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U.S. House of Representatives Committee on Energy and Commerce
Subcommittee on Communications and Technology
“Securing U.S. Leadership of Communications Technology”
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Key Points

- The U.S. commercial space industry is growing rapidly and is critical to national security, economic development, exploration, and scientific research and development.
- It is critical that the United States delegation to the International Telecommunication Union (ITU) World Radiocommunication Conference 2027 (WRC-27) deliver a strong, unified message that supports American interests.
- Unlike U.S. wireless carriers, U.S. commercial space companies are inherently global in nature, which means they depend on efficient global spectrum rules to innovate and provide beneficial services. Inefficient rules can delay rapid deployment and block innovative new space-based services altogether.
- With over 80 percent of the WRC-27 agenda focused on space matters, the United States must adopt a holistic strategy to advance American space superiority, global deployment, and innovation at the ITU
- At the heart of the issue is that the ITU relies on decades-old technical assumptions—many from before the Internet—to create rules that will bind modern systems for decades to come. It’s equivalent to writing highway laws to protect horse-drawn carriages.
- International competitors, particularly the People’s Republic of China, understand the significance of WRC-27 and are seeking to leverage these byzantine, consensus-based procedures of the ITU to thwart innovation and gain a competitive advantage over the United States. And because the ITU is a consensus-driven body, it only takes a few countries to block innovation.
- America must work with other national delegations to provide support for critical agenda items and do so based on sound engineering and modern assumptions
- Within the United States, Congress and Federal agencies such as the Federal Communications Commission (FCC) and National Telecommunications and Information Administration (NTIA) are actively working to streamline regulatory frameworks to advance American space innovation. These efforts cannot end at the U.S. coastline.

Introduction

Chairman Guthrie and Ranking Member Pallone, Subcommittee Chairman Hudson and Ranking Member Matsui, and distinguished members of the Committee, thank you for inviting me to speak on behalf of the Commercial Space Federation (CSF).

CSF is the leading U.S.-based trade association representing the commercial space industry. Our members represent multiple sectors of the space economy including launch and reentry, remote sensing, spaceports, satellite-based communications, in-space research and manufacturing, commercial space stations, space situational awareness, and more. CSF and its members are focused on expanding America's leadership in space by offering innovative – and often less expensive – solutions to U.S. government customers including the National Aeronautics and Space Administration (NASA), the U.S. Space Force, and the intelligence community. In addition, CSF advocates for policies that will grow a sustainable space economy, the global value of which is already estimated at \$570 billion and projected to grow to \$1.8 trillion by 2035.¹ The commercial space industry has created tens of thousands of high-paying engineering and manufacturing jobs in the United States and has invested billions of dollars across the country, revitalizing a domestic aerospace supply chain that had been in decline and unlocking new potential in space that will benefit us on Earth.

Ensuring U.S. Leadership at WRC-27

The U.S. commercial space industry is innovating at a breakneck pace, furthering American national security, economic development, and research & development. U.S. commercial space operators deliver critical services to everyday Americans, including high-

¹ Space Foundation, The Space Report 2025 Q2. Available here: <https://www.spacefoundation.org/2025/07/22/the-space-report-2025-q2/>

speed broadband and direct-to-device mobility, Earth observation data and insights, space exploration, in-space manufacturing, and more. Central to the continued development of the industry are pragmatic, science-based, and pro-innovation regulatory frameworks overseeing the industry domestically and internationally, including for spectrum access. Meeting demand for these services requires a pipeline of low-, mid-, and high-band spectrum, and each band plays a unique role in the satellite connectivity ecosystem.

In the United States, the Federal Communications Commission (FCC) and National Telecommunications and Information Administration (NTIA) are tasked with managing spectrum access in an effort to promote efficient radiocommunications and continued innovation. Both are actively modernizing outdated rules, delivering satellite spectrum abundance, and promoting efficient spectrum sharing in the United States. CSF applauds these actions intended to support increased competition and growth in the American commercial space industry.

To win the global space race, however, regulatory innovation cannot end at the U.S. coastline. As the Committee is aware, the deliberations at the International Telecommunication Union (ITU) World Radiocommunication Conference 2027 (WRC-27) will be critical to the future of the U.S. commercial space industry. Over 80 percent of the WRC-27 agenda focuses on issues that directly or indirectly impact U.S. commercial space operators, with major implications for global deployment, operations, and innovation. While many agenda items seek to modernize outdated and overprotective rules, incumbents and foreign adversaries are seeking to block reform and impose new harmful restrictions.

A strong, pro-innovation U.S. strategy at the ITU is especially necessary as our international competitors, particularly the People's Republic of China, advance their own space capabilities. As CSF illustrated in its recent report, *Redshift: The Acceleration of China's*

Commercial and Civil Space Enterprise & The Challenge to America, the Chinese government is doing everything in its power to challenge U.S. leadership and strength in space.² China rightfully recognizes that the new space race is not about footsteps or flags, but instead about sustaining commercial space industry development through defining norms, capturing markets, and building international coalitions across all segments of the space ecosystem. It should be no surprise, then, that China successfully lobbied to host WRC-27 in Shanghai, China.

Accordingly, the United States must adopt a holistic strategy to advance American space superiority at the ITU. As my testimony details, this strategy must include establishing a strong, unified voice supporting American commercial space at WRC-27, adopting clear positions on key WRC-27 issues consistent with U.S. spectrum and satellite policy, and initiating a first-principles review of ITU rules and recommendations at the FCC.

Aligning U.S. Positions on WRC-27 with Congressional, Administration, and FCC

Mandates

As we define the U.S. delegation's positions on WRC-27 agenda items (AI), it is important to recall fundamental statutory mandates, Administration priorities, and policies at the FCC and NTIA designed to promote American space leadership through spectrum efficiency. For example, Congress requires the FCC to promote "rapid, efficient, and world-wide"³ radiocommunications and NTIA to promote "efficient and cost-effective use of the spectrum to the maximum extent feasible."⁴ Congress further requires NTIA as a matter of policy to promote "full development of competition, efficiency, and the free flow of commerce in... international

² CSF, *Redshift: The Acceleration of China's Commercial and Civil Space Enterprise & The Challenge to America*. Published September 2025. Available here: <https://commercialspace.org/wp-content/uploads/2025/09/CSF-Redshift-v6.pdf>.

³ 47 U.S.C. § 151.

⁴ 47 U.S.C. § 901(c).

telecommunications markets” and to foster “full and efficient use of telecommunications resources, including effective use of the radio spectrum by the Federal Government.”⁵ The Trump Administration recently adopted its Executive Order on Space Superiority that fully complements these statutory mandates, including a priority to “demonstrate[e] spectrum leadership across space applications to promote United States technology competitiveness, spectrum management efficiency, and global market access.”⁶

To fulfill these statutory mandates, the FCC, NTIA, and the U.S. delegation must take a first-principles approach when developing positions for WRC-27. This first-principles review should consider both the impact of outdated or inefficient ITU rules and recommendations on the commercial space industry at home in the US, as well as how those inefficient rules can slow, restrict, or even block American commercial space operators from operating and competing abroad.

In the U.S., the FCC has recently taken similar bold action to adopt modern, efficient spectrum sharing rules that promote American space innovation. In addition to Chairman Carr’s groundbreaking deregulatory and space modernization efforts designed to root out and replace outdated and overly restrictive rules such as legacy equivalent power flux density (EPFD) rules, the FCC’s Spectrum Management Policy Statement establishes core principles to manage spectrum efficiently and effectively and promote the deployment of innovative new services, including next-generation satellite services.

Among other policies, the FCC establishes a first-principles approach to spectrum management starting from the “realities of interference, drawn from basic physics,” requiring “share[d] responsibility to take prophylactic action to reduce the likelihood and impact of

⁵ *Id.*

⁶ Executive Order 14369, “Ensuring American Space Superiority,” Sec. 2(c)(ii) (Dec. 18, 2025)

harmful interference,” and expecting “robust quantitative data” – not worst-case hypotheses – to assess interference claims.⁷ To that end, the Policy Statement explains that harmful interference should not be based on “an expectation of 100% service availability, or in contemplation of exceptional events,” which “could preclude the introduction of valuable new services in the RF environment and undermine the efficient use of spectrum resources.”⁸ Similarly, the Policy Statement explains that “the Commission routinely evaluates probably, real-world effects instead of worst-case hypotheses.”⁹ More specifically, the FCC reminds parties:

“[i]t is not the policy of the Commission to always provide interference protection to the worst (i.e., least selective) performing receivers, particularly when it is technically feasible and practical, over an appropriate amount of time, for receivers to perform their required functions with significantly more interference immunity. Indeed, the ITU and the EU RED also emphasize that receivers should, as far as practical, be based on the most recent technological advances.”¹⁰

As cutting-edge American commercial space operators seeking to deliver innovative and beneficial communications and space-based services in the United States and around the world, CSF members depend on the U.S. delegation taking positions at WRC-27 that are consistent with the modern, efficient sharing frameworks that the FCC and NTIA have taken to modernize domestic satellite policy in the United States, including NGSO-NGSO sharing, NGSO-GSO sharing, Spectrum Abundance, Inter-Service Light-Licensing and yes, even Weird Space Stuff.

⁷ *Principles for Promoting Efficient Use of Spectrum and Opportunities for New Services*, ET Docket No. 23-122, Policy Statement, ¶ 3 (rel. Apr. 21, 2023).

⁸ *Id.* ¶ 17.

⁹ *Id.*

¹⁰ *Id.* ¶ 17.

CSF therefore urges the FCC, NTIA, and the entire U.S. delegation to adopt positions at WRC-27 that reflect the following principles:

- Require smart, modern, efficient assumptions for preparatory studies. Require WRC-27 preparatory studies to reflect modern capabilities, real-world assumptions, and sound engineering.
- Eliminate spectrum inefficiency and incumbent overprotection in the Radio Regulations. Modernize or remove outdated, inefficient, and overprotective interference protection criteria, recommendations, and rules that lack sound technical basis, included rules based on incorrect, obsolete, or worst-case assumptions.
- Accelerate global deployment and competitiveness of U.S. systems. To enable U.S. commercial space operators to rapidly innovate, deploy, and compete, promote global harmonization of innovative U.S. spectrum sharing frameworks that rely on efficient backstops and coordination rather than command-and-control rules based on worst-case assumptions.

CSF Positions on Select WRC-27 Issues:

Based upon the core principles outlined in the previous section, CSF urges the American ITU delegation to expeditiously adopt clear positions on key WRC-27 issues consistent with fundamental U.S. spectrum and satellite policy. For example, the FCC should focus its WRC-27 efforts on:

Modernizing Ku/Ka-band EPFD rules: Modernize 25-year-old GSO-NGSO sharing rules in both Ku-band and Ka-band to promote more efficient spectrum sharing and deliver an 8x improvement in broadband capacity for consumers. The ITU can and should place GSO-NGSO sharing on the WRC-27 agenda for both Ku-band and Ka-band and expeditiously sunset its

antiquated EPFD regime in favor of a modern, efficient GSO-NGSO sharing regime based on technically sound protection criteria.

Unlocking ubiquitous 6G mobile-satellite service (AI 1.13, 1.14): Establish an efficient, harmonized international framework for ubiquitous 6G mobile-satellite service in commercial spectrum below 3 GHz. The Commission should seek to maximize the ability of American commercial space operators to supplement and complement terrestrial networks through Mobile-Satellite Service to close global coverage gaps and deliver ubiquitous service everywhere. To that end and consistent with U.S. policy, the Commission must ensure that any studies rely on modern, realistic interference protection criteria and MSS system assumptions to maximize spectrum access and geographic coverage at borders, and avoid adopting unnecessary and inevitably conservative regulatory measures on top of protection criteria.

Closing the Ku-band uplink gap (AI 1.2, 1.7): Resolve the significant imbalance between downlink and uplink satellite spectrum in the workhorse Ku-band. Specifically, the Commission should use WRC-27 to unlock 1,600 MHz of contiguous Ku-band uplink (13.75-15.35 GHz) for next-generation satellite service globally to pair with the existing 2,000 MHz of Ku-band downlink to deliver symmetrical, gigabit satellite service through small, efficient phased array user terminals. Many of the regulatory provisions for the Fixed-Satellite Service in 13.75-14 GHz and 14.5-14.8 GHz reflect overly conservative protection criteria, significantly outdated and technically unjustified assumptions, and last-generation sharing techniques (e.g., separation distances and minimum antenna diameters) that are not necessary for next-generation systems to efficiently protect incumbent operations in these bands.

With respect to AI 1.2, CSF generally supports the WRC-27 Advisory Committee (WAC) proposal but urges the Commission to adopt modern, efficient backstop interference protection criteria in connection with appropriate percentage of time for other co-primary services that

enable next-generation satellite services—particularly those with phased array antennas—to maximize the efficient and intensive use of this critical spectrum, instead of adopting pre-defined and inefficient separation distances (i.e., “separation distance of at least X km . . . from the respective border(s) of neighboring countries”). These arbitrary separation distances depart significantly from Commission spectrum policy, ignore modern mitigation and coexistence techniques, and would undermine American commercial space superiority, all at the expense of end users. Eschewing arbitrary separation distances in favor of modern protection criteria for any new Ku-band uplink spectrum is particularly important so that U.S. satellite operators can effectively deliver service in countries with small landmasses or irregular borders and regions featuring many countries in a comparatively small area. CSF does not support the Radio Conference Subcommittee (“RCS”) 1.2 proposal.

Delivering high-band satellite abundance (AI 1.1, 1.3, 1.4, 1.6, 1.10, 1.18): Support modern, efficient sharing rules for satellite and co-primary and adjacent services in Ka-, Q/V-, E-band and above. The Commission should ensure that any studies rely on realistic, technical and operational assumptions for this spectrum to avoid overprotection or inefficient sharing between co-primary services. For example, the WAC should ensure proposed PFD limits for 71-76 GHz in AI 1.10 consider atmospheric attenuation, which is a significant factor at these high frequencies, as well as typical NGSO operational parameters such as “Number of co-frequency beams” simultaneously transmitting to the same site. Discounting atmospheric attenuation in studies is equivalent to ignoring “realities of interference, drawn from basic physics,” and consequently violates Commission policy and statutory obligations to ensure efficient domestic and international spectrum policy. Similarly, any PFD limits must baseline incumbent operations on the “robust quantitative data” that nearly all terrestrial fixed links in these bands operate

below a five-degree minimum elevation angle. As a general matter, adopting worst-case, purely speculative, legacy, or arbitrary assumptions that overprotect incumbent or co-primary services is fundamentally contrary to U.S. policy and the space priorities of the Trump Administration—and must not form the basis of any US positions at WRC-27.

Protecting current and future space activities in mid-band (AI 1.7): Align U.S. stance in international fora with domestic policy not to allocate the 7.4-8.4 GHz band for IMT.¹¹ In particular, the Commission should support a no change position for 7.4-8.4 GHz, consistent with the One Big Beautiful Bill Act, as set forth in WAC AI 1.7 View B and the NTIA RCS proposals.¹² The Commission should also ensure that any IMT allocations in 4.4-4.8 GHz and 7.125-7.4 GHz spectrum efficiently protect and promote critical commercial space activities, such as the earth-exploration satellite service and deep space communications.

Ensuring operational flexibility (AI 1.5): Ensure that there are no new regulations under this agenda item that impose undue burdens on the operation of US satellite systems, noting that existing regulatory frameworks already address the relevant concerns and are sufficient to meet the objectives of this agenda item.

Preserving RR 4.4 – the “Innovation Rule”: Oppose changes to the essential Radio Regulation 4.4, which permits countries to innovate outside of ITU rules on a non-interference, unprotected basis. If the topic is adopted within AI 7, ensure it remains within the clear boundaries of AI 7.

Aligning lunar proposal with U.S. policy objectives (AI 1.15): Ensure lunar SRS allocations enable commercial space to achieve Artemis campaign objectives and the goals set in recent Executive Orders.

Conclusion

The commercial space industry is vital to the lives of everyday Americans as well as our national security, economic competitiveness, and research & development. Securing U.S. leadership in the industry – particularly given advancements made by adversaries such as the People’s Republic of China – is contingent a unified, principled U.S. presence at the ITU and WRC-27. I thank the Committee for its time and attention on this critical matter, and look forward to your questions.