

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Amendment of Part 90 of the Commission's Rules	)	WP Docket No. 07-100
	)	
Implementing a Nationwide, Broadband, Interoperable Public Safety Network in the 700 MHz Band	)	PS Docket No. 06-229
	)	
Service Rules for the 698-746, 747-762 and 777-792 MHz Bands	)	WT Docket No. 06-150

**COMMENTS OF APCO**

The Association of Public-Safety Communications Officials-International, Inc. ("APCO") hereby submits the following comments in response to the Commission's *Fifth Notice of Proposed Rulemaking*, FCC 12-61, released June 13, 2012 ("*Fifth NPRM*"), in the above-captioned proceedings concerning the 4.9 GHz band.

Founded in 1935, APCO is the nation's oldest and largest public safety communications organization. Most APCO members are state or local government employees who manage and operate communications systems for police, fire, emergency medical, forestry conservation, highway maintenance, disaster relief, and other public safety agencies. APCO is the largest FCC-certified frequency coordinator for Part 90, Public Safety Pool channels, and appears regularly before the Commission on a wide range of public safety communications issues.

The 4.9 GHz band has only been allocated for public safety use since 2002. In the *Fifth NPRM*, the Commission indicates its view that the 4.9 GHz band has been underutilized and seeks comments on a variety of rule changes intended to promote more efficient and effective

use of the band. While APCO agrees that the 4.9 GHz band has not lived up to its potential, and that the Commission needs to modify its rules to increase use and efficiency, we note that there has in fact been significant licensing and deployment of the band in many parts of the country, especially in some metropolitan areas. Indeed, the actual number of licenses (over 2500) may not tell the full story, as flexible, wide-area licensing has allowed for a plethora of deployments and devices in many areas that are not fully reflected in the FCC's licensing database. Unfortunately, that flexible, unplanned and uncoordinated use has also limited the potential for expanded mission-critical public safety communications in the band.

The most significant problem facing the 4.9 GHz band is the lack of effective frequency coordination and planning. Licensees are expected to "self-coordinate" to address interference. In reality, there appears to be little or no real coordination which, when combined with the lack of national or regional planning, creates chaotic, haphazard equipment deployment that is incompatible with the needs of interference-free, mission-critical radio communications.

APCO and its members have participated in the National Public Safety Telecommunications Council (NPSTC) working group examining the *Fifth NPRM*, and APCO agrees with NPSTC's recommendations in its comments regarding planning, coordination and other issues.<sup>1</sup> Specifically, there should be a reasonable time frame allowed for the development of a national plan for 4.9 GHz, with input and participation from current 700/800 MHz regional planning committees, current and potential licensees, and other users of the band. The First Responder Network Authority (FirstNet) should also be an active participant in the planning process as there is potential for the public safety national broadband network to utilize the 4.9 GHz band for backhaul and other applications in some areas. The plan should also accommodate

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<sup>1</sup> APCO is a member of the NPSTC Governing Board.

a degree of regional variation in the plan where appropriate. The national plan should be developed under the auspices of NPSTC or by a committee established by the Commission, and then be subject to final Commission approval.

The Commission should also revise its rules to require that all 4.9 GHz applications be submitted to one of the four certified Public Safety Pool frequency coordinators (APCO, IMSA, AASHTO, or FCCA). Coordination would lead to a cleaner, more interference free environment conducive to mission-critical communications. The frequency coordinators would also be the first line of defense to ensure that proposed operations meet FCC equipment and regulatory requirements, and to verify compliance with the national plan. As part of the frequency coordination process, relevant regional planning committees should also be given a reasonable time period to review and comment upon applications to verify national plan compliance.

The 4.9 GHz band has been and is likely to continue to be used for a wide range of technologies and uses, including fixed video links, incident-based broadband networks, mesh networks, and backhaul. Some applications, such as high-capacity, broadband network backhaul in urbanized areas, could quickly consume the limited spectrum available, making it difficult for other types of 4.9 GHz applications to be deployed in the same area. Therefore, the national planning process should explore whether there is a need to discourage use of 4.9 GHz for backhaul in certain areas if there are reasonable alternative means of backhaul available (such as other fixed microwave bands or fiber).

The Commission seeks comments as to whether Critical Infrastructure Industry (CII) entities such as utilities should be permitted access to 4.9 GHz and, if so, under what conditions. APCO believes that limited CII use of the 4.9 GHz band would be beneficial to their safety-related operations. It would also enhance interoperability between utilities and public safety

agencies during and immediately following major emergencies. However, public safety uses need to maintain primary status, and appropriate limitations on CII use (including bandwidth limitations for certain uses) are needed to ensure ongoing access to the spectrum for public safety licensees. Many of these issues could be addressed in the national plan recommended above.

The Commission also asks whether commercial entities should be allowed to use the 4.9 GHz band, at least on a secondary basis. The apparent rationale for allowing commercial access is that it would supposedly increase public safety use by broadening the base of potential customers for 4.9 GHz capable equipment, which in turn would potentially increase the availability and reduce the cost of such equipment for all users, including public safety. However, the somewhat limited public safety use of the band to date is not primarily a result of equipment limitations or costs. The principal reason that public safety has been hesitant to deploy major mission-critical operations in 4.9 GHz band is the lack of frequency coordination and planning. The hodgepodge of largely unregulated and uncoordinated uses in the band creates concerns that essential public safety operations will be subject to dangerous interference. While tolerable for some less critical operations, such chaos is not conducive to most public safety mission-critical communications systems and needs. Therefore, APCO recommends that issues concerning commercial access to the band be deferred until such time as the rule modifications suggested herein and by NPSTC regarding frequency coordination and planning are implemented, and a reasonable time period has passed to determine if those changes have led to the desired improvement in spectrum utilization and efficiency in 4.9 GHz.<sup>2</sup> Furthermore, better band management would also be a prerequisite to any potential commercial use, as

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<sup>2</sup> In any event, “commercial” access by FirstNet partners may be appropriate to the extent that 4.9 GHz is used to provide backhaul for the national public safety broadband network consistent with the 4.9 GHz national plan to be developed.

planning and coordination would be needed to ensure that commercial use, even on a secondary basis, does not interfere with public safety deployments.

APCO supports recommendations for separate licensing categories for various uses of the band, such as fixed point-to-point, mobile hot-spot and temporary mobile mesh networks, permanent mesh networks, point-to-multi-point, and SCADA if used by utilities.<sup>3</sup> This would facilitate more accurate and effective frequency coordination and interference avoidance.

A new 4.9 GHz band licensing database should be established and maintained by the Commission, presumably as part of ULS (or subsequent FCC licensing system). All existing licenses must be added to the new database and ultimately come into compliance with the national plan. Without that information, frequency coordinators will not be able to assign frequencies to new users with confidence that interference will not occur. In particular, existing licensees should be required to enter specified data into the Commission's database and go through frequency coordination before existing licenses can be renewed. Depending upon the timing of the national plan, existing licensees could also be required to submit the data within one year of the Commission's approval of the national plan. Furthermore, applications granted pending Commission' approval of the national plan should contain conditions that the licensee will be required to comply with the plan and registration requirements.

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<sup>3</sup> SCADA use should also be limited to 1 MHz.

## CONCLUSION

Therefore, APCO urges the Commission to modify its rules and initiate a national planning effort for the 4.9 GHz band consistent with the comments set forth above.

Respectfully submitted,

/s/

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