

ORAL ARGUMENT NOT YET SCHEDULED

Nos. 20-1216 and 20-1272
(consolidated with Nos. 20-1190, 20-1274, 20-1281, and 20-1284)

**IN THE UNITED STATES COURT OF APPEALS
FOR THE DISTRICT OF COLUMBIA CIRCUIT**

EDISON ELECTRIC INSTITUTE, ASSOCIATION OF PUBLIC-SAFETY
COMMUNICATIONS OFFICIALS INTERNATIONAL, INC., UTILITIES TECHNOLOGY
COUNCIL, NATIONAL RURAL ELECTRIC COOPERATIVE ASSOCIATION, and
AMERICAN PUBLIC POWER ASSOCIATION,

Petitioners,

v.

FEDERAL COMMUNICATIONS COMMISSION
and UNITED STATES OF AMERICA,

Respondents.

ON PETITIONS FOR REVIEW OF AN ORDER
OF THE FEDERAL COMMUNICATIONS COMMISSION

**RESPONDENT FEDERAL COMMUNICATIONS COMMISSION'S
CONSOLIDATED OPPOSITION TO EMERGENCY MOTIONS
FOR A STAY PENDING REVIEW**

The Federal Communications Commission (“FCC” or “Commission”) opposes the emergency motions for stays pending review filed by the Association of Public-Safety Communications Officials International, Inc. (“APCO”) and by the Edison Electric Institute, Utilities Technology Council, National Rural Electric Cooperative Association, and American Public Power Association (collectively, the “Utilities”).

INTRODUCTION

Americans rely on Wi-Fi for wireless broadband Internet connections in their work, school, and personal lives. Demand for wireless broadband continues to grow and its importance has surged during the COVID-19 pandemic, with schools and workplaces operating remotely via wireless connections to stable, high-speed Internet.

In the *Order* under review, the FCC responded to Congress's call to address the growing demand for wireless broadband by acting to make 1,200 megahertz (MHz) of spectrum in the 6 gigahertz (GHz) band available for unlicensed use by Wi-Fi devices—a move that will ease congestion and usher in a new generation of faster, better-performing Wi-Fi. *See Report and Order and Further Notice of Proposed Rulemaking, Unlicensed Use of the 6 GHz Band; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 and 24 GHz*, FCC 20-51, 2020 WL 2013310 (rel. April 24, 2020) (*Order*).

APCO and the Utilities represent incumbent licensed users of the 6 GHz band. *See Order* ¶ 16 & n.44. They fear that unlicensed use of the 6 GHz band will create harmful interference to their operations, which use “point-to-point microwave links” to support their services. *See id.* ¶¶ 7, 16. But based on its expert judgment and thorough consideration of the administrative record, including the needs of public safety operations in the 6 GHz band, the Commission adopted rules that eliminated

the risk of significant interference that APCO and the Utilities identified. *See id.* ¶¶ 23–86, 96–150. Given the ample safeguards against harmful interference that the *Order* established, APCO and the Utilities are unable to demonstrate that they are likely to prevail on the merits of their claims, and their supposed irreparable harms, in the face of those protections, are speculative and uncertain. In particular, APCO and the Utilities have no good evidence that 6 GHz devices—which still need to be certified under FCC standards, distributed, and sold—will pose *any* significant risk of harmful interference, especially before this Court can resolve their petitions in the ordinary course. On the other hand, a stay would unnecessarily forestall the significant benefits that the *Order* is poised to deliver to consumers and businesses nationwide. The motions for a stay should be denied.

BACKGROUND

Americans connect to wireless broadband Internet using Wi-Fi and other protocols for transmitting data wirelessly via radio waves. *See Order* ¶¶ 2, 4. Such wireless devices transmit across bands of the electromagnetic spectrum that the FCC has opened for unlicensed use. *See id.* ¶ 4. Until now, two bands of spectrum (at 2.4 GHz and 5 GHz) have carried the bulk of Wi-Fi and other unlicensed traffic in the United States. *See Order* ¶¶ 3, 229 n.602. Yet “demand for wireless broadband continues to grow at a phenomenal pace, as American citizens and businesses increasingly rely on Internet connectivity.” *Id.* ¶ 6. To meet this growing

demand, the FCC “continuously evaluates spectrum use” with a goal “to enable more efficient usage,” including through unlicensed operations. *Id.* Congress has also taken note of the problem and recently directed the Commission to “develop a national plan for making additional radio frequency bands available” for unlicensed use. *See* RAY BAUM’S Act, Pub. L. 115-141, § 618, 132 Stat. 348, 1112 (2018) (codified at 47 U.S.C. § 1508).

Consistent with Congress’s directive, in October 2018 the Commission “sought comment on how best to provide new opportunities for unlicensed use in the [6 GHz] band while also ensuring that licensed services that operate in the band continue to thrive.” *Order* ¶ 11; *see* Notice of Proposed Rulemaking, *Unlicensed Use of the 6 GHz Band*, 33 FCC Rcd. 10,496 (2018).

After reviewing an extensive record that included nearly 100 technical studies submitted by proponents and opponents of unlicensed operations in the 6 GHz band, *see Order* ¶¶ 15–16, Appendix E, the Commission adopted an order opening 1,200 MHz of spectrum in the 6 GHz band for more expansive unlicensed use. Among other things, the Commission explained that the newly available spectrum will ease congestion “so that businesses and consumers can take advantage of new data intensive applications,” *id.* ¶ 2, and will lead to new and better-performing Wi-Fi by making available, for the first time, Wi-Fi channels with a 160 MHz size, *id.* ¶ 98. These new channels will allow market participants to “optimiz[e] the potential

for deployment of next generation Wi-Fi,” *id.*, and “will allow more data to be transmitted in a shorter period of time,” *id.* ¶ 120.

When adopting the *Order*, the Commission paid careful attention to the concerns of incumbent licensed users of the 6 GHz band. Currently, “a variety of incumbent licensed services,” including utilities and public safety agencies, “occupy different portions of the 6 GHz band.” *Id.* ¶ 11; *see id.* ¶ 7. To protect these incumbents from harmful interference to their operations, the Commission permitted two types of unlicensed devices—“standard-power” and “low-power” access points—to operate in four sub-bands of the 6 GHz band. *Id.* ¶ 11. Within each of these sub-bands, the Commission “proposed to tailor unlicensed operation” in a way that protects existing licensed operations. *Id.* ¶ 12; *see id.* ¶¶ 20–22.

First, for standard-power devices operating in the 6 GHz band, the Commission established “exclusion zones” where unlicensed devices cannot operate. *Id.* ¶ 22. Under the Commission’s rules, standard-power devices will “only be permitted access to spectrum under the control of an Automated Frequency Coordination (AFC) system,” *id.* ¶ 20, which will “protect incumbent fixed microwave operations” by preventing standard power access points from operating where they could cause harmful interference, *id.* ¶ 22; *see id.* ¶ 12.

As the Commission noted, commenters “generally acknowledge that a properly designed AFC system . . . will protect incumbent operations.” *Id.* ¶ 23.

Indeed, the Commission explained that it has successfully used the same approach in the past to protect television reception, satellite earth stations, and government radar operations in other spectrum bands. *Id.*

Second, for low-power devices like common household Wi-Fi routers operating in the 6 GHz band, the Commission limited the permissible power levels, required a contention-based protocol,¹ and limited access points to indoor locations. *Id.* ¶¶ 99–103. The Commission considered whether to impose an AFC requirement for low-power indoor devices as well, but concluded that such a requirement was unnecessary given the other safeguards that it had adopted against harmful interference. *Id.* ¶¶ 98–99. With these safeguards in place, the Commission found that “signals transmitted by these unlicensed devices will be significantly attenuated when passing through the walls of buildings,” and that signal reduction will “prevent harmful interference from occurring to incumbents.” *Id.* ¶ 100. To ensure that low-power devices remain indoors, the Commission adopted hardware requirements that “will make outdoor operations impractical and unsuitable.” *Id.* ¶ 108. Low-power devices cannot be weather resistant, battery powered, or capable

¹ “A contention-based protocol allows multiple users to share spectrum by providing a reasonable opportunity for the different users to transmit.” *Order* ¶ 101. For example, under one such protocol, the wireless station “listens to the wireless medium and if the medium is idle, the station may transmit; otherwise the station must wait until the current transmission is complete before transmitting.” *Id.*

of connecting to external antennas. *Id.* ¶ 107. In addition, low-power devices must be marketed “for indoor use only,” and consumers will be advised via labels and user manuals that FCC regulations restrict the devices to indoor use. *Id.* In the unlikely event such a low-power device still manages to cause interference, the Commission emphasized that its Enforcement Bureau can investigate and take appropriate action, including by enforcing the Commission’s rules against causing harmful interference to licensed incumbent operations. *See id.* ¶ 149.

The Commission carefully reviewed and assessed the technical studies bearing on the potential for harmful interference to fixed microwave services from low-power indoor devices. *Id.* ¶¶ 112–50. Among those studies, the Commission addressed an analysis by the Critical Infrastructure Industry—whose members include several electric utility organizations, including the petitioner Utilities in this case—regarding “the potential impact of 6 GHz unlicensed use on the incumbent [utilities] and public safety providers that currently use the band.” *Id.* ¶ 136. The Commission provided a detailed explanation for its conclusion that the study “has several critical flaws” that make it “unreliable.” *Id.* ¶ 138. In particular, the study assumes higher powers for indoor unlicensed devices than the adopted rules permit and makes several assumptions that do not reflect the realities of urban environments. *See id.* The Commission found that these flaws “significantly detract” from the study’s value and “lead to substantial errors.” *Id.*

By contrast, the Commission found “persuasive” a study submitted by CableLabs that determined that the ratio of interference to noise power (I/N ratio) generated by low-power indoor devices would be below the -6 dB level that several 6 GHz incumbents—including one of the Utilities petitioners—advocated “as the appropriate metric” for protecting against harmful interference. *Id.* ¶¶ 69, 117–18. Ultimately, however, the Commission found the CableLabs study “persuasive” not because it reached a particular result, but “because it uses actual airtime utilization data for hundreds of thousands of Wi-Fi access points along with a statistical model for building entry loss.” *Id.* ¶ 118. By using a “probability distribution,” the CableLabs study “more accurately models the variability of the building loss” than other studies that used only “a single number for building loss.” *Id.* Even after AT&T raised concerns about the study, CableLabs “submitted additional simulation results” using assumptions that “addresse[d] AT&T’s concern” but that still showed that “the I/N was less than -6 dB in all instances,” as several 6 GHz incumbents advocated. *Id.* ¶ 119. After considering and rejecting other objections to the study, *id.* ¶¶ 120–22, the Commission concluded “that the CableLabs study is the best evidence in the record of the impact that unlicensed low-power indoor devices will have on incumbent operations—and it demonstrates that such operations will *not* cause harmful interference.” *Id.* ¶ 120 (emphasis added).

A summary of the *Order* was published in the Federal Register on May 26,

2020, *see* 85 Fed. Reg. 31,390-01 (May 26, 2020), and the *Order* became effective on July 27, 2020. APCO and one of the Utilities (Edison Electric Institute) asked the Commission to stay the *Order* in late May and mid-June, respectively.² The agency denied those petitions on August 13, 2020, finding that both petitioners were unlikely to succeed on the merits, have not shown irreparable harm, and that a stay would harm the public interest and the interests of other parties. *See* Order Denying Petitions for Stay, *Unlicensed Use of the 6 GHz Band; Expanding Flexible Use in Mid-Band Spectrum Between 3.7 & 24 GHz*, DA 20-879, 2020 WL 4734883 (rel. Aug. 13, 2020) (*Stay Denial Order*). Now, several months after the *Order* was adopted and published, APCO and the Utilities seek an emergency judicial stay pending review of the rules permitting “unlicensed indoor device operation.” Utilities Mot. 2 n.1; *see* APCO Mot. 13–16 (limiting its merits challenge to the *Order*’s rules for “low-power devices”).

² The remaining Utilities concede that they did not move the Commission for a stay. *See* Utilities Mot. 3 n.2. Because they have not shown that it would have been “impracticable” for them to have moved for a stay before the Commission, their motion in this Court is improper. *See* Fed. R. App. P. 18(a). The remaining Utilities contend that this makes no difference because “their arguments before this Court, and the relief they seek, are coterminous with that of” Edison Electric Institute. Utilities Mot. 3 n.2. But the Bornhoft declaration in support of the Utilities’ motion is submitted on behalf of one of the Utilities that did not seek a stay from the Commission, and the Court should therefore disregard that improper filing. *See* Utilities Ex. 4 ¶ 1.

ARGUMENT

A stay pending review is “extraordinary relief” subject to “stringent requirements.” *Citizens for Responsibility & Ethics in Wash. v. FEC*, 904 F.3d 1014, 1016, 1017 (D.C. Cir. 2018) (per curiam). Four traditional factors govern its issuance: (1) whether petitioners have “made a strong showing” that they are “likely to succeed on the merits”; (2) whether petitioners “will be irreparably injured absent a stay”; (3) whether a stay “will substantially injure the other parties interested in the proceeding”; and (4) the “public interest.” *Nken v. Holder*, 556 U.S. 418, 434 (2009). The first two factors “are the most critical,” *id.*, and the final two factors “merge” where, as here, “the Government is the opposing party,” *id.* at 435.

APCO and the Utilities have not made the required showing on any of these factors: (1) they have not demonstrated any flaw in the Commission’s expert technical judgment about the sufficiency of the safeguards it adopted against harmful interference by low-power indoor devices; (2) with those safeguards in place, movants’ claims that they will be injured by the operation of those devices is purely speculative; (3) third-party manufacturers that have plans to market low-power indoor devices will be injured if the *Order*’s effectiveness is suspended; and (4) the public will be deprived of the substantial benefits that will flow from the added wireless capacity that the *Order* will make available. The motions should be denied.

I. PETITIONERS HAVE NOT SHOWN THAT THEY ARE LIKELY TO SUCCEED ON THE MERITS.

APCO and the Utilities claim that the Commission erred in failing to protect incumbent users of the 6 GHz band from harmful interference and by ignoring the *Order*'s effect on public safety. Neither challenge is likely to succeed on the merits.

A. The Commission Reasonably Found That Its Safeguards For Low-Power Devices Eliminate Any Significant Risk Of Harmful Interference To Licensed Users Of The 6 GHz Band.

This Court has long recognized that the FCC's reliance on its expertise to resolve "highly technical question[s]," including those surrounding the appropriate level of interference protections, deserves "considerable deference." *Am. Radio Relay League, Inc. v. FCC*, 524 F.3d 227, 233 (D.C. Cir. 2008) (quoting *MCI Cellular Tel. Co. v. FCC*, 738 F.2d 1322, 1333 (D.C.Cir.1984)); *see also Yale Broadcasting Co. v. FCC*, 478 F.2d 594, 604 (D.C. Cir. 1973) ("interference" is a "technical area[]" in which the Court "must accord great deference"). In light of this deference and the reasonableness of the Commission's decision, the movants' attacks on the Commission's expert technical judgment are unlikely to prevail.

1. The Communications Act creates a licensing regime for the nation's electromagnetic spectrum, 47 U.S.C. § 301, and empowers the Commission to "make reasonable regulations" for devices that may cause "harmful interference to radio communications," *id.* § 302a(a). The Commission protects licensed incumbents from unlicensed operations by prohibiting "harmful interference," 47

C.F.R. § 15.5(b), and requiring that unlicensed devices “cease operating . . . upon notification by a Commission representative that the device is causing harmful interference,” *id.* § 15.5(c). In this context, the Commission defines “harmful interference” as “[a]ny 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 operating in accordance with this chapter.” *Id.* § 15.3(m).

Seizing on the word “endangers,” *id.*, APCO and the Utilities each argue that the Commission has an absolute obligation to prevent *any* risk of interference with their operations. *See* APCO Mot. 13; Utilities Mot. 11. But the ordinary meaning of “endangers” does not support that rigid interpretation. In customary usage, to “endanger” is “to bring into danger or peril of *probable* harm”—not merely an abstract possibility of harm. *See Webster’s Third New International Dictionary* 748 (1981) (emphasis added). Thus, in common usage, operations are not endangered unless harm is sufficiently likely.

The Commission has long understood harmful interference in this way. As this Court has recognized, longstanding Commission precedent interprets the Communications Act to allow operation of an unlicensed device that “does not transmit enough energy to have a *significant potential* for causing harmful interference to licensed radio operators.” *Am. Radio Relay League, Inc.*, 524 F.3d

at 234 (cleaned up and emphasis added) (citing FCC authority dating back to 1955). The Commission has explained that its “significant potential” standard recognizes “practical realities” about the telecommunications industry and accords with more than “70 years of ‘unlicensed’ operations authorized by the Commission under Part 15” of its rules. *Order, Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems*, 19 FCC Rcd. 24,558, 24,589 ¶ 67 (2004). In applying this standard, the agency “considers the particular technical and operational parameters necessary to minimize the potential for harmful interference” in each band of spectrum. *Order* ¶ 145.

The Commission applied its “significant potential” test for harmful interference in the *Order*. *Id.* In doing so, it reasonably rejected calls “to refrain from authorizing services or unlicensed operations whenever there is any possibility of harmful interference.” *Id.* ¶146. As the Commission explained, “such a prohibition would rule out virtually all services and unlicensed operations, given that there is virtually no type of RF-emitting device that does not have the *potential* for causing such interference if used incorrectly.” *Id.* (emphasis added). Instead, the Commission explained that, through rulemaking, it can “authorize operations in a manner that reduces the possibility of harmful interference to the minimum that the public interest”—including public safety considerations—“requires.” *Id.* In this regard, the Commission emphasized that it “focus[es] on identifying and protecting

against actual use cases,” and not on “unrealistic or contrived situation[s]” that might theoretically cause harmful interference, especially since avoiding even remote possibilities of harmful interference would leave “few or no opportunities for sharing between unlicensed devices and licensed services.” *Id.* ¶ 150. Simply put, the “significant potential” standard allows flexibility to address realistic threats while supporting innovation. Here, public safety concerns informed the Commission’s conclusions about the amount of possible interference to tolerate, and the Commission then determined that its safeguards “eliminate[] any significant risk” of harmful interference. *Id.* ¶ 146; *see* Part I-B, *infra* (describing the Commission’s thorough consideration of public safety). It was eminently reasonable, and entirely consistent with the Communications Act and the Commission’s regulations, for the Commission to adhere to its longstanding concern with operations that have a “significant potential” for harmful interference. *Order* ¶ 145.

2. The Commission adopted three specific restrictions to ensure that low-power devices operating in the 6 GHz band would not cause harmful interference to incumbent users of the band. *Order* ¶ 99.

First, the devices “must operate only indoors.” *Id.* ¶ 100. As the Commission explained, indoor operation ensures that the signals transmitted by the devices will be “significantly attenuated when passing through the walls of buildings.” *Id.* To

ensure indoor operation, the Commission adopted three “equipment-related hardware requirements” for such devices—they cannot be “weather resistant,” they cannot be capable of connecting to external antennas that might make their signals more likely to cause harmful interference, and they cannot be able to operate on battery power. *Id.* ¶ 107.³

Second, the devices must employ a “contention-based protocol” that allows “multiple users to share spectrum by providing a reasonable opportunity for the different users to transmit.” *Id.* ¶ 101.⁴ “[T]he need to share spectrum with other devices,” the Commission stated, “will limit the amount of time” the low-power indoor device “will transmit,” thereby “limit[ing] the time periods during which interference could potentially occur.” *Id.* ¶ 102.

Third, the Commission limited the “power levels” at which the indoor devices are authorized to operate. *Id.* ¶ 103 (specifying a “maximum power spectral density” and “maximum transmit power”). After a detailed examination of the voluminous evidence in the record, including nearly 100 technical studies, *see*

³ The Commission also directed that low-power indoor devices be marketed “for indoor use only,” with a corresponding equipment label and statement in the device’s user manual stating that “FCC regulations restrict to indoor use only.” *Order* ¶ 107.

⁴ An example of such a protocol is the Institute of Electronic and Electrical Engineers’ (IEEE) 802.11 standard used by existing Wi-Fi devices. The IEEE 802.11 standard specifies that Wi-Fi devices “listen” to the band on which they operate and transmit only when the band is free of other activity. *Order* ¶ 101.

Order ¶¶ 112–43, the Commission determined that these restrictions “eliminate[] any significant risk of causing harmful interference.” *Id.* ¶ 146. Finally, the Commission stated that “in the unlikely event that harmful interference does occur,” the FCC’s “Enforcement Bureau has the ability to investigate reports of such interference and take appropriate enforcement action as necessary.” *Id.* ¶ 149.

APCO and the Utilities disagree that the Commission’s safeguards will protect against harmful interference to their operations. Their arguments are not likely to succeed on the merits.

First, APCO and the Utilities complain that the Commission did not credit several studies in the record that purport to show harmful interference from low-power indoor devices. *See* APCO Mot. 14; Utilities Mot. 11–12. But the Commission addressed each of these studies and explained why it found them unpersuasive. The Commission explained that a study submitted by AT&T “exaggerate[d] the likelihood of interference” by “treating only the building entry loss as a probabilistic quantity while not considering all other statistical quantities,” *Order* ¶ 127, and that the same error was present in another study submitted by CTIA, *see id.* ¶ 133. The Commission found a third study, submitted by the Southern Company, unpersuasive “for a number of reasons,” including use of an inappropriate radio propagation model and unrepresentative assumptions. *Id.* ¶ 135. And the Utilities’ own study was “unreliable” due to “several critical flaws,”

including assumptions regarding outdoor operation and use of power levels that would not be permitted under the *Order*. *Id.* ¶ 138. Tellingly, neither APCO nor the Utilities attempt to rehabilitate these technical studies or show that the Commission was mistaken in identifying their flaws.⁵

Nor do APCO or the Utilities identify any errors in the Commission’s reliance on a study by CableLabs, which the Commission found “persuasive” and “the best evidence in the record of the impact that unlicensed low-power indoor devices will have on incumbent operations.” *Id.* ¶¶ 118, 120. That study used “actual airtime utilization data for hundreds of thousands of Wi-Fi access points” and a “statistical model for building entry loss” that “more accurately” models reality than other studies did. *Id.* ¶ 118. The CableLabs study’s conclusion was clear: Low-power indoor operations “will not cause harmful interference,” *id.* ¶ 120, even when judged against the standard that 6 GHz incumbents (including one of the Utilities petitioners) advocated. *See id.* ¶¶ 69, 117, 119.

⁵ The Utilities complain that in making its interference determination, the Commission did not conduct any “field test[s].” *See* Utilities Mot. 18. But the Commission had before it a wealth of studies directed to the issue of interference; it was not required to conduct a field test to supplement the already voluminous record. As the Commission’s Office of Engineering and Technology explained in denying the movants’ requests for an administrative stay, the Commission “almost never” conducts field tests “as a matter of course.” *Stay Denial Order* ¶ 19. Instead, the agency relies on information submitted by commenters, who are better situated to tailor testing to their operations. *Id.*

Second, APCO and the Utilities claim that the Commission’s rules for discouraging outdoor use of low-power devices are “meaningless” and “unexplained.” Utilities Mot. 12; *see also* APCO Mot. 14–15. Not so. The Commission explained that its equipment-related limits on low-power indoor devices “will make outdoor operations impractical and unsuitable.” *Order* ¶ 108. Specifically, because the devices cannot be “weather-resistant,” outdoor operation would leave them at the mercy of the elements. Since they cannot connect to external antennas, they cannot connect to an outdoor antenna or a higher gain antenna that will increase their potential for harmful interference. And because they cannot operate on battery power, they will not be able to operate away from a wired power source. Finally, the Commission noted that it has previously prohibited outdoor operation of devices in other bands without incident, which further supports its determination that the even more comprehensive rules for indoor use it adopted in the *Order* will be effective “to discourage outdoor use.” *Id.* ¶ 148.

The Commission also reasonably declined to impose more stringent requirements, including the Utilities’ preference for GPS monitoring to determine whether a device is indoors. *See* Utilities Mot. 12. Record evidence persuaded the Commission that using GPS for this purpose was “impractical” (since it would depend on the presence or absence of a GPS signal in a variety of situations), and the Commission was hesitant to impose a costly GPS requirement when “the

effectiveness of this idea has not been demonstrated.” *Order* ¶ 108.

Third, APCO and the Utilities attack the Commission’s conclusion that the Enforcement Bureau can effectively stop harmful interference once identified. *See* APCO Mot. 15; Utilities Mot. 13–14. As an initial matter, the Commission found that the safeguards it adopted “eliminate[] any significant risk” that low-power indoor devices will cause harmful interference to licensed users. *Order* ¶ 146. But in the unlikely event that such interference were to occur, the Commission explained that its Enforcement Bureau field agents use “specialized spectrum monitoring equipment” to pinpoint interference sources and to resolve claims of interference, including, if necessary, by working in conjunction with “entities at the federal, state, county, and local levels of government.” *See id.* ¶ 149 & n.397. Once the harmful interference is identified, the operator must “cease operating the device upon notification by a Commission representative that the device is causing harmful interference,” and operation of the device “shall not resume until the condition causing the harmful interference has been corrected.” 47 C.F.R. § 15.5(c). The unsupported statements that the Enforcement Bureau will “struggle” to rectify harmful interference, *see* APCO Mot. 15; Utilities Mot. 14, are insufficient to overcome the Commission’s informed judgment that Bureau enforcement efforts will be effective given the very low risk of harmful interference in the first place.

B. The Commission Adequately Considered And Addressed Public Safety Concerns.

APCO and the Utilities each argue that the Commission unlawfully failed to consider the *Order*'s effect on public safety. *See* APCO Mot. 8–13; Utilities Mot. 15–17. This argument is belied by the record, which reflects robust attention to the concerns raised by public safety entities.

1. The Commission discussed at length how its rules will “protect incumbent fixed microwave operations from the potential of harmful interference” by standard-power devices, *Order* ¶ 23, as well as “prevent harmful interference” from low-power devices, *id.* ¶ 99. The Commission expressly acknowledged that protected incumbent users of fixed microwave services include “utilities” and “public safety agencies,” which use “point-to-point microwave links” to support their services in the 6 GHz band. *Id.* ¶ 7. The Commission’s conclusion that its rules will “protect” and “prevent” against harmful interference with these fixed microwave links necessarily means that public safety will not be impaired. *Id.* ¶¶ 23, 99; *see generally id.* ¶¶ 23–86, 112–50 (discussing protections for fixed microwave services); *see also Stay Denial Order* ¶ 21 (“The microwave links used by public safety agencies must follow the same technical rules as those implemented by any other 6 GHz fixed service licensee and their links have the same technical characteristics as those used for other purposes, such as . . . management of electric grids.”).

APCO stresses “that 6 GHz public safety operations are designed for

99.9999% availability,” APCO Mot. 9, but that does not differentiate public safety agencies from other fixed microwave users. In fact, the record before the Commission reflected that “fixed microwave links”—like those used by public safety agencies and utilities—are “typically designed to achieve 99.999% or 99.9999% reliability.” *Order* ¶ 114. In other words, public safety fixed microwave links are “typical[]” of other fixed microwave links. *See id.* The Commission’s extensive findings about the safety of fixed microwave links apply with full force to APCO’s members. *See Stay Denial Order* ¶ 21. And for their part, the Utilities likewise do not identify any basis to distinguish their fixed microwave links from those described in the *Order*.

Moreover, the Commission was attentive to APCO’s and the Utilities’ specific public safety concerns. For example, the Commission expressly noted “the importance of maintaining high link reliability” for “[u]tilities” and “public safety organizations.” *Id.* ¶ 115 (citing comments by APCO and the Utilities). For another, the Commission explained in detail why it did not credit a study from the Critical Infrastructure Industry (which includes the Utilities) analyzing the supposedly harmful effects of low-power indoor devices on “public safety providers that currently use the [6 GHz] band.” *Id.* ¶ 136 & n.350. As the Commission explained, that study had “several critical flaws” that rendered it “unreliable,” including multiple unsound or unjustified assumptions. *Id.* ¶ 138. In short, the Commission

considered and found unpersuasive a technical study about the *Order*'s potential effect on the public safety and utilities systems that the Commission recognized were important. That was not a failure to consider an important part of the problem; it was an informed, expert conclusion with which APCO and the Utilities simply disagree.

Thus, contrary to the Utilities' suggestion, the Commission did not "dismiss[] or ignore[]" evidence that there would be harmful interference to public safety users of the 6 GHz band. *See* Utilities Mot. 17. Rather, after considering studies on both sides, the FCC determined that the safeguards it adopted would protect against harmful interference to all licensed users of the band, which include public safety users. *Order* ¶ 146. APCO acknowledges that the Commission cited APCO's comments "20 times," but tries to dismiss this "citation count" as "irrelevant." APCO Mot. 12–13. That understates APCO's influence on the *Order*. Consistent with APCO's comments, the Commission required (1) use of the Commission's Universal Licensing System to establish exclusion zones for standard-power devices, *id.* ¶ 30; (2) geo-location capabilities for standard-power devices, *id.* ¶¶ 39–40; (3) standard-power device contact with an AFC system at least once per day, *id.* ¶ 46; (4) standard-power registration with the AFC system when requesting a list of available operating frequencies and power levels, *id.* ¶¶ 81–82; and (5) the capacity to deny spectrum access to a registered standard-power access point upon request by the Commission, in the event of harmful interference caused by a device, *id.* ¶ 83.

And as urged by APCO, the Commission refused to permit higher power limits in rural areas. *Id.* ¶¶ 187–88. So, too, with the Utilities: The Commission adopted some of their recommendations and credited parts of their studies. *See id.* ¶ 76 (crediting a study by Edison Electric Institute); *id.* ¶ 83 (adopting a recommendation by Utilities Technology Council). The record is clear that the Commission took into account APCO’s and the Utilities’ public safety concerns when crafting its rules to protect fixed microwave links.

All told, the Commission thoroughly addressed concerns about harmful interference with fixed microwave systems. In doing so, the Commission was aware that public safety agencies and utilities use these systems, and the Commission carefully considered the concerns that these entities raised. APCO and the Utilities have not suggested—here or before the Commission—that their fixed microwave links operate differently from fixed microwave links more generally. Thus, the Commission’s conclusion that *all* fixed microwave links are protected from harmful interference adequately addresses APCO’s and the Utilities’ public safety concerns.

2. To refute this reality, APCO and the Utilities principally rely on this Court’s decision in *Mozilla Corp. v. FCC*, 940 F.3d 1 (D.C. Cir. 2019). That reliance is misplaced.

In *Mozilla*, the Court broadly upheld the FCC’s departure from “utility-style regulation” of the Internet and restoration of “a market-based, ‘light-touch’ policy.”

Id. at 17. During the Commission proceeding, public safety officials objected that a market-based approach that “allow[s] broadband providers to prioritize Internet traffic as they see fit, or to demand payment for top-rate speed, could imperil the ability of first responders . . . to communicate during a crisis.” *Id.* at 60. The Court concluded that, in restoring a market-based approach, the Commission had not adequately explained the effects (if any) on public safety. *See id.* at 61–62.

Mozilla is inapt because the *Order* here affirmatively adopted rules to prevent harmful interference with public safety services. The *Order* specifies clear requirements for standard- and low-power devices operating in the 6 GHz band, *Order* ¶¶ 23–86, 112–50, including requirements that public safety commenters supported, *id.* ¶¶ 30, 39–40, 46, 81–83. The *Order* here thus addresses the substance of the public safety concerns regarding the potential for harmful interference. Mere disagreement with the Commission’s reasoning and policy judgment is not a ground for relief.

II. PETITIONERS HAVE NOT SHOWN THAT THEY WILL SUFFER IRREPARABLE INJURY.

APCO and the Utilities face a “high standard” to show irreparable injury: The injury must be “both certain and great” and “of such imminence that there is a clear and present need” for relief. *Mexichem Specialty Resins, Inc. v. EPA*, 787 F.3d 544, 555 (D.C. Cir. 2015) (quoting *Chaplaincy of Full Gospel Churches v. England*, 454 F.3d 290, 297 (D.C. Cir. 2006)). Neither APCO nor the Utilities satisfy that burden.

Instead, they seek a stay based on “something merely feared as liable to occur at some indefinite time.” *Wis. Gas Co. v. FERC*, 758 F.2d 669, 674 (D.C. Cir. 1985) (quoting *Connecticut v. Massachusetts*, 282 U.S. 660, 674 (1931)). That is inadequate to obtain the “extraordinary relief” they seek. *Citizens for Responsibility & Ethics in Wash.*, 904 F.3d at 1017.

1. APCO’s and the Utilities’ claimed harms are wholly speculative. Specifically, their supporting declarations set forth what “may” or “can” occur, what “would” happen in various hypotheticals, what they “fear,” and the potential “risk” of disruption. *See* APCO Ex. 4 ¶ 3, Ex. 5 ¶¶ 2, 3; Utilities Ex. 3 ¶ 7, Ex. 4 ¶¶ 5, 9,⁶ Ex. 5 ¶ 6. These harms are insufficient to establish an irreparable injury. *See Citizens for Responsibility & Ethics in Wash.*, 904 F.3d at 1019 (no irreparable harm where claimed injuries “fail to rise beyond the speculative level”).

More importantly, as the FCC has shown, APCO and the Utilities have no credible response to the Commission’s finding that harmful interference is unlikely to occur. Indeed, their irreparable harm arguments simply rehash the same studies that they presented to the Commission and that the Commission found unreliable or

⁶ As explained in footnote 2, the Bornhoft declaration is procedurally improper because it is offered on behalf of a petitioner that did not seek a stay from the FCC. *See* Fed. R. App. P. 18(a).

unpersuasive.⁷ *See* APCO Mot. 17 & n.5 (citing a study from Southern Company that the Commission found unconvincing “for a number of reasons,” *Order* ¶ 135); Utilities Mot. 20 & n.11 (same).⁸ Neither APCO nor the Utilities explain why the Commission’s reasoned rejection of this evidence is mistaken. There is simply no good evidence for the contention that low-power indoor devices—much less “even one device”—carry any significant likelihood of causing harmful interference under the Commission’s rules. *See* APCO Mot. 17; Utilities Mot. 20.

Even if harmful interference were more than a remote possibility, both of APCO’s declarants state that “risk” arises only if an approved device is “operating near” one of the public safety agency’s 6 GHz receivers. APCO Ex. 4 ¶ 3, Ex. 5 ¶ 3. There is no certainty that such operation will occur. And the consequences of the risk are likewise speculative; both declarants focus on what “may” or “could” happen in worst-case-scenario events, but it is entirely speculative that any worst case would materialize. *See, e.g.*, APCO Ex. 4, ¶¶ 8, 10, 12, Ex. 5 ¶¶ 8, 10, 12.

APCO and the Utilities rely on these worst-case hypotheticals to suggest that

⁷ APCO relies in part on a post-*Order* study purporting to show “alarming results” that “confirm the threat to public safety.” APCO Mot. 17 & n.6. The FCC’s Office of Engineering and Technology explained that this untimely study has “a number of significant flaws” and is not reliable evidence. *Stay Denial Order* ¶ 25.

⁸ The Utilities’ Kuberski declaration cites a further study by Exelon, *see* Utilities Ex. 5 ¶ 8, which the Commission likewise considered and discounted because it “ignore[s] many statistically significant factors,” *Order* ¶ 134 & n.343.

the Commission—and this Court—cannot accept any risk to their operations because a failure could be catastrophic. Ultimately, however, the Commission has “broad discretion” in pursuing the public interest. *FCC v. WNCN Listeners Guild*, 450 U.S. 582, 594 (1981). Here, the Commission reasonably exercised that discretion to “eliminate[] any significant risk of causing harmful interference” with public safety operations while avoiding a standard so strict that it “would rule out virtually all services and unlicensed operations.” *Order* ¶ 146. The Commission balanced many competing considerations, but it did so in a way that the evidence shows will make harmful interference—and, by extension, the movants’ hypotheticals—nothing but a remote and abstract possibility.

2. Nor have APCO and the Utilities shown that the harm they fear is imminent. According to the Utilities, once 6 GHz devices are “deployed,” there will be a “risk” and a “possibility” of harm to their systems. *See Utilities Mot.* 23. APCO likewise cites “risk” that arises only once 6 GHz devices are on the market. *See APCO Mot.* 17. These barebones claims fall well short of establishing imminence.

Both APCO and the Utilities sound the alarm about the effect of numerous low-power indoor 6 GHz devices on their operations. *See APCO Mot.* 16–17; *Utilities Mot.* 2 (fearing “millions, if not billions” of devices). The Utilities’ own study predicted harmful interference only by “assum[ing] there is an access point for every man, woman, and child living in the Houston area, each watching a 4K video

streaming service.” *Order* ¶ 138. That unrealistic assumption was one of many reasons the Commission found the study “fundamentally flawed and unreliable.” *Id.* And as device manufacturers have observed, “there is simply no historical precedent for the immediate sale of millions of devices” on the timeframe that APCO and the Utilities imagine. *Stay Denial Order* ¶ 31. In short, the sale of 6 GHz devices at the level required for any likelihood of interference, even by the movants’ own lights, is highly unlikely any time soon.

Although APCO and the Utilities respond that “6 GHz chips are already on the market,” they admit that these chips are mere “precursors” to consumer devices. *See* APCO Mot. 17; Utilities Mot. 5. The FCC has not even finalized the guidance for certifying such devices, which is a necessary prerequisite to their sale. *See* 47 C.F.R. §§ 2.803(b), 2.1033(b). It is implausible, given the evidence in the record, that 6 GHz devices will be produced, certified, distributed, and sold in sufficient quantities to create a significant potential for harmful interference before this Court can resolve the petitions for review in the ordinary course.

There is no evidence that “widespread deployment” of 6 GHz devices will reach “many millions”—or any other critical threshold—by any specific date, much less by a date so imminent that it calls for a stay pending review. *See* Utilities Mot. 19. Absent that evidence, harmful interference is “something merely feared as liable to occur at some indefinite time.” *Wis. Gas Co.*, 758 F.2d at 674. That is not enough

to justify a stay.

III. A STAY WILL DISSERVE THE PUBLIC INTEREST AND HARM THIRD PARTIES.

Finally, a stay would not be in the public interest and would harm other interested parties. By contrast, the *Order* furthers the public interest by advancing the stated spectrum policy of the United States, easing congestion for consumers and businesses, and promoting innovation in devices that support wireless connectivity.

1. “The public policy of the United States,” as “declared by Congress,” is necessarily an important aspect of “the public interest.” *Cf. Retail Store Emps. Union v. FCC*, 436 F.2d 248, 259 (D.C. Cir. 1970). By opening spectrum for new unlicensed operations, the *Order* advances the “policy of the United States . . . to promote spectrum policy that makes available on an unlicensed basis radio frequency bands to address consumer demand for unlicensed wireless broadband operations.” 47 U.S.C. § 1507(a)(3). It also faithfully advances the Commission’s obligation to “encourage the larger and more effective use of radio in the public interest.” *Id.* § 303(g). Although there are countless ways to use spectrum, Congress has directed the Commission to make room for “unlicensed . . . operations” where it can. *See* 47 U.S.C. § 1508. The Court should honor the Commission’s compliance with that directive.

2. A stay also would adversely affect consumers and businesses nationwide.

As this Court has acknowledged, “the use of wireless networks in the United States is skyrocketing,” and “the country faces a major challenge to ensure that the speed, capacity, and accessibility of our wireless networks keeps pace with these demands.” *Nat’l Ass’n of Broadcasters v. FCC*, 789 F.3d 165, 169 (D.C. Cir. 2015) (quotation marks omitted). The *Order* tackles this problem by easing “existing and anticipated congestion so that businesses and consumers can take advantage of new data intensive applications.” *Order* ¶ 2. Relieving spectrum congestion “will provide economic benefits” to the entire nation, with one report estimating that the Commission’s new rules “will produce over \$150 billion in economic value.” *Id.* ¶ 229. The harms from congestion are even more serious “during the COVID-19 pandemic,” which has caused further “rising demand for consumer connectivity for work, school, and entertainment applications.” *Stay Denial Order* ¶ 42. Innovative spectrum use is especially important here and now. Even if the number of unlicensed low-power 6 GHz devices is unlikely to reach millions or billions in the immediate future, the *Order* allows innovators to start the process of delivering *some* such devices to the market in a time when any relief is welcome.

3. Beyond these widespread harms, specific market participants will be harmed by a stay. Low-power indoor 6 GHz products cannot be brought to market without compliance testing with still-to-be adopted procedures from the Commission’s Office of Engineering and Technology. *Stay Denial Order* ¶ 35. A

stay would disrupt this process by sowing uncertainty about the ability of 6 GHz devices to go on the market, discourage investment in 6 GHz products, and “delay companies from receiving the benefit of the investment they have made.”⁹ *See id.*

CONCLUSION

The Court should deny the motions for a stay pending review and deny APCO’s alternative request for a briefing schedule to which no other party has agreed.

Dated: September 14, 2020

Respectfully submitted,

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⁹ APCO and the Utilities try to wave away this economic harm by citing cases about *irreparable* injuries. *See* APCO Mot. 18–19; Utilities Mot. 21. That is not the appropriate standard for third parties, which should not be “substantially harmed” by a stay regardless whether that harm is reparable. *See Nken*, 556 U.S. at 434.

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CERTIFICATE OF FILING AND SERVICE

I hereby certify that on September 14, 2020, I caused the foregoing Federal Communications Commission's Consolidated Opposition to Emergency Motions for a Stay Pending Review to be filed with the Clerk of the Court for the U.S. Court of Appeals for the D.C. Circuit using the Court's CM/ECF system, which caused a true and correct copy of the same to be served on all attorneys registered to receive such notices.

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