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March 4, 2021

Ms. Marlene H. Dortch  
Secretary  
Federal Communications Commission  
445 - 12th Street, S.W.  
Washington, D.C. 20554

Ex Parte

Re: Notice of Ex Parte Presentation, Unlicensed Use of the 6 GHz Band, ET Docket No. 18-295; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz, GN Docket No. 17-183.

Dear Ms. Dortch:

On March 2, 2021, Brett Kilbourne and Rob Thormeyer from the Utilities Technology Council (“UTC”), Aryeh Fishman from the Edison Electric Institute (“EEI”), Corry Marshall from the American Public Power Association (“APPA”), Amanda Sramek from the American Gas Association (“AGA”), Jeff Cohen and Mark Reddish from APCO International (“APCO”), and Ryan Woodward from the International Association of Fire Chiefs (“IAFC”) (collectively the “6 GHz Incumbent Stakeholders”) met with William Davenport, Chief of Staff & Senior Legal Advisor for Wireless and International, in the office of Commissioner Starks to discuss the above-referenced proceeding. The purpose of the meeting was to discuss the request by the 6 GHz Incumbent Stakeholders for the Commission to pause any additional equipment certification approvals for 6 GHz unlicensed low-power indoor (“LPI”) devices until rigorous testing is conducted to demonstrate that unlicensed devices can coexist with incumbent fixed-microwave licensees in the 6 GHz band.<sup>1</sup>

During the meeting, the 6 GHz Incumbent Stakeholders described how interference testing of 6 GHz LPI devices was necessary and reasonable to ensure coexistence with licensed microwave systems that carry mission critical communications that support the safety, reliability and security of public safety agencies and electric, gas, and water utilities, as well as petroleum companies. Participants explained that interference testing is necessary to ensure that essential public safety, energy and water services are not adversely impacted by harmful interference from LPI devices to licensed microwave systems in the 6 GHz band. Moreover, such testing should be conducted before more LPI devices are authorized by the Commission and become commercially available, otherwise it will be extremely difficult for the Enforcement Bureau to retrieve these devices from consumers if it is determined that LPI devices pose an imminent threat of harmful interference. Finally, these tests could be conducted quickly and without undue delay, thus enabling the timely commercial deployment of LPI devices to consumers that do not cause harmful interference to licensed microwave systems. In that context, those equipment manufacturers that have already received equipment certification of LPI devices should be among the first to provide their equipment immediately for interference testing.

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<sup>1</sup>See Letter from UTC, EEI, APPA, National Rural Electric Cooperative Association (“NRECA”), AGA, American Petroleum Institute (“API”), American Water Works Association (“AWWA”), APCO, IAFC and the National Public Safety Telecommunications Council (“NPSTC”) to Marlene H. Dortch, Secretary, Federal Communications Commission in ET Docket No. 18-295 and GN Docket No. 17-183 (filed Jan. 26, 2021).

Real-world interference tests that have been conducted by incumbents and submitted on the record have shown that a single LPI device can cause harmful interference to fixed-microwave licensed systems from as far away as 9 kilometers (km).<sup>2</sup> Given these test results and the imminency of LPI devices entering the market, there is just cause for the Commission to pause any further equipment certification of LPI devices and require them to undergo rigorous testing that demonstrates they will coexist with licensed microwave systems. Further real-world interference testing using LPI devices will help to provide additional information and will be more accurate than modelling to assess the interference potential of LPI devices to licensed microwave systems.

Moreover, Congress has stated that it “expects the Commission to ensure that any mitigation technologies are rigorously tested and found to be effective in order to protect the electric transmission system [from interference],” and it has directed the FCC to report by March 27, 2021 on its “progress in ensuring rigorous testing related to unlicensed use of the 6 gigahertz band.”<sup>3</sup> The 6 GHz Incumbent Stakeholders emphasized that absent such testing, the Commission is unable “to ensure its plan does not result in harmful interference to incumbent users,”<sup>4</sup> and absent such assurance, it should not be granting 6 GHz LPI device certifications. Finally, the 6 GHz Incumbent Stakeholders stated that the process for interference testing should be open and transparent, providing an opportunity for incumbents to participate and review the results of the testing. Therefore, interference testing would be consistent with the direction of Congress for the FCC to report on its progress to ensure interference protection through rigorous testing.

The Commission should exercise its authority under Section 2.945 to require equipment manufacturers to provide sample devices for testing and to refrain from further equipment authorizations pending the results of the testing. The 6 GHz Incumbent stakeholders explained that these interference protection measures would be consistent with Commission precedent. During the introduction of LTE-U, the Commission did not approve any commercial LTE-U equipment until an “industry-driven process to enable fair coexistence between LTE-U and other technologies in the unlicensed bands” was completed.<sup>5</sup> Only then did the Commission authorize LTE-U devices when “voluntary industry testing has demonstrated that both these devices and Wi-Fi operations can co-exist in the 5 GHz band.”<sup>6</sup> By comparison with this precedent, the circumstances here are even more compelling to warrant pausing equipment certification and requiring manufacturers to provide sample equipment for testing, because the interference concerns with 6 GHz LPI devices are based on real-world testing and warrant serious review, considering the importance of licensed microwave systems to protecting public safety and critical infrastructure.<sup>7</sup>

Equipment manufacturers have thus far refused to cooperate and participate in interference

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<sup>2</sup> Letter from Jennifer L. Oberhausen, Director, Regulatory Affairs, CTIA to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 18-295 (Nov. 13, 2020).

<sup>3</sup> Consolidated Appropriations Act, 2021, Joint Explanatory Statement – Division E, at p. 32, available at <https://docs.house.gov/billsthisweek/20201221/BILLS-116RCP68-JES-DIVISION-E.pdf>.

<sup>4</sup> *Id.*

<sup>5</sup> See e.g., Letter from Chairman Tom Wheeler to Senators Schatz, Blumenthal, Udall, Markey, Cantwell, and McCaskill Regarding LTE-U Technologies (March 1, 2016) (found at: <https://www.fcc.gov/document/chairman-response-regarding-lte-u-technologies>). See also M. Macagnone, *FCC’s Wheeler Pushes Industry to Set LTE-U Standards*, LAW360, Sept. 9, 2015 (found at: <https://www.law360.com/articles/700762>).

<sup>6</sup> See *Chairman Pai Statement on Commission Authorization of First LTE-U Devices*, Feb. 22, 2017 (found at: <https://www.fcc.gov/document/chairman-pai-statement-fcc-authorization-first-lte-u-devices>).

<sup>7</sup> In the LTE-U and LAA context, of course, sharing in the 5 GHz band involved existing unlicensed operations with no expectation of harmful interference protection, whereas incumbents here in the 6 GHz band are primary licensed providers entitled to full protection from interfering unlicensed operations.

testing, let alone provide LPI devices for interference testing. 6 GHz Incumbent Stakeholders reported efforts within the 6 GHz Multi-stakeholder Group (“MSG”) to address the issue of interference testing, which have thus far failed to result in participation from equipment manufacturers or other proponents of 6 GHz unlicensed operations. More specifically, equipment manufacturers have declined requests to provide equipment for interference testing, and other proponents have argued that interference testing is out of scope and the Commission only intended the MSG to address issues related to automated frequency coordination (contrary to the Commission’s *Report and Order*).<sup>8</sup> This opposition to interference testing is consistent with similar experiences reported on the record in this proceeding, where equipment manufacturers have refused to provide LPI devices for interference testing.<sup>9</sup> Given the refusal of equipment manufacturers to cooperate in interference testing or to provide LPI equipment for testing, the Commission should intervene to require equipment manufacturers to provide sample LPI devices for interference testing under section 2.945 of the Commission’s Rules and consistent with Congress’s direction to conduct rigorous testing to ensure coexistence with licensed microwave systems in the band.

In conclusion, the 6 GHz Incumbent Stakeholders respectfully request that the Commission pause any further equipment certification of LPI devices until rigorous testing has been conducted and shows that LPI devices will not cause harmful interference to licensed microwave systems that are essential for protecting the safety, reliability and security of public safety and critical infrastructure. Such testing is necessary to protect the public interest in public safety services and essential electric, gas and water services. Moreover, such testing is justified by real-world tests that show LPI devices will cause harmful interference to microwave systems, and additional real-world tests using LPI devices will provide more accurate information than modelling about the interference potential from LPI devices to licensed microwave systems. Congress has directed the Commission to report on its progress in ensuring rigorous testing; without such testing, the Commission will be unable to ensure its plan does not result in harmful interference to incumbent users, as Congress requested. The FCC should exercise its authority under section 2.945 of the Commission’s rules to require manufacturers to provide sample devices for testing, which is consistent with Commission precedent. Finally, Commission intervention is necessary because equipment manufacturers have refused to participate or cooperate in interference testing, let alone provide LPI equipment for testing.

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<sup>8</sup> See Letter from Alex Roytblat, Senior Director of Regulatory Affairs, Wi-Fi Alliance to Marlene H. Dortch, Secretary, Federal Communications Commission in ET Docket No. 18-295 at 3, n. 10 (filed Feb. 5, 2021)(stating “The Letter’s complaint about the multi-stakeholder process is part of a continuing pattern by incumbent licensees to transform that group into something the Commission did not intend. As the 6 GHz Report and Order makes clear, the Commission specifically rejected the request that the multi-stakeholder group engage in device testing, but instead envisioned the group would consider implementation of automated frequency coordination, processes and procedures for resolving interference complaints, and best practices.”) *Compare Unlicensed Use of the 6 GHz Band*, Report and Order and Further Notice of Proposed Rulemaking, 35 FCC Rcd 3852 at ¶174 (2020) (“*Report and Order*”)(stating that “[a]lthough the Notice focused on the AFC system and associated issues, the record before us supports formation of a broader industry led multi-stakeholder group to study technical and operational issues for the 6 GHz band, including indoor low-power devices.” *And compare Id.* at ¶176 (encouraging the multi-stakeholder group “to address any issues it deems appropriate regarding interference detection and mitigation in the event that an incumbent licensee believes it may be experiencing harmful interference from standard-power or indoor low-power operations.”) *And compare Id.* at ¶177 (suggesting that the stakeholder take advantage of the interim time period before commercialization of 6 GHz LPI devices when the “members of the multi-stakeholder group could work cooperatively to develop and test devices to aid in the goal of developing processes for introducing and operating devices across the 6 GHz band.”)

<sup>9</sup> See e.g. Letter from Coy Trosclair, Director of Telecom Services, Southern Company Services to Marlene H. Dortch, Secretary, Federal Communications Commission in ET Docket No. 18-295 at 2 (filed Feb. 11, 2021)(“Southern noted that manufacturers continue to decline to provide any prototype or sample devices that could be used in such testing, even though some parties have already received certification for unlicensed 6 GHz devices and many have already begun marketing efforts for such devices.”)

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Thank you for your help in this matter. If there are any questions concerning this matter, please contact the undersigned.

Respectfully,

A handwritten signature in cursive script that reads "Brett Kilbourne".

Brett Kilbourne

Cc: William Davenport