BEFORE THE
FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON, D.C. 20554

In the Matter of	)	
	)	
Amendment of Parts 1, 2, 22, 24 27, 90 and 95 of the Commission's Rules to Improve Wireless Coverage Through the Use of Signal Boosters	)	WT Docket No. 10-4

To: The Commission

COMMENTS ON NOTICE OF PROPOSED RULEMAKING

The National Association of Manufacturers ("NAM") and MRFAC, Inc. ("MRFAC") ("NAM/MRFAC" or the "Commenters") hereby submit their Comments on the Notice of Proposed Rulemaking (the "Notice" or "NPRM") in the above-captioned proceeding. The Notice raises a number of questions regarding the use of boosters and amplifiers, facilities which are in widespread use among U.S. manufacturers. NAM/MRFAC welcomes the opportunity to address the rules for these facilities, and to suggest certain improvements in the proposed rules with a particular focus on Part 90 boosters.

INTRODUCTION

The National Association of Manufacturers is the nation's largest manufacturing trade association, representing manufacturers in every industrial sector and in all 50 States. The United States is the world's largest manufacturing economy. It produces $1.6 trillion of value each year, or 11.2 percent of GDP, and employs nearly 12 million Americans working directly in manufacturing.

MRFAC is one of the Commission's certified frequency coordinators for the private land mobile bands from 30 to 900 MHz. MRFAC began its operations 30 years ago as the frequency coordinating arm for the NAM. For the past two decades, MRFAC has operated independently, providing coordination and licensing-related services for U.S. manufacturers and other industrial and business entities. MRFAC has long participated in spectrum rulemakings affecting the interests of manufacturers.

The Notice asks for comment on a number of proposals for changes in Part 90 booster rules. These include elimination of that portion of Rule 90.219(d) which allows use of Class B boosters to serve "remote areas" (para. 78); elimination of Class B boosters altogether (para. 72); increasing the power allowed for Class A boosters to 35 watts (para. 88); whether to require registration for boosters (paras. 92-93); and whether to adopt a sunset date for 800 MHz boosters upon the completion of rebanding (para. 94).

NAM/MRFAC members make extensive use of private land mobile radio bi-directional amplifiers ("BDAs").[1] They are typically used in enclosed areas that suffer from poor, or no, RF coverage. Without the use of BDAs, the areas that they augment would be RF dead-zones which is unacceptable, especially for plant Security and Emergency Services. The BDA coverage is itself often extended via use of so-called leaky cable. The latter facilities are made up of radiating coaxial cables which facilitate radio communication where the usual free space propagation of electromagnetic waves is hampered, undesired or impossible, such as in tunnels, mines, buildings, alongside tracks and in other large complexes.

Manufacturers also frequently have cell phone BDAs in their plants, sometimes several in one building. These are typically owned and operated by the cell phone providers, and there can

[1] BDAs are a form of booster. Given the breadth of the definition set forth in the Notice, BDAs appear clearly included within the scope of the Commission's proposals. See Notice, note 4.

be several different providers in any given building.

In short, manufacturers have substantial experience with and investment in, RF booster facilities.

As discussed in more detail below, NAM/MRFAC supports certain changes which can help reduce the risk of interference, but urges the Commission to proceed carefully lest the agency disrupt long-established uses of boosters by manufacturers.

DISCUSSION

At the outset, NAM/MRFAC must take issue with the proposal to revise Rule 90.219(d). That Rule currently allows Class B boosters "to be used only in confined and indoor areas such as buildings, tunnels, underground areas, etc., or in remote areas, i.e., areas where there is little or no risk of interference to other users." By virtue of this Rule and, in particular, the reference to "remote areas," manufacturers have been able to deploy fixed Class B boosters to serve parts of their facilities which may not be inside buildings, but which nonetheless present "little or no risk of interference to others users." These can include areas like railroad marshalling yards on plant property well-removed from populated areas, and areas within a plant complex which may be shielded by tall buildings, effectively forming a "canyon." In cases like these, where boosters are required, manufacturers have made substantial investments in reliance on current Rule 90.219(d).

The risk of interference in the case of these facilities is negligible. These facilities are typically installed for NAM/MRFAC members by professional radio engineers frequently in the employ of the manufacturer. They are far removed from the types of installations which have often posed an interference risk, i.e. those installed by consumers or electricians. In fact, because of the importance of professional installation, NAM/MRFAC would support codifying a

requirement in the rules that boosters be installed by qualified personnel employed by the licensee or under contract thereto. This is a far better alternative than changing a Rule under which hundreds, if not thousands, of Part 90 boosters have long operated successfully in the industrial setting.

Frequency coordination is not required for Part 90 boosters today and is not needed for boosters in confined areas. However, where a booster is used to provide fill-in coverage in remote areas, frequency coordination should be required. In addition, the Commenters would not be averse to a requirement for registration of all boosters with a certified PLMR coordinator or, if more practical, with a centralized clearinghouse.

Interleaved channels characteristic of some Part 90 operations can increase the risk of interference when installed to expand or provide fill-in coverage in remote areas. However, careful coordination -- which is also characteristic of Part 90 -- can ameliorate that risk as the Notice itself recognizes. *Id.* at para. 74 (frequency coordination "can avoid interference"); *see also* para. 79. Together with installation by qualified personnel, a limited coordination requirement would greatly reduce the opportunity for interference to occur.

NAM/MRFAC opposes the proposal to eliminate Class B Part 90 boosters. In the case of many manufacturers, their trunked systems contain few, if any, contiguous channels. For example, one large NAM/MRFAC member utilizes one BDA for each of 24 separate locations on its campus for its 15-channel 900 MHz trunked system, only four channels of which are contiguous. All are Class B facilities. If this manufacturer were forced to use only Class A boosters, a separate amplifier would be required for each pair, or two boosters for each repeater, for as many as 30 boosters in total -- per site. However, with the Class B boosters in use today, one BDA can pass the frequency pair for all 15 repeaters of the trunked system at any given site.

Thus, the proposal represents an instance of an unnecessary regulatory change that would unduly burden business and industry.

In NAM/MRFAC's view, there is no need to increase power levels for either Class of booster to the 35 watts referenced in the Notice (*id.*, para. 88). In the Commenters' view, the current power level, i.e. five watts, is sufficient. Moreover, the Commenters agree that, in this instance, the benefits of greater coverage are outweighed by the increased interference risk acknowledged by the Commission, as well as the potential RF exposure issues (*id.*, para. 89).

In addition, the Commenters support a requirement for an automatic shut-off capability in boosters manufactured from and after the effective date of any new rules that might emerge from this proceeding (*id.*, para. 93). Such a requirement would provide an additional measure of protection against the possibility of oscillation or other interference.

Finally, NAM/MRFAC supports a sunset date for Part 90 Class B boosters operating in the 800 MHz band (*id.*, para. 94). By virtue of re-banding, many of these units will be boosting the wrong frequencies upon completion of the difficult re-banding evolution: industrial/business, land transportation and public safety users, as well as enhanced SMR systems, will have retuned to new and different frequencies leaving their corresponding boosters stranded. This situation is ripe with the potential for interference, and a sunset date should be established, say 12 months after the completion of rebanding in each NPSPAC Region.

CONCLUSION

For the foregoing reasons, NAM/MRFAC urges the Commission to proceed carefully in respect of any changes to PLMR booster rules. While changes are needed in the limited respects discussed above, there are clear differences between boosters used in the business and industrial

setting and those used in the consumer setting. These differences militate against the more significant changes required in the consumer context.

Respectfully submitted,

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