

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

In the Matter of	)	
	)	
T-Mobile License LLC	)	ULS File No. 0010206629
	)	
Application for 2.5 GHz Band Licenses,	)	
Auction No. 108	)	

MEMORANDUM OPINION AND ORDER

Adopted: February 27, 2024	Released: February 27, 2024
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By the Chiefs, Wireless Telecommunications Bureau and Office of Economics and Analytics:

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## I. INTRODUCTION

1. In this Memorandum Opinion and Order (Order), we review the Auction 108 Form 601 application (long-form application) of T-Mobile License LLC (T-Mobile or Applicant) for licenses in the 2.5 GHz band (2496-2690 MHz).<sup>1</sup> T-Mobile won multiple licenses in Auction 108.<sup>2</sup> After T-Mobile filed its long-form application, AT&T Services, Inc. (AT&T) filed a petition to deny.<sup>3</sup> For the reasons explained below, based on the record before us and the applicable Commission precedent, we find that the grant of T-Mobile's 2.5 GHz license application will serve the public interest, convenience, and necessity. Specifically, and in part based on the unique characteristics of the 2.5 GHz band and the specific licenses made available in Auction 108, we find that the grant of T-Mobile's license application—subject to its voluntary divestiture commitment in parts of Hawaii that we impose as a condition—will promote the public interest by facilitating access to and use of the spectrum, particularly in rural areas where this band has been underutilized. Accordingly, we deny AT&T's petition to deny and will process T-Mobile's application consistent with this Order and the Commission's rules.

## II. BACKGROUND

### A. Spectrum Aggregation Policies

2. Avoiding undue aggregation of spectrum in particular geographic markets has long been a bedrock principle of our mobile wireless policy. Since the advent of commercial mobile services, the Commission has consistently considered and adopted policies designed to prevent undue concentration of spectrum licenses necessary to provide those services.<sup>4</sup> The Commission's spectrum aggregation policies reflect the need to ensure “that sufficient spectrum is available for multiple existing mobile service providers as well as potential entrants.”<sup>5</sup> These policies fulfill the Commission's statutory mandate to “include safeguards to protect the public interest” when specifying the classes and characteristics of licenses and permits to be issued by competitive bidding<sup>6</sup> and to “promot[e] economic opportunity and competition and ensur[e] that new and innovative technologies are readily accessible . . . by avoiding excessive concentration of licenses.”<sup>7</sup> As the Commission has explained, “the fundamental goal” guiding the Commission's mobile spectrum holding policies “has been the preservation and promotion of

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<sup>1</sup> T-Mobile filed its long-form application on September 16, 2022 and subsequently amended its application on October 4, 2022, November 7, 2022, February 1, 2023, April 17, 2023, and January 3, 2024. See Amended Application of T-Mobile License LLC for 2.5 GHz Licenses, Form 601, ULS File No. 0010206629 (last filed Jan. 3, 2024) (T-Mobile Application).

<sup>2</sup> *Auction of Flexible-Use Licenses in the 2.5 GHz Band Closes; Winning Bidders Announced for Auction 108*, AU Docket No. 20-429, Public Notice, 37 FCC Rcd 10117, para. 1 (WTB/OEA 2022) (*Auction 108 Closing Public Notice*).

<sup>3</sup> Petition to Deny of AT&T Services, Inc., ULS File No. 0010206629 (filed Nov. 7, 2022), <https://wireless2.fcc.gov/UlsEntry/attachments/attachmentViewRD.jsp?applType=search&fileKey=901738970&attachmentKey=21623913&attachmentInd=applAttach> (AT&T Petition to Deny).

<sup>4</sup> *T-Mobile License LLC, Cellco Partnership, Applications for 3.7-3.98 GHz Band Licenses, Auction No. 107*, ULS File Nos. 0009446137, 0009446983, Memorandum Opinion and Order, 36 FCC Rcd 11486, 11487-88, para. 2 (WTB/OEA 2021) (*3.7 GHz Auction 107 Order*); *Policies Regarding Mobile Spectrum Holdings Expanding the Economic Innovation Opportunities of Spectrum Through Incentive Auctions*, WT Docket No. 12-269, Report and Order, 29 FCC Rcd 6133, 6137, para. 8 (2014) (*Mobile Spectrum Holdings Report and Order*).

<sup>5</sup> *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11487-88, para. 2; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6143-44, para. 17.

<sup>6</sup> *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11487-88, para. 2; 47 U.S.C. § 309(j)(3).

<sup>7</sup> *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11487-88, para. 2; 47 U.S.C. § 309(j)(3)(B).

competition, which in turn, enables consumers to make choices among numerous service providers and leads to lower prices, improved quality, and increased innovation.”<sup>8</sup>

3. These mobile spectrum holding policies are applicable to applications to acquire licenses through competitive bidding.<sup>9</sup> Over the years, the Commission has used a variety of tools to achieve its policy goals. In certain auctions, for example, the Commission has employed in-band spectrum aggregation limits or spectrum reserves to ensure against excessive concentration of spectrum.<sup>10</sup> In other auctions, the Commission has employed post-auction market-by-market review.<sup>11</sup>

4. Since 2004, as part of its mobile spectrum holding policies, the Commission has employed an initial spectrum screen to help identify for further competitive analysis those local markets where an entity would hold approximately one-third or more of the total spectrum “suitable and available” for the provision of mobile telephony/broadband services.<sup>12</sup> Such screens are the beginning, not the end, of the competitive analysis.<sup>13</sup> They do not act as a hard cap on an entity’s spectrum holdings, but rather prompt further competitive analysis as part of the Commission’s case-by-case review.<sup>14</sup> Such case-by-case review affords the Commission “flexibility to consider the unique circumstances” of a proposed transaction or spectrum acquisition and the “changing needs of the mobile wireless marketplace generally.”<sup>15</sup> Any remedies deemed necessary can then be tailored to “the specific harm and circumstances.”<sup>16</sup>

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<sup>8</sup> 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11487-88, para. 2; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6144, para. 17.

<sup>9</sup> 47 U.S.C. § 309(j)(17)(B).

<sup>10</sup> See, e.g., *Facilitating Shared Use in the 3100-3550 MHz Band*, WT Docket 19-348, Second Report and Order, Order on Reconsideration, and Order of Proposed Modification, 36 FCC Rcd 5987, 6022-23, para. 102 (2021) (3.45 GHz Second Report and Order); *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6193, para. 146.

<sup>11</sup> See, e.g., 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11498-11501, paras. 28-34.

<sup>12</sup> See *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6227, 6229, paras. 242, 251; *Applications of T-Mobile US, Inc., and Sprint Corporation for Consent to Transfer Control of Licenses and Authorizations, et al.*, WT Docket No. 18-197, Memorandum Opinion and Order, Declaratory Ruling, and Order of Proposed Modification, 34 FCC Rcd 10578, 10608, para. 72 (2019) (*T-Mobile-Sprint Order*); *Applications of AT&T Wireless Services, Inc. and Cingular Wireless Corporation for Consent to Transfer Control of Licenses and Authorizations, et al.*, WT Docket No. 04-70, et al., Memorandum Opinion and Order, 19 FCC Rcd 21522, 21568-69, paras. 109-110 (2004) (*Cingular-AT&T Order*). Whether spectrum is “suitable,” for purposes of the spectrum screen, “is determined by whether the spectrum is capable of supporting mobile service given its physical properties and the state of equipment technology, whether the spectrum is licensed with a mobile allocation and corresponding service rules, and whether the spectrum is committed to another use that effectively precludes its use for mobile telephony/broadband services.” *T-Mobile-Sprint Order*, 34 FCC Rcd at 10608, para. 72; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6169, para. 71. Whether spectrum is “available” is based on whether it is “fairly certain” that it meets the criteria for suitability in the near term, an assessment that can be made at the time the spectrum is licensed or at later times after changes in technology or regulation that affect the consideration. See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10608, para. 72 & n.227; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6169, para. 71.

<sup>13</sup> Cf. *Applications of AT&T Inc. and DIRECTV for Consent to Assign or Transfer Control of Licenses and Authorizations*, MB Docket No. 14-90, Memorandum Opinion and Order, 30 FCC Rcd 9131, 9163, para. 75 (2015).

<sup>14</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, para. 231; see also 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11488, para. 3.

<sup>15</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, paras. 229, 231; see also 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11488, para. 3.

<sup>16</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, paras. 229, 231; see also 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11488, para. 3.

5. In recent years, the Commission has worked to make spectrum available to support existing 4G LTE networks and to develop and deploy new technologies, such as 5G. In particular, the Commission has pursued a comprehensive strategy to make available more mid-band spectrum,<sup>17</sup> which is uniquely suited for 5G deployment because of its favorable technical characteristics. In February 2021, the Commission concluded Auction 107,<sup>18</sup> which made available new flexible-use overlay licenses in the 3.7-4.2 GHz band (C-band) for 280 megahertz of spectrum or more than half of the C-band.<sup>19</sup> In March 2021, the Commission released an Order regarding the 3.45 GHz spectrum that also took steps to advance the Commission's objectives to make more mid-band spectrum available for 5G.<sup>20</sup> The Order adopted a framework that will enable full-power commercial use<sup>21</sup> of the band and require that future licensees deploy their networks quickly.<sup>22</sup> In January 2022, bidding in that auction (Auction 110) concluded following the close of bidding in the assignment phase.<sup>23</sup> Collectively, the 3.45 GHz band and the neighboring 3.5 GHz and 3.7 GHz bands offer 530 megahertz of contiguous mid-band spectrum for 5G services.<sup>24</sup> As described in greater detail below, Auction 108 furthered the goal of ensuring that any fallow 2.5 GHz spectrum be used to provide high-speed broadband service, particularly in rural areas where this band had historically been underused, in part by offering county-sized licenses for the remaining spectrum in this band, making this unassigned mid-band spectrum available for advanced wireless services, including 5G.<sup>25</sup>

## **B. Auction 108**

6. The Commission conducted Auction 108 in accordance with the July 2019 *2.5 GHz Report and Order*, which transformed the regulatory framework governing the 2.5 GHz band.<sup>26</sup> In that Order, the Commission made available 117.5 megahertz of spectrum in the 2.5 GHz band for new licensed use.<sup>27</sup> The Commission established a Rural Tribal Priority Window (RTPW) to give federally recognized Tribal nations an opportunity to obtain 2.5 GHz licenses for unassigned spectrum in the former Educational Broadband Service (EBS) band over rural Tribal lands before any remaining

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<sup>17</sup> See, e.g., *3.45 GHz Second Report and Order*, 36 FCC Rcd at 5988, para. 1; *Expanding Flexible Use of the 3.7 to 4.2 GHz*, GN Docket No. 18-122, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343 (2020) (*3.7 GHz Report and Order*), *upheld sub nom. PSSI Global Services, L.L.C. v. FCC*, 983 F.3d 1 (D.C. Cir. 2020); *Transforming the 2.5 GHz Band*, WT Docket No. 18-120, Report and Order, 34 FCC Rcd 5446 (2019) (modified by Erratum, 34 FCC Rcd 10386 (WTB 2019)) (*2.5 GHz Report and Order*).

<sup>18</sup> *Auction of Flexible-Use Service Licenses in the 3.7-3.98 GHz Band Closes, Winning Bidders Announced for Auction 107*, AU Docket No. 20-25, Public Notice, 36 FCC Rcd 4318 (WTB/OEA 2021) (*Auction 107 Closing Public Notice*); Press Release, FCC, First Phase of Record-Breaking 5G Spectrum Auction Concludes (Jan. 15, 2021), <https://docs.fcc.gov/public/attachments/DOC-369265A1.pdf>.

<sup>19</sup> *Auction 107 Closing Public Notice*, 36 FCC Rcd at 4318, para. 1; *3.7 GHz Report and Order*, 35 FCC Rcd at 2345, 2357, paras. 4, 30 (new 3.7 GHz licenses were made available from 3.7-3.98 GHz).

<sup>20</sup> *3.45 GHz Second Report and Order*, 36 FCC Rcd at 5988, para. 1.

<sup>21</sup> Commercial use as it is used here refers to non-federal, primary, flexible use of the 3.45 GHz band and does not preclude use of the band for private mobile radio services. *3.45 GHz Second Report and Order*, 36 FCC Rcd at 5988, para. 1 & n.1; see also 47 U.S.C. § 332(d)(3); 47 CFR § 20.3.

<sup>22</sup> *3.45 GHz Second Report and Order*, 36 FCC Rcd at 5988, para. 1.

<sup>23</sup> *Auction of Flexible-Use Service Licenses In the 3.45-3.55 GHz Band Closes, Winning Bidders Announced for Auction 110*, AU Docket No. 21-62, 37 FCC Rcd 308, para. 1 (WTB/OEA 2022).

<sup>24</sup> *3.45 GHz Second Report and Order*, 36 FCC Rcd at 5988, para. 1.

<sup>25</sup> *2.5 GHz Report and Order*, 34 FCC Rcd at 5450, para. 13.

<sup>26</sup> *2.5 GHz Report and Order*, 34 FCC Rcd at 5447, para. 3.

<sup>27</sup> *2.5 GHz Report and Order*, 34 FCC Rcd at 5447, 5450, paras. 3, 13.

unassigned spectrum was made generally available through competitive bidding.<sup>28</sup> The Commission also authorized both fixed and mobile operations in the 2.5 GHz band using geographic area licensing, replaced the regulatory regime of the EBS with new flexible-use licensing and operating rules, and decided to use its competitive bidding rules to assign any remaining spectrum through overlay licenses following the close of the RTPW.<sup>29</sup>

7. In March 2022, the Commission released a Public Notice that provided details regarding procedures, terms, conditions, dates, and deadlines governing participation in the bidding as well as an overview of the post-auction application and payment processes.<sup>30</sup> The release of this Public Notice followed substantial public comment on various process proposals under consideration and the Commission's adoption of the *2.5 GHz Report and Order*.<sup>31</sup>

8. Auction 108, which began on July 29, 2022,<sup>32</sup> offered approximately 8,000 county-sized overlay licenses in the single largest contiguous portion of available mid-band spectrum below 3 GHz, which had been underutilized for years, particularly in rural areas.<sup>33</sup> These licenses will help extend 5G service beyond the most populated areas of the United States.<sup>34</sup> Bidding in the auction concluded on August 29, 2022.<sup>35</sup> Sixty-three bidders won a total of 7,872 licenses and total net winning bids exceeded \$419 million.<sup>36</sup> Of these 63 bidders, 77% of them qualified as small businesses or as entities serving rural communities.<sup>37</sup> On September 1, 2022, the Office of Economics and Analytics (OEA) and the Wireless Telecommunications Bureau (WTB) released a Public Notice announcing the winning bidders for Auction 108.<sup>38</sup> On October 26, 2022, WTB released the first of several public notices listing 52 long-form applications (FCC Form 601) that had been found, upon initial review, to be acceptable for filing.<sup>39</sup>

<sup>28</sup> *2.5 GHz Report and Order*, 34 FCC Rcd at 5450, 5463-69, paras. 46-65.

<sup>29</sup> *2.5 GHz Report and Order*, 34 FCC Rcd at 5450-62, 5472-88, paras. 14-44, 75-112.

<sup>30</sup> *Auction of Flexible-Use Licenses in the 2.5 GHz Band for Next-Generation Wireless Services, Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 108, Bidding Scheduled to Begin July 29, 2022*, AU Docket No. 20-429, Public Notice, 37 FCC Rcd 4370 (2022) (*Auction 108 Procedures Public Notice*).

<sup>31</sup> *Auction of Flexible-Use Service Licenses in the 2.5 GHz Band for Next-Generation Wireless Services; Comment Sought on Competitive Bidding Procedures for Auction 108*, AU Docket No. 20-429, Public Notice, 36 FCC Rcd 645, 648-71, paras. 7-98 (2021) (*Auction 108 Comment Public Notice*). See 47 U.S.C. § 309(j)(3)(E)(i) (requiring the Commission to seek comment on proposed auction procedures); see also *id.* § 309(j)(4)(F) (authorizing the Commission to prescribe reserve price or minimum bid); 47 CFR § 1.2104(c)-(d). *Auction of Flexible-Use Licenses in the 2.5 GHz Band for Next-Generation Wireless Services; Further Comment Sought on Competitive Bidding Procedures for Auction 108*, AU Docket No. 20-429, Public Notice, 37 FCC Rcd 1119, 1122-1132, paras. 8-56 (WTB/OEA 2022).

<sup>32</sup> Press Release, FCC, FCC Starts 5G Mid-Band Spectrum Auction (July 29, 2022), <https://docs.fcc.gov/public/attachments/DOC-385771A1.pdf>.

<sup>33</sup> *Auction 108 Procedures Public Notice*, 37 FCC Rcd at 4372, paras. 1-2; Press Release, FCC, FCC Transforms 2.5 GHz Band For 5G Services (July 10, 2019), <https://docs.fcc.gov/public/attachments/DOC-358396A1.pdf>.

<sup>34</sup> *Auction 108 Procedures Public Notice*, 37 FCC Rcd at 4372, 4447, paras. 1, 256.

<sup>35</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd at 10117, para. 1.

<sup>36</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd at 10117, para. 1.

<sup>37</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd at 10117, para. 1; see also Press Release, FCC, FCC Concludes 2.5 GHz Spectrum Auction: A Boost Of Mid-Band Spectrum For Rural America (Sept. 1, 2022), <https://docs.fcc.gov/public/attachments/DOC-386826A1.pdf>.

<sup>38</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd 10117.

<sup>39</sup> *Wireless Telecommunications Bureau Announces that Applications for Auction 108 Licenses are Accepted for Filing*, Public Notice, 37 FCC Rcd 12344 (WTB/OEA 2022) (*Auction 108 Accepted for Filing Public Notice*). In

(continued....)

On December 1, 2022, WTB granted certain of these long-form applications and issued 650 licenses for Auction 108.<sup>40</sup> Additional long-form applications were granted and licenses issued on January 5, 2023,<sup>41</sup> March 1, 2023,<sup>42</sup> February 1, 2024,<sup>43</sup> and February 27, 2024.<sup>44</sup>

9. On March 9, 2023, the Commission's spectrum auction authority was not extended by Congress and expired.<sup>45</sup> On December 19, 2023, after unanimous passage by both the U.S. Senate and U.S. House of Representatives, President Biden signed into law the 5G Spectrum Authority Licensing Enforcement Act (5G SALE Act).<sup>46</sup> The 5G SALE Act authorized the Commission to process any remaining licenses won in Auction 108 within 90 days after enactment of this Act,<sup>47</sup> which is by March 17, 2024.

### C. Description of the Applicant

10. T-Mobile is a wholly-owned subsidiary of T-Mobile USA, Inc. and, indirectly, T-Mobile US, Inc., a publicly-traded Delaware corporation controlled by Deutsche Telekom AG (Deutsche Telekom) and part of the family of companies that operate under the T-Mobile brand names.<sup>48</sup> T-Mobile US, Inc. and its subsidiaries offer nationwide wireless voice and data services to consumer and business customers and provide service to approximately 119.7 million postpaid and prepaid customers, as of December 31, 2023, as well as offering a wide selection of wireless devices and accessories.<sup>49</sup> Substantially all of T-Mobile US, Inc.'s revenues for the years ended December 31, 2023, 2022, and 2021, were earned in the United States, including Puerto Rico, and the U.S. Virgin Islands.<sup>50</sup> T-Mobile

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December 2022, February 2023, January 2024, and February 2024, WTB released additional accepted for filing public notices. *Wireless Telecommunications Bureau Announces that Applications for Auction 108 Licenses are Accepted for Filing*, Public Notice, 37 FCC Rcd 14127 (WTB/OEA 2022); *Wireless Telecommunications Bureau Announces that Applications for Auction 108 Licenses are Accepted for Filing*, Public Notice, 38 FCC Rcd 1158 (WTB/OEA 2023); *Wireless Telecommunications Bureau Announces that Applications for Auction 108 Licenses are Accepted for Filing*, Public Notice, DA 24-46 (WTB/OEA Jan. 16, 2024); *Wireless Telecommunications Bureau Announces that Applications for Auction 108 Licenses are Accepted for Filing*, Public Notice, DA 24-135 (WTB/OEA Feb. 13, 2024).

<sup>40</sup> *Wireless Telecommunications Bureau Grants Auction 108 Licenses*, Auction No. 108, Public Notice, DA 22-1243 (WTB Dec. 1, 2022).

<sup>41</sup> *Wireless Telecommunications Bureau Grants Auction 108 Licenses*, Auction No. 108, Public Notice, DA 23-12 (WTB Jan. 5, 2023).

<sup>42</sup> *Wireless Telecommunications Bureau Grants Auction 108 Licenses*, Auction No. 108, Public Notice, DA 23-155 (WTB Mar. 1, 2023).

<sup>43</sup> *Wireless Telecommunications Bureau Grants Auction 108 Licenses*, Auction No. 108, Public Notice, DA 24-89 (WTB Feb. 1, 2024).

<sup>44</sup> *Wireless Telecommunications Bureau Grants Auction 108 Licenses*, Auction No. 108, Public Notice, DA 24-170 (WTB Feb. 27, 2024).

<sup>45</sup> The Commission's authority to issue licenses pursuant to a system of competitive bidding lapsed March 9, 2023 under 47 U.S.C. § 309(j)(11); Consolidated Appropriations Act, 2023, Pub. L. No. 117-328, 136 Stat. 4459 (Dec. 29, 2022) (extending the Commission's spectrum auction authority through March 9, 2023).

<sup>46</sup> 5G Spectrum Authority Licensing Enforcement Act (5G SALE Act), Pub. L. No. 118-27, 137 Stat. 132 (Dec. 19, 2023) (5G SALE Act).

<sup>47</sup> 5G SALE Act, Section 2, FCC Processing of Applications for Spectrum Licenses Awarded by Auction.

<sup>48</sup> T-Mobile Application, Exh. B: Foreign Ownership Statement for T-Mobile License LLC.

<sup>49</sup> T-Mobile US, Inc., SEC Form 10-K, at 5-6 (filed Feb. 2, 2024) (77% postpaid customers, 15% prepaid customers, and 8% wholesale, roaming, and other services).

<sup>50</sup> T-Mobile US, Inc., SEC Form 10-K, at 6 (filed Feb. 2, 2024).

US, Inc. reported 2023 total revenues of approximately \$78.6 billion, with an operating income of approximately \$14.3 billion.<sup>51</sup>

#### **D. Record**

11. On November 7, 2022, AT&T filed a petition, pursuant to 47 U.S.C. § 309 and 47 CFR § 1.2108, to deny T-Mobile's long-form application for the 2.5 GHz licenses it won in Auction 108 or to condition the grant on T-Mobile's divestiture of mid-band spectrum.<sup>52</sup> On November 14, 2022, T-Mobile filed an opposition to AT&T's petition arguing that AT&T lacks standing to file a petition.<sup>53</sup> AT&T filed a reply on November 21, 2022.<sup>54</sup>

12. AT&T requests the Commission deny T-Mobile's long-form application or condition its grant on divestitures, arguing that granting the 2.5 GHz licenses would exacerbate a 5G spectrum imbalance and deepen concerns about long-term wireless competition.<sup>55</sup> AT&T states that major U.S. wireless providers have sufficient near-term spectrum assets, but T-Mobile's spectrum aggregation creates an imbalance for effective competition over the long-term.<sup>56</sup> AT&T argues that mid-band spectrum is important to compete in the 5G ecosystem<sup>57</sup> and that T-Mobile has engaged in an anticompetitive strategy to raise its rivals' costs and harm consumers through increased spectrum aggregation.<sup>58</sup> AT&T asserts that T-Mobile's disproportionate mid-band spectrum holdings are primarily due to T-Mobile's acquisition of Sprint, which closed in April 2020.<sup>59</sup> AT&T also argues that it is not requesting reconsideration of the auction rules, but is requesting that the Commission enforce the spectrum aggregation rules by conducting a rigorous competitive analysis.<sup>60</sup>

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<sup>51</sup> T-Mobile US, Inc., SEC Form 10-K, at 34 (filed Feb. 2, 2024).

<sup>52</sup> AT&T Petition to Deny at 1, 16.

<sup>53</sup> T-Mobile Opposition at 2, 10 (arguing that AT&T lacks standing because it fails to demonstrate that grant of the application would cause a direct injury).

<sup>54</sup> AT&T Reply. Also on November 21, 2022, Bloosurf, LLC, a fixed wireless access provider, submitted a request seeking an investigation into alleged interference to its 2.5 GHz network that it believes is caused by T-Mobile. *See* Letter from Vincent Sabathier, CEO, Bloosurf, LLC to the Wireless Telecommunications Bureau and Enforcement Bureau (Nov. 21, 2022) (Bloosurf Request). In that regard, Bloosurf suggests that conditions be placed on certain of T-Mobile's Auction 108 licenses requiring resolution of Bloosurf's interference issue before T-Mobile begins operations pursuant to those licenses. Bloosurf Request at 11-13. We dismiss the Bloosurf Request as untimely to the extent that it seeks license conditions on T-Mobile's Auction 108 licenses. To the extent Bloosurf sought the imposition of license conditions, the deadline for filing such a request was November 7, 2022. *See Auction 108 Accepted for Filing Public Notice* at 1; *see also* 47 CFR § 1.2108(b). Bloosurf fails to acknowledge this deadline and does not present facts that would justify a waiver of the deadline.

<sup>55</sup> AT&T Petition to Deny at 1, 14; *see also* Letter from Michael P. Goggin, Assistant Vice President, Senior Legal Counsel, AT&T, to Marlene H. Dortch, Secretary, FCC, ULS File No. 0010206629, at 3 (filed Feb. 21, 2023) (AT&T Feb. 21, 2023 *Ex Parte* Letter) (requesting that the Commission deny T-Mobile's application or condition its grant on competitively effective and Commission-approved divestitures of mid-band spectrum currently held by T-Mobile).

<sup>56</sup> AT&T Petition to Deny at 13.

<sup>57</sup> AT&T Petition to Deny at 4.

<sup>58</sup> AT&T Petition to Deny at 5-9 (asserting that there is no new mid-band spectrum in the auction pipeline that could equalize the imbalance in mid-band spectrum).

<sup>59</sup> AT&T Petition to Deny at 6 (noting Sprint's spectrum holdings in legacy EBS and BRS spectrum in the 2.5 GHz band outside of the auction context); *see also T-Mobile-Sprint Order*, 34 FCC Rcd 10578.

<sup>60</sup> AT&T Reply at 5; *see also* AT&T Petition to Deny at 10; AT&T Feb. 21, 2023 *Ex Parte* Letter at 2.

13. AT&T urges the Commission to adopt remedies to protect competition.<sup>61</sup> AT&T argues that the Commission should withhold the issuance of additional mid-band licenses, including the Auction 108 licenses, until T-Mobile has divested sufficient mid-band spectrum to restore competitive balance in mid-band spectrum holdings.<sup>62</sup> Further, AT&T asserts that the Commission should play a greater role in structuring spectrum divestitures in a 5G ecosystem where providers need wide blocks of contiguous spectrum across geographic areas.<sup>63</sup> AT&T argues that T-Mobile's spectrum acquisitions should be subject to "exacting regulatory scrutiny."<sup>64</sup> In addition, AT&T maintains that if T-Mobile takes issue with the Commission's mobile spectrum holdings rules, this would be better addressed in a rulemaking; AT&T urges the Commission to put out for public comment AT&T's rulemaking petition regarding a mid-band spectrum screen.<sup>65</sup> We note that since then, WTB and OEA released a Public Notice that sought comment on this petition for rulemaking and more broadly on the Commission's mobile spectrum holdings policies.<sup>66</sup>

14. In response, T-Mobile contends that AT&T has not established a factual or legal basis for its claim of anticompetitive conduct or anticompetitive harm.<sup>67</sup> T-Mobile asserts that AT&T has not shown that 2.5 GHz spectrum is essential to its deployment plans or that it lacks the spectrum necessary to meet its needs.<sup>68</sup> T-Mobile argues that its participation in Auction 108 did not foreclose competitors from acquiring mid-band spectrum and that AT&T, in particular, cannot claim that because it did not participate in the auction.<sup>69</sup>

15. T-Mobile argues that, on the other hand, granting its application serves the public interest by advancing the deployment of next generation 5G services.<sup>70</sup> T-Mobile claims that the spectrum at issue, which is currently lying fallow, would be rapidly utilized by it to support the robust expansion of its 5G network and is ready to be deployed immediately at almost 11,000 sites.<sup>71</sup> According to T-Mobile, the new 2.5 GHz spectrum could be deployed quickly to fill gaps in its coverage.<sup>72</sup> T-Mobile asserts that because of its existing 2.5 GHz holdings, it is positioned to be able to make the best and highest use of 2.5

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<sup>61</sup> AT&T Petition to Deny at 4; *see also* AT&T Feb. 21, 2023 *Ex Parte* Letter at 1-3.

<sup>62</sup> AT&T Petition to Deny at 4 (noting that T-Mobile, newly or further, exceeds the screen in one or more counties in 70 CMAs covering nearly two-thirds of the U.S. population). *Id.* at 11-12; *see also* AT&T Reply at 1, 6 (arguing that the Commission can allow T-Mobile to deploy this 2.5 GHz spectrum while requiring T-Mobile to divest other assets as needed to restore competitive conditions, such as C-band spectrum or the 3.45 MHz spectrum T-Mobile has yet to deploy); AT&T Feb. 21, 2023 *Ex Parte* Letter at 1-3.

<sup>63</sup> AT&T Petition to Deny at 15 (requesting the Commission condition its approval of any new mid-band assets to T-Mobile, including the overlay licenses sought here, on its approval of an acceptable divestiture transaction between T-Mobile and appropriate buyers). *Id.* at 16.

<sup>64</sup> AT&T Petition to Deny at 4-5.

<sup>65</sup> Letter from Jessica B. Lyons, Assistant Vice President, Senior Legal Counsel, AT&T, to Marlene H. Dortch, FCC, ULS File Nos. 0010206629, 0010475575, at 3-4 (filed Apr. 4, 2023) (AT&T Apr. 4, 2023 Letter).

<sup>66</sup> *Wireless Telecommunications Bureau and Office of Economics and Analytics Seek Comment on AT&T Petition for Rulemaking and Mobile Spectrum Holdings Policies*, WT Docket No. 23-319, Public Notice, DA 23-891 (WTB/OEA Sept. 22, 2023) (*Mobile Spectrum Holdings Public Notice*).

<sup>67</sup> T-Mobile Opposition at 2, 12-14 (asserting that AT&T failed to demonstrate any basis for its raising rivals' costs claim or that it lacks access to spectrum).

<sup>68</sup> T-Mobile Opposition at 7-10.

<sup>69</sup> T-Mobile Opposition at 2-5.

<sup>70</sup> T-Mobile Opposition at 17.

<sup>71</sup> T-Mobile Opposition at 17.

<sup>72</sup> T-Mobile Opposition at 17.



GHz spectrum it won at auction.<sup>73</sup> T-Mobile maintains that “[t]he intermixture of this new and already operational spectrum would significantly and rapidly increase 5G mobile broadband capacity for consumers simply by allowing T-Mobile to expand the channel bandwidths and its previously deployed 5G equipment already supports.”<sup>74</sup> T-Mobile further asserts that its ability to improve its fixed wireless in-home broadband offering (Home Internet service) and expand the households this service can support depends directly upon having sufficient spectrum to do so.<sup>75</sup>

16. Specifically, T-Mobile asserts that granting its Auction 108 2.5 GHz licenses in Puerto Rico and Hawaii “will not have an adverse impact on competition in these areas due to the presence of other competitors with mature deployments.”<sup>76</sup> T-Mobile also contends that these spectrum licenses are incremental in nature because the 2.5 GHz band in these areas is fragmented and the licenses at issue are located mostly in rural areas at the fringe of existing licensed 2.5 GHz coverage.<sup>77</sup> In particular, T-Mobile claims that grant of the 2.5 GHz licenses it won in Puerto Rico and Hawaii “is critical to T-Mobile’s ability to rationalize its fragmented 2.5 GHz spectrum holdings.”<sup>78</sup> By filling in geographic and spectrum voids, T-Mobile asserts that this will allow it to deploy the larger, contiguous bandwidths necessary to support enhanced and expanded 5G services.<sup>79</sup> In response, AT&T argues that T-Mobile’s acquisition of all of the available unpaired mid-band spectrum in Hawaii and Puerto Rico will foreclose the opportunity for other providers to mount a competitive response.<sup>80</sup> AT&T notes that T-Mobile holds twice as much licensed sub-6 GHz spectrum as any of its competitors.<sup>81</sup> Moreover, AT&T argues that because there are no C-band or 3.45 GHz licenses in Puerto Rico and Hawaii, the threat to competition posed by T-Mobile’s control of the 2.5 GHz band in these areas is clear.<sup>82</sup>

17. A number of letters were filed in support of the Commission granting T-Mobile’s Auction 108 long-form application.<sup>83</sup> In general, comments included that the grant of this long-form

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<sup>73</sup> T-Mobile Opposition at 17.

<sup>74</sup> T-Mobile Opposition at 17.

<sup>75</sup> T-Mobile Opposition at 17-18; *see also* Letter from Kathleen Ham, Senior Vice President, Government Affairs, T-Mobile, to Marlene H. Dortch, Secretary, FCC, ULS File Nos. 0010206629, 0010475575, at 1 (filed Apr. 28, 2023) (T-Mobile Apr. 28, 2023 *Ex Parte* Letter); Letter from Steve Sharkey, Vice President, Government Affairs, Engineering and Technology Policy, T-Mobile, to Marlene H. Dortch, Secretary, FCC, ULS File No. 0010206629, at 3 (filed Mar. 13, 2023) (T-Mobile Mar. 13, 2023 Letter) (arguing that unlike its mobile competitors, T-Mobile must have sufficient spectrum to satisfy the needs of both mobile and fixed broadband customers).

<sup>76</sup> Letter from Steve Sharkey, Vice President, Government Affairs, T-Mobile, to Marlene H. Dortch, Secretary, FCC, ULS File No. 0010206629 (filed Feb. 6, 2023) (T-Mobile Feb. 6, 2023 *Ex Parte* Letter).

<sup>77</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 3-4.

<sup>78</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2.

<sup>79</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2.

<sup>80</sup> AT&T Feb. 21, 2023 *Ex Parte* Letter at 2.

<sup>81</sup> AT&T Feb. 21, 2023 *Ex Parte* Letter at 2.

<sup>82</sup> AT&T Feb. 21, 2023 *Ex Parte* Letter at 2.

<sup>83</sup> Letter from Patrick Gossman, Chair, National EBS Association, to Honorable Jessica Rosenworcel, et al., Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed June 30, 2023) (NEBSA June 30, 2023 Letter); Letter from Frankie Miranda, President and CEO, Hispanic Federation, to Honorable Jessica Rosenworcel, Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed June 24, 2023) (Hispanic Federation June 24, 2023 Letter); Letter from John Windhausen, Jr., Schools, Health & Libraries Broadband Coalition, to Honorable Jessica Rosenworcel, Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed June 23, 2023) (SHLB June 23, 2023 Letter); Letter from Representatives Darren Soto, Nanette Diaz Barragán, Anna G. Eshoo, Ann McLane Kuster, Jenniffer González-Colón, Congress of the United States, House of Representatives, to Honorable Jessica Rosenworcel, Chairwoman, FCC (filed June 16, 2023); Letter from Gerard J. Hayes, President and Founder,

(continued....)

application will help to advance T-Mobile's deployment of 5G services and assist in bridging the digital divide, particularly in rural areas.<sup>84</sup> For example, the National EBS Association (NEBSA) and the Schools, Health & Libraries Broadband (SHLB) Coalition argue that T-Mobile could use these 2.5 GHz licenses to enable the educational community nationwide to take advantage of greater educational opportunities, better coverage, and faster data speeds.<sup>85</sup> A group of ten organizations that represent various communities<sup>86</sup> filed a letter asserting that the grant of T-Mobile's Auction 108 long-form application will permit T-Mobile to provide wireless services in rural and low-income communities, including rural communities in Puerto Rico and the rural South.<sup>87</sup>

#### **E. Commitment to Divest Spectrum**

18. On February 16, 2024, T-Mobile filed a letter making a voluntary commitment to divest, either by sale or spectrum swap, 20 megahertz of its AWS-1, AWS-3, PCS, or 2.5 GHz band spectrum (or any combination thereof)—in no smaller than 10 megahertz blocks or paired 5 megahertz blocks (unless WTB in its discretion approves smaller blocks)—in each of the following two markets: Hawaii 1–Kauai (CMA 385) and Hawaii 2–Maui (CMA 386) (Divestiture Assets).<sup>88</sup> T-Mobile states that it will divest 20 megahertz of spectrum in these markets to one or more non-affiliated entities. Regarding the timeframe

(Continued from previous page) \_\_\_\_\_

Wireless Research Center of North Carolina, to Honorable Jessica Rosenworcel, Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed May 31, 2023) (WRC May 31, 2023 Letter); Letter from OJ Semans, SR, Executive Director of Legislative Affairs, Coalition of Large Tribes, Justin Velez-Hagan, Founder and Senior Policy Advisor, National Puerto Rican Chamber of Commerce, et al., to Honorable Jessica Rosenworcel, Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed May 22, 2023) (Coalition May 22, 2023 Letter); Letter from Melissa Newman, Vice President, Government Affairs, Telecommunications Industry Association, to Honorable Jessica Rosenworcel, Chairwoman, FCC, ULS File Nos. 0010206629, 0010475575 (filed May 19, 2023); Letter from Harold Feld, Senior Vice President, Public Knowledge, to Joel Taubenblatt, Chief, Wireless Telecommunications Commission, FCC, WT Docket No. 18-120 (filed May 9, 2023) (Public Knowledge May 9, 2023 Letter); *see also* The National Congress of American Indians, Resolution #MN-23-003, Calling Upon the Federal Communications Commission to Issue the Remaining Tribal Priority Window 2.5 GHz Licenses and Issue Remaining Auction 108 Licenses (adopted June 16, 2023); Chris James, President and CEO, The National Center for American Indian Enterprise Development, to Honorable Jessica Rosenworcel, Chairwoman, FCC (filed June 13, 2023) (NCAIED June 13, 2023 Letter) (articulating “strong support for the timely issuance of the remaining 2.5 GHz licenses in Auction 108 to winning bidders”); Letter from Representative Anna G. Eshoo, Congress of the United States, House of Representatives, to Honorable Jessica Rosenworcel, Chairwoman, FCC (filed May 16, 2023) (Eshoo May 16, 2023 Letter); Letter from Senators Ted Cruz and John Thune, United States Senate, Committee on Commerce, Science, and Transportation, to Honorable Jessica Rosenworcel, Chairwoman, FCC (filed Aug. 14, 2023) (Senators’ Aug. 14, 2023 Letter).

<sup>84</sup> *See, e.g.*, NEBSA June 30, 2023 Letter at 1-2; Hispanic Federation June 24, 2023 Letter at 1-2; SHLB June 23, 2023 Letter at 1-2; WRC May 31, 2023 Letter at 1-2; Coalition May 22, 2023 Letter at 1; Public Knowledge May 9, 2023 Letter at 1; Senators’ Aug. 14, 2023 Letter at 2-3; *see also* NCAIED June 13, 2023 Letter at 1-2; Eshoo May 16, 2023 Letter at 1-2.

<sup>85</sup> NEBSA June 30, 2023 Letter at 1-2 (stating that EBS licensees provide T-Mobile’s 5G mobile hotspots to schools, libraries, nonprofits, and low-income communities); SHLB June 23, 2023 Letter at 1-2.

<sup>86</sup> The organizations are the following: Coalition of Large Tribes, National Puerto Rican Chamber of Commerce, National Rural Education Association, Conference of National Black Churches, National Grange, HTTP, OCA-Asian Pacific American Advocates, Allvanza, Silicon Harlem, and Hispanic Heritage Foundation. Coalition May 22, 2023 Letter.

<sup>87</sup> Coalition May 22, 2023 Letter at 1; *see also* NEBSA June 30, 2023 Letter at 2.

<sup>88</sup> Letter from Edward “Smitty” Smith, Senior Vice President, Policy and Government Affairs, T-Mobile, to Marlene H. Dortch, Secretary, FCC, ULS File No. 0010206629, at 3 (filed Feb. 15, 2023) (T-Mobile Feb. 15, 2024 Letter), attached to this Order as Appendix B. We discuss our adoption of T-Mobile’s voluntary divestiture commitment as a condition to our grant below. *See infra* paras. 78-82.

for T-Mobile to divest this spectrum, T-Mobile has committed to filing the relevant Commission application or applications within 12 months of the issuance of its Auction 108 2.5 GHz licenses, unless WTB grants an extension upon a showing of good cause. Until the application(s) are filed, T-Mobile commits to provide WTB with quarterly progress reports. If T-Mobile has not filed the application(s) within 12 months (or any extension granted by WTB), T-Mobile commits to irrevocably transfer to a divestiture trustee the remaining required Divestiture Assets (as selected by T-Mobile) in no smaller than 10 megahertz blocks or paired 5 megahertz blocks (unless WTB in its discretion approves smaller blocks). T-Mobile commits to selecting the divestiture trustee subject to WTB's approval, which would not be unreasonably withheld. The divestiture trustee will be solely responsible for accomplishing disposal of the remaining divestiture assets.

### III. STANDARD OF REVIEW

19. Pursuant to sections 308 and 309 of the Communications Act of 1934 (Act), we must determine whether granting the license application will serve the public interest, convenience, and necessity.<sup>89</sup> As an initial matter, we consider whether the applicant for a license has the requisite "citizenship, character, financial, technical, and other qualifications."<sup>90</sup> No party has raised an issue regarding the basic qualifications of T-Mobile, nor are we aware of any. T-Mobile has repeatedly been found qualified to hold Commission licenses,<sup>91</sup> and we continue to find it to be qualified.

### IV. MOBILE SPECTRUM HOLDINGS AND COMPETITIVE ANALYSIS

20. As we discuss in more detail below, we find that grant of T-Mobile's license application, subject to a voluntary commitment to divest certain spectrum in parts of Hawaii that we impose as a condition, will on balance promote the public interest by facilitating access to and use of the spectrum. We first summarize the Auction 108 results, including the winning bidders and the extent to which T-Mobile would exceed the spectrum screen. For those local markets identified by the spectrum screen, we perform our market-by-market competitive analysis to assess the likely competitive impact of spectrum aggregation to ensure that the public interest, convenience, and necessity is served. We find that in all of these local markets where the spectrum screen is triggered, and subject to the divestiture condition for parts of Hawaii, multiple licensees nevertheless have access to both low-band and mid-band spectrum.

21. We find that AT&T's petition in this matter does not raise specific allegations sufficient to show that AT&T will suffer competitive harm, or otherwise raise substantial or material questions of fact under section 309(d) and (e) with respect to T-Mobile's Auction 108 license application.<sup>92</sup> While AT&T raises general concerns about T-Mobile's spectrum holdings, it fails to provide specific evidence that the grant of the licenses will cause harm to itself or to the public interest in the markets at issue. As noted above, in September 2023, we initiated a proceeding regarding AT&T's separate petition for rulemaking that also raises broader spectrum aggregation issues.<sup>93</sup> AT&T asserts that all major U.S. wireless providers have the spectrum assets they need to compete in the near term,<sup>94</sup> which is consistent

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<sup>89</sup> 47 U.S.C. §§ 308, 309.

<sup>90</sup> 47 U.S.C. §§ 308(b), 309(j)(5); *see also id.* § 309(j)(17). *Cf. T-Mobile-Sprint Order*, 34 FCC Rcd at 10596-97, para. 43 (reviewing whether applicants of a proposed transaction meet the requisite qualification requirements).

<sup>91</sup> *See, e.g., T-Mobile-Sprint Order*, 34 FCC Rcd at 10597, para. 44; *Applications of Deutsche Telekom AG, T-Mobile USA, Inc., and MetroPCS Communications, Inc. for Consent to Transfer of Control of Licenses and Authorizations*, WT Docket No. 12-301, 28 FCC Rcd 2322, 2329, para. 18 (WTB/IB 2013) (*T-Mobile-MetroPCS Order*).

<sup>92</sup> *See* 47 U.S.C. § 309(d); *see also* 47 CFR § 1.2108(d); *Mobile Communications Corp. of America v. FCC*, 77 F.3d 1399, 1409-10 (D.C. Cir. 1996) (citing *Citizens for Jazzon WRVR v. FCC*, 775 F.2d 392 (D.C. Cir. 1985)).

<sup>93</sup> *Mobile Spectrum Holdings Public Notice*.

<sup>94</sup> AT&T Petition to Deny at 13.

with our competitive analysis of the markets at issue in T-Mobile's 2.5 GHz license application. Accordingly, we deny AT&T's petition.

**A. Auction 108 Results**

22. In total, 63 bidders won licenses in Auction 108.<sup>95</sup> T-Mobile won 7,156 of the 8,017 licenses offered across 678 Cellular Market Areas (CMAs), with the spectrum it won ranging from adding no new attributable spectrum to T-Mobile's holdings to adding 116.5 megahertz.<sup>96</sup> Verizon, through its Cellco subsidiary, won 12 licenses over 9 counties and the other 61 bidders won the remainder of the licenses.<sup>97</sup> We note that while the nominal available spectrum in each market ranged up to a maximum of 117.5 megahertz, due to the fact that these Auction 108 licenses are overlay licenses that are required to protect all existing incumbents, the actual spectrum available for deployment could be much less.<sup>98</sup>

**B. Competitive Analysis**

23. Spectrum is an essential input in the provision of mobile wireless services, and ensuring that sufficient spectrum is available for incumbent licensees as well as potential new entrants is critical to promoting effective competition and innovation in the marketplace.<sup>99</sup> Regarding mobile spectrum holding policies, as noted above, the Commission's fundamental goal is the preservation and promotion of competition, which in turn, leads to lower prices, improved quality, and increased innovation. When considering the potential competitive effects of spectrum aggregation, the Commission has considered whether there would be an increased likelihood that rival service providers or potential entrants would be foreclosed from expanding capacity, deploying advanced mobile broadband technologies, or entering the

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<sup>95</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd 10117.

<sup>96</sup> *See Auction 108 Closing Public Notice*, 37 FCC Rcd 10117, Attach. A. T-Mobile won licenses across 2,724 counties.

<sup>97</sup> *Auction 108 Closing Public Notice*, 37 FCC Rcd 10117.

<sup>98</sup> *See OEA and WTB Address a Request for Revisions to the Auction 108 (2.5 GHz Band) Inventory, and Remind Participants of Their Due Diligence Responsibilities and Obligations Related to the Prohibition Against Certain Communications*, AU Docket No. 20-429, Public Notice, DA 22-489, at 2, para. 5 (OEA/WTB May 6, 2022) (*Auction 108 Inventory Public Notice*) ("A substantial number of licenses in the Auction 108 inventory have very small amounts of unassigned area or unassigned spectrum. The details in each case may or may not be of significance to a potential use of the spectrum. Interested parties therefore should consult the Universal Licensing System (ULS) to confirm all information in the mapping tool and to determine the amount of white space available."). In addition, auction winners may be required to protect certain still pending applications ("In other words, any winning bidder awarded a license in Auction 108 will not be allowed to operate within the license area of a successful RTPW applicant, even if that RTPW application remains pending at the time of issuance of the overlay license. In the event that the grant of a RTPW application results in a county/channel block combination having no unassigned spectrum, the Commission will announce the removal of the affected license(s) from the auction inventory."). *Id.* at 2, para. 6.

<sup>99</sup> *See, e.g., 3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493, para. 15; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10617, para. 94; *SprintCom, Inc., Shenandoah Personal Communications, LLC, and NTELOS Holdings Corp. for Consent to Assign Licenses and Spectrum Lease Authorizations and To Transfer Control of Spectrum Lease Authorizations and an International Section 214 Authorization*, Memorandum Opinion and Order, 31 FCC Rcd 3631, 3635-36, para. 9 (WTB/IB 2016) (*Sprint-Shentel-NTELOS Order*); *Applications of AT&T Inc., Leap Wireless International, Inc., Cricket License Col, LLC and Leap Licenseco, Inc. for Consent to Transfer Control and Assign Licenses and Authorizations*, WT Docket No. 13-193, Memorandum Opinion and Order, 29 FCC Rcd 2735, 2745-46, para. 21 (WTB/IB 2014) (*AT&T-Leap Order*); *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2330-31, para. 22; *see also Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6233, 6240, paras. 267, 286-88.

market, and also whether rivals' costs would be increased to the extent that they would be less likely to be able to compete robustly.<sup>100</sup>

24. Consistent with Commission precedent for competitive review of the acquisition of licenses, we perform our competitive analysis as articulated in the 2008 *Union Telephone Order* to ensure that the public interest, convenience, and necessity is served.<sup>101</sup> We begin by determining the appropriate market definitions,<sup>102</sup> which include the product and geographic markets, and the input market for spectrum suitable and available for the provision of mobile telephony/broadband services.<sup>103</sup> We then consider the current market participants in the mobile wireless industry.<sup>104</sup> We finally turn to our consideration of the likely competitive effects if the proposed license application is granted.

### 1. Market Definitions and Market Participants

25. *Product Market.* Consistent with Commission precedent, we find that the relevant product market is a combined “mobile telephony/broadband services” product market that comprises mobile voice and data services, including mobile voice and data services provided over advanced broadband wireless networks (mobile broadband services).<sup>105</sup>

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<sup>100</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493, para. 15; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10617-18, para. 94.

<sup>101</sup> *Union Tel. Co. Cellco P'ship d/b/a Verizon Wireless, Applications for 700 MHz Band Licenses, Auction No. 73*, Memorandum Opinion and Order, 23 FCC Rcd 16787, 16791-92, 16796, paras. 9, 18 (2008) (*Union Telephone Order*); *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89 (citing to *Union Telephone Order* for review of long-form applications); *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493-11501, paras. 15-34 (applying the *Union Telephone Order* standard in post-auction review of long-form application); *Use of Spectrum Bands Above 24 GHz For Mobile Radio Services*, GN Docket No. 14-177, Third Report and Order, Memorandum Opinion and Order, and Third Further Notice of Proposed Rulemaking, 33 FCC Rcd 5576, 5591, para. 36 (2018) (citing to *Union Telephone Order* for review of long-form applications).

<sup>102</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493-94, para. 16; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10600-01, para. 53; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2331, para. 24.

<sup>103</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493-94, para. 16; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10600-01, para. 53; *AT&T-Leap Order*, 29 FCC Rcd at 2746, para. 22; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2331, para. 24; see also *Union Telephone Order*, 23 FCC Rcd at 16791, para. 9.

<sup>104</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11493-94, para. 16; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10600-01, para. 53; *AT&T-Leap Order*, 29 FCC Rcd at 2746, para. 22; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2331, para. 24; see also *Union Telephone Order*, 23 FCC Rcd at 16791, para. 9.

<sup>105</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11494, para. 17; *Application of Verizon Communications Inc. and América Móvil, S.A.B. de C.V., for Consent to Transfer Control of International Section 214 Authorization*, GN Docket No. 21-112, Memorandum Opinion and Order, 36 FCC Rcd 16994, 17004, para. 27 (2021) (*Verizon-TracFone Order*); *T-Mobile-Sprint Order*, 34 FCC Rcd at 10601, 10603, paras. 55, 60; *AT&T-Leap Order*, 29 FCC Rcd at 2746, para. 23; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2331, para. 25; see also *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6224, para. 234 & n.623; *Union Telephone Order*, 23 FCC Rcd at 16792, para. 11 (noting that if the Commission were to apply the standard competitive analysis to the review of long-form license applications, it would “adopt the same product market definition as applied by the Commission in recent transactions involving the mobile telephony market.”); see also *United States of America et al., v. Deutsche Telekom AG, T-Mobile US, Inc., Softbank Group Corp., Sprint Corporation, and DISH Network Corporation*, Proposed Final Judgment, Case No. 1:19-cv-02232, at 6 (D.D.C.) (filed July 26, 2019) (Competitive Impact Statement by the U.S. Department of Justice stating that the retail mobile wireless service is a relevant product market under section 7 of the Clayton Act); *United States of America v. AT&T Inc., T-Mobile USA, Inc., and Deutsche Telekom AG*, Complaint, Case No. 1:11-cv-01560, para. 12 (D.D.C.) (Aug. 31, 2011) (Mobile wireless telecommunications services constitute a relevant product market under section 7 of the Clayton Act and those services include both voice and data services).

26. *Geographic Market.* The Commission has previously found that the geographic market for wireless transactions is local.<sup>106</sup> The Commission has found, however, that a proposed transaction's competitive effects should also be evaluated at the national level where a proposed transaction exhibits certain national characteristics that provide cause for concern.<sup>107</sup> For this license application, we continue to use CMAs as the appropriate local market for analyzing increased spectrum aggregation.<sup>108</sup>

27. *Input Market for Spectrum.* The Commission has previously determined that the following bands, or portions thereof, meet the definition of suitable and available and should be included in the input market for spectrum: 600 MHz, 700 MHz, cellular, specialized mobile radio service (SMR), broadband personal communications service (PCS), Advanced Wireless Services (AWS) in the 1710-1755 and 2110-2155 MHz band (AWS-1), AWS-3, AWS in the 2000-2020 MHz and 2180-2200 MHz spectrum bands (AWS-4), Broadband Radio Service (BRS), Wireless Communications Service (WCS) spectrum, H Block, Educational Broadband Service (EBS), 3.7 GHz, and 3.45 GHz.<sup>109</sup> The total amount of spectrum that is currently considered suitable and available for the provision of mobile telephony/broadband services is 1,123 megahertz, with an associated spectrum screen trigger of 385 megahertz.<sup>110</sup> As 3.7 GHz and 3.45 GHz spectrum are not available for use in Hawaii, Alaska, and the territories, in these areas, the total amount of suitable and available spectrum is 743 megahertz, and the associated spectrum screen trigger is 250 megahertz.<sup>111</sup>

28. *Market Participants.* Consistent with Commission precedent for reviewing potential competitive effects of spectrum aggregation, we focus only on facilities-based entities providing mobile telephony/broadband services using the spectrum bands included in the spectrum screen.<sup>112</sup>

## 2. Initial Screen

29. Since 2004, the Commission, in reviewing license transfers and other secondary market transactions, has used a two-part screen to help identify those markets that provide particular reason for

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<sup>106</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11494, para. 18; *Verizon-TracFone Order*, 36 FCC Rcd at 17005, para. 30; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10605-06, para. 66; *AT&T-Leap Order*, 29 FCC Rcd at 2748, para. 27; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2332, para. 29.

<sup>107</sup> See, e.g., *Verizon-TracFone Order*, 36 FCC Rcd at 17005, para. 30; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10606, para. 66; *AT&T-Leap Order*, 29 FCC Rcd at 2748, para. 27; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2332, para. 29.

<sup>108</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11494, para. 18; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10605-06, 10607, paras. 66, 69. In the *Union Telephone Order*, the Commission's competitive analysis was undertaken at the CMA level. *Union Telephone Order*, 23 FCC Rcd at 16793, 16796, paras. 12, 18; see also *United States of America v. AT&T Inc., T-Mobile USA, Inc., and Deutsche Telekom AG*, Complaint, Case No. 1:11-cv-01560, paras. 16-17 (D.D.C.) (Aug. 31, 2011) (U.S. Department of Justice using CMAs as relevant geographic markets in its competitive analysis, in addition to a national-level analysis).

<sup>109</sup> See, e.g., *Communications Marketplace Report*, GN Docket No. 22-203, 2022 Communications Marketplace Report, 37 FCC Rcd 15514, 15578-79, paras. 84-85, Fig. II.B.9 (2022) (*2022 Communications Marketplace Report*); see also *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11495, para. 20; *Verizon-TracFone Order*, 36 FCC Rcd at 17005, para. 31 & n.86; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6169, 6177-79, 6184-87, paras. 70, 100-102, 118-25.

<sup>110</sup> *2022 Communications Marketplace Report*, 37 FCC Rcd at 15578-79, paras. 84-85, Fig. II.B.9.

<sup>111</sup> *2022 Communications Marketplace Report*, 37 FCC Rcd at 15579, para. 84 & n.216.

<sup>112</sup> See *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11496, para. 21; *Verizon-TracFone Order*, 36 FCC Rcd at 17005-06, para. 32; *Union Telephone Order*, 23 FCC Rcd at 16794, para. 14; see also *T-Mobile-Sprint Order*, 34 FCC Rcd at 10609, para. 73; *AT&T-Leap Order*, 29 FCC Rcd at 2752, para. 37; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2334-35, para. 37. In addition, we recognize that mobile virtual network operators may provide additional competitive constraints, which we account for in our evaluation of the likely competitive effects. See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10609, para. 73.

further competitive analysis based on increased market concentration and/or increased spectrum aggregation.<sup>113</sup> The first part of the screen is based on the size of the post-transaction Herfindahl-Hirschman Index (HHI) measured in terms of subscribers, and the change in the HHI.<sup>114</sup> As the spectrum won here does not result in the acquisition of wireless business units and customers,<sup>115</sup> we do not apply the HHI screen. The second part of the screen, which is applied on a county-by-county basis, identifies those local markets (CMAs) where the entity would hold approximately one-third or more of the total spectrum suitable and available for the provision of mobile telephony/broadband services, following grant of the license application.<sup>116</sup> As a threshold matter, we again note that the spectrum screen is a tool that prompts the Commission to apply additional analysis; it is not a hard cap or bright-line limit on a service provider's holdings.<sup>117</sup>

30. *Record.* AT&T argues that T-Mobile currently exceeds the spectrum screen in one or more counties within 181 CMAs.<sup>118</sup> AT&T asserts that the grant of the licenses won in Auction 108 would cause T-Mobile to newly or further exceed the screen in one or more counties within 70 CMAs.<sup>119</sup> AT&T argues that the licenses at issue from Auction 108 as a whole cover approximately two-thirds of the U.S. population<sup>120</sup> and that T-Mobile has engaged in an anticompetitive strategy to raise its rivals' costs and harm consumers through undue spectrum aggregation.<sup>121</sup> T-Mobile asserts that AT&T incorrectly treats the spectrum screen as a cap instead of applying the Commission's analysis, which is that exceeding the screen does not automatically constitute competitive harm.<sup>122</sup> T-Mobile claims that a review of the "minor spectrum screen overages resulting from the spectrum T-Mobile won in Auction 108 makes clear that no harm would ensue from granting the application—and certainly no harm that would

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<sup>113</sup> 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11496, para. 22; *Verizon-TracFone Order*, 36 FCC Rcd at 17007, para. 35; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10614, para. 87; *AT&T-Leap Order*, 29 FCC Rcd at 2752-53, 2755-56, paras. 39, 41, 47; *Cingular-AT&T Order*, 19 FCC Rcd at 21568-69, paras. 106-112; *see also Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6140-41, para. 13.

<sup>114</sup> *See, e.g., 3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11496, para. 22; *Verizon-TracFone Order*, 36 FCC Rcd at 17007, para. 35; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10614-15, para. 87; *see also Union Telephone Order*, 23 FCC Rcd at 16791, para. 9; *AT&T-Leap Order*, 29 FCC Rcd at 2753, para. 41; *2010 DOJ/FTC Horizontal Merger Guidelines* at § 5.3; *see also Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6140-41, 6221-22, para. 13 & n.34, para. 225 & n.605.

<sup>115</sup> *See 3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11496, para. 22; *Union Telephone Order*, 23 FCC Rcd at 16795, para. 15 (noting the HHI screen is not triggered for case-by-case review of spectrum acquired at auction).

<sup>116</sup> 3.7 GHz Auction 107 Order, 36 FCC Rcd at 11496, para. 22; *Verizon-TracFone Order*, 36 FCC Rcd at 17007, para. 35; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10614-15, 10617-18, paras. 87, 94; *AT&T-Leap Order*, 29 FCC Rcd at 2753, para. 41; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2335, para. 38; *see also Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6222-23, para. 228.

<sup>117</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, para. 231.

<sup>118</sup> AT&T Petition to Deny at 12, Appx. B.

<sup>119</sup> AT&T Petition to Deny at 12, Appx. A. We note that on November 7, 2022, T-Mobile filed an amended spectrum holdings chart. T-Mobile's original filing indicated that it triggered the spectrum screen in 70 CMAs, which is the number of CMAs AT&T references in its petition to deny. T-Mobile Application. T-Mobile filed a further amended spectrum holdings chart on January 3, 2024 and a letter on February 1, 2024 that corrected the spectrum amount concerning four counties in New York. Our analysis relies on the further amended filings that show that 75 CMAs trigger the spectrum screen.

<sup>120</sup> AT&T Petition to Deny at 12.

<sup>121</sup> AT&T Petition to Deny at 5-11.

<sup>122</sup> T-Mobile Opposition at 12-14.

outweigh the substantial public interest benefits that would result from enabling T-Mobile to put the spectrum to use immediately.”<sup>123</sup>

31. *Discussion.* In Auction 108, T-Mobile won additional attributable EBS spectrum in 1,671 counties covering all or parts of 448 CMAs. Applying the spectrum screen on a county-by-county basis in each local market, which we have determined above to be the CMA,<sup>124</sup> shows that T-Mobile would trigger the spectrum screen in at least one county in 75 CMAs if we were to grant the license application. Across those local markets where 385 megahertz is the trigger, T-Mobile would hold a maximum of 450 megahertz of spectrum. In Puerto Rico and Hawaii, where the spectrum screen trigger is 250 megahertz, T-Mobile would hold a maximum of 300.4 megahertz and 370 megahertz, respectively. The local markets identified for further competitive review cover approximately 19% of the U.S. population.

### 3. Market-by-Market Analysis

32. Consistent with existing Commission precedent,<sup>125</sup> we consider various competitive variables that help to predict the likelihood of competitive harm if the license application is granted. These competitive variables include, but are not limited to: the total number of rival service providers; the number of rival firms that can offer competitive service plans; the coverage by technology of the firms’ respective networks;<sup>126</sup> the applicant’s market share and rival firms’ market shares;<sup>127</sup> the total amount of suitable and available spectrum;<sup>128</sup> the amount of spectrum suitable for the provision of mobile telephony/broadband services controlled by the applicant; and the spectrum holdings of each of the rival

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<sup>123</sup> T-Mobile Opposition at 15.

<sup>124</sup> See *supra* para. 26.

<sup>125</sup> As noted above, the policy for market-by-market analysis for spectrum won at auction was established in the 2008 *Union Telephone Order*. *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18. This approach was affirmed by the Commission in the *3.7 GHz Report and Order* for the 3.7 GHz Service. *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89; see also *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11498, para. 28 & n.93.

<sup>126</sup> We base the coverage analysis on providers’ coverage data they submitted pursuant to the Broadband Data Collection for coverage as of December 31, 2022. Broadband Deployment Accuracy and Technological Availability Act, Pub. L. No. 116-130, 134 Stat. 228 (2020) (codified at 47 U.S.C. §§ 641-646) (Broadband DATA Act); 47 U.S.C. § 642(a)(1)(A) (Broadband Data Collection).

<sup>127</sup> We base providers’ market shares analysis on Numbering Resource Utilization/Forecast (NRUF) data, which indicate the number of phone numbers that a wireless service provider has been assigned in a particular rate center (there are approximately 18,000 rate centers in the country). See 47 CFR § 52.15(e)(5); see also *Auction 108 Long-Form Application of T-Mobile License LLC for 2.5 GHz Band Licenses, Numbering Resource Utilization and Forecast (NRUF) Reports and Local Number Portability (LNP) Reports Placed Into the Record, Subject to the Protective Order*, CC Docket No. 99-200, ULS File No. 0010206629, Public Notice, DA 24-100 (WTB/OEA Feb. 5, 2024). Rate centers are geographic areas used by local exchange carriers for a variety of reasons, including the determination of toll rates. *2022 Communications Marketplace Report*, 37 FCC Rcd at 15569, para. 73 & n.181. We calculate the total number of wireless subscribers from the total number of assigned phone numbers reported by wireless service providers in their required NRUF reports. For purposes of geographical analysis, the rate center data can be associated with a geographic point, and all points that fall within a county boundary can be aggregated together and associated with much larger geographic areas based on counties. We note that the aggregation to larger geographic areas, such as to whole counties or groups of counties, reduces the level of inaccuracy inherent in combining non-coterminous areas, such as rate center areas and counties.

<sup>128</sup> As noted above, the total amount of suitable and available spectrum in the total spectrum screen is currently 1,123 megahertz and the associated total spectrum screen trigger is 385 megahertz, while the below-1-GHz trigger for enhanced factor review is 68 megahertz. Regarding high-band millimeter wave (mmW) spectrum, the Commission has made 4,950 megahertz available for licensed use, and adopted a separate threshold for mmW spectrum holdings, with an associated mmW threshold trigger of 1,850 megahertz.



service providers and licensees.<sup>129</sup> Further, we consider whether current service providers can access additional spectrum in the market either through auction or on the secondary market.<sup>130</sup>

33. In assessing spectrum concentration and its likely competitive effects, we are cognizant of the need to prevent the undue concentration of spectrum and to promote the dissemination of licenses among a wide variety of applicants.<sup>131</sup> We also take into account the specific characteristics of this band, which has been historically underutilized in rural areas. The overlay licenses auctioned in Auction 108 have several characteristics that distinguish them from other licenses. Unlike many bands that the Commission has previously auctioned, the 2.5 GHz band is not “greenfield” spectrum. In addition, the band has a unique interference rule that requires adjacent licensees to closely coordinate with each other.<sup>132</sup> The licenses awarded in Auction 108 were overlay licenses that are required to protect incumbent licenses (including pre-existing 2.5 GHz licenses as well as RTPW licenses) from interference.<sup>133</sup> Further, neither the RTPW licenses nor the vast majority of the other incumbent licenses (which cover 35-mile radius geographic service areas) correspond with the county boundaries used in Auction 108.<sup>134</sup> As a result of this existing incumbency, a substantial number of licenses in the Auction 108 inventory had very small amounts of unassigned spectrum or unassigned area.<sup>135</sup>

34. We organize our discussion of the triggered markets by geographical cluster.<sup>136</sup> After having undertaken our local market-by-market analysis, as discussed in detail below, and in light of the voluntary divestiture commitment for parts of Hawaii, we find that the likelihood of competitive harm as a result of grant of the license application in the particular markets at issue is low. A list of the triggered markets is provided in Appendix A.

35. *Midwest.* There are 11 CMAs in the Midwest of the United States that trigger the initial spectrum screen.<sup>137</sup> Seven of these CMAs—Chicago, IL, St. Louis, MO-IL, Champaign-Urbana-Rantoul, IL, St. Cloud, MN, Kankakee, IL, Joliet, IL, and Michigan 9–Cass—are non-rural markets with

<sup>129</sup> See, e.g., *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11498, para. 28; *T-Mobile-Sprint Order*, 34 FCC Rcd at 10620-21, para. 102; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6238, para. 280; *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18.

<sup>130</sup> *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11498, para. 28; *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18.

<sup>131</sup> *3.7 GHz Auction 107 Order*, 36 FCC Rcd at 11498, para. 29; *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6136, para. 6.

<sup>132</sup> See 47 CFR § 27.1221.

<sup>133</sup> See 47 CFR § 27.1206(b)(2)(ii) (geographic service area of county-based 2.5 GHz licenses excludes overlapping, co-channel incumbent GSAs, including RTPW licenses).

<sup>134</sup> With overlay licenses, the geographic service areas of incumbent licensees (including in many cases circular Geographic Service Areas with a 35-mile radius that do not exist in any other band) are excluded from the service area of the overlay licensee. 47 CFR § 27.1206(b)(2)(ii).

<sup>135</sup> See *Auction 108 Inventory Public Notice*.

<sup>136</sup> The geographic clusters we use are based on the U.S. Census Bureau, Geographic Levels, Regions and Divisions, <https://www.census.gov/programs-surveys/economic-census/guidance-geographies/levels.html> (last visited Feb. 2, 2024). The clusters analyzed are: the Midwest, the Northeast, the East South Central, the South Atlantic, the West South Central, and the West. U.S. Census Bureau, Census Regions and Divisions of the United States, [https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us\\_regdiv.pdf](https://www2.census.gov/geo/pdfs/maps-data/maps/reference/us_regdiv.pdf) (last visited Feb. 2, 2024). We separately evaluate Puerto Rico and Hawaii.

<sup>137</sup> In numerical order, the 11 CMAs are: CMA 3: Chicago, IL; CMA 11: St. Louis, MO-IL; CMA 196: Champaign-Urbana-Rantoul, IL; CMA 198: St. Cloud, MN; CMA 273: Kankakee, IL; CMA 304: Joliet, IL; CMA 395: Illinois 2–Bureau; CMA 399: Illinois 6–Montgomery; CMA 400: Illinois 7–Vermilion; CMA 480: Michigan 9–Cass; and CMA 592: Ohio 8–Clinton.

populations ranging from approximately 52,500 to 8.4 million, and with population densities of 105 to 2,276 people per square mile.<sup>138</sup> The other four CMAs—Illinois 2–Bureau, Illinois 6–Montgomery, Illinois 7–Vermilion, and Ohio 8–Clinton—are rural markets with populations ranging from approximately 185,000 to 242,000, and with population densities of 44 to 76 people per square mile.

36. In the seven non-rural markets, T-Mobile is currently attributed with 325 megahertz to 440 megahertz of spectrum on a county-by-county basis.<sup>139</sup> With T-Mobile’s reported winnings of zero megahertz to 93 megahertz from Auction 108 in these CMAs,<sup>140</sup> T-Mobile would hold a maximum of 450 megahertz of spectrum on a county-by-county basis post-auction.<sup>141</sup> Regarding other nationwide service providers in these markets, AT&T holds 235 megahertz to 300 megahertz on a county-by-county basis, while Verizon Wireless holds 257 megahertz to 317 megahertz. In addition, DISH holds between 111 megahertz and 131 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 42 megahertz of spectrum on a county-by-county basis across these markets.

37. Regarding coverage,<sup>142</sup> AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in the seven non-rural markets.<sup>143</sup> Further, AT&T and T-Mobile each have significant 5G-New Radio (NR) population and land area coverage at speeds of 7/1 Mbps in the seven non-rural markets. Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in six of the seven non-rural markets, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Michigan 9–Cass.<sup>144</sup> In addition, DISH has

<sup>138</sup> The population density is measured by the number of people per square mile using 2020 Census data. Rural markets are characterized by fewer than 100 people per square mile. *See Facilitating the Provision of Spectrum-Based Services to Rural Areas and Promoting Opportunities for Rural Telephone Companies To Provide Spectrum Based Services*, Report and Order, 19 FCC Rcd 19078, 19087-88 (2004).

<sup>139</sup> We derive T-Mobile’s Auction 108 winnings and its other spectrum holdings from its submissions. We derive other licensees’ spectrum holdings from our licensing databases as of February 1, 2024.

<sup>140</sup> In certain counties, T-Mobile’s Auction 108 licenses would allow it to acquire spectrum over additional geographic areas within the county, but would not increase the amount of attributable spectrum because it currently has attributable interests in incumbent licenses within the county.

<sup>141</sup> T-Mobile also holds 700 megahertz to 1,925 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz, and Verizon Wireless holds 1,425 megahertz to 2,450 megahertz. Other licensees, including DISH, hold 200 megahertz to 1,000 megahertz.

<sup>142</sup> As noted above, we derive mobile broadband coverage from the December 2022 Broadband Data Collection data. For 4G LTE, these data are based on speed thresholds of 5 megabits per second (Mbps) download and 1 Mbps upload (5/1 Mbps) with a minimum cell edge probability of 90% and minimum cell loading of 50%. For 5G-NR, these data are based on speed thresholds of 7 Mbps download and 1 Mbps upload (7/1 Mbps) and 35 Mbps download and 3 Mbps upload (35/3 Mbps) with a minimum cell edge probability of 90% and minimum cell loading of 50%. 47 U.S.C. § 642(b)(2)(B)(ii); *see also Establishing the Digital Opportunity Data Collection; Modernizing the FCC Form 477 Data Program*, WC Docket Nos. 19-195 and 11-10, Second Report and Order and Third Further Notice of Proposed Rulemaking, 35 FCC Rcd 7460, 7479-80, paras. 44-45 (2020) (*BDC Second Report and Order*). For 4G LTE and 5G-NR, providers must submit two types of propagation maps: one that models outdoor stationary usage and one that models in-vehicle mobile usage. *See BDC Second Report and Order*, 35 FCC Rcd at 7481-82, para. 48. We report the various speed thresholds based on the outdoor stationary propagation maps.

<sup>143</sup> It has previously been found that coverage of 70% or more of the population and 50% or more of the land area is presumptively sufficient for a service provider to have a competitive presence in the market. *See, e.g., Sprint-Shentel-NTELOS Order*, 31 FCC Rcd at 3642-44, para. 25 & n.77; *AT&T-Leap Order*, 29 FCC Rcd at 2770, para. 81 & n.279.

<sup>144</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population and land area coverage in Chicago, IL, Kankakee, IL, and Joliet, IL, significant population coverage and close-to-significant land area coverage in St. Louis, MO-IL, significant population coverage in Champaign-Urbana-Rantoul, IL and St. Cloud, MN, and has deployed its network to some extent in Michigan 9–Cass. Further, Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in five of the seven non-rural markets and

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significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in St. Louis, MO-IL and Champaign-Urbana-Rantoul, IL.<sup>145</sup>

38. In the four rural markets—Illinois 2–Bureau, Illinois 6–Montgomery, Illinois 7–Vermilion, and Ohio 8–Clinton—T-Mobile is currently attributed with 265 megahertz to 390 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 93 megahertz from Auction 108 in these four markets, T-Mobile would hold a maximum of 418 megahertz of spectrum on a county-by-county basis post-auction.<sup>146</sup> Regarding other nationwide service providers in these markets, AT&T holds 233 to 295 megahertz on a county-by-county basis, while Verizon Wireless holds 252 megahertz to 347 megahertz. In addition, DISH holds between 101 megahertz and 141 megahertz of spectrum, and US Cellular holds between 12 to 184 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 50 megahertz of spectrum on a county-by-county basis across these four markets.

39. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in these four rural markets. Further, AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in all four rural markets, T-Mobile has close-to-significant 5G-NR population coverage and significant 5G-NR land area coverage at speeds of 7/1 Mbps in Ohio 8–Clinton and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in the remaining three rural markets, and Verizon Wireless has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Illinois 6–Montgomery and Ohio 8–Clinton. In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Ohio 8–Clinton,<sup>147</sup> and US Cellular has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Illinois 2–Bureau.<sup>148</sup>

40. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108,<sup>149</sup> we find that the likelihood of competitive harm in these

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significant population coverage in Champaign-Urbana-Rantoul, IL, while AT&T has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in St. Louis, MO-IL, close-to-significant 5G-NR population coverage at speeds of 35/3 Mbps in Chicago, IL, Champaign-Urbana-Rantoul, IL, and Joliet, IL, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in the remaining three non-rural markets. In addition, DISH has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in St. Louis, MO-IL and Champaign-Urbana-Rantoul, IL.

<sup>145</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} %, while AT&T holds {[ ]} %, and Verizon Wireless holds {[ ]} % in these non-rural Midwest markets. No other service providers have a significant market share. We note that Joliet, IL is a single-county market; for this reason we believe that the market shares for AT&T, T-Mobile, and Verizon Wireless in this market of {[ ]} %, respectively, are unreliable and inaccurate. Material set off by double brackets {[ ]} is confidential and is redacted from the public version of this document.

<sup>146</sup> T-Mobile also holds 600 megahertz to 1,500 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz, and Verizon Wireless holds 1,000 megahertz to 2,450 megahertz. Other licensees, including DISH, hold 100 megahertz to 1,025 megahertz.

<sup>147</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, AT&T and T-Mobile have deployed their networks to some extent in all four rural markets. In addition, Verizon Wireless has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Illinois 6–Montgomery and Ohio 8–Clinton, while DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Ohio 8–Clinton.

<sup>148</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} % in Illinois 2–Bureau, Illinois 7–Vermilion, and Ohio 8–Clinton, and has some market presence in Illinois 6–Montgomery with a market share of {[ ]} %. AT&T holds {[ ]} % while Verizon Wireless holds {[ ]} % in these rural Midwest markets. No other service providers have a significant market share.

<sup>149</sup> See *supra* paras. 22, 33.

markets if we grant the license application is low. We find it highly unlikely that T-Mobile's auction winnings would allow it to foreclose entry, raise rivals' costs, or otherwise harm the public interest.

41. *Northeast.* There are 12 CMAs in the Northeast of the United States that trigger the initial spectrum screen.<sup>150</sup> Eight of these CMAs—New York-Newark, NY-NJ, Northeast Pennsylvania, PA, Allentown-Bethlehem, PA-NJ, Atlantic City, NJ, New London-Norwich, CT, Vineland-Millville, NJ, Massachusetts 2–Barnstable, and New Jersey 3–Sussex—are non-rural markets with populations ranging from approximately 144,200 to 17.7 million, and with population densities of 273 to 4,520 people per square mile. The other four CMAs—Glens Falls, NY, New York 2–Franklin, New York 4–Yates, and New York 5–Otsego—are rural markets with populations ranging from approximately 127,000 to 393,000, and population densities ranging from 32 to 99 people per square mile.

42. In the eight non-rural markets, T-Mobile is currently attributed with 317 megahertz to 420 megahertz of spectrum on a county-by-county basis. With T-Mobile's reported winnings of zero megahertz to 93 megahertz from Auction 108, T-Mobile would hold a maximum of 440 megahertz of spectrum on a county-by-county basis post-auction.<sup>151</sup> Regarding the other nationwide service providers in these markets, AT&T holds 251 megahertz to 291 megahertz on a county-by-county basis, while Verizon Wireless holds 267 megahertz to 287 megahertz. In addition, DISH holds between 120 megahertz and 145 megahertz of spectrum on a county-by-county basis. Finally, multiple other licensees hold between 5 megahertz to 20 megahertz of spectrum on a county-by-county basis.

43. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in every market except Massachusetts 2–Barnstable, and all have significant population coverage in Massachusetts 2–Barnstable. Further, T-Mobile has significant 5G-NR population coverage at speeds of 7/1 Mbps in all eight of the non-rural markets, significant 5G-NR land area coverage at speeds of 7/1 Mbps in six of the eight non-rural markets, and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Vineland-Millville, NJ. AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in New York-Newark, NY-NJ, Northeast Pennsylvania, PA, Allentown-Bethlehem, PA-NJ, New London-Norwich, CT, and New Jersey 3–Sussex and significant 5G-NR population coverage at speeds of 7/1 Mbps in Atlantic City, NJ, Vineland-Millville, NJ, and Massachusetts 2–Barnstable. Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in New York-Newark, NY-NJ, Northeast Pennsylvania, PA, and Allentown-Bethlehem, PA-NJ, significant 5G-NR population coverage at speeds of 7/1 Mbps in Atlantic City, NJ and Massachusetts 2–Barnstable, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in New Jersey 3–Sussex, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in New London-Norwich, CT and Vineland-Millville, NJ.<sup>152</sup> In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in New York-Newark, NY-NJ and Northeast Pennsylvania, PA.<sup>153</sup>

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<sup>150</sup> In numerical order, the 12 CMAs are: CMA 1: New York-Newark, NY-NJ; CMA 56: Northeast Pennsylvania, PA; CMA 58: Allentown-Bethlehem, PA-NJ; CMA 134: Atlantic City, NJ; CMA 154: New London-Norwich, CT; CMA 228: Vineland-Millville, NJ; CMA 266: Glens Falls, NY; CMA 471: Massachusetts 2–Barnstable; CMA 552: New Jersey 3–Sussex; CMA 560: New York 2–Franklin; CMA 562: New York 4–Yates, and CMA 563: New York 5–Otsego.

<sup>151</sup> T-Mobile also holds 1,200 megahertz to 1,725 megahertz of mmW spectrum, while AT&T holds 1,100 megahertz in each CMA and Verizon Wireless holds 1,100 megahertz to 1,950 megahertz. Other licensees, including DISH, hold 100 megahertz to 1,000 megahertz.

<sup>152</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population and land area coverage in New York-Newark, NY-NJ and Allentown-Bethlehem, PA-NJ, significant population coverage and close-to-significant land area coverage in Northeast Pennsylvania, PA, significant population coverage in Atlantic City, NJ, New London-Norwich, CT, and Vineland-Millville, NJ, close-to-significant population coverage in New Jersey 3–Sussex, and has deployed its network to some extent in Massachusetts 2–Barnstable. Further, Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in New York-Newark, NY-NJ and

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44. In the four rural markets—Glens Falls, NY, New York 2—Franklin, New York 4—Yates, and New York 5—Otsego—T-Mobile is currently attributed with 179.8 megahertz to 410 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 116.5 megahertz from Auction 108 in these four markets, T-Mobile would hold a maximum of 410 megahertz of spectrum on a county-by-county basis post-auction.<sup>154</sup> Regarding the other nationwide service providers in these markets, AT&T holds 243 megahertz to 291 megahertz on a county-by-county basis, while Verizon Wireless holds 267 megahertz to 337 megahertz. In addition, DISH holds between 116 megahertz and 135 megahertz of spectrum. Finally, multiple other licensees hold between five megahertz to 24 megahertz of spectrum across these markets.

45. Regarding coverage, T-Mobile has significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in New York 4—Yates, significant 4G LTE population coverage and close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in New York 5—Otsego, and significant 4G LTE population coverage at speeds of 5/1 Mbps in Glens Falls, NY and New York 2—Franklin. AT&T and Verizon Wireless have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in Glens Falls, NY, New York 4—Yates, and New York 5—Otsego, while Verizon Wireless has significant 4G LTE population coverage and close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in New York 2—Franklin, and AT&T has significant 4G LTE population coverage at speeds of 5/1 Mbps in New York 2—Franklin. Further, T-Mobile has significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in New York 4—Yates, significant 5G-NR population coverage at speeds of 7/1 Mbps in Glens Falls, NY, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in New York 5—Otsego, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in New York 2—Franklin. In addition, AT&T and Verizon Wireless each have close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in New York 4—Yates and have deployed their 5G-NR networks at speeds of 7/1 Mbps to some extent in the remaining three rural markets.<sup>155</sup> In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in New York 4—Yates.<sup>156</sup>

46. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108, we find that the likelihood of competitive harm in these markets if we grant the license application is low. We find it highly unlikely that T-Mobile’s auction winnings would allow it to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

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Allentown-Bethlehem, PA-NJ, significant population coverage in Northeast Pennsylvania, PA and Atlantic City, NJ, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in the remaining four non-rural markets, while AT&T has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in all eight non-rural markets. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 to some extent in New York-Newark, NY-NJ and Northeast Pennsylvania, PA.

<sup>153</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} %, while AT&T holds {{ }} %, and Verizon Wireless holds {{ }} % in these non-rural Northeast markets. No other service providers have a significant market share.

<sup>154</sup> T-Mobile also holds 700 megahertz to 1,525 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz and Verizon Wireless holds 1,425 megahertz to 1,950 megahertz. Other licensees, including DISH, hold 100 megahertz to 1,000 megahertz.

<sup>155</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, AT&T, T-Mobile, and Verizon Wireless have each deployed their network to some extent in all four rural Northeast markets. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in New York 4—Yates.

<sup>156</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} %, while AT&T holds {{ }} %, and Verizon Wireless holds {{ }} % in these rural Northeast markets. No other service providers have a significant market share.

47. *East South Central.* There are nine CMAs in the East South Central of the United States that trigger the initial spectrum screen.<sup>157</sup> Three of these CMAs—Birmingham, AL, Nashville-Davidson, TN, and Clarksville-Hopkinsville, TN-KY—are non-rural markets with populations ranging from approximately 293,000 to 1.8 million, and with population densities of 232 to 443 people per square mile. The other six CMAs—Alabama 3–Lamar, Alabama 4–Bibb, Alabama 6–Washington, Kentucky 2–Union, Kentucky 7–Trimble, and Kentucky 8–Mason—are rural markets with populations ranging from approximately 107,000 to 213,000, and population densities of 19 to 86 people per square mile.

48. In the three non-rural markets—Birmingham, AL, Nashville-Davidson, TN, and Clarksville-Hopkinsville, TN-KY—T-Mobile is currently attributed with 376.5 megahertz to 439.2 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 23.5 megahertz from Auction 108, T-Mobile would hold a maximum of 439.2 megahertz of spectrum on a county-by-county basis post-auction.<sup>158</sup> Regarding the other nationwide service providers in these markets, AT&T holds 255 megahertz to 315 megahertz on a county-by-county basis, while Verizon Wireless holds 277 megahertz to 287 megahertz. In addition, DISH holds between 131 megahertz and 141 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 20 megahertz of spectrum across these markets.

49. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in these three markets.<sup>159</sup> Further, AT&T, T-Mobile, and Verizon Wireless all have significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in these non-rural markets.<sup>160</sup> In addition, DISH has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Nashville-Davidson, TN, significant 5G-NR population coverage at speeds of 7/1 Mbps in Clarksville-Hopkinsville, TN-KY, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Birmingham, AL.<sup>161</sup>

50. In the six rural markets, T-Mobile is currently attributed with 223.5 megahertz to 420 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 116.5 megahertz from Auction 108 in these markets, T-Mobile would hold a maximum of

<sup>157</sup> In numerical order, the eight CMAs are: CMA 41: Birmingham, AL; CMA 46: Nashville-Davidson, TN; CMA 209: Clarksville-Hopkinsville, TN-KY; CMA 309: Alabama 3–Lamar; CMA 310: Alabama 4–Bibb; CMA 312: Alabama 6–Washington; CMA 444: Kentucky 2–Union; CMA 449: Kentucky 7–Trimble; and CMA 450: Kentucky 8–Mason.

<sup>158</sup> T-Mobile also holds 900 megahertz to 1,000 megahertz of mmW spectrum, while AT&T holds 1,000 to 1,100 megahertz and Verizon Wireless holds 1,750 to 1,850 megahertz. Other licensees, including DISH, hold 100 to 800 megahertz.

<sup>159</sup> We note that Southern Linc holds 9 megahertz of spectrum in Birmingham, AL where it has significant 4G LTE population and land area coverage at speeds of 5/1 Mbps.

<sup>160</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population and land area coverage in Nashville-Davidson, TN as well as significant population coverage in Birmingham, AL and Clarksville-Hopkinsville, TN-KY. Further, Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in Birmingham, AL and Nashville-Davidson, TN and significant 5G-NR population coverage at speeds of 35/3 Mbps in Clarksville-Hopkinsville, KY-TN, while AT&T has significant 5G-NR population coverage at speeds of 35/3 Mbps in Nashville-Davidson, TN and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Birmingham, AL and Clarksville-Hopkinsville, TN-KY. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in all three non-rural markets.

<sup>161</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} %, while AT&T holds {{ }} %, and Verizon Wireless holds {{ }} % in these non-rural East South Central markets. No other service providers have a significant market share.

420 megahertz of spectrum on a county-by-county basis post-auction.<sup>162</sup> Regarding the other nationwide service providers in these markets, AT&T holds 220 megahertz to 320 megahertz on a county-by-county basis, while Verizon Wireless holds 227 megahertz to 362 megahertz. In addition, DISH holds between 101 megahertz and 141 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 60 megahertz of spectrum across these markets.

51. Regarding coverage, AT&T and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in these six rural markets. T-Mobile has significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in Kentucky 2–Union, Kentucky 7–Trimble, and Kentucky 8–Mason, significant 4G LTE population coverage and close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in Alabama 3–Lamar, significant 4G LTE population coverage at speeds of 5/1 Mbps in Alabama 4–Bibb, and close-to-significant 4G LTE population coverage at speeds of 5/1 Mbps in Alabama 6–Washington. Additionally, Pine Belt Wireless has significant 4G LTE land area coverage at speeds of 5/1 Mbps in Alabama 4–Bibb.<sup>163</sup> Further, T-Mobile has significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Kentucky 7–Trimble, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Kentucky 2–Union and Kentucky 8–Mason, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in the remaining three rural markets, while AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Kentucky 2–Union, Kentucky 7–Trimble, and Kentucky 8–Mason, and significant 5G-NR population coverage at speeds of 7/1 Mbps in Alabama 6–Washington, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Alabama 3–Lamar, and Verizon Wireless has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Alabama 6–Washington, Kentucky 7–Trimble, and Kentucky 8–Mason.<sup>164</sup> In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Kentucky 7–Trimble.<sup>165</sup>

52. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108, we find that the likelihood of competitive harm in these markets if we grant the license application is low. We find it highly unlikely that T-Mobile’s auction winnings would allow it to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

53. *South Atlantic.* There are 14 CMAs in the South Atlantic United States that trigger the initial spectrum screen.<sup>166</sup> Five of these CMAs—Atlanta, GA, Richmond, VA, Delaware 1–Kent,

<sup>162</sup> T-Mobile also holds 600 megahertz to 1,925 megahertz of mmW spectrum, while AT&T holds 1,000 to 1,100 megahertz and Verizon Wireless holds 1,000 to 2,450 megahertz. Other licensees, including DISH, hold 100 to 850 megahertz.

<sup>163</sup> We note that Southern Linc holds 9 megahertz of spectrum in Alabama 3–Lamar, Alabama 4–Bibb—where it has close-to-significant 4G LTE population coverage at 5/1 Mbps—and Alabama 6–Washington.

<sup>164</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile deployed its network to some extent in all six rural markets. Further, AT&T has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in five of the six rural markets, while Verizon Wireless has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Kentucky 7–Trimble and Kentucky 8–Mason. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Kentucky 7–Trimble.

<sup>165</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} %, while AT&T holds {[ ]} %, and Verizon Wireless holds {[ ]} % in these rural East South Central markets. No other service providers have a significant market share.

<sup>166</sup> In numerical order, the 14 CMAs are: CMA 17: Atlanta, GA; CMA 59: Richmond, VA; CMA 359: Delaware 1–Kent; CMA 365: Florida 6–Dixie; CMA 366: Florida 7–Hamilton; CMA 367: Florida 8–Jefferson; CMA 372: Georgia 2–Dawson; CMA 374: Georgia 4–Jasper; CMA 375: Georgia 5–Haralson; CMA 376: Georgia 6–Spalding; CMA 383: Georgia 13–Early; CMA 631: South Carolina 7–Calhoun; CMA 689: Virginia 9–Greensville; and CMA 692: Virginia 12–Caroline.

Georgia 2–Dawson, and Georgia 5–Haralson—are non-rural markets with populations ranging from approximately 376,000 to 5.4 million, and with population densities of 191 to 1,236 people per square mile. The other nine CMAs—Florida 6–Dixie, Florida 7–Hamilton, Florida 8–Jefferson, Georgia 4–Jasper, Georgia 6–Spalding, Georgia 13–Early, South Carolina 7–Calhoun, Virginia 9–Greensville, and Virginia 12–Caroline—are rural markets with populations ranging from approximately 62,500 to 241,000, and population densities of 21 to 71 people per square mile.

54. In the five non-rural markets, T-Mobile is currently attributed with 282.7 megahertz to 399.2 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 116.5 megahertz from Auction 108, T-Mobile would hold a maximum of 420 megahertz of spectrum on a county-by-county basis post-auction.<sup>167</sup> Regarding the other nationwide service providers in these markets, AT&T holds 230 megahertz to 280 megahertz on a county-by-county basis, while Verizon Wireless holds 287 megahertz to 332 megahertz. In addition, DISH holds between 101 megahertz and 141 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 40 megahertz of spectrum on a county-by-county basis across these markets.

55. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in the five non-rural markets.<sup>168</sup> Further, T-Mobile has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in all five of the non-rural markets, Verizon Wireless has significant 5G-NR population and land coverage at speeds of 7/1 Mbps in Atlanta, GA, Richmond, VA, and Delaware 1–Kent, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Georgia 2–Dawson, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Georgia 5–Haralson, and AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Atlanta, GA and Delaware 1–Kent, significant 5G-NR population coverage at speeds of 7/1 Mbps in Richmond, VA and Georgia 2–Dawson, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Georgia 5–Haralson.<sup>169</sup> In addition, DISH has significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Richmond, VA, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Atlanta, GA, Delaware 1–Kent, and Georgia 2–Dawson.<sup>170</sup>

56. In the nine rural markets, T-Mobile is currently attributed with 256.2 megahertz to 440 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 116.5 megahertz from Auction 108 in these nine markets, T-Mobile would hold a maximum

<sup>167</sup> T-Mobile also holds 800 megahertz to 1,625 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz, and Verizon Wireless holds 1,200 megahertz to 1,850 megahertz. Other licensees, including DISH, hold 200 megahertz to 850 megahertz.

<sup>168</sup> We note that Southern Linc holds 7.5 megahertz of spectrum in Atlanta, GA, where it has close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps, as well as Georgia 2–Dawson and Georgia 5–Haralson.

<sup>169</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population and land area coverage in Atlanta, GA, significant population coverage in Richmond, VA, close-to-significant population coverage in Georgia 2–Dawson, and has deployed its network to some extent in Delaware 1–Kent and Georgia 5–Haralson. Further, Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in Atlanta, GA and Richmond, VA, significant 5G-NR population coverage at speeds of 35/3 Mbps in Delaware 1–Kent, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Georgia 2–Dawson and Georgia 5–Haralson, while AT&T has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in all five non-rural markets. In addition, DISH has significant 5G-NR population coverage at speeds of 35/3 Mbps in Richmond, VA, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Atlanta, GA and Delaware 1–Kent.

<sup>170</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} %, while AT&T holds {{ }} % and Verizon Wireless holds {{ }} % in these non-rural South Atlantic markets. No other service providers have a significant market share.



of 440 megahertz of spectrum on a county-by-county basis post-auction.<sup>171</sup> Regarding the other nationwide service providers in these markets, AT&T holds 223 megahertz to 305 megahertz on a county-by-county basis, while Verizon Wireless holds 267 megahertz to 347 megahertz. In addition, DISH holds between 101 megahertz and 131 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 50 megahertz of spectrum on a county-by-county basis across these markets.<sup>172</sup>

57. Regarding coverage, AT&T and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in all nine rural markets, while T-Mobile has significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in five of the nine markets, significant 4G LTE population coverage at speeds of 5/1 Mbps in Florida 6–Dixie, Florida 8–Jefferson, and Georgia 4–Jasper, and close-to-significant 4G LTE population coverage at speeds of 5/1 Mbps in Virginia 12–Caroline. Further, T-Mobile has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Georgia 6–Spalding and Virginia 9–Greensville, close-to-significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Florida 7–Hamilton, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Florida 6–Dixie, Georgia 13–Early, and South Carolina 7–Calhoun, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Florida 8–Jefferson, Georgia 4–Jasper, and Virginia 12–Caroline. AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Florida 7–Hamilton and Georgia 13–Early, significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Florida 8–Jefferson, significant 5G-NR population coverage at speeds of 7/1 Mbps in Florida 6–Dixie, Georgia 4–Jasper, South Carolina 7–Calhoun, and Virginia 12–Caroline, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Georgia 6–Spalding and Virginia 9–Greensville, while Verizon Wireless has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in eight of the nine rural markets.<sup>173</sup> In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Virginia 9–Greensville.<sup>174</sup>

58. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108, we find that the likelihood of competitive harm in these markets if we grant the license application is low. We find it highly unlikely that T-Mobile’s auction winnings would allow it to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

59. *West South Central*: There are 14 CMAs in the West South Central United States that trigger the initial spectrum screen.<sup>175</sup> Three of these CMAs—Dallas-Fort Worth, TX, Little Rock, AR,

<sup>171</sup> T-Mobile also holds 600 megahertz to 1,525 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz, and Verizon Wireless holds 1,200 megahertz to 2,450 megahertz. Other licensees, including DISH, hold 100 megahertz to 850 megahertz.

<sup>172</sup> We note that Southern Linc holds up to 7.5 megahertz of spectrum in Florida 8–Jefferson, Georgia 4–Jasper, Georgia 6–Spalding, Georgia 13–Early, and South Carolina 7–Calhoun.

<sup>173</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has deployed its network to some extent in all nine rural markets, AT&T has deployed its network to some extent in eight of the nine rural markets, and Verizon Wireless has deployed its network to some extent in seven of the nine rural markets. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Virginia 9–Greensville.

<sup>174</sup> In terms of significant market share, T-Mobile holds { } % in Florida 6–Dixie, Florida 7–Hamilton, Florida 8–Jefferson, South Carolina 7–Calhoun, Virginia 9–Greensville, and Virginia 12–Caroline, and has some market presence in the remaining three markets with a market share of { } %. AT&T holds { } % across these nine rural South Atlantic markets, while Verizon Wireless holds { } %. No other service providers have a significant market share.

<sup>175</sup> In numerical order, the 14 CMAs are: CMA 9: Dallas–Fort Worth, TX; CMA 92: Little Rock, AR; CMA 112: Corpus Christi, TX; CMA 325: Arkansas 2–Marion; CMA 326: Arkansas 3–Sharp; CMA 329: Arkansas 6–Cleburne; CMA 330: Arkansas 7–Pope; CMA 331: Arkansas 8–Franklin; CMA 455: Louisiana 2–Morehouse;

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and Corpus Christi, TX—are non-rural markets with populations ranging from approximately 422,000 to 7.6 million, and with population densities of 237 to 909 people per square mile. The other 11 CMAs—Arkansas 2–Marion, Arkansas 3–Sharp, Arkansas 6–Cleburne, Arkansas 7–Pope, Arkansas 8–Franklin, Louisiana 2–Morehouse, Louisiana 3–De Soto, Louisiana 4–Caldwell, Texas 10–Navarro, Texas 19–Atascosa, and Texas 20–Wilson—are rural markets with populations of approximately 65,800 to 368,000, and population densities of 18 to 41 people per square mile.

60. In the three non-rural markets, T-Mobile is currently attributed with 406.5 megahertz to 450 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 23.5 megahertz from Auction 108, T-Mobile would hold a maximum of 450 megahertz of spectrum on a county-by-county basis post-auction.<sup>176</sup> Regarding the other nationwide service providers in these markets, AT&T holds 275 megahertz to 280 megahertz on a county-by-county basis, while Verizon Wireless holds 252 megahertz to 297 megahertz. In addition, DISH holds between 121 megahertz and 131 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 30 megahertz of spectrum on a county-by-county basis across these non-rural markets.

61. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in the three non-rural markets. Further, AT&T and T-Mobile each have significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in these three non-rural markets, while Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Dallas-Fort Worth, TX and Little Rock, AR and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Corpus Christi, TX.<sup>177</sup> In addition, DISH has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in all three non-rural markets.<sup>178</sup>

62. In the 11 rural markets—Arkansas 2–Marion, Arkansas 3–Sharp, Arkansas 6–Cleburne, Arkansas 7–Pope, Arkansas 8–Franklin, Louisiana 2–Morehouse, Louisiana 3–De Soto, Louisiana 4–Caldwell, Texas 10–Navarro, Texas 19–Atascosa, and Texas 20–Wilson—T-Mobile is currently attributed with 236 megahertz to 430 megahertz of spectrum on a county-by-county basis. With T-Mobile winning between zero megahertz and 116.5 megahertz from Auction 108 in these 11 markets, T-Mobile would hold a maximum of 442 megahertz on a county-by-county basis post-auction.<sup>179</sup>

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CMA 456: Louisiana 3–De Soto; CMA 457: Louisiana 4–Caldwell; CMA 661: Texas 10–Navarro; CMA 670: Texas 19–Atascosa; and CMA 671: Texas 20–Wilson.

<sup>176</sup> T-Mobile also holds 600 megahertz to 1,725 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz and Verizon Wireless holds 1,425 megahertz to 2,050 megahertz. Other licensees, including DISH, hold 200 megahertz to 1,000 megahertz.

<sup>177</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile significant population coverage in all three non-rural markets and significant land area coverage in Dallas-Fort Worth, TX. AT&T has close-to-significant 5G-NR land area coverage at speeds of 35/3 Mbps in Dallas-Fort Worth, TX and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Little Rock, AR and Corpus Christi, TX. Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in Dallas-Fort Worth, TX and Little Rock, AR and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Corpus Christi, TX. In addition, DISH has significant 5G-NR population and land area coverage at speeds of 35/3 Mbps in Dallas-Fort Worth, TX and Corpus Christi, TX as well as significant 5G-NR population coverage at speeds of 35/3 Mbps and close-to-significant 5G-NR land area coverage at speeds of 35/3 Mbps in Little Rock, AR.

<sup>178</sup> According to December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} %, while AT&T holds {[ ]} % and Verizon Wireless holds {[ ]} % in these non-rural West South Central markets. No other service providers have a significant market share.

<sup>179</sup> T-Mobile also holds 600 megahertz to 1,725 megahertz of mmW spectrum, while AT&T holds 1,000 megahertz to 1,100 megahertz, and Verizon Wireless holds 1,000 megahertz to 2,050 megahertz. Other licensees, including DISH, hold 100 megahertz to 1,025 megahertz.

Regarding the other nationwide service providers in these markets, AT&T holds 230 megahertz to 305 megahertz on a county-by-county basis, while Verizon Wireless holds 242 megahertz to 372 megahertz. In addition, DISH holds between 101 megahertz and 121 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz and 60 megahertz of spectrum across these 11 markets.<sup>180</sup>

63. Regarding coverage, AT&T and Verizon Wireless each have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in these 11 markets. T-Mobile has significant 4G LTE population coverage at speeds of 5/1 Mbps in Arkansas 6–Cleburne, Arkansas 7–Pope, Arkansas 8–Franklin, Louisiana 2–Morehouse, Louisiana 3–De Soto, Texas 19–Atascosa, and Texas 20–Wilson, and close-to-significant 4G LTE population coverage at speeds of 5/1 Mbps in Arkansas 2–Marion, Arkansas 3–Sharp, and Louisiana 4–Caldwell. T-Mobile also has significant 4G LTE land area coverage at speeds of 5/1 Mbps in Arkansas 6–Cleburne and Louisiana 2–Morehouse, and close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in Arkansas 3–Sharp, Arkansas 7–Pope, Arkansas 8–Franklin, Texas 10–Navarro, and Texas 20–Wilson. Further, T-Mobile has significant 5G-NR population coverage at speeds of 7/1 Mbps in Arkansas 6–Cleburne, Texas 19–Atascosa, and Texas 20–Wilson, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Arkansas 7–Pope, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in the remaining seven markets. AT&T has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Arkansas 3–Sharp, Arkansas 6–Cleburne, Louisiana 2–Morehouse, Louisiana 4–Caldwell, Texas 19–Atascosa, and Texas 20–Wilson, significant 5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Arkansas 8–Franklin, significant 5G-NR population coverage at speeds of 7/1 Mbps in Arkansas 7–Pope, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Arkansas 2–Marion, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in the remaining two markets. Verizon Wireless has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps in Arkansas 6–Cleburne, close-to-significant 5G-NR population coverage at speeds of 7/1 Mbps in Arkansas 7–Pope, and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Arkansas 2–Marion, Arkansas 3–Sharp, Arkansas 8–Franklin, Louisiana 4–Caldwell, Texas 10–Navarro, and Texas 19–Atascosa.<sup>181</sup> In addition, DISH has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Arkansas 6–Cleburne, Texas 19–Atascosa, and Texas 20–Wilson.<sup>182</sup>

64. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108, we find that the likelihood of competitive harm in these markets if we grant the license application is low. We find it highly unlikely that T-Mobile’s auction winnings would allow it to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

<sup>180</sup> We note that Southern Linc holds up to 7 megahertz of spectrum in Louisiana 2–Morehouse and Louisiana 4–Caldwell.

<sup>181</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population coverage at speeds of 35/3 Mbps in Texas 19–Atascosa, and has deployed its network to some extent in the remaining ten rural markets. AT&T has close-to-significant 5G-NR population coverage at speeds of 35/3 Mbps in Texas 20–Wilson, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in the remaining ten rural markets. Verizon Wireless has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Arkansas 2–Marion, Arkansas 3–Sharp, Arkansas 6–Cleburne, Arkansas 7–Pope, Arkansas 8–Franklin, and Texas 10–Navarro. In addition, DISH has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Arkansas 6–Cleburne, Texas 19–Atascosa, and Texas 20–Wilson.

<sup>182</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} % in seven of these rural West South Central markets and has some market presence in Arkansas 3–Sharp, Arkansas 8–Franklin, and Louisiana 3–De Soto, with market shares of {{ }} %. AT&T holds {{ }} % while Verizon Wireless holds {{ }} % in these rural West South Central markets. No other service providers have a significant market share. Alta Communications has some market presence in Louisiana 3–De Soto with a market share of {{ }} %.

65. *West.* There are eight CMAs in the West of the United States that trigger the initial spectrum screen.<sup>183</sup> Five of these CMAs—Salt Lake City-Ogden, UT, Oxnard-Simi Valley-Ventura, CA, Fresno, CA, Santa Rosa-Petaluma, CA, and Salinas-Seaside-Monterey, CA—are non-rural markets with populations ranging from approximately 439,000 to 1.9 million, and with population densities of 133 to 457 people per square mile. The other three CMAs—Arizona 1–Mohave, California 6–Mono, and Oregon 4–Lincoln—are rural markets with populations ranging from approximately 32,200 to 274,000, and with population densities of two to 69 people per square mile.

66. In the five non-rural markets, T-Mobile is currently attributed with 317 megahertz to 410 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 93 megahertz from Auction 108, T-Mobile would hold a maximum of 430 megahertz of spectrum on a county-by-county basis post-auction. Regarding the other nationwide service providers in these markets, AT&T holds 261 megahertz to 295 megahertz on a county-by-county basis, while Verizon Wireless holds 247 megahertz to 277 megahertz.<sup>184</sup> In addition, DISH holds between 125 megahertz and 135 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 30 megahertz of spectrum on a county-by-county basis across these markets.

67. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population coverage at speeds of 5/1 Mbps in these five markets. In Fresno, CA, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE land area coverage at speeds of 5/1 Mbps, while in Salt Lake City-Ogden, UT and Santa Rosa-Petaluma, CA, AT&T and Verizon Wireless each have significant 4G LTE land area coverage at speeds of 5/1 Mbps, and in Salinas-Seaside-Monterey, CA, Verizon Wireless has significant 4G LTE land area coverage at speeds of 5/1 Mbps and AT&T has close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps. Further, AT&T, T-Mobile, and Verizon Wireless each have significant 5G-NR population coverage at speeds of 7/1 Mbps in all five markets, T-Mobile has close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Fresno, CA, AT&T has significant 5G-NR land area coverage at speeds of 7/1 Mbps in Salt Lake City-Ogden, UT and Fresno, CA and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Santa Rosa-Petaluma, CA, and Verizon Wireless has significant 5G-NR land area coverage at speeds of 7/1 Mbps in Fresno, CA and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps in Santa Rosa-Petaluma, CA.<sup>185</sup> In addition, DISH has significant 5G-NR population coverage at speeds of 7/1 Mbps in Salt Lake City-Ogden, UT and Fresno, CA.<sup>186</sup>

<sup>183</sup> In numerical order, the eight CMAs are: CMA 39: Salt Lake City-Ogden, UT; CMA 73: Oxnard-Simi Valley-Ventura, CA; CMA 74: Fresno, CA; CMA 123: Santa Rosa-Petaluma, CA; CMA 126: Salinas-Seaside-Monterey, CA; CMA 318: Arizona 1–Mohave; CMA 341: California 6–Mono; and CMA 609: Oregon 4–Lincoln.

<sup>184</sup> T-Mobile holds 1,000 megahertz to 1,400 megahertz of mmW spectrum, while AT&T holds 1,100 megahertz in each CMA, and Verizon Wireless holds 1,000 megahertz to 1,850 megahertz. Other licensees, including DISH, hold 100 megahertz to 850 megahertz.

<sup>185</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, Verizon Wireless has significant population coverage in all five of these markets. T-Mobile has significant 5G-NR population coverage at speeds of 35/3 Mbps in Salt Lake City-Ogden, UT, Oxnard-Simi Valley-Ventura, CA, and Fresno, CA, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Santa Rosa-Petaluma, CA and Salinas-Seaside-Monterey, CA. AT&T has significant 5G-NR population coverage at speeds of 35/3 Mbps in Fresno, CA and Salinas-Seaside-Monterey, CA, close-to-significant 5G-NR population coverage at speeds of 35/3 Mbps in Oxnard-Simi Valley-Ventura, CA, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Salt Lake City-Ogden, UT and Santa Rosa-Petaluma, CA. In addition, DISH has significant 5G-NR population coverage at speeds of 35/3 Mbps in Salt Lake City-Ogden, UT and close-to-significant 5G-NR population coverage at speeds of 35/3 Mbps in Fresno, CA.

<sup>186</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds { } %, while AT&T holds { } % and Verizon Wireless holds { } % in these non-rural West markets. No other service providers have a significant market share.

68. In the three rural markets—Arizona 1–Mohave, California 6–Mono, and Oregon 4–Lincoln—T-Mobile is currently attributed with 283.5 megahertz to 420 megahertz of spectrum on a county-by-county basis. With T-Mobile’s reported winnings of zero megahertz to 116.5 megahertz from Auction 108 in these three markets, T-Mobile would hold a maximum of 420 megahertz of spectrum on a county-by-county basis post-auction. Regarding the other nationwide service providers in these markets, AT&T holds 255 megahertz to 295 megahertz on a county-by-county basis, while Verizon Wireless holds 260 megahertz to 362 megahertz.<sup>187</sup> In addition, DISH holds between 111 megahertz and 121 megahertz of spectrum. Finally, multiple other licensees hold between 10 megahertz to 55 megahertz of spectrum across these three markets.

69. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population coverage at speeds of 5/1 Mbps in all three markets. Verizon Wireless has significant 4G LTE land area coverage at speeds of 5/1 Mbps in Arizona 1–Mohave and close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in Oregon 4–Lincoln, while AT&T has close-to-significant 4G LTE land area coverage at speeds of 5/1 Mbps in Arizona 1–Mohave. Further, AT&T has significant 5G-NR population coverage at speeds of 7/1 Mbps in all three markets,<sup>188</sup> while T-Mobile has significant 5G-NR population coverage at speeds of 7/1 Mbps in Arizona 1–Mohave and Oregon 4–Lincoln and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in California 6–Mono, and Verizon Wireless has significant 5G-NR population coverage at speeds of 7/1 Mbps in Arizona 1–Mohave and has deployed its 5G-NR network at speeds of 7/1 Mbps to some extent in Oregon 4–Lincoln.<sup>189</sup>

70. Based on our evaluation of the factors ordinarily considered, including the fact that multiple licensees have access to spectrum, as well as the unique characteristics of this specific band and the overlay licenses offered in Auction 108, we find that the likelihood of competitive harm in these markets if we grant the license application is low. We find it highly unlikely that T-Mobile’s auction winnings would allow it to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

71. *Puerto Rico.* T-Mobile asserts that several benefits will arise from it deploying the 2.5 GHz licenses it won in Puerto Rico. It states that it will use those licenses to close the gaps in its existing coverage, which will allow for spectrum contiguity in areas where it was not possible before and would not be possible in the absence of these licenses.<sup>190</sup> Specifically, T-Mobile argues that it will be able to rationalize its holdings, improving its coverage and speeds, particularly in rural areas on the east and west coast of Puerto Rico.<sup>191</sup> T-Mobile asserts that it will eventually deploy an enhanced and expanded Home Internet service in Puerto Rico, enhancing consumer choice and competition in the in-home broadband market.<sup>192</sup> T-Mobile also asserts the other providers in Puerto Rico have sufficient spectrum to compete:

<sup>187</sup> T-Mobile also holds 900 megahertz to 1,425 megahertz of mmW spectrum, while AT&T holds 1,100 megahertz in each CMA and Verizon Wireless holds 1,425 megahertz to 1,850 megahertz. Other licensees, including DISH, hold 200 megahertz to 800 megahertz.

<sup>188</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has significant population coverage in Arizona 1–Mohave and Oregon 4–Lincoln and has deployed its network to some extent in California 6–Mono. AT&T has significant 5G-NR population coverage at speeds of 35/3 Mbps in Arizona 1–Mohave and California 6–Mono, and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Oregon 4–Lincoln. Verizon Wireless has significant 5G-NR population coverage at speeds of 35/3 Mbps in Arizona 1–Mohave and has deployed its 5G-NR network at speeds of 35/3 Mbps to some extent in Oregon 4–Lincoln.

<sup>189</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} % in Oregon 4–Lincoln and Arizona 1–Mohave, respectively, and has some market presence in California 6–Mono with a market share of {[ ]} %. AT&T holds {[ ]} % while Verizon Wireless holds {[ ]} % in these rural West markets. No other service providers have a significant market share.

<sup>190</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 3.

<sup>191</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 3.

<sup>192</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 3.

that Liberty Mobile possesses a pop-weighted average of 164 megahertz of spectrum,<sup>193</sup> and América Móvil possesses a pop-weighted average of 144.9 megahertz and 425 megahertz of high-band spectrum. T-Mobile further states that DISH also holds a substantial amount of spectrum throughout both island regions.<sup>194</sup> According to T-Mobile, its winnings in Puerto Rico are limited to 4 counties in which it won 23.5 megahertz and 7 counties in which it won 6 megahertz (out of a total of 55 counties in Puerto Rico).<sup>195</sup> T-Mobile states that its spectrum holdings as a result of the grant of these licenses would not exceed 347.35 megahertz in any county, which, T-Mobile asserts, is a level of aggregation that the Commission has already approved for T-Mobile in a number of other counties in Puerto Rico.<sup>196</sup>

72. As the Commission has previously found, because of Puerto Rico's unique characteristics—its limited geographic scope and isolated nature—the relevant geographic market is not any individual CMA within Puerto Rico, but rather Puerto Rico as a whole.<sup>197</sup> Puerto Rico overall is a non-rural market with a population of approximately 3.3 million, and a population density of 956 people per square mile.<sup>198</sup> T-Mobile is currently attributed with 276.9 megahertz to 347.4 megahertz of spectrum on a county equivalent-by-county equivalent basis across Puerto Rico. With T-Mobile's reported winnings of zero megahertz to 23.5 megahertz from Auction 108, T-Mobile would hold a maximum of 347.4 megahertz of spectrum on a county equivalent-by-county equivalent basis post-auction.<sup>199</sup> The other nationwide service providers, AT&T and Verizon Wireless, do not operate in Puerto Rico. Instead, local providers América Móvil and Liberty Latin compete with T-Mobile: América Móvil holds 74 megahertz to 99 megahertz, while Liberty Latin holds 163 megahertz to 175 megahertz. In addition, DISH holds 91 megahertz of spectrum.<sup>200</sup> Finally, TerreStar holds 10 megahertz of spectrum.

73. Regarding coverage, América Móvil, Liberty Latin, and T-Mobile all have significant 4G LTE population and land area coverage at speeds of 5/1 Mbps in Puerto Rico. Further, Liberty Latin has significant 5G-NR population and land area coverage at speeds of 7/1 Mbps,<sup>201</sup> T-Mobile has significant

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<sup>193</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 5.

<sup>194</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 4.

<sup>195</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 6-7.

<sup>196</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 7.

<sup>197</sup> *Applications of AT&T Inc. and Centennial Communications Corp. for Consent To Transfer Control of Licenses, Authorizations, and Spectrum Leasing Arrangements*, WT Docket No. 08-246, Memorandum Opinion and Order, 24 FCC Rcd 13915, 13934-35, para. 42 (2009); *see also Application of AT&T Mobility Puerto Rico Inc. and Worldcall Inc. for Consent To Assign Licenses*, WT Docket No. 14-206, Memorandum Opinion and Order, 30 FCC Rcd 9763, 9768-69, para. 12 (WTB 2015).

<sup>198</sup> As noted above, 3.7 GHz and 3.45 GHz spectrum are not available for use in Hawaii, Alaska, and the territories. In these areas, the total amount of suitable and available spectrum is 743 megahertz, and the associated spectrum screen trigger is 250 megahertz.

<sup>199</sup> T-Mobile also holds 2,000 megahertz of mmW spectrum, while América Móvil holds 425 megahertz and Liberty Latin holds 300 megahertz. Other licensees, including DISH, hold 400 megahertz to 1,400 megahertz.

<sup>200</sup> *But see Federal Communications Commission Establishes Docket for Petition for Declaratory Ruling and Proposed Assignment of Spectrum Licenses, Assets, and Customers of DISH Network Corporation to Liberty Latin America Ltd in Puerto Rico and the U.S. Virgin Islands*, GN Docket No. 24-55, Public Notice, DA 24-167 (WTB/OIA/OEA Feb. 23, 2024).

<sup>201</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, Liberty Latin has significant population and land area coverage in Puerto Rico, T-Mobile has significant population coverage, and América Móvil has deployed its network to some extent.

5G-NR population coverage and close-to-significant 5G-NR land area coverage at speeds of 7/1 Mbps, and América Móvil has significant 5G-NR population coverage at speeds of 7/1 Mbps.<sup>202</sup>

74. As noted above, AT&T argues that T-Mobile's acquisition of the available unpaired mid-band spectrum in Puerto Rico will harm competition, and that T-Mobile holds significantly more mid-band spectrum than any of its rivals.<sup>203</sup> Based on our review of the licensing records in Puerto Rico, we find that the issuance of these specific Auction 108 licenses to T-Mobile would not materially change the spectrum landscape. The licenses issued in Auction 108 are a unique form of overlay licenses: in Channel Blocks 1 and 2, where T-Mobile won virtually all of its licenses in Puerto Rico, there was no available spectrum over 90% of the island, and in Mayaguez, on the westernmost part of the island, where spectrum was available, grant of these licenses would result in T-Mobile controlling 300.35 megahertz of relevant spectrum, up from 276.85 megahertz. Further, we note that other providers have been able to access 2.5 GHz spectrum in Puerto Rico: América Móvil leases several 2.5 GHz licenses in Puerto Rico,<sup>204</sup> and Aeronet Wireless Broadband, LLC won the majority of the Channel Block 1 licenses. Under these specific circumstances, and given the unique nature of the 2.5 GHz band, we conclude that issuing Auction 108 licenses to T-Mobile in Puerto Rico is unlikely to result in competitive harm.

75. *Hawaii.* T-Mobile asserts several benefits that will accrue from its deployment of the 2.5 GHz licenses it won in Auction 108 in Hawaii. First, it claims that grant of these licenses would make it possible for it to deploy 100 megahertz channels in parts of Hawaii, greatly enhancing network capacity and significantly increasing speed.<sup>205</sup> T-Mobile states that industry groups have noted that large channels of mid-band spectrum are indispensable to achieving the faster connections and lower latency that 5G promises.<sup>206</sup> T-Mobile further argues that due to the radio propagation characteristics, the extent of territory where T-Mobile's use of very wideband carriers is impacted by balkanized 2.5 GHz holdings is much broader than the region acquired by T-Mobile and therefore the benefits will extend beyond just the narrow geographic areas where T-Mobile obtained spectrum.<sup>207</sup> Moreover, T-Mobile asserts that it has already deployed Home Internet service in Hawaii, with availability covering over 83,000 locations as of June 30, 2022.<sup>208</sup>

76. T-Mobile asserts that in the four CMAs in Hawaii in which it won 2.5 GHz spectrum, the amount of T-Mobile's total attributable spectrum holdings upon grant of the licenses would be less than aggregate spectrum amounts already approved by the Commission to be held by T-Mobile in other parts of Hawaii.<sup>209</sup> T-Mobile argues that its winnings do not indicate competitive harm as competitors already possess sufficient spectrum to compete.<sup>210</sup> T-Mobile states that AT&T has an extensive operational

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<sup>202</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {[ ]} % in the Puerto Rico market. América Móvil holds {[ ]} % while Liberty Latin holds {[ ]} %. No other service providers have a significant market share.

<sup>203</sup> See *supra* para. 16.

<sup>204</sup> See Spectrum Leasing Arrangements for Long Term *De Facto* Lease, Lease Identifiers L000023460-L000023468 (leasing EBS spectrum to Lessee Puerto Rico Telephone Company, Inc., (real party in interest America Móvil, S.A.B. de C.V.)).

<sup>205</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2.

<sup>206</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2.

<sup>207</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2.

<sup>208</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2. According to T-Mobile, this availability will increase in the Hawaiian Islands as more 2.5 GHz spectrum and facilities are brought on air. T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 2-3.

<sup>209</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 6.

<sup>210</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 6.

network and has between 125 and 145 megahertz of low- and mid-band spectrum as well as 1,100 megahertz of high-band spectrum.<sup>211</sup> T-Mobile further states that Verizon also serves Hawaii using between 97 and 107 megahertz of spectrum and between 1,100 and 1,850 megahertz of high-band spectrum.<sup>212</sup> Moreover, T-Mobile adds that DISH has over 90 megahertz of spectrum in Hawaii and 800 megahertz of high-band spectrum.<sup>213</sup>

77. AT&T asserts that in Hawaii's five counties, T-Mobile's post-auction attributable spectrum holdings would range from 277 to 390 megahertz.<sup>214</sup> AT&T argues that these attributable totals are particularly noteworthy because in Hawaii, unlike the continental United States, the current spectrum screen is only 250 megahertz.<sup>215</sup> AT&T maintains that unconditional grant of T-Mobile's acquisition of all the available unpaired mid-band spectrum in Hawaii will foreclose the opportunity for other providers to mount a competitive response unless and until either: (1) the Commission identifies, allocates, and auctions additional unpaired mid-band spectrum with licenses available in Hawaii; or (2) the Commission requires a divestiture as a competitive remedy.<sup>216</sup>

78. As described in Section II.E above, T-Mobile has voluntarily committed to divest 20 megahertz of its AWS-1, AWS-3, PCS, or 2.5 GHz band spectrum in each of the following two markets: Hawaii 1–Kauai (CMA 385) and Hawaii 2–Maui (CMA 386).<sup>217</sup>

79. There are two CMAs in Hawaii that trigger the spectrum screen as a result of increased spectrum aggregation.<sup>218</sup> Both of these CMAs—Hawaii 1–Kauai (CMA 385) and Hawaii 2–Maui (CMA 386)—are non-rural markets with populations of approximately 73,300 and 165,000, respectively, and with population densities of 118 and 140 people per square mile. In the two markets, T-Mobile is currently attributed with 233 megahertz to 346.5 megahertz of spectrum on a county-by-county basis. Taking into account both T-Mobile's reported winnings of zero megahertz to 69.5 megahertz from Auction 108, and the spectrum T-Mobile will be divesting, T-Mobile would hold a maximum of 350 megahertz of spectrum on a county-by-county basis post-auction.<sup>219</sup> Regarding the other nationwide service providers in these markets, AT&T holds 135 megahertz to 145 megahertz on a county-by-county basis, while Verizon Wireless holds 102 megahertz to 127 megahertz. In addition, DISH holds 91 megahertz of spectrum in both CMAs. Finally, multiple other licensees hold 10 megahertz of spectrum across these two markets. Regarding coverage, AT&T, T-Mobile, and Verizon Wireless each have significant 4G LTE population coverage at speeds of 5/1 Mbps in these two markets. Further, AT&T and T-Mobile have significant 5G-NR population coverage at speeds of 7/1 Mbps in both Hawaii markets,<sup>220</sup>

<sup>211</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 4.

<sup>212</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 4.

<sup>213</sup> T-Mobile Feb. 6, 2023 *Ex Parte* Letter at 4-5.

<sup>214</sup> Letter from Jessica B. Lyons, Assistant Vice President, Senior Legal Counsel, AT&T, to Marlene H. Dortch, FCC, ULS File No. 0010206629, at 2 (filed Jan. 12, 2024) (AT&T Jan. 12, 2024 Letter).

<sup>215</sup> AT&T Jan. 12, 2024 Letter at 2.

<sup>216</sup> AT&T Jan. 12, 2024 Letter at 3; *see also* AT&T Feb. 21, 2023 *Ex Parte* Letter at 1, 3; AT&T Apr. 4, 2023 Letter at 4; AT&T Petition to Deny at 1, 14.

<sup>217</sup> *See* T-Mobile Feb. 15, 2024 Letter, which is attached as Appendix B.

<sup>218</sup> In Honolulu, HI (CMA 50) and Hawaii 3–Hawaii (CMA 387), while T-Mobile won licenses, it did not increase its attributable spectrum holdings as a result of Auction 108.

<sup>219</sup> T-Mobile also holds 1,000 megahertz to 1,425 megahertz of mmW spectrum, while AT&T holds 1,100 megahertz in both CMAs and Verizon Wireless holds 1,000 megahertz to 1,850 megahertz. Other licensees, including DISH, hold 200 megahertz to 850 megahertz.

<sup>220</sup> In terms of 5G-NR coverage at speeds of 35/3 Mbps, T-Mobile has close-to-significant population coverage in Hawaii 1–Kauai and has deployed its network to some extent in Hawaii 2–Maui; AT&T has significant population

(continued....)



while Verizon Wireless has significant 5G-NR population coverage at speeds of 7/1 Mbps in Hawaii 2–Maui.<sup>221</sup>

80. Based on our review of the specific circumstances present in Hawaii, the factors ordinarily considered, and our adoption of the voluntary divestiture commitments in Hawaii 1–Kauai and Hawaii 2–Maui as a condition of the grant of T-Mobile’s application, we find that the likelihood of competitive harm would be low in these two markets in which T-Mobile won additional attributable spectrum in Auction 108. We note that while T-Mobile holds substantial amounts of spectrum in these markets compared to the other significant mobile service providers, in Hawaii 2–Maui, for instance, after divesting 20 megahertz of spectrum, its holdings will increase by only 3.5 megahertz. We also note that multiple licensees have access to spectrum in these two markets and again point out the unique characteristics of this specific band and the overlay licenses offered in Auction 108. Based on the current record, and under these specific circumstances, we conclude that issuing the licenses to T-Mobile in the Hawaii markets that it won in Auction 108 is unlikely to allow T-Mobile to foreclose entry, raise rivals’ costs, or otherwise harm the public interest.

81. Accordingly, we impose T-Mobile’s voluntary divestiture commitments as a condition to our approval of T-Mobile’s long-form application. Any applications for the transfer of Divestiture Assets must still be approved by the Commission as being in the public interest. As such—and consistent with T-Mobile’s commitments—each entity to which spectrum is divested must receive no less than 10 megahertz of contiguous or paired spectrum, unless WTB finds in its discretion that transferring smaller blocks of spectrum would serve the public interest. Further, if T-Mobile’s proposed divestiture involves a spectrum swap, the Commission will review spectrum aggregation in the other market or markets implicated by the proposed swap.

82. Upon application by T-Mobile to WTB, WTB may grant one or more extensions of the 12 month timeframe for the filing of application(s), not to exceed 60 days in the aggregate, to allow T-Mobile further time to dispose of the Divestiture Assets. To the extent the application(s) are not filed by the relevant date, or by any extended date allowed by WTB, WTB may require T-Mobile to transfer the Divestiture Assets—or what remains of the Divestiture Assets—to a divestiture trustee, as set forth in T-Mobile’s commitments. T-Mobile is not permitted to return any licenses to the Commission in order to fulfill these conditions. T-Mobile’s first quarterly report will be due three months from the issuance of its Auction 108 2.5 GHz licenses.

## V. CONCLUSION

83. Based on our careful and thorough review, and taking into account the unique characteristics of this specific band and the overlay licenses offered in Auction 108, as well as our adoption of the voluntary divestiture commitment in Hawaii 1–Kauai and Hawaii 2–Maui as a condition of the grant of T-Mobile’s application, we conclude that competitive harm resulting from the grant of this application is unlikely. Our examination of the record and our analysis of the particular markets at issue finds that granting this Auction 108 license application as conditioned would be unlikely to foreclose rival service providers from entering or expanding in these local markets, or give T-Mobile the ability to raise its rivals’ costs significantly.

84. In addition, we find that certain public interest benefits are likely, such as increased network quality through the deployment of spectrum that is currently lying fallow, particularly in rural

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coverage in Hawaii 1–Kauai and close-to-significant population coverage in Hawaii 2–Maui; and Verizon Wireless has significant population coverage in Hawaii 2–Maui.

<sup>221</sup> According to the December 2022 NRUF data, in terms of significant market share, T-Mobile holds {{ }} % in Kauai and Maui, respectively. AT&T holds {{ }} % in Kauai and Maui, respectively, while Verizon Wireless holds {{ }} % in Kauai and Maui, respectively. No other service providers have a significant market share.

areas, and an improved customer experience. T-Mobile's use of the spectrum to deploy 5G and other advanced wireless services rapidly will benefit American consumers by promoting the provision of mid-band 5G services, meeting the increased demand for wireless data, and by expanding and improving advanced wireless service to rural areas where the 2.5 GHz band has been historically underused. We further find that assigning this 2.5 GHz spectrum to T-Mobile will allow it to support its fixed wireless in-home broadband offerings.

85. We also find that AT&T's petition does not contain specific allegations sufficient to show that AT&T will suffer competitive harm, or substantial or material questions of fact under section 309(d) and (e) with respect to T-Mobile's Auction 108 license application. While AT&T's subsequent *ex parte* letters raise specific concerns regarding Puerto Rico and parts of Hawaii, we note those concerns are unavailing given the unique circumstances of the 2.5 GHz overlay licenses that T-Mobile won in Puerto Rico and Hawaii, and taking into account T-Mobile's commitment in parts of Hawaii to divest spectrum, which we impose as a condition. Accordingly, we deny AT&T's petition. As we find that the public interest, convenience, and necessity will be served if T-Mobile's Auction 108 long-form application is granted, we will process its long-form application in accordance with the provisions of this Order and the Commission's rules.

86. As noted, we find competitive harm to be unlikely in this particular case given the record before us, applicable Commission precedent, and T-Mobile's spectrum divestiture commitment that we impose as a condition to our grant. We also recognize the Commission's statutory responsibility to promote economic opportunity and competition in designing systems of competitive bidding pursuant to section 309(j). To this end, we have separately solicited comment on AT&T's petition for rulemaking seeking to examine mid-band spectrum aggregation issues, and we have solicited comment more broadly on mobile spectrum holdings rules and policies.

## VI. ORDERING CLAUSES

87. Accordingly, **IT IS ORDERED**, pursuant to sections 4(i), 4(j), and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), (j), 309, and sections 0.21, 0.131, 0.271, 0.331, and 1.2108 of the Commission's rules, 47 CFR §§ 0.21, 0.131, 0.271, 0.331, 1.2108, that the Petition to Deny filed by AT&T Services, Inc. on November 7, 2022, **IS DENIED**.

88. **IT IS FURTHER ORDERED** that any grant of ULS File No. 0010206629 filed by T-Mobile License LLC on September 16, 2022, and amended on October 4, 2022, November 7, 2022, and February 1, 2023, shall be conditioned upon the implementation of the commitments as described above.

89. **IT IS FURTHER ORDERED**, pursuant to sections 4(i), 4(j), and 309 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), (j), 309, and sections 0.21, 0.131, 0.271, 0.331, and 1.2108 of the Commission's rules, 47 CFR §§ 0.21, 0.131, 0.271, 0.331, 1.2108, that the Request filed by Bloosurf, LLC on November 21, 2022, **IS DISMISSED**.

90. **IT IS FURTHER ORDERED** that the FCC Form 601 long-form application filed by T-Mobile License LLC, FCC File No. 0010206629, **SHALL BE PROCESSED** by the Wireless Telecommunications Bureau consistent with this Order and the Commission's rules.

91. This action is taken under delegated authority pursuant to sections 0.51, 0.131, 0.261, and 0.331 of the Commission's rules, 47 CFR §§ 0.51, 0.131, 0.261, 0.331.

FEDERAL COMMUNICATIONS COMMISSION

Joel Taubenblatt  
Chief  
Wireless Telecommunications Bureau

Giulia McHenry  
Chief  
Office of Economics and Analytics

**APPENDIX A**  
**LIST OF TRIGGERED MARKETS IN WHICH T-MOBILE**  
**WON ADDITIONAL ATTRIBUTABLE 2.5 GHz SPECTRUM**

<b>CMA</b>	<b>CMA Name</b>	<b>2020 Census Population</b>	<b>Population Density</b>
1	New York-Newark, NY-NJ	17,664,761	4,519.6
3	Chicago, IL	8,445,866	2,275.8
9	Dallas-Fort Worth, TX	7,599,029	909.5
11	St. Louis, MO-IL	2,637,506	526.5
17	Atlanta, GA	5,370,765	1,235.6
39	Salt Lake City-Ogden, UT	1,882,838	201.3
41	Birmingham, AL	1,054,190	315.1
46	Nashville-Davidson, TN	1,817,304	443.1
56	Northeast Pennsylvania, PA	709,817	359.9
58	Allentown-Bethlehem, PA-NJ	861,889	588.2
59	Richmond, VA	1,120,304	519.6
73	Oxnard-Simi Valley-Ventura, CA	843,843	457.2
74	Fresno, CA	1,008,654	168.4
92	Little Rock, AR	720,054	243.1
112	Corpus Christi, TX	421,933	237.1
123	Santa Rosa-Petaluma, CA	488,863	309.4
126	Salinas-Seaside-Monterey, CA	439,035	133.4
134	Atlantic City, NJ	369,797	426.4
154	New London-Norwich, CT	268,555	395.2
169	Mayaguez, PR	193,364	760.6
196	Champaign-Urbana-Rantoul, IL	205,865	206.4
198	St. Cloud, MN	296,854	133.8
204	Aguadilla, PR	173,640	1,002.6
209	Clarksville-Hopkinsville TN-KY	292,817	232.2
228	Vineland-Millville, NJ	154,152	309.8
266	Glens Falls, NY	127,039	72.4
273	Kankakee, IL	107,502	158.6
304	Joliet, IL	52,533	124.3
309	Alabama 3–Lamar	116,264	18.7
310	Alabama 4–Bibb	135,191	29.1
312	Alabama 6–Washington	106,601	20.7
318	Arizona 1–Mohave	213,267	15.9
325	Arkansas 2–Marion	104,292	28.5
326	Arkansas 3–Sharp	106,751	32.8
329	Arkansas 6–Cleburne	116,084	40.6
330	Arkansas 7–Pope	130,174	36.3
331	Arkansas 8–Franklin	73,813	25.3

<b>CMA</b>	<b>CMA Name</b>	<b>2020 Census Population</b>	<b>Population Density</b>
341	California 6–Mono	32,211	2.4
359	Delaware 1–Kent	419,229	272.2
365	Florida 6–Dixie	77,538	34.7
366	Florida 7–Hamilton	143,323	63.6
367	Florida 8–Jefferson	62,500	21.4
372	Georgia 2–Dawson	506,087	191.1
374	Georgia 4–Jasper	154,751	45.0
375	Georgia 5–Haralson	376,063	192.3
376	Georgia 6–Spalding	241,312	71.0
383	Georgia 13–Early	157,606	41.2
385	Hawaii 1–Kauai	73,298	117.5
386	Hawaii 2–Maui	164,836	140.2
395	Illinois 2–Bureau	242,107	43.9
399	Illinois 6–Montgomery	193,920	44.8
400	Illinois 7–Vermilion	211,528	49.9
444	Kentucky 2–Union	125,376	41.9
449	Kentucky 7–Trimble	212,813	86.3
450	Kentucky 8–Mason	135,051	53.1
455	Louisiana 2–Morehouse	96,820	24.0
456	Louisiana 3–De Soto	142,852	29.3
457	Louisiana 4–Caldwell	65,784	18.5
471	Massachusetts 2–Barnstable	263,851	453.1
480	Michigan 9–Cass	302,559	104.9
552	New Jersey 3–Sussex	144,221	273.3
560	New York 2–Franklin	223,210	32.3
562	New York 4–Yates	352,503	98.9
563	New York 5–Otsego	393,021	75.8
592	Ohio 8–Clinton	185,439	75.8
609	Oregon 4–Lincoln	274,189	69.2
631	South Carolina 7–Calhoun	140,281	48.9
661	Texas 10–Navarro	368,016	39.2
670	Texas 19–Atascosa	252,915	18.2
671	Texas 20–Wilson	173,023	28.1
689	Virginia 9–Greensville	99,329	49.6
692	Virginia 12–Caroline	207,638	60.2
723	Puerto Rico 1–Rincon	15,187	1,062.9
724	Puerto Rico 2–Adjuntas	231,304	405.5
728	Puerto Rico 6–Vieques	8,249	160.8

**APPENDIX B  
T-MOBILE'S COMMITMENTS**



February 15, 2024

*VIA ELECTRONIC MAIL*

Marlene H. Dortch  
Secretary  
Federal Communications Commission  
45 L Street, NE  
Washington, DC 20554

**Re: T-Mobile License LLC, ULS File No. 0010206629**

Dear Ms. Dortch:

In order to expedite the issuance of the 2.5 GHz licenses that T-Mobile License LLC ("T-Mobile") won in Auction 108 as part of the above-captioned application, the company hereby offers the following voluntary commitment:

T-Mobile commits to divest by sale or swap 20 megahertz of AWS-1, AWS-3, PCS or 2.5 GHz spectrum (or any combination thereof) in no smaller than 10 megahertz blocks or paired 5 megahertz blocks (unless the Wireless Telecommunications Bureau (the "Bureau") in its discretion approves smaller blocks of spectrum) in both of the Hawaii 1 – Kauai (CMA385) – and Hawaii 2 – Maui (CMA 386) – CMAs (the "Divestiture Assets") to an unaffiliated entity. T-Mobile further commits to file the relevant FCC application(s) to assign or transfer the spectrum to be divested within 12 months of the issuance of the 2.5 GHz licenses to T-Mobile (the "Divestiture Term") unless the Bureau grants an extension upon a showing of good cause. Until the application(s) are filed, T-Mobile will provide the Bureau with quarterly progress reports. If the Divestiture Term expires without the filing of an application(s) to assign or transfer the 20 megahertz of spectrum, T-Mobile will irrevocably transfer the remaining required Divestiture Assets (as selected by T-Mobile) in amounts of no less than 10 megahertz or paired 5 megahertz blocks (unless the Bureau in its sole discretion approves smaller blocks of spectrum) to a Divestiture Trustee,<sup>1</sup> who will be solely responsible for accomplishing disposal of these remaining Divestiture Assets.<sup>2</sup>

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<sup>1</sup> T-Mobile understands that the Divestiture Trustee will be subject to approval by the Bureau, whose approval shall not be unreasonably withheld.

<sup>2</sup> For the avoidance of doubt, proceeds from the Divestiture Trustee's sale of the remaining Divestiture Assets will revert to T-Mobile.

Ms. Marlene H. Dortch  
February 15, 2024  
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Please contact the undersigned for T-Mobile should you have any questions regarding the foregoing or should you require additional information.

Respectfully submitted,

*/s/ Edward "Smitty" Smith*

Edward "Smitty" Smith  
Senior Vice President  
Policy and Government Affairs  
**T-Mobile US, Inc.**

cc: Joel Taubenblatt  
Garnet Hanley  
Susannah Larson  
Susan Mort  
Catherine Matraves

## CERTIFICATE OF SERVICE

I, Peter Shroyer, certify that on this 15th day of February 2024, I have served\* a copy of the foregoing Opposition on the following:

Jessica B. Lyons  
Assistant Vice President – Senior Legal Counsel  
AT&T Service, Inc.  
1120 20<sup>th</sup> Street NW, Suite 1000  
Washington, DC 20036  
[Jessica.Lyons@att.com](mailto:Jessica.Lyons@att.com)

/s/ Peter Shroyer  
Peter Shroyer

\* AT&T has consented to service by electronic mail