

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

In the Matter of )
T-Mobile License LLC ) ULS File No. 0009446137
Cellco Partnership ) ULS File No. 0009446983
Applications for 3.7-3.98 GHz Band Licenses, )
Auction No. 107 )

MEMORANDUM OPINION AND ORDER

Adopted: July 23, 2021

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By the 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 107 Form 601 applications (long-form applications) of T-Mobile License LLC (T-Mobile) and Celco Partnership d/b/a Verizon Wireless (Verizon Wireless) (each an Applicant) for licenses in the 3.7-3.98 GHz band (the 3.7 GHz Service).<sup>1</sup> T-Mobile and Verizon Wireless won multiple licenses in Auction 107. After they filed their long-form applications, DISH Network Corporation (DISH) filed petitions to deny.<sup>2</sup> For the reasons explained below, based on the record before us and the applicable Commission precedent, including the rules framework adopted in the *3.7 GHz Report and Order*,<sup>3</sup> we find that grant of the 3.7 GHz Service license applications will serve the public interest, convenience, and necessity. Specifically, we find that grant of the license applications will facilitate access to spectrum in a manner that promotes competition, and we accordingly deny the petitions and will process the above-referenced Auction 107 Form 601 applications 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 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 competition, which in turn, enables consumers to make choices among numerous service providers and

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<sup>1</sup> T-Mobile and Verizon Wireless first filed their long-form applications on March 10, 2021, but subsequently amended their applications. See Amended Application of T-Mobile License LLC for 3.7 GHz Service Licenses, Form 601, ULS File No. 0009446137 (filed Mar. 19, 2021) (T-Mobile Application); Amended Application of Celco Partnership for 3.7 GHz Service Licenses, Form 601, ULS File No. 0009446983 (filed May 10, 2021) (Verizon Wireless Application).

<sup>2</sup> Petition to Deny of DISH Network Corporation, ULS File No. 0009446137, AU Docket No. 20-25 (filed Apr. 12, 2021) (DISH Petition to Deny on T-Mobile); Petition to Deny of DISH Network Corporation, ULS File No. 0009446983, AU Docket No. 20-25 (filed Apr. 12, 2021) (DISH Petition to Deny on Verizon Wireless).

<sup>3</sup> *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, GN Docket No. 18-122, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343 (2020) (*3.7 GHz Report and Order*).

<sup>4</sup> *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> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6143-44, para. 17.

<sup>6</sup> 47 U.S.C. § 309(j)(3).

<sup>7</sup> 47 U.S.C. § 309(j)(3)(B). We also note the recent Executive Order encouraging the Commission to adopt spectrum auction rules "designed to help avoid excessive concentration of spectrum license holdings in the United States" in order to "promote competition, lower prices, and a vibrant telecommunications system." The White House, Briefing Room, *Executive Order on Promoting Competition in the American Economy* (July 9, 2021), <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/07/09/executive-order-on-promoting-competition-in-the-american-economy/>.

leads to lower prices, improved quality, and increased innovation.”<sup>8</sup> These policies are equally applicable to applications to acquire licenses through competitive bidding.<sup>9</sup>

3. Over the years, the Commission has used a variety of tools to achieve these 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. 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>10</sup> Such screens are the beginning, not the end, of the competitive analysis.<sup>11</sup> They prompt further competitive analysis as part of the Commission’s case-by-case review.<sup>12</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>13</sup> Any remedies deemed necessary can then be tailored to “the specific harm and circumstances.”<sup>14</sup>

4. In recent years, the Commission also has made substantially more low- and high-band spectrum available for the provision of mobile wireless services. And with respect to mid-band spectrum, the Commission has announced two additional auctions in the near future: the 3.45 GHz band, which will auction 100 megahertz of mid-band spectrum starting in October of this year; and the 2.5 GHz band, which will offer approximately 8,300 geographic overlay licenses in that band.

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<sup>8</sup> *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 *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>11</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>12</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, para. 231; see also *Application of T-Mobile License LLC and Channel 51 License Company LLC for Spectrum Manager Lease Arrangement; Application of T-Mobile License LLC and LB License Co, LLC for Spectrum Manager Lease Arrangement*, ULS File No. 0009021213; ULS File No. 0009021220, Order on Reconsideration, DA 20-1442, 35 FCC Rcd 14059, 14066, para. 18 (WTB 2020) (*T-Mobile-Channel 51 Order on Reconsideration*).

<sup>13</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, paras. 229, 231; see also *T-Mobile-Channel 51 Order on Reconsideration*, 35 FCC Rcd at 14066, para. 18.

<sup>14</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6223, paras. 229, 231.

**B. Auction 107**

5. In the *3.7 GHz Report and Order*, the Commission adopted rules to reform the 3.7-4.2 GHz band (C-band) by making 280 megahertz of valuable mid-band spectrum available for flexible use through public auction, with a 20 megahertz guard band.<sup>15</sup> The Commission authorized both fixed and mobile operations of the 3.7 GHz Service using geographic area licensing.<sup>16</sup> The Commission did not impose pre-auction, bright-line limits on spectrum aggregation in this band.<sup>17</sup> However, the Commission stated that it would add the 280 megahertz of spectrum in the C-band into the spectrum screen once the auction closed.<sup>18</sup> In addition, the Commission explained that it would perform case-by-case review of the long-form license applications filed as a result of the auction.<sup>19</sup> The Commission further noted that it may allow an applicant to “exceed the threshold if it finds that this would not foreclose other competitors from acquiring similar’ spectrum.”<sup>20</sup>

6. Auction 107, which began in December 2020,<sup>21</sup> offered 5,684 flexible-use overlay licenses in the 3.7 GHz band throughout the contiguous United States subject to clearing requirements.<sup>22</sup> The 280 megahertz of spectrum available in Auction 107 will be licensed on an unpaired basis in three blocks divided into 20-megahertz sub-blocks by partial economic areas (PEAs) in the contiguous states and the District of Columbia (PEAs 1-41, 43-211, 213-263, 265-297, 299-359, and 361-411).<sup>23</sup> Bidding in the auction concluded on February 17, 2021, with 21 bidders winning 5,684 licenses.<sup>24</sup> On February 24, 2021, the Office of Economics and Analytics (OEA) and the Wireless Telecommunications Bureau (WTB) released a public notice summarizing the Auction 107 results for each bidder.<sup>25</sup> WTB released an

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<sup>15</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2345, para. 4.

<sup>16</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2370, para. 54; *see also* 47 CFR § 2.106.

<sup>17</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89.

<sup>18</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2381-84, paras. 83-89.

<sup>19</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89.

<sup>20</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89 & n.273 (quoting *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, GN Docket No. 14-177, et al., Third Report and Order, Memorandum Opinion and Order, and Third Further Notice of Proposed Rulemaking, 33 FCC Rcd 5576, 5591, para. 35 (2018) (*Spectrum Frontiers Third Report and Order*)).

<sup>21</sup> *Auction of Flexible-Use Service Licenses in the 3.7–3.98 GHz Band for Next-Generation Wireless Services; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 107; Bidding in Auction 107 Scheduled to Begin December 8, 2020*, AU Docket No. 20-25, Public Notice, 35 FCC Rcd 8404, 8406, para. 2 (2020) (*3.7 GHz Auction Procedures Public Notice*).

<sup>22</sup> *3.7 GHz Auction Procedures Public Notice*, 35 FCC Rcd at 8407-08, para. 7.

<sup>23</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2377-80, paras. 72-80. Specifically, the A Block covered 100 megahertz from 3.7–3.8 GHz in five 20-megahertz sub-blocks: 3700–3720 MHz (A1), 3720–3740 MHz (A2), 3740–3760 MHz (A3), 3760–3780 MHz (A4), and 3780–3800 MHz (A5). The B Block covered 100 megahertz from 3.8–3.9 GHz in five 20-megahertz sub-blocks: 3800–3820 MHz (B1), 3820–3840 MHz (B2), 3840–3860 MHz (B3), 3860–3880 MHz (B4), and 3880–3900 MHz (B5). The C Block covered 80 megahertz from 3.9–3.98 GHz, and four 20-megahertz sub-blocks will be licensed for flexible use: 3900–3920 MHz (C1), 3920–3940 MHz (C2), 3940–3960 MHz (C3), and 3960–3980 MHz (C4). *3.7 GHz Auction Procedures Public Notice*, 35 FCC Rcd at 8408, para. 7.

<sup>24</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, DA 21-207, at 1, para. 1 (OEA/WTB Feb. 24, 2021) (*Auction 107 Close Public Notice*).

<sup>25</sup> *Auction 107 Close Public Notice* at 2, paras. 4-5, Attach. A.

accepted for filing public notice listing Form 601 applications filed by all 21 of the winning applicants on April 2, 2021.<sup>26</sup>

### C. Description of the Applicants

#### 1. T-Mobile

7. 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>27</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 102 million postpaid and prepaid customers, as of December 31, 2020, as well as a wide selection of wireless devices and accessories.<sup>28</sup> Substantially all of T-Mobile US, Inc.'s revenues for the years ended December 31, 2020, 2019, and 2018, were earned in the United States, including Puerto Rico, and the U.S. Virgin Islands.<sup>29</sup> T-Mobile US, Inc. reported 2020 operating revenues of approximately \$68 billion, with an operating income of approximately \$6.6 billion.<sup>30</sup>

#### 2. Verizon

8. Verizon Communications Inc. (Verizon) is a publicly-traded Delaware corporation headquartered in New York City, New York with a presence around the world.<sup>31</sup> Verizon states that it offers voice, data, and video services nationwide with its wireless services accessible on a broad range of devices through its operating subsidiaries.<sup>32</sup> Verizon states that its wireless division, Cellco Partnership d/b/a Verizon Wireless, provides nationwide voice and data services to nearly 120 million total wireless connections, including approximately 94 million wireless retail connections, as of December 31, 2020.<sup>33</sup> Verizon further states that, as of December 31, 2020, it operates in both the prepaid and postpaid market for wireless services and that 96% of its consumer retail connections were postpaid connections.<sup>34</sup> Verizon reported 2020 wireless operating revenues of approximately \$89 billion with an operating income of approximately \$29 billion.<sup>35</sup>

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<sup>26</sup> *Wireless Telecommunications Bureau Announces That Applications for Auction 107 Licenses are Accepted for Filing*, DA 21-380, at 1 (WTB Apr. 2, 2021) (*Auction 107 Accepted for Filing Public Notice*). In this Order, we review T-Mobile's and Verizon Wireless's long-form applications and address DISH's petitions to deny their applications. The other winning bidders' Auction 107 long-form applications are unopposed. Consistent with this Order, WTB will process the pending long-form license applications separately.

<sup>27</sup> T-Mobile Application, Exh. B: Foreign Ownership Statement for T-Mobile License LLC.

<sup>28</sup> T-Mobile US, Inc., SEC Form 10-K, at 5-6 (filed Feb. 23, 2021) (72% postpaid customers, 19% prepaid customers, and 9% wholesale, roaming, and other services); T-Mobile Investors, News & Events (Jan. 6, 2021), <https://www.t-mobile.com/news/un-carrier/t-mobile-adds-5-5-million-postpaid-customers-in-2020> (last visited June 6, 2021).

<sup>29</sup> T-Mobile US, Inc., SEC Form 10-K, at 6 (filed Feb. 23, 2021).

<sup>30</sup> T-Mobile US, Inc., SEC Form 10-K, at 35 (filed Feb. 23, 2021); Macrotrends, T-Mobile US Financials, <https://www.macrotrends.net/stocks/charts/TMUS/t-mobile-us/operating-income> (last visited June 28, 2021).

<sup>31</sup> Verizon Communications Inc., SEC Form 10-K, at 1, 4 (filed Feb. 25, 2021); Verizon, 2021 Q1 Verizon Fact Sheet, [https://www.verizon.com/about/sites/default/files/Verizon\\_Fact\\_Sheet.pdf](https://www.verizon.com/about/sites/default/files/Verizon_Fact_Sheet.pdf) (last visited June 28, 2021).

<sup>32</sup> Verizon Communications Inc., SEC Form 10-K, at 4 (filed Feb. 25, 2021).

<sup>33</sup> Verizon Communications Inc., SEC Form 10-K, at 4 (filed Feb. 25, 2021).

<sup>34</sup> Verizon Communications Inc., SEC Form 10-K, at 4 (filed Feb. 25, 2021).

<sup>35</sup> Verizon Communications Inc., SEC Form 10-K, at 30-31 (filed Feb. 25, 2021).

#### D. DISH Petitions to Deny

9. On April 12, 2021, DISH filed two petitions, pursuant to section 1.2108 of the Commission's rules,<sup>36</sup> requesting that the Commission deny, respectively, the long-form applications of T-Mobile and Verizon Wireless for the 3.7 GHz Service licenses each won in Auction 107.<sup>37</sup> No other parties filed in either proceeding. On April 19, 2021, T-Mobile and Verizon Wireless each filed an opposition to DISH's petitions.<sup>38</sup> DISH filed a reply to each of these oppositions on April 26, 2021.<sup>39</sup> In DISH's petitions and replies, it asserts that T-Mobile's and Verizon Wireless's new post-auction 3.7 GHz Service licenses lead to spectrum aggregation that exceeds the Commission's spectrum screen in certain areas. Specifically, DISH claims that T-Mobile exceeds the spectrum screen in 86 PEAs and Verizon Wireless exceeds the screen in 21 PEAs.<sup>40</sup> DISH further contends that if the Commission grants Verizon and T-Mobile's applications in the affected areas, it could foreclose competitors and auction participants, such as DISH, from obtaining valuable spectrum that is vital to competition in the mobile wireless marketplace.<sup>41</sup> DISH argues that the Commission should deny the applications or designate them for a hearing.<sup>42</sup> No other entity has filed in support of DISH's position or raised competitive concerns with either Verizon Wireless's or T-Mobile's application.

#### III. STANDARD OF REVIEW

10. Pursuant to sections 308 and 309 of the Communications Act of 1934 (Act), we must determine whether granting the license applications will serve the public interest, convenience, and necessity.<sup>43</sup> As the Commission determined in the *3.7 GHz Report and Order*, declining to adopt pre-auction, bright-line limits on spectrum aggregation in this band, we will "use the same case-by-case review as we do for secondary market transactions, updated to account for the additional 3.7-3.98 GHz spectrum for reviewing acquisitions of 3.7 GHz spectrum."<sup>44</sup> In that Order, the Commission applied the standard articulated in the 2008 *Union Telephone Order*.<sup>45</sup> As an initial matter, we consider whether the applicant for a license has the requisite "citizenship, character, financial, technical, and other qualifications."<sup>46</sup> No party has raised an issue regarding the basic qualifications of T-Mobile or Verizon

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<sup>36</sup> 47 CFR § 1.2108.

<sup>37</sup> DISH Petition to Deny on T-Mobile at 2; DISH Petition to Deny on Verizon Wireless at 2.

<sup>38</sup> T-Mobile Opposition; Verizon Wireless Opposition.

<sup>39</sup> DISH Reply on T-Mobile; DISH Reply on Verizon Wireless.

<sup>40</sup> DISH Petition to Deny on T-Mobile at 5-7; DISH Petition to Deny on Verizon Wireless at 5-6; *see also* DISH Reply on T-Mobile at 2-5; DISH Reply on Verizon Wireless at 2-6.

<sup>41</sup> DISH Petition to Deny on T-Mobile at 2; DISH Petition to Deny on Verizon Wireless at 2; *see also* DISH Reply on T-Mobile at 4-6.

<sup>42</sup> DISH Petition to Deny on T-Mobile at 2, 7-8; DISH Petition to Deny on Verizon Wireless at 2, 6; *see also* DISH Reply on T-Mobile at 2-3, 7; DISH Reply on Verizon Wireless at 6-7.

<sup>43</sup> 47 U.S.C. §§ 308, 309.

<sup>44</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89.

<sup>45</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89 (citing *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*)).

<sup>46</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).

Wireless, nor are we aware of any. Both T-Mobile and Verizon Wireless have repeatedly been found qualified to hold Commission licenses,<sup>47</sup> and we continue to find them to be qualified.

#### IV. MOBILE SPECTRUM HOLDINGS AND COMPETITIVE ANALYSIS

11. As we discuss in more detail below, we deny DISH's petitions. We first summarize the Auction 107 results, including the winning bidders and the extent to which Verizon Wireless and 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, multiple licensees nevertheless have access to both low-band and mid-band spectrum. We further find that DISH's petitions fail to set forth, as required by section 309(d) of the Act, specific allegations of fact sufficient to show that grant of these applications would be prima facie inconsistent with the public interest.<sup>48</sup> Finally, we find that DISH has failed under section 309(d) to present any substantial and material issue of fact with respect to Verizon Wireless's and T-Mobile's long-form applications.<sup>49</sup>

##### A. Auction 107 Results

12. In Auction 107, T-Mobile won 142 licenses across 72 PEAs,<sup>50</sup> with the spectrum it won ranging from 20 megahertz to 60 megahertz in each of these PEAs.<sup>51</sup> Its 3.7 GHz band winnings would cover 68% of the population within the continental United States, and it would hold approximately 27 megahertz on a population-weighted basis of the total 3.7 GHz band spectrum if its license application was granted. Its average population-weighted spectrum holdings nationwide, excluding millimeter wave (mmW) spectrum, would be 354 megahertz.<sup>52</sup>

13. Verizon Wireless won 3,511 3.7 GHz Service licenses across all 406 PEAs offered,<sup>53</sup> with the spectrum it won ranging from 140 megahertz to 200 megahertz in each of these PEAs.<sup>54</sup> Its 3.7 GHz band winnings would cover 100% of the population within the continental United States, and it would hold approximately 161 megahertz on a population-weighted basis of the total 3.7 GHz band spectrum if its license application was granted. Its average population-weighted spectrum holdings nationwide, excluding mmW spectrum, would be 275 megahertz.

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<sup>47</sup> See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10597, para. 44; *Applications of XO Holdings and Verizon Communications Inc. for Consent to Transfer Control of Licenses and Authorizations*, Memorandum Opinion and Order, WC Docket No. 16-70, 31 FCC Rcd 12501, 12507, para. 13 (WCB/IB/WTB 2016); *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>48</sup> See 47 U.S.C. § 309(d); see also 47 CFR § 1.2108(d).

<sup>49</sup> See 47 U.S.C. § 309(d); *Mobile Communications Corp. of America v. FCC*, 77 F.3d 1399, 1409-10 (D.C. Cir. 1996) (citing *Citizens for Jazz on WRVR v. FCC*, 775 F.2d 392 (D.C. Cir. 1985)); see also 47 CFR § 1.2108(d).

<sup>50</sup> *Auction 107 Close Public Notice*, Attach. A. T-Mobile's net payment amount for these licenses is \$9,336,125,147. *Id.*

<sup>51</sup> See generally T-Mobile Application, Exh. C: Spectrum Aggregation for T-Mobile License LLC.

<sup>52</sup> We obtain spectrum holdings for the licensees from our licensing databases and the long-form license applications.

<sup>53</sup> *Auction 107 Close Public Notice*, Attach. A. Verizon Wireless's net payment amount for these licenses is \$45,454,843,197. *Id.*

<sup>54</sup> See generally Verizon Wireless Application, Exh. G: Spectrum Aggregation for Verizon Wireless, Attach. 1.

14. In total, 21 bidders won licenses in Auction 107, including AT&T, which won 1621 licenses across all 406 PEAs offered,<sup>55</sup> with the spectrum it won ranging from 60 megahertz to 100 megahertz in each of these PEAs.<sup>56</sup> Its 3.7 GHz band winnings would cover 100% of the population in the continental United States, and it would hold approximately 80 megahertz on a population-weighted basis of the total 3.7 GHz band spectrum once its license application is granted. Its average population-weighted spectrum holdings nationwide, excluding mmW spectrum, would be 232 megahertz.<sup>57</sup> In addition to the nationwide licensees, 17 other bidders won a total of 409 licenses, covering a combined 116 million people.<sup>58</sup>

## B. Competitive Analysis

15. 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>59</sup> With respect to mobile spectrum holding policies, 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 mobile broadband technologies, or entering the 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>60</sup>

16. As noted, the Commission declined to adopt pre-auction, bright-line limits on spectrum aggregation for this band in the *3.7 GHz Report and Order*, and so we perform the competitive analysis under the standard articulated in the *Union Telephone Order* to ensure that the public interest, convenience, and necessity is served.<sup>61</sup> We begin our competitive analysis by determining the appropriate market definitions,<sup>62</sup> which includes the product and geographic markets, and the input market for

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<sup>55</sup> *Auction 107 Close Public Notice*, Attach. A. AT&T's net payment amount for these licenses is \$23,406,860,839. *Id.*

<sup>56</sup> See generally AT&T Application, Attach. Spectrum Aggregation Chart for AT&T Spectrum Frontiers LLC.

<sup>57</sup> We note that DISH won one 3.7 GHz Service license in one PEA, accounting for less than 1% of the total U.S. population, and less than one megahertz of spectrum on a population weighted basis of the total 3.7 GHz band spectrum were the license applications to be granted. DISH's average population-weighted spectrum holdings nationwide, excluding mmW spectrum, would be 94 megahertz.

<sup>58</sup> See generally *Auction 107 Close Public Notice*, Attach. A.

<sup>59</sup> See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10617, para. 94; *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.

<sup>60</sup> See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10617-18, para. 94; *Application of AT&T Mobility Spectrum LLC and Club 42CM Limited Partnership for Consent to Assign Licenses*, WT Docket No. 14-145, Memorandum Opinion and Order, 30 FCC Rcd 13055, 13062-63, para. 16 (2015) (*AT&T-Club 42 Order*).

<sup>61</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89 (citing *Union Telephone Order*, 23 FCC Rcd at 16791-92, 16796, paras. 9, 18).

<sup>62</sup> See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10600-01, para. 53; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2331, para. 24.



spectrum suitable and available for the provision of mobile telephony/broadband services.<sup>63</sup> In addition, we consider the current market participants in the mobile wireless industry.<sup>64</sup> We then turn to our consideration of the likely competitive effects were the proposed license applications to be granted.

### 1. Market Definitions and Market Participants

17. *Product Market.* Consistent with Commission precedent, and with the definitions used by the U.S. Department of Justice in its review of major wireless transactions, 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>65</sup>

18. *Geographic Market.* The Commission has previously found that the geographic market for wireless transactions is local.<sup>66</sup> For these proposed license applications, we continue to use Cellular Market Areas (CMAs) as the appropriate local market for analyzing increased spectrum aggregation.<sup>67</sup>

19. We note that DISH uses the PEA in its analysis of post-auction spectrum holdings.<sup>68</sup> Verizon Wireless, citing the *Mobile Spectrum Holdings Report and Order*, replies that the screen is applied on a county-by-county basis.<sup>69</sup> DISH contends that instead of a county-by-county CMA evaluation, which Verizon Wireless describes, it is appropriate for the Commission’s competitive review

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<sup>63</sup> See, e.g., *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>64</sup> See, e.g., *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>65</sup> See, e.g., *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).

<sup>66</sup> See, e.g., *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; *Applications of AT&T Inc. and Atlantic Tele- Network, Inc. for Consent to Transfer Control of and Assign Licenses and Authorizations*, WT Docket No. 13-54, Memorandum Opinion and Order, 28 FCC Rcd 13671, 13682, paras. 23-26 (WTB/IB 2013).

<sup>67</sup> See, e.g., *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>68</sup> DISH Petition to Deny on T-Mobile at 5; DISH Petition to Deny on Verizon Wireless at 5.

<sup>69</sup> Verizon Wireless Opposition at 2.

to be based on counties in each PEA rather than in each CMA.<sup>70</sup> We disagree. For purposes of competitive review, the Commission has repeatedly found that because most consumers use their mobile wireless services at or close to where they live, work, and shop, they generally purchase mobile wireless services from service providers that offer and market such services locally and has therefore consistently used the CMA as the relevant local market for its analysis.<sup>71</sup> PEAs generally are larger than CMAs and are thus inappropriate for our competitive analysis as typically they will not reflect the purchasing patterns of consumers.<sup>72</sup> We note that, similar to the Commission, the Department of Justice also has used CMAs in its competitive analyses of wireless transactions.<sup>73</sup> In any event, we find that there is no evidence in the record nor do we have any reason to believe that if we had used PEAs instead of CMAs in our analysis of post-auction spectrum holdings, this would have changed the results of our analysis.

20. *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: cellular, broadband PCS, SMR, 700 MHz band spectrum, Advanced Wireless Services (AWS) in the 1710-1755 and 2110-2155 MHz band (AWS-1), Broadband Radio Service spectrum (BRS), Wireless Communications Service (WCS) spectrum, the 600 MHz band, AWS in the 2000-2020 MHz and 2180-2200 MHz spectrum bands (AWS-4), H Block, Educational Broadband Service (EBS) spectrum, and the AWS-3 band.<sup>74</sup> Most recently, the Commission incorporated the 280 megahertz of the 3.7 GHz band of spectrum into the screen, effective as of the close of Auction 107.<sup>75</sup> The total amount of spectrum that is currently considered suitable and available for the provision of mobile telephony/broadband services is 1,023 megahertz, with an associated spectrum screen trigger of 350 megahertz.<sup>76</sup>

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<sup>70</sup> DISH Reply on Verizon Wireless at 5.

<sup>71</sup> See, e.g., *T-Mobile-Sprint Order*, 34 FCC Rcd at 10606, para. 68; *AT&T-Leap Order*, 29 FCC Rcd at 2748-49, para. 29; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2332-33, para. 31; see also *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6225-26, para. 238. DISH points to the use of the PEA in the *Mobile Spectrum Holdings Report and Order*. DISH Reply on Verizon Wireless at 5. In that case, the PEA was used only because the Commission was calculating the attributable interest each entity had in below-1-GHz spectrum in order for entities to qualify to bid on reserved licenses in the 600 MHz Incentive Auction. *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6204-05, para. 175.

<sup>72</sup> In the continental United States, there are 406 PEAs, 708 CMAs, and 3,109 counties. The Top 100 CMAs in terms of population contain approximately 191 million people (approximately 62% of the U.S. population), whereas the Top 100 PEAs have a population of 235 million, or approximately 23% more. However, these same CMAs have a land area of approximately 306,000 square miles, whereas the PEAs have a land area of approximately 805,000 square miles—approximately 164% more land area. This results in the Top 100 PEAs having less than half the population density of the Top 100 CMAs and demonstrates that PEAs are more likely to include areas beyond where most customers in an area live, work, and shop.

<sup>73</sup> See, e.g., *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).

<sup>74</sup> See, e.g., *Communications Marketplace Report*, GN Docket No. 20-60, 2020 Communications Marketplace Report, 35 FCC Rcd 2945, 2965, para. 31, Fig. II.A.10 (2020) (*2020 Communications Marketplace Report*); *3.7 GHz Report and Order*, 35 FCC Rcd at 2383, para. 87; see also *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6169, 6177-79, 6184-87, paras. 70, 100-102, 118-25.

<sup>75</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 88 (adding 280 megahertz of C-band to the screen once the auction closes); see also *Auction 107 Close Public Notice* (announcing close of Auction 107 on February 17, 2021).

<sup>76</sup> Because the Commission excluded locations outside the contiguous United States from Auction 107, the total amount of spectrum in the screen and associated trigger remain 743 megahertz and 250 megahertz, respectively, for those locations. See *3.7 GHz Report and Order*, 35 FCC Rcd at 2371, para. 56. See also *2020 Communications Marketplace Report*, 35 FCC Rcd at 2965, para. 31; *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 88.

21. *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>77</sup>

## 2. Initial Screen

22. 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 further competitive analysis based on increased market concentration and/or increased spectrum aggregation.<sup>78</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>79</sup> As the spectrum acquisition here does not result in the acquisition of wireless business units and customers,<sup>80</sup> we need consider only the second part of the screen, which identifies 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 applications.<sup>81</sup>

23. *Record.* As noted above, DISH claims that each of the Applicants exceeds the spectrum screen in certain markets.<sup>82</sup> In particular, DISH contends that “T-Mobile would have 86 PEAs above the spectrum trigger, and in 63 of those PEAs, T-Mobile exceeds the screen by more than 20 megahertz—the same size as a C-band license.”<sup>83</sup> DISH maintains that Verizon Wireless exceeds the spectrum screen in 21 PEAs, including one market that exceeds the screen by more than 20 megahertz.<sup>84</sup>

24. In response, T-Mobile does not disagree that it has exceeded the spectrum screen in some markets, but argues that the screen is merely a processing tool to identify in a streamlined manner the local markets in which it is clear that no competitive harm arises from the transaction.<sup>85</sup> T-Mobile contends that markets where a spectrum screen is triggered are not presumptively anticompetitive, but rather markets where a case-by-case review is initiated.<sup>86</sup> Verizon Wireless maintains that of the 33 PEAs in which Verizon Wireless will exceed the spectrum screen in at least one county, it will exceed the

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<sup>77</sup> See *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. *Id.*

<sup>78</sup> *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>79</sup> See, e.g., *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>80</sup> See *AT&T-Club 42 Order*, 30 FCC Rcd at 13066, para. 24; see also *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>81</sup> *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>82</sup> DISH Petition to Deny on T-Mobile at 5-7; DISH Petition to Deny on Verizon Wireless at 5-6; see also DISH Reply on T-Mobile at 2-5; DISH Reply on Verizon Wireless at 2-6.

<sup>83</sup> DISH Petition to Deny on T-Mobile at 5; see also DISH Reply on T-Mobile at 3.

<sup>84</sup> DISH Petition to Deny on Verizon Wireless at 5-6; see also DISH Reply on Verizon Wireless at 4.

<sup>85</sup> T-Mobile Opposition at 1-2.

<sup>86</sup> T-Mobile Opposition at 2-3.

screen in the entire PEA in only five of them.<sup>87</sup> Verizon Wireless further asserts that it is above the spectrum screen trigger in each of the counties of those five PEAs by less than 20 megahertz.<sup>88</sup> In the other 28 PEAs, Verizon Wireless claims that it exceeds the spectrum screen in only a handful of the counties within each of these PEAs, and the screen is exceeded “normally by less than 20 megahertz.”<sup>89</sup> As noted above, no other entity has filed in support of DISH’s position or raised competitive concerns with either Verizon Wireless’s or T-Mobile’s application.

25. *Discussion.* As explained above, the Commission applies the spectrum screen on a county-by-county basis in each local market, which the Commission has found to be the CMA.<sup>90</sup> Our application of the spectrum screen on a county-by-county basis indicates that T-Mobile would hold 350 megahertz or more of spectrum in at least one county in 209 CMAs upon grant of the license application. Across those local markets, T-Mobile would hold a maximum of 426 megahertz of spectrum. The triggered local markets identified for further competitive review cover approximately 68% of the U.S. population.

26. Regarding Verizon Wireless, our application of the spectrum screen on a county-by-county basis indicates that Verizon Wireless would hold 350 megahertz or more of spectrum in at least one county in 34 CMAs upon grant of the license application. Across those local markets, Verizon Wireless would hold a maximum of 397 megahertz of spectrum. The triggered local markets identified for further competitive review cover approximately 2% of the U.S. population.

27. Finally, DISH is incorrect when it suggests that the Commission is required to perform “enhanced factor” review of these applications in markets where acquisitions would trigger the spectrum screen.<sup>91</sup> Such enhanced factor review is only required where the specific acquisitions at issue would increase an applicant’s holdings of below-1-GHz spectrum post-transaction.<sup>92</sup> Because we are reviewing acquisitions of the 3.7 GHz band spectrum, there is no increase of below-1-GHz holdings under review, and as such, enhanced factor review is inapposite.

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<sup>87</sup> Verizon Wireless Opposition at 3; *see also* Verizon Wireless Application, Public Interest Statement, Exh. G: Miscellaneous Information, at 2. Verizon Wireless notes that DISH does not identify the 21 PEAs where DISH claims that Verizon Wireless exceeds the screen threshold, nor does DISH provide its methodology for calculating those PEAs. Verizon Wireless Opposition at 1-2. Thus, in opposing DISH’s assertions, Verizon Wireless instead provides its own calculation of PEAs where it exceeds the screen threshold. *See* Verizon Wireless Opposition at 3.

<sup>88</sup> Verizon Wireless Opposition at 3; *see also* Verizon Wireless Application, Public Interest Statement, Exh. G: Miscellaneous Information, at 2.

<sup>89</sup> Verizon Wireless Opposition at 3.

<sup>90</sup> *See supra* paras. 19-20; *see also* *T-Mobile-Sprint Order*, 34 FCC Rcd at 10605-06, para. 66; *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18.

<sup>91</sup> DISH Petition to Deny on T-Mobile at 3-5; DISH Petition to Deny on Verizon Wireless at 3-5; DISH Reply on T-Mobile at 6; DISH Reply on Verizon Wireless at 6.

<sup>92</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6231, para. 256 (finding that “*further significant aggregation* of below-1-GHz spectrum holdings in secondary market transactions will be subject to enhanced review in our case-by-case competitive evaluation”) (emphasis added); *id.* at 6239, para. 283 (explaining that the Commission will “*treat certain further concentration* of below-1-GHz spectrum as an enhanced factor”) (emphasis added); *see also* *T-Mobile-Sprint Order*, 34 FCC Rcd at 10615, para. 87 (“[I]f the acquiring entity *would increase* its below-1-GHz spectrum holdings so as to hold approximately one-third or more of such spectrum post- transaction, we would apply enhanced factor review.”) (emphasis added).

### 3. Market-by-Market Analysis

28. Consistent with existing Commission precedent,<sup>93</sup> we consider various competitive variables that help to predict the likelihood of competitive harm if the license applications are 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; the rival firms' market shares; the applicant's market share; the total amount of spectrum available; 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 service providers and licensees.<sup>94</sup> In addition, we consider whether current service providers can access additional spectrum in the market either through auction or on the secondary market.<sup>95</sup>

29. 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>96</sup> We generally agree with DISH that the Commission should act to help ensure that new entrants and small and regional providers have access to sufficient spectrum in order to offer competing services that would lower consumer costs.<sup>97</sup> The Commission's decision in the *3.7 GHz Report and Order* to apply the spectrum screen in post-auction case-by-case review of Auction 107 license applications requires us to carefully examine each local market and to take appropriate action where necessary to preserve or protect competition.<sup>98</sup> Having undertaken our local market-by-market analysis, we find that the likelihood of competitive harm as a result of grant of the license applications in the particular markets at issue is low.<sup>99</sup>

30. In all of these local markets where the spectrum screen is triggered, at least four licensees nevertheless have access to spectrum, both low-band spectrum and mid-band spectrum.<sup>100</sup> Moreover, in all but four markets, there is at least one additional licensee with access to spectrum. The three nationwide service providers—AT&T, T-Mobile, and Verizon Wireless—have significant spectrum

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<sup>93</sup> As noted, 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.

<sup>94</sup> See, e.g., *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>95</sup> *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18.

<sup>96</sup> *Mobile Spectrum Holdings Report and Order*, 29 FCC Rcd at 6136, para. 6.

<sup>97</sup> DISH Petition to Deny on Verizon Wireless at 6; DISH Petition to Deny on T-Mobile at 7.

<sup>98</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2384, para. 89. See, e.g., *Spectrum Frontiers Third Report and Order*, 33 FCC Rcd at 5591, para. 35 (adopting case-by-case review for mmW spectrum bands).

<sup>99</sup> Consistent with previous Commission orders, we do not provide a detailed analysis of each and every CMA where the spectrum screen is triggered. See, e.g., *Union Telephone Order*, 23 FCC Rcd at 16796, para. 18; see also *T-Mobile-Sprint Order*, 34 FCC Rcd at 10619, para. 97; *AT&T-Leap Order*, 29 FCC Rcd at 2768, para. 76; *T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2338-39, paras. 48-52; *Applications of Cellco Partnership d/b/a Verizon Wireless and SpectrumCo LLC and Cox TMI, LLC for Consent to Assign AWS-1 Licenses, et al.*, WT Docket No. 12-4, et al., Memorandum Opinion and Order and Declaratory Ruling, 27 FCC Rcd 10698, 10725, 10727-28, paras. 71, 79-80 (2012); *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, 13948-49, para. 76 (2009).

<sup>100</sup> We derive December 2020 market shares from our analysis of data compiled in our NRUF database. We derive network coverage from the December 2020 Form 477 data, and we obtain spectrum holdings from our licensing databases and the applications.

holdings post-auction to be able to effectively deploy 5G. Further, DISH, a nationwide licensee, has substantial spectrum holdings in all of these local markets. In addition, multiple smaller entities—including licensees such as U.S. Cellular—hold spectrum in almost all of these local markets. DISH has made no showing of insufficient spectrum held by any of these (or the many other) existing providers, or that they cover insufficient area or population.<sup>101</sup> In every triggered Top 100 market (by population), for example, there are: at least four licensees that hold spectrum; at least three service providers with a significant market share, and at least three service providers with significant LTE population and land area coverage.<sup>102</sup> We also note that additional spectrum bands will be available for flexible use. For example, the Commission has adopted service rules for 100 megahertz of spectrum in the 3.45-3.55 GHz band,<sup>103</sup> and it has slated it for auction in October 2021.<sup>104</sup> The Commission also has revised the service rules for spectrum in the 2.5 GHz band.<sup>105</sup>

31. Further, both applicants assert that the public interest will be served because the 3.7 GHz spectrum at issue is essential in their deployment of a nationwide 5G network. For example, Verizon Wireless maintains that it will use the 3.7 GHz Service licenses that it won in Auction 107 to bring fast and reliable 5G service to customers across the United States.<sup>106</sup> Verizon Wireless contends that it requires a significant amount of spectrum, much more than Verizon Wireless currently has, in order to meet growing demand and enable the full potential of 5G technology.<sup>107</sup> In particular, there are certain areas where DISH has identified Verizon Wireless exceeding the spectrum screen by a small amount that are largely rural areas where Verizon Wireless argues that granting its application will serve the public interest by improving the quality of 5G service available to customers living in those rural areas.<sup>108</sup>

32. T-Mobile asserts that it will rapidly deploy the 3.7 GHz spectrum it won in Auction 107, once it is licensed and available, in order to enhance T-Mobile's nationwide 5G network and provide

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<sup>101</sup> The Commission has previously found that coverage of 70% or more of the population and 50% or more of the land area is presumptively sufficient for a provider to have a competitive presence in the local market. *See, e.g., T-Mobile-MetroPCS Order*, 28 FCC Rcd at 2339, para. 50 & n.119; *AT&T-Club 42 Order*, 30 FCC Rcd at 13071-72, para. 35 & n.141; *AT&T-Leap Order*, 29 FCC Rcd at 2769-70, para. 81 & n.279. In addition, in a substantial majority of these local markets, at least three facilities-based service providers have a significant market share.

<sup>102</sup> For T-Mobile, the triggered Top 100 CMAs account for 177 million of the total 208 million people, or approximately 85%, living in CMAs that T-Mobile would trigger.

<sup>103</sup> *See Facilitating Shared Use in the 3100-3550 MHz Band*, WT Docket No. 19-348, Second Report and Order, Order on Reconsideration, and Order of Proposed Modification, FCC 21-32, at 2, para. 1 (Mar. 18, 2021); *Facilitating Shared Use in the 3100-3550 MHz Band*, WT Docket No. 19-348, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 11078, 11079, 11110, paras. 4, 94 (2020).

<sup>104</sup> *Auction of Flexible-Use Service Licenses in the 3.45-3.55 GHz Band for Next-Generation Wireless Services; Notice and Filing Requirements, Minimum Opening Bids, Upfront Payments, and Other Procedures for Auction 110; Bidding in Auction 110 Scheduled to Begin October 5, 2021*, Public Notice, DA 21-655, at 4, 6, paras. 2, 10 (June 9, 2021). Collectively, the 3.45 GHz band, the 3.5 GHz band, and the 3.7 GHz band will offer 530 megahertz of contiguous mid-band spectrum for 5G services.

<sup>105</sup> *Transforming the 2.5 GHz Band*, WT Docket No. 18-120, Report and Order, 34 FCC Rcd 5446 (2019).

<sup>106</sup> Verizon Wireless Opposition at 1; *see also* Verizon Wireless Application, Public Interest Statement, Exh. G: Miscellaneous Information, at 1.

<sup>107</sup> Verizon Wireless Application, Public Interest Statement, Exh. G: Miscellaneous Information, at 2. *See also* Press Release, Verizon Wireless, *Verizon Starts C-Band Equipment Deployment* (Apr. 19, 2021), <https://www.verizon.com/about/news/verizon-starts-c-band-equipment-deployment> (“C-band spectrum provides a valuable middle ground between capacity and coverage for 5G networks, and will enable 5G Ultra Wideband speeds and coverage for both mobility, home broadband and business internet solutions.”).

<sup>108</sup> Verizon Wireless Opposition at 1.

improved and expanded wireless service to consumers.<sup>109</sup> T-Mobile maintains that deployment of this C-band spectrum will have significant benefits for consumers and competition by allowing T-Mobile to meet the increased demand for wireless data in the markets covered by its 3.7 GHz Service licenses.<sup>110</sup> T-Mobile further claims that this spectrum will increase available capacity on T-Mobile's network to support expanded and/or improved home Internet and enhance competition, which should help extend wireless broadband to more U.S. consumers.<sup>111</sup>

33. In the *3.7 GHz Report and Order*, the Commission determined that the public interest warrants licensing the lower 280 megahertz of the 3.7 GHz band for flexible use and making it available for mutually exclusive licensing through a public auction.<sup>112</sup> The Commission's prior determinations in this regard are amply supported by Verizon Wireless's and T-Mobile's plans for deploying this spectrum. We note that under the C-band transition schedule,<sup>113</sup> entities may be able to deploy wireless services to the public on this spectrum in the near-term. Both Verizon Wireless and T-Mobile have explained their plans for the almost immediate use of the C-band spectrum to bring the benefits of 5G to American consumers. Verizon Wireless has already begun installing 5G C-band equipment and is scheduled to reach 100 million people with its C-band service by March 2022.<sup>114</sup> In addition, T-Mobile has said that when the C-band licenses become available, it will add them to its Ultra Capacity 5G network, which it claims will cover 200 million people by the end of 2021.<sup>115</sup>

34. Based on our careful evaluation of the competitive effects in each local market, we disagree with DISH that competitors and auction participants could be foreclosed. Our examination of the record and our analysis of the particular markets at issue finds that granting these Auction 107 license applications would be unlikely to foreclose rival service providers from entering or expanding in these local markets. We also find it unlikely that granting the applications would give T-Mobile and Verizon Wireless the ability to raise their rivals' costs significantly. We agree with T-Mobile and Verizon

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<sup>109</sup> T-Mobile Opposition at 9. See also Press Release, T-Mobile, *T-Mobile Further Solidifies 5G Leadership Position with Successful C-Band Auction* (Mar. 10, 2021), <https://www.t-mobile.com/news/network/t-mobile-further-solidifies-5g-leadership-position-with-successful-c-band-auction>.

<sup>110</sup> T-Mobile Opposition at 9.

<sup>111</sup> T-Mobile Opposition at 9.

<sup>112</sup> *3.7 GHz Report and Order*, 35 FCC Rcd at 2353, paras. 20-21.

<sup>113</sup> The *3.7 GHz Report and Order* established a deadline of December 5, 2025, for incumbent space station operators to complete the transition of their operations to the upper 200 megahertz of the band, while providing an opportunity for accelerated clearing of the band by allowing eligible space station operators to commit to relocate voluntarily on a two-phased accelerated schedule. *3.7 GHz Report and Order*, 35 FCC Rcd at 2408, para. 155; 47 CFR § 27.1412(b)(1)-(2). The Accelerated Relocation Deadlines require space station operators to clear 120 megahertz of spectrum (3.7-3.92 GHz) in 46 of the top 50 PEAs by December 5, 2021 and an additional 180 megahertz of spectrum (3.92-4.0 GHz) nationwide by December 5, 2023. All eligible incumbent space station operators elected to clear on an accelerated timeline. The *3.7 GHz Report and Order* required that, after the auction, the Relocation Payment Clearinghouse shall send an initial bill to all 3.7 GHz Service licensees for their *pro rata* share of the relocation costs already incurred by C-band incumbents, plus the estimated costs for the next six months of the transition, and then distribute initial payments to C-band incumbents. 47 CFR §§ 27.1417, 27.1418(c). 3.7 GHz Service licensees are also responsible for paying their *pro rata* share of the Accelerated Relocation Payment attributable to the space station operator for that benchmark. 47 CFR § 27.1418(b)(4).

<sup>114</sup> Press Release, Verizon Wireless, *Verizon Starts C-Band Equipment Deployment* (Apr. 19, 2021), <https://www.verizon.com/about/news/verizon-starts-c-band-equipment-deployment>; Fierce Wireless, *Verizon Deploys C-Band Gear from Ericsson, Samsung for Its 5G Network* (Apr. 19, 2021), <https://www.fiercewireless.com/operators/verizon-deploys-c-band-gear-from-ericsson-samsung-for-its-5g-network>.

<sup>115</sup> Press Release, T-Mobile, *T-Mobile Further Solidifies 5G Leadership Position with Successful C-Band Auction* (Mar. 10, 2021), <https://www.t-mobile.com/news/network/t-mobile-further-solidifies-5g-leadership-position-with-successful-c-band-auction>.

Wireless that DISH does not put forth any evidence that grant of the licenses will cause harm to DISH itself or to the public interest.<sup>116</sup> We also note that no party filed in support of DISH's assertions. Moreover, T-Mobile's and Verizon Wireless's use of the spectrum to deploy 5G and other advanced wireless services rapidly will benefit American consumers by introducing new competition in 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. We find that granting these license applications will allow each of the Applicants to put this mid-band spectrum to use in the near term. Although we find competitive harm to be unlikely given the record before us and the applicable Commission precedent, we acknowledge that the amount of spectrum needed for multiple competitors to deploy robust 5G networks may evolve, and we will continue to monitor these dynamics.

## V. CONCLUSION

35. For the reasons discussed above, we find that the public interest, convenience, and necessity would be served if T-Mobile's and Verizon Wireless's above-referenced Auction 107 long-form applications are granted. We conclude that competitive harm resulting from the grant of these applications is unlikely. Further, we find that DISH's petitions do not raise any specific allegations, much less substantial or material questions of fact under section 309(d) and (e) with respect to T-Mobile's and Verizon Wireless's Auction 107 license applications. Considering the totality of the circumstances and the record before us in the particular markets at issue, we deny DISH's petitions and find it unnecessary to designate the license applications for a hearing. We will process the above-referenced Auction 107 long-form applications in accordance with the provisions of this Order and the Commission's rules.

## VI. ORDERING CLAUSES

36. 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 C.F.R. §§ 0.21, 0.131, 0.271, 0.331, 1.2108, that the Petitions to Deny filed by DISH Network Corporation on April 12, 2021, ARE DENIED.

37. IT IS FURTHER ORDERED that the FCC Form 601 long-form application filed by Cellco Partnership, FCC File No. 0009446983, SHALL BE PROCESSED consistent with this Order and the Commission's rules.

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<sup>116</sup> See T-Mobile Opposition at 1, 9 (arguing that DISH has not provided any evidence that grant of the licenses will harm DISH or the public interest and contending that the acquisition and deployment of T-Mobile's 3.7 GHz spectrum will in fact enhance competition); Verizon Wireless Opposition at 1 (noting that DISH does not identify any competitive concerns in the areas where Verizon Wireless exceeds the spectrum screen). We note that DISH committed to the Commission that it would build out a robust 5G network over the near term without conditioning that commitment on acquiring additional spectrum in future spectrum auctions, including the C-band auction. *T-Mobile-Sprint Order*, 34 FCC Rcd at 10739-45, paras. 364-83; see also Appx. H: DISH Buildout Commitments.



38. IT IS FURTHER ORDERED that the FCC Form 601 long-form application filed by T-Mobile License LLC, FCC File No. 0009446137, SHALL BE PROCESSED consistent with this Order and the Commission's rules.

FEDERAL COMMUNICATIONS COMMISSION

Joel Taubenblatt  
Acting Chief  
Wireless Telecommunications Bureau

Giulia McHenry  
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