



**UNITED STATES DEPARTMENT OF COMMERCE**  
**The Secretary of Commerce**  
Washington, D.C. 20230

June 25, 2019

The Honorable Ron Johnson  
United States Senate  
Washington, DC 20510

Dear Senator Johnson:

Thank you for your letter regarding the allocation of Federal spectrum for 5G use. I share your enthusiasm for American leadership in telecommunications technology and can assure you that the Department of Commerce is committed to America winning the race to 5G deployment. Unfortunately, I believe your letter mischaracterizes the Department's involvement in the push for 5G deployment and fails to appreciate the importance of accurate weather forecasting to public safety, our economy, and national security. To be clear, the Department is paving the way for the rollout of 5G by supporting this critical technology in numerous ways while at the same time ensuring that the advancement of 5G does not come at the expense of American leadership and innovation in other important areas such as weather forecasting, space commerce, and autonomous vehicles.

There has been an interagency process that includes the Department's National Oceanic and Atmospheric Administration (NOAA), the National Aeronautics and Space Administration (NASA), the Department of Defense, the Department of State, the Federal Communications Commission (FCC) and other elements of the U.S. Government that has been considering this issue for several months. That interagency group reached a workable compromise last Friday, which is why it is so disappointing to learn that you have been provided inaccurate information about Commerce's constructive role in the process. This Administration, through the Department's National Telecommunications and Information Administration (NTIA) and in close and continuing collaboration with the FCC, continues to evaluate and allocate existing spectrum for 5G use. These efforts have resulted in the United States making massive amounts of high-band (millimeter wave) spectrum available that will enable network connections with significantly increased capacity. However, NTIA is also responsible for ensuring that critical government functions are protected by maintaining the integrity of spectrum that is dedicated for national security and public safety. The spectrum about which you express concern – the 24 GHz band – lies adjacent to spectrum that plays a fundamental role in protecting the Nation's citizens from natural disasters, such as catastrophic hurricanes, devastating tornado outbreaks, and destructive floods and superstorms.

As you are aware, NOAA is charged with operating critical weather satellites that provide more than 85% of the data used for weather prediction and accurate forecasting. It is imperative these satellites can operate without interference from adjacent spectrum use.

Indeed, the governing telecommunications body for the European Union, which also operates world class weather forecasting systems and is racing to deploy 5G, adopted a protection level in 2018 of -42 dBW for systems operating in the 24 GHz band, which is within the range agreed to through the interagency process. With respect to the 24 GHz auction, NOAA initiated a study of potential interference impacts in 2017 and worked to validate the results with its interagency partners over the course of several years. In response to concerns raised by the FCC, NOAA collaborated with NASA on a new study in 2018. The FCC has been in receipt of this study since the beginning of 2019 and has engaged in interagency technical discussions with both NOAA and NASA, among other Federal agencies. Considering the European Union position and these longstanding interagency activities, the concerns raised by NOAA and others should come as no surprise to the FCC or anyone else who has followed this matter closely.

You have raised concerns that have been put forward by the FCC with regards to the NOAA/NASA studies, yet may not be aware that the FCC has undertaken no study and published no documents to justify the -20 dBW protection level that the FCC has been advocating. Unfortunately, just because the FCC does not agree with the results of the NOAA/NASA analyses does not mean the science is “fundamentally flawed.” NOAA, NTIA, and NASA have dedicated subject matter experts that have worked in good faith with the FCC for several years to reach a resolution on this issue. Furthermore, as described throughout the attached NOAA/NASA studies, the NOAA/NASA studies used assumptions that the International Telecommunication Union (ITU) has published to facilitate studies of this kind. The ITU assumptions were developed by international panels of experts, which included experts from the FCC, and are expressly intended to help facilitate discussions at the upcoming World Radiocommunication Conference at which international protection levels will be agreed for the 24 GHz band.

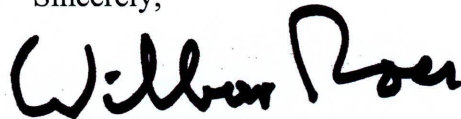
Given the potential harm that disrupting accurate weather forecasting could have on the safety of our communities, it is vital that decisionmakers consider the objective facts regarding the NOAA/NASA analysis of interference from 5G systems operating in the 24 GHz band. Accurate weather forecasting is also critical for our Nation’s economy, helping farmers maximize crop yields and ensuring the efficient flow of air transport and other forms of commerce. American taxpayers have invested \$18 billion in the NOAA weather sensors that could be degraded or even rendered useless if adequate protection levels are not adopted. This taxpayer investment in public safety and economic security is nine times greater than the approximate \$2 billion taxpayers will receive from the recently concluded FCC auction for 24 GHz for 5G use. I would be remiss in my duty as a cabinet official if I did not ensure that all information on this matter is carefully considered by the Administration and Congress in determining the U.S. position.

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In response to your requests, I would like to offer Dr. Neil Jacobs, our Assistant Secretary of Commerce for Environmental Observation and Prediction, Performing the Duties of Under Secretary of Commerce for Oceans and Atmosphere, to personally brief you and your staff on the importance of NOAA's satellite sensors to accurately predict hurricane, tornado, and weather forecasting. In addition, the Department is happy to update you on its ongoing efforts to make spectrum available to facilitate 5G deployment by the commercial industry.

I appreciate your interest in this matter as well as the importance of both accurate weather prediction and successful 5G deployment to the Nation. If you have any further questions, please contact Charles Kolo Rathburn, Performing the Duties of the Assistant Secretary for Legislative and Intergovernmental Affairs, at (202) 482-3663.

Sincerely,

A handwritten signature in black ink that reads "Wilbur Ross". The signature is written in a cursive, slightly slanted style.

Wilbur Ross

Attachments