

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Facilitating Opportunities for Advanced)	WT Docket No. 24-629
Air Mobility)	

REPLY COMMENTS OF APCO INTERNATIONAL

I. INTRODUCTION

The Association of Public-Safety Communications Officials International (APCO)¹ submits these reply comments in response to the Federal Communications Commission’s (FCC or Commission) Notice of Proposed Rulemaking in the above-referenced proceeding.² APCO conditionally supports amendments to the Commission’s rules governing Commercial Aviation Air-Ground Systems in the 849-851 MHz and 894-896 MHz bands (800 MHz ATG Band). APCO appreciates the Commission’s interest in harmonizing these rules to be consistent with those governing similar operations in other spectrum allocations, to promote technology neutrality and more efficient use of the spectrum. At the same time, as described in greater detail below, APCO

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 35,000 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 Facilitating Opportunities for Advanced Air Mobility, WT Docket No. 24-629, *Notice of Proposed Rulemaking*, FCC 25-7 (Jan. 17, 2025) (*ATG NPRM*). APCO has been a long-time participant in the underlying proceedings involving Gogo Business Aviation LLC (Gogo) that serves as the basis for the *ATG NPRM*’s tentative conclusions and proposals. See Wireless Telecommunications Bureau Seeks Comment on Request by Gogo Business Aviation LLC for Waiver of 800 MHz Air-Ground Service Power Measurement Rule, WT Docket No. 21-282, *Public Notice*, 36 FCC Rcd 10395 (WTB 2021); Gogo Business Aviation LLC Request for Waiver of 47 CFR 22.857 Applicable to 849-851 MHz and 894-896 MHz Bands, WT Docket No. 21-282, *Order*, 37 FCC Rcd 7437 (WTB-MD 2022) (*Gogo Waiver Order*); Wireless Telecommunications Bureau Seeks Comment on Gogo’s Petition for Rulemaking to Enable More Flexible Use of the 800 MHz Commercial Air-Ground Service, WT Docket No. 24-184, RM 11895, *Public Notice*, DA 24-586 (WTB 2024).

urges that any amendments to the Commission's rules be accompanied by sufficient protections for public safety spectrum operations in adjacent bands.

II. DISCUSSION

A. Technical Requirements Governing Commercial Aviation Air-Ground Systems Must Protect Adjacent Public Safety Operations

APCO conditionally supports the *ATG NPRM's* tentative conclusion to regulate Commercial Aviation Air-Ground Systems based on average, rather than peak, power. Such flexibility supports Gogo's (the sole licensee operating in the 800 MHz ATG Band) implementation of Orthogonal Frequency Division Multiplex (OFDM) technologies. OFDM technologies do not utilize emissions with a constant envelope, such that disparities and variances between peak and average power measurements are difficult to identify. Accordingly, APCO supports the use of average power, rather than peak power, subject to certain safeguards. Because Gogo's ground-based transmitters can be sources of interference to public safety handsets listening to 851-854 MHz (DL) frequencies, APCO urges the Commission to adopt provisions that require Gogo to ensure public safety operations can continue, interference-free, in adjacent bands. In this regard, the Commission should adopt an interference mitigation process (described below in Section C) whereby Gogo must immediately address and resolve interference to public safety operations in adjacent bands.

Further, to ensure public safety entities operating in the adjacent National Public Safety Planning Advisory Committee (NPSPAC) bands do not experience interference from Gogo's operations in the 800 MHz ATG Band, APCO supports the adoption of a peak-to-average (PAR) limit. APCO agrees with Motorola that the Commission's proposed 13 dB peak-to-average ratio

(PAR) should be reduced to 9 dB.³ This increased protection is technically feasible and will reduce the potential for interference in adjacent public safety spectrum, while still allowing Gogo's operation to maximize their use of the 800 MHz ATG band. The absence of any guard band between Commercial Aviation Air-Ground Systems operating in the 800 MHz ATG Band and public safety NPSPAC spectrum necessitates the use of emissions and power levels that prioritize the protection of public safety users in adjacent bands.

Finally, APCO supports the use of a Power Spectral Density (PSD) model, but with a more stringent emissions mask. Gogo agrees with Motorola that Gogo should be required, at a minimum, to attenuate emissions in the 851-854 MHz public safety band by a PSD of $50 + 10\log(P)$ dB.⁴ Doing so will appropriately limit out-of-band-emissions into adjacent public safety spectrum bands. This adjacent spectrum is managed by FCC-authorized Regional Planning Committees, which are led by volunteers across the country who are in no position to be tasked with complex and time-sensitive responsibilities of interference detection or mitigation. Moreover, the fact that licensees in spectrum adjacent to Gogo's OFDM-based operations are public safety entities responsible for mission-critical, life-safety communications should, on its own, justify the adoption of more restrictive emissions limits in the 800 MHz ATG Band. The need for such restrictions is further underscored by the fact that these public safety systems rely on narrowband technologies, which are particularly susceptible to adjacent band interference.

³ Comments of Motorola, Inc., WT Docket No. 24-629, at 6 (filed April 17, 2025) ("Motorola Comments"). See *ATG NPRM* at paras. 91-93 (proposing a PAR limit of 13 dB).

⁴ Motorola Comments at 3.

B. Commercial Aviation Air-Ground Operations Should Include Station Identification to Protect Public Safety

To ensure the timely detection and mitigation of any interference from Gogo's Commercial Aviation Air-Ground Systems operations using the power levels listed herein, and consistent with its past filings on this matter, APCO opposes the amendment of section 22.313 to add stations operating in the Commercial Aviation Air-Ground Systems band to the station identification exemption list.⁵ While APCO understands that Gogo might consider the station identification requirement burdensome, Gogo's inconvenience is outweighed by the need to ensure interference-free operation for critical public safety users in adjacent spectrum. If interference occurs, the responsibility for identifying its source will fall on public safety entities. In such cases, Station Identification should be a tool that public safety entities can rely upon to swiftly determine the source of such interference.

With the introduction of new OFDM-based technologies in the 800 MHz ATG Band adjacent to public safety, APCO believes requiring Gogo to implement Station Identification is sound policy focused on the prioritization of safety of life communications. The Commission should ensure that its rules provide public safety agencies with the necessary tools to identify interference in their systems and begin to take steps to mitigate any such interference.

C. The Commission Should Codify an Interference Mitigation Framework To Protect Public Safety Operations

To ensure interference-free public safety operations in the adjacent band, APCO agrees with Motorola Solutions that Gogo should be required to satisfy certain interference mitigation

⁵ See 47 C.F.R. § 22.313.

conditions.⁶ These technical and operating conditions should be reflected in the Commission's rules:

- Gogo must incorporate some means of identification into its signal so that public safety entities can easily identify when Gogo is the source of interference.
- Gogo must designate a point of contact for public safety entities to notify and report instances of potential interference. Gogo must provide public safety entities with the name, title, phone and email of this designated contact, who must be available at all times (including nights, weekends, and holidays).
- Gogo must immediately respond to any reports of interference from public safety entities.
- Gogo must mitigate reported interference to the satisfaction of the reporting public safety entity, and in the interim, pending such resolution, Gogo must immediately cease operations on the channel(s) causing interference to the public safety entity.

This interference mitigation framework, together with the more stringent emissions mask and reduced PAR limit discussed above, should help ensure that Gogo's 800 MHz ATG Band operations do not interfere with adjacent public safety users' operations.

III. CONCLUSION

APCO supports the harmonization and modernization of the Commission's rules governing Commercial Aviation Air-Ground Systems operations in the 800 MHz ATG Band,

⁶ See Motorola Comments at 3-4.

subject to modifications and provisions to protect adjacent public safety licensees. APCO is grateful to the Commission for its continued commitment to promoting public safety.

Respectfully submitted,
APCO INTERNATIONAL

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