January 26, 2021

Acting Chairwoman Jessica Rosenworcel
Commissioner Brendan Carr
Commissioner Geoffrey Starks
Commissioner Nathan Simington
Federal Communications Commission
45 L Street NE
Washington, DC 20554

Re: 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: Notice of *Ex Parte* Presentation

Dear Acting Chairwoman and Commissioners:

The undersigned parties, representing public safety, critical infrastructure, and wireless licensees in the 6 GHz band, respectfully urge the Federal Communications Commission ("FCC" or "Commission") immediately 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.[1] Such action is necessary to satisfy Congress's recent directive to the FCC to provide a report on progress towards "ensuring rigorous testing related to unlicensed use of the 6 gigahertz band" and is the only prudent course given recent showings in the record that LPI devices pose a significant interference risk. In the fall of 2020, CTIA and Southern Company conducted field testing that showed a single LPI device can cause interference to a licensed

[1] Further, we are filing in support of the written ex parte submission by Southern Company Services ("Southern Company") which also opposes any further unlicensed operations in the 6 GHz band, until rigorous testing shows that unlicensed operations will not cause harmful interference to fixed microwave systems that public safety, utilities and other critical infrastructure use for mission critical communications. *See* Letter from Coy Trosclair, Director of Telecom Services, Southern Company Services to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 18-295 (filed Jan. 7, 2021) ("Southern Company January 15 Letter")

fixed-microwave link from as far as 9 km away.[2] The field testing used a programmable vector signal generator to represent the transmissions of a single unlicensed LPI device. The results are of serious concern and demand more testing and further review of LPI devices.

In enacting the Consolidated Appropriations Act, 2021, Congress adopted the Joint Explanatory Report which spoke directly to the testing of unlicensed devices in the 6 GHz band:

> As the FCC has authorized unlicensed use of the 6 gigahertz band, the agreement expects the Commission to ensure its plan does not result in harmful interference to incumbent users or impact critical infrastructure communications systems. The agreement is particularly concerned about the potential effects on the reliability of the electric transmission and distribution system. The agreement expects the FCC to ensure any mitigation technologies are rigorously tested and found to be effective in order to protect the electric transmission system. **The FCC is directed to provide a report to the Committees within 90 days of enactment of this Act on its progress in ensuring rigorous testing related to unlicensed use of the 6 gigahertz band**.[3]

The undersigned are eager to work with the FCC and all stakeholders on rigorous testing.

LPI stakeholders have refused to participate in or even make LPI devices available for testing, but want the FCC to certify their devices nonetheless. The 6 GHz Report and Order suggested that a 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,"[4] but 6 GHz incumbent requests for testing within the multi-stakeholder group have been rebuffed.

As a first step towards its report to Congress which is due March 27, 2021, the FCC should announce that it will not approve the grant of any additional 6 GHz unlicensed LPI device certifications until such testing is conducted. Absent such testing, the Commission is unable "to ensure its plan does not result in harmful interference to incumbent users,"[5] and absent such assurance, it should not be granting 6 GHz LPI device certifications.

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[2] *See e.g.* Letter from Jennifer L. Oberhausen, CTIA, to Marlene H. Dortch, Secretary, Federal Communications Commission, ET Docket No. 18-295, GN Docket No. 17-183 (filed Nov. 13, 2020).

[3] Joint Explanatory Statement – Division E, at p. 32, *available at* https://docs.house.gov/billsthisweek/20201221/BILLS-116RCP68-JES-DIVISION-E.pdf (emphasis added).

[4] *Unlicensed Use of the 6 GHz Band*, Report and Order and Further Notice of Proposed Rulemaking, ET Docket No. 18-295 35 FCC Rcd 3852 at ¶177 (2020) (rel. Apr. 24, 2020)(hereinafter, "Report and Order").

[5] Joint Explanatory Statement – Division E, at p. 32, *available at* https://docs.house.gov/billsthisweek/20201221/BILLS-116RCP68-JES-DIVISION-E.pdf..

Second, the Commission should exercise its authority under Section 2.945 of its rules to obtain sample devices from any LPI device equipment manufacturer that seeks equipment certification.[6] This approach is consistent with the process the Commission used in the LTE-U and LAA context, an approach in response to unlicensed proponents who today are among the biggest 6 GHz LPI stakeholders. In that context, for example, NCTA argued that LTE-U and LAA claims regarding spectrum sharing "depend on badly flawed coexistence simulations."[7] NCTA recommended that the Commission:

> (1) convene a meeting of the Chief of the Office of Engineering and Technology and a representative group of licensed carriers and the unlicensed community to initiate a process to establish effective sharing mechanisms;
> (2) establish a working group composed of Commission staff and engineers from interested parties to carry forth this work after this initial meeting in weekly meetings;
> (3) seek monthly status reports from IEEE and 3GPP on the progress of coordination between these bodies on establishing effective sharing; and
> (4) ensure that licensees do not launch non-standard versions of LTE-U until these processes have been completed to the Commission's satisfaction.[8]

In response, 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.[9] Only then did the Commission authorize LTE-U devices when "voluntary industry testing has demonstrated that both

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[6] *See* 47 C.F.R. §2.945 (a) ("Prior to certification. (1) The Commission or a Telecommunication Certification Body (TCB) may require an applicant for certification to submit one or more sample units for measurement at the Commission's laboratory or the TCB.").

[7] *See e.g.*, Comments of The National Cable & Telecommunications Association, ET Docket No. 15-105 at 14 (filed June 11, 2015).

[8] *Id*. at 36.

[9] *See e.g.*, Letter from Chairman Tom Wheeler to Senators Schatz, Blumenthal, Udall, Markey, Cantwell, and McCaskill Regarding LTE-U Technologies (March 1, 2016), *available 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, *available at* https://www.law360.com/articles/700762.

these devices and Wi-Fi operations can co-exist in the 5 GHz band."[10] Here, the concerns are real and warrant serious review.[11]

In light of the CTIA/Southern Company field testing and Congress' call for rigorous testing, incumbent 6 GHz stakeholders ask the Commission to engage in real-world testing to assess the operating parameters and mitigation technologies that unlicensed LPI devices will rely on *prior to* authorizing any additional unlicensed 6 GHz device.

Further testing under real-world conditions using actual unlicensed devices is necessary before the Commission and other stakeholders can be certain that interference will not occur. These testing efforts could be managed through the multi-stakeholder group process or through another regime acceptable to the Commission.[12] The Commission, either on its own or through the multi-stakeholder group, should complete its evaluation of the interference effects from unlicensed use of the 6 GHz band prior to further equipment certification.

Given that the 6 GHz Report to Congress on "the progress in ensuring rigorous testing" must be filed by March 27, 2021, there is urgency for the Commission to take tangible, reportable steps. Announcing no further LPI device certifications pending testing and demanding sample LPI devices for testing would represent just such action.

In accordance with Section 1.1206 of the Commission's rules, this letter is being filed electronically in the above-referenced proceeding.

Sincerely,

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[10] *See Chairman Pai Statement on Commission Authorization of First LTE-U Devices*, Feb. 22, 2017, *available at* https://www.fcc.gov/document/chairman-pai-statement-fcc-authorization-first-lte-u-devices.

[11] 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.

[12] Workstream 1 of the multi-stakeholder group has been reviewing a proposed process for dealing with harmful interference.

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