FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 73

[MB Docket No. 22–405; FCC 23–61; FR ID 161601]

Rules for FM Terrestrial Digital Audio Broadcasting Systems

AGENCY: Federal Communications Commission.

ACTION: Proposed rule.

SUMMARY: In this document, the Federal Communications Commission (Commission or FCC) adopted a Notice of Proposed Rulemaking, in which it seeks comment on proposals to change the digital audio broadcasting technical rules that would permit additional FM stations to increase FM hybrid digital effective radiated power (FM Digital ERP) beyond the existing levels without the need for individual Commission authorization, as well as allowing asymmetric digital sideband operation. These specific rule changes were proposed based on two consolidated Petitions for Rule Making filed in 2019 and 2022.

DATES: Comments may be filed on or before September 21, 2023 and reply comments may be filed on or before October 6, 2023.

ADDRESSES: You may submit comments, identified by MB Docket No. 22–405, by any of the following methods:

- *Electronic Filers:* Federal Communications Commission's website: *http://apps.fcc.gov/ecfs//.* Follow the instructions for submitting comments.
- *Paper Filers:* Parties who choose to file by paper must file an original and one copy of each filing.
- Filings can be sent by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although the Commission continues to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9050 Junction Drive, Annapolis Junction, MD 20701.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 45 L Street NE, Washington, DC 20554.
- Effective March 19, 2020, and until further notice, the Commission no longer accepts any hand or messenger delivered filings. This is a temporary measure taken to help protect the health and safety of individuals, and to mitigate the transmission of COVID–19.
- During the time the Commission's building is closed to the general public and until further notice, if more than one docket or rulemaking number appears in the caption of a proceeding, paper filers need not submit two additional copies for each additional docket or rulemaking number; an original and one copy are sufficient.

People with Disabilities: Contact the FCC to request reasonable accommodations (accessible format documents, sign language interpreters, CART, etc.) by email: *FCC504@fcc.gov* or phone: 202–418–0530 or TTY: 888–835–5322.

FOR FURTHER INFORMATION CONTACT: Albert Shuldiner, Chief, Media Bureau, Audio Division, (202) 418–2700; Thomas Nessinger, Senior Counsel, Media Bureau, Audio Division, (202) 418–2700. For additional information concerning the Paperwork Reduction Act (PRA) information collection requirements contained in this document, contact Cathy Williams at 202–418–2918, or via the internet at *Cathy.Williams@fcc.gov.*

SUPPLEMENTARY INFORMATION: This is a summary of the Commission's Order and Notice of Proposed Rulemaking (NPRM), MB Docket No. 22–405; FCC 23–61, adopted on July 31, 2023, and released on August 1, 2023. The full text of this document is available for public inspection and copying via ECFS at *http://apps.fcc.gov/ecfs* and the FCC's website at *https://docs.fcc.gov/public/attachments/FCC-23-61A1.pdf.* Documents will be available electronically in ASCII, Microsoft Word, and/or Adobe Acrobat. Alternative formats are available for people with disabilities (Braille, large print, electronic files, audio format), by sending an email to *fcc504@fcc.gov* or calling the Commission's Consumer and Governmental Affairs Bureau at (202) 418–0530 (voice), (202) 418–0432 (TTY).

Initial Paperwork Reduction Act of 1995 Analysis

The NPRM in document FCC 23–61 seeks comment on proposed rule amendments that may result in modified information collection requirements. If the Commission adopts any modified information collection requirements, the Commission will publish another notice in the **Federal Register** inviting the public to comment on the requirements, as required by the Paperwork Reduction Act, Public Law 104–13; 44 U.S.C. 3501–3520. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, the Commission seeks comment on how it might further reduce the information collection burden for small business concerns with fewer than 25 employees. Public Law 107–198; 44 U.S.C. 3506(c)(4).

Synopsis

1. *Power Increase Petition; History of Digital FM Power Limits.* In 2002, the Commission selected in-band, on-channel (IBOC) technology, at the time developed and manufactured by iBiquity, to enable radio broadcast stations to commence digital broadcasting. At that time, the Commission adopted notification procedures allowing existing FM radio stations to begin digital transmissions immediately on an interim basis using the IBOC system. The iBiquity FM IBOC digital system includes several hybrid modes and separate all-digital modes. In the hybrid and extended hybrid modes, a station simultaneously transmits both the analog and digital signals. In the all-digital modes, the station drops the analog signal and is able to increase the capacity of the digital signal. The Commission initially limited digital operations to the hybrid digital mode, which permits the simultaneous transmission of both the analog and digital signals within the current spectral emissions mask of a single FM channel, placing redundant blocks of digital information in the sidebands on both sides of and immediately adjacent to the analog signal.

2. iBiquity and several independent parties conducted extensive field and laboratory tests of the IBOC system prior to Commission adoption. Based on the National Radio Systems Committee's (NRSC) evaluation of those test results, in December 2001 the NRSC approved the NRSC–5 standard, which specifies a digital FM effective radiated power (ERP) equal to one percent of authorized analog FM power (20 decibels below carrier or −20 dBc). Subsequently, the Commission adopted this as the maximum digital power level for the hybrid digital mode of the FM IBOC system. In 2010, the Commission's Media Bureau (Bureau) released an Order increasing the allowable power level of the FM station's digital sidebands from −20 dBc to −14 dBc, upon electronic notification to the Commission. The Bureau further allowed certain FM stations to increase digital power above −14 dBc, to up to −10 dBc, upon a showing that such power increase would comply with the formula in the Bureau's 2010 order, and therefore would not cause harmful

interference to adjacent analog FM stations.

3. Petitioners in this rulemaking proceeding state that digital FM receiver penetration continues to grow: according to petitioners, there are over 90 million autos in the U.S. with digital receivers; receiver penetration has exceeded 40% in some markets; and almost 60% of new automobiles sold in the U.S. are equipped with digital IBOC receivers. Petitioners National Association of Broadcasters (NAB) and Xperi (successor to iBiquity) contend, however, that many stations have resisted adopting IBOC technology due to the inability to replicate their analog signal coverage with digital coverage, owing to the limits placed on digital sideband power. They maintain that the Commission, by its own admission, overprotected adjacent-channel FM analog stations when implementing the allowable FM digital power table set forth in the 2010 Bureau Order, and further state that 12 years of experience with the current FM digital power levels has yielded few if any complaints of interference from hybrid digital FM transmissions. As evidence for its contentions, petitioners NAB and Xperi attached an analysis of existing digital FM stations transmitting at the current allowable limit of −14 dBc, but whose digital signal substantially overlaps that of adjacent analog FM stations. They assert that in none of these real-world situations have there been any instances of digital-to-analog interference. NAB and Xperi further attached the results of their own field test, conducted under experimental authority, using three stations in the New York market, two adjacent ''interfering'' stations and one ''interfered with'' station. In this study the adjacent-channel digital stations operated first with FM digital signals at −14 dBc, and then at −10 dBc, while recordings were made of the adjacent channel analog station under each condition. According to a panel of listeners—consisting of NAB and Xperi employees—who evaluated the recordings, there was ''no significant change or degradation of the desired [FM analog] signal when the 1st-adjacent channel interferer went from −14 dBc to −10 dBc'' even though these stations were operating at levels far in excess of the levels permitted under the current methodology.

4. *Asymmetric Sideband Petition.* The Commission's existing rules assumed that digital power would be the same on both digital sidebands. NAB, Xperi, and National Public Radio (NPR), in the 2019 Asymmetric Sideband Petition, assert that with asymmetric sidebands a digital FM station could protect one adjacent analog FM station while concurrently increasing power on the other sideband frequency in order to expand its digital coverage and building penetration. These petitioners conducted a study that they state demonstrates that many more digital FM stations could increase power above −14 dBc on at least one sideband. Out of 10,875 digital FM stations studied, petitioners contend that 6,120 could increase power to −10 dBc under the current rules, whereas if asymmetric sidebands were allowed, an additional 3,496 stations could increase one sideband to −10 dBc, with another 532 being able to increase one sideband's power to between −14 and −10 dBc. These petitioners also noted that, under the current rules, stations may only request asymmetric sidebands under an experimental authorization. They argued that the need to request experimental authorization, and the temporary nature of such authorizations, discourages use of asymmetric sidebands, which in turn limits digital FM stations to the power level needed to protect the closer or higher-powered adjacent-channel analog FM station. Petitioners thus requested that the Commission amend its rules to allow FM stations to operate with asymmetric digital sidebands, without having to request experimental authorization to do so, in order to remove unnecessary regulatory barriers and promote broader adoption of terrestrial digital FM broadcasting. The Bureau sought comment on the consolidated Power Increase Petition and Asymmetric Sideband Petition in a Public Notice released November 28, 2022.

5. After review of the two consolidated petitions for rulemaking (Power Increase Petition and the Asymmetric Sideband Petition), and the comments filed in response, the Commission concluded that the record discloses sufficient reasons to justify the institution of a rulemaking proceeding seeking further comment on these proposals. The Commission tentatively concluded that the proposals in both the Power Increase Petition and the Asymmetric Sideband Petition represent steps toward improving the terrestrial digital FM broadcast radio service. The Commission seeks comment on its proposal to allow additional stations to increase FM digital power levels, to authorize asymmetric sideband power levels without the need for experimental authorization, and to rely on existing interference mitigation and remediation processes, and notification procedures.

6. *Power Increase Petition.* The Commission proposed to amend its rules to change its power increase methodology and notification procedures, consistent with the Petition. Specifically, it proposed to change the methodology used by digital FM stations to determine whether they are eligible to increase digital FM power up to −10 dBc, or 10% of analog power. It also proposed that such increases be allowed without the need for additional individual special authorization, but upon basic notification to the Commission. It further proposed that stations notify the Commission of a power increase up to −10 dBc in the Bureau's Licensing and Management System (LMS), using the same notification procedures as currently used to notify the Commission of digital operation up to −14 dBc.

7. *Maximum Permissible FM Digital ERP Table.* The Commission proposed to amend its rules to modify the methodology a digital FM station must use to determine whether it is eligible to increase its power above −14 dBc. This modification, if adopted, would allow more stations to increase power up to −10 dBc without the requirement of submitting a contour analysis. Secondary services such as LPFM and FM translators are eligible to operate in hybrid mode. To the extent that such a secondary service station seeks to increase its digital power, it would use the same methodology set forth herein. As summarized above, currently a digital FM station may operate with digital power up to −14 dBc. Additionally, a digital FM station could apply to operate with power of up to −10 dBc (10% of analog power), pursuant to the current methodology. Petitioners asserted that the intervening dozen years of experience with the established 2010 power limits, as well as follow-up field tests and other studies, demonstrate that most digital FM stations should be able to operate at power levels of up to −10 dBc without special Commission authorization, and without causing interference to adjacent channel FM facilities. They proposed an updated table for determining maximum permissible FM Digital ERP as follows:

Proponent analog F(50,10) field strength at first adjacent station's analog 60 dBμ F(50,50) contour (symmetric sideband operation)	Maximum permissible FM digital ERP
57.9 dBμ and above	−14 dBc
56.5 dBμ to 57.8 dBμ	−13 dBc
55.6 dBμ to 56.4 dBμ	−12 dBc
54.1 dBμ to 55.5 dBμ	−11 dBc
54.0 dBμ or less	−10 dBc

8. Currently, a licensee desiring FM Digital ERP in excess of −14 dBc must calculate the station's analog F(50,10) field strength at all points on the 60 dBμ F(50,50) contour of a potentially affected first-adjacent channel analog FM station. This calculation must be done using each station's licensed analog facilities and the standard FCC contour prediction methodology. Once the most restrictive analog F(50,10) field strength of the proponent station has been determined, the licensee will use the updated table to determine the proponent station's maximum permissible FM Digital ERP.

9. Petitioners studied pairs of stations in which the digital FM station operated at −14 dBc, yet the station's signal strength at the protected contour of the adjacent analog FM station is greater than that allowed by the current methodology. Despite this, petitioners stated that none of the studied analog FM stations reported any significant interference from the digital FM stations, in spite of signal strengths higher than permitted by the current methodology. The Commission noted that it had not received any interference complaints from any of the adjacent channel stations most likely to experience interference from the stations that petitioners studied, with greater-than-normal power ratios. The Commission requests comment on the methodology or interpretation of petitioners' studies, and whether they support petitioners' claim that use of the proposed revised table will not result in harmful interference.

10. The majority of commenters supported the proposals set forth in the Power Increase Petition. Most agreed with petitioners that allowing more stations to increase digital power would assist FM digital stations to expand their digital service areas, as well as improve building signal penetration. Two commenters expressed concern about the effect of increased digital FM power on Low-Power FM (LPFM) and smaller Class A FM stations, contending that such stations serve listeners outside the protected 60 dBμ contour.

11. The Commission tentatively concluded that the record collected to date supports the proposed methodology change. The Commission initiated the process of authorizing digital broadcast operations in 1999 with the eventual goal of moving terrestrial broadcasting from an all-analog to an all-digital world. Although it stated repeatedly that there is no timetable for this eventual change to all-digital broadcast radio, and did not alter that stance in the *NPRM,* its objective is to advance the progress of digital radio without causing harmful interference or disruption to existing analog operations. This is especially true given the record evidence of increased digital FM receiver penetration, even while recognizing that such receivers are far from ubiquitous, and that the record was less complete with regard to non-automotive digital FM receiver penetration. It is this desire to encourage continued adoption of digital FM broadcast technology that informed the Commission's tentative conclusions and proposals in this *NPRM.*

12. The Commission tentatively concluded that the proposals set forth in the Power Increase Petition support the goal of furthering the progress of digital FM broadcast radio. It therefore proposed to amend its rules to change the methodology used by digital FM stations to determine whether they are eligible to operate with allowable IBOC power up to and including −10 dBc, and to permit any existing FM digital station currently operating with power below −10 dBc that satisfies the table proposed to be adopted herein, to increase allowable IBOC power without seeking prior Commission authorization and without the requirement of submitting a contour overlap analysis. It further proposed to adopt the petitioners' table for calculating maximum allowable FM IBOC power set forth above. The Commission seeks comment on this proposal. Are the contours and power levels set forth in the Maximum Permissible FM Digital ERP Table reasonable from an engineering standpoint? If not, how would commenters modify the table? To the extent that any such modifications are proposed, the Commission requests that commenters detail the engineering rationale underlying any such modifications. If commenters generally support providing greater flexibility for stations to increase their FM digital power but disagree with the use of the Maximum Permissible FM Digital ERP Table, what other methods would they suggest for calculating maximum FM digital power?

13. *Interference and Proposed Interference Remediation Procedures.* The Commission also seeks comment on whether changing the power increase methodology will create an unacceptable risk of interference to adjacent-channel stations. Most commenters agreed with petitioners that interference has not been and would not be an issue with the proposal to broaden the number of stations eligible to increase digital power levels. Petitioners, and those who concurred with them, based their contentions on the technical analyses and field studies they cited. Some commenters, however, expressed caution surrounding digital interference to FM analog stations, especially smaller stations. These commenters argued that the proposed change to the methodology could harm smaller stations such as Class A FM stations, LPFM stations, and FM translators and AM stations rebroadcasting over FM translators, as well as other entities beside FM stations, such as broadband providers.

14. The Bureau previously set forth detailed procedures to identify and remedy complaints of digital-to-analog FM interference among full-service FM broadcast stations. Those procedures require, first, that an analog FM station receiving verifiable listener complaints of digital interference within its protected contour contact the digital FM station, and that the stations cooperate to confirm the interference and attempt to eliminate it using voluntary tiered FM digital power reductions. If the stations are unable to agree on appropriate interference remediation measures, the affected analog FM licensee may file a complaint with the Bureau. Bureau staff will review each complaint and order appropriate action within 90 days of filing the complaint. If the Bureau has not acted within 90 days, the interfering station must reduce its digital power, and ongoing complaints of interference may require subsequent stepped reductions of digital power.

15. Like the petitioners and commenters, the Commission has noted few interference complaints from full-service analog FM stations resulting from adjacent-channel digital transmissions. Given the paucity of interference complaints, the Commission tentatively concluded that the interference remediation procedures outlined above will continue to suffice to handle such digital-to-analog interference complaints as may arise between full-service FM stations. These interference mitigation and remediation procedures would therefore remain in place to guard against any instances of actual interference to other facilities. The Commission seeks comment on this tentative conclusion. To the extent that commenters believe that these current procedures would be inadequate to deal with the increased power levels proposed in this NPRM, they are asked to state specifically where the current system is deficient, and describe in detail the interference identification and remediation measures they feel are needed.

16. As secondary services LPFM and FM translators stations are not eligible for the interference remediation

procedures outlined herein. Because secondary services are not protected from interference from full-service stations, the Commission did not propose to modify this approach such that secondary services can use these interference remediation procedures to claim interference from full-service stations. However, although the number of secondary service stations employing hybrid digital operation to date is small, the Commission invites comment as to whether it should adopt any digital interference remediation procedures for secondary service analog stations claiming interference from secondary service digital stations. All full-service stations, including Class A stations, may take advantage of the interference remediation procedures proposed herein.

17. Commenters may wish to address whether the station complaints described above should be based on objective criteria such as ''agreed-upon [mathematical] formulas,'' rather than listener reports. Should the number of reports of ongoing interference required (currently six) be increased or decreased? Should a complaining station be allowed instead to submit studies and/or measurements demonstrating that the digital FM signal within the complaining station's protected contour exceeds allowable limits? Additionally, how should a digital FM station that has increased its digital power be treated if and when an adjacent-channel analog FM station subsequently increases its analog power, and/or moves its facilities closer to the digital FM station? Should we give precedence to the analog FM signal? Alternatively, should the digital FM facility that now seeks a power increase be protected over a subsequent facility modification by an adjacent-channel analog FM station?

18. Two commenters raised the issue of how a digital FM station power increase would affect protection to incumbent stations, expressing concern about its impact on LPFM and other smaller stations. They argued that protection to the 60 dBμ contour is insufficient for analog FM stations on adjacent channels that, they contend, have listenership well beyond that contour. The Commission tentatively concluded that there is no need to provide protection from actual interference outside the protected contour of an analog FM station from the digital signal of a full-service FM station, and seeks comment on this conclusion. Should protection of incumbent analog FM stations on adjacent channels be increased beyond the 60 dBμ contour and, if so, to what contour? Commenters are asked to give detailed evidence for or against increasing the level of protection to analog FM stations on adjacent channels from increased FM digital sideband power proposals. Commenter Press Communications, LLC (Press), offered a number of proposals to remedy what it sees as the problems the Power Increase Petition would cause to smaller, coastal FM stations, including: (i) allowing such stations to move up to three miles inland under certain conditions; (ii) adopting a universal analog 60 dBμ protection in Zone I for all co-, first-, and second-adjacent analog Class A to Class B station-to-station separations; and (iii) extending protection beyond the 60 dBμ contour for Class A stations to the 45 dBμ contour or even a 50 dBμ Longley-Rice contour. While noting that Press's proposed solutions appear to be geographically targeted and class-specific, the Commission invites comment on Press's proposals. Finally, the Commission invites comment as to the potential effect of the proposed change in the methodology for calculating digital FM power levels on all stakeholders utilizing the 88–108 MHz frequency band, whether they are broadcasters or providers of other services.

19. *Superpowered FM Stations.* The Commission proposed to continue to limit the power level for previously authorized superpowered FM stations to the station's class maximum. One commenter noted that allowing a legacy digital superpowered FM station meeting the proposed new table to increase its digital ERP up to −10 dBc, or 10% of the analog ERP could allow certain stations to increase digital power to above the class maximum, resulting in harmful interference. The Commission tentatively concluded that a superpowered station's digital ERP should continue to be limited to the class maximum provided in 47 CFR 73.211 and 73.511. Thus, it proposed that a superpowered FM station seeking to increase its digital power above −14 dBc may request experimental authorization or special temporary authorization (STA) to do so, and the staff would review such requests on a case-by-case basis. The Commission solicits comment on this conclusion and proposal, and requests that commenters opposing this view detail the reasons why they believe that a digital FM station whose power greatly exceeds its class maximum will not cause excessive interference to adjacent channel analog facilities.

20. *Notification of FM Digital Power Increase.* The Commission seeks comment on the type of notification, if any, that should be required of a digital FM station increasing digital power, and whom should be notified. One commenter urged that any adopted notification procedures also include a provision that the FM digital station increasing power notify the licensees of first-adjacent channel FM stations at least 30 days prior to implementation of the power increase, but in no event after the power increase has already taken place. The International Association of Audio Information Services (IAAIS), representing radio reading services that use analog FM station sub-carriers to provide audio versions of publications for print-disabled individuals, likewise requested that a host station increasing digital power to −10 dBc provide written notification to any radio reading services on that host station's sub-carriers, as well as to all radio reading services broadcasting over any adjacent channel stations' sub-carriers.

21. Under the current system, stations increasing symmetric digital sideband power to levels up to −14 dBc need to submit LMS Form 2100, Schedule 335–FM, FM Digital Notification (Schedule 335–FM), without any further showings or analysis to be submitted to the staff for approval. The digital FM station must electronically notify the Media Bureau of increased power FM digital operation within 10 days of commencement of operations at increased power. Although these notifications are available to the public from the FCC's database, the staff takes no action on the notifications, and they do not appear in the Commission's public notices of broadcast applications or broadcast actions. Symmetric digital operation at power levels between −14 dBc and −10 dBc currently require both notification on Schedule 335–FM and a showing that the contours generated do not overlap with the protected contours of adjacent-channel FM stations. Such showings are confirmed by the staff. Under the Commission's proposal herein, such showings would no longer be required for power increases up to −10 dBc—the station seeking a power increase would only have to provide notification by filing Schedule 335–FM, and the staff would neither grant nor deny such notification. The Commission tentatively concluded that this notification-only procedure should be sufficient for digital FM stations increasing digital sideband power the additional 4 dB it proposes to allow in the NPRM, and seeks comment on this conclusion. It likewise tentatively concluded that Schedule 335–FM notification should be required for any digital FM station permanently reducing

digital power, and further tentatively concluded that any such notification of digital FM power reduction be accompanied by a short statement of the reason(s) for the power reduction (*e.g.,* interference complaints, inadequate signal coverage, etc.), and seeks comment on this tentative conclusion.

22. Although the filing of Schedule 335–FM does not generate a separate LMS Public Notice, all filed LMS forms are searchable, and are thus available to the public using the LMS ''Search'' function. The Commission thus seeks comment on whether this accessibility should provide adequate notice to other stations and interested parties that a first-adjacent channel FM digital station is increasing its digital power. It seeks comment on whether Schedule 335–FM filings in LMS will provide adequate notice or if it should adopt any other notification procedure. Commenters holding differing views should explain why the Commission should require additional specific notice, *i.e.,* to first-adjacent stations or entities other than the Commission, than is currently required. Should it require direct notice to all potentially affected first-adjacent channel FM stations in addition to that provided by the notification filed in LMS? Should potential direct notice to first-adjacent channel FM stations be given a certain period of time, such as 30 days, before the digital station is allowed to implement the digital power increase? In the alternative, should the station increasing digital power be required not only to file Schedule 335–FM, but further be obliged to wait a certain period of time before implementing the power increase, so as to give interested parties an opportunity to comment and/or object? The Commission asks that commenters provide reasons for their positions regarding notice, and further to provide specifics as to both the type of notice that should be given and the key recipients of that notice.

23. IAAIS expressed concerns about digital FM sideband power and its effects on radio reading services. Radio reading services, using primarily volunteer staff, provide valuable services by reading daily and weekly newspapers, magazines, current books, and other programs of interest to blind, visually impaired, physically disabled, and other print-disabled persons, who cannot easily access or consume written media. While these important services employ a variety of methods to deliver their content, the majority of IAAIS members broadcast over analog FM radio subcarriers. With regard to IAAIS's concerns about the effect of increased digital FM sideband power on such subcarriers, even absent a general requirement of direct notice of digital power increase to potentially affected stations, should such radio reading services receive special notification from the station proposing to increase digital power, whether that is the station hosting the radio reading service or a nearby adjacent channel station? If so, what form should that direct notice take? If, after reviewing comments, the Commission determines that a station increasing digital power must notify all first-adjacent channel stations of the increase, should it further require that any first-adjacent channel station receiving such notice notify any radio reading service(s) that it hosts?

24. *Asymmetric Sideband Petition.* The Commission proposed to grant blanket authorization to digital FM stations to originate digital transmissions at different power levels on the upper and lower digital sidebands without having to request experimental authorization. As with any digital FM power increase resulting from the proposed revised power table, discussed above, it proposed that a digital FM station need only notify us of asymmetric sideband operation by filing notification (Schedule 335–FM) in the Bureau's LMS database.

25. *Asymmetric Sideband Operation/Interference Issues.* Currently, digital FM stations must use the same ERP on both the upper and lower digital sidebands. Thus, as pointed out by petitioners, any digital FM station's digital power was limited to that needed to protect the nearer of the adjacent channel analog FM stations, regardless of whether there was a need to limit power on the other sideband. Petitioners contended that allowing calculation of the maximum allowable digital FM ERP on a per-sideband basis allows such stations to optimize their digital signal coverage while still protecting analog FM stations on adjacent channels. For example, a digital FM station with an analog station only on the first adjacent channel above its frequency could selectively reduce power on the upper sideband to avoid causing interference, while maintaining or even increasing digital ERP on the lower sideband to enhance signal coverage without interfering with a nearby station. Alternatively, a digital FM station in the same situation could maintain its digital ERP on the upper sideband while increasing power on the lower sideband. The 2022 Power Increase Petition proposed a new formula to calculate maximum digital power per sideband, updated to comport with the Power Increase Petition proposal. The proposed new method for calculating per-sideband FM Digital ERP yields the following table:

Proponent analog F(50,10) field strength at first adjacent station's analog 60 dBμ F(50,50) contour (asymmetric sideband operation)	Maximum permissible FM digital ERP
54.9 dBμ and above	−14 dBc
53.5 dBμ to 54.8 dBμ	−13 dBc
52.6 dBμ to 53.4 dBμ	−12 dBc
51.1 dBμ to 52.5 dBμ	−11 dBc
51.0 dBμ or less	−10 dBc

26. When operating in symmetric mode, each digital sideband contributes exactly half of the total authorized digital power for that station. For example, a station that is authorized to operate in symmetric mode with a total digital power of −10 dBc operates with half that power (−13 dBc) in each digital sideband. When a station operates in asymmetric mode with one digital sideband having more power than the other, it is necessary to ensure that each sideband is limited to the appropriate contour-limited value from the table, and that the total digital power in both sidebands together does not exceed the total amount of digital power that would be authorized if the station were operating in symmetric mode. Accordingly, the Effective Radiated Power at each sideband must be adjusted so that the total sideband powers do not exceed the total power that would be authorized for that station operating in symmetric sideband mode.

27. Those commenters that addressed the Asymmetric Sideband Petition uniformly supported it, although Press, which filed ex parte presentations after the commenting period expired, questioned whether these proposals, if adopted, would actually protect adjacent FM analog stations to the extent it believed is required. Many of the supporters noted that eliminating the need to seek experimental authorization for asymmetric sideband operation would encourage more stations to adopt this operational mode.

28. Given the general lack of commenter objection and the record as presented by the petitioners and certain commenters, the Commission proposed to authorize asymmetric sideband operation for FM digital broadcasters operating at any power level, without the need first to seek experimental authorization. As with any potential FM digital power increase, the Commission proposed that a digital FM station seeking to operate with asymmetric sidebands must notify the Bureau using Schedule 335–FM. It reiterated that the filing of Schedule 335–FM with the

Commission does not trigger the release of a separate Public Notice in LMS, but that, like all LMS forms, the filing is searchable and thus available to members of the public using the LMS ''Search'' function. The Commission therefore seeks comment on whether notification to the Commission should suffice to provide notice to other interested parties, including adjacent channel stations. To the extent that commenters believe that more or different notice should be required, it asks that they specify the type of notice and the reasons why form availability in LMS is not sufficient. It further tentatively concluded that Schedule 335–FM notification should be required for any digital FM station that permanently reverts to symmetric sideband operation from asymmetric sideband operation, and further tentatively conclude that any such notification of return to symmetric sideband operation be accompanied by a short statement of the reason(s) for this action. The Commission seeks comment on this tentative conclusion.

29. Likewise, the Commission believed that the interference mitigation and remediation procedures established in 2010 should be sufficient to remedy any reports of inter-station interference as a result of asymmetric sideband operation. It observed that asymmetric sideband operation per se should not cause an increase in interference or complaints thereof, as stations employing such operation are already protecting the closer of the adjacent stations to their sideband frequencies, and the only power increases should be toward adjacent channel stations that are more distant, either physically or by frequency. To the extent that commenters believe that more stringent interference mitigation and remediation procedures are required, the Commission asks that such commenters detail the measures they deem necessary as well as the precise reasons why the current procedures are inadequate.

30. *Other Issues: Digital Equity and Inclusion.* Finally, the Commission, as part of its continuing effort to advance digital equity for all, including people of color, persons with disabilities, persons who live in rural or Tribal areas, and others who are or have been historically underserved, marginalized, or adversely affected by persistent poverty or inequality, invites comment on any equity-related considerations and benefits (if any) that may be associated with the proposals and issues discussed herein. The term ''equity'' is used here consistent with Executive Order 13985 as the consistent and systematic fair, just, and impartial treatment of all individuals, including individuals who belong to underserved communities that have been denied such treatment. Such individuals include Black, Latino, and Indigenous and Native American persons, Asian Americans and Pacific Islanders and other persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality. Section 1 of the Communications Act of 1934 as amended provides that the FCC ''regulat[es] interstate and foreign commerce in communication by wire and radio so as to make [such service] available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex.''. Specifically, the FCC seeks comment on how its proposals may promote or inhibit advances in diversity, equity, inclusion, and accessibility, as well the scope of the Commission's relevant legal authority.

Procedural Matters

Ex Parte Rules

31. The proceeding this NPRM initiates shall be treated as a ''permit-but-disclose'' proceeding in accordance with the Commission's ex parte rules, 47 CFR 1.1200 *et seq.* 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. Memoranda must contain a summary of the substance of the ex parte presentation and not merely a listing of the subjects discussed. More than a one or two sentence description of the views and arguments presented is generally required. 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 47 CFR 1.1206(b). In proceedings governed by 47 CFR 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

32. The Regulatory Flexibility Act of 1980, as amended (RFA), requires that a regulatory flexibility analysis be prepared for notice and comment rule making proceedings, unless the agency certifies that ''the rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.'' 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 Small Business Administration (SBA).

33. As required by the RFA, the Commission has prepared this Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on a substantial number of small entities by the policies proposed in the Notice of Proposed Rulemaking (NPRM). Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the NPRM provided on the first page of the NPRM. The Commission will send a copy of this entire NPRM, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration (SBA). In addition, the NPRM and the IRFA (or summaries thereof) will be published in the **Federal Register**.

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

34. In the NPRM, the Commission proposes to revise its methodology for determining whether a digital FM station may increase the effective radiated power (ERP) on its digital sidebands; to allow a digital FM station to implement or increase digital ERP from 14 dB below the analog carrier ERP (expressed as −14 dBc) to −10 dBc, without the need to do more than notify the Commission of such operation by FCC form; and to allow a digital FM station to operate with different power levels on its upper and lower digital sidebands, without first having to seek experimental authorization for such operation. The Commission initiated the NPRM in response to two Petitions for Rulemaking that were consolidated by the Media Bureau (Bureau) because the proposed rule changes both relate to improving digital FM signal quality and minimizing the effect of the digital FM station signal on adjacent channel FM transmissions. In the earlier of the two petitions, filed December 9, 2019, petitioners National Association of Broadcasters (NAB), Xperi Corporation (Xperi), and National Public Radio (NPR) request blanket authorization to set digital power at different levels on each digital sideband, thus allowing a digital FM station to protect, for example, an analog FM station on a lower first adjacent channel, while enabling an increase in digital power on the upper sideband where there is no adjacent analog FM station or a more distant adjacent station. In the second petition, filed October 26, 2022, NAB and Xperi request that the FCC adopt an updated methodology to determine digital FM power levels for stations seeking to exceed the currently authorized FM digital effective radiated power (ERP) of −14 dBc. The Commission seeks comment on whether the rule changes proposed, based on the Asymmetric Sideband Petition and Power Increase Petition, would serve the public interest by providing digital FM stations with the ability to increase power and, concomitantly, increase coverage area, building penetration, and provide a more robust digital signal. Petitioners, and most commenters on the petitions, maintain that the current method for determining digital FM power overprotects analog FM stations on adjacent frequencies from digital interference, and that higher digital FM power levels would enable digital FM stations to more closely replicate their analog FM coverage with digital coverage. With regard to the Asymmetric Sideband Petition, petitioners contend that allowing calculation of the maximum allowable digital FM power on a per-sideband basis allows such stations to optimize their digital signal coverage while still protecting analog FM stations on adjacent channels. For example, a digital FM station with an analog station only on the first adjacent channel above its frequency could selectively reduce power on the upper sideband to avoid causing interference, while maintaining or even increasing digital power on the lower sideband to enhance signal coverage without interfering with a nearby station. Alternatively, a digital FM station in the same situation could maintain its digital power on the upper sideband while increasing power on the lower sideband.

35. The Commission seeks comment on the following issues relating to digital FM station operations: (1) to change the methodology used by digital FM stations to determine whether they are eligible to increase digital FM ERP up to −10 dBc, or 10% of analog power, upon basic notification to the Commission and without the need for additional individual special authorization; (2) to allow a power increase up to −10 dBc by notifying the Commission in the Bureau's Licensing and Management System (LMS), utilizing the same notification procedures as currently used; (3) whether changing the method for calculating whether a digital FM station can increase its digital power will create an unacceptable risk of interference to adjacent-channel stations; (4) whether to continue to limit the power level for previously authorized superpowered FM stations to their class maximum; (5) the type of notification, if any, we should require of a digital FM station increasing digital power, and whom should be notified; (6) whether the interference mitigation and remediation procedures currently used for inter-station digital FM interference should be sufficient to remedy any reports of interference to FM broadcast stations or other spectrum users as a result of a station's increase in its digital power; (7) whether to grant blanket authorization to digital FM stations to originate digital transmissions at different power levels on the upper and lower digital sidebands without having to request experimental authorization; and (8) whether the interference mitigation and remediation procedures currently used for inter-station digital FM interference should be sufficient to remedy any reports of inter-station interference as a result of asymmetric sideband operation.

B. Legal Basis

36. The proposed action is authorized pursuant to sections 1, 4(i), 4(j), 301, 302a, 303, 307, 308, 309, 316, 319, and 324 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 154(j), 301, 302a, 303, 307, 308, 309, 316, 319, and 324.

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

37. 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. 5 U.S.C. 603(b)(3). 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.

38. *Radio Stations.* This industry is comprised of ''establishments primarily engaged in broadcasting aural programs by radio to the public.'' Programming may originate in their own studio, from an affiliated network, or from external sources. The SBA small business size standard for this industry classifies firms having $41.5 million or less in annual receipts as small. U.S. Census Bureau data for 2017 show that 2,963 firms operated in this industry during that year. Of this number, 1,879 firms operated with revenue of less than $25 million per year. Based on this data and the SBA's small business size standard, we estimate a majority of such entities are small entities.

39. The Commission estimates that as of March 31, 2023, there were 4,472 licensed commercial AM radio stations and 6,681 licensed commercial FM radio stations, for a combined total of 11,153 commercial radio stations. Of this total, 11,151 stations (or 99.98%) had revenues of $41.5 million or less in 2022, according to Commission staff review of the BIA Kelsey Inc. Media Access Pro Database (BIA) on April 7, 2023, and therefore these licensees qualify as small entities under the SBA definition. In addition, the Commission estimates that as of March 31, 2023, there were 4,219 licensed noncommercial (NCE) FM radio stations, 1,999 low power FM (LPFM) stations, and 8,939 FM translators and

boosters. The Commission however does not compile, and otherwise does not have access to financial information for these radio stations that would permit it to determine how many of these stations qualify as small entities under the SBA small business size standard. Nevertheless, given the SBA's large annual receipts threshold for this industry and the nature of radio station licensees, we presume that all of these entities qualify as small entities under the above SBA small business size standard.

40. We note, however, that in assessing whether a business concern qualifies as ''small'' under the above definition, business (control) affiliations must be included. Our estimate, therefore, likely overstates the number of small entities that might be affected by our action, because the revenue figure on which it is based does not include or aggregate revenues from affiliated companies. In addition, another element of the definition of ''small business'' requires that an entity not be dominant in its field of operation. We are unable at this time to define or quantify the criteria that would establish whether a specific radio or television broadcast station is dominant in its field of operation. Accordingly, the estimate of small businesses to which the rules may apply does not exclude any radio or television station from the definition of a small business on this basis and is therefore possibly over-inclusive. An additional element of the definition of ''small business'' is that the entity must be independently owned and operated. Because it is difficult to assess these criteria in the context of media entities, the estimate of small businesses to which the rules may apply does not exclude any radio or television station from the definition of a small business on this basis and similarly may be over-inclusive.

41. *Low Power FM Stations.* The SBA small business size standard for Radio Stations applies to low power FM stations. The Radio Stations industry comprises establishments primarily engaged in broadcasting aural programs by radio to the public. Programming may originate in their own studio, from an affiliated network, or from external sources. The SBA small business size standard for this industry classifies firms having $41.5 million or less in annual receipts as small. U.S. Census Bureau data for 2017 show that 2,963 firms in this industry operated during that year. Of this number, 1,879 firms operated with revenue of less than $25 million per year. Therefore, based on the SBA's size standard we conclude that the majority of low power FM stations are small.

42. Additionally, according to Commission data as of March 31, 2023, there were 1,999 Low Power FM licensed broadcast stations and 8,939 FM Translator Stations. The Commission does not compile and otherwise does not have access to financial information for these stations that would permit it to determine how many of the stations would qualify as small entities under the SBA size standard. However, given that low power FM stations and FM translators and boosters are very small and limited in their operations and unlikely to have annual receipts anywhere near the SBA small size standard, we will presume that these licensees qualify as small entities under the SBA size standard.

D. Description of Projected Reporting, Recordkeeping and Other Compliance Requirements

43. In this section, we identify the reporting, recordkeeping, and other compliance requirements proposed in the NPRM and consider whether small entities are affected disproportionately by any such requirements. As discussed above, the NPRM seeks comment on changes to the Commission's rules governing digital FM broadcast stations. Allowing some broadcasters that are small entities to increase digital FM power, or to operate with asymmetric sideband power, as proposed in the NPRM would be a voluntary process. Each FM station that meets the proposed requirements can make an individual decision about whether operating with higher digital power and/or asymmetric sideband power is a feasible technical and economic upgrade option. The Commission does not propose to compel, but rather merely to authorize, the proposed digital power increases and operations. The NPRM proposes new mandatory reporting, recordkeeping, and compliance requirements for small entities that are FM licensees and choose to increase their power and/or adopt asymmetric sideband operation. We note that the adoption of the proposed rules may require modification of current requirements and processes for small entities that choose to implement these operational changes, and may require modification of FCC forms, including but not limited to, FCC Form 2100, Schedule 335–FM, which is the form currently used to notify the Commission of the initiation of digital operations. The NPRM thus may impose additional obligations or expenditure of resources on small businesses that elect to modify their digital service, and may require small entities to hire professionals to comply with the proposed rules.

44. The NPRM seeks comment on the notification and interference mitigation and remediation obligations of digital FM stations, including small entities. For example, the proposal to amend the Commission's rules to modify the methodology a digital FM station must use to determine whether it is eligible to increase its power above −14 dBc, if adopted, would reduce compliance obligations for small entities by allowing them to increase power up to −10 dBc without submitting a contour analysis. Small entity stations that seek to increase digital sideband power by the addition of 4 dB would need to notify the Commission by filing Schedule 335–FM. At this time the Commission cannot quantify the cost of compliance for small entities that choose to modify their operations pursuant to the NPRM proposals. However, the Commission expects the information it receives in comments to help it identify and evaluate relevant compliance matters for small entities, including compliance costs and other burdens that may result from potential changes discussed in the NPRM.

E. Steps Taken To Minimize Significant Impact on Small Entities, and Significant Alternatives Considered

45. The RFA requires an agency to describe any significant, specifically small business, alternatives that it has considered in reaching its proposed approach, which may include the following four alternatives (among others): ''(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.''

46. The NPRM considers a voluntary process by which some FM stations may operate at increased digital power and/or with differing power levels on each digital sideband. According to commenters, the proposal would benefit digital FM broadcasters and listeners alike by promoting greater adoption of FM digital transmission systems. Commenters also assert that adoption of the NPRM proposals would increase the robustness of the digital FM broadcast service by improving stations' signal quality, including building penetration and allowing a digital FM licensee to

expand its digital service area to approximate more closely its analog service area. Other commenters caution that the proposed change may harm small entities by causing surrounding interference for smaller stations such as Class A FM stations, LPFM stations, and stations broadcasting over FM translators.

47. In the NPRM, the Commission considers specific steps it could take and alternatives to the proposed rules that could minimize potential economic impact on small entities that might be affected by the proposed rule change, as well as any other rule changes that may be required. For example, to avoid increasing burdens on digital FM broadcasters, the Commission proposes that any notification of increases in digital FM ERP and/or initiation of asymmetric sideband operation be made by filing FCC Form 2100, Schedule 335–FM, in the searchable LMS database. This is the same form currently used to notify the Commission of the initiation of digital operations. Under the proposed rule changes fewer stations would be required to submit a contour study with Schedule 335–FM, as is currently the case for digital FM stations proposing digital power levels above −14 dBc. Therefore, the administrative impact of the proposed rule changes will be similar to that of existing digital FM service, will be less burdensome for most digital FM broadcasters, and thus is not likely to have an additional adverse economic impact on small entities.

48. The Commission also considers alternatives to its current interference remediation procedures, including whether station complaints should be assessed based on listener complaints or based on studies and/or measurements demonstrating that a digital FM signal within the complaining station's protected contour exceeds allowable limits. Another alternative considered in relation to interference that may impact small entities is whether protection of incumbent analog FM stations on adjacent channels should be increased beyond the 60 dBμ contour. The Commission tentatively concluded that this protection is not necessary, however, it also considered whether this protection should be increased and, if so, to what contour. The Commission expects to more fully consider the economic impact and alternatives for small entities following the review of comments filed in response to the NPRM.

F. Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals

49. None.

50. To request materials in accessible formats for people with disabilities (Braille, large print, electronic files, audio format), send an email to *fcc504@fcc.gov* or call the Consumer and Governmental Affairs Bureau at 202–418–0530 (voice), 202–418–0432 (TTY).

Ordering Clauses

51. Accordingly, *it is ordered*, pursuant to § 1.407 of the Commission's rules, 47 CFR 1.407, that the Petition for Rulemaking of the National Association of Broadcasters, Xperi Corporation, and National Public Radio filed on Dec. 9, 2019 and the Petition for Rulemaking of the National Association of Broadcasters and Xperi Corporation filed on Oct. 26, 2022 *are granted.*

52. *it is further ordered* that, pursuant to the authority contained in sections 1, 4(i), 4(j), 301, 302a, 303, 307, 308, 309, 316, 319, and 324 of the Communications Act of 1934, as amended, 47 U.S.C. 151, 154(i), 154(j), 301, 302a, 303, 307, 308, 309, 316, 319, and 324 this Notice of Proposed Rulemaking *is adopted.*

53. *it is further ordered* that the Commission's Office of the Secretary, Reference Information Center, *shall send* a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

List of Subjects in 47 CFR Part 73

Radio, Reporting and recordkeeping requirements.

Federal Communications Commission.

Katura Jackson,

Federal Register Liaison Officer.

Proposed Rules

For the reasons discussed in this preamble, the Federal Communications Commission proposes to amend 47 CFR part 73 as follows:

PART 73—RADIO BROADCAST SERVICES

■ 1. The authority citation for part 73 continues to read as follows:

Authority: 47 U.S.C. 154, 155, 301, 303, 307, 309, 310, 334, 336, 339.

■ 2. Amend § 73.310 by revising paragraphs (a) and (b) to read as follows:

§ 73.310 FM technical definitions.

(a) *Frequency modulation.* The following definitions pertain to frequency modulation, as defined in § 73.310(a)(17).

(1) *Antenna height above average terrain (HAAT).* HAAT is calculated by: determining the average of the antenna heights above the terrain from 3 to 16 kilometers (2 to 10 miles) from the antenna for the eight directions evenly spaced for each 45° of azimuth starting with True North (a different antenna height will be determined in each direction from the antenna): and computing the average of these separate heights. In some cases less than eight directions may be used. (See § 73.313(d).) Where circular or elliptical polarization is used, the antenna height above average terrain must be based upon the height of the radiation of the antenna that transmits the horizontal component of radiation.

(2) *Antenna power gain.* The square of the ratio of the root-mean-square (RMS) free space field strength produced at 1 kilometer in the horizontal plane in millivolts per meter for 1 kW antenna input power to 221.4 mV/m. This ratio is expressed in decibels (dB). If specified for a particular direction, antenna power gain is based on that field strength in the direction only.

(3) *Auxiliary facility.* An auxiliary facility is an antenna separate from the main facility's antenna, permanently installed on the same tower or at a different location, from which a station may broadcast for short periods without prior Commission authorization or notice to the Commission while the main facility is not in operation (*e.g.,* where tower work necessitates turning off the main antenna or where lightning has caused damage to the main antenna or transmission system) (See § 73.1675).

(4) *Center frequency.* The term ''center frequency'' means:

(i) The average frequency of the emitted wave when modulated by a sinusoidal signal.

(ii) The frequency of the emitted wave without modulation.

(5) *Composite antenna pattern.* The composite antenna pattern is a relative field horizontal plane pattern for 360 degrees of azimuth, for which the value at a particular azimuth is the greater of the horizontally polarized or vertically polarized component relative field values. The composite antenna pattern is normalized to a maximum of unity (1.000) relative field.

(6) *Composite baseband signal.* A signal which is composed of all program and other communications signals that frequency modulates the FM carrier.

(7) *Effective radiated power.* The term ''effective radiated power'' means the product of the antenna power

(transmitter output power less transmission line loss) times:

(i) The antenna power gain, or

(ii) the antenna field gain squared. Where circular or elliptical polarization is employed, the term effective radiated power is applied separately to the horizontal and vertical components of radiation. For allocation purposes, the effective radiated power authorized is the horizontally polarized component of radiation only.

(8) *Equivalent isotropically radiated power (EIRP).* The term ''equivalent isotropically radiated power (also known as ''effective radiated power above isotropic) means the product of the antenna input power and the antenna gain in a given direction relative to an isotropic antenna.

(9) *FM Blanketing.* Blanketing is that form of interference to the reception of other broadcast stations which is caused by the presence of an FM broadcast signal of 115 dBμ (562 mV/m) or greater signal strength in the area adjacent to the antenna of the transmitting station. The 115 dBμ contour is referred to as the blanketing contour and the area within this contour is referred to as the blanketing area.

(10) *FM broadcast band.* The band of frequencies extending from 88 to 108 MHz, which includes those assigned to noncommercial educational broadcasting.

(11) *FM broadcast channel.* A band of frequencies 200 kHz wide and designated by its center frequency. Channels for FM broadcast stations begin at 88.1 MHz and continue in successive steps of 200 kHz to and including 107.9 MHz.

(12) *FM broadcast station.* A station employing frequency modulation in the FM broadcast band and licensed primarily for the transmission of radiotelephone emissions intended to be received by the general public.

(13) *Field strength.* The electric field strength in the horizontal plane.

(14) *Free space field strength.* The field strength that would exist at a point in the absence of waves reflected from the earth or other reflecting objects.

(15) *Frequency departure.* The amount of variation of a carrier frequency or center frequency from its assigned value.

(16) *Frequency deviation.* The peak difference between modulated wave and the carrier frequency.

(17) *Frequency modulation.* A system of modulation where the instantaneous radio frequency varies in proportion to the instantaneous amplitude of the modulating signal (amplitude of modulating signal to be measured after pre-emphasis, if used) and the instantaneous radio frequency is independent of the frequency of the modulating signal.

(18) *Frequency swing.* The peak difference between the maximum and the minimum values of the instantaneous frequency of the carrier wave during modulation.

(19) *Multiplex transmission.* The term ''multiplex transmission'' means the simultaneous transmission of two or more signals within a single channel. Multiplex transmission as applied to FM broadcast stations means the transmission of facsimile or other signals in addition to the regular broadcast signals.

(20) *Percentage modulation.* The ratio of the actual frequency deviation to the frequency deviation defined as 100% modulation, expressed in percentage. For FM broadcast stations, a frequency deviation of ±75kHz is defined as 100% modulation.

(21) *Previously authorized superpowered FM station.* An FM station authorized to operate with facilities that exceed the Effective Radiated Power/Height Above Average Terrain limitations of §§ 73.211 or 73.511 for their specific class.

(b) *Stereophonic sound broadcasting.* The following definitions pertain to stereophonic sound broadcasting, as defined in § 73.310(b)(8).

(1) *Cross-talk.* An undesired signal occurring in one channel caused by an electrical signal in another channel.

(2) *FM stereophonic broadcast.* The transmission of a stereophonic program by a single FM broadcast station utilizing the main channel and a stereophonic subchannel.

(3) *Left (or right) signal.* The electrical output of a microphone or combination of microphones placed so as to convey the intensity, time, and location of sounds originating predominately to the listener's left (or right) of the center of the performing area.

(4) *Left (or right) stereophonic channel.* The left (or right) signal as electrically reproduced in reception of FM stereophonic broadcasts.

(5) *Main channel.* The band of frequencies from 50 to 15,000 Hz which frequency-modulate the main carrier.

(6) *Pilot subcarrier.* A subcarrier that serves as a control signal for use in the reception of FM stereophonic sound broadcasts.

(7) *Stereophonic separation.* The ratio of the electrical signal caused in sound channel A to the signal caused in sound channel B by the transmission of only a channel B signal. Channels A and B may be any two channels of a stereophonic sound broadcast transmission system.

(8) *Stereophonic sound.* The audio information carried by plurality of channels arranged to afford the listener a sense of the spatial distribution of sound sources. Stereophonic sound broadcasting includes, but is not limited to, biphonic (two channel), triphonic (three channel) and quadrophonic (four channel) program services.

(9) *Stereophonic sound subcarrier.* A subcarrier within the FM broadcast baseband used for transmitting signals for stereophonic sound reception of the main broadcast program service.

(10) *Stereophonic sound subchannel.* The band of frequencies from 23 kHz to 99 kHz containing sound subcarriers and their associated sidebands.

* * * * *

■ 3. Amend § 73.402 by adding paragraph (i) to read as follows:

§ 73.402 Definitions.

* * * * *

(i) *Asymmetric sideband operation.* For digital FM stations, the use of different power levels on the upper and lower digital sidebands in a hybrid or extended hybrid DAB system.

■ 4. Amend § 73.404 by adding paragraphs (e) through (g) to read as follows:

§ 73.404 IBOC DAB operation.

* * * * *

(e) All FM stations transmitting hybrid IBOC signals may operate with total effective radiated power of up to −14 dBc. No station may operate its digital carriers with a total effective radiated power in excess of −10 dBc. A station using symmetric sidebands planning to operate with a total radiated power in excess of −14 dBc must confirm compliance with Table 1 below by calculating the signal strength of its analog signal at the first adjacent station's 60 dBμ contour. All calculations must be made using the standard FCC contour prediction methodology.

TABLE 1 TO PARAGRAPH (e)—MAXIMUM PERMISSIBLE FM DIGITAL ERP FOR SYMMETRIC SIDEBAND OPERATION

Proponent analog F(50,10) field strength at first adjacent station's analog 60 dBμ F(50,50) contour (symmetric sideband operation)	Maximum permissible FM digital ERP (dBc)
57.9 dBμ and above	−14
56.5 dBμ to 57.8 dBμ	−13
55.6 dBμ to 56.4 dBμ	−12
54.1 dBμ to 55.5 dBμ	−11
54.0 dBμ or less	−10

(f) FM stations may transmit hybrid IBOC signals with asymmetric power on

the digital sidebands, as defined in § 73.402(i). Where asymmetric operation is used, the Effective Radiated Power at each sideband must be adjusted so that the total sideband powers do not exceed the total power that would be authorized for the station operating in symmetric sideband mode. A station using asymmetric sidebands planning to operate with a radiated power in excess of −17 dBc on either sideband (upper or lower) must confirm compliance with Table 1 below by calculating the signal strength of its analog signal at the respective (upper or lower) first adjacent station's 60 dBμ contour. All calculations must be made using the standard FCC contour prediction methodology.

TABLE 1 TO PARAGRAPH (f)—MAXIMUM PERMISSIBLE FM DIGITAL ERP FOR ASYMMETRIC SIDEBAND OPERATION

Proponent analog F(50,10) field strength at the upper or lower first adjacent station's analog 60 dBμ F(50,50) contour (asymmetric sideband operation)	Maximum permissible FM digital ERP for the respective (upper or lower) sideband (dBc)
54.9 dBμ and above	−17
53.5 dBμ to 54.8 dBμ	−16
52.6 dBμ to 53.4 dBμ	−15
51.1 dBμ to 52.5 dBμ	−14
51.0 dBμ or less	−13

(g) The digital effective radiated power of a previously authorized superpowered FM station, as defined in § 73.310(a)(7) and (a)(21), must be limited to the class maximum set forth in §§ 73.211 and 73.511.

■ 5. Amend § 73.406 by adding paragraphs (d)(5) through (8) to read as follows:

§ 73.406 Notification.

* * * * *

(d) * * *

(5) If applicable, for FM stations planning to operate with symmetric sidebands in excess of −14 dBc, a certification that the proposed FM digital Effective Radiated Power is permitted, using the table set forth in Table 1 to § 73.404(e). Certifications must be based on the most restrictive analog field strength of the proponent at any nearby first-adjacent channel station's 60 dBμ contour.

(6) If applicable, for FM stations employing asymmetric sideband operation as defined in § 73.402(i), a certification that the proposed digital sideband power on each sideband conforms to the Maximum Permissible FM Digital ERP set forth in Table 1 to § 73.404(f), and that the total digital sideband power will not exceed the total power if the digital sideband operation were symmetric.

(7) Any digital FM station permanently reducing digital power must notify the Commission of such digital power reduction on Form 2100, Schedule 335–FM. Any such notification of digital FM power reduction must include a short statement of the reason(s) for the power reduction.

(8) Any digital FM station permanently discontinuing asymmetric sideband operation and returning to symmetric sideband operation must notify the Commission of such return to symmetric sideband operation on Form 2100, Schedule 335–FM. Any such notification of discontinuing asymmetric sideband operation must include a short statement of the reason(s) for such action.

[FR Doc. 2023–17423 Filed 8–21–23; 8:45 am]

BILLING CODE 6712–01–P

DEPARTMENT OF TRANSPORTATION

Federal Railroad Administration

49 CFR Part 245

[Docket No. FRA–2022–0019, Notice No. 3]

RIN 2130–AC91

Certification of Dispatchers

AGENCY: Federal Railroad Administration (FRA), Department of Transportation (DOT).

ACTION: Notice of proposed rulemaking (NPRM); extension of comment period.

SUMMARY: On May 31, 2023, FRA published an NPRM proposing to require railroads to develop written programs for certifying dispatchers and to submit those written certification programs to FRA for approval prior to implementation. On July 5, 2023, FRA published a notice extending the comment period by 30 days. By this notice, FRA is extending the NPRM's comment period by an additional 15 days.

DATES: The comment period for the NPRM, scheduled to close on August 30, 2023, is extended until September 14, 2023.

ADDRESSES:

Comments: Comments related to Docket No. FRA–2022–0019, Notice No. 1, may be submitted by going to *https://www.regulations.gov* and following the online instructions for submitting comments.

Instructions: All submissions must include the agency name, docket name, and docket number or Regulatory Identification Number (RIN) for this rulemaking (2130–AC91). Note that all comments received will be posted without change to *https://www.regulations.gov,* including any personal information provided. Please see the Privacy Act heading in the **SUPPLEMENTARY INFORMATION** section of this document for Privacy Act information related to any submitted comments or materials.

Docket: For access to the docket to read background documents or comments received, go to *https://www.regulations.gov* and follow the online instructions for accessing the docket.

FOR FURTHER INFORMATION CONTACT: Curtis Dolan, Railroad Safety Specialist, Dispatch Operating Practices, telephone: (470) 522–6633 or email: *curtis.dolan@dot.gov;* or Michael C. Spinnicchia, Attorney Adviser, Office of the Chief Counsel, telephone: (202) 493–0109 or email: *michael.spinnicchia@dot.gov.*

SUPPLEMENTARY INFORMATION: On July 24, 2023, FRA provided information in the rulemaking docket about the accidents that were analyzed by FRA in the regulatory impact analysis.[1] In an August 5, 2023, petition, the American Short Line and Regional Railroad Association (ASLRRA) requested a 30-day extension of the NPRM's [2] comment period to analyze the information and its impact on ASLRRA's member railroads.

The comment period for this NPRM is scheduled to close on August 30, 2023.[3] As FRA is partially granting ASLRRA's request, the comment period is now extended 15 days to September 14, 2023.

Privacy Act

In accordance with 5 U.S.C. 553(c), DOT solicits comments from the public to better inform its rulemaking process. DOT posts these comments, without edit, to *https://www.regulations.gov,* as described in the system of records notice, DOT/ALL–14 FDMS, accessible through *www.dot.gov/privacy.* To facilitate comment tracking and response, we encourage commenters to provide their name, or the name of their organization; however, submission of names is completely optional. Whether or not commenters identify themselves, all timely comments will be fully considered. If you wish to provide comments containing proprietary or confidential information, please contact

[1] *https://www.regulations.gov/document/FRA-2022-0019-0022.*

[2] 88 FR 35574 (May 31, 2023).

[3] 88 FR 42907 (July 5, 2023).