Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554

In the Matter of	**)**	
	)	
Office of Engineering and Technology	**)**	ET Docket No. 24-121
Seeks Comment on Expanded Federal	)	
Use of the Non-Federal FSS and	)	
MSS Bands	)	

COMMENTS OF CTIA

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July 31, 2024

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CTIA[1] respectfully submits these comments in response to the Public Notice released by the Federal Communications Commission ("FCC" or "Commission") Office of Engineering and Technology ("OET") seeking input on ways to potentially expand federal use of non-federal satellite spectrum bands.[2]

I. INTRODUCTION AND SUMMARY.

CTIA supports the Commission's continuing efforts to balance ensuring sufficient access for commercial mobile broadband use while ensuring that federal spectrum users have access to the spectrum necessary to meet their mission-critical objectives. As CTIA has previously observed, the sweeping proposals to allocate spectrum to federal government users on a primary basis contemplated in this decade-old proceeding would exacerbate the existing imbalance

[1] CTIA – The Wireless Association® ("CTIA") (www.ctia.org) represents the U.S. wireless communications industry and the companies throughout the mobile ecosystem that enable Americans to lead a 21st century connected life. The association's members include wireless providers, device manufacturers, suppliers as well as apps and content companies. CTIA vigorously advocates at all levels of government for policies that foster continued wireless innovation and investment. The association also coordinates the industry's voluntary best practices, hosts educational events that promote the wireless industry and co-produces the industry's leading wireless tradeshow. CTIA was founded in 1984 and is based in Washington, D.C.

[2] *Office of Engineering and Technology Seeks Comment on Expanded Federal Use of the Non-Federal FSS and MSS Bands*, ET Docket No. 24-121, Public Notice, DA 24-396 (rel. Apr. 26, 2024) ("Public Notice").

between federal and non-federal spectrum allocations and harm the Commission's ability to manage commercial access to spectrum in the future.[3] Moreover, as OET notes, the spectrum landscape has changed significantly in the time since the Commission first considered this issue.[4] Accordingly, the Commission should exercise caution to not hinder the continuing deployment of innovative 5G services, as well as other terrestrial uses of these non-federal bands in the future.

As an initial matter, CTIA appreciates the Commission's decision to invite comment on this issue independently of its Commercial Space Launch proceeding, as CTIA had suggested.[5] Before a rigorous analysis of this issue can occur, however, the Commission and OET should clearly define the spectrum bands not currently allocated for federal Fixed Satellite Service ("FSS") and Mobile Satellite Service ("MSS") that may be further investigated for expanded federal use. Because the Commission has sought comment on multiple items in proceedings spanning over a decade, it is unclear which specific bands are now being considered as potential "targets" for expanded federal use, and the Public Notice fails to specify the bands on which OET is seeking comment. Given the aforementioned shift in the spectrum landscape over the last decade-plus, the Commission should clarify the specific bands that are now under consideration.

CTIA also encourages the Commission and OET to account for continuing domestic and global efforts examining the potential for certain spectrum bands to be used for other services. To the extent the Public Notice seeks comment on adding federal allocations to the 3.7-4.0 GHz

[3] Comments of CTIA, ET Docket No. 13-115, RM-11341, at 2 (filed Aug. 11, 2021) ("CTIA 2021 Comments").

[4] Public Notice at 3.

[5] CTIA 2021 Comments at 3-5.

band, the 4.0-4.2 GHz band, and the 12.7-13.25 GHz ("13 GHz") band, the Commission should be mindful that doing so could frustrate ongoing investigation of these bands for commercial mobile use. Ignoring these efforts and adding a primary federal allocation for certain bands would unnecessarily complicate the current incumbent landscape and inhibit the ability of the Commission to consider more flexible uses of these bands in the future.

To that end, CTIA urges the Commission to move cautiously before providing additional federal allocations in bands that are either heavily used by 5G services or that may be explored in the near term to address the growing spectrum requirements of 5G services. As CTIA previously suggested, the Commission and OET should reject proposals for new federal allocations within commercial spectrum until the specific bands that may potentially be impacted are clearly defined and the associated in-band and adjacent-band technical issues are fully considered and addressed.[6] At a minimum, the Commission should exclude from consideration spectrum bands that are being investigated for commercial mobile use to ensure that critical spectrum is available for the development and deployment of 5G technologies.

II. THE COMMISSION AND OET SHOULD CLEARLY DEFINE THE SPECTRUM BANDS AND PROCEDURES BEING CONSIDERED FOR EXPANDED FEDERAL USE.

A. Greater Clarity is Needed Regarding the Spectrum Bands Being Investigated.

The Commission has adopted a piecemeal approach to the issue of expanding federal access to non-federal spectrum since the release of the *Notice of Proposed Rulemaking* in 2013 ("*2013 NPRM*"). In that item, the Commission sought comment on granting either primary status or interference protection to federal operations in a total of 13.275 gigahertz of non-federal

[6] *Id.* at 2-4.

spectrum.[7] In the *Further Notice of Proposed Rulemaking* issued eight years later ("*2021 FNPRM*"), the Commission sought comment on the 4.0-4.2 GHz, 5.925-6.425 GHz, 10.7-11.7 GHz, 11.7-12.2 GHz, 12.7-13.25 GHz, 13.75-14.5 GHz, 18.3-19.3 GHz, 19.7-20.2 GHz, 28.35-29.1 GHz, and 29.25-30 GHz bands, among others.[8] However, in that item, the Commission removed certain portions of spectrum that were considered in the *2013 NPRM*, such as the 3.6-4.0 GHz band, the 5.85-5.925 GHz band, the 6.425-6.725 band, the 27.5-28.35 GHz band, the 29.1-29.25 GHz band, the 37.5-39.5 GHz and the 47.2-50.2 GHz bands.[9] Accordingly, the Public Notice's reference to the previous Commission items fails to provide a definitive list of specific bands that are being considered for expanded federal use.

As the Public Notice acknowledges and CTIA addresses in section III below, the spectrum landscape has changed dramatically since the *2013 NPRM* was released. Any proposal to allocate bands for federal use should thoroughly explore the current state of play and weigh the implications for each proposed band, as increasing any federal allocation and/or interference protection rights represents significant technical and policy challenges—both domestically and internationally. The potential addition of federal users to certain spectrum bands—particularly federal earth stations that require interference protection—would increase the complexity of coordination between terrestrial and satellite users in the bands.

To that end, CTIA urges the Commission and OET to specifically outline the bands being considered before taking sweeping action to provide new or expanded federal allocations in

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[7] *Amendment of Part 2 of the Commission's Rules for Federal Earth Stations Communicating with Non-Federal Fixed Satellite Service Space Stations et al.*, Notice of Proposed Rulemaking and Notice of Inquiry, 28 FCC Rcd 6698, 6700, 6703 ¶¶ 4, 13 (2013) ("*2013 NPRM*").

[8] *Allocation of Spectrum for Non-Federal Space Launch Operations et al.*, Report and Order and Further Notice of Proposed Rulemaking, 36 FCC Rcd 7764, 7818-19, ¶¶ 149, 151 (2021) ("*2021 FNPRM*").

[9] *See id.*

existing non-federal bands. Without a clear delineation of the bands being considered, interested stakeholders are unable to accurately assess the potential impact of the new allocations to incumbent services already operating in the bands.[10] Additionally, it is unclear whether any new allocations may foreclose the potential for new or additional uses of spectrum by other non-federal services in the future.

Once the specific bands are outlined, CTIA supports a thorough exploration of the merits of each proposed band and the associated domestic and international ramifications of such changes. The Commission should refrain from moving forward before addressing incumbent uses in and adjacent to each specific band, future plans for the relevant band, and the policy issues related to opening each band to primary federal use. At the same time, the Commission, in coordination with NTIA, should consider whether any frequencies previously used by federal agencies for these services can be reallocated for commercial wireless use.[11]

B. The Commission Should Clarify Its Exclusive Authority to Manage Non-Federal Spectrum Licenses.

The Public Notice asks whether the procedures proposed in the *2013 NPRM* would be appropriate for coordination between federal earth stations and non-federal stations.[12] CTIA agrees with the Commission that federal earth station operators should follow the procedures required for earth station licenses pursuant to Part 25 of the Commission's rules.[13] This will avoid confusion and ensure parity between federal and non-federal users, regardless of whether

[10] Under the Administrative Procedure Act, stakeholders must be offered a meaningful opportunity to participate in rulemakings, and administrative proposals must include "a description of the subjects and issues involved." *See* 5 U.S.C. § 553(b)(3), (c).

[11] *See 2021 FNPRM*, 36 FCC Rcd at 7817, ¶ 146 (noting the migration of some federal government users toward using commercial services in non-federal spectrum).

[12] *See* Public Notice at 3.

[13] *See 2013 NPRM*, 28 FCC Rcd at 6713-15, 6717-18, ¶¶ 38-41, 48-49.

the federal earth station operator seeks a blanket earth station license or a license for an individual earth station.

At the same time, the Commission should clarify that NTIA approval would not be required for non-federal spectrum authorizations under the proposed procedures. As the Commission noted in the *2013 NPRM*, any adopted approach must ensure that the Commission retains authority over the satellite systems accessed by federal users and FSS in general.[14] Consistent with this view, the Satellite Industry Association ("SIA") proposed a modification to the allocation approach to clarify the Commission's exclusive authority.[15] As SIA explained, Commission and NTIA rules and coordination procedures apply where spectrum uses within the same frequency band are separately administered by the FCC and NTIA, and coordination is required to achieve compatibility.[16] Under the proposed approach, however, use of the spectrum would continue to be exclusively for commercial, non-government satellite space networks, and federal earth station operators would be situated like any other applicant before the Commission.[17] As such, not only does the application process fall squarely within the

[14] *See 2013 NPRM*, 28 FCC Rcd at 6706-07, 6718, ¶¶ 22-23, ¶ 52.

[15] Comments of the Satellite Industry Association, ET Docket No. 13-115, RM-11341, at 6-8 (filed Aug. 30, 2013) ("SIA Comments").

[16] *See id.* at 7-8.

[17] *See* Letter from Lawrence E. Strickling, Assistant Secretary for Communications and Information and Administrator, NTIA, U.S. Department of Commerce, to Julius Genachowski, Chairman, FCC, ET Docket No. 13-115, at 2 (filed May 13, 2013) (explaining that NTIA's goal is for "federal earth stations [to be] treated the same as similarly situated non-federal stations, but we are not expecting the FCC or non-federal users to consult or coordinate with NTIA or other federal agencies to any greater extent than they already do under current rules and procedures")*; 2013 NPRM*, 28 FCC Rcd. at 6706-07, ¶ 22 (noting this assessment by NTIA)*; see also id.* at 6715, 6717, ¶¶ 41, 48 (describing application of Part 25 rules to federal applicants). Application of the Part 25 licensing process and FCC regulation of use of non-federal spectrum by federal users would also satisfy the Memorandum of Understanding between the FCC and NTIA, under which each agency broadly committed to provide notice to the other of proposed actions that could potentially cause interference to operations overseen by the other agency. *See* Memorandum of Understanding Between the Federal Communications Commission and the National Telecommunications

Commission's authority and subject to its rules, but the Commission would retain exclusive jurisdiction over the spectrum bands to which federal users are granted access.[18] As with any other spectrum band to which the FCC grants licenses, the bands may later be reallocated or reassigned, and licensees relocated, if doing so is in the public interest.

Regardless of the specific approach ultimately adopted, the Commission should explicitly retain exclusive jurisdiction over the relevant spectrum bands and require any federal applicants granted access to commercial satellite networks to fully comply with the Part 25 Rules. Doing so will avoid confusion that could arise from adopting inconsistent procedures or introducing ambiguity around its exclusive authority over non-federal spectrum. This ensures that, should the Commission seek to repurpose the spectrum at a future date, there will be no uncertainty regarding its authority to do so.

III. ANY ACTION TO EXPAND FEDERAL ALLOCATIONS MUST REFLECT ONGOING GLOBAL AND DOMESTIC EFFORTS TO INCREASE ACCESS TO SPECTRUM FOR COMMERCIAL MOBILE SERVICES.

Recognizing the significant changes impacting the spectrum landscape since the *2013 NPRM*, the Commission observed in the *2021 FNPRM* that "[s]ome of the bands raised in the NPRM may no longer be suitable for expanded federal use."[19] Though eight years elapsed between the Commission's initial items regarding this issue, the pace of technological and regulatory changes in just the three years since the release of the *2021 FNPRM* has continued to

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and Information Administration (Aug. 1, 2022), https://docs.fcc.gov/public/attachments/DOC-385867A1.pdf.

[18] *See* 47 U.S.C. § 151 (creating the FCC for the purpose of regulating interstate and foreign commerce in communication by wire and radio); *id.* at § 301 (requiring a license for transmission of radio signals); *id.* at § 303 (describing the powers and duties of the Commission, including prescribing the nature of the service to be rendered by each station and class of stations, assigning bands of frequencies, making regulations it deems necessary to prevent interference and carry out its obligations under the Communications Act of 1934 in the public interest, and studying new uses for radio).

[19] *2021 FNPRM*, 36 FCC Rcd at 7818, ¶ 150.

accelerate significantly. As a result, there is a clear and pressing need to rapidly identify and introduce new spectrum resources for licensed wireless services.

Wireless data traffic has soared in the last decade, from 3.2 trillion megabytes ("MB") in 2013 to 42.2 trillion MB in 2020, to a staggering 73.7 trillion MB in 2022.[20] By year-end 2022, nearly 162 million 5G devices were active in the U.S.—almost double the number from 2021 and nearly an 11-fold increase since just 2020.[21] The continued growth in all three categories—traffic, connections, and devices—demonstrates the tremendous value that wireless data and mobile services provide to consumers. Despite this, research indicates that the U.S. spectrum deficit continues to grow, with commercial mobile providers projected to require nearly 1,500 megahertz of licensed, full-power spectrum just to meet consumer demand in the U.S. over the next ten years.[22] In addition to meeting consumer demand, ensuring that wireless providers have access to robust spectrum resources can help achieve the nation's most pressing economic, policy, and national security objectives, including bridging the digital divide.

CTIA recommends that, at a minimum, the Commission exclude certain bands from consideration for expanded federal use given ongoing domestic and international activity involving these bands. For example, the 3.4-3.8 GHz band represents a core global 5G mid-band range specifically identified at World Radiocommunication Conference 2023 ("WRC-23") for

[20] See CTIA, 2023 Annual Survey Highlights, at 3 (July 25, 2023), https://api.ctia.org/wp-content/uploads/2023/11/2023-Annual-Survey-Highlights.pdf.

[21] *Id.* at 5.

[22] Coleman Bazelon & Paroma Sanyal, *How Much Licensed Spectrum is Needed to Meet Future Demands for Network Capacity?*, BRATTLE GROUP, at 6 (Apr. 17, 2023), https://api.ctia.org/wp-content/uploads/2023/04/Network-Capacity-Constraints-and-the-Need-for-Spectrum-Brattle.pdf.

additional use.[23] Including this band for consideration of expanded federal use would undermine alignment with global trends, including possible additional use of the 3.7 GHz band in the non-continental United States.[24] Moreover, as CTIA has previously observed, the Commission is in the midst of transitioning FSS use of the 3.7-4.2 GHz spectrum band into the remaining 4.0-4.2 GHz segment, and has imposed a freeze on registering new protected earth stations pending completion of the transition.[25] Accordingly, even if a federal allocation was added to this spectrum, deployment could not occur without additional Commission action.

Similarly, the 4.0-4.2 GHz frequency band has been viewed as a viable candidate for use by commercial mobile providers, as it offers a substantial opportunity for the deployment of 5G services in a globally harmonized and contiguous frequency range.[26] The European Commission mandated that the European Conference of Postal and Telecommunications Administrations ("CEPT") evaluate the feasibility for using the 3.8-4.2 GHz band for 5G operations, including the development of harmonized technical conditions for use in the region.[27] The band has also

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[23] ITU, Radio Communication Sector, *World Radiocommunication Conference 2023 (WRC-23) Final Acts*, at Nos. 5.433A, 5.433B, 5.434, 5.434B, 5.435B, https://www.itu.int/hub/publication/r-act-wrc-16-2024.

[24] *See, e.g., Expanding Flexible Use in the 3.7-4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343, 2371, ¶ 56 (2020) (retaining FSS allocation across the 3.7-4.2 GHz band outside the contiguous United States).

[25] CTIA 2021 Comments at 5 (citing *2021 FNPRM*, 36 FCC Rcd at 7818-19, ¶ 150).

[26] *See, e.g.*, FAA Reauthorization Act of 2024, Pub. L. No. 118-63, § 1018(a)-(d), 138 Stat. 1025 (2024) (requiring an accelerated research and development program to inform development and testing of the standards and technology necessary for next generation radio altimeters).

[27] European Commission, Mandate to CEPT on technical conditions regarding the shared use of the 3.8-4.2 GHz frequency band for terrestrial wireless broadband systems providing local-area network connectivity in the union (Dec. 16, 2021), https://eccwp.cept.org/WI_Detail.aspx?wiid=804. *See also,* European Conference of Postal and Telecommunications Administrations, *Results of the WG FM#107 (Hybrid) Meeting, 03-7 June 2024* (June 18, 2024), https://www.cept.org/ecc/groups/ecc/wg-fm/news/results-of-the-wg-fm107-hybrid-meeting-03-07-june-2024 (approving progress on the mandated draft report for public consultation and identifying outstanding issues).

been made available for use up to 4.1 GHz in Japan,[28] and other countries have explored opening the band for additional uses.[29]

Further, although the Commission previously sought comment on expanding federal uses in the 13 GHz band, the Commission has since initiated a proceeding to repurpose some or all of the band for commercial mobile broadband or other expanded uses.[30] As CTIA observed in its comments in the 13 GHz proceeding, reallocation of the 13 GHz band would aid commercial wireless providers in meeting increasing consumer demand, while ensuring that incumbent operations in the band can be efficiently relocated or accommodated.[31] However, adding an allocation for federal operations, especially earth stations requiring interference protection, would increase the complexity of coordination between terrestrial and satellite users in the bands. Expanding the federal allocation would effectively foreclose the possibility of increased terrestrial use in the future.

IV. CONCLUSION.

Once the Commission publicly identifies the bands under consideration, CTIA urges the Commission to thoroughly explore the merits of each proposed band and the associated domestic and international ramifications of such changes. The bands noted above are unsuitable for consideration in this proceeding due to:

- Ongoing proceedings affecting some of the spectrum bands;
- The potential for future flexible terrestrial use of the MSS/FSS spectrum;

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[28] *See Japan assigns 5G spectrum to four operators*, EUROPEAN 5G OBSERVATORY (Apr. 16, 2019), https://5gobservatory.eu/japan-assigns-5g-spectrum-to-four-operators.

[29] *See, e.g.*, Australian Communications and Media Authority, Planning of the 3700-4200 MHz Band – Discussion Paper (Aug. 13, 2019), https://www.acma.gov.au/consultations/2019-09/planning-3700-4200-mhz-band-consultation-272019 (Australian 2019 Planning for the 3700-4200 MHz band).

[30] *See generally*, *Expanding Use of the 12.7-13.25 GHz Band for Mobile Broadband or Other Expanded Use*, GN Docket No. 22-352, Notice of Proposed Rulemaking, FCC 23-36 (rel. May 19, 2023).

[31] Comments of CTIA, GN Docket No. 22-352, at 6-9 (filed Aug. 9, 2023).

- The need to protect adjacent terrestrial operations that has not been fully addressed; and
- The fact that some spectrum bands have had licenses issued by auction since the Commission initiated its previous proceeding on this issue in 2013.

Adding a federal allocation or footnote to these bands would add unnecessary complexity to the existing interference environment, and could hinder the deployment of innovative 5G services, as well as other terrestrial uses of these bands in the future.

Respectfully submitted,

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