

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

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

NOTICE OF INQUIRY

Adopted: February 27, 2025

Released: February 28, 2025

Comment Date: April 29, 2025

Reply Comment Date: May 29, 2025

By the Commission: Chairman Carr and Commissioners Starks and Gomez issuing statements.

I. INTRODUCTION

1. The 3.7–4.2 GHz band (C-band) is a prime band for many enhanced spectrum-based services due to its desirable coverage, capacity, and propagation characteristics. In 2020, the Commission repurposed the 3.7–3.98 GHz portion of the C-band for flexible use in the contiguous United States.¹ Thanks to those efforts, operators deployed new and improved wireless services that brought 5G to countless communities, including rural, remote, and underserved areas. To meet projected spectrum demand, spur economic growth, and advance American security interests, we initiate this proceeding to consider whether we should take additional actions regarding the remainder of the C-band.

2. This *Notice of Inquiry (NOI)* broadly seeks to continue an important and ongoing conversation among stakeholders about whether the Commission should make some or all of the 3.98–4.2 GHz portion of the band (Upper C-band) available for more intensive use. This *NOI* is an initial step towards exploring whether, and if so, how to introduce new operations in the Upper C-band, and we encourage all interested parties to submit detailed and evidence-based comments to advance current discussions.

II. BACKGROUND

3. *3.7–4.0 GHz Transition.* In the *2020 C-Band R&O*, the Commission authorized flexible use terrestrial operations in the lower 280 megahertz of the C-band (3.7–3.98 GHz) (the 3.7 GHz Service) in the contiguous United States, while reserving 20 megahertz as a guard band (3.98–4.0 GHz) and migrating incumbent operations into the upper 200 megahertz (4.0–4.2 GHz).² To effectuate this transition, the Commission modified the licenses and market access authorizations of incumbent Fixed Satellite Service (FSS) operators, transmit-receive earth station licensees, and Fixed Service (FS) licensees to clear the lower portion of the band,³ and assigned overlay licenses for the 3.7 GHz Service

¹ *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, 2353–90, paras. 22–109 (2020) (*2020 C-Band R&O*).

² *Id.* at 2370–72, paras. 54, 56–58. The 3.7 GHz Service is currently allocated in the United States for non-Federal use on a primary basis for Fixed Service and Mobile, except aeronautical mobile, Service, and it is authorized for flexible use within the contiguous United States, and for fixed use outside of the contiguous United States. *Id.*; see also 47 CFR § 2.106(c)(182), (c)(457).

³ *2020 C-Band R&O*, 35 FCC Rcd at 2394–408, 2463–66, 2488–89, paras. 124–53, 321–28, 409. The Commission also adopted a freeze on the filing of new or modified earth station applications across the 3.7-4.2 band. *Temporary*
(continued....)

through a Commission-administered public auction.⁴ The Commission also adopted service rules requiring 3.7 GHz Service licensees to comply with certain part 27 licensing, operating, and technical rules to encourage efficient use of the spectrum and protect incumbent users both in-band and in adjacent bands.⁵

4. In order to facilitate the transition of incumbent services into the 4.0–4.2 GHz portion of the band, the Commission required the new 3.7 GHz Service licensees to reimburse the reasonable relocation costs of eligible incumbent FSS space station operators, FSS earth station operators, and FS licensees, and determined that a third-party Relocation Payment Clearinghouse would oversee the cost-related aspects of the transition.⁶ The practical aspects of the FSS transition were managed by the eligible incumbent space station operators who were required to submit public transition plans and work with a Relocation Coordinator to ensure a timely and orderly process.⁷ The Commission established an ultimate deadline of December 5, 2025, by which the eligible incumbent space station operators were to complete the transition of FSS operations to the upper portion of the band, and also provided incentives for an accelerated clearing process by allowing eligible incumbent space station operators to voluntarily commit to relocate on a two-phased accelerated schedule, with a Phase I deadline of December 5, 2021, and a Phase II deadline of December 5, 2023.⁸ All five eligible incumbent space station operators elected accelerated relocation,⁹ subsequently met the respective Phase I and II deadlines, and thus, became eligible for designated accelerated relocation payments.¹⁰ As a result, the practical work of the transition was completed in 2023, and 3.7 GHz Service licensees are now providing 5G service using these frequencies in markets throughout the contiguous United States.¹¹ The residual cost-related aspects of the transition are nearing completion.¹²

5. *Current Allocation and Use of the Upper C-band and Adjacent Bands.* Subsequent to the transition in the lower portion of the band, the 3.98–4.0 GHz portion of the Upper C-band in the contiguous United States is currently reserved as a guard band to protect adjacent incumbent operations

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Freeze on Applications for New or Modified Fixed Satellite Service Earth Stations and Fixed Microwave Stations in the 3.7-4.2 GHz Band, Public Notice, 33 FCC Rcd 3841 (IB, PSHSB, WTB 2018). This freeze remains in place.

⁴ *2020 C-Band R&O*, 35 FCC Rcd at 2353–90, paras. 22–109; see also *Wireless Telecommunications Bureau Grants Auction 107 Licenses*, Public Notice, 36 FCC Rcd 10972 (WTB 2021); *Wireless Telecommunications Bureau Grants Additional Auction 107 Licenses*, Public Notice, 37 FCC Rcd 4505 (WTB 2022); *2020 C-Band R&O*, 35 FCC Rcd at 2353–70, paras. 22–53.

⁵ *2020 C-Band R&O*, 35 FCC Rcd at 2376–90, 2467–86, paras. 71–109, 332–397. See generally 47 CFR pt. 27.

⁶ *2020 C-Band R&O*, 35 FCC Rcd at 2415–52, paras. 178–283; 47 CFR §§ 27.1411–27.1422.

⁷ *2020 C-Band R&O*, 35 FCC Rcd at 2452–2461, paras. 284–317; 47 CFR §§ 27.1411–27.1413. Incumbent point-to-point FS operations in the entire C-band were sunset in the contiguous United States as of Dec. 5, 2023. See *2020 C-Band R&O*, 35 FCC Rcd at 2463–66, paras. 321–28; see also 47 CFR §§ 2.106(c)(182)(iii)(B); 101.147(a)(8), (14), (25); 101.803(d)(1).

⁸ *2020 C-Band R&O*, 35 FCC Rcd at 2408, 2413–22, paras. 155, 168–192; 47 CFR § 27.1412(a), (b)(1)–(2).

⁹ *Wireless Telecommunications Bureau Announces Accelerated Clearing in the 3.7–4.2 GHz Band*, GN Docket No. 18-122, Public Notice, 35 FCC Rcd 5517 (WTB 2020); 47 CFR § 27.1412(c).

¹⁰ See generally *2020 C-Band R&O*, 35 FCC Rcd at 2415–45, paras. 178–249; 47 CFR §§ 27.1412(b), (g); 27.1422.

¹¹ See, e.g., Press Release, Verizon, Verizon Turbo Charges its 5G Network With the Addition of More Spectrum (Aug. 14, 2023), <https://www.verizon.com/about/news/verizon-5g-network-addition-more-spectrum>.

¹² Relocation Payment Clearinghouse LLC, Quarterly Report for the Period Ending Dec. 31, 2024, at 1 (2025), <https://www.fcc.gov/ecfs/document/10130281942638/1>; see also *Wireless Telecommunications Bureau Adopts Final Deadlines for Submission of C-Band Reimbursement Claims*, GN Docket No. 18-122, Public Notice, 2023 WL 8643467 (WTB 2023).

from potential harmful interference.¹³ The 4.0–4.2 GHz portion of the Upper C-band is currently allocated throughout the entire United States for non-Federal use on a primary basis for FSS and FS, although FS links no longer operate within the continental United States.¹⁴ Domestically, space station operators use these frequencies to provide space-to-earth or downlink signals of various bandwidths to licensed transmit-receive, registered receive-only, and unregistered receive-only earth stations nationwide.¹⁵ These signals primarily deliver programming content to television and radio broadcasters throughout the country, as well as providing telephone, data, and satellite communications services to customers on a contractual basis, including federal users.¹⁶

6. The adjacent 4.2–4.4 GHz band is allocated in the United States for Federal and non-Federal Aeronautical Radionavigation Services for radio altimeters, which are aeronautical safety systems primarily used at altitudes under 2500 feet to measure aircraft height above terrain and obstacles in all phases of flight.¹⁷ It also has a global co-primary allocation for wireless avionics intra-communications systems, which provide communications over short distances between points on a single aircraft and are not intended to provide air-to-ground communications or communications between two or more aircraft.¹⁸

III. DISCUSSION

7. In this *NOI* we take the initial step towards exploring whether and, if so, how we could free up additional mid-band spectrum for new services in the Upper C-band. In doing so, we acknowledge the wide variety of incumbent operations and users in and adjacent to the band—including FSS operators, FSS earth stations, content providers, and aviation interests—and seek comment below on how to provide opportunities for more intensive use of the spectrum, whether terrestrial, satellite-based, or a combination thereof (as is the case, for example, under our Supplemental Coverage from Space (SCS) rules).¹⁹ Given the success of the recent 3.7 GHz Service transition and the rapid deployment of 5G services in that portion of the band, we seek comment on whether similar authorization and transition mechanisms could be used to make additional spectrum available in the Upper C-band.

8. *Opportunities for More Intensive Use of the Upper C-band.* Building on the Commission’s prior decision in the *2020 C-Band R&O*, we seek general comment on the parameters of any new opportunities for robust connectivity in this band.²⁰ More specifically, we seek comment on

¹³ 3.98–4.0 GHz is allocated in the continental United States for non-Federal use on a primary basis for FS and Mobile, except aeronautical mobile, Service although there are no service rules established for that portion of the band. 47 CFR § 2.106(c)(182), (c)(457); *see also 2020 C-Band R&O*, 35 FCC Rcd at 2371–72, para. 58.

¹⁴ 47 CFR § 2.106(c)(182), (c)(457). For FSS, historically the entire 3.7–4.2 GHz band (space-to-Earth or downlink) was paired with the 5.925–6.425 GHz band (Earth-to-space or uplink), and collectively these bands have been known as the “conventional C-band.” *See id.* § 25.103 (definitions). In the *2020 C-Band R&O*, the Commission amended the United States Table of Frequency Allocations (U.S. Table) to remove the FSS allocation from the 3.7–4.0 GHz band and required incumbent FS operators in the contiguous United States to relocate their point-to-point links out of the entire C-band (3.7–4.2 GHz) by December 5, 2023. *2020 C-Band R&O*, 35 FCC Rcd at 2371, 2463–66, paras. 56, 321–28; 47 CFR §§ 2.106(c)(182)(iii)(B); 101.147(a)(8), (14), (25); 101.803(d)(1).

¹⁵ *2020 C-Band R&O*, 35 FCC Rcd at 2347–48, para. 8.

¹⁶ *Id.*

¹⁷ 47 CFR § 2.106(c)(261) (“use of the band 4200–4400 MHz by the aeronautical radionavigation service is reserved exclusively for airborne radio altimeters”); *see also id.* § 2.106(b)(438) (“[u]se of the frequency band 4200–4400 MHz by the aeronautical radionavigation service is reserved exclusively for radio altimeters installed on board aircraft . . .”).

¹⁸ *Id.* § 2.106(b)(436).

¹⁹ *Single Network Future: Supplemental Coverage from Space, Space Innovation*, GN Docket No. 23-65, IB Docket No. 22-271, Report and Order and Further Notice of Proposed Rulemaking, 39 FCC Rcd 2622 (2024).

²⁰ *See generally 2020 C-Band R&O.*

whether the Commission should further repurpose the Upper C-band, in full or in part, to authorize more intensive use of the upper 220 megahertz portion of the band. Recognizing that 20 megahertz (3.98–4.0 GHz) is currently designated as a guard band and 200 megahertz (4.0–4.2 GHz) is actively used by incumbents, we ask commenters to specifically identify the amount of Upper C-band spectrum that might be suitable for repurposing.²¹

9. We also seek comment on whether and, if so, how we should amend the U.S. Table if the Commission decides to repurpose the Upper C-band. Should we consider aligning the allocation in the 4.0–4.2 GHz band with the Mobile, except aeronautical mobile, Service allocation in the 3.7–4.0 GHz band? Would this type of alignment help to facilitate deployment and create economies of scale? If so, should the Commission also revise the current FSS allocation in the 4.0–4.2 GHz band?²² Should the Commission consider the allocation of this band for another service or combination of services? We also request comment on steps the Commission could consider to promote connectivity in historically unserved or underserved areas.²³ Commenters should consider the economic value of current and future use cases for each type of service, including benefits and opportunity costs to consumers and the Nation’s economy.

10. *Incumbent Operators and Users.* In determining how we could further repurpose the Upper C-band, we seek to better understand the current and future needs of existing operators and users in the band. With that goal in mind, we ask incumbent operators and users—including FSS space station operators, FSS earth station operators, content providers, and other contractual customers (including federal users) that rely on FSS services—to address how the potential introduction of new services in the Upper C-band could impact their current and anticipated operations and uses. To what extent might the demand for these FSS services shift over time or be superseded by alternative technologies or delivery methods for their customers? Are there potential alternatives to Upper C-band spectrum for the provision of broadcast, media, and communications services, such as fiber, wireless backhaul, or Ku/Ka-band spectrum?²⁴ Commenters are encouraged to detail whether there are innovative approaches that might maximize use of spectrum in the Upper C-band, including but not limited to repacking in-band, relocating out of the band, or sunseting operations in favor of alternative distribution technologies. For example, commenters should address whether there are recent or anticipated technological advancements or equipment features, such as compression and filters, that could create efficiencies for existing operators and free up spectrum for new services in the band. To the extent that managed coexistence between incumbents and new service providers may be necessary, we ask that commenters propose specifics on

²¹ *Id.* at 2370–72, paras. 54, 56–58.

²² *Id.* at 2370–72, paras. 54–58; *id.* at 2370–71, para. 55 (“Adopting a primary non-Federal mobile, except aeronautical mobile, allocation to the 3.7-4.0 GHz band and revising the FSS allocation within the contiguous United States will foster more efficient and intensive use of mid-band spectrum to facilitate and incentivize investment in next generation wireless services.”).

²³ As one example, the FCC conducted a Tribal priority window in the transition of the 2.5 GHz band to encourage deployment of communications services on Tribal lands. *See Transforming the 2.5 GHz Band*, WT Docket No. 18-120, Report and Order, 34 FCC Rcd 5446 (2019) (modified by Erratum, 34 FCC Rcd 10386 (WTB 2019)); Letter from Dr. Buu Nygren, President, The Navajo Nation, to Brendan Carr, Chairman, FCC, GN Docket No. 25-59 et al. (filed Feb. 20, 2025).

²⁴ The conventional Ku-band refers to the 11.7–12.2 GHz (space-to-Earth) and 14.0–14.5 (Earth-to-space) FSS frequency bands, and the extended Ku-band refers to the 10.95–11.2 GHz (space-to-Earth), 11.45–11.7 GHz (space-to-Earth), and 13.75–14.0 GHz (Earth-to-space) FSS frequency bands. 47 CFR § 25.103. The conventional Ka-band refers to the 18.3–18.8 GHz (space-to-Earth), 19.7–20.2 GHz (space-to-Earth), 28.35–28.6 GHz (Earth-to-space), and 29.25–30.0 GHz (Earth-to-space) frequency bands. *Id.* The extended Ka-band refers to the 17.3–18.3 GHz (space-to-Earth), 18.8–19.4 GHz (space-to-Earth), 19.6–19.7 GHz (space-to-Earth), 27.5–28.35 GHz (Earth-to-space), and 28.6–29.1 GHz (Earth-to-space) FSS frequency bands. *Id.*

how effective coexistence could be maintained, with technical details and quantitative results drawn from the current state of the art.

11. *Adjacent Band Users.* Similarly, we seek to better understand how introducing new services in the Upper C-band may impact radio altimeters used by the aviation sector in the 4.2–4.4 GHz band. In connection with the 3.7–4.0 GHz transition, the Commission in the *2020 C-Band R&O* established technical and service rules to protect these adjacent band services and encouraged the aviation industry to take into account the evolving RF environment in the band and to take appropriate action, if necessary, to ensure protection of devices operating in the 4.2–4.4 GHz band.²⁵ Since that time, federal agencies and private industry stakeholders have continued to study the potential effects of flexible use operations in the 3.7 GHz Service on radio altimeters in the 4.2–4.4 GHz band.²⁶ While different views remain, ultimately a successful coexistence environment was reinforced through corresponding actions by the 3.7 GHz Service licensees, who made temporary, voluntary commitments,²⁷ and the aviation industry, through retrofits and the installation of more resilient radio altimeters.²⁸

12. In consideration of the potential deployment of new services in the Upper C-band, we seek comment on the factors and assumptions that we should consider in assessing the potential spectral environment and whether it presents risk to today’s more resilient radio altimeter operations. Are there studies or reports that can inform our understanding of the impact of introducing new services in the Upper C-band? Are there recent or anticipated technological advancements or equipment features that could further improve radio altimeter performance and new service provider equipment performance to promote successful coexistence with new services in the Upper C-band? What steps need to be taken to develop improved radio altimeters and what measures could be taken to accelerate those steps and quicken the installation of improved radio altimeters on aircraft? What, if any, technical and service rules for new operations in the Upper C-band could be implemented to maximize the commercial utility of the band while mitigating against any potential for adjacent band harmful interference?

13. *Transition Mechanics and Structure.* We also ask commenters to provide detailed proposals on the mechanics and structure of a transition to more intensive use of the Upper C-band that could incentivize rapid and efficient deployment, spur investment, and address the needs of incumbent

²⁵ *2020 C-Band R&O*, 35 FCC Rcd at 2484–85, paras. 390–95. The Commission also encouraged aviation industry stakeholders to participate in an anticipated multistakeholder group to further examine coexistence issues. *Id.* at 2485, para. 395 (“We nonetheless agree with AVSI that further analysis is warranted on why there may even be a potential for some interference given that well-designed equipment should not ordinarily receive any significant interference (let alone harmful interference) given these circumstances.”).

²⁶ Notably, the Joint Interagency 5G Radar Altimeter Interference (JI-FRAI) conducted bench tests, flight tests, and aircraft taxi testing to obtain objective data on the real world strength of 5G signals and their actual impact on radio altimeters in the 4.2–4.4 GHz band. See Frank H. Sanders, Kenneth R. Calahan, Geoffrey A. Sanders, and Savio Tran, “Measurements of 5G New Radio Spectral and Spatial Power Emissions for Radar Altimeter Interference Analysis,” Technical Report TR-22-562, U.S. Department of Commerce, National Telecommunications and Information Administration, Institute for Telecommunication Sciences, October 2022.

²⁷ See, e.g., Letter from Henry G. Hultquist, Vice President-Federal Regulatory, AT&T Services, Inc., et al., to Marlene H. Dortch, Secretary, FCC, GN Docket No. 18-122 (filed Mar. 31, 2023) (detailing voluntary commitments jointly filed by AT&T Services, Inc., T-Mobile, UScellular, and Verizon, to which the remaining seventeen 3.7 GHz licensees also subsequently committed). The voluntary commitments sunset on January 1, 2028 unless extended or reduced by mutual agreement.

²⁸ See Federal Aviation Administration, Department of Transportation, Airworthiness Directives; Transport and Commuter Category Airplanes, 88 Fed. Reg. 34065 (May 26, 2023); see also Federal Aviation Administration, *Domestic Notice, 5G C-band Transport/Commuter Airplanes, Contiguous United States, July 1, 2023, Until Further Notice*, https://www.faa.gov/air_traffic/publications/domesticnotices/dom23020_gen.html (last visited Feb. 4, 2025) (requiring that only aircraft with retrofitted radio altimeters are allowed to operate in the United States after February 1, 2024).

operators and their customers. In the *2020 C-Band R&O*, the Commission determined that it would conduct an auction of flexible use overlay licenses to assign the cleared frequencies to winning bidders.²⁹ If the Commission's auction authority is restored, could a similar approach work in the Upper C-band, or are there any changes that we should consider that would provide for a more efficient licensing process? Alternatively, we seek comment on whether there are other approaches, including other market-based mechanisms, for introducing new services to the Upper C-band.

14. We further seek comment on whether we should utilize other elements of the transition framework adopted in the *2020 C-Band R&O* to clear some or all of the Upper C-band for new services.³⁰ Depending on the intended approach to incumbent FSS services, how would their existing market authorizations, licenses, and registrations be addressed, as well as any new allocations, regulatory authorizations, or service rules that may be needed? Who would be obliged to undertake the practical transition work, and how would that process be managed, such as by a transition administrator or relocation coordinator? Who would be responsible for payment of any transition costs, and how would any payment process be managed, such as through a third-party clearinghouse? What should be the applicable standard for any cost reimbursements, and which entities would be eligible? Beyond reimbursements, are there opportunities to incentivize the repacking, relocation, or sunset of incumbent operations to make more spectrum available for flexible use on an accelerated basis?

15. *Service Rules.* Commenters should also address how the service rules we might adopt governing any new uses of the Upper C-band could encourage the efficient use of spectrum resources. In the *2020 C-Band R&O*, the Commission adopted licensing, operating, and technical rules to encourage efficient use of the spectrum resources and promote investment in the 3.7 GHz Service while protecting incumbent users remaining in the band and in adjacent bands.³¹ Should we ultimately decide to authorize flexible use operations in the Upper C-band, we seek comment on whether adopting similar service rules to those in the 3.7 GHz Service would facilitate complementary deployments in the Upper C-band. While we understand that the scope of the licensing, operating, and technical rules could vary depending on the authorization and transition mechanics that we may adopt, we ask commenters to identify any aspects of the applicable part 27 rules that may need to be modified to best support more intensive use of the Upper C-band. Alternatively, would new or different service rules be more appropriate? Should we consider other service rule models for different types of services or combination of services? We also seek comment on any cross border considerations related to Mexico or Canada. We encourage commenters to discuss how different types of service rules could promote more robust and efficient use of spectrum resources, minimize any potential for harmful interference, and maximize the flexibility of new licensees to meet the needs of their end users.

16. *Costs and Benefits/Other Possible Approaches.* We invite general comment on the costs and benefits associated with authorizing new services in the Upper C-band as discussed in this *NOI*, and ask that commenters provide detailed technical and economic data to support their suggestions. Recognizing that there could be a range of tradeoffs to consider, including different costs and benefits associated with the sharing, relocation, or sunset of incumbent services, or potentially harmful impacts to adjacent band users, we also invite comment on ways to minimize the costs and optimize the benefits of authorizing more intensive use of the Upper C-band. We seek comment on whether there are other studies, standards, efforts, or analyses that we should consider in this proceeding. If so, we ask that commenters identify them, explain why they should be considered, and note any related timing

²⁹ See *supra* note 4. The Commission previously concluded that it would serve the public interest to license the 3.7 GHz Service by assigning flexible use overlay licenses through a system of competitive bidding, however since that time, the Commission's statutory authority to resolve mutually exclusive applications for initial licenses through a system of competitive bidding has lapsed.

³⁰ See generally *2020 C-Band R&O*, 35 FCC Rcd at 2391–2466, paras. 110–328; 47 CFR §§ 27.1411–27.1422.

³¹ See *supra* note 5.

considerations. Finally, we invite comment on other possible approaches, and the costs and benefits of such approaches, that we should consider in addition to those discussed in this *NOI*.

IV. PROCEDURAL MATTERS

17. *Ex Parte Presentations.* The proceeding this *Notice* initiates shall be treated as a “permit-but-disclose” proceeding in accordance with the Commission’s *ex parte* rules.³² Persons making *ex parte* presentations must file a copy of any written presentation or a memorandum summarizing any oral presentation within two business days after the presentation (unless a different deadline applicable to the Sunshine period applies). Persons making oral *ex parte* presentations are reminded that memoranda summarizing the presentation must (1) list all persons attending or otherwise participating in the meeting at which the *ex parte* presentation was made, and (2) summarize all data presented and arguments made during the presentation. If the presentation consisted in whole or in part of the presentation of data or arguments already reflected in the presenter’s written comments, memoranda or other filings in the proceeding, the presenter may provide citations to such data or arguments in his or her prior comments, memoranda, or other filings (specifying the relevant page and/or paragraph numbers where such data or arguments can be found) in lieu of summarizing them in the memorandum. Documents shown or given to Commission staff during *ex parte* meetings are deemed to be written *ex parte* presentations and must be filed consistent with rule 1.1206(b). In proceedings governed by rule 1.49(f) or for which the Commission has made available a method of electronic filing, written *ex parte* presentations and memoranda summarizing oral *ex parte* presentations, and all attachments thereto, must be filed through the electronic comment filing system available for that proceeding, and must be filed in their native format (e.g., .doc, .xml, .ppt, searchable .pdf). Participants in the proceeding should familiarize themselves with the Commission’s *ex parte* rules.

18. *Comment Period and Filing Procedures.* Pursuant to section 1.430 of the Commission’s rules, 47 CFR § 1.430, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using the Commission’s Electronic Comment Filing System (ECFS). Commenters should refer to GN Docket No. 25-59 when filing in response to this *Notice of Inquiry*.

- *Electronic filers:* Comments may be filed electronically using the Internet by accessing the ECFS: <https://www.fcc.gov/ecfs>.
- *Paper filers:* Parties who choose to file by paper must file an original and one copy of each filing.
 - Filings can be sent by hand or messenger delivery, by commercial courier, or by the U.S. Postal Service. **All filings must be addressed to the Secretary, Federal Communications Commission.**
 - Hand-delivered or messenger-delivered paper filings for the Commission’s Secretary are accepted between 8:00 a.m. and 4:00 p.m. by the FCC’s mailing contractor at 9050 Junction Drive, Annapolis Junction, MD 20701. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes and boxes must be disposed of before entering the building.
 - Commercial courier deliveries (any deliveries not by the U.S. Postal Service) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
 - Filings sent by U.S. Postal Service First-Class Mail, Priority Mail, and Priority Mail Express must be sent to 45 L Street NE, Washington, DC 20554.

³² 47 CFR § 1.1200 *et seq.*

19. *Availability of Documents.* Comments, reply comments, and *ex parte* submissions will be publicly available via ECFS.

20. *People with Disabilities.* To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an e-mail to fcc504@fcc.gov or call the Consumer and Governmental Affairs Bureau at 202-418-0530 (voice).

21. *Additional Information.* For additional information on this proceeding, contact Paul Powell of the Wireless Telecommunications Bureau, Mobility Division, at (202) 418-1613 or Paul.Powell@fcc.gov.

V. ORDERING CLAUSE

22. IT IS ORDERED, pursuant to sections 1, 301, 302(a), 303(g), and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151, 301, 302a(a), 303(g), and 403, and section 1.430 of the Commission's rules, 47 CFR § 1.430, that this *Notice of Inquiry* IS HEREBY ADOPTED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

**STATEMENT OF
CHAIRMAN BRENDAN CARR**

Re: *Upper C-band (3.98 to 4.2 GHz)*, GN Docket No. 25-59 (Feb. 2025).

Seven years ago, when I testified at my first Senate confirmation hearing, I said that expanding U.S. leadership in wireless would be one of my top priorities at the FCC. Back then, I talked about the need for a steady pipeline of spectrum to meet consumer demand. And that demand has only increased in the intervening years. Right off the bat when I joined the FCC, we had the opportunity to make a lot of significant forward progress on spectrum. We ended up freeing up almost six gigahertz of spectrum for licensed services in addition to thousands of megahertz of spectrum for unlicensed services. Over the last couple of years, the FCC hasn't been able to make as much forward progress. So, it is important for the FCC to act. After all, freeing up spectrum drives down prices for consumers, it creates jobs, and it increases competition. It's also key to promoting our national security and geopolitical leadership.

So, I am very pleased that the Commission is moving forward quickly on spectrum, including with today's decision to look at a large portion of mid-band spectrum, known as the Upper C-band. In recent years, forward progress on spectrum has been a challenge, particularly after the FCC's auction authority lapsed. And it is important that Congress restore the FCC's authorization so that we can move forward in a balanced manner—one that protects the interests of all stakeholders—including our national security partners and private sector.

The Upper C-band is a good place to start, and the FCC's inquiry here can complement ongoing efforts that are focused on different portions of the Table of Frequency Allocations. The FCC has recent experience with this band. Back in 2020, the Commission successfully repurposed and auctioned 280 MHz of the lower portion of the C-band for commercial 5G. Like almost all spectrum efforts these days, that one was not an easy task. But the FCC's talented staff rose to the challenge once again and found a path forward.

Fast forward five years to today. That lower portion of the C-band now powers new and competitive offerings from in-home broadband to high-speed mobile broadband from coast to coast. Given our experience in that proceeding, I think it is appropriate to take another look at the band.

As we do so, nothing is off the table. We look forward to hearing from commenters about whether, and if so, how the Upper C-band could be put to use in a way that incentivizes deployment and investment. We will also need to consider incumbent stakeholders and our federal partners with interests in this band. I look forward to reviewing the record as it develops.

Finally, I would like to thank all the FCC staff that worked on this item, especially Susan Mort, Paul Powell, and Halie Peacher from the Wireless Telecommunications Bureau.

**STATEMENT OF
COMMISSIONER GEOFFREY STARKS**

Re: *Upper C-band (3.98 GHz to 4.2 GHz)*, GN Docket No. 25-59 (Feb. 2025).

Global competition in wireless communications is white hot. Without the spectrum we need to power next generation networks, the United States risks falling behind. This NOI holds the potential to facilitate more intensive use of the upper 220 megahertz of the C-band that could encourage economic growth and reinforce our national security.

I want to thank the Chairman for accepting my edits to ensure we evaluate all options for repurposing this band. Whether that's for one service, or a mix of several, we need to explore every opportunity to efficiently utilize this prime, mid-band spectrum. My edits will ensure that this NOI unambiguously solicits feedback not just on the potential for terrestrial OR space-based service, but also a combination of multiple services simultaneously. As demand for spectrum increases, and opportunities for repurposing it become more difficult, it's imperative that we do more with less. If there are technological or governance solutions that can successfully accommodate more users in the Upper C-band, we want to hear about them. As we begin this process, I'm glad we'll be doing so with spectral efficiency as our north star.

I'm also thankful that—as we did with the AWS-3 item—we'll be seeking comment on promoting connectivity on historically unserved and underserved areas, especially as it relates to Tribal lands. As I noted in my approval of the previous item, this is an area where we can and must do better. Period. Building a record on tools like a Tribal priority window will ensure we have the information we need to continue chipping away at the digital divide. I'll remain engaged on this critical issue as the record develops.

While this NOI is an important step, we're far from where we need to be. This agency still lacks auction authority and there are significant challenges to more efficiently utilizing this band. Inter-agency conflict, competing business models, and bureaucracy all lend themselves to sluggish timelines and inaction. In March 2021, almost four years ago exactly, then Commissioner Carr said at the start of the prior Administration: “We need to be clear eyed about our spectrum policy going forward. Whether we like it or not, freeing up more spectrum requires FCC leadership that accumulates political capital and has the willingness to spend it. This is the reality of spectrum policy these days, and the FCC must show strong leadership to free up more airwaves.”¹ I couldn't agree more. But now it's time to put those words into action. Will we commit to tight timelines? To be even more precise, then Commissioner Carr said in that same speech that the prior Administration should push quickly to auction the Lower 3GHz in a year - - 2022. So where do we stand today in this Administration to move on Lower 3GHz – still able to move within a year? Will this agency stand up for its jurisdiction during the interagency process? Will this Administration show the will needed to make new spectrum available for commercial use?

Keeping the United States as the global pacesetter for wireless innovation is my goal. I stand ready to help. Thank you to the Wireless Bureau for their hard work.

¹ Keynote Remarks of FCC Commissioner Brendan Carr at the American Enterprise Institute, *Extending America's 5G Leadership*, Mar. 15, 2021, available at <https://docs.fcc.gov/public/attachments/DOC-370781A1.pdf>.

**STATEMENT OF
COMMISSIONER ANNA M. GOMEZ**

Re: *Upper C-band (3.98 GHz to 4.2 GHz)*, GN Docket No. 25-59 (Feb. 2025).

Taking a measured first step towards exploring new opportunities in spectrum is important. This Notice of Inquiry is a measured first step. I am pleased to see that we are asking broad questions, particularly about studies and reports that can inform our understanding of the impact of introducing new users and services to an established band.

We know from the first C-band transition in 2020 that failure to ask questions led to our inability to identify potential problems. Failure to coordinate cost the industry time and money. Failure to address our differences led to the challenges we are facing now in collaborating with other agencies, which has made it harder to find more spectrum. So, I am glad we are asking questions now. By asking questions early, we take steps toward consensus and effectiveness in spectrum management.

Here, I would like to thank both the Chairman and Commissioner Starks for working with me on edits. I am particularly pleased to see Footnote 23, citing the letter that the President of the Navajo Nation sent to Chairman Carr encouraging our agency to consider a Tribal Priority Window in any potential restructuring of the Upper C-band.¹ As Navajo Nation President Nygren states, the Tribal Priority Window “has been a keystone in promoting broadband connectivity, allowing local service providers to expand wireless access to thousands of homes and businesses across our lands.”²

I look forward to hearing from all Tribal Nations on whether a Tribal Priority Window in the Upper C-band would create opportunities for deploying communications services on Tribal Lands. And also from other stakeholders, like the 20 organizations that filed a letter in support of such a window.³

I want to remind us that to be able to exercise the full strength of our spectrum management power, we need the reinstatement of our auction authority.

Thank you to the stellar staff of the Wireless Telecommunications Bureau for your hard work on this item.

¹ Letter from Dr. Buu Nygren, President, The Navajo Nation, to Brendan Carr, Chairman, FCC, GN Docket No. 25-59 et al. (filed Feb. 20, 2025).

² *Id.*

³ Letter from Harold Feld, Senior Vice President, Public Knowledge, to Marlene H. Dortch, Secretary, FCC, GN Docket No. 25-70 et al. (filed Feb. 19, 2025).