



Leaders in Public Safety Communications®

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Re: Notice of *Ex Parte*, ET Docket No. 18-295; GN Docket No. 17-183, ET Docket No. 21-352

On December 5 and 7, myself, Mark Reddish, and Alison Venable from APCO International met separately with Greg Watson, Policy Advisor, Office of Commissioner Carr, Shiva Goel, Legal Advisor for Wireless and International Issues, Office of Commissioner Starks, Erin Boone, Chief of Staff and Wireless Advisor, Office of Commissioner Simington, and Ethan Lucarelli, Legal Advisor, Wireless and International, and Carmen Scurato, Legal Advisor, Consumer and Public Safety, Office of Chairwoman Rosenworcel, to discuss APCO's concerns related to interference to public safety communications in the 6 GHz band. During these meetings, APCO described new information since adoption of the Commission's order permitting new unlicensed operations that validates previously articulated concerns and outlined reasonable steps the Commission should immediately take to ensure public safety systems are protected.

APCO reiterated that it is not opposed to the use of spectrum sharing in a band where public safety operates, so long as sharing methods have undergone sufficient testing and are proven in advance to adequately protect public safety systems from harmful interference. Additionally, solving new interference problems should be the responsibility of new entrants to the band, not incumbents. Public safety agencies hold primary status and should not have to bear new costs like specialized software for identifying interference caused by new entrants. APCO's sole interest in this proceeding is to protect public safety licensees from interference. The 6 GHz band is heavily used and relied upon for fixed-point-to-point microwave links that serve as the backbone to emergency communications. Therefore, public safety use of the 6 GHz band must remain reliable and free from interference.

New Information Demonstrates that the Risk of Interference is Greater than Expected

When the Order was adopted, APCO disagreed with the reliance on mathematical modeling rather than real world testing to assess the risk of

interference. Since then, incumbents have taken it upon themselves to conduct testing of low power indoor (LPI) devices that the FCC has been approving for marketing and use, which has repeatedly shown that there will be interference to public safety systems and that the threat far exceeds the Commission’s initial assumptions.¹ Further, the sole recommendation that received consensus from both incumbents and unlicensed proponents in the Multi-stakeholder Group (MSG) was the use of baseline measurements to detect and identify interference to incumbent microwave systems (necessarily at incumbents’ own expense). There remains no solution for preventing interference to public safety links operating under an emergency STA.²

There is no Solution to Promptly Eliminate Interference to Public Safety Systems

In the 6 GHz Order, the Commission relied on the assumption that interference could be addressed through existing Enforcement Bureau processes and methods that would be developed by a multi-stakeholder group.³ However, there is still no way to promptly identify, detect, and eliminate interference to public safety systems.

The Enforcement Bureau Process will be Inadequate for Quickly Eliminating Interference

- As detailed in a recent ex parte letter, an interference case for a 6 GHz microwave system in Miami-Dade County has been underway for two years.⁴ Despite diligent efforts of local Enforcement Bureau agents, significant vendor support, and in-house resources that few agencies possess, interference from part 15 devices presents an extremely difficult, persistent interference environment with no end in sight. Miami-Dade cannot fully utilize its new 6 GHz microwave system for the life-safety communications it was designed for until the interference is resolved. While it is unclear if the interference sources are limited to 5.9 GHz devices illegally operating in the 6 GHz band, this case illustrates the difficulty resolving interference caused by unlicensed devices, even when they are operating as part of a centrally-managed system. The Enforcement Bureau process for resolving interference complaints is not well-suited for promptly and permanently eliminating interference from the types of part 15 devices permitted by the 6 GHz Order.

The MSG Failed to Develop a Process for Resolving Interference

- As APCO has explained, the MSG failed to provide meaningful guidance on the highly important matters of how to detect, identify, and resolve interference from both LPI and standard power devices.⁵

¹ See Ex Parte of Southern Company, ET Docket No. 18-295, 21-352, GN Docket No. 17-183 (Sep. 1, 2022) (Dec. 1, 2022) at 2 (explaining that “the record now includes multiple field tests measuring the impact of commercially available, FCC-certified unlicensed low power indoor (“LPI”) devices on actual licensed 6 GHz Fixed Service microwave links under real-world conditions—and all have shown harmful interference will occur.” (emphasis in original)).

² As the MSG Report concedes, the MSG has not identified a mechanism to protect public safety links operating pursuant to an emergency Special Temporary Authority. See Letter from Richard Bernhardt, Don Root, Edgar Figueroa, and Brett Kilbourne, Chairs of the 6 GHz Multi-Stakeholder Group to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 18-295 (filed July 11, 2022), attaching “Best Practices and Recommended Procedures for Interference Detection, Reporting, and Resolution to Protect Fixed Microwave Service Receivers in the 6 GHz Band” (“MSG Report”) at 9. Such links are typically authorized by telephone or email when public safety agencies are facing a disaster or other major emergency. There is no proposed method for AFCs to protect these links, which do not need to be formally documented with the Commission (including in ULS) for a period of 10 days.

³ See Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295, GN Docket No. 17-183, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 3852 (2020) para. 84 (encouraging formation of a multi-stakeholder group to develop additional procedures to resolve interference concerns) and para. 149 (explaining that in the event interference occurs, the Enforcement Bureau has the ability to investigate reports of such interference and take appropriate enforcement action as necessary).

⁴ Ex Parte of APCO International, ET Docket No. 18-295, 21-352, GN Docket No. 17-183, ET Docket No. 21-352, EB-FIELDSCR-22-00033669 (Nov. 22, 2022).

⁵ See Ex Parte of APCO International, ET Docket No. 18-295, 21-352, GN Docket No. 17-183 (Sep. 1, 2022). See also, MSG Report.

The MSG’s “best practices” for addressing interference is a list of mutually-exclusive “alternative viewpoints” that leave incumbents and RLAN proponents no closer to effective interference resolution procedures than when the 6 GHz Order was adopted.

Steps the Commission Should Take to Protect Public Safety Communications

- Put the joint Petition for Rulemaking out for public comment and pause equipment authorization of LPI devices as requested in the joint Request for Stay submitted a year ago by public safety and utility stakeholders. At a minimum, defer further expansion of unlicensed use until public safety concerns have been addressed.⁶
- Conduct real-world testing of LPI devices to assess the risk of interference to public safety systems.
- Ensure OET’s approach to testing AFCs and standard power devices is rigorous and evaluates the risk of interference to public safety systems and effectiveness of processes for detecting, identifying, and eliminating interference.
 - The MSG failed to resolve the process for public safety incumbents to report suspected interference and trigger action by AFC operators, as well as the steps AFC operators will take to address interference reports (including when and how to modify instructions to standard power devices). OET has granted conditional approvals for AFC operators but may require further instruction from the Commission to fully address the gaps for standard power device operation. For example, OET has not confirmed that the process for testing AFC systems will entail real world testing with standard power devices, and despite acknowledging that the Multi-Stakeholder Group failed to reach consensus on the process for resolving interference complaints, OET declined to establish a uniform approach.
- Address reliability problems with ULS and other enhancements necessary to support use by AFC operators to prevent interference to public safety systems.
- Establish a reimbursement program to compensate public safety incumbents for expenses incurred to address interference.
 - Absent new action by the Commission, public safety incumbents face new expenses for baseline measurements,⁷ system monitoring, interference investigations, and any needed software and equipment changes to sustain reliable operation of public safety systems.

Failure to address these issues risks creating an irreparable interference environment for first responder communications, as well as considerable costs for state and local governments, consumers, and industry stakeholders.

Respectfully submitted,

APCO INTERNATIONAL

By:

⁶ See Comments of APCO International, ET Docket No. 18-295, 21-352, GN Docket No. 17-183 (June 29, 2020) (explaining that further expanding unlicensed use, and loosening restrictions as contemplated in the FNPRM, would be irresponsible).

⁷ The MSG recommended public safety agencies conduct baseline measurements prior to the introduction of new potential interference sources. See, e.g., MSG Report at 22. This was not contemplated by the Order.

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