



FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 30

[WT Docket No. 24-243, GN Docket No. 14-177; FCC 25-24; FR ID 293182]

Lower 37 GHz Band and Use of Spectrum Bands Above 24 GHz for Mobile Radio Service

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission) seeks comment on three issues: adopting a more stringent emissions limit for Upper Microwave Flexible Use Service (UMFUS) operations above 37 GHz; whether the first phase of the coordination mechanism adopted in the companion final rule, published elsewhere in this issue of the **Federal Register**, can be enhanced by consideration of additional factors; and whether it might be possible to replace the same coordination mechanism with a dynamic spectrum management system (DSMS). The Commission also proposes to correct an error in a power flux density (PFD) figure in one of its technical rules for UMFUS.

DATES: Comments are due on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**; reply comments are due on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Written comments on the Initial Regulatory Flexibility Analysis (IRFA) in this document must have a separate and distinct heading designating them as responses to the IRFA and must be submitted on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

ADDRESSES: Pursuant to §§ 1.415 and 1.419 of the Commission's rules, 47 CFR 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated in the **DATES** section of this document. Comments may be filed using the Commission's Electronic Comment Filing System (ECFS). See *Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998). You may submit comments, identified by WT Docket No. 24-243, by any of the following methods:

- *Electronic Filers:* Comments may be filed electronically using the Internet by accessing 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 a.m. and 4 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.

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 & Governmental Affairs Bureau at (202) 418-0530.

FOR FURTHER INFORMATION CONTACT: Catherine Schroeder, Wireless Telecommunications Bureau, Broadband Division, at Catherine.Schroeder@fcc.gov or (202) 418-1956.

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's *Further Notice of Proposed Rulemaking (FNPRM)* in WT Docket No. 24-243; GN Docket No. 14-177; FCC 25-24; FR ID 293182; adopted on April 28, 2025, and released on April 29, 2025. A *Report and Order and Sixth Report and Order* relating to the *Further Notice of Proposed Rulemaking* will be published in the Final Rule section of the *Federal Register* on the same date as this summary. The full text of the document is available at <https://www.fcc.gov/document/fcc-clears-way-wireless-innovation-lower-37-ghz-band-0>.

Ex Parte Rules

The proceeding shall be treated as “permit-but-disclose” in accordance with the Commission's *ex parte* rules. 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 this proceeding should familiarize themselves with the Commission's *ex parte* rules.

Initial Regulatory Flexibility Analysis

The Commission prepared an Initial Regulatory Flexibility Analysis (IRFA) concerning the potential impact of rule and policy changes in the *FNPRM* on small entities. Written public comments are requested on the IRFA. Comments must be filed by the deadlines for comments on the *FNPRM* indicated in the **DATES** section of this document and must have a separate and distinct heading designating them as responses to the IRFA; see section II of this document for more detail.

Paperwork Reduction Act

The *Further Notice of Proposed Rulemaking* does not contain proposed information collection requirements subject to the Paperwork Reduction Act of 1995, Public Law 104-13. In addition, therefore, it does not contain any proposed information collection burden “for small business concerns with fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002.

Providing Accountability Through Transparency Act

The Providing Accountability Through Transparency Act requires each agency, in providing notice of a rulemaking, to post online a brief plain-language summary of the proposed rule. Accordingly, the Commission will publish the required summary of the *FNPRM* on <https://www.fcc.gov/proposed-rulemakings>.

SYNOPSIS

I. FURTHER NOTICE OF PROPOSED RULEMAKING IN WT DOCKET NO. 24-243

1. In the *FNPRM*, the Commission seeks comment on whether to revise the emissions limits for Upper Microwave Flexible Use Service (UMFUS) operations above 37 GHz to protect passive sensors in the adjacent 36–37 GHz band, whether the initial coordination mechanism can be enhanced by consideration of additional factors like clutter, the development of an automated portal, and/or whether a dynamic sharing mechanism might be considered in the future.

2. The entire 37 GHz band (37–38.6 GHz) is allocated to the fixed and mobile services on a primary basis for Federal and non-Federal use. Portions of the 37 GHz band are also allocated to the Space Research Service (SRS) (space-to-Earth) on a primary basis for Federal use (37–38 GHz), and to the Fixed-Satellite Service (FSS) (space-to-Earth) on a primary basis for non-Federal use (37.5–38.6 GHz). The use of this FSS downlink allocation is limited to individually-licensed earth stations, and is also subject to other limitations. In addition, the 37 GHz band is adjacent to the 36–37 GHz band, where passive sensors in the Earth Exploration Satellite Service (EESS) and SRS are located.

3. In 2016, the Commission adopted rules to permit fixed and mobile terrestrial operation in the 37 GHz band (81 FR 79894). In an accompanying *FNPRM* (81 FR 58270), the Commission sought comment on a proposal under which Federal

and non-Federal fixed and mobile users would access the Lower 37 GHz band by registering individual sites through a coordination mechanism. In 2018, the Commission denied petitions for reconsideration asking that it adopt exclusive area licensing in the Lower 37 GHz band, and that it not allow Federal entities to have expansion rights in that band (83 FR 34478, corrected 84 FR 17360). In an FNPRM published in 2018, the Commission also sought comment on how to coordinate operations under a non-exclusive licensing regime that could be used to share spectrum either between non-Federal entities or between Federal and non-Federal entities (*2018 FNPRM*, 83 FR 34520). In the *2018 FNPRM*, the Commission also recognized the importance of the Lower 37 GHz band to future Federal operations, and stated its intent to work in partnership with the National Telecommunications and Information Administration (NTIA), Department of Defense (DoD), and other Federal agencies to develop a sharing approach that allows for robust Federal and non-Federal use in the Lower 37 GHz band.

4. Subsequently, in 2023, the National Spectrum Strategy, adopted under the prior Administration, identified the Lower 37 GHz band for further study “to implement a co-equal, shared-use framework allowing Federal and non-Federal users to deploy operations in the band.”

5. To aid in the study of the band, the Commission’s Wireless Telecommunications Bureau (WTB) issued a Public Notice seeking further development of the record relating to the Lower 37 GHz band (*2024 Public Notice*; 89 FR 68610). The *2024 Public Notice* specifically solicited further information on: (i) potential uses of the Lower 37 GHz band; (ii) a two-phase coordination framework; (iii) adjacent band protections, including whether additional measures are needed to protect spaceborne remote passive sensors in the 36–37 GHz band; (iv) a licensing process, which would involve two steps for non-Federal operations; and (v) priority access for DoD and

military agency departments in the 37–37.2 GHz portion of the band. It also sought general input on a means of ensuring widespread access to Lower 37 GHz spectrum. The Commission received thirteen comments and four *ex parte* filings in response to the *2024 Public Notice*.

6. On November 29, 2024, DoD and NTIA released a report (DoD/NTIA Report) recommending adoption of the coordination framework described in the *2024 Public Notice*; establishing priority access for DoD in the 37–37.2 GHz portion of the band while retaining co-equal access for Federal and non-Federal users in the 37.2–37.6 GHz portion of the band; and establishing stricter out-of-band emission (OOBE) limits than the Commission previously adopted in 2016 in order to protect adjacent band operations in the 36–37 GHz band.

7. On April 28, 2025, the Commission adopted a *Report and Order and Sixth Report and Order (2025 R&O)* to establish a framework to share the Lower 37 GHz band among Federal and non-Federal users. This framework will allow the Lower 37 GHz band to be used for a range of services through rules designed to accommodate a variety of use cases—including backhaul and backbone links; fixed wireless broadband systems; Internet of Things (IoT)-type systems; and supplemental capacity for mobile systems. The *2025 R&O* also adopts an initial mechanism for coordinating co-primary shared Federal and non-Federal uses of the band, developed jointly with NTIA with input from DoD and other interested Federal and non-Federal stakeholders. The *FNPRM* was adopted at the same time as the *2025 R&O*.

A. Emissions into the Passive Band Below 37 GHz

8. *Background.* There are Federal and non-Federal allocations for EESS (passive) and SRS (passive) in the adjacent 36–37 GHz band. Passive sensors use the 36–37 GHz band to collect data on ocean surface vector winds, cloud liquid water,

precipitation rate, snow depth, tropical cyclone, forecast and warning, sea ice characterization, and the National Weather Prediction model. The NTIA/DoD Report notes that the military services use this data in a wide variety of ways that they note is important to their daily operations, and indicates these agencies' concern that lack of adoption of Resolution 243 would increase the likelihood that continued existing and proposed military operations cannot be accommodated in the 36-37 GHz band. The American Geophysical Union (AGU), American Meteorological Society (AMS), National Weather Association (NWA) and University Corporation for Atmospheric Research (UCAR) note that the data collected by these observations are openly available and extremely valuable to civil and international users of meteorological information across the public, private and academic sectors for weather prediction and climate monitoring worldwide. National Aeronautics and Space Administration (NASA) also uses this band in connection with "the Global Precipitation Measurement (GPM) Mission, which is an important science satellite mission that operates passive sensors to measure Earth's rain and snowfall."

9. In 2016, the Commission adopted an OOB limit that it concluded would "keep emissions from an UMFUS device into the 36–37 GHz band well below the -10 dBW level specified by footnote US550A," noting that the -10 dBW power limit "was adopted to protect passive sensors in the 36–37 GHz band in accordance with ITU Resolution 752 (WRC-07)." Section 30.203 of the Commission's rules limits out-of-band emissions for licensees in the Lower and Upper 37 GHz bands to -13 dBm/MHz, which is equivalent to -13 dBW/GHz, which is more stringent than the limit contained in Resolution 752 (WRC-07).

10. Subsequently, Resolution 243 (WRC-19), Table 1, established a two-prong out-of-band emission limit into the adjacent 36-37 GHz band for International Mobile Telecommunications (IMT) stations operating in 37-40.5 GHz: 1) -43 dBW/MHz,

which is equivalent to the -13 dBm/MHz limit in the Commission's rules; 2) -23 dBW/GHz, which is the unwanted emission power over the full 36-37 GHz band. In addition, Resolution 243 (WRC-19), Table 1, recommended a stricter emission limit of -30 dBW/GHz for IMT stations. In their report, NTIA and DoD contend that protection to these levels is "essential, considering the anticipated higher density deployment of fixed and mobile services that will result from the development of a sharing framework in the Lower 37 GHz Band." As a result, NTIA recommends updating the U.S. footnotes to reflect WRC-19 Resolution 243, Table 1.

11. All potential non-Federal users of Lower 37 GHz spectrum addressing the issue in response to the *2024 Public Notice* oppose revising the OOB limits for the 37 GHz band, arguing that the existing limit is sufficient to protect passive sensors and that revising the limit could make existing equipment unusable. Ericsson notes that existing 37 GHz band equipment was designed to meet the OOB limits adopted by the Commission in 2016. It also notes that the Commission previously required that this equipment be operable across the entire 37–40 GHz band, and that "radios have been deployed based on those existing Part 30 rules." Accordingly, Ericsson contends that changing the OOB limits after rules have already been established for the Upper 37 GHz and 39 GHz bands could impair existing equipment and deployments in those bands, because equipment in those bands was not designed to comply with the more stringent Resolution 243 limits.

12. The National Academy of Sciences Committee on Radio Frequencies (CORF) and American Geophysical Union (AGU)/American Meteorological Society (AMS)/National Weather Association (NWA)/University Corporation for Atmospheric Research (UCAR) urge, at a minimum, the incorporation of the interference protection limits in Resolution 243 (WRC-19) into the Commission's rules. CORF asserts a need for a greater degree of protection from OOB than what was defined by WRC-19 when

accounting for the aggregate emission from many devices within the footprint of these passive sensors; AGU, AMS, NWA and UCAR support this view.

13. *Discussion.* In response to the DoD/NTIA Report, the Commission seeks comment on whether or not to adopt a more stringent unwanted emission limit for mobile stations in the Lower 37 GHz band. In addition to WRC-19 Resolution 243, is there a technical basis for revisiting the Commission's 2016 conclusion that the Commission's existing limits are sufficient to protect passive observations below 37 GHz? Should the Commission adopt the limits in WRC-19 Resolution 243? Alternatively, should the Commission adopt a lesser limit? NTIA and DoD, as well as CORF and AGU/AMS/NWA/UCAR, assert that adopting the mean power -23 dBW/GHz limit over the 36–37 GHz band is “essential,” given the increased density in the shared Lower 37 GHz band, and that it might even be appropriate to adopt a more stringent limit. However, users and potential users of the band assert that the existing limit is sufficient—and that, due to the operability requirement, changing the OOB limit could degrade the performance of existing equipment and deployments for which the Commission adopted harmonized technical rules across three gigahertz of spectrum in 2016. The Commission seeks comment on the U.S. footnote that DoD and NTIA propose to add to the Table of Allocations implementing the limits adopted as part of Resolution 243 at WRC-19.

14. The Commission asks both proponents and opponents of adopting stricter limits to provide specific technical information to support their arguments. In particular, the Commission seeks comment on the actual characteristics of currently available and currently deployed equipment, including equipment available or deployed in the Upper 37 and 39 GHz bands (37.6–40 GHz). What standard for OOB does this equipment currently meet? Are there measurements of their actual OOB, or the roll-off of their emissions over varying frequency ranges, that would shed light on the potential effects

on current services in the adjacent passive band? Also, what are the technical characteristics of adjacent-band satellite sensors that are germane to determining the level of protection they need from operations in the Lower 37 GHz band? Separately, what are the appropriate assumptions regarding the nature and density of industry's planned terrestrial deployment, and how do these align with the assumptions in the studies underlying WRC-19 Resolution 243? What kind of propagation and scattering models should be used to determine the impact, if any, of OOB from terrestrial transmitters on satellite sensors? What would be the cost of modifying this equipment to comply with the limits in Resolution 243—either in replacing or modifying already deployed equipment, or in making changes to equipment lines manufactured on a going-forward basis? Would it be possible to operate currently available equipment in a way that complies with the Resolution 243 limits, and if so, what would be the effect on the quality of service provided?

15. The Commission anticipates that in the 200 megahertz closest to the passive band (37–37.2 GHz) the level of non-Federal deployment will be lower because of the priority given to military operations in that portion of the band. While the Commission anticipates that there could be higher levels of deployment in the 37.2–37.6 GHz band, the extra 200 megahertz of separation from the passive band should provide some level of additional protection of passive observations. The Commission also seeks comment on the alternative of applying the stricter limit to non-Federal operations only in the 37–37.2 GHz portion of the band. If the Commission took this approach, would that change require a modification of the existing requirement that equipment be tunable across the entire 37–40 GHz band?

16. The Commission seeks comment on how to treat existing equipment and Upper 37 GHz and 39 GHz deployments. Resolution 243 extends up to 40.5 GHz, which includes Upper 37 GHz band and the 39 GHz band, which are licensed on a

geographic area basis. The Commission seeks comment on whether existing deployments in those bands use equipment that will not comply with the Resolution 243 emissions limits. Given the minimum of 600 megahertz of separation between the upper edge of the passive band and the lower edge of the Upper 37 GHz band, the Commission seeks comment on whether allowing existing equipment to continue operating in the Upper 37 GHz band or 39 GHz band would negatively impact EESS observations. In light of this issue, the Commission seeks comment on the potential costs and benefits of grandfathering existing deployments in the Upper 37 GHz band indefinitely.

17. Different considerations apply with respect to the Lower 37 GHz band, where there are no existing deployments authorized under the UMFUS rules. If the Commission concludes that increased emissions limits are necessary to protect observations below the Lower 37 GHz band, there would be interest in having deployments promptly comply with the Resolution 243 limits. On the other hand, as noted by NCTA, one of the attractions of the Lower 37 GHz band “is the prospect for expedited deployment due to the existing robust and growing 5G equipment ecosystem in the band.” If the more fully developed record in this proceeding shows that Lower 37 GHz deployments are not already aligned with Resolution 243 regarding a more stringent emissions limit, existing standards will have to be modified, and equipment will have to be designed to meet the new standard. That will delay the ability to deploy quickly in the band. In light of those factors, the Commission seeks comment on whether there is a transition mechanism that would allow Lower 37 GHz licensees to deploy initially using existing equipment while establishing a schedule by which they would have to comply with a more stringent emissions limit. The Commission invites commenters to suggest such a transition mechanism, keeping in mind the important

interests of protecting passive observations and encouraging rapid deployment in the band.

B. Improvements in Phase One Coordination

18. The Commission anticipates that ultimately the Phase One process of calculating interference contours for prospective sites, and comparing those contours to the contours of existing sites, may be automated through a portal. The Commission seeks comment on any factors that it should consider when exploring solutions in this space. What features would be most useful for applicants in terms of efficiently navigating this process? Are there specific features of the 70/80/90 GHz database that would be helpful for applicants in this band, as suggested by SpaceX and New America/Public Knowledge? Should the Commission designate one or more third parties to develop this functionality, and if so how should such parties be chosen? What would be the potential benefits or drawbacks of doing so?

19. Additionally, clutter can make a significant difference in interference potential and can make propagation modeling substantially more accurate to allow for more intensive use of the band. This is especially true for deployments using high-frequency spectrum in urban and suburban areas where the Commission expects most commercial 37 GHz deployments will occur because buildings, vegetation, and other manmade obstructions lead to substantial clutter loss. Specifically, allowing consideration of clutter when generating the Phase One coordination contours would reduce the number of potential contour overlaps, conserve applicants' resources by eliminating unnecessary Phase Two coordinations, and allow for a more accurate analysis of potential interference. The Commission invites commenters to discuss the advantages and disadvantages of considering clutter in Phase One coordination. The Commission also seeks comment on the best means of incorporating clutter into the

calculation of the Phase One interference contours. What are the best models and datasets to be used when considering clutter? The Commission notes that the current Phase Two rule cites ITU-R P.2108, but also encourages applicants to mutually agree on proprietary clutter loss models and building height databases, consistent with good engineering practices. Are there other principles or requirements the Commission should adopt with respect to consideration of clutter? The Commission also invites comment on the costs and benefits involved.

C. Development of DSMS

20. Some commenters supported the use of a DSMS, claiming that it would provide a more efficient solution for spectrum sharing in the band. The *2025 R&O* does not foreclose the adoption of a DSMS in the future. The Commission seeks comment on the possibility of replacing the coordination framework the Commission adopted in the *2025 R&O* with a DSMS. What metrics might the Commission use to determine that use of the 37 GHz band has reached sufficient scale to merit further exploration of adopting a DSMS to coordinate use of the band? Proponents of a DSMS also suggest the establishment of a multistakeholder group to facilitate establishment of a DSMS. If appropriate, how would such a multistakeholder group be established, and who should be included in such a group? What would be the broad parameters for such a DSMS? A DSMS would need to protect existing registrations and installed transmitters. How would existing sites and equipment be incorporated into the DSMS? How would the transition from the two-phase coordination process to the DSMS occur? For how long would both coordination methods have to be supported until a DSMS completely replaces the two phase process? The Commission seeks comment on the above questions, as well as any additional issues concerning DSMS.

D. Technical amendment to 47 CFR 30.204

21. In the *2016 Order* (81 FR 79894), the Commission intended to adopt a PFD of -77.6 dBm/m²/MHz. The adopted rule, however, lists a different value: -76/dBm/m²/MHz. The Commission believes it is in the public interest to correct that unintentional error and amend the rule to have the rule reflect the Commission's intent. The Commission seeks comment on this proposal.

II. INITIAL REGULATORY FLEXIBILITY ANALYSIS

22. As required by the Regulatory Flexibility Act of 1980, as amended (RFA), the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the policies and rules proposed in the *FNPRM*, assessing the possible significant economic impact on a substantial number of small entities. The Commission requests written public comments on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments specified in the **DATES** section of this document. The Commission will send a copy of the *FNPRM*, including the IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the *FNPRM* and IRFA (or summaries thereof) will be published in the *Federal Register*.

A. Need for, and Objectives of, the Proposed Rules

23. In the *FNPRM*, the Commission first seeks comment on whether to adopt Resolution 243, which established a -23 dBW/200 MHz emissions limit, for operations in the 37–38 GHz band. Such an approach, if adopted, would be taken in order to protect passive sensors in the 36–37 GHz band. As part of this first inquiry, the Commission also asks commenters utilizing the 37–38 GHz band, some of which are small entities, to provide specific technical information to support their arguments regarding the appropriate emission limit for this band. The Commission seeks comment on how to treat existing equipment and Upper 37 GHz band deployments. Through the actions it

ultimately takes as a result of the *FNPRM*, the Commission seeks to achieve its objective of ensuring the protection of EESS passive operations in the 36–37 GHz band, which are critical for accurate climate monitoring and weather forecasting as well as fulfillment of military missions.

24. The Commission also seeks comment on allowing consideration of clutter when generating the Phase One coordination contours. Considering clutter would reduce the number of potential contour overlaps, conserve applicants' resources by eliminating unnecessary Phase Two coordinations, and allow for a more accurate analysis of potential interference.

25. The Commission further seeks comment on the possibility of replacing the new coordination framework with a DSMS. It asks commenters to discuss what metrics might be useful to determine whether utilization of the Lower 37 GHz band has reached sufficient scale to merit further exploration; how, if appropriate, a multistakeholder group for DSMS establishment might itself be established; what the broad parameters for a DSMS might be; how existing sites and equipment might be incorporated into a DSMS; and how a transition might work (including with regards to how long two parallel systems might need to be maintained).

26. Finally, the Commission proposes to correct one of its technical rules. In 2016, the Commission intended to adopt a PFD of $-77.6 \text{ dBm/m}^2/\text{MHz}$. The adopted rule, however, lists a different value: $-76 \text{ dBm/m}^2/\text{MHz}$. The Commission believes it is in the public interest to correct that error and amend the rule to have the rule reflect the Commission's intent.

B. Legal Basis

27. The proposed action is authorized pursuant to sections 4(i), 301, 302, 303(r), 308, 309, and 333 of the Communications Act of 1934, 47 U.S.C. 154(i), 301, 302a, 303(r), 308, 309, 333.

C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply

28. The RFA directs agencies to provide a description of and, where feasible, an estimate of the number of small entities that may be affected by the proposed rules, if adopted. The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.” In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act. A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the SBA.

29. *Small Businesses, Small Organizations, Small Governmental Jurisdictions.* The Commission actions, over time, may affect small entities that are not easily categorized at present. The Commission, therefore, describes at the outset, three broad groups of small entities that could be directly affected herein. First, while there are industry specific size standards for small businesses that are used in the regulatory flexibility analysis, according to data from the Small Business Administration’s (SBA) Office of Advocacy, in general a small business is an independent business having fewer than 500 employees. These types of small businesses represent 99.9% of all businesses in the United States, which translates to 34.75 million businesses.

30. Next, the type of small entity described as a “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.” The Internal Revenue Service (IRS) uses a revenue benchmark of \$50,000 or less to delineate its annual electronic filing requirements for small exempt organizations. Nationwide, for tax year 2022, there were approximately 530,109 small exempt organizations in the U.S. reporting revenues of \$50,000 or less

according to the registration and tax data for exempt organizations available from the IRS.

31. Finally, the small entity described as a “small governmental jurisdiction” is defined generally as “governments of cities, counties, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.” U.S. Census Bureau data from the 2022 Census of Governments indicate there were 90,837 local governmental jurisdictions consisting of general purpose governments and special purpose governments in the United States. Of this number, there were 36,845 general purpose governments (county, municipal, and town or township) with populations of less than 50,000 and 11,879 special purpose governments (independent school districts) with enrollment populations of less than 50,000. Accordingly, based on the 2022 U.S. Census of Governments data, the Commission estimates that at least 48,724 entities fall into the category of “small governmental jurisdictions.”

32. *Wireless Telecommunications Carriers (except Satellite)*. This industry comprises establishments engaged in operating and maintaining switching and transmission facilities to provide communications via the airwaves. Establishments in this industry have spectrum licenses and provide services using that spectrum, such as cellular services, paging services, wireless Internet access, and wireless video services. The SBA size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms in this industry that operated for the entire year. Of that number, 2,837 firms employed fewer than 250 employees. Additionally, based on Commission data in the 2022 Universal Service Monitoring Report, as of December 31, 2021, there were 594 providers that reported they were engaged in the provision of wireless services. Of these providers, the Commission estimates that 511 providers have 1,500 or fewer

employees. Consequently, using the SBA's small business size standard, most of these providers can be considered small entities.

33. *Fixed Microwave Services.* Fixed microwave services include common carrier, private-operational fixed, and broadcast auxiliary radio services. They also include the UMFUS, Millimeter Wave Service (70/80/90 GHz), Local Multipoint Distribution Service (LMDS), the Digital Electronic Message Service (DEMS), 24 GHz Service, Multiple Address Systems (MAS), and Multichannel Video Distribution and Data Service (MVDDS), where in some bands licensees can choose between common carrier and non-common carrier status. Wireless Telecommunications Carriers (except Satellite) is the closest industry with an SBA small business size standard applicable to these services. The SBA small size standard for this industry classifies a business as small if it has 1,500 or fewer employees. U.S. Census Bureau data for 2017 show that there were 2,893 firms that operated in this industry for the entire year. Of this number, 2,837 firms employed fewer than 250 employees. Thus, under the SBA size standard, the Commission estimates that a majority of fixed microwave service licensees can be considered small.

34. The Commission's small business size standards with respect to fixed microwave services involve eligibility for bidding credits in the auction of spectrum licenses for the various frequency bands included in fixed microwave services. When bidding credits are adopted for the auction of licenses in fixed microwave services frequency bands, such credits may be available to several types of small businesses based average gross revenues (small, very small and entrepreneur) pursuant to the competitive bidding rules adopted in conjunction with the requirements for the auction and/or as identified in part 101 of the Commission's rules for the specific fixed microwave services frequency bands.

35. In frequency bands where licenses were assigned by auction, the Commission notes that as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily represent the number of small businesses currently in service. Further, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated. Additionally, since the Commission does not collect data on the number of employees for licensees providing these services, at this time the Commission is not able to estimate the number of licensees with active licenses that would qualify as small under the SBA's small business size standard.

36. *Satellite Telecommunications.* This industry comprises firms "primarily engaged in providing telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications." Satellite telecommunications service providers include satellite and earth station operators. The SBA small business size standard for this industry classifies a business with \$44 million or less in annual receipts as small. U.S. Census Bureau data for 2017 show that 275 firms in this industry operated for the entire year. Of this number, 242 firms had revenue of less than \$25 million. Consequently, using the SBA's small business size standard most satellite telecommunications service providers can be considered small entities. The Commission notes however, that the SBA's revenue small business size standard is applicable to a broad scope of satellite telecommunications providers included in the U.S. Census Bureau's Satellite Telecommunications industry definition. Additionally, the Commission neither requests nor collects annual revenue information from satellite telecommunications providers, and is therefore unable to more accurately estimate the number of satellite

telecommunications providers that would be classified as a small business under the SBA size standard.

37. *All Other Telecommunications.* This industry is comprised of establishments primarily engaged in providing specialized telecommunications services, such as satellite tracking, communications telemetry, and radar station operation. This industry also includes establishments primarily engaged in providing satellite terminal stations and associated facilities connected with one or more terrestrial systems and capable of transmitting telecommunications to, and receiving telecommunications from, satellite systems. Providers of Internet services (e.g., dial-up ISPs) or Voice over Internet Protocol (VoIP) services, via client-supplied telecommunications connections are also included in this industry. The SBA small business size standard for this industry classifies firms with annual receipts of \$40 million or less as small. U.S. Census Bureau data for 2017 show that there were 1,079 firms in this industry that operated for the entire year. Of those firms, 1,039 had revenue of less than \$25 million. Based on this data, the Commission estimates that the majority of “All Other Telecommunications” firms can be considered small.

38. *Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing.* This industry comprises establishments primarily engaged in manufacturing radio and television broadcast and wireless communications equipment. Examples of products made by these establishments are: transmitting and receiving antennas, cable television equipment, GPS equipment, pagers, cellular phones, mobile communications equipment, and radio and television studio and broadcasting equipment. The SBA small business size standard for this industry classifies businesses having 1,250 employees or less as small. U.S. Census Bureau data for 2017 show that there were 656 firms in this industry that operated for the entire year.

Of this number, 624 firms had fewer than 250 employees. Thus, under the SBA size standard, the majority of firms in this industry can be considered small.

D. Description of Economic Impact and Projected Reporting, Recordkeeping, and Other Compliance Requirements for Small Entities

39. The RFA directs agencies to describe the economic impact of the proposed rules on small entities, as well as projected reporting, recordkeeping and other compliance requirements, including an estimate of the classes of small entities which will be subject to the requirement and the type of professional skills necessary for preparation of the report or record.

40. None of the rules on which the Commission is seeking comment would impose a new reporting or recordkeeping requirement. If the *FNPRM*'s proposal to adopt the Resolution 243 emissions limit were adopted, it will not impose any new reporting or recordkeeping requirements on small entities. At this time, the record does not include sufficient cost/benefit analyses to allow the Commission to quantify the costs of compliance for small entities including whether it will be necessary for small entities to hire professionals to comply with the proposed rules if adopted. The Commission expects the comments it receives from small entities will include information addressing costs, service impacts, and other matters of concern, which should help the Commission identify and evaluate what actions, if any, the Commission should take to minimize the cost of compliance on small entities. Through the comment process, the Commission also seeks to address other relevant issues for small entities, including compliance costs and other burdens that may result from the matters raised in the *FNPRM*, before adopting final rules.

41. With respect to the proposal to consider clutter in Phase One coordination, the Commission does not believe that adoption of this proposal would impose significant

costs on small entities. Indeed, by shrinking the Phase One coordination contours, considering clutter would provide greater opportunities for reuse of spectrum in a given area and reduce the number of times licensees would have to incur expenditures by engaging in Phase Two coordination.

42. With respect to the evaluation of a possible DSMS future in Lower 37 GHz, the Commission at this juncture only asks commenters to address the possibility of an eventual replacement of the new coordination framework; specifics—including with regards to metrics for evaluating scale, for multistakeholder group establishment, for existing registration and transmitter protections, and for a hypothetical transition—are nowhere proposed by the Commission.

43. Finally, the Commission is not aware of any costs that would be imposed on small entities by correcting the Commission technical rule to include the correct value for power flux density.

E. Discussion of Significant Alternatives Considered That Minimize the Significant Economic Impact on Small Entities

44. The RFA directs agencies to provide a description of any significant alternatives to the proposed rules that would accomplish the stated objectives of applicable statutes, and minimize any significant economic impact on small entities. The discussion is required to include alternatives such as: “(1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance and reporting requirements under the rule for such small entities; (3) the use of performance rather than design standards; and (4) an exemption from coverage of the rule, or any part thereof, for such small entities.”

45. In the *FNPRM*, the Commission considered alternatives such as, for example, maintaining the existing emissions limits. If such an approach were to be

adopted, small entities would not be subject to increased compliance costs. However, certain parties contend the Commission existing requirements may not provide the necessary protections for passive satellite operations to operate in the 36-37 GHz band and might make it difficult for EESS to make observations free from harmful interference, thereby jeopardizing the accuracy of critical weather forecasting and climatology science data. Conversely, the Commission also considered, but declined to seek comment on, stricter emissions limits than those contained in Resolution 243. Adopting such an approach would likely create additional compliance burdens on small or other entities currently operating in the 37-38 GHz band.

46. Information contained in comments referring to data on the costs and economic impact of the proposals and approaches discussed in the *FNPRM* will allow the Commission to better evaluate options and alternatives for minimizing the significant economic impact on small entities should the Resolution 243 emissions limit be adopted. Accordingly, the Commission expects to more fully consider the economic impact on small entities following the Commission review of comments filed in response to the *FNPRM*.

F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules

47. None.

III. ORDERING CLAUSES

48. IT IS ORDERED, pursuant to sections 4(i), 301, 302, 303(r), 308, 309, and 333 of the Communications Act of 1934, 47 U.S.C. 154(i), 301, 302a, 303(r), 308, 309, 333, that the *Further Notice of Proposed Rulemaking*, IS ADOPTED as set forth above.

49. IT IS FURTHER ORDERED that the Office of the Secretary SHALL SEND a copy of the *Further Notice of Proposed Rulemaking*, including the Initial Regulatory

Flexibility Analyses, to the Chief Counsel for Advocacy of the Small Business
Administration.

Federal Communications Commission.

Marlene Dortch,

Secretary,

Office of the Secretary.

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