Before the
Federal Communications Commission
Washington, D.C. 20554

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

COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS

November 12, 2014

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Summary

Throughout this proceeding broadcasters have urged the Commission to adhere to the balance Congress struck in the Spectrum Act, namely that broadcasters who remain on the air and their viewers are not harmed as a result of the incentive auction. When Congress instructed the Commission to take "all reasonable efforts" to preserve the ability of broadcasters to continue to serve their viewers, and when Congress created a significant fund to reimburse broadcasters for their out-of-pocket expenses incurred as a result of a repack to make way for the wireless industry, Congress believed it was taking the steps necessary to fully protect those broadcasters who did not surrender their licenses. In the Report and Order, however, in a number of critical areas, the Commission elected to employ only half-measures to protect broadcasters, essentially suggesting that Congress instructed the FCC merely to "give it the old college try," and too bad viewers are left in the dark after the auction. This approach turns the Spectrum Act on its head, and the Commission should rethink some key pieces of the Report and Order to ensure that the balance Congress sought is realized.

There are a host of significant and measurable ways, as raised in numerous petitions for reconsideration in this proceeding, in which the FCC's framework order fails to protect broadcasters and their millions of viewers as Congress intended. While each of these demand the Commissions' close attention on reconsideration (as noted below), three, in particular, are threshold issues that must be addressed on reconsideration to ensure that the auction does not seriously damage the TV broadcast industry and its millions of viewers.

First, the order not only fails to protect broadcasters in the incentive auction process, but also shockingly requires broadcasters to *subsidize* the wireless industry's

new spectrum acquisition. The Commission currently is taking *no* upfront steps – literally not one – to ensure that it does not repack more stations than it can reimburse. In fact, the FCC's repacking simulations show an average of more than *1300 stations* being repacked to clear 84 MHz of spectrum. By any calculation, that means that broadcasters will easily deplete the $1.75 billion fund established by Congress. Using the FCC's conservative Widelity Report, the auction is now on track to require repacking to the tune of more than $2.6 billion. If the Commission does not intervene, it effectively will be saying that Congress sought to reimburse broadcasters only partially for their moves. Nowhere did anyone in Congress or at the FCC ever suggest that would be the case. NAB strongly urges the Commission to rectify this problem on reconsideration.

Even beyond the direct financial harm to broadcasters, this level of repacking – one that is completely unconstrained – will be a disaster for consumers and, in turn, the Commission and Congress. The Commission should be mindful of the challenges presented not that long ago by the DTV transition, which involved repacking only approximately 150 stations from "out of core" channels, as opposed to well over a thousand as currently contemplated by the incentive auction. Nowhere does the Commission acknowledge in its order that its unconstrained approach to repacking will be far more difficult to administer and will undoubtedly leave many consumers in the dark. As NAB has advocated consistently in this proceeding, the Commission should cut at least in half the number of stations it currently plans on repacking. The Commission can still run a successful auction while ensuring that broadcasters can be reimbursed and diminishing consumer harm.

Second, the Spectrum Act had a simple goal when it comes to broadcast TV viewers: those who receive a station today should be able to receive that station after the

auction if it remains on the air. The Report and Order, however, adopts a number of approaches that will *guarantee* that many viewers will no longer receive stations that remain on the air in their local communities. The order attempts to dress this harm up by adorning it with technical language and concepts – wrapping itself in notions of terrain loss and losses due to interference – but ultimately these machinations unfortunately amount to lipstick on a pig. The Spectrum Act is crystal clear that the Commission must make all reasonable efforts to ensure that the same people receive the same stations before and after the auction, if those stations continue to broadcast. Thus, when the Commission says that it will not account for viewers cut off by terrain losses as a result of repacking, it violates this important protection. The Commission's approach is saying, ex ante, that it is not taking all reasonable efforts to protect broadcasters' populations served, but instead is protecting them only insofar as it is convenient. The bottom line is that the Commission's current approach – which is by no means essential to the goal of reallocating spectrum – will mean that many viewers will be denied access to the stations on which they currently rely.

Third, the Commission adopted an unprecedented hardline and punitive approach to transitioning frequencies that would be moving from broadcast to wireless. The order mandates that *every* repacked station must be off the air 39 months following the auction, no matter what the circumstance. That means that station must go dark or miraculously find another temporary facility. The Commission did not allow for *any* deviations from this deadline. So, for example, if the fault was not a station's, but the Commission's or even due to a natural disaster, the station must still go off the air. Even if the new wireless licensee has no plans whatsoever to deploy on that spectrum, the station must still go off the air – meaning viewers could lose access to their favorite station without any rhyme or

reason. This point is particularly relevant given that there is still a great deal of spectrum from the 2008 700 MHz auction that is not deployed throughout the country. At the very least, the Commission should institute a clear, predictable waiver process under which stations unable to relocate within 39 months due to circumstances outside their control can continue to provide service on their old channels.

The goal of the incentive auction was never simply to forcibly reallocate as much spectrum as possible from one use to another. Rather, Congress authorized the incentive auction to use market forces, not regulatory fiat, to allocate spectrum. Under this approach, broadcasters would be free to participate in the auction, or not participate, based on their business decisions in light of how much wireless carriers were prepared to pay. If broadcasters chose not to participate, and if it was necessary to move them to a new channel, they would be made whole and their viewers would be protected. Thus, the Spectrum Act struck a careful balance: making broadcaster participation wholly voluntary *by protecting broadcasters electing not to participate*. Unfortunately, the Commission has cast aside protections that could, even if just theoretically, limit its ability to repurpose spectrum. As a result, the Commission has upset the careful balance Congress struck, leaving broadcasters and viewers at risk.

On reconsideration, NAB urges the FCC to correct this imbalance and move forward with an auction that is fair for all stakeholders. We hope the Commission will consider these recommendations, and others described in more detail herein. More broadly, we hope the Commission will commit to a voluntary, market-based auction that does not shortchange broadcasters and their viewers with respect to the protections Congress carefully included in the Spectrum Act. There is still ample time to get this auction right, and we look forward to working with the Commission to make that happen.

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COMMENTS OF THE NATIONAL ASSOCIATION OF BROADCASTERS

The National Association of Broadcasters ("NAB")[1] submits these comments in response to various petitions for reconsideration submitted in the above-referenced docket.[2]

I. THE COMMISSION SHOULD TAKE ADDITIONAL STEPS TO ENSURE BROADCASTERS ARE FULLY REIMBURSED FOR THEIR INVOLUNTARY RELOCATION.

The defining attribute of the auction Congress authorized in the Spectrum Act is that it is voluntary. The incentive auction was not designed to forcibly reallocate spectrum from broadcasters to wireless carriers by threatening broadcasters with economic harm if they did not participate in the auction. Rather, Congress envisioned an auction that would allow market forces to operate. Broadcasters would be free to participate in the auction, or not to participate, according to their own business decisions. If broadcasters chose not to participate, and if it was necessary to move them to a new channel, they

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[1] The National Association of Broadcasters is a nonprofit trade association that advocates on behalf of free local radio and television stations and broadcast networks before Congress, the Federal Communications Commission and other federal agencies, and the courts.

[2] *Petitions for Reconsideration of Action in Rulemaking Proceeding*, Public Notice, GN Docket No. 12-268, Report No. 3011 (Oct. 2, 2014).

would be made whole, both financially and in terms of their ability to continue serving their viewers. After all, if broadcasters electing not to participate in the auction are forced to fund their own involuntary relocation, the auction is no longer voluntary. For this reason, NAB agrees with petitioners asking the Commission to take all reasonable steps to ensure that broadcasters are not required to fund their own relocation.[3]

The Report and Order expresses confidence that the $1.75 billion relocation fund will prove sufficient to cover the costs of relocating broadcasters.[4] Since the adoption of the Report and Order, however, the Commission has released new information that completely undermines this confidence. As the Affiliate Associations note, the Commission has provided new information regarding a number of simulated repacking scenarios based on different spectrum clearing targets and auction participation levels.[5] On average, the simulations reflecting clearing of 120 MHz nationwide resulted in relocating *1163* stations, and clearing 84 MHz nationwide required relocating *1332* stations. There is no reason to believe the $1.75 billion relocation fund will be sufficient to reimburse costs associated with this many channel changes.

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[3] *See* Petition for Reconsideration of ABC Television Affiliates Association, CBS Television Network Affiliates Association, FBC Television Affiliates Association, NBC Television Affiliates at 2-6, GN Docket No. 12-268 (Sept. 15, 2014) ("Affiliates Petition"); Block Communications, Inc. Petition for Reconsideration at 8-10, GN Docket No. 12-268 (Sept. 15, 2014) ("Block Petition").

[4] *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6567, ¶ 650 (2014) ("Report and Order") ("We emphasize that we have no reason, at this time, to believe that the Fund will be insufficient to cover all eligible relocation costs").

[5] Affiliates Petition at 2, citing Letter from Gary Epstein, Chair, Incentive Auctions Task Force, Federal Communications Commission to Rick Kaplan, Executive Vice President, Strategic Planning, National Association of Broadcasters, GN Docket No. 12-268, ET Docket No. 13-26 (June 30, 2014).

For example, the Widelity Report commissioned by the FCC provides sample case studies illustrating potential costs associated with relocation. These case studies include a full power station moving a large number of channels (case 1), a full power station moving only a few channels, where the existing transmission line can be reused (case 2), and a Class A low power station (case 3).[6] Class A stations represent approximately 23 percent of UHF stations currently on the air, so we assume that approximately 23 percent of relocated stations will be Class A stations. Based on our review of the sample repacking scenarios, approximately 70 percent of full power station moves require moving more than five channels (case 1) and the remaining 30 percent of full power station moves may be similar to case 2. Using the sample repacking costs provided by the Widelity Report results in the following estimated costs for repacking:

Amount of Spectrum	Average Stations Repacked	Widelity Case Type	No. of Stations	Cost Estimate Per Station	Cost Per Category	Total Cost
120 MHz	1163	Case 1	627	$2,695,000	$1,689,765,000	$2.3B
		Case 2	269	$1,679,000	$ 451,651,000	
		Case 3	267	$ 588,000	$156,996,000	
84 MHz	1332	Case 1	718	$2,695,000	$1,935,010,000	$2.6B
		Case 2	308	$1,679,000	$ 517,132,000	
		Case 3	306	$588,000	$179,928,000	

Even assuming the Commission's post-auction optimization reduces slightly the number of stations that must be relocated, the above analysis does not take into account any channel changes at "super-complicated" sites, or costs for new towers, zoning, or

[6] Widelity, Inc., Response to the Federal Communications Commission for the Broadcaster Transition Study Solicitation – FCC13R0003, DA 14-389A2 at 44 (Dec. 30, 2013) ("Widelity Report"). The report also studied a "super-complicated" case study involving multiple channel reassignment occurring at the Sutro Tower in San Francisco.

consumer education expenses. In short, the Commission's own data indicate that repacking will impose hundreds of millions of dollars in unrecoverable costs on local stations.

Critically, this data supersedes comments upon which the FCC relied in the Report and Order. In dismissing broadcaster concerns that the FCC was taking no steps to limit repacking, the FCC cited estimates for repacking costs submitted by U.S. Cellular and AT&T.[7] U.S. Cellular estimates that the total costs of repacking will be only $775 million, based on average repacking costs of $885,500 for full power stations and $267,375 for low power stations.[8] AT&T cites a 2011 study projecting that repacking costs will amount to only $565 million, based repacking 629 stations at a cost of $898,000 per station.[9] These estimates now appear wholly inconsistent with both the costs set forth in the Widelity Report and the numbers of stations repacked in the staff's simulated repacking scenarios.

The Commission should at least attempt to alleviate this problem, either by restricting repacking to a number of stations that can reasonably be expected to be repacked for $1.75 billion, or by requiring winning bidders in the forward auction to cover the excess costs incurred by relocating broadcasters. These options are not mutually exclusive. The FCC can and should take reasonable steps to minimize repacking costs

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[7] Report and Order at ¶ 650, n. 1810 ("We note that although the broadcast industry expresses concern that $1.75 billion will be insufficient, other commenters argue that this amount will be more than enough to reimburse eligible entities.")

[8] Comments of United States Cellular Corporation, GN Docket No. 12-268, 8-9 (filed Jan. 25, 2013).

[9] Reply Comments of AT&T Inc., GN Docket No. 12-268, 65 (filed Mar. 12, 2013).

while also requiring forward auction winners to establish a fund to serve as a backstop for excess costs.[10]

Restricting repacking to a manageable number of stations would not be technically difficult. For example, constraint files used during the auction could be revised to include a cap on the total number of stations that are relocated, based on a rough estimate of how many stations could be moved within the $1.75 billion budget. Alternatively, the Commission could employ a more granular approach by categorizing stations and potential channel moves according to estimated cost ranges, and then updating the constraint files to disallow repacking solutions where total estimated costs exceed $1.75 billion. The Commission can do this, and it should. If the Commission, and commenters who supported it, are correct that repacking costs will not exceed $1.75 billion, including a cost limit in the constraint files will have no effect on spectrum recovery or auction results. If they are wrong, including a cost limit, consistent with Congressional intent, will protect broadcasters from being forced to subsidize the repurposing of spectrum to benefit wireless carriers.

II. THE COMMISSION SHOULD RECONSIDER ITS APPROACH TO PROTECTING POPULATION SERVED.

Throughout this proceeding, NAB has urged the Commission to protect viewers as broadcasters are forced to change channels to allow the repacking of the television band

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[10] The Spectrum Act specifically requires excess proceeds from the auction to be deposited in the Treasury for the sole purpose of deficit reduction. Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. 112-96, 126 Stat. 224-225, § 6402 (Feb. 22, 2012) (codified at 47 U.S.C. § 309(j)(8)(G)(iii) ("Spectrum Act"). Nothing in the Act, however, prohibits the FCC from requiring winning bidders in the forward auction, as a condition of their licenses, to establish a mechanism for the reimbursement of incumbents forced to relocate after the auction.

and the auction of cleared spectrum to wireless carriers. To date, in its efforts to preserve the population served of repacked stations, the FCC has only considered losses with regard to new interference and only on a station pairwise basis. This is largely because the Commission has assumed that population losses due to other causes, such as frequency changes, would be insignificant.[11] The Commission also assumed that, because it was seeking to clear spectrum from channel 51 down, relocated stations would generally be assigned to channels lower in the band and they might benefit from superior propagation characteristics of lower frequencies.[12]

These assumptions now appear to be incorrect. The repacking simulations released by the staff show many stations may be repacked to *higher* channels – which may tend to reduce coverage. Further, far from *de minimis* losses, NAB's analysis of these repacking simulations shows that some stations may experience *significant* population losses beyond the interference loss values on which the FCC has focused. The losses in population served due to channel changes can be many times greater than the losses due to new interference.[13]

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[11] In its Notice of Proposed Rulemaking in this proceeding, the Commission stated, "We expect that any coverage area or population served differences under our proposed approach will be *de minimis*: based on the DTV transition, we anticipate that they generally will impact less than two percent of a station's total coverage area." *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Notice of Proposed Rulemaking, 27 FCC Rcd. 12357 (2012).

[12] *In the Matter of Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6567, ¶ 174 (2014).

[13] In general, station moves to higher channels result in population losses. These losses occur regardless of interference and regardless of efforts to replicate a station's contour. Replication does not fully compensate for losses because the power level required to re-establish the coverage contour at the new channel increases as the second-power of the frequency (channel) while diffraction losses due to terrain increase

For example, in one of the recently released repacking profiles (profile 100) the staff found the largest population loss suffered by any station to be 1.53 percent. In fact, NAB's analysis, using the Commission's *TV Study* methodology, confirms that this station loses 8.49 percent of its population served following repacking. This disparity stems from the staff's decision to count only those losses due to new interference, ignoring the effect of channel changes. This is a curious decision, as the *entire point* of repacking is channel changes, and the Commission itself has acknowledged that coverage will change with channel because radio waves propagate differently on different frequencies.[14] In any event, the only relevant benchmark for judging the success of efforts to preserve population served is to compare the population a station serves before repacking with the population served after repacking. The Spectrum Act directs the Commission, in repacking, to take all reasonable efforts to preserve population served – not merely to preserve population served from losses due to interference, which is only one potential source of loss.

Accordingly, NAB supports the Block Petition's request that the Commission re-evaluate its approach to protecting population served and coverage area in the repacking process to comply with the Spectrum Act's directive to use all reasonable efforts to

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as a higher exponent (typically fourth-power) of the frequency. For example, channel 14 (473 MHz) station operates at 224 kW and is repacked to channel 20 (509 MHz). The replication power level would be 259 kW, representing 224 x (509/473)^2. The power level actually required to overcome terrain losses is more like 224 x (509/473)^4 = 300 kW. The shortfall in power level causes losses in population served.

[14] *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Second Report and Order and Further Notice of Proposed Rulemaking, GN Docket No. 12-268, FCC 14-157, ¶ 8 (rel. Oct. 17, 2014).

preserve both coverage area and population served.[15] NAB understands that, at this point, the Commission may be reluctant to consider alternative approaches for the structure of the auction. We also understand that the Commission has stressed the importance of speed in the conducting the auction. Within that framework, NAB has proposed three options to provide additional protections against population losses.[16] None of these options will delay the auction. None of them will require the Commission to adopt an entirely new approach to conducting the auction. All three are workable, practical solutions to help protect viewers during repacking. Two of three approaches involve modification of the domain file prior to the running of the repacking and auction software. The third approach is implemented just prior to the closing of the reverse auction, and would require the validation of the reserve auction repacking run results to correct any assignment that resulted in excess population losses before closure and starting the forward auction. These options are not mutually exclusive, and the Commission should consider adopting all three.[17]

III. THE COMMISSION SHOULD RECONSIDER ITS DECISIONS REGARDING THE TIMING OF REPACKING.

The Affiliate Associations rightly seek reconsideration of the arbitrary, inflexible 39-month deadline by which relocated stations must cease operations on their old channels.[18] This deadline finds no support in the record, and there is no reason to

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[15] Block Petition at 4.

[16] Letter from Rick Kaplan, NAB to Marlene H. Dortch, FCC, GN Docket No. 12-268 (Oct. 10, 2014).

[17] Appendix A includes a complete description of all three approaches.

[18] Affiliates Petition at 12-14.

believe it will be realistic and achievable in all cases. The Widelity Report, which the FCC itself solicited "to aid the Commission in understanding the process and costs associated with the post-incentive auction transition,"[19] acknowledges that channel changes at a "super complicated site," such as tall building rooftops in New York and Chicago or Mount Sutro in San Francisco, may take 41 months "assuming no glitches."[20] The Report itself acknowledges that this is a "best case scenario" that does not account for "scheduling issues, weather delays or other factors" that may delay completion.[21] The Commission is thus ordering stations off their old channels months before it will be possible to relocate, even under a scenario devoid of weather, Acts of God, and glitches, according to a report the Commission itself solicited. Far from data-driven, this is data-agnostic decision-making that will harm over-the-air television viewers as stations are forced to go off the air before their new facilities are complete.

The Commission should adopt a clear, predictable waiver process that allows stations to remain on the air if they are unable to complete relocation due to circumstances outside their control. NAB would recommend a process in which broadcasters that anticipate being unable to complete relocation within 39 months would, at least six months in advance of their deadline to cease operations, submit a request for a waiver of the requirement that they vacate their old channels. The Commission could place these waivers on public notice and seek comment from winning forward auction bidders holding spectrum licenses that are affected by the waiver request.

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[19] *Media Bureau Seeks Comment on Widelity Report and Catalog of Potential Expenses and Estimated Costs*, Public Notice, 29 FCC Rcd 2989 (2014).

[20] Widelity Report at 53.

[21] *Id.* at 44.

At a minimum, waivers should be presumed granted if wireless carriers are not ready to deploy on the spectrum those broadcasters will be clearing. It serves no purpose to force broadcasters off the air before wireless carriers are actually prepared to build out. In all other cases, broadcasters should be required to include information in their waiver requests describing the circumstances which prevent them from completing relocation, setting forth an estimated schedule for the completion of relocation, and describing why operation on the station's new channel using temporary facilities is infeasible. Assuming a broadcaster submits a waiver request demonstrating it is unable to complete relocation within 39 months due to circumstances outside its control, the Commission should grant the broadcaster a six month waiver, and require the station to submit any requests for further waivers at least 30 days prior to the expiration of the extended relocation period.

IV. FAILURE TO COMPLETE INTERNATIONAL COORDINATION PRIOR TO COMMENCING THE AUCTION WILL HARM BROADCAST TELEVISION STATIONS.

NAB supports petitioners asking the Commission to reconsider its conclusion that it is not required to complete international coordination prior to commencing the incentive auction, or, at a minimum, mitigate the effects of failing to complete such coordination before starting the auction.[22] Failure to complete international coordination prior to commencing the auction puts hundreds of stations at risk of either failing to receive

[22] Affiliates Petition at 14-15; Block Petition at 7-8; Petition for Reconsideration of the Advanced Television Broadcasting Alliance, GN Docket No. 12-268, 5-6 (filed Sept. 15, 2014); Petition for Reconsideration of Gannet Co., Inc., Graham Media Group, and ICA Broadcasting, GN Docket No. 12-268 (filed Sept. 15, 2014) ("Gannet Petition"); Petition for Reconsideration of Cohen, Dippell and Everist, P.C., GN Docket No. 12-268, 2 (filed Sept. 15, 2014).

reimbursement for their involuntary relocation, or being forced to go dark on their old channels before relocation is completed and they can begin operation on their reassigned channels.

First, because reimbursement from the TV Broadcaster Relocation Fund is limited to a three-year period following the auction, every day after the auction during which the FCC still has not yet completed coordination is a day closer to the reimbursement window slamming shut for border stations. Until coordination is completed and border stations know that their reassigned channel will actually be approved, they cannot begin, let alone complete, relocation. The Commission's current approach may leave stations without reimbursement for some or all of their relocation costs if they cannot complete relocation before the reimbursement window closes.[23]

Second, as discussed above, because the Commission has adopted an arbitrary and unreasonable requirement that stations go dark on their old channels after 39 months, stations along the border may be forced to go dark for a substantial period solely due to the FCC's failure to complete coordination prior to commencing the auction. For example, if a border station does not receive an approved, coordinated channel until two years (24 months) after the auction, and it takes that station more than 15 months to relocate to its new channel, that station will, inevitably and through no fault of its own, be forced to go dark, and its viewers will lose service upon which they rely. This is not at all a remote possibility.[24] Such an utterly unreasonable and unfair outcome will cause significant harm to viewers.

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[23] Gannett Petition at 2.

[24] *Id.* at 3 (describing an eight and a half year coordination process for a Michigan station during the DTV transition).

If the Commission is unwilling to commit to completing international coordination prior to commencement of the auction, it should, at a minimum, take steps to mitigate the substantial harm its decision will cause. First, the Commission should take steps to ensure that border stations are not forced to relocate at their own expense because of incomplete international coordination by requiring winning bidders in the forward auction to reimburse relocation expenses incurred after the three-year reimbursement window. Second, the Commission should clarify that its arbitrary 39-month deadline for stations to go dark is only triggered when a station receives its new channel assignment *and that assignment is completely coordinated*. Anything less risks leaving border stations and their viewers at the mercy of the Commission's ongoing, and secretive, negotiations with Canada and Mexico.

V. THE COMMISSION SHOULD RECONSIDER ALLOWING UNLICENSED DEVICES TO OPERATE IN THE DUPLEX GAP.

NAB strongly supports petitions seeking reconsideration of the Commission's determinations regarding the allocation of spectrum in the duplex gap for unlicensed use.[25] Licensed wireless microphones and other Part 74 low power auxiliary station users should have exclusive access to a portion of the duplex gap, with the remainder used as guard bands to protect licensed operations in the adjacent uplink and downlink bands. NAB also agrees with RTDNA that licensed wireless microphones should also have access, under the current TV White Space ("TVWS") rules, to any spectrum set

[25] Petition for Reconsideration of the Radio Television Digital News Assocation, GN Docket No. 12-268 (filed Sept. 15, 2014) ("RTDNA Petition"); Petition for Reconsideration of Qualcomm Incorporated, GN Docket No. 12-268 (filed Sept. 14, 2014) ("Qualcomm Petition").

aside for guard bands.[26] At the very least, NAB recommends that the FCC withdraw its decision and complete further studies and analysis, as suggested by Qualcomm, in its petition for reconsideration.[27]

In dividing spectrum between licensed wireless microphones and TVWS devices, the FCC is choosing between an "irreplaceable service that has delivered high value for decades versus one that has yet to realize the ambitious promises it made twelve years ago."[28] Today, millions of wireless microphones and other low power auxiliary devices are in constant use and operation and, at best, only a few hundred TVWS devices have been deployed in the four years since the rules permitting such devices were adopted.

Licensed wireless microphones are vital to program production and public safety. As noted by Sennheiser, the "United States leads the world in both share of GDP and share of employment attributable to the copyright industries," and wireless microphones are key production tools fueling these successes.[29] Additionally, wireless microphones play a critical role in newsgathering across all types of media – including both television and radio. The ability to immediately disseminate information during emergencies is essential to our citizens and to our government first responders. The record of this proceeding is replete with evidence and examples from weather emergencies and other events demonstrating how the ability to disseminate information immediately has saved

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[26] RTDNA Petition at 4.

[27] Qualcomm Petition at 14.

[28] Petition for Reconsideration of Sennheiser Electronic Corporation, GN Docket No. 12-268, 9 (filed Sept. 15, 2014) ("Sennheiser Petition").

[29] *Id.* at 3.

property and lives.[30] The Commission should reconsider its decisions to dramatically curtail that capability.

Expanding opportunities for unlicensed operations should not come at the expense of eliminating or severely hampering current licensed operations serving critical functions. The Commission is making, in total, 20 to 34 Mhz of spectrum newly available for unlicensed use, while eliminating 12 MHz reserved for licensed wireless microphone operation.[31] Grant of the RTDNA Petition would provide *both* wireless microphones and unlicensed service with access to some spectrum on an exclusive basis, while also providing additional spectrum to both unlicensed service and wireless microphones on a shared basis. In fact, under RTDNA's approach, for the first time, spectrum will be available for TVWS devices in certain major markets, such as New York and Los Angeles. While spectrum for licensed wireless microphones would be severely reduced (from 12 MHz to 6 MHz or less), some dedicated spectrum would continue to be available for breaking news and program production in every market. For these reasons, RTDNA's Petition presents a balanced and workable approach, and we urge the Commission to adopt it.

Further, while we support the FCC's decision to separate uplink and downlink operations by an 11 MHz duplex gap, no information or data in the record supports the conjecture that unlicensed TV white spaces devices can operate in the duplex gap without causing interference to wireless microphones and wireless broadband

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[30] RTDNA Petition at 2, n. 3.
[31] Report and Order at ¶ 264.

operations.[32] Qualcomm has argued that unlicensed devices in the duplex gap will cause significant interference to wireless mobile receivers.[33] On the other hand, licensed wireless microphones, because of their lower power, their unique operational characteristics, such as battery power, intermittent operation and likely body absorption, are a more appropriate sharing partner with wireless broadband than uncontrolled and unlicensed Part 15 devices.[34] At the very least, the FCC should withdraw its decision and complete further studies and analysis, as suggested by Qualcomm.[35]

VI. THE COMMISSION SHOULD RECONSIDER THE USE OF A VARIABLE BAND PLAN.

The Commission's decision to adopt a variable band plan is unnecessary and requires complex inter-service interference rules and analysis. NAB supports petitions seeking reconsideration of the decision to pursue a variable band plan.[36]

The central assumption underlying the use of a variable band plan runs headfirst into the central assumption underlying the incentive auction itself. As the Affiliate Petition correctly notes, if wireless carriers are prepared to pay market rates for broadcaster spectrum, there is no reason there should be a "least common denominator" problem.[37]

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[32] Qualcomm Petition at 3.

[33] *Id.* at 5 and 9.

[34] NAB's initial technical analysis suggest that operation by wireless microphones currently is possible in only approximately 6 MHz of the duplex gap, with 2 to 4 MHz guard bands needed to protect wireless operations. Further testing is required to determine the appropriate amount of separation between wireless microphone and LTE uplink and downlink bands.

[35] Qualcomm petition at p. 11.

[36] Affiliates Petition at 15; Petition for Reconsideration of the Advanced Television Broadcasting Alliance, GN Docket No. 12-268, 8 (Sept. 15, 2014).

[37] Affiliates Petition at 18.

Further, a variable band plan introduces significant, unnecessary complexity into the auction, due to the need to predict and prevent inter-service interference and the resulting creation of myriad different categories of wireless license impairments. If wireless carriers and broadcasters are not operating on the same or adjacent channels in nearby markets, the post-auction interference environment will be significantly easier to predict and navigate.[38]

A variable band plan will leads to inefficient use of the spectrum. Due to interservice interference, neither broadcasters nor wireless carriers will be able to use spectrum in some areas, producing inefficient channel plans. For example, broadcast operations that impair certain wireless downlink channels will also impair corresponding uplink channel pairs. In addition, a variable plan will require additional guard bands to protect both services from interference.

Ultimately, a "lower common denominator" may actually be more spectrally efficient and desirable from a wireless perspective. The Commission, as well as all stakeholders, would be better served by focusing its resources and efforts on the most congested markets and selecting a nationwide plan based on the amount of spectrum that can be recovered in those markets.

VII. THE COMMISSION SHOULD NOT ELEVATE REPURPOSING SPECTRUM ABOVE PROTECTING VIEWERS.

NAB supports petitions for reconsideration urging the Commission to process pending VHF-to-UHF channel substitution petitions according to their merits and protect

[38] *See, e.g., id.* at 16.

the facilities proposed in these long-pending requests.[39] Refusing to process these petitions risks harming viewers solely and expressly for the potential benefit of bidders in the forward auction. The Commission refused to protect the facilities requested in these petitions on the grounds that adding stations to the UHF band will constrain the repacking process and limit the FCC's ability to repurpose spectrum.[40] Setting aside the questionable assertion that adding *nine stations* to the UHF band will meaningfully constrain repacking of the 1675 stations currently operating in the UHF band, the heart of the Commission's justification is repurposing spectrum is more important than protecting over-the-air viewers. This justification is inconsistent with Congress's intent in the Spectrum Act.

Further, the Commission should consider these petitions as a matter of procedural fair play. The petitions in question were filed before the Media Bureau established a freeze on the filing of new channel-substitution petitions and, when the Bureau established the freeze, it stated expressly that it would continue processing petitions already on file.[41] Retroactively changing the date of the freeze is bad process.

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[39] Petition for Reconsideration of Media General, Inc., GN Docket No. 12-268 (filed Sept. 15, 2014) ("Media General Petition"); Petition for Reconsideration of Bonten Media Group, Inc. and Raycom Media, Inc., GN Docket No. 12-268 (filed Sept. 15, 2014) ("Bonten-Raycom Petition").

[40] Report and Order at ¶ 228.

[41] *Freeze on the Filing of Petitions for Digital Channel Substitutions, Effective Immediately*, Public Notice, 26 FCC Rcd 7721 (2011) ("The Media Bureau will continue its processing of rulemaking petitions that are already on file with the Office of the Secretary.")

Finally, processing these petitions would in no way raise any risk of gamesmanship, contrary to concern articulated in the Report and Order.[42] Bonten, Raycom and Media General have all agreed that they would accept conditions on their construction permits forbidding them from submitting a UHF-to-VHF bid in the reverse auction.[43] As Bonten and Raycom note, the Commission's interpretation that the terms of the Spectrum Act *forbid* the Commission from imposing such conditions simply cannot be squared with other conditions the Report and Order imposes on bidders in the reverse auction – including the refusal to accept channel sharing bids that could cause community of license changes or media ownership rule violations.[44] The Commission has plainly elected to impose certain conditions on bidders for policy reasons – it cannot now claim it would be unlawful to impose conditions.

Similarly, the Commission should protect the facilities of stations that were actually in use as of February 22, 2012, providing service to viewers. The Report and Order states that it will not protect the coverage area of stations operating above the limits on antenna height above average terrain and/or effective radiated power to the extent such operations exceed the maximum power limits without regard to height above average terrain.[45] This is contrary to Commission's express position that the Spectrum Act's mandate to preserve population served and coverage area "require[s] us to preserve the actual coverage areas and populations served by broadcast stations on February 22,

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[42] Report and Order at ¶ 228, n. 707.
[43] Media General Petition at 3, n. 8; Bonten-Raycom Petition at 9.
[44] Bonten-Raycom Petition at 9, citing Report and Order at ¶ 374, n.1111 and ¶ 376.
[45] Report and Order at ¶ 167.

2012,"[46] which would certainly require protecting facilities operating under waivers of the Commission's rules on that date. Accordingly, NAB urges the Commission to grant the petitions for reconsideration submitted by the Dispatch Printing Company and The Walt Disney Company on this subject.[47] As with the pending VHF-to-UHF channel change petitions, failing to protect the facilities actually in use by broadcasters will harm those stations and their viewers solely for the purpose of making repacking easier for the FCC. Again, the Commission should not be favoring one industry at the expense of another in a manner inconsistent with the Spectrum Act and clearly contrary to Congressional intent.

VIII. CONCLUSION.

As the Commission itself recently acknowledged in its decision to delay the auction until 2016, this is an incredibly complex proceeding, with a number of moving parts.[48] The auction does, however, have a few fundamental precepts that are very simple. The auction should be market-based. The auction should be voluntary. To ensure that it remains voluntary, the auction should not penalize broadcasters that do not participate, either by imposing costs that will not be reimbursed, or restricting the ability to continue to serve existing viewers. If the Commission holds to these principles, the auction has a chance to succeed. If the Commission violates these principles, there is a substantial risk that the auction will be a loud and costly failure.

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[46] Report and Order at ¶ 139.

[47] Petition for Reconsideration of the Dispatch Printing Company, GN Docket No. 12-268 (filed Sept. 15, 2014); Petition for Reconsideration of The Walt Disney Company, GN Docket No. 12-268 (filed Sept. 15, 2014).

[48] Gary Epstein, Incentive Auction Progress Report, available at: http://www.fcc.gov/blog/incentive-auction-progress-report.

Unfortunately, the Report and Order makes too many missteps, and takes too many shortcuts in its rush to pry loose spectrum for auction. Fortunately, there is still time to correct these errors. We hope the Commission will begin with the recommendations set forth herein.

Respectfully submitted,

NATIONAL ASSOCIATION OF BROADCASTERS
1771 N Street, NW
Washington, DC 20036
(202) 429-5430

Rick Kaplan
Jerianne Timmerman
Patrick McFadden

Victor Tawil
Bruce Franca
Robert Weller

November 12, 2014