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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 July 11, 2022, the 6 GHz Multi-Stakeholder Group (MSG) submitted its final report entitled: “Best Practices and Recommended Procedures for Interference Detection, Reporting, and Resolution to Protect Fixed Microwave Service Receivers in the 6 GHz Band.”<sup>1</sup>

From any read of the Report, the MSG has failed to provide meaningful guidance on the highly important matters of how to detect, identify, and resolve harmful interference caused to public safety communications from both low power indoor (LPI) and standard power devices. To the extent that the report goes beyond recounting the ongoing impasse between incumbents and RLAN proponents, perhaps the most helpful element is the concession by RLAN proponents that the new 6 GHz devices will in fact cause harmful interference to incumbents. The Commission deferred important matters to the MSG, but the MSG was incapable of delivering actionable guidance. As a result, public safety agencies and other incumbents lack clarity on how RLAN proponents and/or the FCC would promptly eliminate harmful interference from 6 GHz unlicensed devices. Ignoring these issues puts the public and first responders at risk.

**The MSG Failed to Reach Consensus on Recommended Procedures for Interference Detection, Reporting, and Resolution to Protect Fixed Microwave Service Receivers in the 6 GHz Band**

Despite the report’s title, the MSG failed to reach consensus on its fundamental objective. Instead, the Report presents 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. For

<sup>1</sup> 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”).

example, the report’s “Recommended Procedure” when incumbent fixed service operators such as public safety agencies are experiencing interference is not a recommended procedure so much as it’s a description of an impasse between incumbents and RLAN proponents. For the initial step of reporting interference, the incumbents’ viewpoint is that incumbents should have the option of using a single interface to report interference to the FCC and AFC operators. In contrast, the RLAN proponents’ viewpoint is that incumbents should report interference to all AFC operators using contact information provided by the FCC.<sup>2</sup> Regardless of the merits of either “viewpoint,” these are not actionable recommendations.

The “Recommended Procedure” for acting upon a report of interference is similarly unhelpful. Incumbents’ viewpoint is that upon receipt of a report of interference, AFC operators should immediately expand the protections for the victim incumbent microwave link using 10 km as the default for the temporary expansion of the exclusion zone area.<sup>3</sup> In contrast, RLAN proponents’ viewpoint gives much more discretion to AFC operators to first “review and validate” the interference report before creating an unspecified protection zone. AFC operators would be able to make separate decisions about how promptly to respond to interference reports, how much certainty is required that the source of interference is a standard power device under the AFC operator’s control to trigger a response, how to expand an exclusion zone while investigating the interference, and what the respective roles of incumbents and AFC operators are to resolve the interference. Even if the RLAN proponents’ viewpoint was adopted, neither incumbents nor AFC operators would have clear procedures to follow to resolve interference.<sup>4</sup>

### The Report Exposes a Fundamental Flaw in the Current Approach to Introducing New Unlicensed Devices

One of the subjects on which consensus could be reached is that a best practice for detecting interference involves comparing baseline system measurements to measurements during interference conditions. The Report acknowledges that baseline measurements must be obtained prior to the introduction of new potential interference sources.<sup>5</sup> This was not contemplated by the 6 GHz Order.<sup>6</sup> The Report further acknowledges that LPI devices are already being marketed and sold,<sup>7</sup> meaning that incumbent operators will face increasing difficulty attributing interference to LPI devices.

Setting aside the fact that, despite the concerns raised by public safety incumbents and others, the Commission continues to allow new LPI devices to enter the marketplace, thereby altering the theoretical “baseline” more every day, critical questions remain unanswered. How will public safety incumbents be compensated for the time and resources they expend on baseline measurements? If the band becomes unreliable for public safety communications, what demonstration of the change to the spectrum environment will the Commission require

<sup>2</sup> *Id.* at 29 (“(2) Incumbent FS operator submits interference report to all AFC operators per publicly available contact information provided by FCC.”). While the RLAN proponents’ viewpoint acknowledges that an interference-reporting portal might be developed to provide simultaneous notification of the FCC and AFC operators, the RLAN proponents did not adopt this as a recommended procedure or agree to pursue development of such an interface.

<sup>3</sup> *Id.* at 33.

<sup>4</sup> This exemplifies RLAN proponents’ willful blindness to the consequences of interference to public safety communications. Lives will be at risk. Yet, absent a Commission mandate, RLAN proponents opposed reasonable mitigation measures, such as immediate expansion of the AFC’s exclusion zone, a step which might not even adversely impact standard power device operations given that an exclusion zone would not need to prohibit standard power access to the band altogether.

<sup>5</sup> *See, e.g.*, MSG Report at 22 (describing a fade margin test as “another test that must be carried out prior to the introduction of potential interferers in order to establish the baseline.”).

<sup>6</sup> 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) (“Order”).

<sup>7</sup> MSG Report at 23.

to attempt reversing course? This alone is reason for the Commission to immediately grant incumbents' request for stay, at least until a process for performing and funding baseline measurements is developed, and baseline measurements are recorded.<sup>8</sup>

### The Report Confirms that Public Safety Incumbents Will Face Costs Unanticipated by the Commission

In the procedures for detecting and identifying a source of interference, the Report explains how to identify an interfering signal using a spectrum analyzer.<sup>9</sup> Several aspects of the procedures are problematic from a public safety perspective. First, while some microwave systems include spectrum analyzer software provided by the manufacturer, the report acknowledges that some microwave links lack this type of integrated software and will require using a traditional spectrum analyzer, test equipment, and test fixtures.<sup>10</sup> The Order did not establish or require the unlicensed device proponents to develop such mechanisms, but at a minimum, they should be responsible for the costs to public safety incumbents. As a more fundamental concern, APCO rejects the assumption that the unlicensed device manufacturers, operators, and AFCs bear no responsibility for detecting interference to incumbent public safety systems. Unlicensed devices must not cause harmful interference to primary licensees,<sup>11</sup> and the new entrants should at least explore mechanisms that could protect incumbents from new costs. Unfortunately, the report omits an analysis of costs and division of responsibilities, despite the requests of APCO and other incumbents. The unlicensed proponents refused to include a discussion of these important and relevant issues.<sup>12</sup>

Second, the recommended procedures ignore the impracticality of shutting off a public safety microwave link to perform a spectrum analysis.<sup>13</sup> Engineering procedures that are appropriate for test environments and non-critical systems do not necessarily work in the real world where public safety communications are impacted and lives are put at risk. When public safety agencies face harmful interference, diverting agency resources to turn off the transmit site and use spectrum analyzer software or other equipment (that they may not have on hand) to detect and identify the source of the interference is an unacceptable solution.

### The Report Acknowledges the Problematic Nature of Interference Caused by LPI Devices but Refused to Revolve Outstanding Issues

The report concedes that locating an LPI device and identifying the party responsible for the device is problematic at best.<sup>14</sup> Further, to the extent that there are options for identifying the interfering device – attempting to locate an LPI signal using radio direction finding equipment or by capturing the MAC ID and enlisting the help of interference service providers – these procedures will have limited effectiveness given the “sporadic” nature of the devices<sup>15</sup> and because “the capability to introduce random MAC IDs is currently

<sup>8</sup> Request for Stay of APCO International, et al., ET Docket No. 18-295, GN Docket No. 17-183 (filed Dec. 7, 2021) (“Request for Stay”).

<sup>9</sup> MSG Report at 23.

<sup>10</sup> *Id.* (“Older radios may not be able to use this type of software and the user would have no other option than to use a traditional spectrum analyzer, test equipment and test fixtures.”).

<sup>11</sup> *See* Order at para. 150 (citing 47 C.F.R. 15.5(b)). *See also* 47 C.F.R. 15.407(l) (“A standard power access point or fixed client device must not cause harmful interference to fixed microwave services authorized to operate in the 5.925-6.425 GHz and 6.525-6.875 GHz bands.”).

<sup>12</sup> *See* MSG Report at 35.

<sup>13</sup> *Id.* at 23 (“With the transmitter at the site experiencing interference turned off, it will be clear to see if there is another signal appearing in the FS channel.”).

<sup>14</sup> *Id.* at 30.

<sup>15</sup> *Id.* at 23.

available and increasingly being adopted.”<sup>16</sup> The report also concedes that incumbent microwave systems are not capable of identifying whether an interference source is an LPI vs. a standard power device<sup>17</sup> and that the Commission identified interference from LPI as an area for the MSG to address.<sup>18</sup> Nonetheless, RLAN proponents opposed proposals that the MSG engage in further study to address interference resolution options for LPI devices.<sup>19</sup>

### The Need to Protect Public Safety Operations Under Emergency Special Temporary Authority Remains Unaddressed

The report concedes that the MSG has not identified a mechanism to protect public safety links operating pursuant to an emergency Special Temporary Authority.<sup>20</sup> 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.<sup>21</sup> APCO has previously raised this concern with the Commission, but it remains unaddressed. Absent Commission action, public safety links operating pursuant to an emergency STA will receive zero protection from standard power devices.

APCO has repeatedly expressed concern with the Commission’s decision to defer important issues to a voluntary, industry-led group. Despite good-faith efforts from several of the stakeholders, the MSG was a failure. Worse, the refusal of the industry to address a variety of relevant issues – evidenced by an appendix of “Non-Consensus Items”<sup>22</sup> that, in contrast to the list of topics where no consensus was reached,<sup>23</sup> industry refused to even discuss – raises substantial doubt as to RLAN proponents’ willingness to render prompt assistance when public safety microwave links suffer harmful interference.

A joint Petition for Rulemaking and Request for Stay were filed by representatives of public safety and critical infrastructure incumbents in December 2021.<sup>24</sup> The basis for these requests is more compelling now, considering the MSG’s failure to produce best practices and recommended procedures that will provide the assistance needed to public safety agencies and other stakeholders. Accordingly, we respectfully ask that the Commission promptly and favorably act on these pending petitions.

Sincerely,

APCO INTERNATIONAL

By:

Jeffrey S. Cohen  
Chief Counsel

<sup>16</sup> *Id.* at 30.

<sup>17</sup> *Id.* at 28.

<sup>18</sup> *See id.* at 5 (citing Order at para. 176).

<sup>19</sup> *Id.* at 34-35.

<sup>20</sup> *Id.* at 9.

<sup>21</sup> *Id.*

<sup>22</sup> *See id.* at 39 (Annex C).

<sup>23</sup> *See id.* at 34-35 (Section 9).

<sup>24</sup> 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.

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