



U.S. Chamber of Commerce

1615 H Street, NW
Washington, DC 20062-2000
uschamber.com

April 17, 2023

Via Electronic Submission

Ms. Stephanie Weiner
Acting Chief Counsel
National Telecommunications and
Information Administration
U.S. Department of Commerce
1401 Constitution Ave NW
Washington, DC 20230

Re: Request for Comments, National Telecommunications and Information Administration; Development of a National Spectrum Strategy (88 Fed. Reg. 16,244-16,247, March 16, 2023)

Dear Ms. Weiner:

The U.S. Chamber of Commerce (“the Chamber”) appreciates the opportunity to submit comments on the National Telecommunications and Information Administration’s (“NTIA”) Request for Comments (“RFC”) on a National Spectrum Strategy (“NNS”). Sound spectrum policy is critical to the business community and its consumers, as well to fulfill important national objectives including national and homeland security, job creation and economic growth.

Why Spectrum Matters to the Business Community

Spectrum policy started with broadcasters and the Titanic, but since, a panoply of new uses of spectrum have emerged from terrestrial to satellite, fixed to mobile, licensed to unlicensed – that are driving new and innovative products and services for consumers, businesses, and government users. Consequently, spectrum is the lifeblood of businesses of all sizes and sectors and serves as a foundation for the U.S. economy, global competitiveness, and national security. Spectrum matters to the business community for innumerable reasons, including connecting all Americans, educating and entertaining the public, ensuring the safety of consumers and the public, strengthening manufacturing, protecting our homeland, and unlocking industries of the future.

NTIA’s development and subsequent implementation of the NSS is instrumental to facilitating sound spectrum policy, which will allow for the delivery of products and services that ensure public safety, protect national security, create economic opportunity,

and support a free flow of ideas. We encourage NTIA to continue engaging the business community on spectrum policy, be collaborative and creative in addressing the spectrum needs of all stakeholders, and leverage the NSS to launch the next generation of spectrum innovation.

Pillar #1—A Spectrum Pipeline To Ensure U.S. Leadership in Spectrum-Based Technologies

Pillar 1 focuses on developing a spectrum pipeline to evaluate spectrum bands for repurposing to meet new federal and non-federal uses. The Chamber emphasizes that companies of all sizes and sectors are developing new and innovative products and services for commercial and government uses that rely on spectrum.

The Chamber strongly supports the development of a new spectrum pipeline that can lead the U.S. into the next decade of spectrum innovation. The next spectrum pipeline should account for the broad range of use cases and needs by the business community and their customers including broadband, transportation, space, national defense and homeland security, television and radio broadcasting, and many others. Any pipeline should account for the wide range of spectrum access approaches, including licensed, unlicensed, and shared spectrum solutions. While the Chamber supports a broad-based approach to spectrum and appropriate public uses of spectrum, we strongly oppose any spectrum policy that furthers the establishment of a nationalized or government-created regime that competes with the private sector, such as a nationalized 5G network.

The RFC asks specifically about the spectrum needs for numerous spectrum, reliant services, products, and missions. NTIA should take into account the wide range services and missions, products, and missions utilizing spectrum in crafting the NSS.

One of the topics raised by the RFC includes the spectrum needs for fixed and mobile wireless broadband services. NTIA should take note of growing data demands on licensed wireless networks, which show that U.S. networks currently support more data traffic than 2010 through 2017 combined.¹ The Chamber notes that 5G impacts a myriad of sectors, including transportation and logistics, manufacturing, agriculture, healthcare, and energy.² Moreover, 5G positively contributes to other key policy objectives such as enhancing public safety and supporting our national climate goals.³

As noted, the Chamber supports a wide array of different spectrum access models including exclusive licensed, unlicensed, and shared spectrum solutions. The business community is using these spectrum solutions in a wide range of ways. For example, exclusive use licensed helps drive investment in our nation's wireless networks. Between 1985 and 2020, wireless network operators have spent more than \$600 billion in capital investment, not including over \$120 billion paid to the federal government for the right to

¹ <https://www.ctia.org/news/2022-annual-survey-highlights>

² <https://www.ctia.org/news/the-5g-innovators>

³ <https://www.ctia.org/news/answering-the-call-wireless-for-good-2>

use spectrum to power the networks and support next generation wireless services.⁴ In turn, these investments have allowed the wireless industry to provide service to hundreds of millions of consumers throughout the U.S., contributing \$825 billion in GDP and supporting 4.5 million jobs.⁵

The NSS should likewise acknowledge the role that unlicensed technologies play in a spectrum pipeline. Unlicensed spectrum is vital in ensuring that consumers and businesses can access the technologies they depend on using in their daily lives. It is important that NTIA considers a full range of spectrum access models that work together to ensure that our nation's crowded airwaves are used efficiently.

The United States is a long-time leader in Wi-Fi technologies, supporting a wide range of applications and benefiting diverse sectors of the economy. Further Wi-Fi, which runs on unlicensed spectrum, continues to serve as the primary onramp to the Internet for the majority of broadband connections in the country. The next generation of Wi-Fi (Wi-Fi 7) supports channels up to 320-megahertz wide, which will make possible the increased throughput, lower latency, and higher capacity needed to power data-intensive applications and deliver high-value services to consumers. Further, a 2022 Report from the Consumer Technology Association (CTA) estimates that unlicensed spectrum generates \$95.8 billion annually, demonstrating that making additional unlicensed spectrum is not only crucial to keep pace with how consumers are using data, but also to support the American economy.⁶ In fact, cable operators are seeing that more than 80 percent of their mobile data traffic runs over Wi-Fi, and consumers connect billions of devices to Wi-Fi to participate in school and work, consult with healthcare providers, communicate with family and friends, and more.

In addition, the aerospace and defense ("A&D") industry utilizes the same spectrum on which its customers—federal, non-federal, and foreign—operate. In 2021 alone, the U.S. A&D industry supported more than 2.1 million jobs in every state, and from 2018-2021 contributed more than \$1.89 Trillion in GDP.⁷ In addition, tens of billions of dollars of annual foreign military sales are supported by national security bands.⁸ Products developed by the A&D industry are powering the recovery of air travel, designing more sustainable aviation technologies, providing cutting-edge defense and deterrence capabilities, and developing systems that will further space exploration.

⁴ <https://www.ctia.org/news/the-importance-of-licensed-spectrum-and-wireless-telecommunications-to-the-american-economy>

⁵ <https://www.ctia.org/news/the-importance-of-licensed-spectrum-and-wireless-telecommunications-to-the-american-economy>

⁶ <https://www.cta.tech/Resources/Newsroom/Media-Releases/2022/January/Unlicensed-Spectrum-Generates-95-Billion-Per-Year>

⁷ <https://www.aia-aerospace.org/news/2022-facts-and-figures-data/>

⁸ <https://www.state.gov/fiscal-year-2022-u-s-arms-transfers-and-defense-trade/#:~:text=The%20three%2Dyear%20rolling%20average,FY2019%2DFY2022%20was%20%2445.8%20billion>

Finally, spectrum is crucial for critical infrastructure industries, such as the electric power companies, which are vital to this nation's continued economic growth and support all this nation's public safety, business, and trade. Investor-owned electric companies and other critical infrastructure industries currently use spectrum to support their private internal wireless communications systems to ensure the safe, reliable, and secure delivery of power to the public. These systems must stay on during power outages and reach personnel and critical assets across large service territories that extend into remote areas. U.S. investor-owned electric utilities collectively provide electricity for 235 million Americans, operate in all 50 states and the District of Columbia, and directly and indirectly employ more than seven million people in communities across the nation.

While the electric companies utilize a range of spectrum access models, access to licensed spectrum is important for the electric utility industry to support wide area coverage with higher throughput/lower latency. This spectrum can support new applications, such as distributed energy resources, electric vehicles, new physical and cybersecurity requirements, and enhanced remote monitoring and control technologies, such as distribution automation, power quality monitoring and protective relaying. Additionally, electric companies are considering shared spectrum solutions with Federal users because such arrangements have the potential for attracting an ecosystem of equipment suppliers and develop economies of scale that would promote equipment availability and lower costs as well as supporting interoperability between electric companies. This would be valuable in mutual aid scenarios in the aftermath of storms and other natural disasters.

The Chamber also appreciates the RFC's consideration of shared spectrum, which is important to ensuring that businesses are able to meet the needs of both federal and non-federal customers. We recognize that spectrum co-existence solutions can be band specific depending on existing, new, and modified systems in the band and which occur on a time, geographic, and frequency basis between/among like and dissimilar services and between/among all combinations of federal and non-federal users, both with and without the use of third-party databases and coordinators. Research and development ("R&D") is critical to continue advancements in spectrum co-existence. In addition, the Chamber encourages NTIA to recognize the success of static sharing models, which has proven successful in the past to enable coordinated sharing with federal and non-federal users and meeting the important objectives of both federal and non-federal users. These examples include the sharing models utilized in the Advanced Wireless Services (AWS-1 and AWS-3). While the private sector plays a leading role in spectrum co-existence R&D, the federal government can bolster these efforts through investments in basic and applied R&D in partnership with the private sector.

Outside of the private sector, other bodies and entities play a critical role in informing spectrum policy and in spectrum management and allocation. Recognized standards setting bodies play a significant role in facilitating the development of relevant standards that in turn inform commercial products and services. The NSS should recognize the important role of standards setting bodies in spectrum policy. Moreover, the Chamber supports international collaboration and harmonization of regulatory policies,

which includes the harmonization of spectrum bands that support our national security and other important commercial priorities. International entities such as the International Telecommunications Union make important contributions to spectrum policy and U.S. engagement and leadership in those bodies is critical to assuring U.S. spectrum leadership.

Domestically, the NSS should reaffirm the Federal Communications Commission (“FCC”) and NTIA’s existing roles in spectrum management. The FCC, as the expert agency overseeing non-federal use of spectrum leads the federal government’s efforts to manage and allocate spectrum for non-federal use. NTIA serves as the President’s lead advisor on telecommunications and spectrum policy issues and should continue to manage federal agencies’ use of spectrum and coordinating government positions regarding new spectrum allocations. The Chamber commends the recent updates to the MOU between the FCC and NTIA on spectrum coordination, but more can be done. Specifically, NTIA should encourage Congress to codify certain elements of the MOU, such as the periodicity of meetings at the political level and need for regular working group level engagements. The FCC and NTIA should regularly review, and if necessary, revise the MOU to ensure effective coordination and provide certainty for both federal and non-federal spectrum users.

Pillar #2—Long-Term Spectrum Planning

Long-term spectrum planning—including developing spectrum co-existence capabilities—is valuable but may not fully account for innovations that change how spectrum can be used or shared. Nevertheless, the NSS should promote policies that seek to provide certainty and a predictable environment to inform the long-term planning for the business community. Also, long-term planning in some areas can provide a strong signal to the international community on U.S. spectrum leadership.

As NTIA develops the NSS, the agency should recognize that a broad and diverse segment of the business community utilize and rely on spectrum for a bevy of purposes that serve important economic, national defense and homeland security, and safety objectives. NTIA should be proactive in stakeholder engagement in the development of the NSS and ensure that sectors impacted by spectrum decisions are engaged in a long-term spectrum planning process. Enhancing efficient and effective spectrum use requires ensuring that the U.S. spectrum governance model incentivizes consensus and collaboration, which leads to greater certainty for both federal and non-federal uses.

Finally, the FCC and NTIA play crucial roles in spectrum management and allocation. We urge policymakers to assess whether the FCC and NTIA are appropriately resourced with needed technology tools and staffed with a broad array of technical expertise, beyond wireless communications, whether engineers, IT specialists, or other market segment backgrounds to ensure effective, informed, and timely spectrum management and allocation decisions. Any resource needs should be reflected in the FCC and NTIA’s budget requests to Congress.

Pillar #3—Unprecedented Spectrum Access and Management Through Technology Development

The Chamber advocates for a technology and business model neutral approach to communications policy, and spectrum policy is no different. Businesses of all sizes and sectors depend on access to spectrum for uses including broadband, transportation, space, national defense and homeland security, television and radio broadcasting, and many others. The Chamber supports a broad range of spectrum access models including exclusive licensed, unlicensed, and shared. The business community is pursuing a wide range of next-generation spectrum access models.

In addition to recognizing the need for federal users to have access to frequency assignments to support their missions, the Chamber supports an all of the above approach to spectrum access that licensed, unlicensed, and shared spectrum solutions. The NSS should consider several policies that will help enable the development of new and innovative uses of spectrum. First, the NSS should affirm the importance of the FCC's auction authority as one key tool to help ensure that spectrum can come to market to benefit consumers and businesses. For 30 years, Congress has authorized the FCC to use spectrum auctions, and to date the FCC has held over 100 auctions raising over \$230 billion in revenues. The Chamber also believes that auction proceeds should be directed towards covering the FCC's auction related expenses, and enabling effective spectrum repurposing and relocation, and supporting other meritorious national priorities. Auction authority is an important tool to ensure that, where spectrum is auctioned for licensed use, the FCC has an objective means of doing so, and also has the requisite authority to conduct ancillary licensing activities, and to craft suitable auction rules as needed. Second, as demand for spectrum continues to increase among federal and non-federal users, the U.S. should promote technological solutions that enable co-existence among all users, while ensuring that federal missions or commercial capabilities are still able to be met. The Chamber supports federal investments in R&D to achieve this objective, which should be conducted in partnership with the private sector. Third, in line with its support for an all of the above approach to spectrum access, the Chamber encourages NTIA to ensure that the spectrum pipeline considers opportunities for, and is intended for the benefit of, all spectrum access models.

Conclusion

The Chamber thanks NTIA for considering our views on this RFC and pursuing a long-term vision for spectrum policy. If you have any questions, please reach out to Matt Furlow, Policy Director at the Chamber Technology Engagement Center (C_TEC) (mfurlow@uschamber.com).

Sincerely,

A handwritten signature in black ink, appearing to read 'TK' followed by a long, sweeping horizontal stroke.

Tom Quaadman
Executive Vice President
Chamber Technology Engagement Center
(C_TEC)
U.S. Chamber of Commerce