NETGEAR®

350 E Plumeria Dr
San Jose, CA 95134

Ms. Marlene H. Dortch, Secretary

Federal Communications Commission
445 12th Street SW
Washington DC 20554

Regarding ET Docket No. 18-295 Unlicensed use of 6 GHz from NETGEAR, Inc.

General Comments:

As a leader in consumer and small business Internet connectivity solutions, NETGEAR continues to see explosive growth in devices and new applications driving Internet connections and a growing dependency of being and staying connected to the Internet. In US households WiFi is the primary way consumers and their devices stay connected to the Internet. Even if other wireless technologies, such as Bluetooth, Zigbee, and Z-wave are used in some smart home products, the way most of these devices ultimately connect back to the Internet is via WiFi with use of wireless bridges. We see all these WiFi connections foundational to driving the Internet connected economy, from music, TV, movies, banking, entertainment, gaming, security, home automation, social media, shopping, education, productivity, medical/health, etc.

NETGEAR forecasts the total number of devices connected to the Internet in US households will increase from 985 million devices in 2018 to over 2.1 billion by 2022 driven by the growth in new smart home devices being innovated and installed. These devices range from new smart thermostats, light bulbs, light switches, security systems, security cams, doorbells, door locks, garage door openers, smart watches, voice/video assistants, smart speakers, CO2, water and smoke detectors most of which are intended to be always-on and connected. These are in addition to more traditional connected devices like, computers, smartphones, printers, tablets, e-readers, TVs, game consoles, action cams, webcams, and speakers. This growing demand on WiFi bandwidth within each home is multiplied in denser more urban environments where WiFi networks overlap. In these areas wireless interference and congestion can compound, further necessitating greater availability of non-overlapping WiFi bands and channels.

It's clear to NETGEAR that growth of Internet connected devices and applications that relies on WiFi connectivity is only growing. We are strong proponents of making WiFi connectivity faster and more reliable with the addition of new WiFi bandwidth. We also see the direct relationship between improved WiFi experiences and continued economic growth driven by the need for greater Internet connectivity and urge the FCC to open the 6GHz band for WiFi use.

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NETGEAR Inc. is excited to consider the opening of a new 6GHz band and is dedicating resources to research and develop new products for this band. We are encouraged by the industry movements and see a benefit for manufacturers, consumers and business operating with new unlicensed radio spectrum. We are grateful to the Commission for their timely efforts in anticipating the public need for this unlicensed band in the NPRM.

We endorse the proposed rulemaking and if approved will move swiftly to produce compatible compliant products.

NETGEAR Background:

NETGEAR (NASDAQ: NTGR) is a global networking company that delivers innovative products to consumers, businesses and service providers. The Company's products are built on a variety of proven technologies such as wireless (Wi-Fi and LTE), Ethernet and powerline, with a focus on reliability and ease-of-use. The product line consists of wired and wireless devices that enable networking, broadband access and network connectivity. These products are available in multiple configurations to address the needs of the end-users in each geographic region in which the Company's products are sold. NETGEAR products are sold in approximately 26,000 retail locations around the globe, and through approximately 23,000 value-added resellers, as well as multiple major cable, mobile and wireline service providers around the world. The company's headquarters are in San Jose, Calif., with additional offices in approximately 25 countries

Comments on the NPRM:

NETGEAR has worked closely with industry leading chip set vendors to research the 6GHz band. We offer parallel comments to those already filed, in agreement with the strategy for successful use of the band:

i. Low-power indoor uses should be authorized throughout the entire 6 GHz band – the risk of congestion is very low and easily managed.
ii. For AFC control to be widely adopted, the systems must be simple, flexible, scalable, and customizable (e.g., centralized, decentralized, on device, cloud-based, proprietary, non-profit, or for profit).
iii. Power spectral density rules should be set to take advantage of the gain in OFDMA.

1. Propose that total power is aligned with PSD over 2 MHz

a. 27 dBm/MHz for AFC

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b. 21 dBm/MHz for low-power indoor

2. Clients can transmit at the same power/PSD as the AP that they are associated with.

iv. The Commission should authorize standard-power portable devices to operate using AFC and enable very-low-power portable devices to operate without AFC.

These policies would help guarantee the value and importance of the 6 GHz band, encouraging creative and sustained service.

Regards,

Andrew Kim
Sr. VP Legal and Corporate Development

Mark Merrill
Chief Technology Officer