments of CTIA at 29 (“CTIA once again encourages the Commission to use all of the regulatory tools available to it to accelerate relocation of Channel 51 incumbents to alternate channels...”).

licensed operations.<sup>215</sup> USCC continues to support other approaches as well, including: permitting a Channel 51 licensee to decrease its operating parameters while retaining the right to participate in the reverse auction; allowing the sale of a Channel 51 license to a third party, including a wireless carrier, who would be permitted to cease broadcast operations and subsequently participate in the reverse auction; and reducing the size of the “exclusion zones” around Channel 51 transmitters.<sup>216</sup>

USCC also supports proposals made by other commenters. For instance, Leap/Cricket proposed that “Channel 51 should be part of the very first license to be auctioned in each market, and only after Channel 51 is made available for wireless use through a paired license should any excess spectrum be considered for a potential downlink-only license.”<sup>217</sup> In addition, USCC agrees with MetroPCS that “the Commission should consider an early mandatory relocation of Channel 51 broadcasters.”<sup>218</sup> As MetroPCS explained, because Channel 51 broadcast operations will be relocated during the repacking process, “there is little reason that the Commission should not require these broadcasters to relocate to comparable channels immediately, while reimbursing prudent out-of-pocket costs.”<sup>219</sup>

#### **XIV. CONCLUSION**

The Spectrum Act provides the Commission with a crucial and, at least for now, lone opportunity to address our nation’s spectrum crunch and facilitate the provision of wireless

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<sup>215</sup> See Comments of CCA at 13 (“[T]he Commission should promote the immediate, voluntary relocation of Channel 51 broadcasters by clarifying that broadcasters who voluntarily vacate Channel 51 forthwith nevertheless will be able to recover auction revenues.”); Comments of Verizon at 37-38.

<sup>216</sup> See Comments of USCC at 60; Comments of Verizon at 38; Comments of CCA at 13.

<sup>217</sup> Comments of Leap/Cricket at 12; see Comments of CCA at 13 (“Channel 51 should be part of the first cleared and licensed spectrum in any area, and only after Channel 51 is auctioned should any additional spectrum potentially be allocated as a stand-alone downlink channel.”); Comments of AT&T at 9 (“[A]ny 600 MHz band plan should clear Channel 51 of broadcast operations...”).

<sup>218</sup> Comments of MetroPCS at 29.

<sup>219</sup> *Id.* at 29-30.

