NTIA Request for Comments on Development of a National Spectrum Strategy

Comments of APCO International

Docket No. 230308-0068

The Association of Public-Safety Communications Officials-International, Inc. (APCO)[1] submits the following comments in response to NTIA's request for comments regarding the development of a national spectrum strategy.[2] APCO appreciates the opportunity to provide a public safety perspective on spectrum planning and offers these comments to describe public safety's unique need for reliable, interference-free access to spectrum and the implications for spectrum policies.

As NTIA states, sufficient access to spectrum is vital to public safety and emergency response, among other things.[3] Public safety agencies depend on spectrum for communications to protect life and property. For example, public safety agencies use spectrum to dispatch first responders, provide incident-related data such as suspect descriptions and scene-safety information essential to law enforcement, fire, and EMS officials, establish backup links for 9-1-1 networks, and support life-safety communications for first responders. State and local public safety communications networks can also be integral in addressing national defense and homeland security issues.

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[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 39,000 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] Developing a National Spectrum Strategy, 88 Fed. Reg. 16244-47 (Mar. 16, 2023) ("RFC") *available at* https://www.federalregister.gov/documents/2023/03/16/2023-05406/development-of-a-national-spectrum-strategy.

[3] *Id*. at 16245.

As NTIA evaluates spectrum bands for potential repurposing to allow for more intensive use,[4] APCO encourages NTIA to carefully consider public safety's unique needs.[5] Public safety communications require heightened reliability, priority, and interference-free access to spectrum. Public safety agencies depend upon a range of spectrum bands to suit communications for diverse use cases. Accordingly, spectrum strategies that rely upon relocation of incumbent users could be problematic where public safety systems are involved. Further, public safety agencies typically lack the resources needed to acquire newer spectrum technologies, even when they are more effective and efficient, as well as the funding needed to augment existing networks and equipment to make them more tolerant of new sources of interference.

APCO cautions NTIA against applying the concept of "intensive use" to public safety the same way it would consider intensive use for other users. Public safety communications systems are designed for the worst-case scenario, with very high reliability levels. During emergencies, public safety spectrum use can surge in a small geographic area. The buffer between everyday spectrum use and the surge usage public safety systems are designed for should not be mistaken for underutilization. Nor should reliability measures such as large fade margins – the practice of designing systems with receivers capable of remaining operational during major drops in received signal strength – be mistaken as an opportunity to introduce new users with transmissions that could be tolerated by the public safety systems. Public safety systems are designed with features like large fade margins to ensure they remain operational during events such as extreme weather that can significantly degrade signal quality. These mission critical designs come at higher costs and should not be overlooked.

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[4] *Id*.

[5] In addition to the feedback detailed in these comments, APCO encourages NTIA to ensure that the public safety community has representation on the Commerce Spectrum Management Advisory Committee.

NTIA seeks comment on incentives and policies for encouraging more robust spectrum sharing.[6] NTIA should refrain from considering incentives to change public safety spectrum use the same way it might incentivize sharing or increased use by other users. Public safety agencies require spectrum to protect life and property, not turn a profit. They should not be put in a position to monetize their spectrum, which would likely involve sacrificing responder and public safety.

To facilitate efficient spectrum access, NTIA seeks comment on various approaches, including exclusive-use licensing, pre-defined sharing, and dynamic sharing.[7] Exclusive-use licensing is most likely to provide the interference-free spectrum access public safety needs. APCO is not opposed to spectrum sharing, but public safety communications must not be placed at risk by new, unproven spectrum sharing methods without the right safeguards.

Sharing approaches that repurpose spectrum for new unlicensed uses present unique dangers. Unlicensed use, by its nature, does not permit the quick identification of an interfering party, and eliminating interference likely entails protracted retrieval of every interfering device rather than action through a single responsible entity. Any spectrum sharing techniques that could impact public safety communications should be thoroughly tested and proven in advance through real-world trials and accompanied by effective mechanisms to promptly identify and eliminate interference. Otherwise, public safety users will lack confidence that their systems will remain free from harmful interference, and the spectrum environment can become untenable for mission critical communications.

Illustrating these concepts, a significant, ongoing dispute has emerged concerning the 6 GHz band, where real-world testing did not occur and no mechanisms exist to promptly detect

[6] RFC at 16246.
[7] *Id*.

and eliminate harmful interference to incumbents including public safety agencies. NTIA should apply lessons learned from this approach and other safety-related examples of incumbents concerned about the prospect of harmful interference by new operators when evaluating future spectrum sharing approaches to ensure that public safety communications are afforded the protection they require.

Respectfully Submitted,

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April 17, 2023