

June 26 2020

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

Dear Ms. Dortch:

The American Public Power Association (APPA), the National Rural Electric Cooperative Association (NRECA) and the Utilities Technology Council (UTC) hereby submit this letter in support of the Petition for Stay Pending Judicial Review by the Edison Electric Institute in the above-referenced proceeding.¹ As more fully described herein, the Commission should grant the stay because EEI is likely to prevail on the merits; utilities would suffer irreparable harm absent a stay, and other parties would not suffer immediate harm if the stay is granted.

Introduction and Background

The members of APPA, NRECA and UTC rely on licensed 6 GHz microwave systems for high-capacity point-to-point communications to support their core electric services. These systems provide voice and data communications with utility personnel and help remotely monitor and control electric generation, transmission and distribution infrastructure, ensuring the delivery of safe, efficient and reliable electric service, as well as the safety of electric operations and personnel. These systems are located across the country and cover vast distances, including rural, urban and suburban areas. Owing to the critical nature of the communications that they provide, these systems are designed, built and operated to provide extremely high levels of reliability.

It is imperative that these systems be protected from harmful interference, otherwise the risk to utilities, the public and national security could be catastrophic. These systems support protective relaying systems that immediately isolate faults on the electric transmission and distribution systems before they cause widespread outages. They also provide substation monitoring and control so that control centers can balance the load of electricity on the grid, which is critical and must always be maintained to ensure electric reliability. They also support voice communications with crews working in extremely

¹ Petition for Stay Pending Judicial Review in ET Docket No. 18-295 by the Edison Electric Institute (Jun. 19, 2020)(hereinafter *Petition for Stay*). See also *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 (2020) (rel. Apr. 24, 2020)(hereinafter, “*Report and Order*”).

hazardous environments. Finally, they backhaul communications from a variety of systems all over a utility service territory; if one of these links fails due to interference, all the other microwave links carrying all kinds of communications traffic for utilities are impacted as well.

Electric system communications must be protected against interference from unlicensed operations. Interference must be prevented before it occurs, not after the fact because it will be far too late to undo the damage that could result from interference. The latency requirements for these microwave systems are measured in milliseconds and even intermittent interference can have longer effects on these microwave systems, which may prevent protective relaying systems from isolating faults or lead to imbalances in electric loads which may cause an outage. It cannot be emphasized enough that these mission-critical communications systems are essential to utility operations and must be protected.

As these microwave systems are licensed, they are entitled to interference protection under the Communications Act and the Commission's rules and policies. Sections 301 and 302 of the Communications Act together require the Commission to license any transmitter and prohibit harmful interference to any licensed operation. Although the Commission has authorized unlicensed operations, the Commission's rules require that these systems must not cause harmful interference to licensed operations and they must accept interference from licensed and other unlicensed operations. If they cause harmful interference to other licensed operations, they must immediately correct the interference, or alternatively, shut down the unlicensed operations altogether.² Harmful interference is defined under the FCC rules as "any emission, radiation or induction that endangers the functioning of a radio navigation service or of other safety services or seriously degrades, obstructs or repeatedly interrupts a radiocommunications service [authorized by the Commission]."³ Accordingly, the Commission may not authorize unlicensed operations that pose a significant potential of causing harmful interference to licensed operations.⁴

Standard of Review

The Commission may grant a stay if the petitioner demonstrates (1) the likelihood of success on the merits; (2) irreparable harm if a stay is not granted; (3) lack of harm to other interested parties if the stay is granted; and (4) the public interest is served by granting a stay.⁵

Likelihood of Success on the Merits

EEI is likely to prevail on the merits. It has demonstrated that the *Report and Order* is contrary to law and policy and is arbitrary and capricious. The Commission failed to adopt rules that sufficiently protect licensed microwave systems in the 6 GHz band against

² 47 CFR §15.5.

³ 47 CFR §15.3.

⁴ *American Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 234-35 (D.C. Cir. 2008)).

⁵ *Virginia Petroleum Jobbers Ass'n v. Fed. Power Comm'n*, 259 F.2d 921, 925 (D.C. Cir. 1958).

interference from unlicensed operations, particularly low-power indoor (LPI) devices, which are not required to be controlled by automated frequency coordination (AFC) systems. The FCC relied primarily upon insufficient power limits to reduce the potential for interference from LPI devices, and it adopted ineffective safeguards to prevent the use of LPI outdoors. Studies on the record showed that there is a significant potential for interference to licensed microwave systems by LPI devices. Yet, the FCC failed to adequately consider this record evidence, largely dismissing or downplaying these studies, while at the same time accepting at face value studies from unlicensed proponents. In addition, the FCC failed to conduct any independent testing of its own to investigate the interference potential of unlicensed operations generally, and it declined to require testing of LPI devices prior to their mass market commercial deployment.

In failing to address the overwhelming evidence showing the significant interference potential of unlicensed LPI devices and in failing to adopt sufficient power limits and effective safeguards to prevent their outdoor operation, the Commission abrogated sections 301 and 302 of the Communications Act, as well as Section 706 of the Administrative Procedure Act. In failing to require AFC and allowing these devices to be sold commercially without any restrictions on their marketing and installation, the Commission violated its own Part 15 rules by authorizing the mass market proliferation of LPI devices that are certain to cause harmful interference without establishing any meaningful way for licensees to resolve interference complaints. Finally, the Commission has delegated much of the technical and operational implementation issues for addressing potential interference to a multi-stakeholder working group that doesn't exist and is uncertain at best to substantially address the issues of testing and resolving interference from LPI devices, contrary to the critical infrastructure protection policies in 42 U.S.C. § 5195c(c)(1).

Accordingly, there is a substantial likelihood that the EEI litigation will succeed on the merits. The significant potential for interference is clear and the Commission has failed to adopt rules that will sufficiently mitigate LPI interference or effectively resolve it when it occurs. Therefore, the Commission should stay the effectiveness of its *Report and Order* pending judicial review.

Imminent Irreparable Harm Absent a Stay

EEI has also demonstrated that utilities will suffer imminent irreparable harm if a stay is not granted. The harm is imminent because equipment manufacturers and unlicensed proponents have reported that millions of LPI devices are expected to be marketed commercially as early as this summer. Once those devices are sold to consumers, it will be practically impossible to retrieve them and/or prevent them from causing interference. This interference will cause irreparable harm to electric service providers who operate 6 GHz microwave systems to support the safe, reliable and secure operation of their electric infrastructure. The irreparable harm will be widespread and significant because interference will affect other links in the microwave system as well as other downstream communications networks that rely on the 6 GHz band for backhaul, and the microwave system itself supports a wide variety of communications and utility applications over long distances.

The declarations by Exelon and Southern Company substantiate the risk of irreparable harm, explaining how these companies “rely heavily” on the 6 GHz band with hundreds of licenses to operate microwave systems that provide mission critical communications that help to ensure operational safety, security and reliability. As Exelon explained in its Declaration, “the 6 GHz band is the backbone upon which critical services rely,” and “[a]ny impact to these systems has the potential to negatively affect the Exelon Companies’ ability to provide reliable electric service to the public.”⁶ Similarly, Southern Company stated that, “[a]ny disruption to the communications links supporting utility applications can have serious consequences to utility operations,” including “dangerous situations and potential damage to grid infrastructure [that] can result in outages and interruptions in the provision of electric service to the public.” For example, Southern Company reported that interference to 6 GHz microwave systems could prevent it from managing its electric load and avoiding outages or catastrophic damage to both the electrical grid and generating components when a generating facility is brought onto the grid or there is a fault either at the plant or elsewhere on the electric system.⁷

Therefore, EEI has demonstrated imminent irreparable harm if the stay is not granted and LPI devices proliferate into the commercial market, causing harmful interference to licensed microwave systems that utilities use to protect the grid, personnel in the field and the public at large that depends on reliable electricity for a variety of essential and potentially life-saving services.

No Harm to Other Parties by Granting the Stay.

EEI has also shown that the interests of unlicensed proponents will not be harmed by granting the stay. As EEI observes, it will only marginally delay their commercial marketing plans. By contrast, utilities will risk having their critical communications systems substantially compromised if the new rules are allowed to go into effect immediately. The balance of the equities test clearly weighs in favor of electric service providers and other incumbents including public safety who use their 6 GHz microwave systems to provide essential services, which are even more important now with the ongoing pandemic.

Public Interest Considerations

EEI has correctly concluded that the public interest would be served by granting the stay, because electric service providers will be unable to rely on their 6 GHz systems if LPI devices begin to proliferate the marketplace and cause increasingly harmful interference. The public depends on the essential services that utilities provide. They can ill-afford to have those essential services jeopardized by harmful interference to utilities’ licensed 6 GHz microwave systems. Accordingly, the public interest would be served by grant of a

⁶ *Petition for Stay*, Attachment A: “Declaration of Michael V. Kuberski on behalf of Exelon Corporation in Support of Petitioner Edison Electric Institute’s Petition for Stay Pending Judicial Review” at ¶5.

⁷ *Petition for Stay*, Attachment B: “Declaration of Coy P. Trosclair on behalf of Southern Company Services in Support of Petitioner Edison Electric Institute’s Petition for Stay Pending Judicial Review” at ¶8.

stay to protect against interference to critical infrastructure communications systems and to ensure the reliability, safety and security of their underlying electric operations.

Sincerely,

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