Before the

PISC fully supports the Wi-Fi Alliance proposal to incorporate building entry loss (BEL) in its automated frequency coordination (AFC) predictive propagation model for specifically identifiable ñcomposite devicesò that will operate indoor-only. PISC agrees with OET that it will ñbe possible to protect the microwave incumbents while permitting the AFC systems to adjust their calculations to take into account building entry loss when standard-power devices are indoors.ò[3] Our organizations strongly believe that the ultimate benefits of the 6 GHz band to consumers and the economy will largely hinge on the Commission adopting higher power levels for indoor use ï where 80 percent or more of the nationôs total mobile device data traffic flows over Wi-Fi ï a choice that will determine whether the typical household and small business can distribute the gigabit connectivity enabled by Wi-Fi 6E without the added cost and complexity of multiple routers or repeaters.

We therefore urge the Commission to approve the waiver and, separately, to also approve the proposed increase in the power spectral density limit for low-power, indoor-only (LPI) access points to 8 dBm/MHz across the bandôs entire 1200 megahertz. Both of these enhancements will magnify the utility of indoor-only Wi-Fi connectivity for consumers and businesses alike.

I. The Commission Should Grant the Waiver Request if WFA and other AFCs Demonstrate they can Determine a Composite Device is Certified as Indoor-Only

PISC agrees that the Wi-Fi Alliance and other approved AFC operators should have the flexibility to incorporate building entry loss attenuation into the AFCôs calculations of channel availability and power constraints for composite devices that are authorized to operate in both lower power indoor (ñLPIò) and standard power (ñSPò) mode (ñcomposite devicesò). In its

[3] Office of Engineering and Technology, *OET Announces Conditional Approval for 6 GHz Band Automated Frequency Coordination Systems,* Public Notice, ¶ 40 (Nov. 2, 2022) (ñAFC Conditional Approval PNò).

Public Notice conditionally approving 13 entities to operate AFC systems, OET acknowledged that it will ñbe possible to protect the microwave incumbents while permitting the AFC systems to adjust their calculations to take into account building entry loss when standard-power devices are indoors.ò[4] PISC agrees. As OET has stated, taking building entry loss (ñBELò) into account when calculating the allowed power level at an indoor location is straightforward propagation analysis.[5] An AFCôs ability to do so accurately can be part of the lab and field testing that is required before OET approves an AFC for full commercial operation.

As OET further observed in its *AFC Conditional Approval PN*, ñ[t]he sole requirement in the rules is for AFC systems to use the specified propagation models to protect microwave receivers based on the -6 dB I/N metric used in the *6 GHz Report and Order*.ò[6] As a result, the determining question becomes ñhow the AFC systems [will]

locations or times where even a line-of-sight transmission could overcome a microwave point-to-point linkôs excess margin. Moreover, since composite devices would operate under the control of an AFC, they would by definition be authorized to operate only at a location that is not within the very conservative protection zones calculated by the AFC to ensure sufficient geographic separation between the services.

III. The Waiver Requested by WFA is in the Public Interest but Must Not be a Substitute for Increasing LPI Power Limits

PISC urges the Commission not to view the WFA Waiver Request as a *substitute* for the entirely separate question, pending in the FNPRM, about whether the power spectral density limit for LPI access points can be increased to 8 dBm/MHz for indoor-only use across the bandôs entire 1200 megahertz.[13] The WFA Waiver Request for composite devices and the proposed increase in allowed power for LPI devices each have distinct and separate benefits for consumer and business users. For example, devices operating at standard power are limited to two band segments that accommodate only four contiguous channels of 160 megahertz. In contrast, LPI devices are authorized to operate indoor-only over a contiguous 1200 megahertz that accommodates seven channels of 160 megahertz. Because most high-capacity applications ï and

[13] Studies in the record clearly demonstrate that the Commission can approve the pending proposal to increase the power limit for LPI access points from the current 5 dBm/MHz power spectral density (PSD) to 8 dBm/MHz PSD, the LPI client device PSD limit to 2 dBm/MHz, and the total power limit by at least 3 dB for LPI access points and client devices, to at least 33 dBm and 27 dBm, respectively. *See, e.g.*, Letter from Becky Tangren, Vice President & Associate General Counsel, NCTA ï The Internet & Television Association, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183 (filed Mar. 24, 2023); *CableLabs Power Level Sensitivity in Coexistence Simulations*, as attached to Letter from Becky Tangren, Vice President & Associate General Counsel, NCTA ï The Internet & Television Association, to Marlene H. Dortch, Secretary, FCC, ET Docket No. 18-295, GN Docket No. 17-183, at 2 (filed Nov. 28, 2022).

the most high-density user environments ï are generally indoors, there is an enormous public interest benefit to consumers and the economy in authorizing an adequate power level for next generation Wi-Fi relying across the bandôs entire 1200 megahertz.

In addition, operating at SP inherently imposes the additional cost of AFC coordination, which would be most burdensome for lower-income households. These same lower-income consumers are also likely to be the least able to afford the added cost of a composite router. Most lower-income households could quite likely enjoy adequate conne

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