



# PUBLIC NOTICE

Federal Communications Commission  
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## COMMENT SOUGHT ON DEFINING COMMENCEMENT OF OPERATIONS IN THE 600 MHZ BAND

GN Docket No. 12-268

Comments Due: May 1, 2015

Reply Comments Due: May 18, 2015

1. In the *Incentive Auction Report and Order*, the Commission adopted rules to implement the incentive auction through which certain broadcast television spectrum will be repurposed for wireless flexible use to create the 600 MHz Band.<sup>1</sup> These rules include procedures governing the transition of broadcast television services and other operations out of the 600 MHz Band.<sup>2</sup> As described below, the procedures the Commission adopted permit certain operations to continue in the 600 MHz spectrum until a 600 MHz Band wireless licensee “commences operations” in its licensed spectrum. The Commission did not define the term “commence operations,” but indicated that it would do so in the pre-auction process.<sup>3</sup> By this Public Notice, the Commission seeks comment on defining the term “commence operations” in the context of these transition rules.<sup>4</sup>

2. Specifically, we propose that a 600 MHz Band licensee be deemed to “commence operations” in an area when it begins site activation and commissioning tests, using permanent base station equipment and permanent antenna or tower locations (hereinafter “site commissioning tests”).<sup>5</sup> This testing takes place at the start of the site and system optimization processes and prepares the network for launch in the area in which the licensee will provide commercial service. We believe this approach best fulfills our objective in the transition process of “promot[ing] ready access to the repurposed spectrum by 600 MHz Band wireless licensees when and where they need it, while at the same time

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<sup>1</sup> See Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, *Report and Order*, 29 FCC Rcd 6567 (2014) (*Incentive Auction Report and Order*).

<sup>2</sup> See *Incentive Auction Report and Order*, 29 FCC Rcd at 6833-47, § V.D (Transition Procedures for Other Services and Unlicensed Operations).

<sup>3</sup> See *id.* at 6840, para. 668 n.1861.

<sup>4</sup> The full Commission will resolve the issues set forth in this Public Notice.

<sup>5</sup> Site activation and commissioning tests confirm that the site is operational, integrated into the network, and meets key functional requirements and performance metrics. See also *infra* para. 5.

providing for an orderly transition process for secondary and unlicensed users that currently are serving various important consumer needs using this spectrum.”<sup>6</sup>

3. As noted, this definition will be one element of the 600 MHz transition rules. Under these rules, all full power and Class A television stations must cease operating in the spectrum repurposed for the 600 MHz Band no later than 39 months from issuance of the *Channel Reassignment PN* (i.e., by the end of the Post-Auction Transition Period).<sup>7</sup> 600 MHz Band wireless licensees will not have access to the repurposed spectrum in an area during the Post-Auction Transition Period unless full power and Class A television operations have ceased operations in that area.<sup>8</sup>

4. For secondary and unlicensed users that currently are authorized to operate in this band, including low power television (“LPTV”) and TV translator stations, fixed broadcast auxiliary service operations (“BAS”), and unlicensed television white space (“TVWS”) devices, we established a phased transition out of the 600 MHz Band. The transition procedures applicable to these categories of operations vary in certain regards, but all require that these operations cease in areas where the 600 MHz Band wireless licensee commences operations after providing the requisite notice.<sup>9</sup> Except in the guard bands, LPTV and TV translator stations in the 600 MHz Band may continue to operate indefinitely unless they are in an area in which a 600 MHz Band wireless licensee provides advance written notice that it intends to commence operations and that the LPTV or TV translator station is likely to cause harmful interference to the licensee’s operations in that area.<sup>10</sup> LPTV or TV translator stations in the 600 MHz guard bands must cease operations no later than the end of the Post-Auction Transition Period.<sup>11</sup> TVWS

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<sup>6</sup> *Incentive Auction Report and Order*, 29 FCC Rcd at 6834, para. 655.

<sup>7</sup> The *Channel Reassignment PN* will announce the results of the incentive auction and the repacking process. See *Incentive Auction Report and Order*, 29 FCC Rcd at 6782, para. 525, 6796, paras. 559-560.

<sup>8</sup> See *id.* at 6573, para. 11, 6801-6802, para. 573, 6833-34, para. 655.

<sup>9</sup> See generally *Incentive Auction Report and Order*, Section V.D., 29 FCC Rcd at 6833-47, paras. 655-688.

<sup>10</sup> The 600 MHz Band wireless licensee must give the LPTV or TV translator stations that are likely to cause harmful interference written notice to cease operations at least 120 days prior to the date the wireless licensee intends to commence operations. See *id.* at 6839-6840, paras. 668-669, 6841, para. 672; see also 47 C.F.R. § 73.3700(g)(4)(i)-(v). 600 MHz Band wireless licensees will be required to determine whether a likelihood of receiving harmful interference exists based on the methodology the Commission adopted to prevent inter-service interference. *Id.* at 6840, para. 668 n.1862; see also Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, ET Docket Nos. 13-26 & 14-14, *Second Report and Order and Further Notice of Proposed Rulemaking*, FCC 14-157 at paras. 81-84 (rel. Oct. 17, 2014) (*ISIX Report and Order*). To the extent that the 600 MHz Band wireless licensees are commencing operations in areas of their geographic licenses where harmful interference from LPTV or TV translator stations would not be likely, these LPTV or TV translator stations are not required to cease operations. *Incentive Auction Report and Order*, 29 FCC Rcd at 6840, para. 668 n.1863.

<sup>11</sup> LPTV and TV translator stations operating on channels that include frequencies repurposed for 600 MHz Band guard band use (including the duplex gap) must cease operations on those frequencies no later than the end of the Post-Auction Transition Period (i.e., 39 months after the issuance of the Channel Reassignment PN), and will be required to cease operating prior to that date if any 600 MHz Band licensee has notified them that their operations would be likely to cause harmful interference in areas where the wireless licensee intends to commence operations. *Id.* at 6841, para. 672; see also 47 C.F.R. § 73.3700(g)(4)(v).

devices may continue to operate in the 600 MHz Band indefinitely, except in those areas in which a 600 MHz Band wireless licensee commences operations after providing the requisite notice to the TVWS database administrator.<sup>12</sup> BAS licensees must vacate the 600 MHz Band by the end of the Post-Auction Transition Period,<sup>13</sup> or earlier if notified that they are likely to cause harmful interference to a 600 MHz Band wireless licensee in an area in which it intends to commence operations.<sup>14</sup> While several commenters in the *Incentive Auction* proceeding discussed the transition of secondary and unlicensed users out of the 600 MHz Band, we received limited comment on how best to define when a 600 MHz Band wireless licensee commences operations for the purpose of these transition procedures.<sup>15</sup>

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<sup>12</sup> See *id.* at 6843-44, para. 680. The 600 MHz Band wireless licensee can notify any of the TV bands database administrators when and where it plans to commence operations, and the TV bands databases would be updated to preclude unlicensed TVWS device operations when the licensee commences operations in those areas. See *id.* at 6844, para. 680-81; see also 47 C.F.R. § 15.707(a)(2). Currently, we are seeking comment on revising various procedures concerning operation of the TVWS databases, including addressing how the databases can be designed to identify a specified geographic area that corresponds to the area where the 600 MHz Band wireless licensee has commenced operations. See Amendment of Part 15 of the Commission's Rules for Unlicensed Operations in the TV Bands, Repurposed 600 MHz Band, 600 MHz Guard Bands and Duplex Gap, and Channel 37, GN Docket No. 14-165, ET Docket No. 14-165, *Notice of Proposed Rulemaking*, FCC 14-144 at paras. 178-180 (rel. Sept. 30, 2014).

<sup>13</sup> See *Incentive Auction Report and Order*, 29 FCC Rcd at 6841-42, paras. 673, 674, & 676.

<sup>14</sup> The 600 MHz Band wireless licensee must provide at least 30 days' advance notice to a BAS operator. See *id.* at 6841-42, para. 674 & n.1881; see also 47 C.F. R. §74.602(h)(5)(ii) & (h)(6).

<sup>15</sup> See, e.g., Affiliates Association Comments at 41 (“[N]ew licensees should be required to provide advance notice to all incumbent fixed BAS operations within interference range prior to *commencing operations* in the vicinity.” (emphasis added)); Association of Public Television Comments at 12. (“[T]ranslators should be permitted to operate . . . until they are displaced by a winning bidder that actually builds out and *makes use* of the spectrum acquired in the forward auction for mobile broadband service.” (emphasis added)); Computer & Communications Industry Association Comments at 12 (“[T]hose employing unlicensed white space spectrum would bear the onus of monitoring the license database for notices that a licensee of repurposed 600 MHz spectrum intends to *commence service*.” (emphasis added)); Google/Microsoft Comments at 44-45 (“[The Commission has the opportunity to] allow unlicensed devices to access frequencies within the 600 MHz band . . . where 600 MHz licensees have not yet *begun operations*. . . . As soon as a licensee notifies the Commission that it is ready to *begin operations*, the rules should require database providers to update their database to prohibit unlicensed operations in the relevant frequencies.” (emphasis added)); Public Interest Spectrum Coalition Comments at 6, 57 (“[A]ll new 600 MHz licenses should include a condition that permits unlicensed white space devices (TVBDs) to continue to operate on a localized basis until such time as the licensee notifies the Commission and a TV Bands Database administrator that the licensee intends to *commence service*.” (emphasis added)); Wireless Internet Service Provider Association Comments at 26 (“[T]he Commission thus should make clear that auctioned spectrum will remain available in the TV bands database until the licensee notifies the Commission and the database administrators that it is *commencing service* to the public.” (emphasis added)); see also White Space Alliance Comments at 20-21 (“[U]nlicensed, white space use of the spectrum [should be] permitted until a licensee *actually builds out and turns on a site* serving a defined geographic area.”) (emphasis added)); White Space Database Administrator Group Comments at 3 (“[S]pectrum where *no licensed service is deployed* can remain available for use until a relatively short time before a new *service goes online*...” (emphasis added)). Complete names of filers are listed in Appendix D of the *Incentive Auction Report and Order*. See *Incentive Auction Report and Order*, 29 FCC Rcd at 7026, Appendix D (Commenter Short Names).

5. Under our proposed definition, a 600 MHz Band wireless licensee's operations would be deemed to "commence" prior to the licensee's launch of commercial services in an area, specifically when the licensee begins site commissioning tests. These site commissioning tests ordinarily take place in the late stages of a deployment, after the wireless licensee has completed construction of physical network infrastructure that will provide commercial service in the area. That is, they are conducted after a cell site has been fully constructed, with all base station equipment, antennas, feed systems, and other hardware installed, and with all power systems and backhaul connectivity installed and operational. This testing encompasses start-up procedures and system checks when the system is first powered up, a series of functionality tests, and over-the-air field tests, such as establishing mobile calls, validating coverage, and confirming handover between sectors. Site commissioning tests are used to confirm that all of the site infrastructure is working properly and is integrated into the licensee's network, and to enable the licensee to verify the site's coverage through direct measurements. To ensure the accuracy of this site commissioning testing, a licensee will require access to its 600 MHz Band spectrum in the area in which it is commencing operations so all of its facilities can be tested under the real world conditions for which they were designed and in an environment that is free from potential interference from others.<sup>16</sup> Alternatively, should any testing by a wireless licensee be deemed the "commencement" of operations? Is there a specific stage of testing other than site commissioning tests that would be an appropriate benchmark? Commenters supporting one of these alternatives to our proposal above should explain how it meets the objectives set forth in the *Incentive Auction Report and Order* regarding an orderly transition process for existing secondary and unlicensed users in the 600 MHz Band.<sup>17</sup>

6. We also propose that a 600 MHz Band licensee's notification would cover the area served by the licensee's commercial service infrastructure deployment. Under this approach, the area subject to notification might include an entire metropolitan area, in the case of the initial launch for a market, or might be a smaller area, such as a highway corridor, where a licensee is deploying commercial service in phases. The 600 MHz Band licensee would be authorized to conduct site commissioning tests on all cell sites within the identified area, starting on the date provided in the notice. Alternatively, should the area subject to a wireless licensee's notification cover larger areas to encompass the licensee's phased deployment of infrastructure? Commenters proposing such alternatives should explain their reasoning and how their proposals meet our transition objectives.

7. Under our proposed definition of "commence operations," secondary and unlicensed users would continue to operate as set forth in the *Incentive Auction Report and Order* until the time prescribed by the notice from the 600 MHz Band wireless licensee that triggers their obligation to vacate the affected area(s) of the licensed spectrum. We believe this proposed definition of "commence operations" best accomplishes our transition objectives.

8. We seek comment on this proposed definition of "commence operations" for the purpose of the transition rules for the 600 MHz Band, including our proposal for determining the area to be covered by the licensee's notification. Commenters should discuss and quantify the costs and benefits of this proposal, as well as any suggested clarifications or revisions to the definition, and any proposed alternative approaches. In advocating an alternative definition, commenters should explain why the alternative proposal better serves the public interest and the Commission's policy goals than the definition being proposed.

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<sup>16</sup> See, e.g. CTIA Comments at 40 (CTIA argues that "[b]efore a licensee launches commercial service in a particular geographic area, they must engage in extensive construction and testing of equipment and services. Requiring the licensee to share its spectrum with other uses while in the process of expanding into new geographic areas would undermine or delay the provision of service in these areas.")

<sup>17</sup> *Incentive Auction Report & Order*, 29 FCC Rcd at 6834, para. 655; see also *supra* para. 4.

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9. Interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. When filing comments, please reference GN Docket No. 12-268.<sup>18</sup>

10. This matter shall be treated as a “permit-but-disclose” proceeding in accordance with the *ex parte* rules.<sup>19</sup> Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. More than a one- or two-sentence description of the views and arguments presented generally is required.<sup>20</sup> Other requirements pertaining to oral and written presentations are set forth in section 1.1206(b) of the rules.<sup>21</sup>

11. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS) or by filing paper copies.<sup>22</sup> Comments filed through the ECFS can be sent as an electronic file via the Internet to <http://www.fcc.gov/cgb/ecfs/>. Generally, only one copy of an electronic submission must be filed and should include the docket or rulemaking number referenced in the caption. In completing the transmittal screen, commenters should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by Internet e-mail. To get filing instructions for e-mail comments, commenters should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and should include the following words in the body of the message, “get form.” A sample form and directions will be sent in reply. Parties who choose to file by paper must file an original and four copies of each filing.

12. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). Parties are strongly encouraged to file comments electronically using the Commission’s ECFS. All filings must be addressed to the Commission’s Secretary, Office of the Secretary, Federal Communications Commission, 445 12th Street, S.W., Washington, DC 20554.

- Effective December 28, 2009, all hand-delivered or messenger-delivered paper filings for the Commission’s Secretary must be delivered to FCC Headquarters at 445 12<sup>th</sup> St., SW, Room TW-A325, Washington, DC 20554. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the

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<sup>18</sup> The actions in this Public Notice have not changed, or proposed to change, our Final Regulatory Flexibility Analysis (FRFA), which was set forth in the *Incentive Auction Report and Order*. See *Incentive Auction Report and Order*, 29 FCC Rcd at 6947, Appendix B. Thus, no supplemental FRFA is necessary. In addition, the action contained herein does not change, or propose to change, the information collection requirements subject to the Paperwork Reduction Act of 1995 (“PRA”), Public Law 104-13, contained in the *Incentive Auction Report and Order*. As a result, no new submission to the Office of Management and Budget is necessary to comply with the PRA requirements.

<sup>19</sup> 47 C.F.R. § 1.1200, *et seq.* See also, Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions, GN Docket No. 12-268, *Notice of Proposed Rulemaking*, 27 FCC Rcd 12357, 12494-95, paras. 416-417.

<sup>20</sup> See 47 C.F.R. § 1.1206(b)(1).

<sup>21</sup> See 47 C.F.R. § 1.1206(b).

<sup>22</sup> See Electronic Filing of Documents in Rulemaking Proceedings, GC Docket No. 97-113, *Report and Order*, 13 FCC Rcd 11322 (1998).

building. The filing hours at this location are 8:00 a.m. to 7:00 p.m.

- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington DC 20554.

13. Documents in GN Docket No. 12-268 will be available for public inspection and copying during business hours at the FCC Reference Information Center, Portals II, 445 12th St. S.W., Room CY-A257, Washington, DC 20554, or call the Reference Information Center at 202-418-0270.

14. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

15. For further information, contact Simon Banyai of the Wireless Telecommunications Bureau, Broadband Division, at 202-418-1443, or via e-mail at [simon.banyai@fcc.gov](mailto:simon.banyai@fcc.gov).

16. Action by the Commission March 26, 2015: By Chairman Wheeler, and Commissioners Clyburn, Rosenworcel, Pai and O’Rielly.

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