

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

In the Matter of)
)
The Commission Begins the Process for) ET Docket No. 21-352
Authorizing 6 GHz Band Automated Frequency)
Coordination Systems)

COMMENTS OF APCO INTERNATIONAL

The Association of Public-Safety Communications Officials-International, Inc. (APCO),¹ offers the following comments in response to the automated frequency coordination (AFC) system operator proposals filed with the Commission for certification in the 6 GHz band.² Under the 6 GHz rules, standard-power devices are required to check an AFC system prior to operating to avoid causing harmful interference to incumbent operations.³ The Commission’s Public Notice summarizes the requirements for AFC systems set forth in the rules and describes the information to be included in the proposals. Based on the applicants’ proposals, APCO is concerned that several critical issues for protecting public safety communications remain unresolved.

The 6 GHz rules for AFC testing only require the AFC system operators to “provide a test system that will be subject to a public trial period to provide interested parties an opportunity to check that it provides accurate results.”⁴ Instead of defining a comprehensive testing process

¹ Founded in 1935, APCO is the nation’s oldest and largest organization of public safety communications professionals. APCO is a non-profit association with over 36,000 members, primarily consisting of state and local government employees who manage and operate public safety communications systems – including 9-1-1 Emergency Communications Centers (ECCs), emergency operations centers, radio networks, and information technology – for law enforcement, fire, emergency medical, and other public safety agencies.

² The Commission Begins the Process for Authorizing 6 GHz Band Automated Frequency Coordination Systems, ET Docket No. 21-352, *Public Notice*, FCC 21-100 (Sep. 28, 2021) (“Public Notice”).

³ Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295, *Report and Order and Further Notice of Proposed Rulemaking*, 35 FCC Rcd 3852 (2020) (“Order”).

⁴ *Id.* at paras. 49-50.

in the Order, the Commission encouraged the formation of a multistakeholder group to address AFC issues and indicated it would work with the industry to develop appropriate test procedures.⁵ Unfortunately, the multistakeholder group has not been an effective resource for developing test procedures or otherwise engaging in useful efforts to address the risk of harmful interference to incumbent fixed wireless services, including public safety systems. Compounding this challenge, neither the AFC proposals nor the Commission's rules or instructions to date address other critical issues pertinent to protecting public safety systems.

The AFC proposals offered differing explanations for how they will respond to reports of harmful interference. Some proposals suggest applicants will receive reports of interference directly from incumbent licensees, whereas others suggest they will only be responsive to reports from the Commission.⁶ Public safety agencies should not be expected to report interference to individual AFC operators. Even if the particular device causing interference can be identified, incumbents are not likely to know which AFC operator is controlling the device.

What information must public safety agencies provide to ensure AFC operators eliminate interference from devices under their control? What is the process for identifying sources of interference, and how will AFC operators account for costs involved? Will AFC operators require the reports to identify the individual devices causing interference? This would be impractical, and AFC operators are better suited for identifying the source of interference by applying their knowledge of standard power devices' frequency use and locations to the reports

⁵ *Id.* at para. 50.

⁶ For example, Federated Wireless proposed a NOC for reporting harmful interference, including reports from incumbents. *See* Proposal of Federated Wireless to Serve as an Automated Frequency Coordination System Operator in the 6 GHz Band, ET Docket No. 21-352 (filed Nov. 30, 2021). In contrast, RED Technologies notes that their interference identification and solution plan is simply to implement any necessary requests received from the Commission, yet the Commission did not specify a procedure for identifying and mitigating interference in the 6 GHz rules. *See* Proposal by RED Technologies for Operating an AFC System, ET Docket No. 21-352 (filed Nov. 25, 2021).

of degradations and outages in public safety systems. Further, when there is harmful interference, will AFC operators be capable of either having standard power devices immediately shut down or shift frequencies to ensure that public safety communications will suffer no further interference?

AFC applicants did not address how they will evaluate compliance with standard power device geolocation requirements and account for potential errors that put public safety communications at risk. Standard power devices must report location with 95% confidence. Given questions about how accurately these devices will calculate confidence and uncertainty, how will AFC operators account for inaccurate uncertainty estimates and the resulting misrepresentative exclusion zones? Will AFC operators take this potential error into account when providing a list of available frequencies?

AFC system operators and the Commission will need to be able to evaluate the accuracy of exclusion zones to ensure these protections for incumbents are compliant with Commission requirements. Will such evaluation be part of the test procedures and ongoing assessments of compliance? While the Commission's rules specify the propagation models to apply in different situations, AFC applicants have not indicated that they will have a uniform approach.⁷ Evaluating the extent of these differences, implementation errors, and the impacts on the AFCs' ability to prevent interference to incumbents will be important. Further, given the consequences of inaccurate instructions from an AFC, what cyber protections will AFC operators employ to prevent AFCs from becoming tools for effectively shutting down critical communications systems?

⁷ For example, Qualcomm indicates that its AFC will use USGS National Elevation data and USGS National Land Cover Data. Qualcomm Incorporated Application to be Authorized as 6 GHz Band Automated Frequency Coordination System Operator, ET Docket No. 21-352 (filed Nov. 30, 2021). An AFC operator using a different data source could produce different exclusion zones.

As discussed in the Petition for Rulemaking and Request for Stay recently filed by APCO and others, real world testing has shown that assumptions in the Order used to calculate the risk of interference from unlicensed devices to incumbent systems were incorrect.⁸ While this testing has focused on low power indoor devices, it calls into question the assumptions made for the risk of interference from standard power devices as well. The applications from prospective AFC system operators have further demonstrated that it is necessary for the Commission to pause, collect more information, and take the necessary next steps to ensure public safety systems in the 6 GHz band are protected.

Respectfully submitted,

APCO INTERNATIONAL

By:

Jeffrey S. Cohen
Chief Counsel
(571) 312-4400 ext. 7005
cohenj@apcointl.org

Mark S. Reddish
Senior Counsel
(571) 312-4400 ext. 7011
reddishm@apcointl.org

Alison P. Venable
Government Relations Counsel
(571) 312-4400 ext. 7004
venablea@apcointl.org

December 21, 2021

⁸ Petition for Rulemaking of APCO International, et al., ET Docket No. 18-295, GN Docket No. 17-183 (filed Dec. 7, 2021); Request for Stay of APCO International, et al., ET Docket No. 18-295, GN Docket No. 17-183 (filed Dec. 7, 2021).