

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Facilitating Shared Use in the)	WT Docket No. 19-348
3.1-3.55 GHz Band)	

REPLY COMMENTS OF CTIA

CTIA respectfully submits these reply comments in response to the Notice of Proposed Rulemaking (“NPRM”) issued by the Federal Communications Commission (“Commission”) that proposes to remove existing non-federal secondary Radiolocation Service (“Radiolocation”) and Amateur Radio Service (“Amateur”) allocations in the 3.3-3.55 GHz band.¹

I. INTRODUCTION.

CTIA commends the Commission for moving forward with plans to auction 350 megahertz of mid-band spectrum this year, which is essential to keeping the United States competitive with where other nations are today in terms of mid-band spectrum availability. Mid-band spectrum provides a critical mix of coverage and capacity to support 5G, and auctioning the 3.5 GHz and 3.7 GHz bands is a significant and positive step to support next-generation connectivity. However, these steps will not be enough for the U.S. to lead in our new 5G economy because other nations are on track to make available significantly more licensed mid-band spectrum than the U.S., with Japan planning to open up 1,000 megahertz, China with 460 megahertz already today, and South Korea planning to make 600 megahertz available by 2022.

¹ See *Facilitating Shared Use in the 3.1-3.55 GHz Band*, Notice of Proposed Rulemaking, 34 FCC Rcd 12662 ¶ 1 (2019) (“*Lower 3 GHz NPRM*”).

Further, the most recent report by Analysys Mason confirms that the United States is dedicating more valuable mid-band spectrum to unlicensed or shared use than other countries.²

It is therefore critical that the Commission not only execute on its planned mid-band auctions, but also foster a pipeline beyond 2020 for exclusive, licensed mid-band spectrum under 5G-friendly rules. Two large swaths of mid-band spectrum are key to this effort—the 6 GHz band and the 3.1-3.55 GHz (“Lower 3 GHz”) band. In the 6 GHz band, the Commission has before it 1,200 megahertz of prime mid-band spectrum—an amount not typically seen outside the high-band context. This frequency range is large enough to accommodate future Wi-Fi and other unlicensed needs (so long as critical licensed incumbents are protected) while also creating a pipeline for exclusive, licensed spectrum to support 5G.³ By taking a balanced approach in the 6 GHz proceeding, while also creating exclusive licensed mid-band channels in the Lower 3 GHz band, the U.S. can match the spectrum allocation strategies that other nations are pursuing in the effort to exploit the economic and technological opportunities offered by 5G.

CTIA therefore supports the Commission’s proposal to remove existing non-federal secondary Radiolocation and Amateur allocations in the 3.3-3.55 GHz band and to relocate incumbent non-federal operations out of the band to prepare for possible expanded commercial wireless use.⁴ The Lower 3 GHz band is well suited to help meet the growing demand for

² David Abecassis, Janette Stewart, and Chris Nickerson, *International Comparison: Licensed, Unlicensed, and Shared Spectrum, 2017-2020*, ANALYSYS MASON (Jan. 2020), <https://api.ctia.org/wp-content/uploads/2020/02/report-International-Comparison-Licensed-Unlicensed-and-Shared-Spectrum-2017-2020.pdf> (“International Comparison”), attached to Letter from CTIA to FCC, WT Docket No. 19-348, *et al.* (filed Feb. 3, 2020).

³ See, e.g., Letter from CTIA to FCC, ET Docket No. 18-295 (filed Mar. 13, 2020); Letter from CTIA to FCC, ET Docket No. 18-295 (filed Feb. 24); Letter from CTIA to FCC, ET Docket No. 18-295 (filed Jan. 10, 2020); Comments of CTIA, ET Docket No. 18-295 (filed Feb. 15, 2019).

⁴ *Lower 3 GHz NPRM* ¶ 1.

critical mid-band spectrum to enable next-generation wireless services. As noted by the Commission, deleting existing non-federal secondary allocations from the 3.3-3.55 GHz band in the Table of Frequency Allocations would be an important initial step toward satisfying Congress’s directives and making as much as 250 megahertz of spectrum available for advanced wireless services, including 5G.⁵

There is broad support in the record for reallocating the Lower 3 GHz band for commercial use on an exclusive, flexible-use licensed basis with parties emphasizing that prioritizing the Lower 3 GHz band for exclusive commercial use will align U.S. policy with international developments. Commission action to free the Lower 3 GHz band or portions thereof from non-federal encumbrances will also allow for greater coordination with federal partners to create opportunities for commercial wireless use and development of the full Lower 3 GHz band for next-generation wireless services. As such, any proposals that would inhibit the use of the Lower 3 GHz band for 5G services—including through adoption of unnecessary sharing frameworks or elevation of the rights of secondary users—should be rejected.

II. THE LOWER 3 GHZ BAND IS A PRIME OPPORTUNITY TO MAKE MID-BAND SPECTRUM AVAILABLE FOR 5G.

A. The 3.3-3.55 GHz Band Should Be Repurposed for Commercial Wireless Use on an Exclusive, Flexible-Use Licensed Basis.

As highlighted in initial comments, this proceeding presents a unique opportunity to create a pipeline of critical licensed mid-band spectrum to support next-generation wireless services.⁶ To maximize the potential of the Lower 3 GHz band, the record broadly supports

⁵ *Id.*

⁶ See Comments of CTIA, WT Docket No. 19-348, at 2 (filed Feb. 21, 2020) (“CTIA Comments”); Comments of AT&T Services, Inc., WT Docket No. 19-348, at 3 (filed Feb. 21, 2020) (“AT&T Comments”); Comments of 5G Americas, WT Docket No. 19-348, at 6 (filed Feb. 21, 2020) (“5G Americas Comments”); Comments of Competitive Carriers Association, WT Docket No. 19-348, at 2

repurposing the 3.3-3.55 GHz segment for commercial wireless use on an exclusive, flexible-use licensed basis.⁷ Commenters emphasized that the Commission’s exclusive, flexible-use licensing model has proven incredibly successful in creating value for the U.S. economy and helping deliver high-quality mobile broadband services to the public.⁸ As noted previously, making 400 megahertz of licensed mid-band spectrum available for commercial 5G networks is projected to add \$274 billion to the U.S. economy and create 1.3 million new jobs.⁹ Exclusive access to commercial spectrum continues to remain the backbone of the U.S.’s world class telecommunications infrastructure. In addition, one commenter stressed that increased future reliance on wireless networks, particularly for data-intensive applications, means that more exclusive-use spectrum will be critical to maintaining U.S. wireless leadership.¹⁰ Utilizing this proven approach for the 3.3-3.55 GHz band would create incentives for efficient, balanced spectrum use and would foster opportunities for the next generation of wireless services.

The record also is clear that prioritizing the 3.3-3.55 GHz band for exclusive commercial wireless use is consistent with international efforts and global harmonization.¹¹ As the

(filed Feb. 21, 2020) (“CCA Comments”); Comments of T-Mobile USA, Inc., WT Docket No. 19-348, at 2 (filed Feb. 21, 2020) (“T-Mobile Comments”); Comments of Nokia, WT Docket No. 19-348, at 2 (filed Feb. 21, 2020) (“Nokia Comments”).

⁷ See AT&T Comments at 3; T-Mobile Comments at 1; Nokia Comments at 2; 5G Americas Comments at 6; CCA Comments at 4.

⁸ See T-Mobile Comments 7-8 (noting licensed spectrum is the foundation of today’s robust mobile wireless ecosystem, driving investment, innovation, and competition); AT&T Comments at 4 (noting that the Commission’s exclusive, flexible-use licensing model has proven incredibly successful in helping deliver high-quality mobile broadband services to the public).

⁹ CTIA Comments at 8 (citing David W. Sosa, *The Economic Impacts of Reallocating Mid-Band Spectrum to 5G in the United States*, ANALYSIS GROUP, at 1 (Feb. 2019)).

¹⁰ T-Mobile Comments at 8.

¹¹ See Comments of The Computing Technology Industry Association, WT Docket No. 19-348, at 2 (filed Feb. 21, 2020); AT&T Comments at 2; T-Mobile Comments at 5; CCA Comments at 2-3; 5G Americas Comments at 6.

Commission recognized, the 3.3-3.55 GHz band has been the focus for 5G use by standards setting organizations and in other countries.¹² The 3.3-3.4 GHz band is supported for studies for possible 5G identification at WRC-23, extending the current identification from 3.4-3.7 GHz.¹³ Already, several countries are exploring and/or making available spectrum down to 3.3 GHz (e.g., India, Uruguay, China),¹⁴ and many have made mid-band spectrum available in the 3.4-5.0 GHz range via exclusive wide-area licenses.¹⁵ In comments, 5G Americas notes that because early movers around the globe are focusing on the 3 GHz band for licensed 5G, the Commission should make any additional spectrum in the range available for commercial use on an exclusively licensed basis to deliver the quality of service and security enhancements that 5G promises.¹⁶

B. Incumbent Non-Federal Operations Should Be Relocated to Prepare for Expanded Commercial Wireless Use.

In consideration of the facts above, the record supports the Commission’s proposal to relocate incumbent non-federal operations out of the 3.3-3.55 GHz band. The limited number of existing non-federal secondary operations should be transitioned to other spectrum in a reasonable timeframe to prepare for possible expanded commercial wireless use. Relocating these high-powered weather radar systems will mitigate potential interference to adjacent

¹² See *Lower 3 GHz NPRM* ¶ 8. Of note, the United States is the only benchmark country that has released mid-band spectrum in the 3 GHz range on a shared or unlicensed basis. See International Comparison, *supra* note 2.

¹³ See World Radiocommunication Conference 2019 - Provisional Final Acts, International Telecommunications Union, Radio Communications Sector, at 470 (“[T]o consider identification of the frequency bands 3300-3400 MHz, 3600-3800 MHz, 6425-7025 MHz, 7025-7125 MHz and 10.0-10.5 GHz for International Mobile Telecommunications (IMT), including possible additional allocations to the mobile service on a primary basis, in accordance with Resolution COM6/2 (WRC-19).”).

¹⁴ See *Lower 3 GHz NPRM* ¶ 8 (“We note that 3.3-3.55 GHz has been the focus for 5G use by standards setting organizations and in other countries, and we thus believe our focus on this band would promote international harmonization.”).

¹⁵ See International Comparison at 1.

¹⁶ See 5G Americas Comments at 6.

Citizens Broadband Radio Service (“CBRS”) operations and help allow for unfettered access to the band for next-generation wireless services.

CTIA recommends that the Commission consider a variety of potential relocation options for secondary Radiolocation operations while ensuring it does not hinder the use of the Lower 3 GHz band for primary, commercial licensed services. For example, spectrum in the 2.7-3.0 GHz range may be a viable option for relocation, provided that the need to protect federal radar operations in that band would not require overly burdensome frequency coordination. As another alternative, NBCUniversal proposes relocating S-Band Doppler weather radar (“DWR”) licensees currently operating in the 3.5-3.55 GHz portion of the band to the 3.0-3.1 GHz band.¹⁷ CTIA recommends that the Commission consider both approaches while fostering 5G use in the Lower 3 GHz band. In addition, as discussed in initial comments, the Commission should not delay its proposal to relocate Amateur operations, which operate on a secondary and unprotected basis, out of the band segment.

III. THE COMMISSION SHOULD REJECT ANY PROPOSALS THAT WOULD CAUSE DELAY OR INHIBIT USE OF THE LOWER 3 GHZ BAND FOR 5G.

In considering allocation changes and relocation options for incumbent users, the Commission should refrain from any action that would inhibit the development and deployment of 5G services in the Lower 3 GHz band.

A. The Commission Should Make Clearing the 3.3-3.55 GHz Band for Exclusive Licensed Commercial Use its Top Priority.

International harmonization and balanced spectrum policy favor repurposing some or all of the Lower 3 GHz band for exclusive licensed commercial use, not shared access between

¹⁷ See Comments of NBCUniversal, WT Docket No. 19-348, at 4 (filed Feb. 21, 2020) (“Although the Notice seeks comment on the 3.1-3.3 GHz band, the Commission should focus on the 3.0-3.1 GHz band for relocating S-Band DWR incumbents.”).

federal and non-federal users. The Commission should therefore reject proposals that would undermine the goal of clearing the 3.3-3.55 GHz band for exclusive licensed commercial use and instead prioritize the clearing and relocation of existing federal uses out of some or all of the Lower 3 GHz band as its primary goal. The Commission should work closely with NTIA toward this objective.¹⁸ CTIA recognizes, however, that to the extent clearing all or a portion of the Lower 3 GHz band is not feasible, federal incumbents and new commercial mobile licensees may share this band in the future. In that case, a sharing mechanism should be adopted that is transparent and less complicated and unwieldy than the CBRS framework.

Additionally, several parties in the record suggest making the 3.3-3.55 GHz band available on a shared basis between non-federal users.¹⁹ As noted above, the record makes clear that, to gain the benefits of international harmonization and globalization, the Commission should reject any proposed sharing models between non-federal users.²⁰ In particular, the three-tiered sharing approach utilized in the CBRS band is unnecessary and should not be extended to any portion of the Lower 3 GHz band.

B. The Commission Should Reject Proposals that Would Empower Secondary Users to Impede Use of the Lower 3 GHz Band for New Primary Services.

Existing secondary services (including the Amateur Radio Service, experimental licensing, and unlicensed devices) should not impede the use of the Lower 3 GHz band for 5G.

¹⁸ See, e.g., CTIA Comments at 5; T-Mobile Comments at 7; CCA Comments at 4; 5G Americas Comments at 10.

¹⁹ See, e.g., Comments of Federated Wireless, Inc., WT Docket No. 19-348, at 2 (filed Feb. 21, 2020) (“Federated Comments”); Comments of Dynamic Spectrum Alliance, WT Docket No. 19-348, at 2 (filed Feb. 24, 2020) (“DSA Comments”); Comments of Wireless Internet Service Providers Association, WT Docket No. 19-348, at 4 (filed Feb. 21, 2020) (“WISPA Comments”); Comments of CommScope, Inc., WT Docket No. 19-348, at 2 (filed Feb. 21, 2020); Comments of The Wireless Innovation Forum, WT Docket No. 19-348, at 1 (filed Feb. 21, 2020).

²⁰ See, e.g., T-Mobile Comments at 8; 5G Americas Comments at 14.

Accordingly, the Commission should reject any proposal that calls for delaying or withholding action on the band due to unprotected secondary operations.²¹ The Commission is well aware of the need for timely development and deployment of next-generation wireless services. Our nation must not wait to prepare the band for expanded commercial wireless use.

In addition, secondary users' proposals to delay or withhold action on the band fail on procedural grounds. The Commission has ruled in prior proceedings that secondary operations lack formal interference protection rights.²² This is further supported by the Commission's rules, as Section 2.104(d)(3) notes that stations of a secondary service shall not cause harmful interference or claim any protection from harmful interference from stations of a primary service.²³ Therefore, the operations authorized on a secondary basis in the 3.3-3.55 GHz band lack any formal interference protection rights and should not be capable of inhibiting new, primary services allocated within the spectrum by the Commission.

C. The Commission Should Reject Calls to Further Encumber the Lower 3 GHz Band.

Finally, CTIA and its member companies continue to oppose efforts by Dynetics to remove the Commission's freeze on use of the 3.1-3.3 GHz band. The freeze is an important step toward relocating non-federal incumbents from the 3.3-3.55 GHz band, which has support in

²¹ See Comments of Boeing, WT Docket No. 19-348, at 5 (filed Feb. 21, 2020); Comments of Lockheed, WT Docket No. 19-348, at 3 (filed Feb. 21, 2020); Comments of Piper Networks, WT Docket No. 19-348, at 1 (filed Feb. 21, 2020); Comments of The American Radio Relay League, WT Docket No. 19-348, at 1 (filed Feb. 21, 2020); Comments of The American Television Network, WT Docket No. 19-348, at 1 (filed Feb. 20, 2020).

²² For example, many LPTV and TV translator stations licensed on a secondary basis were displaced during the repacking process following the 600 MHz Incentive Auction and the Commission declined to reimburse relocation costs. See *Expanding the Economic and Innovation Opportunities of Spectrum Through Incentive Auctions*, Report and Order, 29 FCC Rcd. 6567 ¶ 237 (2014).

²³ 47 C.F.R. § 2.104(d)(3).

the record from various stakeholders.²⁴ Therefore, the freeze should remain intact during the study of the 3.1-3.55 GHz band and possible repurposing of the band for flexible-use commercial wireless services.

IV. CONCLUSION.

The record demonstrates that the Commission should prioritize spectrum solutions in the Lower 3 GHz band that create incentives for efficient, balanced spectrum use based on the highly successful exclusive-use licensing framework. The Commission should reject any efforts to undermine the use of the Lower 3 GHz band for next-generation mobile services and allow for the development and use of this band without unnecessary encumbrances.

Respectfully submitted,

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²⁴ See, e.g., Federated Comments at 5; WISPA Comments at 5; DSA at 4.