**FACT SHEET: SPECTRUM FRONTIERS PROPOSAL TO IDENTIFY, OPEN UP VAST AMOUNTS OF NEW HIGH-BAND SPECTRUM FOR NEXT GENERATION (5G) WIRELESS BROADBAND**

*Today, Chairman Wheeler circulated rules that, if adopted, would identify and open up the high frequency airwaves known as millimeter wave spectrum. Building on a tried-and-true approach to spectrum policy that enabled the explosion of 4G (LTE), the Chairman's rules would set in motion the United States' rapid advancement to next-generation 5G networks and technologies.*

*The new rules would open up almost 11 GHz of spectrum for flexible use wireless broadband – 3.85 GHz of licensed spectrum and 7 GHz of unlicensed spectrum. If these rules are adopted, the U.S. will be the first country in the world to open high-band spectrum for 5G networks and technologies, creating a runway for U.S. companies to launch the technologies that will harness 5G's fiber-fast capabilities. The Report & Order and Further Notice of Proposed Rulemaking will be voted on July 14th.*

**The FCC is moving fast to establish U.S. leadership in 5G**

The next generation of wireless connectivity—the fifth generation, or 5G—is essential to seizing the 21st century opportunities in wireless broadband technologies. High-band millimeter wave spectrum is key to unlocking the potential for 5G. The U.S. is leading the world with today's action taking the steps toward making new 5G spectrum available.

**The Report & Order will open up new spectrum for licensed, unlicensed, and shared use**

The proposal makes available more spectrum for flexible use wireless broadband than ever before— a total of 10.85 GHz. It would adopt a balanced approach and flexible framework that builds off of years of successful spectrum policies with important updates to address the new shared use challenges in these bands. Specifically, the proposal will create a new Upper Microwave Flexible Use service in the 28 GHz (27.5-28.35 GHz), 37 GHz (37-38.6 GHz), and 39 GHz (38.6-40 GHz) bands, and an unlicensed band at 64-71 GHz.

- **Licensed use in the 28 GHz, 37 GHz and 39 GHz bands**: Makes available 3.85 GHz of licensed, flexible use spectrum, which is more than four times the amount of flexible use spectrum the FCC has licensed to date.
    - Provides consistent block sizes (200 MHz), license areas (Partial Economic Areas), technical rules, and operability across the exclusively licensed portion of the 37 GHz band and the 39 GHz band to make 2.4 GHz of spectrum available.
    - Provides two 425 MHz blocks for the 28 GHz band on a county basis and operability across the band.
- **Unlicensed use in the 64-71 GHz band**: Makes available 7 GHz of unlicensed spectrum which, when combined with the existing high-band unlicensed spectrum (57-64 GHz), doubles the amount of high-band unlicensed spectrum to 14 GHz of contiguous unlicensed spectrum (57-71 GHz). That 14 GHz band will be 15 times as much as all unlicensed Wi-Fi spectrum in lower bands.
- **Shared access in the 37-37.6 GHz band**: Makes available 600 MHz of spectrum for dynamic shared access between different commercial users, and commercial and federal users.

**We will promote sharing schemes to ensure different users are able to share spectrum**

The proposal would adopt effective sharing schemes to ensure that diverse users – including federal and non-federal, satellite and terrestrial, and fixed and mobile – can co-exist, and that federal uses can be protected and expand.

- **Federal Operations**: It would ensure that federal operations are protected and can grow, including by creating a dedicated sub-band for federal and non-federal entities to share equally in the 37-37.6 GHz segment.
- **Continued & Expanded Satellite Operations**: It would also create a path for continued and expanded satellite operations in the 28 GHz, 37 GHz, and 39 GHz bands. It would adopt several mechanisms to provide flexibility to satellite operators and predictability to terrestrial operators.

**Competition and innovation will be protected from the beginning**

The Report & Order will include rules that continue to promote competitive access to spectrum through scalable competition policies that avoid excessive concentration of licenses and promote innovation in the efficient use of spectrum. Specifically, it will adopt an ex ante spectrum holdings limit of 1250 MHz applied to auctioned spectrum in these bands, and a spectrum threshold of 1250 MHz for case-by-case review of secondary market transactions.

**Security by design is essential for modern networks**

In establishing the framework for the creation of new millimeter wave network services and technology, the rules, if adopted, promote security by design without creating a significant regulatory burden. The proposal would require licensees to file a statement before deployment that includes certain security-related information, such as a description of participation in standards body security work, its intended approach to security, and the implications their security by design will have for other parts of the 5G ecosystem.

**Technical rules will give providers certainty and flexibility**

The proposal adopts a number of technical rules that will give enough certainty to drive investment and innovation, while allowing the technology to evolve and develop without unreasonable or unnecessary regulatory constraints. Among other technical rules, it establishes power levels as follows:

- **Base Station Power:** Adopt transmit power limit of 75 dBm/100 MHz based upon anticipated deployment needs.
- **Mobile Power**: Adopt 43dBm EIRP transmit power as proposed in the NPRM.
- **Transportable Power**: Maximum power of 55dBm EIRP.

**Proposes to make additional bands available using the same flexible framework**

A Further Notice of Proposed Rulemaking ensures that we continue to dramatically increase the spectrum available for next generation services by proposing to make an additional 17.7 GHz of spectrum available. It proposes to apply the same licensing, service, and technical rule framework set in the Report & Order, modified to meet the characteristics of a specific band. Specifically, it proposes additional bands for consideration: 24-25 GHz (24.25-24.45/25.05-25.25 GHz), 32 GHz (31.8-33.4 GHz), 42 GHz (42-42.5 GHz), 48 GHz (47.2-50.2 GHz), 51 GHz (50.4-52.6 GHz), 70 GHz (71-76 GHz), and 80 GHz (81-86 GHz).

**Further notice refines the rules as necessary**

The Further Notice of Proposed Rulemaking will also develop additional rules to finalize the regulatory scheme, including detailed questions on the federal/commercial sharing regime in 37 GHz; how to structure a machine-to-machine performance requirement; how to structure a use-it-or-share-it performance requirement; various refinements and clarifications to our technical rules; and details of implementing the new spectrum aggregation limit, the appropriate holding period, and how to apply the policies to FNPRM bands.