

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

In the Matter of)	
)	
Use of Spectrum Bands Above 24 GHz For)	GN Docket No. 14-177
Mobile Radio Services)	
)	
Notice of Initial 39 GHz Reconfiguration)	AU Docket No. 19-59
Procedures)	

COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”)^{1/} submits these comments in response to the *Public Notice* in the above-referenced proceedings proposing procedures for reconfiguring the 39 GHz (38.6-40 GHz) band in preparation for an incentive auction of the Upper 37 GHz (37.6-38.6 GHz), 39 GHz, and 47 GHz (47.2-48.2 GHz) bands (“Auction 103”).^{2/} T-Mobile applauds the efforts of the Wireless Telecommunications Bureau (“Bureau”), in cooperation with the Office of Economics and Analytics, to reconfigure the 39 GHz band in order to maximize the utility of the band post-auction. It supports the Bureau’s proposals for setting relative weights for incumbent licensees’ spectrum holdings pre-reconfiguration, but believes that the weighting should be based primarily on Auction 102 (24 GHz) so that it takes into account the propagation characteristics of millimeter wave spectrum and most recent auction information. T-Mobile also supports the Bureau’s proposals for determining an incumbent licensee’s “partial” holdings in a Partial Economic Area (“PEA”) post-reconfiguration and allocating incentive payments to commonly controlled entities that are not 39 GHz licensees.

^{1/} T-Mobile USA, Inc. is a wholly-owned subsidiary of T-Mobile US, Inc., a publicly traded company.

^{2/} See *Notice of Initial 39 GHz Reconfiguration Procedures et al.*, Public Notice, GN Docket No. 14-177 and AU Docket No. 19-59, DA 19-196 (rel. Mar. 20, 2019) (“*Public Notice*”).

I. THE MOST RECENT AND RELEVANT DATA SHOULD BE USED FOR SETTING RELATIVE WEIGHTS FOR THE 39 GHz BAND

The *Public Notice* seeks comment on the methodology for setting relative weights for 39 GHz spectrum holdings by PEA in order to compare incumbents' MHz-pops across PEAs.^{3/} Pursuant to the Commission's directive that "the MHz-[p]ops in each PEA will be weighted using an index,"^{4/} the Bureau proposes to weight the MHz-pops in each PEA using an index that includes the weighted average of relative price indices for Auctions 102 (24 GHz), 1002 (600 MHz), and 97 (AWS-3).^{5/} The proposed approach would *not* incorporate price data from Auction 101 (28 GHz), Auction 66 (AWS-1), or Auction 77 (700 MHz).^{6/}

T-Mobile supports principally using data from Auction 102 to determine the relative weights for the 39 GHz band. As T-Mobile has explained, price data establishing relative weights "should be based on . . . earlier millimeter wave auctions, where the spectrum characteristics are most similar."^{7/} Using price data from Auction 102 is particularly appropriate because it is the most recent data and because, like Auction 103, it offers millimeter wave spectrum on a nationwide basis. And within Auction 102, the Commission should weight most heavily the data from the Category U Blocks (covering 24.75-25.25 GHz). While there may be multiple reasons for the differences in pricing for the Category U and Category L Blocks

^{3/} See *id.* ¶¶ 26-33.

^{4/} *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Fourth Report and Order, GN Docket No. 14-177, FCC 18-180, ¶ 19 (rel. Dec. 12, 2018) ("*Spectrum Frontiers Fourth Report and Order*"); see also *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Fourth Further Notice of Proposed Rulemaking, 33 FCC Rcd 7674, ¶ 33 (2018) ("*Spectrum Frontier Fourth FNPRM*").

^{5/} See *Public Notice* ¶ 27.

^{6/} See *id.* ¶ 30.

^{7/} See Comments of T-Mobile USA, Inc., GN Docket No. 14-177, at 9 (filed Sept. 17, 2018) ("T-Mobile Fourth FNPRM Comments").

(covering 24.25-24.45 GHz) in a market,^{8/} members of Congress have expressed concerns about the effect of terrestrial use of Category L spectrum on National Aeronautics and Space Administration, National Oceanic and Atmospheric Administration, and Department of Defense operations.^{9/} No similar concerns have been expressed with respect to the Category U Blocks, making the pricing data for that spectrum likely more analogous to 39 GHz.

T-Mobile agrees that the Commission should *not* include data from Auction 101 in establishing relative weights for 39 GHz spectrum. That auction, as T-Mobile previously observed, featured spectrum that was heavily encumbered and therefore different from the 39 GHz band.^{10/} The Commission already has evidence that Auction 101 was not necessarily representative of the demand for millimeter wave spectrum. As reported in the *Auction 101 Closing Public Notice*, Auction 101 raised a little over \$700 million in gross bids.^{11/} In contrast, bidding in Auction 102 has already generated over \$1.9 billion in auction proceeds.^{12/}

^{8/} See *Auction 102 – 24 GHz: Clock Phase – Product Status*, FCC Public Reporting System, https://auctiondata.fcc.gov/public/projects/auction102/reports/product_status (last visited Apr. 15, 2019); see also *Auctions of Upper Microwave Flexible Use Licenses for Next-Generation Wireless Services et al.*, Public Notice, 33 FCC Rcd 7575, ¶ 219 (2018) (“The upper and lower segments of the 24 GHz band are separated spectrally and offer various possibilities for aggregation of multiple contiguous blocks, which may cause bidders to value them differently.”).

^{9/} See Letter from Rep. Eddie Bernice Johnson, Chairwoman, Committee on Science, Space, and Technology, and Rep. Frank Lucas, Ranking Member, Committee on Science, Space, and Technology, to the Hon. Ajit Pai, Chairman, FCC (dated Mar. 13, 2019).

^{10/} See, e.g., T-Mobile Fourth FNPRM Comments at 9 (urging the Commission to rely on the results of the 24 GHz band “because of encumbrances in the 28 GHz band”); see also Comments of T-Mobile USA, Inc., GN Docket No. 14-177 *et al.*, at 5 (filed Jan. 23, 2018); Reply Comments of T-Mobile USA, Inc., GN Docket No. 14-177 *et al.*, at 12-13 (filed Feb. 22, 2018); Comments of T-Mobile USA, Inc., GN Docket No. 14-177 *et al.*, at 2-3 (filed Sept. 30, 2016).

^{11/} See *Auction of 28 GHz Upper Microwave Flexible Use Service Licenses for Next-Generation Wireless Services Closes et al.*, Public Notice, AU Docket No. 18-85, DA 19-23, ¶ 1 (rel. Jan. 31, 2019).

^{12/} See *Auction 102 – 24 GHz*, FCC Public Reporting System, <https://auctiondata.fcc.gov/public/projects/auction102> (last visited Apr. 15, 2019).

If the Commission includes price data from other auctions, such as Auctions 1002 and 97, to determine relative weights for the 39 GHz band, data from Auction 102 should be weighted more heavily – T-Mobile proposes between 50 and 75 percent. As noted above, Auction 102 features the most recent data and is based on the most relevant spectrum. The Commission has recognized that data currently available from previous auctions, aside from Auction 101, “all pertain to licenses for flexible use in spectrum below 3 GHz.”^{13/} It is well documented that there are differences between low-band spectrum, which provides wide-area coverage, and high-band spectrum, which will provide massive capacity in denser environments.^{14/} Therefore, the difference in MHz-pop values between urban and rural areas, for example, will not likely be consistent for low-band and high-band spectrum. Instead, market value differences will be based on spectrum characteristics. Weighting data from Auction 102 more heavily would appropriately reflect market demand for spectrum with similar characteristics.

II. RECONFIGURED HOLDINGS EQUIVALENT TO A PARTIAL PEA SHOULD BE MAXIMIZED AND REFLECT INCUMBENT OPERATIONS TO THE GREATEST EXTENT POSSIBLE

The *Public Notice* seeks comment on two aspects of modified licenses that will be issued for partial PEAs as a result of reconfiguring 39 GHz license holdings.^{15/} First, the Bureau seeks comment on its tentative conclusion to increase to 10 percent, from the 5

^{13/} *Spectrum Frontiers Fourth Report and Order* ¶ 20.

^{14/} See *Expanding Flexible Use of the 3.7 to 4.2 GHz Band*, Order and Notice of Proposed Rulemaking, 33 FCC Rcd 6915, ¶ 5 (2018); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Report and Order and Further Notice of Proposed Rulemaking, 31 FCC Rcd 8014, ¶¶ 6-7 (2016); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Notice of Proposed Rulemaking, 30 FCC Rcd 11878, ¶¶ 5, 6 (2015); *Use of Spectrum Bands Above 24 GHz for Mobile Radio Services, et al.*, Notice of Inquiry, 29 FCC Rcd 13020, ¶ 4 (2014).

^{15/} See *Public Notice* ¶ 40 (explaining that because modified licenses would be for 100 megahertz (the complete bandwidth of a new license), a single modified license for a partial PEA would only be “partial” with respect to geography).

percent that was previously set by the Commission, the *de minimis* threshold by which it would determine whether a modified license post-reconfiguration would be considered to cover a *full* PEA.^{16/} *Second*, the Bureau seeks comment on a proposed process for determining the geographic boundaries of an incumbent's modified license for a partial PEA.^{17/}

T-Mobile supports the Bureau's tentative conclusion to increase the *de minimis* threshold to 10 percent so that an incumbent licensee would receive, post-reconfiguration, a modified license for a full PEA if it would otherwise have holdings in the PEA that would cover 90 percent or more of the PEA population. T-Mobile has stressed that an important goal of the incentive auction process "is to make available for licensing the maximum amount of unencumbered 39 GHz spectrum so that, after the auction, licensees will be authorized for spectrum that can be most effectively used to provide wireless services."^{18/} Allowing reconfigured holdings that cover the majority of the PEA population to be considered licenses for a "full" PEA will maximize the number of unencumbered licenses and limit the possibility that the remaining population is unserved. As the Commission itself has recognized, where an incumbent licensee would cover nearly all of the population in a PEA after reconfiguration, "it would be unlikely that any other provider would seek to serve the remaining area in that PEA."^{19/}

^{16/} See *id.* ¶¶ 41-42.

^{17/} See *id.* ¶¶ 45-47. Under the proposed process, the Commission would first determine the incumbent's current geographic coverage area and then add (or, in the case that the population in the coverage area exceeds the reconfigured holdings, subtract) two-by-two kilometer grid cells adjacent to this coverage area within the PEA until the population is as close as possible to the MHz-pops value of the incumbent's reconfigured holdings in the PEA while not being under. See *id.* ¶¶ 46-47.

^{18/} See T-Mobile Fourth FNPRM Comments at 2.

^{19/} *Spectrum Frontiers Fourth Report and Order* ¶ 26.

While secondary market transactions can help rationalize reconfigured holdings to address partial PEAs, those transactions may, among other things, increase costs. The more efficient approach would be to ensure *prior to* the auction that reconfigured holdings will be distributed in a manner that creates the greatest number of “full” PEAs. Such an approach would permit incumbent licensees to engage in better spectrum planning and provide the certainty they need to determine whether to accept the modified license or relinquish the spectrum. And because an incumbent licensee with reconfigured holdings that result in a full PEA license due to *de minimis* rounding will only be permitted to receive an incentive payment for that license based on its *pre-rounding* holdings,^{20/} there is no risk of an incumbent receiving a windfall from such *de minimis* rounding if it chooses to relinquish the spectrum.

T-Mobile also supports the proposed process for determining the geographic boundaries of a modified license for a partial PEA. This approach will reasonably promote a result pursuant to which an incumbent licensee’s post-reconfiguration boundaries reflect, as closely as possible, the incumbent’s pre-reconfiguration holdings, should it choose to accept modified licenses.

III. INCENTIVE PAYMENTS SHOULD BE MADE TO ANY COMMONLY CONTROLLED ENTITY DESIGNATED BY THE INCUMBENT

The *Public Notice* states that the Commission will make a single incentive payment for an incumbent’s combined holdings relinquished in the incentive auction.^{21/} While the Bureau tentatively concludes that, in the case where multiple 39 GHz licenses are held by commonly controlled entities, the single payment may be directed only to one of those commonly controlled

^{20/} See *Public Notice* ¶ 44.

^{21/} See *id.* ¶ 72.

entities, it seeks comment on whether it should permit the designation of a commonly controlled entity that does not already hold a 39 GHz license.^{22/}

T-Mobile agrees that incentive payments can and should be made to any commonly controlled entity as designated by the incumbent, regardless of whether that entity holds a 39 GHz license. Indeed, such an approach is no different than the Commission's practice of limiting participation in a spectrum auction to only one commonly controlled entity while also allowing that entity to engage in *pro forma* assignments of the licenses it won at auction to a commonly controlled entity post-auction without advance Commission approval.^{23/}

IV. CONCLUSION

The ability of incumbent and new licensees to provide valuable next-generation services in the Upper 37 GHz, 39 GHz, and 47 GHz bands rests largely upon the successful reconfiguration of the 39 GHz band. T-Mobile agrees with the Bureau that its proposed procedures for reconfiguring the 39 GHz band will facilitate a successful incentive auction while preserving incumbents' spectrum usage rights. It therefore supports the Bureau's proposals, particularly with respect to setting relative weights pre-reconfiguration, determining partial holdings post-reconfiguration, and making incentive payments.

^{22/} See *id.*

^{23/} See 47 C.F.R. §§ 1.2105(b), 1.948(c)(1) (permitting instead post-consummation notifications under certain conditions).

Respectfully submitted,

/s/ Steve B. Sharkey

Steve B. Sharkey

John Hunter

Christopher Wieczorek

T-MOBILE USA, INC.

601 Pennsylvania Avenue, N.W.

Suite 800

Washington, DC 20004

(202) 654-5900

April 15, 2019