



Federal Communications Commission
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Small Entity Compliance Guide

An 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

Docket No. 93-177

Released August 16, 2013

This Guide is prepared in accordance with the requirements of Section 212 of the Small Business Regulatory Enforcement Fairness Act of 1996. It is intended to help small entities—small businesses, small organizations (non-profits), and small governmental jurisdictions—comply with the new rules adopted in the above-referenced FCC rulemaking docket(s). This Guide is not intended to replace the rules and, therefore, final authority rests solely with the rules. Although we have attempted to cover all parts of the rules that might be especially important to small entities, the coverage may not be exhaustive. This Guide may, perhaps, not apply in a particular situation based upon the circumstances, and the FCC retains the discretion to adopt approaches on a case-by-case basis that may differ from this Guide, where appropriate. Any decisions regarding a particular small entity will be based on the statute and regulations.

In any civil or administrative action against a small entity for a violation of rules, the content of the Small Entity Compliance Guide may be considered as evidence of the reasonableness or appropriateness of proposed fines, penalties or damages. Interested parties are free to file comments regarding this Guide and the appropriateness of its application to a particular situation; the FCC will consider whether the recommendations or interpretations in the Guide are appropriate in that situation. The FCC may decide to revise this Guide without public notice to reflect changes in the FCC's approach to implementing a rule, or to clarify or update the text of the Guide. Direct your comments and recommendations, or calls for further assistance, to the FCC's Consumer Center:

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I. OBJECTIVES OF THE PROCEEDING

The *Third Report and Order and Second Order on Reconsideration* in MM Docket No. 93-177 furthers the Commission's initiative to simplify the Media Bureau's licensing procedures.¹ Specifically, the *Order* harmonizes and streamlines the Commission's rules regarding tower construction near AM stations in two respects. First, the *Order* establishes a single protection scheme for tower construction and modification near AM tower arrays. Second, the *Order* designates "moment method" computer modeling as the principal means of determining whether a nearby tower affects an AM radiation pattern. These actions take another step in the Commission's modernization by replacing time-consuming direct measurement procedures with an efficient computer modeling methodology that is reflective of current industry practice.

II. BACKGROUND

In AM radio, the tower itself functions as the antenna. Consequently, a nearby tower may become an unintended part of the AM antenna system, reradiating the AM signal and distorting the authorized AM radiation pattern. Previously, the Commission's rules contained several service-specific sections concerning tower construction near AM antennas that were intended to protect AM stations from the effects of such tower construction, specifically, Sections 73.1692 (broadcast), 22.371 (Public Mobile Service), and 27.63 (Advanced Wireless Service and Wireless Communications Service).² These previous rule sections imposed differing requirements on the broadcast and wireless entities, although the issue is the same regardless of the types of antennas mounted on a tower. Other rule parts, such as Part 90 (Private Land Mobile Radio Services) and Part 24 (Personal Communications Services), entirely lacked provisions for protecting AM stations from possible effects of nearby tower construction. The new rules consolidate the various service-specific rules and extend the rules to all Commission licensees and permittees constructing and modifying towers.

III. RULES THAT THE COMMISSION AMENDED

- The new rules exclude short towers from their scope on the ground that such towers are inefficient reradiators that would not generally affect an AM pattern. Accordingly, the rules apply only to towers that are taller than a specified "threshold height." The Commission adopted a threshold height of 36 electrical degrees for a directional antenna and 60 electrical degrees for a nondirectional antenna. The new rules also exclude most antenna structures mounted atop buildings from AM proximity analysis, except where the structure alone would be a significant reradiator as defined in Section 1.30002(a) or (b) of the Commission's rules.³
- The Commission adopted a provision requiring 30 days' prior notice of tower construction, including significant tower modifications, to a nearby AM station. The notice must include the tower proponent's name and address, the coordinates of the tower to be constructed or modified, a physical description of the planned structure, and the results of the analysis showing the predicted effect on the AM pattern, if performed. The Commission adopted an expedited

¹ *An 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, 28 FCC Rcd 12555 (2013).

² 47 C.F.R. §§ 73.1682, 22.371, 27.63.

³ 47 C.F.R. § 1.30002.

notification period (less than 30 days), which may be requested when deemed necessary by the tower proponent.⁴

- If there is an urgent communications need during an emergency situation involving essential public services, public health, or public welfare, a tower proponent may either erect a temporary new tower or make a temporary significant modification to an existing tower without prior notice to potentially affected nearby AM stations. However, the tower proponent shall: (1) provide written notice to such AM stations within five days of the construction or modification of the tower and (2) cooperate with such AM stations to promptly remedy any pattern distortions that arise as a consequence of such construction. The notification procedures apply to AM stations that are licensed and to those that are operating pursuant to program test authority.⁵ The AM station response to a notification indicating a potential disturbance of the AM radiation pattern must: (1) specify the technical details and (2) be provided to the proponent within 30 days. If no response to notification is received within 30 days, the proponent may proceed with the proposed tower construction or modification.
- Nondirectional AM station operation requires only one tower (radiator), the geographic coordinates of which appear in the Commission's Consolidated Database System ("CDBS") as the AM station's location. Directional AM station operation requires multiple towers (as few as two and as many as twelve in an array in some cases), and these towers can be spaced at considerable distances from each other. The geometric center of a directional antenna array is defined as the array center and these coordinates are the location of the AM station specified in CDBS. The Commission clarified that, for both nondirectional and directional AM stations, tower proponents should determine the distance from the AM station to the proposed tower construction using the AM station coordinates specified in CDBS.⁶
- The new rules establish a presumption that tower construction or modification that does not meet the specified technical criteria in 47 C.F.R. § 1.30002 will have no significant effect on an AM station, and proximity analysis is therefore not required in these circumstances. However, the Commission adopted a remedial provision to cover circumstances in which an AM station believes it has been affected by tower construction or modification that does not meet those technical criteria requiring AM proximity analysis. Specifically, if an AM station is affected by tower construction or modification that does not meet the technical criteria established in 47 C.F.R. § 1.30002, the station may submit a showing that its operation has been affected by that tower construction or alteration. Such a showing shall consist of either a moment method analysis as described in paragraph (c) of Section 1.30002, or of field strength measurements. Moment method modeling is a computer modeling technique that can be used to verify that an AM directional antenna performs as authorized. Moment method proofs, in contrast to traditional field strength proofs, are based on measurements internal to the antenna system.⁷ Field strength measurements consist of at least eight field strength measurements made on each of the radials that include a monitoring point.⁸ The showing shall be provided to the tower proponent or to the

⁴ See 47 C.F.R. §§ 1.30002; 1.30004.

⁵ 47 C.F.R. §§ 1.30002, 1.30004.

⁶ 47 C.F.R. § 1.30001(d).

⁷ See 47 C.F.R. 1.30002(c).

⁸ See 47 C.F.R. § 73.154.

current tower owner, and to the Commission, within two years after the date of completion of the tower construction or modification. If necessary, the Commission shall direct the tower proponent or owner to install and maintain any detuning apparatus necessary to restore proper operation of the AM antenna.⁹

- The rules apply only to Commission applicants, permittees, and licensees and only to tower construction or modification that has adversely affected an AM station that was operating before the tower proponent commenced construction or modification.¹⁰
- Applicants may not propose and licensees and permittees may not use towers that have not completed the revised study and notice process and any necessary detuning.¹¹
- In general, the Commission will apply these provisions only to towers constructed or modified after February 20, 2014, the effective date of the new rules. An AM station, however, may submit a showing that its operation has been affected by tower construction or modification that was commenced or completed prior to or on the effective date of the new rules. Such showings must be made within one year after the effective date of the new rules. If necessary, the Commission shall direct the owner of the reradiating tower to install and maintain any detuning apparatus to restore proper operation of the AM antenna.¹²
- The changes discussed above are part of a larger additional subpart to Section 1, Subpart BB of the Commission's rules, which includes new Sections 1.30001, 1.30002, 1.30003, and 1.30004.
- The rule changes in Part 1 affected provisions in Part 73 of the Commission's rules, including new Sections 73.45(c), 316(e), 685(h), 875(c), 1675(c)(1). Section 73.1692 was removed and incorporated into the Part I Rules.

IV. IMPACT ON SMALL BUSINESS

These rule modifications will have no significant adverse impact on small entities. Rather, the rule changes may benefit small entities because the rules facilitate conflict resolution between the parties, which will allow small entities to resolve issues without Commission intervention. Further, the new rules streamline the process of determining the impact of nearby tower construction, thereby saving small businesses both time and money. By permitting the use of moment method modeling, the rules eliminate the need for costly, time-consuming field strength measurements.

V. STEPS A SMALL ENTITY MUST TAKE TO NOTIFY AM STATIONS AND PROTEST AM STATIONS FROM THE EFFECTS OF NEARBY TOWER CONSTRUCTION OR MODIFICATION

The rule changes took effect February 20, 2014. To protect or notify AM stations about the effects of nearby tower construction, a small entity proponent of tower construction or modification must:

⁹ 47 C.F.R. § 1.30002(g).

¹⁰ 47 C.F.R. §1.30000.

¹¹ 47 C.F.R. §§ 1.30002(g) and (i).

¹² 47 C.F.R. § 1.30002(h).

- Identify whether the tower is within the proscribed distances of an AM antenna, per Section 1.30002(a) or (b) of the Commission’s rules, using the geographic coordinates of the AM station specified in CDBS.
- Identify whether any tower modification is significant enough to warrant notification to an AM tower owner, per Section 1.30002(d) or (e) of the Commission’s rules and paragraphs 11-12 of the Order. If so, the small entity tower proponent must provide 30 days’ prior notice of construction to the AM station owner, per Section 1.30002(a) of the Commission’s rules and the notice must contain the information specified in Section 1.30004(a). A tower proponent may request less than 30 days’ notice. If the proponent believes shorter notice is necessary, the notification to an AM tower owner shall: (1) be identified as “expedited” and (2) identify clearly the requested response date. The proponent may proceed with the proposed tower construction or modification prior to the expiration of the 30-day notification period only upon receipt of written concurrence from the affected AM station (or oral concurrence, with written confirmation to follow).¹³ In the event of an emergency situation, the tower proponent shall: (1) provide written notice to such AM stations within five days of the construction or modification of the tower and (2) cooperate with such AM stations to promptly remedy any pattern distortions that arise as a consequence of such construction. Tower proponents only need to notify those AM stations that are licensed and those AM stations that are operating under Program Test Authority, per Section 1.30004(a) of the Commission’s rules.
- Perform an analysis, per Section 1.30002(c) or (f), 73.151 and 73.154 of the Commission’s rules. If the analysis demonstrates that, in the case of a nondirectional antenna, there will be a 2 dB distortion of the radiation pattern, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the nondirectional antenna. If, in the case of a directional antenna, modification would result in radiation in excess of the AM station’s licensed standard pattern or augmented standard pattern values, the proponent shall be responsible for the installation and maintenance of any detuning apparatus necessary to restore proper operation of the directional antenna.
- An AM station may be affected by tower construction even in situations in which an AM proximity analysis is not required because the construction does not meet the criteria set forth in Sections 1.30002(c) and (f) of the Commission’s rules. In such cases, an AM station may submit a showing that its operation has been affected by tower construction or alteration. Such a showing may be based on a moment method analysis as described in Section 1.30002(c), or field strength measurements if the AM station in question was licensed by that method. The showing shall be provided to the tower proponent or to the current tower owner, and to the Commission, within two years after the completion of the tower construction or modification. If necessary, the Commission shall direct the tower proponent to install and maintain any detuning apparatus necessary to restore proper operation of the AM antenna.

¹³ See Section 1.30004(d).

VI. RECORDKEEPING AND OTHER COMPLIANCE REQUIREMENTS

None other than those described above.

VII. WEBLINK

Report FCC 13-115, Released August 16, 2013:

http://fjallfoss.fcc.gov/edocs_public/attachmatch/FCC-13-115A1.pdf