

Congress of the United States

House of Representatives

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

2321 RAYBURN HOUSE OFFICE BUILDING

WASHINGTON, DC 20515-6301

(202) 225-6371

www.science.house.gov

March 20, 2024

Brendan Carr
Commissioner
Federal Communications Commission
445 12th Street NW
Washington, DC 20554

Dear Commissioner Carr,

The Committee on Science, Space, and Technology continues to support the integrity of global weather forecasting, satellite-based climate measurements, and ground-based radio astronomy observations conducted in the 23.6-24 GHz band and advocate for its protection. Any interference with operations conducted in this portion of the spectrum would seriously hinder our ability to monitor and forecast weather and could have significant impacts on public safety. Over the last five years, the Committee consistently raised concerns about the impact of out-of-band emissions (OOBE) from licensees using spectrum between 24.25-25.25 GHz on passive satellite operations in the 23.6-24 GHz band. We support efforts by the Federal Communication Commission (FCC) to conform domestic regulations with OOBE limits articulated in Resolution 750 and agreed upon at the 2019 World Radio Conference to protect the passive observations in the 23.6-24 GHz band.¹

The FCC auctioned licenses for operations in 24.25-24.45 GHz and 24.75-25.25 GHz (for ease of reference, the “24 GHz band”) in 2019. In multiple Committee hearings leading up to the auction, the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA) testified that the proposed OOBE limits for the 24GHz band licenses would lead to significant loss of critical weather and climate data. The Committee also wrote to the FCC expressing concerns about the effects of spectrum interference on Earth observation sensors for weather and climate forecasting. The letter urged the FCC not to dismiss the concerns of the science community and requested that the FCC delay auction of 24 GHz band licenses until such concerns were addressed. Nevertheless, the FCC proceeded to auction 24 GHz licenses during Auction 102 in March of 2019.

In December 2019, the Committee requested a Government Accountability Office (GAO) report on the interagency coordination process regarding spectrum interference. The GAO report was released on July 19, 2021², and on the following day the Committee heard expert testimony from the GAO, the scientific community, and industry at its hearing, “*Spectrum Needs for Observations in Earth and*

¹ https://www.itu.int/dms_pub/itu-r/oth/OC/OA/ROCOA00000F00157PDFE.pdf

² <https://www.gao.gov/products/gao-21-474>

Space Sciences.”³ At this hearing, witnesses were unanimous in their support of adequate protections for passive weather and climate sensors near the 24 GHz band.

In November 2019, international agreement was reached at the 2019 World Radio Conference (WRC-19) to limit OOB into the passive 23.6-24.0 GHz band by applying the “unwanted emission limits” of Resolution 750 to operations in the neighboring 24.25-27.5 GHz band.⁴ Two years later, on May 27, 2021, the FCC opened a public notice seeking comment on implementing a similar approach domestically. That August, the Committee wrote to the FCC again expressing its concerns about the negative impacts of OOB on passive sensing operations in the 23.6-24.0 GHz band and urging the FCC to align its rules for stations in the 24 GHz band with the limits articulated in Resolution 750.⁵ The Committee further urged the FCC to address several specific implementation questions raised in the docket filings of the National Telecommunications and Information Administration (NTIA), the National Academy of Sciences, Engineering and Medicine’s Committee on Radio Frequencies (NASEM CORF), the American Geophysical Union (AGU), American Meteorological Society (AMS), and the National Weather Association (NWA).

On January 29, 2024, the FCC published a proposed rule aligning the FCC’s regulations for mobile operations with the Resolution 750 limits on unwanted emissions into the 23.6-24.0 GHz band, as adopted at WRC-19, and seeking comment on potential alternatives to its proposals and other related issues.⁶ The Committee fully supports and welcomes the FCC’s proposed alignment with Resolution 750, including full incorporation of the unwanted emissions limits adopted at the WRC-19 into FCC’s rules. The Committee also appreciates the Commission’s inquiry into means to encourage adoption of the more stringent OOB limits prior to the September 2027 deadline.

The Committee now asks that the Commission pay particular attention to the new docket filings by NTIA, CORF, AMS, AGU, and NWA on E.T. Docket No. 21-186, which raise implementation questions and provide detailed responses to the FCC’s requests for comments. In particular, the Committee supports several specific implementation recommendations in these 2024 filings that are consistent with the filings in 2021 and the Committee’s August 2021 letter:

- FCC should clarify that all base station and user equipment modified or replaced after September 1, 2027, should comply with the more stringent post-2027 OOB limits;
- FCC should apply the Resolution 750 OOB limits to all fixed and mobile systems in the Upper Microwave Flexible Use Service; and
- FCC licensees should use only total radiated power (TRP) to measure compliance with the 24 GHz OOB limits, consistent with the rules adopted at WRC-19.

Additionally, the Commission should require all 24 GHz band licensees to affirmatively address interference the licensees are found to cause to passive satellite sensing operations in the 23.6-24 GHz band.

³ <https://science.house.gov/hearings?ID=78BF5740-8AEE-49D4-A632-43F04BFAAE7C>

⁴ See *supra* 1.

⁵ https://republicans-science.house.gov/_cache/files/9/5/95524bd5-929e-4445-b64c-c0b2bcd46a5e/B28C94E34378E8405EC02B1044E54711.2021-8-10-ebi-lucas-to-fcc-re-conforming-with-wrc-simington.pdf

⁶ [Federal Register: Modifying Emissions Limits for the 24.25-24.45 GHz and 24.75-25.25 GHz Bands](#)

We thank you for examining these technical questions carefully in the Commission's efforts to craft a final rule that is adequately protective of the Earth Exploration Satellite Service (EESS). We note that the issues associated with the 24 GHz band are not unique as the FCC is considering additional spectrum auctions that could affect other bands currently protected for scientific purposes and used by federal agencies.

If you have any questions, please have your staff contact the Majority staff or (202) 225-6371 or the Minority staff for the Committee on Science, Space and Technology at (202) 225-6375.

Sincerely,

A handwritten signature in blue ink, appearing to read "Frank Lucas".

Frank Lucas
Chairman
Committee on Science, Space, & Technology

A handwritten signature in blue ink, appearing to read "Zoe Lofgren".

Zoe Lofgren
Ranking Member
Committee on Science, Space, & Technology