

Senator James Inhofe, Chairman
Senator Jack Reed, Ranking Member
US. Senate Committee on Armed Services
Russell Senate Building, Room 228
Washington, D.C. 20510-6050

Representative Adam Smith, Chairman
Representative Mac Thornberry, Ranking Member
House Armed Services Committee
2216 Rayburn House Office Building
Washington, D.C. 20515

Dear Chairman Inhofe, Ranking Member Reed, Chairman Adam Smith, and Ranking Member Thornberry,

The undersigned individuals and organizations have diverse technology policy views, but all support the unanimous, bipartisan 5-0 decision by the Federal Communications Commission to finalize rules for Ligado Networks' 5G deployment with stringent license conditions (See Order). We are united in this support because the FCC's action will lead to more innovation and competition in new 5G services while at the same time protecting important services like Global Positioning Systems (GPS) from harmful interference.

It should not be a point of contention to say that the FCC is the agency of jurisdiction in commercial spectrum policy, but it appears to have become one. Federal law (and more than two decades of federal practice) makes clear the process by which federal agencies work with the FCC to construct a uniform, coherent federal policy. When those processes are not followed, as the Chair and Ranking Member of the House Energy & Commerce Committee recently observed, the interests of the United States suffer and our international leadership on spectrum matters is compromised. In the case of the Ligado Networks license modification, the FCC meticulously followed these processes. The FCC fully consulted with relevant federal agencies at each stage of the process, and proceeded in a careful, deliberate, and open manner, properly balancing competing interests and protecting critical GPS operations.

By seeking to re-open this matter in an unprecedented and highly public fashion, and in a manner that misrepresents the FCC's adherence to proper procedure and its history of consultation with both federal agencies and interested members of the public throughout this proceeding, the Department of Defense has further undermined the already broken process of federal spectrum coordination. While we respect the role of the Senate Armed Service Committee to provide legislative oversight of the nation's military, by rule of law, commercial spectrum decisions remain the sole authority of the FCC. The federal government spent years consolidating its approach to spectrum policy to avoid the exact predicament in which the FCC's decisions would be challenged by other federal agencies. Increasing, and increasingly public, friction between other federal agencies and the FCC now places all that at risk, threatening to paralyze U.S. spectrum policy at the worst possible time. This effort by federal agencies to undermine the authority vested in the FCC by Congress should be reversed, not encouraged.

The FCC's decision to grant Ligado's application to deploy a low-power nationwide terrestrial network is one based on sound data and policy. The deployment of Ligado's network would enable much-needed economic development. This development could include enhanced internet-of-things (IoT), next-generation wireless technologies, and advancement versus China in the race to 5G. It could also promote competition among service providers, thereby lowering consumer prices, and improve the efficiency of spectrum use. Congress created the existing process to promote uniformity and certainty and to encourage private investment and innovation while protecting federal spectrum interests. The private sector must have certainty that the FCC has final say over spectrum issues so

that innovation in wireless technologies can be seen as good investments that won't be undone by other agencies.

The spectrum at issue has been licensed exclusively to what is today Ligado for more than 30 years, and was designated as commercial spectrum for terrestrial use 17 years ago in an open rulemaking. The FCC's Order does not expand or re-allocate the spectrum in any way. To the contrary, the modification of Ligado's license dramatically reduces the power the FCC authorized for licensees to use in this band in its 2003 rulemaking, and withdraws 23 MHz of spectrum previously allocated to Ligado for use to create a guardband between the portion of the L-Band still used and the GPS/Radionavigation band. This particular FCC proceeding, a license modification proposed by Ligado after consulting with stakeholders and concluding agreements with major GPS manufacturers, began in 2016. The record includes thousands of submissions, reports from thousands of hours of testing from numerous parties, and details of hundreds of meetings between FCC, Ligado, and federal agencies.

In short, contrary to what opponents of the decision have claimed, this was neither a hasty decision nor one made without the opportunity for public input. This is one of the most examined and debated pieces of spectrum ever before the FCC. The carefully crafted Order itself is 74 pages with 144 footnotes. Upon unanimous FCC acceptance, supporters from both sides of the aisle in both houses of Congress, the Secretary of State, and the Attorney General applauded the decision.

The Department of Defense has had years to express its concerns to the FCC and to support its arguments with data, but declined to perform its own testing. Instead, it pressed the FCC to abandon the existing legal standard of "harmful interference" (which the FCC must apply by statute) and adopt an entirely new, and effectively impossible screen of "1 db" of interference -- a screen so low that natural background noise can exceed it. When the FCC properly rejected this standard as beyond its statutory authority and unnecessary to protect critical GPS functions, DoD changed tactics. At the eleventh hour, DoD wrote to the FCC in early April that a "vast" number of DoD GPS systems would be impacted, but did not specify which or how. This is contrary to the expertise of the FCC, an independent agency directly controlled by Congress, that has acquired unparalleled engineering expertise in wireless technologies which has allowed the United States to dominate the global wireless economy for more than two decades. The FCC, which has addressed GPS concerns in the past, noted in its Order that the DoD did not provide any technical data to support its case, and it cited the long-held understanding between the FCC, National Telecommunications and Information Administration, and the Air Force that GPS receivers are not entitled to protection outside their designated band.

This press release by both the House and Senate Armed Services Committees suggests that the Senate Armed Services Committee would ask the FCC to undo its bipartisan decision and for the United States President to intervene directly. With respect, Congress directed that the FCC exercise exclusive jurisdiction over commercial spectrum decisions. By asking the President to pressure the FCC to reverse its decision, the Senate Armed Services Committee wants the President to transgress the FCC's independence and authority, a clear violation of separation of powers.

Members of the Senate Armed Services Committee have also suggested legislation to reverse the FCC's Ligado decision. Setting aside the matter of proper jurisdiction for such legislation -- especially in light of the fact that the spectrum in question has always been commercially allocated and not subject to federal use or regulation by the DoD -- the Armed Services Committee should carefully consider how such a step would harm the broader national interest. Congress created the current division between federal spectrum and non-federal spectrum management to ensure that the United States has a coherent spectrum policy that protects vital national interests while promoting investment

and innovation. Increasingly, however, the DoD and other federal agencies have chosen to abandon the processes Congress has created over the last several decades. Instead of working with the FCC, DoD and other agencies have sought to undermine the legitimacy of the FCC's engineering analysis.

There is bipartisan consensus that the necessary processes put in place by Congress and previous Administrations have already broken down to a point that threatens American leadership in wireless technology. As the Chair and Ranking member of the House Energy & Commerce Committee previously warned: "Congress created this system, in part, to ensure that certain agencies did not improperly elevate their own spectrum needs over others." The refusal of agencies, including the DoD, to abide by these processes has already "undermined the U.S. government's efforts in international spectrum coordination proceedings" and caused "[i]nefficient management" of needed spectrum, to the detriment of our efforts to win the race to 5G deployment against China.

At its May 6 hearing, many senators observed that only DoD representatives were invited, and the discussion lacked the necessary response from at least one of the relevant parties, the FCC or Ligado. Nevertheless, the hearing outlined the importance of GPS to America, its value to the economy, and not least of all, its role in enabling the valiant men and women of the armed forces to defend the nation. Senator Jack Reed noted how military GPS user equipment (MGUE) will not be ready until the 2030s. If that is the case, then the military's GPS is vulnerable to radio interference of all kinds like GSM, LTE, FM broadcast radio, VHF/UHF communications, Wi-Fi, satellite phones, and GNSS, not to mention adversaries who could exploit this GPS vulnerability, as Senator Blumenthal observed. If GPS systems are genuinely so fragile as to require the DoD-proposed 1 db standard, Ligado is hardly the problem.

In this environment, the FCC has had no choice but to move ahead in the face of opposition from other federal agencies seeking to protect their own spectrum "turf," and despite repeated engineering analysis demonstrating no cognizable risk of harmful interference to federal operations. If the Armed Services Committee were to reward the DoD for its refusal to engage in the statutory processes, this would make an already difficult process of finding sufficient spectrum for new wireless services practically impossible. The fear of federal agencies winning the jurisdictional war after losing the engineering battle would undermine investor confidence and chill innovation in new wireless services. In making spectrum decisions, it is incumbent on the FCC to balance multiple competing interests, including the military. National security is important, and protecting it requires, in part, private sector innovation and enterprise to further technological and strategic advantage as well as the necessary revenue to fund the armed forces. The FCC, having analyzed extensive data and testing on Ligado's technology, struck the appropriate balance with stringent conditions.

As a nation, we should be putting the already-licensed 40 MHz of mid-band spectrum to work for Americans by developing 5G networks and services. Protecting GPS and countering China's 5G ambitions are national priorities, and this FCC spectrum decision does both. The Defense Department's spectrum interests, however important, do not justify an attempt to undo lawful FCC decisions. The FCC has shown itself to be the expert agency on resolving spectrum disputes and should be allowed to do its job.

Sincerely,

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Access Humboldt

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Center for Growth and Opportunity

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The Honorable Daniel S. Goldin**

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