



FEDERAL COMMUNICATIONS COMMISSION
WASHINGTON DC

Mike O'Rielly
Commissioner

June 14, 2019

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COMMITTEE ON SCIENCE, SPACE,
AND TECHNOLOGY

The Honorable Eddie Bernice Johnson
Chairwoman
Committee on Science, Space, and Technology
Congress of the United States
House of Representatives
2321 Rayburn House Office Building
Washington, D.C. 20515-6301

Dear Chairwoman:

Thank you for your March 13, 2019, letter regarding the Commission's 24 GHz auction (Auction 102) and the allegations raised by the National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), and certain meteorological organizations claiming that commercial operations could result in interference to operations in the nearby passive band (23.6-24 GHz). It is my hope to clarify the Commission's reasoning for proceeding with the auction, which was concluded on May 28th. First and foremost, to lead the way on 5G technology, the United States must make more spectrum available for commercial use. This is a bipartisan position that not only reflects a bipartisan consensus among FCC Commissioners and the Chairman, but also the view of the current Administration and many members of Congress. Making the 24 GHz band available for commercial use is a necessary step to achieving this goal.

At the FCC, we understand the importance of interagency coordination prior to moving forward on important issues like 5G deployment. For every proceeding, including the 24 GHz auction, we follow well-established processes, as well as notice and comment procedures, to ensure all voices may be heard. In fact, the very federal agencies that you mention in your letter participated in this process starting in 2016. After over two years of coordination and resolution of the matter through the well-established interagency process, no evidence has been presented to the Commission indicating the auction should have been delayed.

The service rules adopted by the FCC for the 24 GHz band utilize the same out-of-band emissions limit for non-adjacent bands, the -20 dBW emissions limit, that both the Commission and the National Telecommunications and Information Administration (NTIA) have historically used. Currently, there are nearly 40,000 fixed microwave links operating in the band, directly below the passive band at issue, using this -20 dBW standard emissions limit. No interference has ever been reported. Additionally, while these fixed operations occur without a guard band to protect passive uses, the commercial services to be provided above 24.25 GHz are separated by a 250 MHz guard band to ensure no interference could occur.

Page 2
June 14, 2019

Further, the study provided by NASA and NOAA is based on several assumptions that our experts found to be unrealistic. These include assumptions based on worst case scenarios; failure to account for the 250 megahertz guard band; and misrepresenting the technical characteristics of 5G networks, such as ignoring the use of beamforming antennas, disregarding realistic hot spot deployment scenarios, and assuming that base stations and user equipment will transmit at the same time. Most importantly, the highly-sensitive sensors for passive water vapor detection, upon which the NASA/NOAA study is based, simply do not exist and were never installed on the satellites.

I support protecting water vapor sensing in the passive bands to accurately forecast weather and take our public safety role very seriously. However, there is no verifiable evidence that commercial operations will interfere in any manner with non-adjacent frequencies – 250 megahertz away – that are used for measuring water vapor. For the reasons I have discussed, the Chairman determined the auction should go forward, and I support his decision. Based on the evidence presented, any delay would have been unnecessary and, in fact, harmful to the development of next-generation networks. The Commission will continue to work with our federal partners through the existing public and interagency processes to ensure we win the race to 5G without neglecting existing technologies.

Thank you for your interest in this important matter, as I know we all share a common goal. Please let me know if I can be of any further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "M. O'Rielly", written in a cursive style.

Michael O'Rielly