Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC  20554

In the Matter of

Competitive Bidding Procedures for
Broadcast Incentive Auction 1000,
Including Auctions 1001 and 1002

AU Docket No. 14-252
GN Docket No. 12-268

COMMENTS OF THE PUBLIC BROADCASTING SERVICE,
ASSOCIATION OF PUBLIC TELEVISION STATIONS, AND
CORPORATION FOR PUBLIC BROADCASTING

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February 20, 2015
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EXECUTIVE SUMMARY

The Public Broadcasting Service (“PBS”), Association of Public Television Stations (“APTS”), and Corporation for Public Broadcasting (“CPB”) (collectively, “PTV”) share the Commission’s goal of achieving a successful incentive auction and repacking that maintains all Americans’ access to vibrant and robust noncommercial educational television services. PTV has a strong incentive and desire for the incentive auction to succeed. Public television stations have embraced both broadcasting and mobile broadband communications platforms in order to reach the public on a wide range of devices in the home and on the go. For example, these stations use the Internet to enhance the impact of their over-the-air programming, and they use their broadcast television programming as a gateway to lead viewers to Internet resources and enriching mobile applications. In addition, PBS’s and local stations’ programming has fueled the creation of online content systems that give educators free access to research-based video content and games, both for their own development and for use in educating students.\(^1\) All of these online and mobile offerings supplement the stations’ broadcast television services, which remain the predominant way in which viewers watch the station’s high-quality and noncommercial news, public affairs, arts, science, and educational children’s programming.

The procedures proposed in the Commission’s Public Notice will form the foundation supporting the operation of the incentive auction and repacking, and it is therefore critical that the Commission get these procedures right. As the first auction of its kind, the incentive auction raises a number of complex, interrelated, and high-stakes issues. Less than a decade ago, the D Block auction was designed to facilitate an unprecedented public-private

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partnership for a nationwide public safety network, but failed to attract any bids that met the reserve price set by the Commission because of the “many layers of uncertainty and risk” involved, according to the Office of Inspector General. Certain of the proposals that the Commission has put forth for conducting the incentive auction similarly create unnecessary complications and uncertainty among potential bidders and other stakeholders, as discussed below, thus increasing the risk that the incentive auction could fail to reach its full potential. In contrast, the recently completed AWS-3 spectrum auction, for which the total provisional winning bids came in at $44.899 billion, was an unprecedented success.

To help avoid significant uncertainty and risk and to facilitate the success of the incentive auction, PTV urges the Commission to take the following four steps to improve the proposals set forth in the Public Notice:

1. Refrain from assigning any television stations within the repurposed 600 MHz band;
2. Improve the optimization process to account for co-located facilities and take steps to ensure stations have a realistic remedy for new interference;
3. Use market mechanisms—not artificial discounts—to determine the proceeds that a station will receive for moving to the VHF band; and
4. Clarify that the Commission will not penalize an innocent party that would not be in violation of the FCC’s rules but for another’s breach of a channel sharing agreement.

Each of these steps is critical to the success of the incentive auction, and PTV looks forward to working with the Commission as it continues to consider these important issues.

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The Public Broadcasting Service (“PBS”), Association of Public Television Stations (“APTS”), and Corporation for Public Broadcasting (“CPB”) (collectively, “PTV”) share the Commission’s goal of achieving a successful incentive auction and repacking process that maintains Americans’ access to a vibrant and robust noncommercial educational television service. PTV submits these comments in response to the Public Notice in the above-referenced proceeding to urge the Commission to take four important steps to help achieve this goal. First, the Commission should refrain from assigning any television stations within the repurposed 600

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4 PBS, with its over 350 member stations, offers all Americans the opportunity to explore new ideas and new worlds through television and online content. Each month, PBS reaches nearly 109 million people through television and over 28 million people online, inviting them to experience the worlds of science, history, nature, and public affairs; to hear diverse viewpoints; and to take front row seats to world-class drama and performances.

5 APTS is a non-profit organization whose membership comprises the licensees of nearly all of the nation’s 364 CPB-qualified noncommercial educational television stations. The APTS mission is to support the continued growth and development of a strong and financially sound noncommercial television service for the American public.

6 CPB is a private, non-profit corporation created and authorized by the Public Broadcasting Act of 1967 to facilitate and promote a national system of public telecommunications. Pursuant to its authority, CPB has provided millions of dollars in grant monies for support and development of public broadcasting stations and programming.

MHz band. **Second,** the Commission should improve the optimization process to account for co-located facilities and take steps to ensure stations have a realistic remedy for aggregate new interference. **Third,** the Commission should allow market mechanisms to determine the proceeds that a station will receive for moving to the VHF band, rather than imposing artificial discounts. **Finally,** the Commission should clarify that it will not penalize a station that would not be in violation of the Commission’s rules but for another’s breach of a channel sharing agreement.

These steps will significantly support the success of the incentive auction and subsequent repacking process by providing greater certainty for all stakeholders.

I. The Commission Should Not Repack Stations within the Repurposed 600 MHz Band.

The *Public Notice* proposes that some television channels, regardless of whether a station volunteers to participate in the incentive auction or not, may be placed on “any frequency in the 600 MHz Band” if there are insufficient channels to place all post-auction UHF TV stations in the post-auction UHF TV band. The Commission suggests that such stations would be protected from any harmful interference caused by wireless operators, including by applying a “zero-percent threshold for interference to TV stations from wireless services.”

PTV urges the Commission not to assign any repacked television stations to the repurposed 600 MHz wireless band and to instead maintain a contiguous television band. PTV appreciates the Commission’s proposal to apply a “zero-percent” interference threshold in theory. However, as explained below, it is doubtful that this threshold would work in practice, and prior experience demonstrates that such a standard would suffer from insurmountable challenges in implementation and enforcement. For example, the Commission has only recently

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8 *Id.* at ¶ 35.
9 *Id.* at ¶ 22.
set the wireless industry on a path to resolving the inter-service interference issues that frustrated wireless deployment in the Lower 700 MHz A Block for years. The Commission should not, through the repacking process, create a new (and greatly magnified) version of the same problem by interspersing television stations throughout the repurposed 600 MHz Band.

As a threshold matter, the particulars of the Commission’s inter-service interference rules and measurement methodology — including the zero-percent threshold itself — are not clearly defined. The Commission has acknowledged that it would “be applying the proposed methodology for the first time” and it has never been tested in real-world conditions. Despite the Commission’s best efforts, therefore, significant unforeseen challenges may arise if wireless carriers and/or a wide variety of consumers’ smartphones, tablets, and other mobile devices begin operating on frequencies in proximity to television stations. CTIA, for instance, has expressed concerns about the burdens wireless carriers would have to bear to avoid causing any interference to TV stations in the 600 MHz Band. And if television stations are assigned within the uplink band, it is unclear how stations could practically enforce their protections against interference caused by consumers’ mobile devices. Identifying the source of interference—particularly if it is intermittent—would be especially difficult for resource-constrained public television stations. Even if the source of interference could be identified in the uplink band, it is unclear how a station could obtain an effective remedy—particularly if the

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11 ISIX FNPRM at ¶ 66.

12 CTIA ISIX Reply Comments at 3–6.
device is owned by an individual consumer. Notably, the Consumer Electronics Association has already found, based on its own analysis, that “intermodulation interference from LTE and DTV operations into DTV receivers poses a substantial risk to DTV reception,” and that the ISIX FNPRM “does not adequately consider” this risk. Given these uncertainties, PTV is concerned that the proposed assignment of some television stations to the 600 MHz Band risks irreversible impairment to viewers’ ability to reliably receive these stations over the air.

These concerns are not hypothetical. When the 700 MHz Band was reassigned for wireless use after the DTV transition, avoiding interference between TV Channel 51 and the Lower 700 MHz A Block required the Commission to establish “exclusion zones” — in which A Block operations were forbidden — covering nearly 40 percent of the U.S. population. Concerns about interference from Channel 51 led to the division of the Lower 700 MHz Band into non-interoperable band classes, which the Commission (working with the wireless industry) has only recently begun to knit back together. Scattering TV stations throughout the new 600 MHz Band risks creating many of the same problems, only magnified and more complicated due to the combined impact of geography, frequency, and power level variables.

The contiguity of the television band also could have implications for consumer electronics makers. Under the proposal set forth in the Public Notice, televisions and other receivers would need to continue to be able to receive television stations across the entire pre-
auction UHF band for the foreseeable future, and they would have to do so without suffering interference from wireless users in the new 600 MHz Band. In contrast, maintaining a contiguous TV band would allow for the production of more efficient receivers once the repacking and final DTV transition for low-power and Class A television stations is complete.

The Commission’s proposal to allow impairments on a nationwide aggregate basis of up to 20 percent of the total U.S. population (measured on a weighted basis) only exacerbates these issues. This significant market variation makes it even more likely that stations in a large number of markets will find themselves assigned to disparate portions of the 600 MHz Band. This approach thus would increase the number and complexity of interactions between wireless operators and TV stations and prevent equipment manufacturers from improving receiver efficiency (since their receivers must work on a national basis).

Consequently, PTV strongly urges the Commission to not repack television stations within the repurposed 600 MHz band.

II. The Commission Should Improve Its Repacking Optimization Process and Take Steps To Ensure Stations That Experience Substantial New Interference Have Adequate Relief.

The Commission should continue to pressure test its repacking optimization process to ensure that it will be able to account for significant variations between markets and stations. For instance, the current process does not appear to consider or address the effect that reassigning one station’s channel may have on facilities co-located with the reassigned channel.

In the Incentive Auction Report and Order, the Commission correctly concluded that “stations that are not reassigned to new channels but that sustain expenses due to the repacking process may be reimbursed indirectly,” such as where one station who is relocated shares a tower with other stations and is contractually obligated to cover certain expenses incurred by the other tower
occupants. In its previous comments, PTV requested that the TV Broadcaster Relocation Fund Reimbursement Form include a separate section specifically covering these indirect costs in order to help stations understand how these costs should be reported and facilitate a more uniform and fair reimbursement process. Similarly, PTV encourages the Commission to design its repacking algorithm to assign channels in a way that ensures co-location remains technically feasible for currently co-located stations in order to make the repacking as spectrally and economically efficient as possible. In some markets, several co-located facilities are assigned to alternating channels. An imprudent reassignment of one such channel could cause a chain reaction requiring multiple stations to relocate, imposing burdens on the stations and unnecessary strain on the TV Broadcaster Relocation Fund (the “Relocation Fund”). This burden would be particularly harsh given the express, extra efforts these stations have gone to in order to build spectrally and economically efficient facilities to date. The Commission could avoid these unnecessary costs by providing stations an early opportunity to identify themselves as having co-located facilities prior to the start of the auction and building this factor into the optimization algorithm.

Moreover, PTV asks that the Commission take steps to ensure that stations that experience more than one-percent aggregate new interference after the repacking are able to seek adequate relief from the Commission. The Public Notice asserts that “the worst cases will be limited in number and will not exceed two percent” new aggregate interference, and it suggests

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17 Comments of the Public Broadcasting Service, Corporation for Public Broadcasting, and Association of Public Television Stations, GN Docket No. 12-268, at 6 (filed Nov. 26, 2014).
that stations suffering from these “worst-case” scenarios “may remedy any such situations by seeking alternative channel assignments in the post-auction transition process.”\textsuperscript{18}

As PTV previously has explained in its comments, even seemingly small amounts of new interference to a public television station’s population served would adversely affect statutory principles of universal service because these mathematical percentages represent real individuals losing service.\textsuperscript{19} For example, the Incentive Auction Task Force’s studies indicate that WCET in Cincinnati, Ohio could lose 1.818 percent of its population served under some scenarios. This is 56,271 people and 25,231 more people than with a one-percent aggregate interference cap.\textsuperscript{20} Similarly, WNJS in Camden, New Jersey could lose 1.327 percent of its population served, resulting in 95,036 people losing service, which is 23,410 more than with a one-percent cap.\textsuperscript{21} The Commission’s analysis also indicates that WUNC in Chapel Hill, North Carolina could lose 1.654 percent of its population served in certain scenarios, which would mean interference with service to 65,711 people and 25,994 more than with a one-percent cap.\textsuperscript{22}

PTV agrees with the Commission that these stations should be able to seek relief from the Commission in such circumstances, but PTV is concerned that the proposed remedy of seeking an alternative channel assignment will be illusory if there are no extra channels available in the station’s post-auction band — as will presumably be the case in most markets if the auction successfully repurposes a significant amount of the broadcast TV spectrum.

Consequently, if the Commission continues to insist that stations may be subject to aggregate

\textsuperscript{18} \textit{Public Notice} at ¶ 132.

\textsuperscript{19} \textit{Reply Comments of the Public Broadcasting Service, Association of Public Television Stations, and Corporation for Public Broadcasting, GN Docket No. 12-268} et al., at 2 (filed July 22, 2014).

\textsuperscript{20} \textit{Id.} at 3.

\textsuperscript{21} \textit{Id.} at 4.

\textsuperscript{22} \textit{Id.}
new interference over one-percent of population served consistent with the Spectrum Act, PTV urges the Commission to offer a stronger assurance that stations suffering such aggregate interference will have access to meaningful relief before the band plan is locked down.

III. Payments for Stations Moving to a VHF Band Should Be Determined By Market Mechanisms, Not an Artificial Discount.

The Public Notice proposes that the opening bid for a station offering to move from the UHF band to the VHF band would be discounted by an artificial fixed percentage of the opening price offered to a station proposing to go off the air.\textsuperscript{23} Such an artificial ceiling on UHF-to-VHF bids is inconsistent with the basic purpose of the auction: to use market mechanisms to determine the value a broadcaster is willing to accept to relinquish its current channel and either go off the air or move to a less technically desirable channel. Instead, PTV recommends that the Commission develop opening VHF bids that are comparable to full relinquishment, with downward pressure on the price resulting from the actual supply of VHF channels in a given market and the bidder demand for those channels. This approach is the most likely to ensure a robustly successful incentive auction because it will attract the maximum number of stations willing to consider a move to VHF, which in turn maximizes competition in the reverse auction and ensures final prices will reflect the competitive market value of the winning station’s move. This market-based approach is more likely to support a successful auction than imposing an artificial limit on the bids offered to stations considering a move to one of the VHF bands.

If the Commission nonetheless retains its fixed-discount approach, it should adopt a bidding credit for noncommercial educational (“NCE”) stations that successfully bid for a VHF

\textsuperscript{23} Public Notice at ¶ 99.
move, analogous to the already adopted small business bidding credit in the forward auction.24 This would “gross up” a winning NCE station’s final payment to offset the initial, fixed reduction in the price offered to the station for its VHF move. The Commission has determined that winning UHF-to-VHF bidders will not be eligible to receive reimbursements from the TV Broadcaster Relocation Fund, but will instead be required to fund their move out of auction proceeds.25 But as the Commission is aware, NCE stations face unique financial and organizational challenges, stemming from the fact that these stations rely on direct financial support from private donations and, in many cases, funding from federal and state governments.26 Because money is, of course, fungible, requiring PTV and other NCE stations to pay relocation costs out of artificially discounted auction proceeds would, in effect, be akin to diverting NCE stations’ public and charitable funding (in an amount equal to the proposed discount) from supporting educational programming toward funding the station’s relocation. The public interest would be far better served by allowing NCE stations to fund their relocation using the full, undiscounted value of their spectrum from proceeds paid by forward auction bidders.

IV. The Commission Should Clarify That It Will Not Penalize an Innocent Station That Would Not Be in Violation of the Commission’s Rules But For Another’s Breach of a Channel Sharing Agreement.

The Public Notice suggests that the Commission will not referee private economic disputes between entities that enter into a channel sharing arrangement, stating that “parties to a channel sharing agreement bear the consequences of any defects in the agreements or the failure

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24 Incentive Auction Report and Order, 29 FCC Rcd at 6762 ¶ 475.
25 Id. at 6813 ¶ 601.
of either party to perform,” and that the Commission “is not a guarantor or an enforcer of channel sharing agreements.” Read literally, this statement suggests the Commission could seek to enforce its rules against an entirely innocent party whose violation of the Commission’s regulations results solely from another’s breach of the channel sharing agreement. PTV encourages the Commission to clarify that such a literal reading, which would discourage stations from entering into channel sharing arrangements, was not intended. Clarifying this point will help contribute to the success of a robust incentive auction.

For instance, the Commission requires that “each channel sharing licensee retain spectrum usage rights adequate to ensure access to enough shared channel capacity to allow it to provide at least one Standard Definition (‘SD’) program stream at all times.” If one channel sharing party were to begin operating in a way that prevented its partner from maintaining the required SD program stream, the Commission should protect the rights of the injured licensee, as set forth in the Commission’s rules, just as the Commission would step in to prevent harmful interference to a standalone licensee or to enforce a station’s valid network non-duplication or syndicated exclusivity rights. None of these actions requires the Commission to become “a guarantor or an enforcer of channel sharing agreements” as a whole. However, parties considering channel sharing arrangements need assurance that, just as each channel sharing licensee retains “its independent obligation to comply with all pertinent statutory requirements and [Commission] rules,” each licensee also retains its right to seek the protections afforded by those rules, including those protections required by the Commission to be codified in a channel sharing agreement. The Commission should also confirm that, if the licensees have allocated

27 Public Notice at ¶ 75.
28 Incentive Auction Report and Order, 29 FCC Rcd at 6851 ¶ 697.
29 Id. at 6853 ¶ 700.
certain responsibilities (such as tower maintenance) in a compliant channel sharing agreement, the Commission will respect that allocation and will not seek to hold one licensee responsible for its partner’s failure to carry out its responsibilities. The lack of such assurances may hinder parties’ willingness to enter into channel sharing arrangements, thus unnecessarily depressing overall reverse auction participation.

CONCLUSION

PTV looks forward to working with the Commission to take the steps described above, which will maximize the incentive auction’s chances of success while ensuring that post-auction noncommercial educational broadcasters remain able to continue serving their communities effectively in a viable and vibrant television broadcast band.

Respectfully submitted,

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