

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

In the Matter of	)	
	)	
Broadcast Incentive Auction Comment Public	)	
Notice Auction 1000, 1001 and 1002	)	AU Docket No. 14-252
	)	
Expanding the Economic and Innovation	)	
Opportunities of Spectrum Through Incentive	)	GN Docket No. 12-268
Auctions	)	

**COMMENTS OF  
EXPANDING OPPORTUNITIES FOR BROADCASTERS COALITION**

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## EXECUTIVE SUMMARY

When the FCC suggested in 2010, as a fundamental part of its *National Broadband Plan*, that it should conduct an “incentive auction” to determine the best and highest use of scarce spectrum resources, common reactions ranged from mild laughter to anger to disbelief. There were many reasons for skepticism. For one, the Commission did not have the authority to share a portion of its auction proceeds with broadcasters. Then there was the issue of how to aggregate disparate broadcast channels into usable wireless spectrum. Most importantly, there was the question of whether broadcasters would show up in sufficient numbers to provide enough spectrum to reallocate for mobile broadband use.

Now, almost five years later, the first two issues have mostly been resolved, and the primary question has evolved from whether there will even be an auction to how successful the auction will be. The answer to that question will continue to turn on how many broadcasters ultimately elect to relinquish some or all of their spectrum usage rights in the reverse auction. If the Commission adopts policies in this proceeding that encourage broadcaster participation, there will be sufficient participation to reallocate at least 126 MHz of spectrum on a near-nationwide basis, cover all of the costs required to close the auction, and have billions of dollars left over for the Federal treasury. If, on the other hand, the agency attempts to control every aspect of the auction rather than allowing market forces to dictate auction outcomes, it will snatch defeat from the jaws of victory, resulting in less spectrum for mobile broadband, less consumer welfare, and a weakened broadcast industry.

Fortunately, there are many reasons to believe that the Incentive Auction will be an unmitigated success. *First*, the recent AWS-3 auction exceeded even the most optimistic expectations, establishing the tremendous demand for low- and mid-band spectrum. Given the superior qualities of the 600 MHz spectrum that the FCC will be offering in the Incentive

Auction, it is not unreasonable to think that forward auction revenues in the Incentive Auction will exceed \$80 billion, providing the Commission with tremendous financial flexibility to entice broadcasters to participate in large numbers. *Second*, broadcaster interest in the auction is higher than ever. Recent involvement by Fox, Ion, Tribune, and Univision has provided public affirmation of a trend that has been forming over several months. *Finally*, through the tremendous efforts of the FCC and its staff, the *Incentive Auction Report and Order* provides a strong framework for a successful auction. The Commission arrived at this point by providing a remarkably open and transparent process and by recognizing that the single most important element of a successful auction is attracting broadcast interest through high price offers.

Still, the most important issues that will determine the outcome of the auction—including pricing, clearing targets, and information sharing—remain to be resolved in this proceeding. Unfortunately, many of the proposals in the *Auction Comment PN* reflect a belief that the Commission, rather than the market, is the best determinant of auction outcomes. While this belief never was appropriate, it is particularly misplaced in light of the unmistakable market signals from the AWS-3 auction. Demand for mobile spectrum—and the resulting forward auction revenues—will be the driver of an historic and tremendously successful auction that not only achieves, but exceeds, all of the FCC’s and Congress’s goals—but only if the Commission allows it. Accordingly, the agency must adopt procedures that reflect its role as a facilitator, but not a manager, of the Incentive Auction.

As an initial matter, the FCC should remain steadfast in its commitment to begin accepting broadcaster registrations by the end of 2015 and commence the Incentive Auction in early 2016. Consumer demand for wireless services continues to expand at an exponential pace, placing tremendous strain on existing networks. Given the many years that it will take to

complete the auction, the repacking of broadcast television stations, and the reallocation of spectrum, the Commission cannot afford to delay the auction any further, nor should it. Wireless carriers have strong incentives to bid aggressively in the Incentive Auction, and the AWS-3 results provide an unequivocal signal that they will. Thus, the FCC should continue to proceed expeditiously and reject self-serving calls to delay the auction.

The procedures that the Commission adopts in the *Auction Procedures Public Notice* must reflect a commitment to maximize public welfare by placing spectrum to its best and highest use. To accomplish this goal, the FCC should begin with the premise that it needs to offer high prices to all broadcasters to encourage robust participation and competition in the reverse auction. It must also, consistent with the policy that it adopted in the *Report and Order*, offer the highest prices to stations with the greatest impact on the repacking process. A pricing formula that prioritizes any other factor will lead to distorted auction results and an inefficient reallocation of spectrum.

The Commission must also adopt policies for setting clearing targets and reserve prices that maximize the amount of spectrum reallocated for mobile broadband use. If there is both sufficient broadcaster supply and wireless carrier demand, the FCC should not serve as the impediment to reallocating as much spectrum as possible. Accordingly, the agency must abandon any procedures that would require it to define, before the auction even begins, an “acceptable” level of impairment. The only acceptable impairment is the minimal impairment that will occur in a few select, non-competitive areas, if the FCC sets clearing targets to maximize spectrum reallocation in the most critical markets. Thus, the clearing target should reflect the greatest amount of spectrum that the Commission can reallocate in either New York or Los Angeles, whichever is greater. Additionally, the agency should reject reserve price

approaches, such as dynamic reserve pricing (“DRP”), which not only invite, but require, impairment of spectrum. Using DRP to impair spectrum before putting it up for auction is like beating your car with a sledge hammer before taking the photo to sell it on Craigslist. Instead, the Commission should adopt a more targeted approach, such as a Round Zero Reserve, that is both predictable and seeks to maximize artificial impairment.

Finally, the FCC must provide broadcasters with sufficient opportunity for outcome discovery. In this first reverse auction for broadcast spectrum, many potential bidders will rely on information gathered during the auction to guide their decision-making process. For some broadcasters, that may mean the decision of whether to exit the business, channel share, or exchange a UHF channel for a VHF channel. For other broadcasters, that may mean deciding whether to contribute a large portfolio of stations to the auction or to retain benefits of scale in their post-auction operations. To facilitate this outcome discovery, the Commission should provide broadcasters with as much information as possible about supply and demand during the reverse auction. It must also adopt small, predictable price decrements and intra-round bidding so that bidding activity most closely resembles the actual value that stations place on their spectrum.

By committing to a market-based auction that places spectrum to its best and highest use, the Commission will attain the once unthinkable goal of reallocating at least 126 MHz of broadcast spectrum. The Expanding Opportunities for Broadcasters Coalition and its members are committed to continuing to work with the FCC to achieve this result.

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The Expanding Opportunities for Broadcasters Coalition (the “Coalition”)<sup>1</sup> respectfully submits these comments in response to the Commission’s *Public Notice* in the above-referenced proceedings.<sup>2</sup> Through the tremendous efforts of the agency and its Staff, the FCC is on the verge of conducting a monumental Incentive Auction that will fulfill the shared goals of the agency and Congress to reallocate a substantial amount of spectrum for mobile broadband use, contribute billions of dollars to the Federal treasury, and strengthen the broadcast industry. The atmosphere is ripe for an auction that exceeds all expectations: wireless carriers have demonstrated a commitment to acquire low-band spectrum at unprecedented prices, while broadcasters increasingly are recognizing the potential opportunity that the Incentive Auction

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<sup>1</sup> Pursuant to the Public Notice issued on December 18, 2012 (DA 12-2040), these comments represent the views of a coalition of broadcasters who own or have financial interests in more than 85 auction-eligible stations and who desire to remain anonymous at this time. Together, the Coalition members own both full power and Class A television stations in a number of markets, including stations in several of the ten largest DMAs. The individual members of the Coalition may not agree with all positions taken in these comments. The Coalition’s name and mailing address are provided in accordance with Section 1.419 of the Commission’s rules. See 47 C.F.R. § 1.419(d).

<sup>2</sup> See *In the Matter of Broadcast Incentive Auction Comment Public Notice Auction 1000, 1001 and 1002; Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, AU Docket No. 14-252 & GN Docket No. 12-268, FCC 14-191 (rel. Dec. 17, 2014) (“*Comment PN*”).

offers. The challenge for the Commission is to adopt procedures that will facilitate this marketplace transfer of spectrum to its highest and most valued use and not to add unnecessary hurdles that will discourage broadcaster participation, create unnecessary impairments, and thereby lessen the public welfare created by the Incentive Auction. In these comments, the Coalition proposes alternatives to many of the FCC's proposals that will result in increased broadcaster participation, the reallocation of more spectrum to satisfy the demand of mobile consumers, and a stronger post-auction broadcast industry that can better serve the public interest.

## **I. INTRODUCTION**

In the *Comment PN*, the FCC described the “central goal of a successful auction” as “allow[ing] market forces to determine the highest and best use of spectrum.”<sup>3</sup> The Coalition wholeheartedly supports this approach and believes that, if the Commission develops policies that are consistent with this goal, a successful auction that fulfills Congress’ vision of reallocating at least 126 MHz for mobile broadband use while, at the same time, generating a hefty surplus for the treasury not only is possible, but well within reach. The procedures that the Commission adopts in the *Auction Procedures Public Notice* (“*Procedures PN*”) will go a long way toward determining just how successful this auction can be.

To ensure that the auction truly allows market forces to determine the highest and best use of spectrum, the Commission should ensure that all of the procedures that it adopts for the Incentive Auction adhere to the following principles:

- **Maximization of Public Welfare:** The FCC should establish policies that maximize public welfare. This means: (i) attracting substantial broadcaster participation and reallocating as much spectrum as possible, particularly in the top PEAs, for mobile broadband use, while (ii) minimizing the disruption to over-the-air viewers.

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<sup>3</sup> *Id.* ¶ 37.

- Predictability: The FCC must adopt clear and replicable procedures in advance for all relevant aspects of the auction, including establishing the clearing target, pricing for all rounds and options (including price decrements between rounds), how stations will be frozen, and reserve pricing (if any).
- Transparency: Broadcasters must have the tools to both: (i) conduct ongoing discovery about the likelihood of clearing and the price of clearing to guide their decision making processes; and (ii) verify that the auction is following the procedures that the FCC has adopted.

Unfortunately, several of the proposals in the *Comment PN* appear to depart from these principles, which could risk a failed auction that does not achieve the market-based results that the FCC has espoused.

The formula described in the *Comment PN* for calculating opening prices in the reverse auction is one such proposal. In the *Incentive Auction Report and Order*, the Commission committed to establishing opening prices based on each station’s contribution to the repacking process.<sup>4</sup> Under this policy, “a station with a high potential for interference will be offered a price that is higher than a station with less potential for interference to other stations.”<sup>5</sup> Yet, in the *Comment PN*, the FCC abandons this framework, and instead introduces external factors into the pricing formula that will reduce broadcaster participation, force the FCC to pay higher prices for the same level of clearing, and cause greater loss of over-the-air television service. The Commission should modify its formula to properly prioritize a station’s contribution to clearing spectrum, as required under the policy adopted in the *Incentive Auction R&O*. The agency also should increase the base clock price, consistent with the unprecedented results of the recent

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<sup>4</sup> *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6567 ¶ 450 (2014) (“*Incentive Auction R&O*”) (“[E]ach station will see a price that takes into account objective factors, such as location and potential for interference with other stations, that affect the availability of channels in the repacking process and, therefore, the value of a station’s bid to voluntarily relinquish spectrum usage rights.”).

<sup>5</sup> *Id.*

AWS-3 auction, to attract additional broadcaster participation and increase competition for spectrum relinquishment.

Another proposal that strays from the core principles of a successful, market-based auction is the procedure for establishing the initial clearing target. The Commission's proposal, which is based on approaching, but not exceeding, a threshold of nationwide impairment, could result in a failure to reallocate substantial amounts of spectrum in areas where there are both willing buyers and sellers and where the reallocation of that spectrum will improve public welfare through improved mobile services. The agency's proposal also is difficult, if not impossible, to predict, relying on amorphous optimization criteria such as "account[ing] for the operation of the proposed dynamic reserve price process," "increas[ing] the likelihood of satisfying the final stage rule," and providing "at least a minimum level of vacancy in the broadcasting portion of the band, so as to give the auction system more flexibility to find feasible assignments during the bidding rounds." Instead of following a complicated formula that results in unnecessary impairment in key markets, the FCC should instead set a clearing target based on the maximum amount of spectrum that it can reclaim in either the New York or Los Angeles partial economic area (whichever is greater). This approach is predictable, it is transparent, and it will result in the optimal reallocation of spectrum in the markets where it is valued the most.

Dynamic reserve pricing ("DRP"), meanwhile, would apply an unnecessarily complicated "solution" to a relatively minor, and possibly non-existent, "problem"—with potentially devastating results. Despite extensive efforts, most broadcasters do not understand DRP, and those that do cannot understand why the FCC would use it. Under DRP, the opening prices that the Commission offers to broadcasters will be nothing more than a mirage. Even worse, unlike traditional reserve prices, which are predictable at the outset of an auction, DRP

will place the value of one station in the hands of other stations that potentially are thousands of miles away. Moreover, DRP will destroy spectrum value and public welfare by requiring impairment as a condition to turning off DRP. This unnecessary impairment could be as high as 20% of weighted population, including multiple channels in the key markets that will drive total auction revenues and where the 600 MHz spectrum will produce the greatest consumer welfare. If the Commission feels compelled to apply a reserve where there is little or no competition in the auction, it should instead adopt a more targeted approach, such as a Round Zero Reserve (“RZR”), which provides predictable prices to stations that would be “frozen” at the start of the auction, and allows all other stations to receive their competitive, market-based prices.

The Commission’s proposed information disclosures for the reverse auction would create the least transparent auction in the history of the FCC’s competitive bidding program and deny broadcasters the opportunity for price discovery that the agency has recognized they need. The Commission must greatly improve the transparency of the reverse auction by providing broadcasters with important information to inform their bidding decisions. This information is necessary to help bidders develop confidence in their own valuations and in the wider auction process as bidding progresses.

Finally, the Commission must adopt additional procedures to simplify the auction for bidders and produce the most efficient results. Primary among these procedures are a combination of low, standard price decrements and the availability of intra-round bidding. A low fixed price decrement, such as one percent of the opening base clock price per round, will simplify participation for broadcasters while, at the same time, controlling the length of the auction. However, even a one percent decrement may be too high if the FCC reverses course and does not permit intra-round bidding, which enables bidders to exit the auction or switch

options at precise price levels that can then be used to determine accurate market prices for other bidders. The combination of low price decrements and intra-round bidding will support a steady pace of price discovery and promote the most efficient auction outcome.

Although the Coalition believes that the FCC has made progress toward creating the proper framework for a successful Incentive Auction, the Commission risks ruining this historic opportunity if it fails to address the concerns outlined above. The Coalition looks forward to working with the Commission to improve on the proposals in the *Comment PN*.

**A. The Coalition's Involvement In This Proceeding.**

The Coalition has been the leading advocate for the Incentive Auction among the broadcast community, both in terms of encouraging broadcast licensees to consider the potential benefits of participating in the auction and providing input to the FCC about auction design elements that will encourage broadcaster participation and, thereby, maximize the amount of spectrum that the Commission can reallocate for mobile broadband use.

On January 23, 2013, the Coalition submitted detailed comments in response to the Incentive Auction *Notice of Proposed Rulemaking*.<sup>6</sup> In those comments, the Coalition explained that the Commission can conduct an auction that: (i) reallocates at least 120 MHz of broadcast spectrum for wireless broadband; and (ii) raises billions of dollars in surplus funds for deficit reduction and other financial priorities. However, to achieve those goals, the Coalition noted that the FCC must ensure that broadcasters are compensated based on the value of their spectrum to the overall success of the auction, with prices set high enough to induce broad broadcaster participation.

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<sup>6</sup> Comments of Expanding Opportunities for Broadcasters Coalition, GN Docket No. 12-268 (Jan. 23, 2012), available at <http://apps.fcc.gov/ecfs/document/view?id=7022110423> (“*EOBC Comments*”).

On March 10, 2013, the Coalition filed its reply comments, which explained that the key elements of a successful auction are: (i) offering prices to broadcasters that are based on the value of a station's spectrum (as compared to other factors) and that meet or exceed broadcaster expectations; and (ii) adopting policies that will maximize the amount of spectrum that can be reallocated, without allowing lowest common denominators to handcuff the Commission's ability to reallocate as much spectrum as market forces permit.<sup>7</sup>

On November 6, 2013, the Coalition, together with the Consumer Electronics Association, presented a white paper by former FCC Wireless Telecommunications Bureau Chief Fred B. Campbell in which Mr. Campbell provided empirical evidence of the detrimental effects that bidding restrictions and other forms of interference with market-driven pricing have upon the FCC's ability to maximize auction revenues and expedite service to the public.<sup>8</sup>

When the FCC adopted the *Incentive Auction R&O* on May 15, 2014, the Coalition reiterated its commitment "to do everything possible to help the FCC conduct a successful auction."<sup>9</sup> In that spirit, on September 12, 2014, the Coalition, in consultation with FCC staff, filed a *Petition for Reconsideration* proposing changes to the rules for channel sharing that will make channel sharing a more realistic and viable option for broadcasters.<sup>10</sup> That Petition remains pending.

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<sup>7</sup> Reply Comments of Expanding Opportunities for Broadcasters Coalition, GN Docket No. 12-268 (Mar. 10, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7022129556>.

<sup>8</sup> See Fred Campbell, *Maximizing the Success of the Incentive Auction* (Nov. 4, 2013), available at <http://apps.fcc.gov/ecfs/document/view?id=7520955388>.

<sup>9</sup> See John Eggerton, *FCC Approves Spectrum Auction Framework*, Broadcasting & Cable (May 15, 2014), available at <http://www.broadcastingcable.com/news/washington/fcc-approves-spectrum-auction-framework/131195>.

<sup>10</sup> Expanding Opportunities for Broadcasters Coalition, *Petition for Reconsideration*, GN Docket No. 12-268 (Sept. 12, 2014) ("*Petition for Reconsideration*"), available at <http://apps.fcc.gov/ecfs/document/view?id=7522236215>.

Then, on October 1, 2014, the Coalition intervened on behalf of the Commission in *Sinclair Broadcast Group, Inc. v. FCC*, a challenge to the rules and regulations that the Commission adopted in the *Incentive Auction R&O*.<sup>11</sup> In its brief, the Coalition urged the court “to affirm, without limitation, the FCC’s Order.”<sup>12</sup>

**B. The Exponential Demand for Wireless Spectrum.**

On January 30, 2015, the FCC announced that its auction of Advanced Wireless Services (AWS-3) had closed after raising \$41,329,673,325 in 341 rounds of bidding.<sup>13</sup> The AWS-3 auction sent an unmistakable signal about the market demand for mid- and low-band spectrum. As Chairman Wheeler and each of the FCC’s Commissioners recognized, the results of the AWS-3 auction “confirm the strong market demand for more spectrum” and demonstrate that “there will continue to be strong demand for low-band spectrum that will be made available in the Incentive Auction early next year.”<sup>14</sup>

In fact, the demand for wireless data continues to grow at an exponential rate, with no sign of slowing down. Shortly after the AWS-3 auction closed, Cisco Systems released its annual VNI Global Mobile Data Traffic Forecast, which predicted seven-fold growth in U.S.

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<sup>11</sup> See Expanding Opportunities for Broadcasters Coalition, Motion for Leave to Intervene, *Sinclair Broadcast Grp., Inc. v. FCC*, No. 14-1179, Document No. 1514932 (D.C. Cir. Oct. 1, 2014).

<sup>12</sup> See Expanding Opportunities for Broadcasters Coalition, Brief of Intervenor, *Sinclair Broadcast Grp., Inc. v. FCC*, No. 14-1179, Document No. 1528874 (D.C. Cir. Dec. 23, 2014).

<sup>13</sup> See *Auction of Advanced Wireless Services (AWS-3) Licenses Closes*, Public Notice, DA 15-131 (Jan. 30, 2015), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2015/db0130/DA-15-131A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0130/DA-15-131A1.pdf).

<sup>14</sup> Statement of FCC Chairman Tom Wheeler (Jan. 29, 2015), available at <http://www.fcc.gov/document/chairman-wheeler-statement-auction-97> (“Wheeler AWS-3 Statement”); see also Statement of FCC Commissioner Jessica Rosenworcel (Jan. 29, 2015), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2015/db0129/DOC-331773A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0129/DOC-331773A1.pdf) (observing that the AWS-3 auction “demonstrates the extraordinary value of the airwaves all around us”); Statement of FCC Commissioner Mignon L. Clyburn (Jan. 29, 2015), available at <http://www.fcc.gov/document/statement-commissioner-clyburn-aw-3-auction-results> (stating that “Auction 97 has shown that demand for this spectrum was phenomenal”); Statement of Ajit Pai, FCC Commissioner (Jan. 29, 2015), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2015/db0129/DOC-331762A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0129/DOC-331762A1.pdf) (recognizing the “intense demand for mid-band spectrum”); Statement of Michael O’Rielly, FCC Commissioner (Jan. 29, 2015), available at [http://transition.fcc.gov/Daily\\_Releases/Daily\\_Business/2015/db0129/DOC-331769A1.pdf](http://transition.fcc.gov/Daily_Releases/Daily_Business/2015/db0129/DOC-331769A1.pdf) (concluding that “licensed spectrum is valued more highly than ever in the marketplace”).

mobile data traffic between 2014 and 2019, with average individual usage increasing over that time from less than 2 GB per month to more than 11.5 GB per month.<sup>15</sup> Of course, wireless users only will be able to consume that much data if wireless providers have enough spectrum to support it. Accordingly, to fulfill the public's seemingly insatiable demand for wireless data, it is imperative that the FCC adopts rules that will permit the reallocation of as much spectrum through the Incentive Auction as market forces will permit.

## II. ARGUMENT

### A. The Commission Should Adhere to Its Current Timeline and Commence the Auction in Early 2016.

In the *Comment PN*, the Commission reiterated its intention to “begin accepting applications to participate in the broadcast television spectrum incentive auction in the fall of 2015, and to start the bidding process in early 2016.”<sup>16</sup> Under this timeline, the FCC and carriers will be hard-pressed to make spectrum purchased in the auction available for mobile broadband use by 2020, much less by the 2015 date originally envisioned in the National Broadband Plan.<sup>17</sup> Given exploding consumer demand for wireless broadband, and given that the reallocated spectrum will not become available to carriers and consumers until several years after the auction, the Commission must remain steadfast in its plans to conduct the Incentive Auction in 2016. Further delay would materially disserve the public interest.

As Chairman Wheeler has recognized, the results of the recent AWS-3 auction “confirm the strong market demand for more spectrum.”<sup>18</sup> Moreover, as the attached White Paper by

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<sup>15</sup> See Cisco, *VNI Mobile Forecast Highlights, 2014-2019*, [http://www.cisco.com/assets/sol/sp/vni/forecast\\_highlights\\_mobile/index.html#~Country](http://www.cisco.com/assets/sol/sp/vni/forecast_highlights_mobile/index.html#~Country) (last visited Feb. 9, 2015).

<sup>16</sup> *Comment PN* ¶ 8.

<sup>17</sup> See FCC, *Connecting America: The National Broadband Plan* 84, 88-93 (2010), available at <http://transition.fcc.gov/national-broadband-plan/national-broadband-plan.pdf>.

<sup>18</sup> See Wheeler AWS-3 Statement.

Kagan Media Appraisals (“Kagan”) demonstrates, wireless carriers have both the incentive and the ability to secure an abundance of capital to bid for the superior spectrum that will be available in the Incentive Auction.<sup>19</sup>

Concerns about the ability of the wireless industry to fund vigorous bidding in the Incentive Auction are misplaced. As detailed in the *Kagan White Paper*, wireless companies are “favored guests in the credit markets.”<sup>20</sup> “Verizon and AT&T are high profile investment grade borrowers with multiple options for raising cash and monetizing assets,” while “T-Mobile and Sprint have investment grade parent companies with resources to support them at will.”<sup>21</sup> In fact, over the past five years, these companies have averaged nearly \$150 billion in new debt issues per year.<sup>22</sup> Verizon has announced plans to use the proceeds from its sale of tower and wireline assets to pay off its short term debt while AT&T has secured the flexibility to maintain a liberal debt-to-EBITDA ratio of up to 3.0x.<sup>23</sup>

Additionally, these companies each have strong incentives to aggressively bid for 600 MHz spectrum. As Kagan explains, “the quantity and distribution of spectrum holdings have become an indispensable tool for deploying high-quality, high-speed platforms, and for achieving differentiation that can attract and retain customers and create clear business advantages for companies in the enterprise space.”<sup>24</sup> T-Mobile and Sprint each have less than a third of the low band spectrum of AT&T and Verizon, placing them in a position of “need[ing]

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<sup>19</sup> See Kagan Media Appraisals, *Can the FCC Attract a Full House for the 2016 Broadcast Incentive Auction?* (Feb. 11, 2015) (“*Kagan White Paper*”), attached hereto as Exhibit A.

<sup>20</sup> *Id.* at 3, 33-34.

<sup>21</sup> *Id.* at 3.

<sup>22</sup> *Id.* at 34.

<sup>23</sup> See Transcript, *VZ - Verizon Communications Inc to Discuss FCC Spectrum Auction Results 3* (Feb. 17, 2015), available at: <http://www.verizon.com/about/file/5291/download?token=aemV7p-G>; AT&T Inc., SEC Form 8-K (Jan. 21, 2015), available at: <http://www.sec.gov/Archives/edgar/data/732717/000119312515016771/d856210d8k.htm>.

<sup>24</sup> *Kagan White Paper* at 4.

low band spectrum to compete effectively over the long term.”<sup>25</sup> AT&T and Verizon, despite having a greater amount of low band spectrum, have “tight ratios of available spectrum for the large customer bases they serve.”<sup>26</sup>

Given these factors, Kagan estimates that 600 MHz auction receipts “could well be in the \$60-80 billion range,” with “multiple bidders that will value 600 MHz spectrum at \$2.50/MHz pop or higher on average, even with restricted competition in some of the blocks.”<sup>27</sup> In fact, the primary barrier that Kagan identifies to achieving this revenue level is not the availability of financing available to wireless providers, but the amount of spectrum sold.<sup>28</sup> As Kagan concludes: “whenever the Incentive Auction takes place, the combination of surging wireless usage and demand, the desire to protect their franchises, the foreclosure value of getting control of limited spectrum resources, the lure of low-band spectrum and the plans for generating new and lucrative cross-platform revenue streams should be irresistible drivers for the carriers to be there and bid hard for the spectrum that suits their needs.”<sup>29</sup> Accordingly, there is no basis to further delay the Incentive Auction and deny the American public the benefits of bringing additional low band spectrum to market as quickly as possible.

**B. The Commission Should Revise the Reverse Auction Pricing Methodology Proposed in the *Comment PN*.**

The pricing methodology that the Commission adopts in the *Procedures PN* must achieve two goals: (1) it should be consistent with the pricing policy that the FCC adopted in the

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<sup>25</sup> *Id.* at 3, 25-32.

<sup>26</sup> *Id.* at 3, 15-24.

<sup>27</sup> *Id.* at 8. This is consistent with the conclusion of auction economist Peter Cramton and his research team (“The Cramton Team”), who project that the revenue for 10 blocks of 600 MHz spectrum should be *at least* \$84.9 billion. See Peter Cramton, Hector Lopez, David Malec, and Pacharasut Sujarittanonta, *Design of the Reverse Auction in the FCC Incentive Auction 20* (Feb. 19, 2015) (“*Cramton Expert Report*”), attached hereto as Exhibit B.

<sup>28</sup> *Kagan White Paper* at 8 (explaining that forward auction revenue estimate “depend[s] on how many MHz are being sold once the final stage of the auction is reached”).

<sup>29</sup> *Id.* at 36.

*Incentive Auction R&O*; and (2) it should maximize public welfare by allocating spectrum to its best use, as measured by the market forces of the auction.

As an initial matter, the FCC is bound, when adopting its pricing methodology for the reverse auction, by the policies that it adopted in the *Incentive Auction R&O*. Although courts generally provide agencies with discretion to interpret final rules adopted through notice-and-comment rulemaking, such deference is limited when an interpretation is “plainly erroneous or inconsistent with the regulation.”<sup>30</sup> “The reason for this limited deference is to prevent agencies from gaming the rulemaking provisions of the APA . . . by creating interpretive regulations that undercut regulations passed through notice-and-comment rulemaking.”<sup>31</sup> In the *Incentive Auction R&O*, the Commission committed to setting reverse auction prices based on a station’s “impact on the repacking process” or, in other words, its preclusive effect.<sup>32</sup> Thus, the agency must set prices for broadcasters that reflect this value.

In selecting between the many pricing methodologies that could be consistent with the *Incentive Auction R&O*, the Commission should focus on maximizing public welfare. This requires the FCC to adopt a pricing formula that results in the reallocation of the greatest amount of spectrum in the locations where it is valued the most while minimizing the corresponding loss of broadcast viewership. Because the FCC cannot possibly know how broadcasters will actually behave during the auction, it is particularly important to optimize the robustness of the auction by adopting policies that will result in the greatest likelihood of auction success, as defined by these parameters. Below, we discuss several modifications that preserve the core structure of the Commission’s pricing formula, but increase the likelihood of achieving these outcomes.

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<sup>30</sup> See *St. Francis Health Care Centre v. Shalala*, 205 F.3d 937, 943-44 (6<sup>th</sup> Cir. 2000) (quoting *Harris County Hosp. Dist. v. Shalala*, 64 F.3d 220, 221 (5<sup>th</sup> Cir. 1995)).

<sup>31</sup> *Crestview Parke Care Center v. Thompson*, 373 F.3d 743, 750 (6<sup>th</sup> Cir. 2004).

<sup>32</sup> See *Incentive Auction R&O* ¶ 451.

1. The FCC’s Foundation For Its Opening Price Methodology Is Flawed.

In the *Comment PN*, the Commission properly recognizes that its primary objective when setting opening prices for the reverse auction should be to set prices “high enough to encourage robust participation in the reverse auction.”<sup>33</sup> Yet, rather than proceed under this principle, which has been endorsed by broadcasters, wireless providers, and equipment manufacturers,<sup>34</sup> the FCC instead offers two purported justifications to *hold down* opening prices: that high prices will cause the reverse auction to last “many hundreds of rounds” and that the agency is bound by the “statutory goals” outlined in Section 309(j) of the Communications Act to limit payments to broadcasters. These fabricated justifications are unacceptable and have no place in designing the FCC’s reverse auction pricing policies.

As Chairman Wheeler has recognized, “[r]obust participation by broadcasters will be critical to the success of the auction.”<sup>35</sup> Stakeholders from every vantage point agree that the single most important element of a successful Incentive Auction is offering high initial prices to broadcasters. Verizon and Verizon Wireless, which have no direct interest in maximizing broadcaster revenue, recognized that “[t]he initial reverse auction reserve price for each of the exit, channel sharing and VHF relocation options must be high enough to ensure that

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<sup>33</sup> *Comment PN* ¶ 95.

<sup>34</sup> See, e.g., *EOBC Comments* at 8 (“Just as the Commission typically sets reserve prices in forward auctions sufficiently low to attract maximum participation and to ascertain the actual market price, so too must the Commission adopt an initial price for the reverse auction that is sufficiently high to determine the price at which broadcasters would be willing to relinquish their spectrum.”); Comments of Telecommunications Industry Association, GN Docket No. 12-268 (Jan. 25, 2013) (“TIA Comments”) at 13 (encouraging Commission to set “opening prices high enough to operate as real incentives”); Comments of Prospective Reverse Auction Participant, GN Docket No. 12-268 (Jan. 25, 2013) at 4 (encouraging the Commission to “set[] opening bid prices sufficiently high to attract broadcaster interest (even if, due to supply considerations, the FCC ultimately does not accept those high bids)”).

<sup>35</sup> Tom Wheeler, FCC Chairman, *The Incentive Auction: Helping Broadcasters Make Informed Decisions*, Official FCC Blog (June 25, 2014, 1:41 p.m.) <http://www.fcc.gov/blog/incentive-auction-helping-broadcasters-make-informed-decisions-0> (“June 25 Blog Post”),

broadcasters will have incentive to participate in the first instance.”<sup>36</sup> Similarly, U.S. Cellular encouraged the FCC to “set a high reserve price” to “incentivize broadcaster participation.”<sup>37</sup> This approach also found support from both the Telecommunications Industry Association and the Consumer Electronics Association.<sup>38</sup> The FCC’s focus, then, should be on convincing broadcasters that the prices it is offering are so high that every broadcaster must consider participating in the reverse auction (which will have the effect of creating competition and driving *down* prices), not devising ways to justify artificially lowering prices.

The Commission’s expressed concern—that if the prices are too high, the reverse auction will require “hundreds of rounds to reach final clearing prices”<sup>39</sup>—is a red herring. *First*, as a matter of public policy, the Commission should prioritize efficiency over expediency. After all, the recent AWS-3 auction lasted 341 rounds, yet Chairman Wheeler and House Communications and Technology Subcommittee Chair Greg Walden declared that, “By any measure, th[at] auction was a resounding success.”<sup>40</sup> *Second*, the Commission already is anticipating that the Incentive Auction will last “several months.”<sup>41</sup> *More fundamentally*, there is no direct correlation between the amount of the opening prices and the length of the auction. The FCC has proposed to determine prices by multiplying a station’s fixed interference volume by a variable

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<sup>36</sup> Comments of Verizon, GN Docket No. 12-268 (Jan. 25, 2013) at 28.

<sup>37</sup> Comments of U.S. Cellular, GN Docket No. 12-268 (Jan. 25, 2013) at 9.

<sup>38</sup> TIA Comments at 16 (suggesting setting opening bids “at a level sufficient to prompt the boards of publicly traded broadcast licensees to fulfill fiduciary obligations by at least considering auction participation”); Reply Comments of Consumer Electronics Association, GN Docket No. 12-268 (Mar. 12, 2013) at 5 (encouraging the FCC to “promote broadcaster participation . . . by establishing initial bid prices that ‘exceed the expectations of potential sellers’”).

<sup>39</sup> *Comment PN ¶ 95.*

<sup>40</sup> Tom Wheeler and Rep. Greg Walden, OpEd, *Spectrum Auction is Bipartisanship in Action*, The Hill (Jan. 30, 2015), available at <http://thehill.com/opinion/op-ed/231196-spectrum-auction-is-bipartisanship-in-action>.

<sup>41</sup> See Deborah D. McAdams, *FCC Proposes Top Station Opening Bids Totaling \$39 Billion*, TVTechnology (Feb. 9, 2015), available at <http://www.tvtechnology.com/news/0086/fcc-proposes-top-station-opening-bids-totaling--billion/274464>.

base clock price. As such, the length of the auction will be determined not by the volume metric, but rather by the rate at which the base clock price descends. At the proposed 3% decrement, prices would fall in half by round 24. Even if the agency adopts a 1% decrement, as discussed in Section II.E.1, *infra*, prices will reach 60% of opening prices by round 50 and half of opening prices by round 70. This is not a slow pace, even if the Commission needs to move to a new clearing target and re-run some rounds for bidders previously frozen and now reactivated. The FCC can further manage the length of the auction by fixing decrements based on the opening clock price rather than the new clock price for each round. Thus, concerns about the length of the reverse auction should not dictate the FCC's opening price offers for the reverse auction.

Moreover, the FCC's embrace of "statutory goals" specified in its general auction authority is even further misplaced.<sup>42</sup> In the Omnibus Budget Reconciliation Act of 1993, Congress granted the Commission with the authority to issue certain types of "*initial license[s] or construction permit[s]*" through auctions.<sup>43</sup> The Act specified certain objectives that the agency should incorporate into its methodology for those auctions, including: (a) the development and rapid deployment of new technologies, products and services, (b) promoting economic opportunity and competition, (c) recovery for the public of a portion of the value of the public spectrum resource made available for commercial use; and (d) efficient and intensive use of the electromagnetic spectrum.

By its terms, this section (now codified at 47 U.S.C. § 309(j)(3)) cannot apply to the broadcast licenses offered in the reverse auction. As the Commission repeatedly has recognized,

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<sup>42</sup> *Comment PN ¶ 95* ("In designing a system of competitive bidding, which includes setting opening prices, we promote several statutory goals, including 'recovery for the public of a portion of the value of the public spectrum resource made available for commercial use and avoidance of unjust enrichment through the methods employed to award uses of that resource.'").

<sup>43</sup> Pub. L. No. 103-66, 107 Stat. 388 (1993).

the “Incentive Auction” actually consists of two separate auctions: a reverse auction and a forward auction.<sup>44</sup> The statutory objectives in 309(j)(3), meanwhile, only apply to certain “licenses or permits that the Commission *grants* through a competitive bidding system” (*e.g.*, the licenses offered in the forward auction). Because the Commission will not be granting any licenses in the reverse auction, the Commission’s general auction authority and the rules pertaining thereto do not apply.

Additionally, there is no basis to consider these *forward* auction “objectives” when adopting procedures for the *reverse* auction. Section 309(j)(3) does not command any particular outcome; rather, it imposes a procedural requirement on the FCC when “identifying classes of licenses and permits to be issued by competitive bidding, in specifying eligibility and other characteristics of such licenses and permits, and in designing the methodologies for use” in auctions for initial licenses or construction permits. Thus, even though the forward and reverse auctions are interrelated, the prices that the Commission offers to broadcasters in the reverse auction have no bearing on whether the agency satisfies its statutory obligation to include the necessary safeguards in its forward auction design.

Perhaps it is not surprising, then, that the FCC did not once mention a reverse auction statutory obligation under Section 309(j)(3) during the notice-and-comment rulemaking in this proceeding. Although the Incentive Auction *Notice of Proposed Rulemaking* included four references to Section 309(j)(3) and the *Incentive Auction R&O* included nine such references—all were in the context of policies for the *forward* auction.<sup>45</sup> Now, the Commission is attempting

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<sup>44</sup> See, *e.g.*, *Comment PN* ¶ 2 (“The incentive auction will include a “reverse auction” in which broadcasters will offer to voluntarily relinquish some or all of their spectrum usage rights, and a “forward auction” of new, flexible use licenses suitable for providing mobile broadband services.”).

<sup>45</sup> *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd. 12357 ¶¶ 293 & n.427, 381 n. 579, 383, 384 & nn.596 &

to shift the burden of this forward auction design obligation to the reverse auction. Quite simply, Section 309(j)(3) does not apply the reverse auction. The Commission should adopt reverse auction procedures based on their contribution to the goal of maximizing spectrum reallocation rather than their compliance with a contrived, nonexistent statutory obligation.

Finally, even if the FCC was correct that it must consider the objectives identified in Section 309(j)(3) in adopting its reverse auction procedures, there is no basis for considering a single objective in isolation, as the Commission does in the *Comment PN*. When considering the statutory factors in their totality, it is clear that the balance favors setting prices high for all stations and allowing market forces (as informed by the Commission’s feasibility checker) to dictate the prices paid to each station.

*First*, artificially reducing prices offered to broadcasters will hinder the development and rapid deployment of new technologies, products, and services by limiting broadcaster participation and, in turn, the amount of spectrum that is reallocated in the Incentive Auction. As Chairman Wheeler and Representative Walden recently acknowledged, “Bringing additional spectrum to market . . . contributes to technological innovation, greater competition, and more consumer choices.”<sup>46</sup>

*Second*, limiting prices to broadcasters will harm economic opportunity and competition by failing to develop the market-based reallocation that Congress desired and that the FCC has promised. According to a wireless industry estimate cited in that same OpEd, “for every 10

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591 (2012) (“*NPRM*”); *Incentive Auction R&O* ¶¶ 63 n.171, 343 & n.1019, 344 & n.1021, 345 & n.1026, 472 & n.1350, 324 & n.985, 479 n. 1372, 749 nn.2114 & 2116.

<sup>46</sup> Tom Wheeler and Rep. Greg Walden, *infra* n.40.

Megahertz of spectrum licensed for wireless broadband, 7,000 American jobs are created and U.S. gross domestic product increases by \$1.7 billion.”<sup>47</sup>

*Finally*, needlessly capping broadcaster prices will preclude efficient and intensive use of the electromagnetic spectrum by preventing spectrum from being allocated to its highest and best use. As demonstrated in the attached Expert Report by The Cramton Team, the public welfare is maximized by offering high initial prices to all broadcasters and establishing a competitive market for broadcast spectrum.<sup>48</sup>

On balance, then, artificially controlling prices offered to broadcasters will hinder, not promote, the objectives set forth in Section 309(j)(3).

2. The FCC’s Opening Price Methodology Is Inconsistent With the Pricing Policies Adopted In the *Incentive Auction R&O*.

Although the Commission did not adopt a specific methodology in the *Incentive Auction R&O* for how it would set prices for the reverse auction, it did commit to a framework for setting those prices that it must now follow in the *Procedures PN*. *First*, the agency explained that a station’s price would account for objective factors “that affect the availability of channels in the repacking process and, therefore, the value of a station’s bid to voluntarily relinquish spectrum usage rights.”<sup>49</sup> As the FCC explained, under this policy, “a station with a high potential for interference will be offered a price that is higher than a station with less potential for interference to other stations.”<sup>50</sup> *Second*, the Commission stated that it would set prices based on a station’s “impact on the repacking process” or, in other words, its preclusive effect, and not on “the

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<sup>47</sup> *Id.*

<sup>48</sup> *Cramton Expert Report* at 34.

<sup>49</sup> *Incentive Auction R&O* ¶ 450.

<sup>50</sup> *Id.*

potential market or enterprise value of stations.”<sup>51</sup> Although the *Incentive Auction R&O* identified certain possible factors that the agency could use, it did not adopt those factors, nor did it justify how the proposed factors were consistent with the pricing policy adopted in the *Incentive Auction R&O*.

The pricing methodology proposed in the *Comment PN* cannot be reconciled with the framework that the FCC adopted in the *Incentive Auction R&O*. In the *Comment PN*, the agency proposes a formula that multiplies a unique volume factor calculated for each station by a base clock price for all UHF stations.<sup>52</sup> The volume component is calculated by multiplying the square root of the interference-free population covered by a station’s service contour by the square root of the number of co-and adjacent channel constraints a station would impose on repacking on a pairwise basis.<sup>53</sup>

The *Comment PN* does not even attempt to justify how this proposed methodology reflects a station’s “impact on the repacking process,” as required under the policy adopted in the *Incentive Auction R&O*. Even the Commission’s conclusory statement that the proposed approach “will yield opening bid prices that reasonably approximate underlying relative differences in value of stations to the auction” is suspect.<sup>54</sup> *First*, the policy that the FCC adopted in the *Incentive Auction R&O* did not call for it to “reasonably approximate” a station’s impact on the repacking process. Rather, it limited the factors upon which the Commission could discriminate among stations to those “that affect the availability of channels in the repacking process and, therefore, the value of a station’s bid to voluntarily relinquish spectrum

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<sup>51</sup> *Id.* ¶ 451.

<sup>52</sup> *Comment PN* ¶ 95.

<sup>53</sup> *Id.* ¶ 96.

<sup>54</sup> *Id.*

usage rights.” *Second*, as the Coalition repeatedly has demonstrated, the interference-free population covered by a station’s contour has nothing to do with the station’s “impact on the repacking process.”<sup>55</sup> Thus, instead of reflecting the value of each station to the repacking process, the agency’s proposal will simply cause it to pay more money for stations with a smaller impact on the repacking process. Attached as Exhibit D hereto is a list of more than 1,100 stations that directly block service to a population at least two-and-a-half times greater than their interference-free population, and, thus, are undervalued by the proposed interference-free population metric.

Instead of explaining how its pricing proposal is consistent with the policies adopted in the *Incentive Auction R&O*, the FCC offers four alternative justifications for its proposed pricing methodology—none of which can withstand scrutiny:

*First*, the Commission claims that the inclusion of a population component will enable the agency “to clear more spectrum in markets where the forward auction value of relinquished spectrum usage rights is apt to be higher.”<sup>56</sup> However, the *Comment PN* fails to explain how discriminating among broadcasters based on population served will achieve this result. As the

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<sup>55</sup> See Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (Mar. 26, 2013) (demonstrating that a station with less population coverage could be more difficult to repack than a station with substantially greater population coverage); Letter from Preston Padden, Executive Director, EOBC, to Ruth Milkman, Brett Tarnutzer, Sasha Javid, and Evan Kweral, FCC (Apr. 7, 2013) (citing Mar. 26, 2013 filing); Campbell, *supra* note 8 at 24 (“Though a television station’s coverage contour could reflect its value as a television station, it is irrelevant to the market value of the station’s spectrum for mobile services or the value of the station’s participation in the FCC’s spectrum clearing efforts.”); Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (Apr. 21, 2014) (statistically demonstrating the “minimal correlation between the number of POPs served by a station and its value in clearing the broadcast spectrum”); Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (Apr. 28, 2014) (same); Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (May 8, 2014) (same); Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (Dec. 4, 2014) (demonstrating through statistical analysis and specific examples how “a station with a relatively low interference-free POP count has an oversized ‘impact on the repacking process’ because it is mutually exclusive with stations in one or more larger DMAs.”); from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (May 8, 2014) (same); Letter from Preston Padden, Executive Director, EOBC, to Marlene H. Dortch, Secretary, FCC (Jan. 12, 2015). Attached as Exhibit C hereto are three illustrations of how the use of population within a station’s contour to establish prices and preclusion to determine repacking produces disparate results.

<sup>56</sup> *Comment PN* ¶ 98.

FCC-commissioned “Greenhill Report” recognized, “[s]tations with lower coverage populations may also be important to the repacking process insofar as their interference footprint prevents larger stations in critical areas from being repacked.<sup>57</sup> Thus, the key to clearing spectrum in markets where forward auction values will be highest is to offer high prices to all stations that could contribute to freeing spectrum in those markets. Offering wildly different prices to broadcasters with similar interference profiles will not contribute to the clearing of a single additional station. Instead, it creates a risk of non-participation by lower priced stations, resulting in less, not more, clearing in markets with the highest forward auction values. For example, the FCC’s proposal results in lower opening prices for a number of stations than the prices that the Commission released in October 2014, which were supposed to reflect the potential final amounts that those stations could receive.<sup>58</sup> If the FCC’s own methodology for estimating a station’s value reflected a higher price than the price the agency is now willing to offer, this demonstrates a critical flaw in the Commission’s pricing formula that could result in less spectrum reallocation.

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<sup>57</sup> Greenhill & Co., LLC, *Incentive Auction Opportunities for Broadcasters* 30-34 (Oct. 2014), available at <http://wireless.fcc.gov/incentiveauctions/learn-program/docs/ia-opportunities-book.pdf> (“October Greenhill Book”).

<sup>58</sup> Compare *id.* at 30-34 with Greenhill & Co., LLC, *Incentive Auction Opportunities for Broadcasters* 25-28 (Feb. 2015, available at [http://wireless.fcc.gov/incentiveauctions/learn-program/Incentive\\_Auction\\_Opportunities\\_Book\\_Information\\_Sessions\\_2\\_5\\_15.pdf](http://wireless.fcc.gov/incentiveauctions/learn-program/Incentive_Auction_Opportunities_Book_Information_Sessions_2_5_15.pdf)). For example, the October 2014 Greenhill book estimates that the maximum full power station in San Diego could receive \$250 million in the auction, while the maximum Class A station in San Diego could receive \$230 million. Yet, under the FCC’s proposed formula, the *starting* price for the top full power station in San Diego would be \$220 million and the *starting* price for the top Class A station would be \$160 million. Because prices can only go down from there, these stations are assured to receive *at least* \$30 million and \$70 million less, respectively, than the Commission’s prior estimates. Similarly, the October 2014 book highlighted the “compelling” compensation for Class A broadcasters in Wilkes-Barre-Scranton, PA, with estimated high end compensation of \$56 million for the top station. Yet, the *starting* price for that station, under the FCC’s proposed methodology, is \$38 million—an \$18 million drop before the auction even begins. The October 2014 book also touted “compelling” compensation for stations in Palm Springs, CA--\$180 million for the top full power station—yet, now it proposes to offer that station an opening price of just \$87 million.

*Second*, the Commission claims that the proposed methodology “will enable [it] to close the auction in a reasonable number of rounds.”<sup>59</sup> As explained in Section II.B.1, *supra*, opening prices will have only a minor effect on the number of rounds. Moreover, as The Cramton Team explains, higher prices will attract greater participation and more competition, which will lead to a more efficient and successful auction.<sup>60</sup> This is well worth the cost of a few additional days or weeks of bidding.

*Third*, the Commission claims that the pricing methodology will allow it to “meet [its] statutory obligation to promote the interests of taxpayers in getting a portion of the value of the spectrum sold at the forward auction.”<sup>61</sup> As also described in Section II.B.1, *supra*, the FCC’s only statutory obligation is to adopt *forward auction methodology* that includes safeguards to recover a portion of the value of that spectrum for taxpayers. This procedural obligation has no application to the reverse auction. Moreover, the Commission’s proposed pricing methodology would negatively impact the other statutory objectives in Section 309(j)(3).

*Finally*, the Commission claims that its “use of a population factor is consistent with the fact that the spectrum recovered from broadcasters will enable flexible use licenses to be offered in the forward auction subject to procedures that are based, among other things, on the population covered by each PEA.”<sup>62</sup> This assumes, improperly, that the population covered by a station’s contour corresponds to the population covered by any PEAs that it would prevent the FCC from offering in the forward auction. In fact, as the agency has recognized, a station’s real value in the auction is its impact on the repacking process.<sup>63</sup> The Commission would be remiss

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<sup>59</sup> *Comment PN* ¶ 98.

<sup>60</sup> *Cramton Expert Report* at 34.

<sup>61</sup> *Id.*

<sup>62</sup> *Id.*

<sup>63</sup> *Incentive Auction R&O* ¶ 451.

to abandon this conclusion. A formula that prioritizes a station's interference profile over the station's own population served will better achieve this objective by paying more to the stations that will have the greatest impact on the population that the Commission can offer in the forward auction.

3. The FCC Should Adopt an Alternative Pricing Methodology That Maximizes Public Welfare and Better Serves the Commission's Own Objectives.

Not only is the FCC's proposed pricing formula inconsistent with the policies adopted in the *Incentive Auction R&O*, but it also fails to maximize public welfare by creating an unnecessary risk that the Commission will not be able to reallocate an efficient amount of spectrum for mobile broadband use. The Coalition has evaluated hundreds of alternative formulas for calculating a station's value that are more consistent with the framework that the agency adopted in the *Incentive Auction R&O* and that better achieve the agency's objectives.

The Coalition initially focused on alternatives that, consistent with the framework that the FCC adopted in the *Incentive Auction R&O*, reflect a station's "impact on the repacking process." The purest form of measuring a station's value in the repacking, its "freeze probability," uses only the data from the FCC's domain and interference constraint files to determine, based on thousands of simulations, how likely a station is to be "frozen" during the auction because it cannot be repacked. To calculate "freeze probability," we determine the frequency (expressed as a percentage) at which the station freezes in thousands of simulations with a random order of station exits.<sup>64</sup> To avoid extremes, freeze probabilities are bounded with a floor of 10% and a ceiling of 80%.<sup>65</sup> By excluding any assumptions about broadcaster values and participation, this formula provides the "best measure of a station's value in clearing, as

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<sup>64</sup> *Cramton Expert Report* at 6, 35.

<sup>65</sup> *Id.* at 35.

determined from the population that is precluded if the station is repacked and the likelihood that it must clear to maintain a feasible repack.”<sup>66</sup> This number can then be scaled to a particular high starting price, just as the Commission has done under its formula.

Another alternative is to replace the population component of the FCC’s formula, which focuses solely on the population served by a single broadcast station, with a preclusion component, which measures the population that cannot be served by another broadcaster if that station has to be repacked. The Coalition has calculated a station’s precluded population as the population that cannot be served by any other station if the specified station is repacked. As The Cramton Team explains, this measure “reflects that fact that a broadcaster’s signal extends far beyond its protected contour, creating a ‘zone of preclusion’ in which no other broadcasting and no wireless operations could exist without experiencing destructive interference.”<sup>67</sup>

These two alternatives can be combined into a single volume formula:

$$\text{Freeze Volume} = (\text{Precluded population})^5 \times (\text{Freeze probability})$$

Unlike the FCC’s proposed formula, with freeze volume, “a station with a high potential for interference will be offered a price that is higher than a station with less potential for interference to other stations.”<sup>68</sup>

If the Commission nevertheless insists on including a station’s interference-free population in the volume metric, it should at least re-balance that metric to better reflect a station’s “impact on the repacking process” and to maximize public welfare. The FCC can achieve this result by preserving the fundamental structure of its proposal while modifying the

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<sup>66</sup> *Id.* at 6.

<sup>67</sup> *Id.* at 6-7.

<sup>68</sup> *Comment PN* ¶ 98.

exponent of the population factor from 0.5 to 0.25 (the “EOBC Compromise Proposal”). Thus, a station’s volume would be measured using the following formula:

$$\text{Station Volume} = (\text{Interference})^{0.5} * (\text{Population})^{0.25}$$

There are numerous benefits to the EOBC Compromise Proposal. Although this formula continues to account for a station’s population served, it produces a result that more closely reflects the pricing policy that the Commission adopted in the *Incentive Auction R&O*. By rebalancing the volume inputs, the EOBC Compromise Proposal places a greater emphasis on how a station affects “the availability of channels in the repacking process and, therefore, the value of a station’s bid to voluntarily relinquish spectrum usage rights.”<sup>69</sup> In fact, the reweighted exponents better fit the “freeze probability” and, thus, as The Cramton Team explains, “follow directly from the FCC constraint files; whereas, the FCC exponents were simply chosen arbitrarily based on some ‘equal weight’ notion and constant returns to scale (the exponents sum to one), neither of which are justified in any way by the FCC.”<sup>70</sup> As a result, under the EOBC Compromise Proposal, “a station with a high potential for interference” will be more likely to be “offered a price that is higher than a station with less potential for interference to other stations.”<sup>71</sup>

Additional benefits of the EOBC Compromise Proposal, compared to the FCC’s proposed formula, include: (1) increased robustness; and (2) a smaller loss in broadcaster coverage. Adopting the EOBC Compromise Proposal will increase the likelihood of a successful auction that maximizes spectrum reallocation. By increasing the incentive for smaller stations to participate—particularly those with an oversized preclusive effect—the EOBC Compromise

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<sup>69</sup> *Incentive Auction R&O* ¶ 450.

<sup>70</sup> *Cramton Expert Report* at 6.

<sup>71</sup> *Incentive Auction R&O* ¶ 450.

Proposal increases the likelihood that the Commission will receive enough volunteers to achieve the maximum possible clearing target with the fewest impairments.<sup>72</sup> Additionally, by prioritizing payments to stations with the highest population coverage, the FCC's proposal predictably results in accepting relinquishment bids from more stations with large population coverage. The Cramton Team estimates that the EOBC Compromise Proposal, in comparison, will result in approximately 50 million people receiving one additional over-the-air television channel post-auction, because this formula prioritizes freezing the stations that are most difficult to repack, allowing more efficient use of broadcast spectrum by the remaining broadcasters.<sup>73</sup> The public interest, therefore, would be far better served by the EOBC Compromise Proposal.

4. The Commission Should Increase the Base Clock Price to Reflect the Proven Demand for Low-Band Spectrum.

No matter what formula the FCC adopts for calculating a station's volume, it should increase the base clock price to reflect the increased value of broadcast spectrum in light of the unprecedented success of the AWS-3 auction. In the *Comment PN*, the Commission proposed, based on its "work to date," to "set the base clock price so as to yield an opening bid of \$900 million" for the station with the greatest volume.<sup>74</sup> At the time, the agency was assuming that the forward auction prices would average \$1.50 MHz-pop, total auction revenues could approach \$45 billion, and the FCC would need to reserve \$5 billion to cover the costs of FirstNet.<sup>75</sup> Less than two months later, the AWS-3 auction closed, raising more than \$41 million at an average of \$2.715/MHz-pop—reflecting a fundamental shift in the way the communications industry values

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<sup>72</sup> *Cramton Expert Report* at 6.

<sup>73</sup> *Id.*

<sup>74</sup> *Comment PN* ¶ 97.

<sup>75</sup> *See* October Greenhill Book at 2, 35. Although AWS-3 prices had already begun to skyrocket when the FCC adopted the *Comment PN*, on December 11, 2014, the Coalition believes that the agency did not account for those results when it settled on the \$900 million maximum price at least several weeks earlier.

spectrum. At that price, even without accounting for the superior qualities of 600 MHz spectrum, ten blocks of spectrum in the Incentive Auction would yield nearly \$85 billion.<sup>76</sup> Even the more conservative Kagan estimate predicts Incentive Auction revenues to reach between \$60 billion and \$80 billion.<sup>77</sup>

There are several valid reasons to scale opening prices higher. *First*, because, as the Commission has acknowledged, high prices motivate broadcaster participation, raising the price offered to every broadcaster will help optimize participation and provide the FCC with an insurance policy against the possibility that some broadcasters have higher than expected reservation values (and would not participate under the proposed price scale).<sup>78</sup> This is particularly true in light of the AWS-3 auction, which has forced a recalibration of spectrum value.<sup>79</sup> *Second*, greater participation may result in lower total payments to broadcasters by ensuring that there is sufficient competition to drive down prices in most markets. *Finally*, the FCC has the flexibility to offer substantially higher opening prices.<sup>80</sup> To clear 126 MHz of spectrum on a near-nationwide basis, the Commission will only need to make payments to approximately 500 stations<sup>81</sup>—most at prices well below their opening offers. Thus, expected payments to broadcasters would be substantially less than the conservative forward auction revenue estimates provided by Kagan and The Cramton Team, providing the Commission with the flexibility to improve the robustness of the auction by increasing starting prices without any risk of jeopardizing its ability to satisfy the final stage rule.

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<sup>76</sup> *Cramton Expert Report* at 20.

<sup>77</sup> *Kagan White Paper* at 8.

<sup>78</sup> *Cramton Expert Report* at 5, 34.

<sup>79</sup> *Id.*

<sup>80</sup> *Id.*

<sup>81</sup> *Id.* at 25.

The question, then, is what base clock price to use instead of the \$900 price proposed in the *Comment PN*. The Cramton Team found that the increased prices: (1) make the auction more robust by increasing the likelihood of a successful auction; (2) better reflect the results of the AWS-3 auction; and (3) add little to the clearing cost due to competition.<sup>82</sup> Although the AWS-3 results easily justify raising the clock price to \$1,500 or beyond, the Coalition would support even a more moderate increase of at least \$1,100.

C. **The Commission Should Adopt Alternative Procedures for Setting the Initial Clearing Target and Reserve Pricing That Maximize Reallocation.**

The procedures that the FCC establishes for setting the initial clearing target and for reserve pricing are critical to determining whether the Commission can achieve its goal of “allow[ing] market forces to determine the highest and best use of spectrum.” Accordingly, the Commission should adopt procedures that maximize public welfare while remaining both simple and predictable. The procedures should maximize public welfare by balancing the need to reallocate as much spectrum as possible in the markets where it will be valued the highest while minimizing impairments nationwide. The procedures also should be simple enough that no broadcaster should need to hire an auction economist to understand what happens after the FCC collects initial applications. An auction that is not simple is neither predictable nor transparent. Finally, the procedures should be predictable enough that broadcasters know that if a certain event or sequence of events occurs, a particular result will follow. This requires adopting procedures that are formulaic and non-discretionary so that the initial clearing target and reserve prices are set through formulas adopted in the *Procedures PN*, not by the FCC’s staff and outside economists analyzing broadcaster behavior and *then* deciding how to implement these critical components of the auction.

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<sup>82</sup> *Id.* at 5.

1. The Commission Should Adopt an Alternative Proposal for Setting the Initial Clearing Target that Better Serves The Goal of Maximizing Reallocation.

The FCC’s proposal for setting an initial clearing target both fails to optimize the amount of spectrum reallocated and is unnecessarily complicated. In the *Comment PN*, the Commission identifies the primary objective of the proposed clearing target optimization procedure as minimizing the total impaired weighted-pops nationwide.<sup>83</sup> This objective confuses necessary impairment (impairment created by pursuing maximum spectrum reallocation in the markets where it will create the greatest public welfare) with artificial impairment (impairment created when, despite adequate supply, the FCC refuses to pay broadcasters a price at or below their opening bid levels). While the clearing target should minimize artificial impairment, it should not allow necessary impairment to reduce the amount of spectrum reallocated in those areas where it is valued the most. In the *Incentive Auction R&O*, the agency recognized this distinction when it concluded that “accommodating market variation is necessary” so that “more spectrum can be made available in the forward auction.”<sup>84</sup> Consistent with this approach, then, the primary objective of the clearing target optimization procedure should be to maximize the amount of spectrum repurposed in the areas where demand for that spectrum is greatest. This will maximize public welfare by ensuring that as much spectrum as possible is reallocated to fulfill the rapidly growing demand for mobile broadband.

The FCC’s proposal also is neither simple nor predictable. The Commission has identified a number of “additional criteria” that it may consider when setting the initial clearing target, but fails to explain how these additional criteria would be incorporated into the process. With each factor that the FCC adds to its formula, the formula becomes more complicated and

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<sup>83</sup> *Comment PN* ¶ 43.

<sup>84</sup> *Incentive Auction R&O* ¶ 82.

less transparent to participating broadcasters. Furthermore, any proposal that would allow the agency's staff and outside economists to subjectively account for these factors would lack both predictability and transparency.

Rather than adopting this complicated approach, the FCC should set the initial clearing target based on the maximum amount of spectrum that can be reallocated in New York or Los Angeles (whichever is greater) after optimization. For example, if the opening prices attract sufficient participation to reallocate 126 MHz in New York and 108 MHz in Los Angeles, the Commission would set the clearing target at 126 MHz and accept the resulting necessary impairment in Los Angeles. In The Cramton Team's simulations, New York and Los Angeles served as "the most common and important bottlenecks that limit the quantity of spectrum that can be repurposed."<sup>85</sup> By setting the clearing target in a way that optimizes the amount of spectrum reallocated in those two markets, the FCC would unlock spectrum value nationwide while, at the same time, reallocating the greatest amount of spectrum in the markets where it has the greatest economic value. This simple approach reflects the commercial reality that the viability of extending a wireless band plan is likely linked to availability of spectrum in a few key markets, which underpin economies of scale in the wireless industry for the entire country.

Under no circumstance should the Commission "favor an initial channel assignment with at least a minimum level of vacancy in the broadcasting portion of the band."<sup>86</sup> The *Comment PN* suggests that the benefit of this approach is that it might "avoid[] the need to move to a lower clearing target because" the auction fails to satisfy the final stage rule.<sup>87</sup> But, the Commission will not know if it can satisfy the final stage rule at a particular clearing target until it runs the

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<sup>85</sup> *Cramton Expert Report* at 8.

<sup>86</sup> *Comment PN* ¶ 45.

<sup>87</sup> *Id.*

auction. The Cramton Team conservatively estimates that the incremental value of each 5x5 MHz block of spectrum will be \$8.49 billion, with a flat demand curve for clearing targets between 84 MHz and 126 MHz.<sup>88</sup> Thus, it would make no sense to sacrifice the public welfare benefits of a higher national clearing target at the outset to account for the possibility that the FCC might need to lower its clearing target during the auction. In fact, setting a higher national clearing target could make it more likely that the auction will satisfy the final stage rule by unlocking spectrum value in markets where the Commission will not incur any cost to aggregate spectrum for reallocation.

If the Commission does adopt the proposal in the *Comment PN* for setting the initial clearing target, it should set the percentage in a way that would not create artificial impairment in New York or Los Angeles. The *Comment PN* does not include any discussion of the effect of the 20% clearing target or an explanation of how permitting impairment of up to 20% of weighted pops “will promote the central goal of a successful auction that allows market forces to determine the highest and best use of spectrum.” In the *Incentive Auction R&O*, the FCC adopted policies to “prevent the ‘least common denominator market’ from limiting the quantity of spectrum [the FCC] can offer generally across the nation.”<sup>89</sup> Setting the maximum interference threshold at 20% would defeat this objective by failing to reallocate a substantial amount of spectrum—despite adequate supply and demand—just to satisfy an arbitrary, *ex ante*, threshold. Notwithstanding these points, if the FCC insists on using a simple percentage threshold for determining acceptable impairment, then the use of weighted population based on past auction results is clearly an essential component. Without such weighting, there would be

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<sup>88</sup> *Cramton Expert Report* at 24.

<sup>89</sup> *Incentive Auction R&O* ¶¶ 17, 44, 82.

too great a risk that the FCC will either discard a viable band plan or proceed with one that is doomed because all the key markets are impaired.

2. The Commission Should Adopt an Alternative Proposal for Reserve Pricing That Better Serves The Goal of Maximizing Reallocation.

DRP is an unnecessarily complex proposal to solve a very narrow “problem” that could have devastating effects on the Incentive Auction.<sup>90</sup> As described in the *Comment PN*, DRP will “enable the auction system to reduce the price offered a station below the opening or previous round’s price even when the station cannot feasibly be assigned a channel in its pre-auction band, so long as assigning the station a channel in the 600 MHz Band will not result in inter-service interference that exceeds the nationwide standard for market variation.”<sup>91</sup> There are several critical problems with this proposal. *First*, the FCC has not articulated a valid need for DRP. The proposed auction design has adequate safeguards in place to prevent against “overpaying” a broadcast station. Any scheme to artificially limit payments to broadcasters is contrary to the market-based principles that the Commission has espoused. *Second*, DRP is the antithesis of simplicity. Under DRP, the price paid to those broadcasters most critical to unlocking the value of spectrum nationwide will be arbitrary and impossible to predict. The only predictable aspect of DRP is that no station will receive its opening price or likely anything approaching its opening price. *Third*, and most importantly, DRP is destructive of spectrum value and public welfare. By its design, DRP will create artificial impairment even where there is adequate supply of and

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<sup>90</sup> Although the Commission raised the possibility of using DRP in the *Incentive Auction R&O*, it deferred this issue for the *Comment PN*. See *id.* ¶ 335 (“Although each stage generally will be associated with a single clearing target, during the first stage of the auction the target may be reduced or modified in certain areas if we implement a ‘dynamic reserve price,’ under which bidders would be asked if they are willing to accept lower prices in areas without bidding competition (that is, areas where there is not active bidding by more stations than needed to meet the initial clearing target).”). Thus, unlike the basis for setting opening prices, which already has been decided, the Commission is free to abandon DRP.

<sup>91</sup> *Comment PN* ¶ 106.

demand for additional spectrum. The FCC should not tolerate, much less promote, a policy that intentionally reduces the amount of spectrum available for reallocation, as is the case with DRP.

a. *DRP Will Produce Inefficiencies, Cause Less Spectrum Reallocation, and Disserve the Public Interest.*

In the *Comment PN*, the FCC explains that it needs DRP to avoid paying a station its opening price “merely because there is no channel to offer in a pre-auction band—a result that would have little or nothing to do with what the station would be willing to accept in exchange for relinquishing its spectrum usage rights.”<sup>92</sup> This purported justification is an affront to the Commission’s repeated commitment to conducting a market-driven auction. Under the reverse auction structure that the agency adopted in the *Incentive Auction R&O*, prices are decremented until the point at which the feasibility checker determines that a particular station is critical to the clearing scenario. The fact that this price may exceed a broadcaster’s “walk-away” level is key to attracting bidders to participate and an essential part of the price discovery process in this unique auction. In all but a few limited scenarios, the only reason that the FCC would need to pay a station its opening price offer is because other stations chose not to relinquish their spectrum at the opening prices. If this happens, the “problem” is not that the price for a given station is too high; it is that the FCC has not offered prices high enough to create a competitive market. The solution to this problem is to offer higher prices, not to artificially restrict demand. The Commission’s approach—offering prices that may not be high enough to create a competitive market, while, at the same time, preventing sellers from commanding the prices that the FCC-created market will justify—would distort the marketplace and produce artificial and inefficient results.

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<sup>92</sup> *Id.*

Because DRP is neither simple nor predictable, it creates the impression among broadcasters that the FCC is engaging in a bait-and-switch: offering broadcasters one price while hiding the ball on how much the Commission actually is willing to pay. The Commission still has not fully detailed how it would implement DRP. Whereas the *Comment PN* contains detailed technical appendices for calculating inter-service interference, optimizing the clearing target, and setting and processing bids in both the forward and reverse auctions, there is no comparable description of DRP. Even for the few broadcasters who, nevertheless, have been able to comprehend how DRP will work in theory, because it includes so many variables—many of which have nothing to do with the demand for that station’s spectrum—the concept remains amorphous and virtually impossible to predict. What broadcasters do understand is that DRP provides the FCC with a blunt tool to drive down the price of stations that are critical to achieving a particular clearing target. This is exactly the wrong message to be sending to the same broadcasters whose participation is critical to maximizing spectrum reallocation and corresponding public welfare.

Aside from making the auction overly complicated, the other effect of DRP is to destroy spectrum value by introducing additional impairment beyond that which is necessary to establish a high national clearing target. Under DRP, the FCC not only would be accepting impairment beyond the minimum amount required, but it actually would *require* additional impairment in most scenarios before DRP could be turned off. In the *Comment PN*, the Commission proposes that “the reverse auction will begin in the first stage with DRP procedures in effect.”<sup>93</sup> Thus, under the proposed auction design, ***no station could receive its opening bid price***, no matter how valuable that station is to the auction or how close that price is to the station’s individual exit

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<sup>93</sup> *Id.* ¶ 107.

(reservation) price. If, as prices are reduced, a station declines the FCC's offer, "the station may provisionally be assigned a channel in the 600 MHz band, creating potential impairments to one or more 600 MHz Band blocks."<sup>94</sup> Because creating additional impairment is a prerequisite to discontinuing DRP, the FCC's design will result in reallocating less spectrum for mobile broadband use than the market could support and the public welfare demands.

The Coalition is particularly concerned about the risk that DRP could needlessly impair multiple channels in markets that will drive the success of the auction nationwide. Although the Commission has indicated that it does not believe that DRP will create artificial impairment in key markets, this is clearly a possible outcome (and, perhaps, even probable, given that broadcasters in these markets likely will value their spectrum higher than broadcasters in other markets). Even under the weighted population formula proposed in the *Comment PN*, it may be possible to impair several channels in key markets such as New York or Los Angeles before reaching the 20% threshold, creating great uncertainty for forward auction participants given the critical role of key population centers in underpinning the commercial viability of band plans.

The additional impairment required by DRP will destroy spectrum value. Wireless carriers have indicated that they are willing to accept a minimum level of impairment as an alternative to a least common denominator approach to the national clearing target. But every additional broadcast station that must be placed in the new wireless band will prevent the FCC from offering any wireless licenses in one or more PEAs, and likely will cause Category 1 or 2 impairment to several additional 600 MHz licenses. Thus, DRP will result in fewer licenses offered in the forward auction, more impaired licenses, and fewer blocks available nationwide—needlessly suppressing forward auction revenue.

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<sup>94</sup> *Id.*

b. *DRP is Not Necessary to Solve the “Problem” that the FCC Has Identified.*

The FCC’s auction proposal has several built-in protections that obviate the need for a destructive policy such as DRP. *First*, the statutory closing conditions, as reflected in the final stage rule, provide a necessary safeguard against paying broadcasters more than the market value for their spectrum. Under the Spectrum Act, the auction cannot close unless the forward auction proceeds are sufficient to cover: (1) payments to broadcasters relinquishing their spectrum; (2) the FCC’s costs for the forward auction; and (3) the TV Broadcaster Relocation Fund.<sup>95</sup> Thus, if the cumulative price paid to broadcasters is greater than the value of the spectrum they are relinquishing, the final stage rule would not be satisfied, and the auction would proceed to the next stage.<sup>96</sup> This provides a market-based approach to determining whether “lower opening prices would be necessary,” as suggested in the *Comment PN*.<sup>97</sup> *Second*, the Commission’s use of a “volume factor” (*i.e.*, scoring) to determine broadcaster prices ensures that stations are priced based on some relative value at the outset of the auction. Through scoring, the agency already will control the maximum price that it will pay any individual station. For example, the FCC’s proposed formula for calculating opening prices already lowers the price to stations along the borders with Mexico and Canada by not counting cross-border stations when determining a station’s interference count. Thus, the stations most likely to be “frozen” at the start of the auction (due to domain constraints rather than insufficient prices) already will receive a lower price than stations in more competitive areas. DRP would double-penalize those stations by preventing them from obtaining even these lower prices.

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<sup>95</sup> Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96 § 6403(c)(2), 125 Stat. 156 (2012).

<sup>96</sup> *See Comment PN* ¶ 69.

<sup>97</sup> *Id.* ¶ 106.

c. *A Round Zero Reserve Addresses the Commission's Concerns Without the Negative Consequences of DRP.*

If the Commission nevertheless insists on adopting reserve prices for the reverse auction, it should replace DRP with a Round Zero Reserve (“RZR”, pronounced “Razor”). Under RZR, after optimizing the clearing target (as discussed above), the Commission would identify stations that would need to be “frozen” at the start of the auction, or Round Zero. The FCC would offer only those stations a take-it-or-leave-it RZR price. Stations that accept would be paid the RZR price. Stations that reject the RZR price would be repacked. The auction then would proceed for all remaining stations, without the need to create any additional impairments of the 600 MHz band. A chart illustrating how RZR would work is included at Figure 13 to the attached *Cramton Expert Report*.<sup>98</sup>

Whereas DRP fails on simplicity, predictability, and maximizing public welfare, RZR is superior by all three measures. RZR is simple in that it applies a targeted approach to those stations that would be “frozen” at the start of the auction. All other stations would operate according to the standard processes that the Commission adopts for the reverse auction. RZR is predictable in that RZR prices would be determined before the auction begins. This is analogous to the reserve prices traditionally used by the FCC, which allow participants to make informed decisions based on a predictable set of outcomes. DRP, on the other hand, would establish reserve prices on the fly, based on external inputs that have nothing to do with the value of any given station.<sup>99</sup> Finally, RZR would maximize public welfare by transferring the greatest amount of spectrum to its most valued use. Unlike DRP, which is designed to require some

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<sup>98</sup> See *Cramton Expert Report* at 42.

<sup>99</sup> Moreover, DRP is no more market-based than RZR. As The Cramton Team explains, “Both the prices and set of stations that freeze under DRP are determined through administrative decisions, such as the opening prices and the impairment levels.” See *id.* at 10.

additional impairment before it is discontinued, RZR creates a realistic possibility that the Commission could reallocate 100% of the spectrum available under the near-national clearing target.

Of course, the success of RZR depends on what methodology the FCC adopts for setting RZR prices. Any RZR price methodology should reflect the fact that: (1) there is a direct correlation between the participation of stations frozen at Round Zero in the auction and the amount of spectrum that can be repurposed in the forward auction; (2) stations subject to RZR must make decisions about the value of their spectrum without further opportunity for outcome discovery; and (3) the participation of stations in several key markets will unleash spectrum value nationwide (including in areas where the Commission will not need to buy spectrum). Accordingly, RZR prices must be high enough to secure participation by broadcasters frozen at Round Zero—particularly in those areas where the reallocation of spectrum is most critical. The Coalition continues to evaluate formulas for calculating RZR prices and intends to submit a specific recommendation in the near future.

3. If the Commission Does Adopt DRP, It Must Turn DRP Off Based on the Aggregate Level of Artificial Impairment.

In the *Comment PN*, the Commission asks how to determine whether the DRP threshold standard would be exceeded.<sup>100</sup> If the FCC adopts DRP (which it should not), then it should adopt a separate target for artificial impairment that is not linked to the level of necessary impairment identified with the clearing scenario. The current approach that links both necessary and artificial impairment together is perverse, as it effectively would ensure that impairment is always driven to a level that the FCC has identified as the maximum acceptable limit. The Commission should set the threshold for artificial impairment sufficiently low such that the risk

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<sup>100</sup> *Comment PN* ¶ 109.

of unnecessary impairment of key markets is eliminated. A threshold of not more than three percent of weighted pops might achieve this, and would substantially mitigate the uncertainty for broadcasters and the threat to efficiency posed by the current approach.

When calculating the level of artificial impairment, the FCC should deem the standard to be exceeded when the aggregate level of potential artificial impairment from participating stations dropping out of the auction could exceed the national standard.<sup>101</sup> As the Commission explained in the *Comment PN*, the aggregate interference approach “could result in a lower level of impairment, and possibly even no additional impairment, due to DRP.”<sup>102</sup> Because artificial impairment will destroy spectrum value and lead to reduced public welfare, the agency should seek to minimize this type of impairment.

The FCC’s other alternative, to “use the population served by UHF stations that cannot be assigned a channel in the TV portion of the UHF band as a proxy for predicted aggregate impairments,” is based on the flawed premise that population can serve as a proxy for impairment.<sup>103</sup> As explained in Section II.B.2, *supra*, a station’s population served often grossly undervalues that station’s preclusive effect. This would also be true of the inter-service interference caused by that station.<sup>104</sup> Even a single broadcast station with a low population served could prevent the FCC from offering multiple 600 MHz wireless blocks in several PEAs and impair several additional licenses. Accordingly, a station’s population served is a poor proxy for predicted aggregate impairment and would produce anomalous results and disserve the public interest.

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<sup>101</sup> *Id.* ¶ 110.

<sup>102</sup> *Id.*

<sup>103</sup> *Id.*

<sup>104</sup> Despite a request from the Coalition, the FCC has not released its ISIX calculations. Accordingly, parties have not had the opportunity to fully analyze this proposal. If the Commission does favor this alternative, it must provide interested parties with a further opportunity for comment after reviewing the ISIX data.

**D. The Commission Should Provide Additional Information to Broadcasters During the Reverse Auction.**

As Chairman Wheeler has acknowledged: (1) “spectrum auctions are new for most broadcasters”; and (2) when making “a major sale . . . having more information leads to better decisions.”<sup>105</sup> Given these two realities, it is imperative that the Commission provide as much data as possible, consistent with the Spectrum Act, during the reverse and forward auctions to inform decisions by broadcasters and other participants.

Providing the necessary tools for outcome discovery is essential “in the context of this first-time-ever incentive auction, in which there will be no historical results to guide bidder expectations.”<sup>106</sup> It also will reassure broadcasters of the FCC’s commitment to “harness market forces” to determine how much spectrum to reallocate and at what price.<sup>107</sup> Conversely, a perception that the auction is anything but formulaic will destroy confidence in the auction and could cause a number of broadcasters to steer clear of the auction entirely or, at the very least, to withdraw prematurely. Put simply, if broadcasters do not trust that the Commission is allowing market forces to dictate the results of the Incentive Auction, broadcasters will not show up and the FCC will not achieve its spectrum reallocation goals.

Despite the importance of providing information and outcome discovery to broadcasters, the proposal in the *Comment PN* would make the reverse auction the least transparent auction in the history of the FCC’s competitive bidding program. Under the Commission proposal, “the auction system will offer each reverse auction bidder only the prices for options specific to its

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<sup>105</sup> June 25 Blog Post.

<sup>106</sup> *Incentive Auction R&O* ¶ 449.

<sup>107</sup> See, e.g., Tom Wheeler, FCC Chairman, *Ensuring A Fair And Competitive Incentive Auction*, Official FCC Blog (Apr. 25, 2014), available at <http://www.fcc.gov/blog/ensuring-fair-and-competitive-incentive-auction>.

stations(s).”<sup>108</sup> The agency’s proposal would not provide broadcasters with even basic and critical information about: (1) the clearing target for each stage; (2) whether DRP is on or off; (3) the level of bidding; or (4) any other information about the auction. This proposal will hinder the process of outcome discovery that the FCC properly has embraced.

There are two important economic justifications for increasing the transparency of the reverse auction. *First*, this is an auction featuring many bidders with partial common values and great uncertainty over the value of their spectrum. As auction theory recognizes, in any setting where there is substantial “common value uncertainty,” price discovery is necessary for participants to build confidence in their valuations. As the Commission’s outside auction design expert, Paul Milgrom, has explained, “when bidders are uncertain about their valuations, they can acquire useful information by scrutinizing the bidding behavior of their competitors . . . weaken[ing] the winner’s curse and lead[ing] to more aggressive bidding.”<sup>109</sup> Thus, price discovery will increase broadcaster certainty, stimulating bidding behavior. *Second*, outcome discovery will allow broadcasters to decide between multiple participation options. Even a broadcaster with a single station must decide whether to exit, channel share, or move down to a lower band. As The Cramton Team explains, “[o]utcome discovery helps such a bidder decide among these four options.”<sup>110</sup> Increased transparency is particularly important for broadcasters with multiple stations, which “have portfolio, budget, and other aggregate constraints that demand a high level of outcome discovery to manage”—similar to that of forward auction bidders.<sup>111</sup>

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<sup>108</sup> *Comment PN ¶ 77.*

<sup>109</sup> *See* Paul R. Milgrom and Robert J. Weber, *A Theory of Auctions and Competitive Bidding*, 50 *Econometrica* 1095 (1982).

<sup>110</sup> *Cramton Expert Report* at 26.

<sup>111</sup> *Id.* at 26-27.

In contrast to the lack of information that the Commission is proposing to provide during the reverse auction, for the forward auction, it would disclose: (1) the identities of other forward auction applicants that have selected geographic areas that overlap with the applicant's own selection; (2) the clearing target for each stage, prior to bidding in the clock phase of each stage; (3) the number of spectrum blocks in each license category in each PEA and the percentage impairment of each block; (4) after the reverse auction, the total dollar amount of forward auction proceeds necessary to satisfy the final stage rule; (5) the forward auction bid amounts for each round; (6) the number of blocks in each category for which a bidder bids; (7) the extent of excess demand for each category; (8) the status of each bidder's bids; and (9) if demand fell to equal supply during the round, the intra-round price point at which that occurred.<sup>112</sup> Although not all of these have analogues in the reverse auction, it is indisputable that the FCC is proposing to provide substantially more opportunities for outcome discovery in the forward auction (where most bidders already have extensive auction experience) than in the reverse auction.

The Coalition recognizes that the Commission must weigh the disclosure of information against concerns regarding confidentiality and collusion. Nevertheless, the procedures proposed in the *Comment PN* do not even attempt to balance among these interests. For instance, although the Spectrum Act mandates that the agency “shall take all reasonable steps necessary to protect the confidentiality of Commission-held data of a licensee participating in the reverse auction . . . including withholding the identity of such licensee . . . ,”<sup>113</sup> this does not prevent the FCC from disclosing details about bidding activity that does not reveal the identity of reverse auction bidders. Rather, such information will help foster the “system of competitive bidding” required

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<sup>112</sup> *Comment PN* ¶¶ 138-41; 182-83.

<sup>113</sup> *See* Middle Class Tax Relief and Job Creation Act of 2012, 112 PL 96 § 6403(a)(3).

under the statute.<sup>114</sup> As The Cramton Team has found, given the lack of concentration in the broadcast market—even at the PEA level—“concerns of collusion and inappropriate coordination among broadcasters in the reverse auction are misplaced.”<sup>115</sup> Additionally, the Commission already took important steps in the *Incentive Auction R&O* to strike this balance. As the Commission stated in that Order, the “confidentiality obligations, along with the rule prohibiting certain communications and auction procedures regarding available information, will provide ample protection to the identities and other confidential information of reverse auction participants.”<sup>116</sup>

The Commission must provide more information during the reverse auction to fulfill the Chairman’s commitment “to ensuring broadcasters have all the information they need to make an informed business decision about whether and how to participate in the Incentive Auction.”<sup>117</sup> Consistent with its approach in the forward auction, unless there is a specific and credible reason not to do so, the Commission should: (1) publicly announce in advance of the auction the opening price and (if different) the reserve price for every auction eligible station; (2) announce the clearing target before bidding commences in any reverse auction stage; (3) release, at the end of each round, the amount of spectrum available for reallocation in each PEA and aggregate information about the number of stations that registered, were “frozen,” or remain active; (4) if the Commission adopts its DRP proposal, publicly announce when DRP has been turned off; (5) provide, on a round-by-round basis, anonymized information about the offers made to each station for each bid-type; (6) provide anonymized information about whether each station

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<sup>114</sup> *Id.* § 6403(a)(1).

<sup>115</sup> *Cramton Expert Report* at 26.

<sup>116</sup> *Incentive Auction R&O* ¶ 394.

<sup>117</sup> June 25 Blog Post.

accepted the bid and which stations were “frozen”; (7) provide aggregate information about the actions of stations that are mutually exclusive (not compatible on one or more channels) with each participating station; and (8) provide the total amount of payments to broadcasters for bids that the FCC has conditionally accepted.<sup>118</sup>

To preserve the anonymity of participating broadcasters, the Commission can release certain categorical information about each station, such as a combination of station type (full power or Class A; commercial or non-commercial), station affiliation (major network, minor network, independent), number of mutually exclusive stations, Designated Market Area, state of license, and any other factor used to determine a station’s “score,” without identifying any individual stations. This balanced release of information will enhance transparency, fuel outcome discovery, and facilitate informed decision-making.

**E. The Commission Should Design Other Auction Procedures to Promote Broadcaster Participation and Maximize Public Welfare.**

**1. The Commission Should Adopt a Small Decrement for Each Round of the Reverse Auction.**

In the *Comment PN*, the FCC has proposed to: (1) reduce prices by between three percent and 10 percent per round; and (2) allow the amount that the base clock price will be reduced to “be changed at any point during the reverse auction based on bidding activity during the auction.”<sup>119</sup> These proposals are inappropriate for an auction such as this, where the stakes are extremely high and many bidders will be unfamiliar with the auction process and require opportunities for outcome discovery.

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<sup>118</sup> We note that descending clock auctions are widely used in U.S. electricity markets. In these markets, aggregate supply data is commonly released, but not information about the bids of specific bidders.

<sup>119</sup> *Comment PN* ¶ 105.

Reducing the clock by even three percent per round will lead to large changes in price in each round, making participation complicated and reducing outcome discovery. For example, at the proposed base clock price of \$900 million, some stations will see their prices fall by around \$27 million in each of the early rounds. This large decrement will force broadcasters to decide whether to accept substantially lower prices in each subsequent round—all without information about the behavior of other bidders at intermediate prices.

This problem is only exacerbated by allowing such a wide range of potential price decrements during the auction. Unlike a forward auction, where bidders are attempting to buy a new commodity for which there frequently are substitutes, in the reverse auction, broadcasters must determine whether to part with one of the most valuable assets of their existing business. This is not the type of decision that many broadcasters will be able to make “on the spot.” The potential that bid decrements could change significantly during the auction will make it difficult, if not impossible, for these broadcasters to prepare in advance. This could cause broadcasters either not to participate in the auction at all or, if they do participate, to exit at a higher price.

To address these issues, the Commission should adopt a fixed one percent decrement by which the base clock price will drop each round. This approach will simplify the bidding process, increase opportunities for outcome discovery, result in more exact exit values, and allow bidders to prepare in advance, with full knowledge of the prices that will be offered in each round. The FCC can further manage the length of the auction by calculating decrements based on the opening price, rather than the price for each round.

If the Commission, nevertheless, believes it needs some flexibility to change decrements to manage the pace of the auction, it should: (1) provide clear guidance about the limited range of circumstances when it might utilize higher decrements; and (2) adopt a modest maximum

decrement that does not exceed three percent per round. The FCC should limit the circumstances in which it might deviate from the one percent decrement to only: (1) the start of a subsequent stage, when the Commission needs to “re-run” some price decrement rounds for bidders that were previously frozen; or (2) if the auction stage reaches a point when only a few broadcasters are still bidding and the absolute value of their decrements is very small relative to their opening bid levels.

2. The Commission Should Utilize Intra-Round Bidding As a First Tie-Breaker When Multiple, Mutually Exclusive Stations Drop Out of the Auction at the Same Clock Price.

Not only should the FCC should adopt the proposal in the *Comment PN* to provide the option to place an intra-round bid instead of simply dropping out if the price is too low in a given round, but it already has.<sup>120</sup> In the *Incentive Auction R&O*, the Commission committed to “provide participating broadcasters with the optional flexibility of ‘intra-round bidding.’”<sup>121</sup> Intra-round bidding will result in a more market-based auction by distinguishing between stations to determine which station values its spectrum the most. These specific intra-round price points can then be used to set exact market prices for broadcasters whose spectrum is cleared. This will lead to a more efficient allocation of broadcast spectrum.

Contrary to the suggestion in the *Comment PN*,<sup>122</sup> intra-round bidding will not overly complicate the auction. Stations will continue to have the option to make a binary, yes or no choice in each round of the auction. In fact, intra-round bidding could actually simplify the auction for many broadcasters. The Greenhill Book encourages stations to “establish an internal

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<sup>120</sup> *Id.* ¶¶ 115-16.

<sup>121</sup> *Incentive Auction R&O* ¶ 455.

<sup>122</sup> *Comment PN* ¶ 116.

‘walk away’ price at which they would elect not to participate.”<sup>123</sup> Even at low decrements, however, the auction prices may not exactly match a station’s “walk away” price. Intra-round bidding would allow stations to utilize that actual price by specifying the specific price at which they would exit the auction rather than having to decide whether to accept an offer that is lower than the pre-determined exit price.

An alternative bidding process that would not provide “the option to place an intra-round bid, and instead simply ask each bidder if it is willing to accept the new lower price for its relinquishment option”<sup>124</sup> would be a step backwards and contrary to the policy adopted in the *Incentive Auction R&O*. Moreover, without intra-round bidding, to avoid risk of inefficient outcomes, the Commission would need to use very small bid decrements (much lower than our proposed one percent standard), which would be inconsistent with its desire to run the auction in a reasonable number of rounds.

### 3. The Commission Should Permit Proxy Bidding in the Reverse Auction.

In the *Comment PN*, the Commission again asks whether to permit proxy bidding, reasoning that because the use of smaller decrements could increase the number of rounds, proxy bidding “could reduce the bidders’ need to closely monitor numerous, frequent bidding rounds.”<sup>125</sup> As a general matter, the Coalition believes that most broadcasters will want to closely monitor the actions and outcomes of other stations and retain the flexibility to adjust their bids as the auction progresses. Therefore, utilization of proxy bidding is likely to be low. Nevertheless, the Coalition supports providing broadcasters with the option to submit proxy bids to facilitate the use of price decrements in line with those suggested above. It is critical that

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<sup>123</sup> October Greenhill Book at 4.

<sup>124</sup> *Comment PN* ¶¶ 118.

<sup>125</sup> *Id.* ¶ 105 & n. 295.

broadcasters who choose to use proxy bidding have the flexibility during the auction to freely revise their proxy bid or switch to regular bidding at any time until the end of the round in which their exit price is reached. Also, to preserve the integrity of the auction, the FCC must configure the auction system so any proxy bids are completely confidential and not viewable by either the Commission or other bidders.

4. The Commission Should Stop the Reverse Auction When No Additional Volunteers Are Needed at the Existing Clearing Target.

The proposal in the *Comment PN* to continue bidding rounds “until no stations are still bidding”—without regard for whether there is a need for any additional reverse auction participation—is unnecessary and inconsistent with other priorities expressed by the Commission.<sup>126</sup> It is impossible to reconcile this proposal with the FCC’s stated preference, in other parts of the *Comment PN*, to limit the length of the reverse auction.<sup>127</sup> Allowing the auction to continue until no stations are still bidding unnecessarily would extend the auction with no corresponding benefit. The agency should be able to determine during the auction the point at which it can repack all remaining stations, and thus, does not need any additional volunteers. This should be the point at which the reverse auction ends. Extending the reverse auction bidding will yield no useful information for the Commission and will only serve to enhance mistrust, create confusion, and needlessly delay the commencement of the forward auction.

5. The Commission Should Not Skip Any Clearing Targets.

The FCC should adopt the proposal in the *Comment PN* to move sequentially to the next lowest clearing target if either the level of impairment is too high after the initial optimization or

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<sup>126</sup> *Id.* ¶ 124.

<sup>127</sup> *Id.* ¶ 98 (expressing concern about closing the auction “in a reasonable number of rounds”).

the final stage rule cannot be satisfied at any stage of the auction.<sup>128</sup> The alternative proposal, determining before the auction even begins, that “the benefits outweigh the costs of skipping some clearing targets,” is inconsistent with the Commission’s dedication to a market-based auction. In the specific example of the 108 MHz clearing target, where “two downlink blocks are separated from the remaining downlink blocks by channel 37,”<sup>129</sup> it would be inappropriate for the agency to predetermine how forward auction bidders will value that spectrum. If the auction can satisfy the final stage rule at 108 MHz, then the market will have determined that it is worth separating the two lowest downlink blocks from the rest of the 600 MHz band. The alternative would result in an automatic loss of 40 MHz of reallocated spectrum should the auction not reach the 114 MHz threshold, destroying public welfare. Instead, at both the outset of the auction and in any successive stages, the FCC should proceed sequentially through the twelve clearing targets that it adopted in the *Incentive Auction R&O*.

6. The Commission Should Not Impose Any Pre-Auction Requirements That Restrict Broadcasters’ Flexibility to Enter Into or Modify Channel Sharing Agreements After the Auction.

The proposed requirement for channel sharing stations to submit a certification from the channel sharer “that the channel sharing agreement submitted is a true, correct, and complete copy of the channel sharing agreement between the parties” should not serve as a pre-requisite to the ability of parties to channel share.<sup>130</sup> The FCC can greatly increase the viability and desirability of channel sharing by providing broadcasters with the flexibility to negotiate contingent channel sharing agreements with multiple stations or to enter into channel sharing agreements after the auction. Thus, as the Coalition explained in its pending *Petition for*

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<sup>128</sup> *Id.* ¶¶ 25, 69.

<sup>129</sup> *Id.*

<sup>130</sup> *Id.* ¶ 81.

*Reconsideration*, the Commission should not require stations to submit channel sharing agreements in advance of the auction.<sup>131</sup>

To address the Commission's interest in limiting certain communications during the auction, the agency should provide broadcasters with the *option* of submitting a redacted channel sharing agreement, consistent with the other terms that the agency adopts in response to the *Petition for Reconsideration*, if they desire to communicate with a potential sharing partner during the auction (under the exception to the prohibition on communications). This approach balances the need for some broadcasters to communicate during the auction with the strong public interest in providing broadcasters with the opportunity to enter into agreements either before or after the auction or even to enter into multiple, contingent sharing agreements.

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<sup>131</sup> *Petition for Reconsideration* at 6-8.

