

October 2023 Technical Bulletin for Operators of 6 GHz Microwave Systems



To: Public Safety Operators of 6 GHz Fixed Point-to-Point microwave systems

Purpose: To alert operators of 6 GHz microwave systems of October 2023 FCC rule changes that permit new types of unlicensed devices to transmit co-channel with licensed microwave systems.

Background: In 2020, the FCC adopted rules for the 6 GHz band that will allow hundreds of millions of unlicensed devices to operate across the entire band. The FCC initially authorized two distinct types of these new Wi-Fi devices: “standard power” devices that are subject to automated frequency coordination (AFC), and “low power indoor” (LPI) devices. APCO remains concerned that these devices present an interference risk to public safety because despite our requests, the FCC did not require testing in advance, ensure effective measures are in place to prevent interference, or adopt measures to quickly detect, identify, and eliminate interference when it occurs.

In October 2023, the FCC authorized a new class of “Very Low Power” (VLP) devices, creating an additional risk for public safety microwave. Whereas the previously-authorized devices are for fixed use (ex: campus Wi-Fi), VLP devices are expected to be mobile – smartphones, glasses, watches, earphones, vehicle dashboards, etc. Real-world testing has demonstrated that a single VLP device transmitting near a microwave receiver is capable of disrupting the link. Thus, the prospect of these devices becoming commonly used presents a significant threat to public safety communications.

APCO’s [September 2022 APCO Technical Bulletin](#) provides additional information about the nature of the threat these types of new unlicensed devices present to public safety 6 GHz microwave systems. The bulletin explains how baseline system measurements can be used to document current system operating parameters/measurements in advance so that future operating parameters can be compared to the archived operating parameters in the event of a degradation of system performance. APCO recommends that 6 GHz licensees review the technical bulletin and conduct baseline measurements to prepare for the increasingly uncertain spectrum environment attributed to the influx of new unlicensed devices.

APCO staff are available to assist with technical issues and advocacy at the FCC in the event that operators of public safety microwave systems experience harmful interference from sources that cannot be identified and resolved quickly. Please contact gro@apcointl.org for assistance.