

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

In the Matter of)
)
Revitalization of the AM Radio Service) MB Docket No. 13-249

NOTICE OF PROPOSED RULE MAKING

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I. INTRODUCTION

1. We adopt this *Notice of Proposed Rulemaking* (“NPRM”) to introduce a number of possible improvements to the Amplitude Modulation, or AM, radio service and the rules pertaining to AM broadcasting.¹ We seek to revitalize further the AM band by identifying ways to enhance AM broadcast quality and proposing changes to our technical rules that would enable AM stations to improve

¹ See Subpart A of Part 73 of the Code of Federal Regulations, 47 C.F.R. §§ 73.1 – 73.190.

their service.² We believe that this in turn will help AM broadcasters better serve the public, thereby advancing the Commission's fundamental goals of localism, competition, and diversity in broadcast media.

2. The Commission's last comprehensive examination of the technical, legal, and policy issues relating to AM broadcasting took place a generation ago, in a proceeding that began with a 1987 Notice of Inquiry.³ In the more than quarter-century since, the challenges facing the AM band have increased dramatically.⁴ In the mid-1980s, AM radio represented 30 percent of the nation's radio listening hours.⁵ By 2010, that number had dropped to 17 percent, with AM radio comprising only 4 percent of listening hours among younger Americans.⁶ The causes of this decline are well-documented. As the Commission has previously stated, a "combination of higher fidelity alternatives to AM radio and increased interference to AM radio have caused an erosion of the AM radio audience and the loss of young listeners to other programming outlets."⁷

II. BACKGROUND

3. The AM broadcast service is the oldest broadcasting service. For decades, it has been an integral part of American culture. Today, AM radio remains an important source of broadcast entertainment and information programming, particularly for locally oriented content. AM broadcasters provide unique, community-based programming to distinguish themselves from other media sources in an increasingly competitive mass media market.⁸ For example, all-news/talk, all-sports, foreign language, and religious programming formats are common on the AM band. Indeed, over 90 percent of all news/talk stations operate on the AM band.⁹ Local programming is also prevalent on the AM dial, including discussions of local news, politics and public affairs, traffic announcements, and coverage of community events such as high school athletic contests.¹⁰

4. The sustainability of the AM broadcast service has been threatened by the migration of AM listeners to newer media services.¹¹ Technical limitations in the AM band have contributed to consumer migration. Today, AM broadcasts provide lower fidelity than other sources of audio programming including FM, satellite radio, personal media players, podcasts, and audio streams provided

² AM stations operate on the band of frequencies from 535 to 1705 kHz. 47 C.F.R. § 73.14.

³ See *Review of Technical Assignment Criteria for the AM Broadcast Service*, Notice of Inquiry, 2 FCC Rcd 5014 (1987) ("1987 AM NOI").

⁴ See, e.g., *Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations*, Report and Order, 24 FCC Rcd 9642, 9643-45 (2009) ("2009 Translator Order").

⁵ The Gale Group, *Radio Broadcasting Stations*, HighBeam Business (2013), available at <http://business.highbeam.com/industry-reports/transportation/radio-broadcasting-stations>.

⁶ 2009 Translator Order, 24 FCC Rcd at 9644.

⁷ *Id.*

⁸ *Id.* at 9643.

⁹ See Petition for Rulemaking filed by the National Association of Broadcasters, RM-11338 (filed July 14, 2006) ("2006 NAB Petition").

¹⁰ 2009 Translator Order, 24 FCC Rcd at 9643.

¹¹ See *Review of the Technical Assignment Criteria for the AM Broadcast Service*, Report and Order, 6 FCC Rcd 6273, 6275 (1991) ("Expanded Band R&O"), *recon. granted in part*, Memorandum Opinion and Order, 8 FCC Rcd 3250 (1993) ("Expanded Band MO&O"), *review denied*, *National Association for the Advancement of Colored People v. FCC*, 40 F.3d 474 (D.C. Cir. 1994).

over the Internet.¹² Digital media sources can also provide advanced consumer-friendly features, such as real-time data and information displays, that are not available via analog AM radio.

5. The AM band is also subject to interference concerns not faced by other broadcast sources. First, due to the nighttime propagation characteristics of AM signals, many AM stations are unable to operate at night, and many others must reduce operating power substantially and/or use a complex directional antenna system in order to avoid interference to co- and adjacent-channel AM stations at night.¹³ As a result, many AM stations are unable to provide service to sizeable portions of their audiences in the evening hours, and still others can provide no protected nighttime service.¹⁴ Second, reinforced structures, such as buildings with steel frames or aluminum siding, can block AM signals.¹⁵ Thus, AM reception can be poor in urban areas where reinforced buildings are prevalent. Third, AM radio is particularly susceptible to interference from electronic devices of all types, including such ubiquitous items as TV sets, vehicle engines, fluorescent lighting, computers, and power lines.¹⁶ The noise on the AM band that is caused by those sources is only expected to increase as electronic devices continue to proliferate.

6. The availability of higher fidelity alternatives and increased interference to AM radio has led to a steady decline in AM listenership. AM radio was once the dominant form of audio entertainment: until 1978, more than half of all radio listening hours were spent on the AM dial.¹⁷ By 2010, AM listenership had decreased to just 17 percent of radio listening hours.¹⁸ The decline has been the sharpest among younger listeners. Only 9 percent of listeners aged 25–34 listen to the AM band; among those aged 12–24, AM radio accounts for only 4 percent of listening hours.¹⁹ The popularity of AM stations versus FM facilities is also on the decline. AM listening dropped by roughly 200,000 listeners between 2011 and 2012, while FM listenership actually increased during that time.²⁰ Between 1990 and 2010, the number of AM stations decreased by 197 stations while the number of FM stations almost doubled.²¹

7. The Commission has previously made efforts to revitalize the AM band. In 1987, the Commission issued a Notice of Inquiry “for the purpose of providing a comprehensive review of the

¹² 2009 *Translator Order*, 24 FCC Rcd at 9643.

¹³ See *Digital Audio Broadcasting Systems and Their Impact on the Terrestrial Radio Broadcast Service*, MM Docket No. 99-325, Further Notice of Proposed Rulemaking and Notice of Inquiry, 19 FCC Rcd 7505, 7521–22 (2004) (“During daytime hours, AM signals propagate principally via currents conducted through the earth, called groundwave propagation. Useful groundwave signals have a range of only about 200 miles for the most powerful AM stations, and less than 50 miles for many stations. After sunset, changes in the upper atmosphere cause the reflection of AM signals back to earth, resulting in the transmission of skywave signals over paths that may extend thousands of miles. Nighttime skywave propagation results in a much greater potential for inter-station interference.”); see also *infra* para. 23.

¹⁴ See 2006 NAB Petition at 3–4 (some stations lose 80–95% of their coverage area to protect clear channel AM stations often located hundreds of miles away).

¹⁵ Jay Allen, *Combating AM (And SW) Interference*, Radio Jay Allen (2013), available at <http://radiojayallen.com/combating-am-and-sw-interference/>.

¹⁶ *Id.*

¹⁷ 2009 *Translator Order*, 24 FCC Rcd at 9644.

¹⁸ *Id.*

¹⁹ Matthew Lasar, *Does AM radio need a tenfold wattage boost to survive?*, ArsTechnica (June 10, 2010), available at <http://arstechnica.com/tech-policy/2010/06/should-am-radio-stations-get-a-10x-power-boost/>.

²⁰ *Id.*

²¹ *Id.*

technical issues pertaining to AM broadcast assignment criteria and related issues.”²² The goal of that proceeding was to “identify any needed changes to its technical rules which would permit AM stations to improve their service to the public and enhance their ability to compete in the marketplace.”²³ The Commission’s 1987 AM NOI was followed by a *Notice of Proposed Rulemaking* in 1990, which sought comment on various proposals designed to “raise the quality and thus the competitive posture of the AM radio service significantly.”²⁴ The product of those efforts was the Commission’s adoption in 1991 of a comprehensive AM improvement plan.²⁵ That plan included three principal elements. First, new and revised AM technical standards were promulgated to reduce interference within AM stations’ primary service areas. Second, ten “expanded band” frequencies (situated between 1605–1705 kHz) were opened to relocate select AM stations whose migration to those frequencies was intended to abate significantly congestion and interference in the existing AM band. Finally, various measures were adopted affording broadcasters greater latitude and incentives to reduce interference through non-technical means.²⁶

8. Additionally, in the past several years the Commission has instituted several discrete changes in its AM rules and policies designed to further enhance the AM service or reduce regulatory and technical burdens on AM broadcasters. These include:

- 2005 and 2008 – Announced simplified AM licensing procedures for the KinStar (2005)²⁷ and Valcom (2008)²⁸ alternative, low-profile and streamlined AM antennas. These antennas provide additional siting flexibility for non-directional stations to locate in areas where local zoning approvals for taller towers cannot be obtained.
- 2006 – Adopted streamlined procedures for AM station community of license modifications.²⁹
- 2008 – Adopted moment method modeling as an alternative methodology to verify AM directional antenna performance.³⁰ These streamlined procedures have reduced the cost of AM proof of performance showings dramatically, in some cases saving licensees over \$100,000 in completing required proofs.

²² 1987 AM NOI, 2 FCC Rcd at 5014.

²³ *Id.*

²⁴ See *Review of the Technical Assignment Criteria for the AM Broadcast Service*, Notice of Proposed Rulemaking, 5 FCC Rcd 4381, 4383 (1990) (“1990 AM NPRM”).

²⁵ See *Expanded Band R&O*, 6 FCC Rcd at 6273.

²⁶ *Id.*

²⁷ *Media Bureau Adopts Simplified Application Procedures for AM Nondirectional KinStar Antennas*, Public Notice, 20 FCC Rcd 15415 (MB 2005).

²⁸ *Media Bureau Adopts Simplified Application Procedures for AM Nondirectional Valcom Antennas*, Public Notice, 23 FCC Rcd 2782 (MB 2008).

²⁹ *Revision of Procedures Governing Amendments to FM Table of Allotments and Changes of Community of License in the Radio Broadcast Services*, Report and Order, 21 FCC Rcd 14212, 14217-21 (2006), *recon. pending* (“Community of License R&O”).

³⁰ *Inquiry Into the Commission’s Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification*, Second Report and Order and Second Further Notice of Proposed Rule Making, 23 FCC Rcd 14267 (2008).

- 2009 – Authorized AM/FM translator rebroadcasting.³¹ This has proved to be an enormous success, with over 10 percent of all AM stations now using FM translators to provide improved daytime and nighttime service to their communities of license.
- 2011 – Authorized AM stations to use Modulation Dependent Carrier Level (“MDCL”) control technologies.³² These technologies allow AM broadcasters to achieve substantial energy cost savings, both through reduced electricity consumption on transmissions and related system cooling functions.
- 2011 – Announced an FM translator minor modification rule waiver policy and waiver standards to expand rebroadcast opportunities for AM stations to fill in their coverage areas.³³
- 2012 – Permitted all future FM translator stations licensed from Auction 83 to be used for AM station rebroadcasting.³⁴
- 2012 – Granted first Experimental Authorization for all-digital AM operation.
- 2013 – Improved protection to AM stations from potential re-radiators and/or pattern disturbances, by establishing a single protection scheme for tower construction and modification near AM tower arrays, and designated moment method modeling as the principal means of determining whether a nearby tower affects an AM radiation pattern. The new rules provide certainty to tower proponents, and the use of moment method modeling saves many AM licensees the time and expense of field strength measurements.³⁵

9. On the heels of the above-noted AM improvement measures, we initiate this rulemaking to consider additional options for revitalizing the AM band, in view of the significant technological, policy, and economic changes that have occurred in AM broadcasting since the Commission last did so in 1991. The following sections set forth some specific technical proposals and, where appropriate, proposed rule revisions. We seek comment on these proposals, as well as any other ideas for improving the quality of the AM radio service.

III. DISCUSSION

10. We organize our discussion of proposals to improve the AM service into the following sections: (A) Open FM Translator Filing Window Exclusively for AM Licensees and Permittees; (B) Modify Daytime Community Coverage Standards for Existing AM Stations; (C) Modify Nighttime Community Coverage Standards for Existing AM Stations; (D) Eliminate the AM “Ratchet Rule”; (E) Permit Wider Implementation of Modulation Dependent Carrier Level Control Technologies; and (F)

³¹ See 2009 Translator Order, *supra* note 4.

³² Media Bureau to Permit Use of Energy-Saving Transmitter Technology by AM Stations, Public Notice, 26 FCC Rcd 12910 (MB 2011) (“MDCL Public Notice”).

³³ John F. Garziglia, Esq., Letter, 26 FCC Rcd 12685 (MB 2011) (“Mattoon Waiver Ruling”) (granting waiver of rules prohibiting move of FM translator station, where applicant had no history of applying for serial “hops” of translator to circumvent rules, proposed translator facility was mutually exclusive with existing facility, proposed translator move would not foreclose future licensing opportunities in the low-power FM service, and translator move was proposed to enable use of FM translator station to fill in coverage area of AM full-power station). Such waivers are commonly known as “Mattoon Waivers.”

³⁴ Creation of a Low Power Service; Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations, Fourth Report and Order and Third Order on Reconsideration, 27 FCC Rcd 3364, 3395-96 (2012) (“2012 Translator Order”).

³⁵ Inquiry Into the Commission’s Policies and Rules Regarding AM Radio Service Directional Antenna Performance Verification, Third Report and Order and Second Order on Reconsideration, FCC 13-115 (Aug. 16, 2013).

Modify AM Antenna Efficiency Standards. In addition, we seek suggestions for other reforms that could lead to revitalization of the AM service.

A. OPEN FM TRANSLATOR FILING WINDOW EXCLUSIVELY FOR AM LICENSEES AND PERMITTEES

11. FM translator stations can be used to rebroadcast the signal of a primary AM station on an FM frequency. Under the Commission's current rules, AM stations are allowed to use authorized FM translator stations (*i.e.*, those now licensed or authorized with construction permits that have not expired) to rebroadcast their AM signals, provided that no portion of the 60 dB μ contour of any such FM translator station extends beyond the lesser of (a) a 25-mile radius from the AM transmitter site, and (b) the 2 millivolts per meter (mV/m) daytime contour of the AM station.³⁶

12. When an AM broadcaster acquires an FM translator, the broadcaster typically must relocate the translator both to meet the station's needs and to comply with the coverage contour requirements outlined above. Under the Commission's current FM translator rules, changes to FM translator facilities can be either major or minor. A major change is one either proposing a translator frequency more than three channels from its currently authorized transmitting frequency that is also not an intermediate frequency, or a physical move to a location at which the proposed 1 mV/m contour does not overlap with the currently authorized 1 mV/m contour.³⁷ Applications for such major changes may only be made during specific announced filing windows.³⁸ However, an FM translator owner may make a minor change – which meets both channel and contour overlap requirements described above – at any time.

13. The regulatory distinction between major and minor changes has led some translator licensees to attempt what would otherwise be dismissed as impermissible major changes, by filing multiple minor modification applications to “hop” the translator to new locations.³⁹ Although no rule specifically prohibits this practice, the Media Bureau has concluded that “hopping” subverts the purpose of the Commission's minor change requirement and, therefore, that the Commission may deny applications resulting in multiple “hops” pursuant to Section 308(a) of the Communications Act of 1934, as amended (the “Communications Act”).⁴⁰ At the same time, however, the contour overlap requirements for relocating FM translators, coupled with the fill-in coverage area restrictions on locating FM translators for use by AM broadcasters, limit the supply of available FM translators for individual AM licensees. Although a new FM translator filing window might alleviate this situation, opening the window to all applicants would require AM broadcasters seeking to establish new fill-in translators to compete at auction with other, non-AM broadcaster applicants. Many of these competing applicants might foreclose opportunities for AM-rebroadcast translators by proposing mutually exclusive translator facilities, while others might apply within the contours of AM stations for the specific purpose of obstructing a local AM

³⁶ 2009 *Translator Order*, 24 FCC Rcd at 9642. See 47 C.F.R. § 74.1201(g).

³⁷ 47 C.F.R. § 74.1233(a)(1). In addition, any change in frequency relocating an unbuilt station from the non-reserved band to the reserved band, or vice-versa, is considered major.

³⁸ See 47 C.F.R. § 74.1233(d)(2)(i).

³⁹ See *Mattoon Waiver Ruling*, 26 FCC Rcd at 12687.

⁴⁰ *Id.* (“The purpose of the overlap requirement is ‘[t]o prevent . . . FM translator stations from abandoning their present service areas.’ The evident purpose of the serial applications is to achieve the prohibited result. No rule specifically prohibits such a practice, but the Commission can take appropriate enforcement action, including denial of applications that are intended to evade the requirement or subvert its purpose pursuant to Section 308(a) of the Communications Act of 1934, as amended, on the ground that that grant would not serve the public interest.”).

broadcaster from acquiring a translator station, forcing it to do business with the winning bidder.⁴¹ While there is a public interest in robust and competitive auctions in services subject to our competitive bidding procedures, as stated above we find there is also a compelling public interest in maintaining the vitality and utility of the AM service.

14. Accordingly, we tentatively conclude that we should afford an opportunity, restricted to AM licensees and permittees, to apply for and receive authorizations for new FM translator stations for the sole and limited purpose of enhancing their existing service to the public. We therefore propose to open a one-time filing window during which only AM broadcasters may participate, and in which each may apply for one, and only one, new FM translator station, in the non-reserved FM band,⁴² to be used solely to re-broadcast the broadcaster's AM signal to provide fill-in and/or nighttime service. We propose that the window would have the following conditions and limitations:

- a. Eligible applicants must be AM broadcast licensees or permittees, and may apply for only one FM translator per AM station. We tentatively conclude that this requirement is necessary, as AM broadcasters forced to rely on translators owned by other licensees and permittees run the risk that the FM translator owner might choose, for example, to relocate the translator to an area that does not fill in the AM station's daytime signal contour, or might opt to rebroadcast another primary station.
- b. Applications for FM translators in this window must strictly comply with the existing fill-in coverage area technical restrictions on FM translators for AM stations, that is, must be located so that no part of the 60 dBμ contour of the FM translator will extend beyond the smaller of a 25-mile radius from the AM station's transmitter site, or the AM station's daytime 2 mV/m contour.
- c. Any FM translator station authorized pursuant to this window will be permanently linked to the AM primary station acquiring it. That is, the FM translator station may only be authorized to the licensee or permittee of the AM primary station it rebroadcasts, rather than an independent party; the FM translator may only be used to rebroadcast the signal of the AM station to which it is linked (or originate nighttime programming during periods when a daytime-only AM station is not operating); and the authorization for such an FM translator station will only be issued subject to the condition that it may not be assigned or transferred except in conjunction with the primary AM station that it rebroadcasts and with which it is commonly owned. We tentatively conclude that these conditions are necessary to accomplish the goals of the proposed filing window, as stated above. It makes little sense to provide AM broadcasters with an opportunity to enhance their service by applying for and receiving authorizations for new FM translator stations if those stations may then be assigned or transferred to independent parties unaffiliated with the primary AM stations, or used to rebroadcast other primary station signals.

We seek comment on these proposals.

15. We seek comment as to whether this window can be limited to AM incumbents, as we have proposed. We tentatively conclude that this eligibility restriction is consistent with the *Ashbacker*

⁴¹ See generally *Creation of a Low Power Radio Service; Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations*, Third Further Notice of Proposed Rule Making, 26 FCC Rcd 9986, 9999 (2011) (commenting on the speculation and trafficking in FM translator permits awarded from the Auction 83 FM translator filing window, noting that the top 15 filers in the Auction 83 filing window accounted for half of the 13,377 applications filed and that several applicants had engaged in the active marketing and sale of hundreds of translator construction permits awarded from that filing window).

⁴² Channels 221-300. See 47 C.F.R. § 73.501(a) (establishing the reserved band as Channels 200-220).

rights of potential applicants.⁴³ The United States Court of Appeals for the District of Columbia Circuit has held that Section 309(e) of the Communications Act “does not preclude the FCC from establishing threshold standards to identify qualified applicants and excluding those applicants who plainly fail to meet the standards.”⁴⁴ Moreover, the subsequent enactment of auction authority under Section 309(j) of the Communications Act reaffirmed the Commission’s “obligation in the public interest to continue to use . . . threshold qualifications . . . in order to avoid mutual exclusivity in application and licensing proceedings.”⁴⁵

16. We believe that the proposed requirements outlined here are narrowly tailored to address the daunting technical and competitive challenges that AM broadcasters face, to provide efficient and expeditious assistance to such broadcasters and, thus, to promote a more robust and sustainable AM broadcast service. These conditions would sharply limit the number of filings, resulting in fewer mutually exclusive proposals and faster application processing. They also would prevent speculative filings, an issue of some concern from our experience with the FM translator applications received in Auction 83.⁴⁶ In contrast, an open window could frustrate our goal of providing expeditious relief to AM broadcasters. As we previously observed, it will be necessary to undertake a close review of FM translator licensing rules before opening a general FM translator window.⁴⁷ Although we intend to revise the FM translator rules, and to provide further opportunities for all interested applicants to apply for FM translator permits, we tentatively conclude that an applicant-limited and technically limited window such as we propose here will provide immediate benefits to the AM service without materially affecting future FM translator window applicants. We invite comment on these tentative conclusions.

17. Specifically, we ask commenters to address the problems faced by AM stations in today’s marketplace, whether a window such as that proposed would significantly alleviate any problems identified, and whether commenters believe that further modifications to the proposed parameters for the window are necessary to address those specific problems (for example, additional or different requirements to be met by potential applicants; limitation of eligibility to licensees or permittees of certain class stations, e.g., Class C and D stations only, or to “stand alone” AM stations). Commenters may also discuss their experiences with using FM translators to augment AM service under our existing

⁴³ *Ashbacker Radio Co. v. FCC*, 326 U.S. 327 (1945) (47 U.S.C. § 309(e) establishes a right to hearing when two *bona fide* applications are mutually exclusive). See also *Kessler v. FCC*, 326 F.2d 673 (D.C. Cir. 1963) (extending *Ashbacker* rights to potential applicants whose applications would have been mutually exclusive but for an application freeze); *Bachow Communications, Inc. v. FCC*, 237 F.3d 683, 689 (D.C. Cir. 2001) (*Ashbacker* rights inhere in potential applicants whose right to file a timely competing application is frustrated by a Commission freeze order).

⁴⁴ See *Hispanic Information & Telecommunications Network, Inc., v. FCC*, 865 F.2d 1289, 1294 (D.C. Cir. 1989) (upholding against an *Ashbacker* challenge the dismissal of “non-local” Instructional Television Fixed Service applications filed during a “local priority period”). See also *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures*, Third Report and Order, 26 FCC Rcd 17642, 17644 n.10 and 17650 (limiting to Tribal entities initial eligibility for FM commercial permits of FM allotments added using Commission’s Tribal Priority); *Advanced Television Systems and their Impact upon the Existing Television Broadcast Service*, Fourth Notice of Proposed Rule Making and Third Notice of Inquiry, 10 FCC Rcd 10540, 10545 (tentatively concluding that initial eligibility for DTV licenses could be limited to incumbent broadcasters).

⁴⁵ See 47 U.S.C. § 309(j)(6)(E) (Commission is obliged to continue to use engineering solutions, negotiation, threshold qualifications, service regulations, and other means in order to avoid mutual exclusivity in application and licensing proceedings). See also *Policies to Promote Rural Radio Service and to Streamline Allotment and Assignment Procedures*, Second Report and Order, First Order on Reconsideration, and Second Further Notice of Proposed Rule Making, 26 FCC Rcd 2556, 2588 (2011).

⁴⁶ See *supra* note 41.

⁴⁷ See *2012 Translator Order*, 27 FCC Rcd at 3395.

rules, and whether there are currently a sufficient number of FM translator stations that are technically suited to meet the demand for AM fill-in service. We also request that commenters address the impact of such an FM translator window on FM full-power licensees, small businesses, businesses owned by minority groups and women, other FM translator licensees, and low-power FM (“LPFM”) broadcasters. Are there any obstacles or disadvantages to opening an FM translator filing window exclusively for AM licensees and permittees?

18. Given the unqualified success of the Commission’s introduction of cross-service FM translators in 2009, we believe that a narrowly tailored filing window for such FM translators, as proposed above, could yield significant public interest benefits with little to no detriment either to the FM translator service or to licensing opportunities for LPFM stations, especially since the filing window proposed here will follow the 2013 LPFM filing window.⁴⁸ We solicit comment on both our proposal to open a filing window and the operational details of such a window, as well as the effects on the FM, FM translator, and LPFM services. We also seek comment on whether, between our relaxation of the limitation on FM translators that can be used to rebroadcast AM station signals,⁴⁹ and the AM-only FM translator window proposed here, there will no longer be a need for so-called “Mattoon Waivers.”⁵⁰ If we do end the Mattoon Waiver policy, should it be eliminated upon adoption of the proposed AM-only translator window or upon the opening of that window?

B. MODIFY DAYTIME COMMUNITY COVERAGE STANDARDS FOR EXISTING AM STATIONS

19. Under the daytime community coverage rule, a commercial radio station must provide daytime coverage to its entire community of license,⁵¹ although the Commission has a “longstanding policy” to waive the rule, so long as the requesting licensee makes an appropriate showing that it will encompass 80 percent of the community of license’s area or population within the station’s 5 mV/m contour.⁵² The Commission adopted this rule in order to provide sufficient signal coverage to the designated community of license. The Minority Media Telecommunications Council (“MMTC”), in a 2009 petition for rulemaking filed with the Commission,⁵³ suggested that this rule, along with the inherent difficulties of finding suitable tower sites in urban areas, actually harms the public interest by “limit[ing] commercial stations from changing sites and making other improvements that benefit the public interest.”⁵⁴ MMTC explains that if a commercial station wants to change its site or make improvements,

⁴⁸ *Creation of a Low Power Radio Service; Amendment of Service and Eligibility Rules for FM Broadcast Translator Stations*, Fifth Order on Reconsideration and Sixth Report and Order, 27 FCC Rcd 15402, 15481 (2012) (announcing target date of October 15, 2013, for LPFM filing window). See also *Media Bureau Announces Availability of the Revised FCC Form 318 and the Filing Procedures for October 15 – October 29, 2013 Low Power FM Filing Window*, Public Notice, 28 FCC Rcd 8854 (MB 2013).

⁴⁹ *2012 Translator Order*, 27 FCC Rcd at 3395-96.

⁵⁰ See *supra* note 33.

⁵¹ See 47 C.F.R. §§ 73.24(i), 73.315(a).

⁵² *CMP Houston-KC, LLC*, 23 FCC Rcd 10656, 10657 n.8 (2008); see also *Barry Skidelsky*, 7 FCC Rcd 5577, 5577 ¶ 3 (1992) (citing *John R. Hughes*, 50 Fed. Reg. 5679 (1985)) (“The Commission traditionally accepts proposals that would cover at least 80 percent of the community of license as constituting substantial compliance with the rule”).

⁵³ *Review of Technical Policies and Rules Presenting Obstacles to Implementation of Section 307(b) of the Communications Act and to the Promotion of Diversity and Localism*, MMTC Radio Rescue Petition for Rulemaking, RM-11565 (Jul. 20, 2009) (“Radio Rescue Petition”). See *Consumer and Governmental Affairs Bureau Reference Information Center Petitions for Rulemaking Filed*, Public Notice, Report No. 2899 (CGB Sept. 23, 2009) (announcing filing of the *Radio Rescue Petition* and seeking public comment).

⁵⁴ *Radio Rescue Petition* at 15.

it must demonstrate that the station would cover at least 80 percent of the community from the new site. MMTC maintains that this “often proves to be impossible and it usually leads to a protracted waiver proceeding at a high cost in Commission resources.”⁵⁵

20. MMTC proposes that the Commission amend the standard to require a station to provide coverage to 50 percent of its community of license with a signal of at least 60 dBμ, which is the current coverage requirement for non-commercial educational (“NCE”) FM stations.⁵⁶ According to MMTC, under this proposal, “[i]f a commercial station were permitted to cover only 50 percent of its community of license, then the remaining 50 percent of the community, in nearly all cases, would still receive a very listenable signal.”⁵⁷ Thus, MMTC contends, the proposed rule modification could provide AM stations with greater flexibility in making station improvements without frustrating the original purpose of the rule. Modification of the rule, according to MMTC, could also “directly benefit small, women, minority, and all other broadcast licensees by providing them with additional flexibility for site location,” explaining that “[m]any commercial stations, including most minority-owned stations, have difficulty covering their target audiences due, in part, to restrictions currently imposed by the Commission’s community coverage rules.”⁵⁸ The Commission has previously noted that “sites suitable for AM antennas are increasingly difficult (and expensive) to find.”⁵⁹ Additionally, when the Commission modified the NCE FM community coverage rule in 2000, it recognized that permitting NCE FM stations to cover 50 percent of the community of license “should ensure sufficient flexibility in siting facilities and reaching target audiences.”⁶⁰

21. We agree with MMTC that, because of the space-intensive nature of AM transmitting facilities, in particular those requiring directional signals for some or all dayparts, which in turn require multiple towers and ground systems, AM tower siting has become increasingly difficult.⁶¹ This is especially true for stations in and near large urban areas. However, we also recognize the value of principal community coverage as part of the commitment to broadcast localism and the fair, efficient, and equitable distribution of radio service.⁶² We believe that an applicant for a new AM facility or change of community of license, as part of its due diligence when evaluating its proposal for new service, should specify a transmitter site that enables daytime and nighttime coverage under our existing standards, namely, coverage of 100 percent of the community of license with a principal community signal (5 mV/m) during the day, and coverage of 80 percent of the community of license with a nighttime interference-free (“NIF”) signal at night.⁶³ The Commission has held that AM coverage of less than 80 percent of the residential area of a community is generally considered to be inadequate,⁶⁴ and we see no

⁵⁵ *Id.*

⁵⁶ *Id.* MMTC references the NCE FM community coverage standard; we assume for purposes of this proceeding that it proposes that AM stations cover 50 percent of the community of license with a daytime 5 mV/m principal community signal. See 47 C.F.R. § 73.24(i). To the extent that MMTC also proposes to modify 47 C.F.R. § 73.315, the community coverage requirements for non-reserved band FM stations, this proposal is beyond the scope of this AM-only proceeding.

⁵⁷ *Id.* at 16.

⁵⁸ *Id.* at 15-16.

⁵⁹ See *Expanded Band R&O*, 6 FCC Rcd at 6322.

⁶⁰ *Streamlining of Radio Technical Rules in Parts 73 and 74 of the Commission’s Rules*, Second Report and Order, 15 FCC Rcd 21649, 21670 (2000).

⁶¹ In some cases, separate sites are needed for daytime and nighttime facilities.

⁶² 47 U.S.C. § 307(b).

⁶³ 47 C.F.R. § 73.24(i).

⁶⁴ *John R. Hughes and Eve H. Hughes, et al.*, Memorandum Opinion and Order, 50 Fed. Reg. 5679, 5680-81 (1985).

reason to allow an applicant proposing a new AM station or community of license change to propose facilities with sub-standard signal coverage. An applicant for a new AM station or community of license change should be able to evaluate whether it is able to secure transmission facilities that will enable it to provide adequate community coverage; if it cannot do so, it should not propose a new station.⁶⁵ Existing stations, however, especially those that have been in the same location for many years, may not have the same flexibility to provide community coverage, due to changes in city boundaries and population distribution, and perhaps due to the loss of unique transmitter sites and the unavailability of acceptable new sites.

22. We therefore propose to modify the daytime community coverage requirement contained in Section 73.24(i) of the Rules, for licensed AM facilities only, to require that the station cover either 50 percent of the population or 50 percent of the area of the community of license with a daytime 5 mV/m principal community signal. We seek comment on this proposed rule change. Specifically, what would be the effect on AM broadcasters and the public in general of modifying the rule? Commenters should describe and, if possible, quantify the costs and benefits of this proposal to broadcasters and the public. Would modifying the rule improve broadcaster flexibility in siting AM facilities and reaching target audiences? Would modification of the rule provide greater benefits to small AM stations and minority broadcasters? Conversely, would modification of the rule provide sub-standard signal quality to significant portions of a community of license? Would it be better to modify the daytime community coverage standard for all AM application types, including those for new stations and those seeking to change community of license? Alternatively, should we retain the existing AM daytime coverage requirements for all stations, subject to waiver on an appropriate showing? We ask that broadcasters discuss with specificity issues they have encountered when they try to comply with the daytime community coverage rule, particularly instances in which the rule may have prevented them from implementing beneficial station improvements.

C. MODIFY NIGHTTIME COMMUNITY COVERAGE STANDARDS FOR EXISTING AM STATIONS

23. Under our current rules, many AM radio stations are required to reduce their power or cease operating at night in order to avoid interference to other AM radio stations.⁶⁶ During daytime hours, AM signals travel principally by conduction over the surface of the earth, known as “groundwave” propagation. Therefore, daytime AM signals generally can be heard within a maximum radius of 100 miles, even for the most powerful stations. However, at night, AM signals that are broadcast at the same power level reflect from the ionosphere back to the earth, and can travel over hundreds of miles. Thus, if AM stations maintained their daytime operating power level at night, significant “skywave” interference to other AM stations would result. As a result, most AM radio stations are required by the Commission’s rules to reduce their power, sometimes drastically, or to cease operating at night altogether to avoid interference to other AM stations.⁶⁷

24. However, the Commission’s nighttime coverage rule also requires that non-Class D AM broadcasters maintain a signal at night sufficient to cause 80 percent of the area or population of the

⁶⁵ See, e.g., *Chester and Wedgefield, South Carolina*, Memorandum Opinion and Order, 4 FCC Rcd 4503, 4504 (MMB 1989), *recon. denied*, 5 FCC Rcd 5572 (1990), *review denied sub nom. Chester County Broadcasting Co. v. FCC*, Case 90-1496 (D.C. Cir. June 6, 1991) (asserted service benefits insufficient to overcome established policy of strict enforcement of technical rules in new station licensing context); *Pinckneyville, Illinois*, Report and Order, 41 R.R.2d 69, 71-72 (MMB 1977) (deleting allotment for new station where no rule-compliant technical proposal was possible); *Centenary College*, Letter, 23 FCC Rcd 17317 (MB 2008) (rejecting attempt to extend NCE FM contour overlap waiver policy from existing station to new station context).

⁶⁶ 47 C.F.R. § 73.182.

⁶⁷ *Id.*

broadcaster's principal community to be "encompassed by the nighttime 5 mV/m contour or the nighttime interference-free contour, whichever value is higher."⁶⁸ Effectively, this means that AM broadcasters must continue serving the bulk of their community of license at night even though the Commission's Rules mandate reduced maximum broadcast power levels.

25. MMTC has noted that the nighttime coverage requirement creates certain issues for AM broadcasters.⁶⁹ First, it observes that requiring separate coverage requirements for daytime and nighttime significantly reduces the transmitter sites available to an AM station. Although one site may be optimal for daytime coverage, it may not meet the specifications required to comply with the nighttime coverage rule. As a result, some stations must operate two separate sites in order to comply with the rule.⁷⁰ Second, MMTC argues that the nighttime coverage rule makes it more difficult for an AM broadcaster to relocate its station's antenna. When an antenna site becomes unusable – for example, due to increased interference caused by urban development in the surrounding area – the station may attempt to move to a more remote site. This attempt might be unsuccessful because changes in community and population coverage would take the station out of compliance with the nighttime coverage rule.⁷¹ Third, the nighttime coverage rule provides an entry barrier by requiring that broadcasters either demonstrate substantial compliance with the rule in an application for a new site or submit a waiver request demonstrating that the FCC should grant an exception to the rule.⁷²

26. As was the case with daytime AM signal coverage requirements, we acknowledge the difficulties faced by existing AM broadcasters with regard to antenna siting. We also recognize, however, the value of nighttime service to communities, especially those with little or no FM or other local nighttime AM service. In fact, because of their service limitations we no longer authorize new Class D AM stations, which are daytime-only or provide only secondary, unprotected nighttime service.⁷³ We also believe that applicants for new AM stations, or those proposing to change their community of license, should provide some level of nighttime service, for the same reasons set forth above in the daytime AM coverage section. That is, an applicant proposing new service or a new community of license should be able to base its decision on whether it can find a site from which it can provide the required coverage, whereas an incumbent station may be constrained from finding a new site from which to cover a community that may have grown since the station was first licensed. We therefore tentatively conclude that the nighttime coverage requirement should be eliminated for existing licensed AM stations, and should be modified to require that new AM stations and AM stations seeking a change to their communities of license cover either 50 percent of the population or 50 percent of the area of the community of license with a nighttime 5 mV/m signal or a nighttime interference-free contour, whichever value is higher. We seek comment on this proposal. Is the rule mandating minimum nighttime coverage for existing AM stations still necessary and desirable in light of the difficulties it poses and the number of waivers that are needed? What would be the benefit, if any, to AM broadcasters and to the public in general of eliminating the nighttime coverage requirement? What negative consequences to other AM stations or to the public in general, if any, would result from eliminating the rule? Would eliminating the

⁶⁸ 47 C.F.R. § 73.24(i). On the classes of AM stations generally, *see* 47 C.F.R. § 73.21. Class D stations, unlike other AM station classes, are not afforded nighttime interference protection and must protect other AM stations at night. Class D stations may have secondary nighttime facilities of no more than 250 watts and equivalent root mean square of less than 141 mV/m at 1 kilometer.

⁶⁹ *See Radio Rescue Petition* at 10-14.

⁷⁰ *Id.* at 11. The Commission has previously noted that "close-in sites suitable for AM antennas are increasingly difficult (and expensive) to find." *See Expanded Band R&O*, 6 FCC Rcd at 6322.

⁷¹ *Id.* at 11-12.

⁷² *Id.* at 12.

⁷³ 47 C.F.R. § 73.21(a)(3).

rule, as MMTC has suggested, afford AM stations “much greater flexibility in site selection and ability to move farther away from developed and costly downtown areas?”⁷⁴ Would eliminating the rule allow AM broadcasters to reduce their costs by improving their ability to move out of areas with high property values? Conversely, would eliminating the rule deprive communities of needed nighttime service? Should we require the station’s nighttime transmitter site and nighttime interference-free contour to be completely within the station’s predicted daytime protected 0.5 mV/m or 2 mV/m contour, to ensure that the station serves at least part of the area in the vicinity of its community of license?

27. To the extent commenters believe that the nighttime coverage rule has continued utility, but perhaps merits modification other than that proposed here, we ask them to submit proposals for such modification, and to discuss how a modified nighttime coverage rule might benefit AM broadcasters and serve the public. For example, rather than eliminating the rule entirely, should we consider relaxing the coverage requirement from 80 percent to 50 percent for existing stations, as the Commission did when adopting the rules for the AM expanded band, and as we proposed above for daytime coverage? Would an across-the-board nighttime 50 percent coverage rule, as the Commission concluded in adopting the standard for the expanded AM band, insure “a signal of significant quality to the community of license and the added flexibility . . . to locate . . . facilities at cost effective locations.”⁷⁵ Would the same be true for all AM broadcasters, whether in the standard or the expanded band? Alternatively, should we retain the AM nighttime coverage requirements in their current form, subject to waiver on a case-by-case basis and on an appropriate showing? Would the waiver process impose a significant burden on broadcasters encountering difficulties in providing adequate nighttime service? Should nighttime coverage requirements be retained for those stations that are the sole local transmission service at a community, or that provide the only nighttime service to a community or to a substantial population? Commenters should describe and, if possible, quantify the costs and benefits to broadcasters and the public of any rule modifications they support or propose.

D. ELIMINATE THE AM “RATCHET RULE”

28. Commission rules currently require that Class A and B stations comply with certain interference reduction requirements. One of these requirements is commonly known as the “ratchet rule.” This rule effectively requires that an AM broadcaster seeking to make facility changes, which would modify its AM signal, demonstrate that the improvements will result in an overall reduction in the amount of skywave interference that it causes to certain other AM stations.⁷⁶ In other words, the AM station proposing the modification must “ratchet back” its radiation at the pertinent vertical angle in the direction of certain other AM stations. The Commission adopted this rule to reduce interference in the AM band,⁷⁷ but as discussed below, it appears that the rule may not have achieved its intended goal.

29. In 2009, two broadcast engineering firms – duTreil, Lundin & Rackley, Inc. (“DLR”), and Hatfield & Dawson Consulting Engineers, LLC (“H&D”) – filed a petition with the Commission

⁷⁴ *Radio Rescue Petition* at 12–13.

⁷⁵ *See Expanded Band R&O*, 6 FCC Rcd at 6323.

⁷⁶ *See* 47 C.F.R. § 73.182(q) n.1 (stating that stations that “contribute to another station’s RSS [root-sum-square values of interfering field strengths] using the 50% exclusion method are required to either reduce their contributions to that RSS by 10%, or to a level at which their contributions no longer enter into the 50% RSS value.”).

⁷⁷ *Expanded Band R&O*, 6 FCC Rcd at 6294-6297 (“The modified approach we have developed adheres to our basic goal of improving the AM service by reducing or restricting increased interference.”); *See also Expanded Band MO&O*, 8 FCC Rcd at 3251 ¶ 10 (“A fundamental focus of the entire AM proceeding has been to ameliorate the interference present in the AM Band. The requirement for a 10% signal reduction under certain circumstances is a key element of our plan to accomplish this goal. In fact, it is the only provision adopted in the Report and Order that will directly reduce interference in the AM band.”).

proposing to eliminate the ratchet rule.⁷⁸ The petitioners contend that the ratchet rule since its inception has been a “serious impediment for stations wishing to make modifications to alleviate nighttime coverage difficulties due to noise and man-made interference.”⁷⁹ According to the petitioners, the ratchet rule tends to discourage service improvements in general, because a station seeking to improve its service by transmitter relocation, pattern change, or other means as a practical matter must reduce its power to comply with the rule. This, argue the petitioners, more often than not results in a net loss of nighttime interference-free service.⁸⁰ Moreover, the petitioners contend that the rule unduly disadvantages AM stations that have been on the air the longest, and that therefore have the lowest nighttime interference levels and largest coverage areas, in favor of reducing interference to newer stations that agreed to accept existing levels of interference when they began operations.⁸¹

30. Eight parties commented on the *Ratchet Rule Petition*, each agreeing that the ratchet rule should be repealed as it does not reduce harmful AM interference, and in fact inhibits AM facility modifications.⁸² Our experience since the ratchet rule was adopted appears to bear out DLR and H&D’s arguments, and those of the commenters, regarding the efficacy of the ratchet rule. There is no dispute that the reduction in radiation required by the ratchet rule causes harm due to loss of nighttime coverage area to licensed stations that must relocate their transmitting facilities. Approximately 60 percent of the AM stations currently governed by the ratchet rule, and that apply to relocate their transmitting facilities, seek waiver of the rule in order to avoid nighttime coverage area losses so severe that the station could provide no more than nominal nighttime service. We therefore tentatively conclude that the ratchet rule should be deleted, and propose deleting note 1 to Section 73.182(q) of the Rules.⁸³ We seek comment on this conclusion and proposed rule change. Is elimination of the ratchet rule both feasible and desirable? What would be the benefit to AM broadcasters, and to the listening public, of eliminating the rule? Would there be negative consequences to other AM stations and/or to listeners if we adopt our proposal to eliminate the ratchet rule? Does the ratchet rule, as the petitioners and commenters assert, tend to discourage service improvements in general? Conversely, does the ratchet rule continue to serve a valuable function in reducing the interference imposed by AM stations on other systems? Would elimination of the rule allow a broadcaster to change its facilities in ways that might increase the levels of interference that the broadcaster imposes on other stations beyond an acceptable threshold? Or are sufficient safeguards in place to prevent that result?

31. Alternatively, are there aspects of the ratchet rule that are worth retaining, such that we should modify the rule instead of deleting it, and if so what modifications should be made? We ask that commenters discuss their specific experiences with the ratchet rule and any instances in which the rule prevented them or their clients from making beneficial station improvements. We also ask that commenters describe and, if possible, quantify the costs and benefits of this proposal, and any suggested alternatives, to broadcasters and to their service to the public. To the extent commenters prefer modifying

⁷⁸ *Modification of Section 73.182(q), Footnote 1, to Promote Improvement of Nighttime Service by AM Radio Stations by Eliminating the “Ratchet Clause,”* Petition for Rulemaking, RM-11560 (Aug. 25, 2009) (“*Ratchet Rule Petition*”). See *Consumer and Governmental Affairs Bureau Reference Information Center Petitions for Rulemakings Filed*, Public Notice, Report No. 2897 (CGB Sept. 9, 2009) (announcing filing of the *Ratchet Rule Petition* and seeking public comment).

⁷⁹ *Ratchet Rule Petition* at second unnumbered page, para. 3.

⁸⁰ *Id.* para. 4, third-fifth unnumbered pages, paras. 7-8.

⁸¹ *Id.* at third unnumbered page, paras. 5-6.

⁸² See, e.g., Comments of Sellmeyer Engineering at 1-3; Comments of Independent Broadcast Consultants, Inc. at 3-6.

⁸³ 47 C.F.R. § 73.182(q) n.1.

the ratchet rule to deleting it, we urge them to submit proposals for modifying the ratchet rule in order to allow broadcasters more latitude to make such improvements.

E. PERMIT WIDER IMPLEMENTATION OF MODULATION DEPENDENT CARRIER LEVEL CONTROL TECHNOLOGIES

32. In September 2011, the Media Bureau (“Bureau”) released the *MDCL Public Notice*,⁸⁴ in which it stated that it would permit AM stations, by rule waiver or experimental authorization, to use transmitter control techniques that vary either the carrier power level or both the carrier and sideband power levels as a function of the modulation level. This allows AM licensees to reduce power consumption while maintaining audio quality and their licensed station coverage areas. These techniques are known as Modulation Dependent Carrier Level (“MDCL”) control technologies or algorithms.

33. There are two basic types of MDCL control technologies. In one type, the carrier power is reduced at low modulation levels and increased at higher modulation levels. Adaptive Carrier Control (“ACC”), Dynamic Amplitude Modulation (“DAM”), and Dynamic Carrier Control (“DCC”) are examples of this type of MDCL control technology. In the other type, there is full carrier power at low modulation levels and reduced carrier power and sideband powers at higher modulation levels. Amplitude Modulation Companding (“AMC”) is this type of MDCL control technology. Use of any of these MDCL control technologies reduces the station’s antenna input power to levels not permitted by Section 73.1560(a) of the Commission’s Rules.⁸⁵

34. The *MDCL Public Notice* permitted AM station licensees wanting to use MDCL control technologies to seek either a permanent waiver of Section 73.1560(a) for those licensees already certain of the particular MDCL control technology to be used, or an experimental authorization pursuant to Section 73.1510 of the Rules for those licensees wishing to determine which of the MDCL control technologies would result in maximum cost savings and minimum effects on the station’s coverage area and audio quality.⁸⁶ Since release of the *MDCL Public Notice*, 30 permanent waiver requests and 16 experimental requests authorizing use of MDCL control technologies have been granted.

35. AM station licensees using MDCL control technologies have reported significant savings on electrical power costs and few, if any, perceptible effects on station coverage area and audio quality.⁸⁷ Based on the absence of either reported negative effects of using MDCL control technologies or interference complaints from other AM stations, we tentatively conclude that use of MDCL control technologies reduces AM broadcasters’ operating costs while maintaining a station’s current level of service to the public, without interference to other stations. We therefore propose to amend Section 73.1560(a) of the Rules⁸⁸ to provide that an AM station may commence operation using MDCL control technology (“MDCL control operation”) without prior Commission authority, provided that the AM station licensee notifies the Commission of the station’s MDCL control operation within 10 days after commencement of such operation using the Bureau’s Consolidated Database System (“CDBS”).

⁸⁴ See *supra* note 32.

⁸⁵ 47 C.F.R. § 73.1560(a).

⁸⁶ 47 C.F.R. § 73.1510. Effective May 29, 2013, 47 C.F.R. § 73.1510 was deleted, and experimental authorizations for licensed broadcast stations are now governed by 47 C.F.R. § 5.203.

⁸⁷ For example, the two AM transmitter manufacturers that provide MDCL control technologies, Harris and Nautel, claim that AM broadcasters can save up to 35 percent of their power costs, totaling tens to hundreds of thousands of dollars over the lifetime of a transmitter. See <http://harrisbroadcast.com/productsandsolutions/RadioTransmission/RadioTransmitters/AMTransmitterPowerReductionAlgorithms.asp> (accessed Aug. 12, 2013); <http://www.nautel.com/solutions/advanced-solutions/mdcl-power-saving-technology/> (accessed Aug. 12, 2013).

⁸⁸ 47 C.F.R. § 73.1560(a).

Additionally, regardless of the MDCL control technology employed, we propose to require that the AM station's transmitter must achieve full licensed power at some audio input level, or when the MDCL control technology is disabled. This requirement will permit stations to use energy-saving MDCL technologies, which preserve licensed coverage areas, while distinguishing between such operations and simple reductions in transmitter power, which do not. We further propose to require an AM station using MDCL control technology to disable it before field strength measurements on the station are taken by the licensee or others. We seek comment on this proposal, including the benefits and potential harms of this proposal to broadcasters and its impact on service to the public, as well as potential cost savings to broadcasters. We also seek comment as to what notice an AM licensee or permittee employing MDCL control technology should receive from the Commission prior to measurements or inspections by Commission staff, and as to what the AM station's obligations should be in such situations. AM stations not using MDCL control technologies are required to adhere to the limits on antenna input power currently specified in Section 73.1560(a). We solicit comments on the proposed rule change, as well as on the potential adverse effects of allowing AM stations to commence MDCL control technology operation without prior Commission authority. We also seek comment as to the potential adverse effects, if any, of MDCL control technology implementation on other AM stations.

36. Two domestic AM transmitter manufacturers currently offer MDCL control technologies for use with their transmitters. Other AM transmitter manufacturers may be developing MDCL control technologies for use with their transmitters and, reportedly, other third-party vendors offer or are planning to offer external MDCL control adapters.⁸⁹ Should we require an AM station licensee to use only an MDCL control technology developed and implemented by the manufacturer of the station's transmitter, or should we allow a station to use an MDCL control technology developed and implemented by another provider? Although we currently do not require an AM station licensee to disclose the make and model of its transmitter, should we require an AM licensee commencing operation using MDCL control technology to inform the Commission of the make and model of its transmitter, as well as the particular MDCL control technology being used?

37. In the *MDCL Public Notice*, we stated that initial tests by transmitter manufacturers showed that MDCL control technologies are compatible with hybrid AM digital operation at the transmitter; that the National Radio System Committee ("NRSC") had recently convened a subcommittee to investigate the effects of MDCL control technologies on the hybrid AM digital signal, especially at the receiver; and that receiver compatibility tests were underway.⁹⁰ Based on these facts, the Commission permitted AM stations operating hybrid AM digital facilities to implement MDCL control technologies, provided that the hybrid signal continues to comply with the spectral emissions mask requirements in Section 73.44 of the Commission's Rules,⁹¹ and that the relative level of the analog AM signal to the digital AM signal remains constant. In April 2013, the NRSC published the NRSC MDCL Guideline,⁹² in which it concluded that, "[c]onsidering the effect that MDCL has on the signal, as well as the practical limitations of transmitter technology, caution is advised when implementing hybrid AM IBOC with MDCL."⁹³ The NRSC cites the potential for increased out-of-band emissions and reduction of signal quality of the hybrid AM digital signal when stations operating hybrid AM analog and digital facilities

⁸⁹ NRSC Guideline NRSC-G101, "AM Modulation-Dependent Carrier Level (MDCL) Usage Guideline" ("NRSC MDCL Guideline") at 9 (available for download at <http://www.nrscstandards.org/download.asp?file=nrsc-G101.pdf>).

⁹⁰ *MDCL Public Notice*, 26 FCC Rcd at 12911.

⁹¹ 47 C.F.R. § 73.44.

⁹² See *supra* note 89.

⁹³ NRSC MDCL Guideline at 16.

implement MDCL control technologies, and reports that further studies regarding the compatibility of MDCL control technologies and hybrid AM digital operation will be undertaken.

38. Since the effects of MDCL control technology on hybrid AM digital operation have not been conclusively determined, and we have received no interference complaints about AM stations operating with both MDCL control technology and hybrid digital facilities since the release of the *MDCL Public Notice*, we tentatively conclude that we should continue to permit all AM stations, including those operating hybrid AM analog and digital facilities, to implement MDCL control technologies without prior Commission authority. The continued operation of AM stations using MDCL control technology with hybrid AM digital facilities will allow further testing to determine the effect of the simultaneous use of MDCL control technologies and hybrid AM analog and digital facilities. We seek comment on this proposal.

F. MODIFY AM ANTENNA EFFICIENCY STANDARDS

39. The Commission's minimum efficiency standards impose minimum requirements regarding the effective field strength of AM broadcast stations.⁹⁴ Under the Commission's rules, "[a]ll applicants for new, additional, or different AM station facilities and all licensees requesting authority to change the transmitting system site of an existing station must specify an antenna system, the efficiency of which complies with the requirements for the class and power of station."⁹⁵ Section 73.189, which is referenced in Section 73.45(a), explains that to satisfy the efficiency requirements, an antenna system must "meet minimum height requirements, or . . . meet[] the minimum requirements with respect to field strength."⁹⁶ Thus, if an AM broadcaster's antenna does not satisfy the minimum height requirements, the broadcaster is required to ensure that the broadcast tower's effective field strength satisfies the minimum requirements contained in Section 73.184 of the Rules.⁹⁷

40. MMTC "proposes that the Commission replace 'minimum efficiency' for AM antennas with 'minimum radiation' in mV/m, thereby allowing AM stations to use very short antennas and enjoy more flexibility in site selection including rooftop installations."⁹⁸ Under MMTC's formulation, an AM broadcaster would only be required to show that the broadcast station produces a certain minimum level of radiation.⁹⁹ According to MMTC, "provided that the minimum radiation is achieved, efficiency levels are immaterial."¹⁰⁰ MMTC contends that the minimum efficiency standard originated in the 1920s when electric power was in short supply but land was abundantly available.¹⁰¹ Now, MMTC argues, "the relative availability of land and electric power are exactly reversed," and the Commission "must reevaluate the regulation to conform to its public interest obligation."¹⁰² MMTC believes that the current rule works a hardship on lower-frequency stations because "lower frequencies are having trouble meeting the minimum efficiency standard due to the large size of the antenna required to meet the standard."¹⁰³ Replacing the minimum efficiency standard with a minimum radiation standard, according to MMTC,

⁹⁴ See 47 C.F.R. §§ 73.45, 73.186, 73.189.

⁹⁵ 47 C.F.R. § 73.45(a).

⁹⁶ 47 C.F.R. § 73.189(b)(1).

⁹⁷ See 47 C.F.R. § 73.184.

⁹⁸ *Radio Rescue Petition* at 20.

⁹⁹ *Id.* at 20.

¹⁰⁰ *Id.*

¹⁰¹ *Id.* at 18.

¹⁰² *Id.* at 18–19.

¹⁰³ *Id.* at 20.

would allow AM stations “to use very short antennas and enjoy more flexibility in site selection.”¹⁰⁴ MMTC asserts that this, in turn, will “enable small businesses and entrepreneurs . . . many of whom are having trouble meeting the efficiency levels, to continue their operations by increasing power and using less land, thus providing the opportunity to move closer to larger, more viable areas.”¹⁰⁵

41. The Commission has previously observed that parcels of land suitable for AM towers and ground systems are less abundant and more expensive today than in the early days of radio broadcasting some 70-80 years ago, especially in and near urbanized areas.¹⁰⁶ However, the other premise that MMTC offers to support its proposal – namely, that electricity is more plentiful and more readily available – is not well established in the record of the *Radio Rescue Petition* proceeding.¹⁰⁷ More importantly, however, the MMTC proposal is unclear as to both the exact problems that MMTC perceives with our current regulations, the specifics of the rule or rules it proposes to eliminate or replace, and why that solution is preferable. While MMTC’s proposal calls for a “minimum radiation” standard expressed in mV/m, as noted above our current rules already provide such a standard as an alternative to the minimum antenna heights set forth therein. Section 73.189(b)(1) of the Rules states that good engineering practice requires an AM applicant either “to install a new antenna system or to make changes in the existing antenna system which will meet the minimum height requirements, or submit evidence that the present antenna system meets the minimum requirements with respect to field strength, before favorable consideration will be given thereto.”¹⁰⁸ Thus, for Class B, Class D, and Alaskan Class A AM stations, an antenna must either meet the minimum height requirements set forth in curves A, B, and C of Figure 7 of Section 73.190,¹⁰⁹ or must provide a minimum effective field strength of 282 mV/m for 1 kilowatt at 1 kilometer from the transmitter.¹¹⁰ In other words, our rules already provide for non-standard antennas, as long as

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ See *Expanded Band R&O*, 6 FCC Rcd at 6322.

¹⁰⁷ For example, MMTC’s evidence for its statement that “electric power was in short supply” consists solely of the statement that 45.148 quintillion BTUs of energy were consumed in the U.S. in 1930, versus 101.545 quintillion BTUs in 2009. *Radio Rescue Petition* at 18-19 and n.47. Given that the population of the United States in 2009 was two and one-half times the 1930 population, the fact that the nation in 2009 consumed 2.25 times as much energy in the aggregate does not demonstrate there was a “short supply” of energy in 1930 as much as it shows a lower demand. See <http://www2.census.gov/prod2/statcomp/documents/1931-02.pdf> (accessed July 19, 2013) (1930 Census population of the United States was 122,775, 046); http://www.census.gov/popest/data/historical/2000s/vintage_2009/ (accessed July 19, 2013) (2009 population of the United States estimated at 307,006,550). Perhaps more pertinent to MMTC’s proposal, MMTC does not provide any evidence regarding the relative cost of electricity today versus the 1920s and ’30s. If MMTC’s premise is that larger, more efficient and land-intensive AM transmission systems were needed in the early days of radio due to the high cost of electricity, it follows that smaller, lower-efficiency systems make economic sense only if electricity were correspondingly less expensive, adjusted for inflation, and at this point the record does not contain any such evidence. We do note, however, that there does appear to be some indication that the relative cost of electricity has decreased over the last several decades. For example, while the general Gross Domestic Product Index (GDP-PI) increased at an annual average rate of 2.94 percent from 1929 to 2005, the Consumer Price Index for electricity increased at an average rate of only 1.79 percent over that same time period. See Edison Electric Institute, *Assessing Rate Trends of U.S. Electric Utilities* (2006) at 6.

¹⁰⁸ 47 C.F.R. § 73.189(b)(1). See also 47 C.F.R. § 73.189(b)(5), under which an applicant contending that the required antenna efficiency can be obtained with an antenna of height or ground system less than the minimum specified must supply a field strength survey demonstrating that the field strength at a mile without absorption fulfills the minimum requirements.

¹⁰⁹ 47 C.F.R. §§ 73.189(b)(1), 73.190.

¹¹⁰ 47 C.F.R. § 73.189(b)(2)(ii).

they meet minimum field strength standards. It is unclear how the current rules differ from MMTC's proposed "minimum radiation" standard which, again, is not described by MMTC in any detail.¹¹¹

42. We accept MMTC's claim that scarcity of land and height restrictions may restrict some AM broadcasters, especially those at lower frequencies and thus longer wavelengths, from installing antenna systems that can meet our current standards for AM transmissions. Although the record as to this proposal is not sufficiently developed to enable us to propose wholesale rule changes at this time, we do believe that reducing the existing minimum effective field strength values in Section 73.189(b) of the Rules would offer AM broadcasters some relief by enabling them to propose shorter antennas. We therefore seek comment as to whether the Commission should reduce the minimum field strength values set forth in Sections 73.182(m) and 73.189(b)(2)(i) – (iii) of the Rules by approximately 25 percent and revise Sections 73.182(m) and 73.189(b)(2), as proposed in Appendix A.¹¹² What would be the benefit to AM broadcasters, or to the listening public, of reducing these values? What would be the impact on the public and the ability of stations to provide service to their communities? Would some other reduction be more appropriate? Would modifying the current minimum efficiency standards have negative consequences for other AM stations or the public? Have broadcasters, in particular those with lower-frequency stations, experienced difficulties in complying with the current rules? Would the proposed rule modifications provide AM broadcasters with more flexibility in site selection? We ask that broadcasters discuss their specific experiences with the minimum efficiency standards and any instances in which the rules prevented or impeded a station from changing location or using a lower-cost or more site-specific antenna system. We also ask that commenters describe and, if possible, quantify the costs of the current minimum efficiency standards, and the corresponding benefits of this proposal or any suggested alternatives.

43. To the extent that commenters believe that the minimum field strength values should be reduced further, eliminated entirely, or that other rule modifications be employed to provide AM broadcasters the relief sought by MMTC, we ask that commenters provide specifics as to any proposed replacement or alternative standard for AM transmission systems, including radiation and/or field strength standards, antenna input power, and minimum specifications for AM towers and ground systems, and the respective potential costs and benefits of such proposals. We seek comment on technical and policy considerations that may limit the extent to which we can lessen efficiency requirements; specifically, we also seek comment as to the potential interference and stability ramifications of lower efficiency transmission systems. Would such systems produce higher levels of skywave, groundwave, blanketing, or other forms of interference? Are the methods described in our current rules sufficient to assess the performance of systems of electrically very short antennas, or would other rule changes be required to permit the use of such antennas? Would they produce excess heat that would harm the transmission systems? Would they produce greater amounts of radio frequency radiation, requiring amendments to our fencing and other rules? Is there a limit to the extent to which AM antenna systems' efficiency can be lowered, to the point where such systems are no longer stable and cannot produce predictable radiation patterns? If so, are there potential rule modifications that can afford AM broadcasters the flexibility to build less efficient antenna systems than those specified by the standards in our rules, but without allowing them to expend needless time and expense on ultimately unstable transmission systems? We

¹¹¹ Likewise, while several commenters to the *Radio Rescue Petition* agreed with this proposal, none provided specifics as to exactly what was being proposed.

¹¹² 47 C.F.R. §§ 73.182(m) and Note (2), 73.189(b)(2)(i) – (iii). The new minimum field strength values would be as follows: for Class C stations, and stations in Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands on 1230, 1240, 1340, 1400, 1450, and 1490 kHz that were formerly Class C and were redesignated as Class B pursuant to § 73.26(b) of the Rules, the minimum effective field strength would be 180 mV/m for 1 kW at 1 km (90 mV/m for 0.25 kW at 1 km); for Class A (Alaska), Class B, and Class D stations other than those covered in § 73.189(b)(2)(i), the minimum effective field strength would be 215 mV/m for 1 kW at 1 km; and for Class A stations, a minimum effective field strength of 275 mV/m for 1 kW at 1 km.

emphasize again our request that commenters provide details as to any proposed rule modifications, additions, or deletions.

G. COMMENTS / SUBMISSION OF FURTHER PROPOSALS

44. We encourage all interested parties to comment on the specific proposals set forth in this *NPRM*, including the specific issues and questions posed by each, and to provide detailed analyses and exhibits in support of their comments. Commenters should describe and, to the extent possible, quantify both the costs and the benefits to the industry and to the public that would result from our proposals and any alternatives suggested in the comments.

45. The foregoing proposals are not intended to be an exhaustive recitation of all the possible means of revitalizing the AM service. Rather, they constitute concrete proposals that can be implemented expeditiously to assist AM broadcasters in providing needed radio service to the public. We recognize that there are other ideas that have been proposed to assist in revitalizing AM radio. These include: changes to nighttime skywave protection for Class A AM stations; adopting rules to permit the permanent licensing of AM synchronous transmission systems; permitting or requiring stations to convert to all-digital AM operation; and modification of the pre-sunrise / post-sunset AM operating rules. These more complex suggested reforms would require additional comment, research, and analysis. We therefore encourage parties to submit comments in this docket for the purpose of advancing these and other specific proposals to revitalize the AM service. In particular, we ask parties to provide us with any proposals to improve the long-term future of the AM service. We emphasize that any such submissions should contain details as to the rule additions, deletions, or modifications sought, as well as specifics as to the reasons underlying any proposals submitted.

IV. PROCEDURAL MATTERS

A. Filing Requirements.

46. *Ex Parte Rules.* The proceeding this *NPRM* initiates shall be treated as a “permit-but-disclose” proceeding 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 Section 1.1206(b) of the rules.¹¹³ In proceedings governed by Section 1.49(f) of the rules 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.

47. *Comments and Reply Comments.* Pursuant to Sections 1.415 and 1.419 of the rules,¹¹⁴ interested parties may file comments and reply comments on or before the dates indicated on the first

¹¹³ 47 C.F.R. § 1.1206(b).

¹¹⁴ 47 C.F.R. §§ 1.415, 1.419.

page of this document. Comments may be filed using the Commission's Electronic Comment Filing System ("ECFS").¹¹⁵

48. *Electronic Filers.* Comments may be filed electronically using the Internet by accessing the ECFS: <http://fjallfoss.fcc.gov/ecfs2/>.

49. *Paper Filers.* Parties who choose to file by paper must file an original and one copy of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

50. Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal. All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- All hand-delivered or messenger-delivered paper filings for the Commission's Secretary must be delivered to FCC Headquarters at 445 12th Street, SW, Room TW-A325, Washington, D.C. 20554. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority Mail must be addressed to 445 12th Street, SW, Washington, D.C. 20554.

51. *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 (voice), 202-418-0432 (TTY).

52. *Additional Information.* For additional information on this proceeding, contact Thomas S. Nessinger, Thomas.Nessinger@fcc.gov, of the Media Bureau, Audio Division, (202) 418-2700.

B. Initial Regulatory Flexibility Analysis.

53. 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).

54. With respect to this *Notice of Proposed Rule Making* ("NPRM"), an Initial Regulatory Flexibility Analysis ("IRFA") under the Regulatory Flexibility Act¹¹⁶ is contained in Appendix A. Written public comments are requested in the IFRA, and must be filed in accordance with the same filing deadlines as comments on the NPRM, with a distinct heading designating them as responses to the IRFA.

¹¹⁵ See *Electronic Filing of Documents in Rulemaking Proceedings*, Memorandum Opinion and Order, 63 Fed. Reg. 24121 (1998).

¹¹⁶ See 5 U.S.C. § 603.

The Commission will send a copy of this *NPRM*, including the IRFA, in a report to Congress pursuant to the Congressional Review Act. In addition, a copy of this *NPRM* and the IRFA will be sent to the Chief Counsel for Advocacy of the SBA, and will be published in the *Federal Register*.

C. Paperwork Reduction Act Analysis.

55. This document contains proposed new information collection requirements. The Commission, as part of its continuing effort to reduce paperwork burdens, invites the general public and the Office of Management and Budget (“OMB”) to comment on the information collection requirements contained in this document, as required by the Paperwork Reduction Act of 1995 (“PRA”), Public Law 104-13. In addition, pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. § 3506(c)(4), we seek specific comment on how we might “further reduce the information collection burden for small business concerns with fewer than 25 employees.” Written comments on possible new and modified information collections must be submitted on or before 60 days after date of publication in the *Federal Register*. In addition to filing comments with the Secretary, a copy of any Paperwork Reduction Act comments on the information collection(s) contained herein should be submitted to Cathy Williams, Federal Communications Commission, via the Internet to Cathy.Williams@fcc.gov, and to Nicholas Fraser, OMB Desk Officer, via the Internet to Nicholas.A.Fraser@omb.eop.gov or by fax to 202-395-5167.

56. For additional information concerning the information collection(s) contained in this document, contact Cathy Williams at 202-418-2918, or via the Internet at Cathy.Williams@fcc.gov.

V. ORDERING CLAUSE

57. Accordingly, IT IS ORDERED that, pursuant to sections 4(i), 301, 303(r), 316, and 403 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 301, 303(r), 316, 403, this Notice of Proposed Rule Making IS ADOPTED.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch
Secretary

APPENDIX A
Proposed Rule Changes

Part 73 of Chapter 1 of Title 47 of the Code of Federal Regulations is proposed to be amended as follows:

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

Authority: 47 U.S.C. 154, 303, 334, 336, and 339.

2. Section 73.24 is proposed to be amended by revising paragraph (i), to read as follows:

§ 73.24 Broadcast facilities; showing required.

* * * * *

(i) That, for all proposals for new stations, and all applications to change a station's community of license, the daytime 5 mV/m contour encompasses the entire principal community to be served. That, for all other applications for modification of licensed stations, the daytime 5 mV/m contour encompasses either 50 percent of the area, or 50 percent of the population, of the principal community to be served. That, for all proposals for new stations in the 535-1605 kHz band, either 50 percent of the area, or 50 percent of the population of the principal community is encompassed by the nighttime 5 mV/m contour or the nighttime interference-free contour, whichever value is higher. That, for stations in the 1605-1705 kHz band, 50 percent of the principal community is encompassed by the nighttime 5 mV/m contour or the nighttime interference-free contour, whichever value is higher. That Class D stations with nighttime authorizations need not demonstrate such coverage during nighttime operation.

* * * * *

3. Section 73.182 is amended by modifying paragraph (m) and Note (2) to paragraph (m); and removing Footnote 1 to paragraph (q), and re-numbering the remaining footnotes to paragraph (q), to read as follows:

§ 73.182 Engineering standards of allocation.

* * * * *

(m) * * * Certain approximations, based on the curve or other appropriate theory, may be made when other than such antennas and ground systems are employed, but in any event the effective field to be employed shall not be less than the following:

Class of station	Effective field (at 1 km)
All Class A (except Alaskan)	275 mV/m.
Class A (Alaskan), B and D	215 mV/m.
Class C	180 mV/m.

* * *

Note (2): For Class B stations in Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands, 180 mV/m shall be used.

* * * * *

(q) Normally protected service contours and permissible interference signals for broadcast stations are as follows (for Class A stations, see also paragraph (a) of this section):

Class of station	Class of channel used	Signal strength contour of area protected from objectionable interference ^[remove footnote reference] ($\mu\text{V/m}$)		Permissible interfering signal ($\mu\text{V/m}$)	
		Day ¹	Night	Day ¹	Night ²
A	Clear	SC 100 AC 500	SC 500 50% SW AC 500 GW	SC 5 AC 250	SC 25 AC 250
A (Alaskan)do	SC 100 AC 500	SC 100 50% SW AC 500 GW	SC 5 AC 250	SC 5 AC 250
B	Clear	500	2000 ²	25	25
	Regional			AC 250	250
C	Local	500	No presc. ³	SC 25	Not presc.
D	Clear	500	Not presc.	SC 25	Not presc.
	Regional			AC 250	

[Remove current footnote 1]

¹ Groundwave.

² Skywave field strength for 10 percent or more of the time.

³ During nighttime hours, Class C stations in the contiguous 48 States may treat all Class B stations assigned to 1230, 1240, 1340, 1400, 1450, and 1490 kHz in Alaska, Hawaii, Puerto Rico, and the U.S. Virgin Islands as if they were Class C stations.

Note: SC = Same channel; AC = Adjacent channel; SW = Skywave; GW = Groundwave

* * * * *

4. Section 73.189 is proposed to be amended by revising paragraph (b)(2), to read as follows:

§ 73.189 Minimum antenna heights or field strength requirements.

* * * * *

(b) * * *

(2) These minimum actual physical vertical heights of antennas permitted to be installed are shown by curves A, B, and C of Figure 7 of § 73.190 as follows:

(i) Class C stations, and stations in Alaska, Hawaii, Puerto Rico and the U.S. Virgin Islands on 1230, 1240, 1340, 1400, 1450 and 1490 kHz that were formerly Class C and were redesignated as Class B pursuant to § 73.26(b), 45 meters or a minimum effective field strength of 180 mV/m for 1 kW at 1 km (90 mV/m for 0.25 kW at 1 km). (This height applies to a Class C station on a local channel only. Curve A shall apply to any Class C stations in the 48 conterminous States that are assigned to Regional channels.)

(ii) Class A (Alaska), Class B and Class D stations other than those covered in § 73.189(b)(2)(i), a minimum effective field strength of 215 mV/m for 1 kW at 1 km.

(iii) Class A stations, a minimum effective field strength of 275 mV/m for 1 kW at 1 km.

* * * * *

5. Section 73.1560 is proposed to be amended by revising paragraph (a)(1), to read as follows:

§ 73.1560 Operating power and mode tolerances.

(a) *AM Stations.* (1) Except for AM stations using modulation dependent carrier level (MDCL) control technology, or as provided for in paragraph (d) of this section, the antenna input power of an AM station, as determined by the procedures specified in § 73.51, must be maintained as near as practicable to the authorized antenna input power and may not be less than 90 percent nor greater than 105 percent of the authorized power. AM stations may, without prior Commission authority, commence MDCL control technology use, provided that within 10 days after commencing such operation, the licensee submits an electronic notification of commencement of MDCL control operation using FCC Form 338. The transmitter of an AM station operating using MDCL control technology, regardless of the MDCL control technology employed, must achieve full licensed power at some audio input level or when the MDCL control technology is disabled. MDCL control operation must be disabled before field strength measurements on the station are taken.

* * * * *

APPENDIX B

Initial Regulatory Flexibility Analysis

1. As required by the Regulatory Flexibility Act of 1980, as amended (“RFA”)¹ 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 in paragraph 75. 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”).² In addition, the *NPRM* and the IRFA (or summaries thereof) will be published in the Federal Register.³

2. **Need For, and Objectives of, the Proposed Rules.** This rulemaking proceeding is initiated to obtain further comments concerning certain proposals designed to revitalize the AM broadcast radio service. It is based in part on proposals raised in Petitions for Rule Making filed by various parties, including *duTreil*, Lundin & Rackley, Inc. (“DLR”), Hatfield & Dawson Consulting Engineers, LLC (“H&D”), and the Minority Media and Telecommunications Council (“MMTC”).

3. Specifically, the Commission seeks comment on the following: (1) whether to open a one-time window for AM licensees and permittees to apply for FM translator stations to fill in parts of their signal contours; (2) whether to reduce the daytime community signal coverage requirements for existing AM stations to 50 percent of the area of the community of license or 50 percent of the community’s population; (3) whether to eliminate the nighttime community coverage requirement for all AM stations; (4) whether to eliminate the AM “ratchet rule,” which requires an AM broadcaster seeking to make changes, which would modify its AM signal, to demonstrate that the improvements will result in an overall reduction in the amount of skywave *interference* that it causes to certain other AM stations; (5) whether to allow AM broadcasters to commence operation using Modulation Dependent Carrier Level (“MDCL”) control technologies without prior Commission authorization, by notifying the Commission within 10 days after initiating such operation; and (6) whether to modify the Commission’s AM antenna efficiency standards by reducing the minimum field strength values set forth in the Rules. Additionally, the Commission seeks comment on any additional proposals designed to reduce burdens upon AM broadcasters, or to enhance AM service to the public.

4. **Legal Basis.** The authority for this proposed rulemaking is contained in Sections 1, 2, 4(i), 303, 307, and 309(j) of the *Communications Act of 1934*, 47 U.S.C §§ 151, 152, 154(i), 303, 307, and 309(j).

5. **Description and Estimate of the Number of Small Entities to Which the Proposed Rules Will Apply.** The RFA directs the Commission to provide a description of and, where feasible, an estimate of the number of small entities that will be affected by the proposed rules.⁴ The RFA generally defines the term “small entity” as encompassing the terms “small business,” “small organization,” and

¹ See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, Title II, 110 Stat. 857 (1996).

² See 5 U.S.C. § 603(a).

³ See *id.* § 603(a).

⁴ *Id.* § 603(b)(3).

"small governmental entity."⁵ In addition, the term "small business" has the same meaning as the term "small business concern" under the Small Business Act.⁶ 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").⁷

6. **Radio Stations.** The proposed policies could apply to radio broadcast licensees, and potential licensees of radio service. The SBA defines a radio broadcast station as a small business if such station has no more than \$7 million in annual receipts.⁸ Business concerns included in this industry are those primarily engaged in broadcasting aural programs by radio to the public.⁹ According to Commission staff review of the BIA Publications, Inc. Master Access Radio Analyzer Database as of August 2, 2013, about 10,811 (97 percent) of 11,162 commercial radio station have revenues of \$7 million or less and thus qualify as small entities under the SBA definition. We note, however, that, in assessing whether a business concern qualifies as small under the above definition, business (control) affiliations¹⁰ 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.

7. In addition, an element of the definition of "small business" is that the 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 station is dominant in its field of operation. Accordingly, the estimate of small businesses to which rules may apply do not exclude any radio station from the definition of a small business on this basis and therefore may be over-inclusive to that extent. Also as noted, an additional element of the definition of "small business" is that the entity must be independently owned and operated. We note that it is difficult at times to assess these criteria in the context of media entities and our estimates of small businesses to which they apply may be over-inclusive to this extent.

8. **FM translator stations and low power FM stations.** The proposed policies could affect licensees of FM translator stations, as well as potential licensees in this radio service. The same SBA definition that applies to radio broadcast licensees would apply to these stations. The SBA defines a radio broadcast station as a small business if such station has no more than \$7 million in annual receipts.¹¹ Currently, there are approximately 6,053 licensed FM translator and booster stations.¹² In addition, there are approximately 646 applicants with pending applications filed in the 2003 translator filing window.

⁵ *Id.* § 601(6).

⁶ *Id.* § 601(3) (incorporating by reference the definition of "small business concern" in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies "unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register."

⁷ 15 U.S.C. § 632.

⁸ *See* 13 C.F.R. § 121.201, NAICS Code 515112.

⁹ *Id.*

¹⁰ "[Business concerns] are affiliates of each other when one concern controls or has the power to control the other or a third party or parties controls or has to power to control both." 13 C.F.R. § 121.103(a)(1).

¹¹ *See* 13 C.F.R. § 121.201, NAICS Code 515112.

¹² *See Broadcast Station Totals as of March 31, 2013*, News Release (rel. Apr. 12, 2013) (http://fjallfoss.fcc.gov/edocs_public/attachmatch/DOC-320138A1.pdf).

Given the nature of these services, we will presume that all of these licensees and applicants qualify as small entities under the SBA definition.

9. **Description of Projected Reporting, Recordkeeping and Other Compliance Requirements.** The proposed rule and procedural changes may, in some cases, impose different reporting requirements on potential radio licensees and permittees, insofar as they would require or allow certain AM applicants to demonstrate their qualifications to apply for an FM translator station meeting the current rules for FM translator use by AM stations. However, the information to be filed is already familiar to broadcasters, and the specific information requested to apply for a new FM translator station involves engineering similar to that of full-power FM stations (and, in fact, less complex than the engineering for a full-power AM station), so any additional burdens would be minimal. Reducing the AM daytime signal coverage requirements should not increase burdens on AM broadcasters; they would still have to calculate their signal contours and the populations covered, but the percentage of the community that must be covered would be lower, so to the extent that broadcasters find it difficult to cover 80 to 100 percent of the community of license with a 5 mV/m signal, burdens should be decreased. Likewise, eliminating the nighttime community coverage requirement will decrease burdens on AM broadcasters, who would no longer have to provide calculations of their nighttime interference-free or 5 mV/m contours. Elimination of the “ratchet rule” would substantially decrease burdens on AM broadcasters seeking to make changes to their facilities, by eliminating the requirement that they reduce skywave interference to certain other broadcasters. Should the Commission adopt its proposal to allow AM broadcasters to use MDCL technologies without prior authorization, this would reduce burdens on such broadcasters, who would no longer have to apply for waivers or experimental authorizations, but would need only to inform the Commission through the Media Bureau’s electronic Consolidated Data Base System (“CDBS”). Finally, if the Commission were to adopt its proposal to reduce the minimum efficiency standards for AM broadcasters, this would reduce burdens on such broadcasters by affording them more flexibility in antenna siting and construction.

10. **Steps Taken to Minimize Significant Impact on Small Entities, and Significant Alternatives Considered.** The RFA requires an agency to describe any significant 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 or reporting requirements under the rule for 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 small entities.¹³

11. In the *Notice of Proposed Rulemaking*, the Commission seeks to assist AM broadcasters by providing them with an opportunity to acquire single-purpose FM translator stations to fill in their signal contours; by providing relief from community signal coverage requirements (day and night) which may have become problematic due to geographic and population shifts and a dearth of land suitable for AM transmission systems; by eliminating the “ratchet rule” that imposes interference-amelioration requirements as a quid-pro-quo for certain facility improvements, but which has had the effect of discouraging such improvements; by simplifying the process of initiating energy-saving MDCL technologies; and by reducing the minimum effective field strength values for AM stations. The Commission seeks comment as to whether its goal of revitalizing the AM service could be effectively accomplished through these means. The Commission is open to consideration of alternatives to the proposals under consideration, as set forth herein, including but not limited to alternatives that will minimize the burden on AM broadcasters, most of whom are small businesses. There may be unique

¹³ 5 U.S.C. § 603(b).

circumstances these entities may face, and we will consider appropriate action for small broadcasters when preparing a *Report and Order* in this matter.

12. **Federal Rules Which Duplicate, Overlap, or Conflict With, the Commission's Proposals.** None.

**STATEMENT OF
ACTING CHAIRWOMAN MIGNON L. CLYBURN**

Re: Revitalization of the AM Radio Service, MB Docket No. 13-249

AM radio is part of the foundation of our media landscape, which has tied communities together for generations. Today, it is one of the more diverse parts of our dial. Female-owned and minority-owned stations make up a greater percentage of stations on the AM dial than the FM dial. And my professional career was buoyed on an AM station in South Carolina, so I have a special affection for the AM service and its place in our culture.

But there are many threats to AM service. Listeners are migrating to newer, higher-fidelity media services, which is leading AM stations to shut down and listenership to dwindle. To help AM stations weather the tide, this item identifies challenges that should be addressed and proposes remedies. For example, due to the propagation characteristics of AM signals, many stations must reduce their power at night, and some are unable to broadcast at that time. We propose to modify the nighttime coverage rules to keep more stations on the air after dark. Moreover, reinforced buildings and structures with steel frames or aluminum siding can block AM signals and lead to poor reception in many urban areas. Our proposals to open an FM translator filing window just for AM licensees and to modify the daytime community coverage standards intend to give licensees more flexibility to deliver their programming to listeners in urban areas. Finally, electricity bills for AM broadcasters can be high. Our proposal to let AM licensees use Modulation Dependent Carrier Level control technologies or algorithms is intended to reduce those bills and lower operating costs.

During my tenure as Chairwoman, the Commission has taken a number of steps to provide relief to AM broadcasters. This summer, the Commission simplified the licensing procedures and technical requirements—including allowing “moment-method” modeling—which can save licensees over \$100,000. And this year, the Commission has actively expanded the inventory of translator stations. In fact, by the end of 2013, the Media Bureau’s Audio Division expects to have increased the number of authorized FM translators from 5,700 to about 7,300 – a 28 percent boost. This item represents the next significant step in our effort to buttress AM broadcast service and ease regulatory burdens on AM broadcasters. These steps, along with the changes proposed in today’s item, will help AM radio stay vibrant into the future. Who knows, maybe a future FCC Chairwoman is getting her start at one today.

I would like to extend a warm thank you to Peter Doyle, Jim Bradshaw, Tom Nessinger, Susan Crawford, and Lisa Scanlan for their hard work on this item. In addition to other vitally important tasks, Peter’s team in the Audio Division has worked tirelessly on the achievements I list above.

**STATEMENT OF
COMMISSIONER AJIT PAI**

Re: *Revitalization of the AM Radio Service*, MB Docket No. 13-249.

This is a great day.

It's been over two decades since we last comprehensively reviewed our AM radio rules. Over that time, the AM band has struggled. Interference problems, declining listenership, and other factors have brought the band low. But millions of Americans—myself included—still rely on and believe in AM radio. So last September, I proposed that the FCC launch an AM radio revitalization initiative.¹

Today, we are doing just that. This Notice of Proposed Rulemaking (NPRM) kicks off a landmark effort by the Commission to energize the nation's oldest broadcasting service, and I am excited to support it.

The NPRM embraces a sensible two-stage strategy for improving AM radio service. First, we propose several ways to give AM broadcasters relief in the short term. For instance, we suggest eliminating the ratchet rule. We tee up modifications to the daytime and nighttime community coverage rules for existing AM stations. Perhaps most importantly, we seek public input on letting AM stations apply for new FM translators. I'm the first to acknowledge that these and other proposals will not be an immediate panacea for the difficulties confronting the AM band. But based on the conversations I have had with AM broadcasters across the country during the past year, I am convinced that they can make a substantial, positive difference to numerous AM stations.

Second, we also invite the American public to share their proposals for the long-term future of the AM band. What steps can the Commission take so that there will be a vibrant AM radio service ten or fifteen years from now? I hope broadcasters, engineers, and anyone else with an interest in AM radio will submit creative ideas to the Commission.

Many outside and inside the Commission paved the way for today's accomplishment. Over the past year, AM broadcasters and listeners across the country have expressed their support for this effort in many different ways.² The Minority Media and Telecommunications Council has pressed us for a long time to reform our AM radio rules; they know that most minority-owned radio stations are on the AM band and that many AM stations serve ethnic and foreign-language populations. Benjamin Tarbell, my one-time clerk and then-student at George Washington University Law School, wrote the first draft of this item. Chairwoman Clyburn's leadership resulted in the circulation of this item. And this Notice would not have seen the light of day without the hard work of the staff in the Media Bureau's Audio Division,

¹ Remarks of Commissioner Ajit Pai Before the Radio Show (Sept. 19, 2012), *available at* <http://go.usa.gov/WTd4>.

² *See, e.g.*, Statement of Commissioner Ajit Pai on WRDN, Reel Country 1430 AM (June 10, 2013), *available at* <http://go.usa.gov/Wb5e>. I want to express my personal gratitude to the many, many radio broadcasters—too numerous to list here, but ranging from Washington, DC to Alaska—who have hosted me in their stations; conducted on-air interviews in person or over the phone; written me emails, letters, and cards; and/or simply given me the proverbial, and sometimes literal, pat on the back for advocating a cause they had assumed had been forgotten.

led by Division Chief Peter Doyle and Deputy Chief Jim Bradshaw. I thank everyone who has helped shepherd this document from conception to adoption and look forward to continuing to collaborate with them in the time to come.

And now, the fun begins. Let's get to work revitalizing AM radio.