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BEAT CHINA BY HARNESSING IMPORTANT,
NATIONAL AIRWAVES FOR 5G ACT OF 2020

R E P O R T

OF THE

COMMITTEE ON COMMERCE, SCIENCE, AND
TRANSPORTATION



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SENATE COMMITTEE ON COMMERCE, SCIENCE, AND TRANSPORTATION

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SECOND SESSION

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AIRWAVES FOR 5G ACT OF 2020

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Ms. CANTWELL, from the Committee on Commerce, Science, and
Transportation, submitted the following

R E P O R T

The Committee on Commerce, Science, and Transportation, to which was referred the bill (S. 4803) in the 116th Congress to make the 3450–3550 MHz spectrum band available for non-Federal use, having considered the same, ordered to be reported favorably thereon without amendment and recommended that the bill do pass. S. 4803 was not reported, but the bill passed as a provision in H.R. 133, the Consolidated Appropriations Act, 2021.¹

PURPOSE OF THE BILL

S. 4803, the Beat China by Harnessing Important, National Airwaves for 5G Act of 2020, requires the Federal Communications Commission (FCC or Commission) to make available some or all of the spectrum between the frequencies of 3450–3550 MHz for non-Federal use no later than December 31, 2021.

BACKGROUND AND NEEDS

As the leader in 4G, the United States reaped the benefits of a \$100 billion increase in national gross domestic product (GDP), as well as the booming app ecosystem that resulted.² 5G is expected to have an even greater impact on innovation and investment, particularly in adjacent sectors like healthcare, transportation, agriculture, and manufacturing. Experts estimate that 5G could contribute as much as \$275 billion in new investment and millions of

¹Public Law 116–260.

²Recon Analytics, *How America's 4G Leadership Propelled the U.S. Economy* (2018), p. 1 (https://api.ctia.org/wp-content/uploads/2018/04/Recon-Analytics_How-Americas-4G-Leadership-Propelled-US-Economy_2018.pdf).

new jobs, and the sooner the United States reaches wide-scale deployment, the more significant the impact.³

Both industry and government stakeholders in the United States have taken steps to promote the rapid development, deployment, and adoption of 5G networks. Congress and the FCC have focused on spectrum availability, infrastructure deployment, and supply chain security in order to create a favorable environment for wireless carriers to invest in 5G networks. In recent years, the FCC has made available high-, mid-, and low-band spectrum, both licensed and unlicensed, through multiple auctions of frequencies including 3550–3650 MHz, 28 GHz, and 3.7–4.2 GHz.⁴

U.S. wireless carriers, though, continue to suggest that Congress and the FCC identify additional mid-band spectrum that can be made available for 5G wireless operations. Mid-band spectrum is believed by the wireless industry and other experts to be a critical component of a successful 5G strategy—these frequencies have both significant capacity, allowing for the transmission of large amounts of data, as well as coverage capability.⁵ The 2018 MOBILE NOW Act directed the FCC to work with the National Telecommunications and Information Administration (NTIA) to determine whether wireless service providers and Federal incumbents could effectively share spectrum in the 3100 to 3550 MHz band.⁶ As part of this effort, in January 2020, NTIA released a technical analysis that concluded that there was “a clear possibility” for spectrum sharing that would protect Federal incumbents in the 3450 to 3550 MHz band.⁷ In a related July 2020 report to Congress, NTIA further concluded that the 3450 to 3550 MHz band is “a good candidate for potential spectrum sharing, including the commercial power levels sought by the wireless industry.”⁸

In August 2020, the White House and the Department of Defense (DOD)—a major user of the 3450 to 3550 MHz band—announced an agreement to make available the 3450 to 3550 MHz band for commercial 5G deployment.⁹ This band is currently utilized for DOD operations including missile defense, electronic warfare, air defense, and air traffic control.¹⁰ Under the agreement reached,

³David Abecassis, Chris Nickerson, and Janette Stewart, *Final Report for CTIA: Global Race to 5G-Spectrum and Infrastructure Plans and Priorities* (London: Analysys Mason Ltd., 2018), p. 1–2 (<https://api.ctia.org/wp-content/uploads/2018/04/Analysys-Mason-Global-Race-To-5G-2018.pdf>).

⁴Federal Communications Commission, “America’s 5G Future,” accessed February 8, 2021 (<https://www.fcc.gov/5G>).

⁵Stein Gudbjorgsrud, *Mid-band Spectrum Is Important for 5G Networks* (Oslo: Analysys Mason, 2020) (https://www.analysismason.com/contentassets/578c5e38bd4b4b8081097cf97969e284/analysys_mason_midband_5g_spectrum_jun2020_rdts0.pdf).

⁶*Consolidated Appropriations Act, 2018*, Public Law 115–141 (2018), § 605 (<https://www.congress.gov/115/plaws/publ141/PLAW-115publ141.pdf>).

⁷U.S. Department of Commerce, National Telecommunications and Information Administration, *Technical Feasibility of Sharing Federal Spectrum with Future Commercial Operations in the 3450–3550 MHz Band*, NTIA Technical Report 20–546 (Washington, DC: U.S. Department of Commerce, 2020) (<https://www.its.bldrdoc.gov/publications/download/TR-20-546.pdf>).

⁸U.S. Department of Commerce, *Feasibility of Commercial Wireless Services Sharing with Federal Operations in the 3100–3550 MHz Band* (Washington, DC: U.S. Department of Commerce, 2020) (https://www.ntia.doc.gov/files/ntia/publications/ntia_3100-3550_mhz_mobile_now_report_to_congress.pdf).

⁹U.S. Department of Defense, “White House and DOD Announce Additional Mid-Band Spectrum Available for 5G by the End of the Summer,” release, August 10, 2020 (<https://www.defense.gov/Newsroom/Releases/Release/Article/2307275/white-house-and-dod-announce-additional-mid-band-spectrum-available-for-5g-by-t/>).

¹⁰U.S. Department of Defense, “AMBIT Gambit Pays Off, Advances U.S. 5G Efforts,” by C. Todd Lopez, *DOD News*, August 10, 2020 (<https://www.defense.gov/Explore/News/Article/Article/2306902/ambit-gambit-pays-off-advances-us-5g-efforts/>).

DOD operations will continue while private sector use will be enabled through spectrum sharing technologies.

The August 2020 agreement, however, is not self-executing. The FCC has commenced a proceeding to auction off the spectrum for 5G use in 2021,¹¹ but that proceeding remains pending. S. 4803 codifies this pending auction to ensure that some or all of the 3450 to 3550 MHz band is made available for commercial wireless operations. The legislation also sets a timeline for that auction, directing that it must commence by the end of December 2021.

SUMMARY OF PROVISIONS

The legislation does the following:

- Requires the President, working through the Assistant Secretary of Commerce for Communications and Information, to withdraw or modify the assignments in the 3450 to 3550 MHz band as needed to facilitate the auction of that band and to notify the Commission within 30 days that such withdrawal or notification is complete.
- Requires the Commission to begin an auction to grant new licenses for use of the band no later than December 31, 2021.

LEGISLATIVE HISTORY

S. 4803 was introduced in the 116th Congress on October 19, 2020, by Senator Wicker (for himself and Senator Thune) and was referred to the Committee on Commerce, Science, and Transportation of the Senate. Senator Scott was an additional cosponsor. On November 18, 2020, the Committee met in open Executive Session and, by voice vote, ordered S. 4803 reported favorably without amendment. S. 4803 was not reported, but the bill passed as a provision in H.R. 133, the Consolidated Appropriations Act, 2021.¹²

Similar legislation, H.R. 8545, was introduced in the 116th Congress on October 6, 2020, by Representative Greg Walden (for himself and Representatives Robert E. Latta and Brett Guthrie) and was referred to the Committee on Energy and Commerce of the House of Representatives. Representatives Cathy McMorris Rodgers, Debbie Lesko, and Pete Olson were additional cosponsors.

ESTIMATED COSTS

In compliance with subsection (a)(3) of paragraph 11 of rule XXVI of the Standing Rules of the Senate, the Committee states that, in its opinion, it was necessary to dispense with the requirements of paragraphs (1) and (2) of that subsection in order to expedite the business of the Senate.

REGULATORY IMPACT STATEMENT

Because the legislation does not create any new programs, it has no additional regulatory impact, and has no additional reporting requirements. The legislation has no further effect on the number or types of individuals and businesses regulated, the economic im-

¹¹Federal Communications Commission, *Facilitating Shared Use in the 3100–3550 MHz Band*, Report and Order and Further Notice of Proposed Rulemaking, WT Docket No. 19–348 (rel. October 2, 2020) (<https://docs.fcc.gov/public/attachments/FCC-20-138A1.pdf>).

¹²Public Law 116–260.

pect of such regulation, the personal privacy of affected individuals, or the paperwork required from such individuals and businesses.

CONGRESSIONALLY DIRECTED SPENDING

In compliance with paragraph 4(b) of rule XLIV of the Standing Rules of the Senate, the Committee provides that no provisions contained in the bill would have met the definition of congressionally directed spending items under the rule.

SECTION-BY-SECTION ANALYSIS

Section 1. Short title

This section provides that the Act may be cited as the “Beat China by Harnessing Important, National Airwaves for 5G Act of 2020” or the “Beat CHINA for 5G Act of 2020”.

Section 2. Reallocation and auction of 3450–3550 MHz spectrum band

Subsection (a) of section 2 defines the terms “Commission” as the Federal Communications Commission, and “covered band” as the band of spectrum between 3450 MHz and 3550 MHz, inclusive of the top and bottom of that band.

Subsection (b) of section 2 requires the President, acting through the Assistant Secretary of Commerce for Communications and Information, to begin the process of withdrawing or modifying the assignments to Federal users within the covered band as necessary for the reallocation and auction of the covered band within 180 days. The Assistant Secretary is required to notify the Commission not later than 30 days after it has completed this process.

Subsection (c) of section 2 directs the Commission to revise the non-Federal spectrum allocation for the covered band to allow flexible use services and, not later than December 31, 2021, begin the auction of new initial licenses for use of the covered band, subject to flexible use service rules. Additionally, this subsection exempts the Commission from complying with certain auction notification requirements and NTIA from supplying certain cost estimates ahead of the auction required by the bill. It also clarifies that the Commission must still comply with the statutory requirement that it may conclude an auction of Federal frequencies only if the auction raises cash proceeds exceeding 110 percent of Federal relocation costs.

The Committee understands that a limited number of secondary licenses used for non-Federal radiolocation operations in the 3300 to 3550 MHz band have been modified to authorize such continued use in the 2900 to 3000 MHz band. These radiolocation operations provide important services relied on by millions of Americans, including life-saving Doppler weather radar systems in some of the Nation’s largest population centers. The Committee understands that five such weather radar systems have been identified through the Commission’s proceedings and believes that the Commission should provide for reimbursement of relocation costs of these radiolocation operations, with money remaining after primary licensees have been fully reimbursed for their relocation costs. Reimbursement of these relocations will ensure that these important services may continue to serve the public interest and not be disrupted dur-

ing relocation to new spectrum assignments. These licenses, while secondary, have in practice operated for many years as though they were primary, without fear of interference, and substantial investments have been made by the license holders based upon this primary-like status. It is not the intent of the Committee to endorse a general precedent for reimbursing secondary license holders for costs associated with relocations required by Commission action, and the Committee expects that any such future considerations by the Commission regarding such reimbursements be based on the facts of such particular cases and determined consistent with the public interest.

The Committee also understands that certain low power testing essential to air safety and mandated by the Federal Aviation Administration must be conducted using the spectrum identified for auction in S. 4803. The Committee intends for the FCC to allow such testing to continue as it did prior to auction. The Committee believes that aircraft manufacturers and auction winners should coordinate all such testing activity in good faith to allow such testing to occur while preventing harmful interference to auction winners' wireless operations in this band.

CHANGES IN EXISTING LAW

In compliance with paragraph 12 of rule XXVI of the Standing Rules of the Senate, the Committee states that the bill would make no change to existing law.

