

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

In the Matter of:)
)
Upper C-band (3.98-4.2 GHz)) GN Docket No. 25-59
)
)

REPLY COMMENTS OF T-MOBILE USA, INC.

T-Mobile USA, Inc. (“T-Mobile”) hereby submits these reply comments in response to the record developed in the above-captioned proceeding. The Notice of Proposed Rulemaking (“NPRM”) issued by the Federal Communications Commission (“Commission”) in this proceeding seeks to reallocate spectrum in the 3.98-4.2 GHz band (“Upper C-band”) for terrestrial broadband use.¹ The record in the proceeding reflects near-unanimous support for such a reallocation and a regulatory framework for terrestrial mobile use that is harmonized across the C-band, including, among other things, applying the licensing and technical rules adopted for the Lower C-band (3.7-3.98 GHz) to the Upper C-band. The record reveals, however, a disconnect between Fixed Satellite Service (“FSS”) clearing timelines—generally one to three years—and upgraded radio altimeter readiness timelines—estimated to be five to eight years. The Commission should therefore ensure any accelerated relocation payments for FSS Upper C-band clearing are based on when spectrum can be fully utilized by mobile wireless providers. Finally, the Commission should decline proposals to introduce mobile satellite services or shared-use mechanisms in the Upper C-band.

¹ See *Upper C-band (3.98-4.2 GHz)*, GN Docket No. 25-59, Notice of Proposed Rulemaking (2025) (“NPRM”).

I. THE RECORD REFLECTS STRONG SUPPORT FOR ADOPTING A UNIFIED REGULATORY FRAMEWORK FOR TERRESTRIAL MOBILE SERVICES ACROSS THE LOWER AND UPPER C-BAND

The record developed in this proceeding reflects near-universal support among mobile wireless stakeholders for aligning the technical and licensing rules for terrestrial mobile services in the Upper C-band with those adopted for the Lower C-band. Regulatory harmonization will produce substantial and tangible public interest benefits, including significant economies of scale and accelerated 6G deployment.²

For example, Samsung argues that utilizing the same part 27 rules for all terrestrial operations in the C-band will “reduce regulatory friction, support equipment interoperability, and accelerate deployment by allowing stakeholders to build upon an existing and well-understood framework.”³ Nokia notes that an aligned licensing and operational framework will enable operators to “leverage existing C-band deployments to provide similar robust coverage, meeting the demands for more high-powered wireless spectrum.”⁴ NTIA provides that aligning allocations in the Lower and Upper C-bands would “enable more efficient spectrum planning, facilitate wider channel bandwidths, and reduce complexity for equipment manufacturers and

² See Comments of Ericsson, GN Docket No. 25-59, at 11-12 (filed Jan. 20, 2026) (“Ericsson Comments”); Comments of Cisco Systems, Inc., GN Docket No. 25-59, at 2, 10-11 (filed Jan. 20, 2026) (“Cisco Comments”); Comments of AT&T Services, Inc., GN Docket No. 25-59, at 5-6 (filed Jan. 20, 2026) (“AT&T Comments”); Comments of The National Telecommunications and Information Administration, GN Docket No. 25-59, at 3 (filed Jan. 20, 2026) (“NTIA Comments”); Comments of Nokia, GN Docket No. 25-59, at 2, 4 (filed Jan. 20, 2026) (“Nokia Comments”); Comments of Samsung Electronics America, Inc., GN Docket No. 25-59, at 1-2 (filed Jan. 20, 2026) (“Samsung Comments”); Comments of CTIA, GN Docket No. 25-59, at 4, 30 (filed Jan. 20, 2026) (“CTIA Comments”); Comments of Verizon, GN Docket No. 25-59, at 3, 20 (filed Jan. 20, 2026) (“Verizon Comments”); Comments of WISPA, GN Docket No. 25-59, at 9 (filed Jan. 20, 2026).

³ Samsung Comments at 3.

⁴ Nokia Comments at 5.

network operators.”⁵ Importantly, the record supports harmonization for all elements of the part 27 rules for Upper C-band operations, including licensing,⁶ out-of-band emissions limits,⁷ power limits,⁸ and protections afforded to incumbent FSS earth stations.⁹

The benefits of building upon the successful Lower C-band reallocation and aligning the licensing and technical requirements for Upper C-band terrestrial operations are clear. Enacting a harmonious regulatory framework will allow this critical mid-band spectrum to swiftly fulfill its best and highest use of supporting robust 5G and 6G deployments.

II. ACCELERATED RELOCATION PAYMENTS FOR FSS OPERATORS MUST BE ADJUSTED FOR ANY OPERATIONAL DELAYS DUE TO RADIO ALTIMETER UPGRADES

The Commission seeks comment on the use of incentives, including accelerated relocation payments, to facilitate the timely reallocation of Upper C-band spectrum.¹⁰ Several satellite operators express support for accelerated relocation payments, and argue that this would facilitate accelerated clearing of the band.¹¹ However, the record in this proceeding reveals a substantial disconnect between the clearing timelines proposed by satellite operators, and the timeline on which upgraded radio altimeters will be deployed. Because the adopted rationale for

⁵ NTIA Comments at 3.

⁶ See CTIA Comments at 30-32; Samsung Comments at 3; Verizon Comments at 21-23; AT&T Comments at 5-6; Nokia Comments at 4; Cisco Comments at 10.

⁷ See CTIA Comments at 34-35; Samsung Comments at 3; Verizon Comments at 24-25; Ericsson Comments at 12; AT&T Comments at 7; Nokia Comments at 5.

⁸ See CTIA Comments at 32-34; Samsung Comments at 3; Verizon Comments at 23-24; Ericsson Comments at 12; AT&T Comments at 7; Nokia Comments at 5.

⁹ See CTIA Comments at 36-37; Samsung Comments at 4; AT&T Comments at 8.

¹⁰ See NPRM at ¶¶ 101-103.

¹¹ See Comments of Eutelsat, GN Docket No. 25-59, at 20-22 (filed Jan. 20, 2026) (“Eutelsat Comments”); Comments of SES Americom, Inc., GN Docket No. 25-59, at 8-10 (filed Jan. 20, 2026) (“SES Americom Comments”).

accelerated relocation payments relied upon the economic benefits of earlier spectrum access for new licensees,¹² and because the presence of potential interference between radio altimeters and adjacent mobile wireless operations impacts the benefits of early access, satellite operators should not receive accelerated relocation payments for clearing spectrum that mobile wireless providers cannot fully utilize. Measurement of early access benefits should not commence until radio altimeters are upgraded, which is currently estimated to be completed sometime in 2031 at the earliest.

Specifically, satellite operators estimate that they can clear the Upper C-band within one to three years.¹³ However, the Federal Aviation Administration (“FAA”) recently released a notice of proposed rulemaking concerning upgrading radio altimeters to withstand interference from adjacent wireless operations.¹⁴ The proposed timeframe for implementing the required upgrades is uncertain, with the FAA noting that the agency “expects the initial [radio altimeter] performance deadline will be achievable between 2029 and 2032”, with the second tranche of

¹² See *Expanding Flexible Use of the 3.7–4.2 GHz Band*, Report and Order and Order of Proposed Modification, 35 FCC Rcd 2343, 2417-18, ¶ 185 (2020) (“Given the significant public interest benefits of clearing terrestrial, mid-band spectrum more quickly, which would bring next-generation services like 5G to the American public years earlier and help assure American leadership in the 5G ecosystem, we find that requiring overlay licensees to make accelerated relocations is in the public interest. We start by noting the significant benefits of accelerating a transition of this spectrum. Studies in the record indicate that licensing mid-band spectrum will lead to substantial economic gains . . . [t]hese studies underscore the importance of incentivizing incumbents to clear the band for 5G use as quickly as possible.”).

¹³ See, e.g., Eutelsat Comments at 20-22 (estimating Eutelsat could clear the Upper C-band within three years in a two-phased process, the first of which it could complete within 12 months, with incentives); SES Americom Comments at 8-10 (estimating SES could clear 100 megahertz of Upper C-band spectrum within 30 months with incentives).

¹⁴ See generally FAA, Department of Transportation, *Requirements for Interference-Tolerant Radio Altimeter Systems*, Notice of Proposed Rulemaking, 91 Fed. Reg. 459 (rel. Jan. 7, 2026).

aircraft subject to the requirement having another two years to come into compliance (or 2031 at the earliest and potentially in 2034).¹⁵

Because mobile wireless providers will not have full use of Upper C-band spectrum if there are lingering interference issues with radio altimeters, the Commission cannot logically base clearing incentives in the form of accelerated relocation payments to satellite incumbents on economic benefits to mobile providers that presuppose full use. Specifically, because mobile wireless operations would potentially be severely impeded by radio altimeter interference concerns, an accelerated clearing in many instances would not serve the Commission’s stated purpose for offering such incentives, which is “facilitating the timely introduction of new terrestrial wireless operation in the Upper C-band.”¹⁶ There are also substantial monetary and public interest considerations that weigh against accelerated clearing payments. As OTI and Public Knowledge note, accelerated relocation payments serve to substantially reduce auction proceeds.¹⁷ OTI and Public Knowledge moreover discourage the Commission from making accelerated relocation payments to avoid providing FSS licensees with “an unnecessary windfall” due to these licensees failing to make “the highest and best use of the spectrum they occupy.”¹⁸

¹⁵ *See id.* at 481 (the initial performance deadline is for “all aircraft operating under 14 CFR part 121 and aircraft operating under part 129 with 30 or more passenger seats or a payload capacity of more than 7,500 pounds. All other aircraft operating under part 91 in the airspace of the 48 contiguous United States and the District of Columbia and equipped with an RA will have an additional two years after the initial performance deadline to use a unit that meets the proposed performance standard.”).

¹⁶ NRPM at ¶ 101.

¹⁷ *See* Comments of Open Technology Institute at New America and Public Knowledge, GN Docket No. 25-29, at 9 (filed Jan. 20, 2026).

¹⁸ *Id.* Similarly, the Commission should decline to entertain satellite providers’ estimated clearing timelines in the absence of incentives. These timelines are self-serving and are clearly

For these reasons, the Commission should not adopt the proposal for accelerated relocation payments. If the Commission does decide to provide such payments, it should withhold payments until it is demonstrated that the band is entirely clear—including any voluntary commitments to prevent potential radio altimeter interference—before distributing any accelerated relocation payments. Such payments, if adopted, should be escrowed until clearance is demonstrated. And, as in the Lower C-band, the scale of the payments should be based on actual economic benefit to new terrestrial licensees.

III. THE COMMISSION SHOULD REJECT PROPOSALS TO INTRODUCE MOBILE SATELLITE SERVICES OR SHARED-USE MECHANISMS IN THE UPPER C-BAND

The Commission should decline to allow mobile satellite services or shared use in the Upper C-band, as some commenters suggest.¹⁹ The record developed here clearly demonstrates that the Lower C-band framework was a resounding success which resulted in the robust expansion of 5G services, and that the Commission should utilize the same regulatory framework for the Upper C-band.²⁰ Proposals that advocate for deviating from this proven framework should be rejected.

First, reserving spectrum for satellite services would only serve to reduce the amount of spectrum allocated for terrestrial mobile wireless services. This would undercut the primary goal of the proceeding, which is to maximize the amount of contiguous mid-band spectrum allocated

designed to motivate the Commission to adopt accelerated relocation payments. *See, e.g.*, SES Americom Comments at 8; Eutelsat Comments at 22.

¹⁹ *See* Comments of Space Exploration Holdings, LLC, GN Docket No. 25-59, at 3-4 (filed Jan. 26, 2026); Comments of OQ Technology, GN Docket No. 25-59, at 1-2 (filed Dec. 31, 2025); Comments of Professor Monisha Ghosh, University of Notre Dame, et al., GN Docket No. 25-59, at 1-2 (filed Jan. 21, 2026).

²⁰ *See* Section I, *supra*.

for terrestrial use and thereby achieve scale benefits in spectrum efficiency and network performance.²¹ If the Commission seeks to explore expanding the bands approved for Supplemental Coverage from Space to include the Upper C-band, as SpaceX advocates, it can do so as part of a separate proceeding once the mobile terrestrial deployments in the Upper C-band are complete and the deployments and spectrum use can be fully analyzed. Finally, allowing for shared use in the Upper C-band would eliminate the Commission-recognized benefits that flow from exclusive use licenses, including promoting investment and incentivizing innovation, as well as better network quality and more rapid deployment of next-generation services.²²

Simply put, to satisfy its Congressional mandate under the One Big Beautiful Bill Act and fulfill its stated goal to “rapidly make more valuable mid-band spectrum available for terrestrial wireless services,”²³ the Commission must allocate the maximum amount of Upper C-band spectrum for exclusive, terrestrial commercial wireless use.

IV. CONCLUSION

The record demonstrates broad consensus among mobile wireless stakeholders that the Commission should adopt a unified regulatory approach to terrestrial mobile operations across the C-band by extending the Lower C-band’s licensing and technical framework to the Upper C-band. At the same time, the record makes clear that the timelines for clearing FSS operations far outpace the readiness of upgraded radio altimeters, creating a gap that would prevent meaningful mobile use of cleared spectrum. In light of this mismatch, the Commission should refrain from authorizing accelerated relocation payments for Upper C-band clearing until the

²¹ See Comments of T-Mobile USA, Inc., GN Docket No. 25-59, at 5 (filed Jan. 20, 2026).

²² See, e.g., *Expanding Flexible Use in the 3.7-4.2 GHz Band*, Report and Order, Order Proposing Modification, 35 FCC Rcd 2343, 2379, ¶ 76 (2020).

²³ NPRM at ¶ 2.

spectrum can be put to productive mobile use. Lastly, the Commission should reject proposals that would inject mobile satellite services or shared-use regimes into the Upper C-band. These proposals would undercut the record developed in this proceeding which demonstrates the substantial public interest benefits that would result from aligning the regulatory framework for terrestrial mobile services across the C-band and allocating the maximum amount of Upper C-band spectrum for exclusive, terrestrial commercial wireless use.

Respectfully submitted,

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