

June 7, 2023

VIA ECFS

Marlene H. Dortch, Secretary
Federal Communications Commission\
45 L Street NE
Washington, DC 20554

Re: NTIA Recommendation to Approve Request for Waiver of 5.9 GHz Band Rules to Permit Initial Deployment of Cellular Vehicle-to-Everything Technology; *Use of the 5.850-5.925 GHz Band*, ET Docket No. 19-138

Dear Ms. Dortch:

The Alliance for Automotive Innovation (“Auto Innovators”) hereby submits this *ex parte* letter to the Federal Communications Commission (“FCC” or the “Commission”) to provide feedback from automotive industry stakeholders on the National Telecommunications and Information Administration’s (“NTIA”) analysis of the Cellular Vehicle-to-Everything (“C-V2X”) Joint Waiver Request, which was granted by the FCC Office of Engineering and Technology (“OET”).¹ Auto Innovators supports OET’s decision to limit the C-V2X Joint Waiver Request to the 5.905-5.925 GHz band, consistent with NTIA’s recommendation and the C-V2X Joint Waiver Request itself. However, the Commission should reiterate that the entire 30 megahertz of the 5.895-5.925 GHz band will be reserved for C-V2X operation in an eventual second report and order.² Additionally, Auto Innovators encourages the Commission to allow C-V2X devices to operate on a co-primary basis with federal incumbents, consistent with current band designations.

¹ Letter from Charles Cooper, Associate Administrator, Office of Spectrum Management, NTIA, to Ronald T. Repasi, Acting Chief, Office of Engineering and Technology, FCC, ET Docket No. 19-138 (filed Apr. 17, 2023) (“NTIA Letter”). OET’s grant of the C-V2X Joint Waiver Request accepted NTIA’s recommendations, but conditioned the waiver grant “on the outcome of any Commission action in the pending rulemaking proceeding. . . .” *Request for Waiver of 5.9 GHz Band Rules to Permit Initial Deployment of Cellular Vehicle-to-Everything Technology*, Order, ET Docket No. 19-138, DA 23-343, at ¶ 12 (rel. Apr. 24, 2023) (“C-V2X Waiver Order”).

² See *Use of the 5.850-5.925 GHz Band*, First Report and Order, Further Notice of Proposed Rulemaking, and Order of Proposed Modification, ET Docket No. 19-138, FCC 20-164, at ¶ 1 (2020) (“5.9 GHz Band First Report and Order”) (“In this First Report and Order, we repurpose 45 megahertz of the 5.850-5.925 GHz band (the 5.9 GHz band) to allow for the expansion of unlicensed mid-band spectrum operations, while continuing to dedicate 30 megahertz of spectrum for vital intelligent transportation system . . . operations.”).

C-V2X Technologies Require the Entire 30 Megahertz of the 5.9 GHz Band. Auto Innovators supports NTIA’s recommendation and the *C-V2X Waiver Order*’s determination that the C-V2X Joint Waiver Request be limited to the 5.905-5.925 GHz band, as the C-V2X Joint Waiver Parties requested.³ However, Auto Innovators encourages the FCC to reiterate that, consistent with the *5.9 GHz Band First Report and Order*, the eventual second report and order will create rules that ensure reliable C-V2X operation throughout the 5.985-5.925 GHz band. As Auto Innovators has reiterated, C-V2X technologies will require interference-free use of *at least* the entire 30 megahertz of the band for auto safety applications.⁴ Indeed, several automotive stakeholders have explained that *more* than 30 megahertz of spectrum will be required, particularly for “advanced” C-V2X safety use cases.⁵ Accordingly, while the *C-V2X Waiver Order* clearly notes that the waiver’s conditions are subject to change based on the eventual second report and order,⁶ the Commission should reiterate that the entire 5.895-5.925 GHz band will be reserved for C-V2X operations.

The Commission Should Allocate C-V2X Operations and Federal Incumbents on a Co-Primary Basis. Although the NTIA letter and the *C-V2X Waiver Order* state that operations under the C-V2X Joint Waiver Request are authorized “on a secondary basis” to federal radiolocation operations in the band, this designation departs from the 5.9 GHz band rules, which provide that federal incumbents share primary status in the band with Intelligent Transportation Services.⁷ Auto Innovators opposes any

³ See *C-V2X Waiver Order* ¶ 1; Request for Waiver of 5.9 GHz Band Rules to Permit Initial Deployments of Cellular Vehicle-to-Everything Technology, Ford Motor Company, et al., ET Docket No. 19-138, at 7, n.14 (filed Dec. 13, 2021) (“To be clear, the Waiver Parties propose these technical parameters solely for the purpose of this Request for Waiver and to expedite the Commission’s approval of C-V2X operations in the upper 20 MHz of the C-V2X band. The Waiver Parties encourage the Commission to . . . permit C-V2X deployments in the full 30 MHz band.”); Letter from Emily Frasaroli, Global Director, Automotive Safety Office, Ford Motor Company, Troy L. Peterson, PE, Director of Operations, Utah Department of Transportation, and Howard Lin, President, AAEON Technology Inc. et al., to Marlene H. Dortch, Secretary, FCC, ET Docket No. 19-138 (filed Apr. 20, 2023).

⁴ See Comments of the Alliance for Automotive Innovation, ET Docket No. 19-138, at 5 (filed Sept. 12, 2022); Alliance for Automotive Innovation Reply to Oppositions to Petition for Reconsideration, ET Docket No. 19-138, at 6-7 (filed Aug. 2, 2021) (explaining that C-V2X can provide a multitude of safety benefits, including prevention of non-line-of-sight automotive accidents; alerting drivers to the presence of vulnerable road users, including pedestrians, bicyclists, and public safety personnel; red light notifications; weather alerts; vehicle-to-vehicle safety communications; and vehicle-to-infrastructure communications); Reply Comments of the Alliance for Automotive Innovation, ET Docket No. 19-138, at 7-8, 13-14 (filed July 2, 2021).

⁵ As the American Association of State Highway and Transportation Officials explained, “more than 85% of comments submitted in response to the [5.9 GHz NPRM] expressed various reasons why [30 megahertz] was not sufficient for safety applications.” Comments of the American Association of State Highway and Transportation Officials, ET Docket No. 19-138, at 7 (filed June 2, 2021). Moreover, the 5G Automotive Association and Qualcomm previously explained that 40 megahertz of additional spectrum will be necessary to support advanced safety use cases, such as equipment that will allow drivers to “see” through vehicles, around turns, and in limited visibility situations. Comments of the 5G Automotive Association, ET Docket No. 19-138, at 20 (filed June 2, 2021); Comments of Qualcomm Incorporated, ET Docket No. 19-138, at 2 (filed June 2, 2021).

⁶ *C-V2X Waiver Order* ¶ 14 (“Although we are conditioning the waiver grant on a requirement that grantees maintain the ability to conform to the final C-V2X operational, technical, and transition rules ultimately adopted by the Commission, we take this action without presuming any particular outcome of the pending rulemaking proceeding.”).

⁷ See *5.9 GHz Band First Report and Order* ¶ 12 (“In addition to the primary non-Federal Mobile Service allocation for DSRC in the ITS radio service, the 5.9 GHz band is also allocated, in the U.S. Table of Frequency Allocations, for the Federal Radiolocation Service . . . on a primary basis. . . .”); 47 C.F.R. § 2.106, NG160; NTIA Letter at 2 (“There are primary

change in allocation status that would relegate future C-V2X operations to secondary operating status. Neither NTIA's letter nor the *C-V2X Waiver Order* provides any explanation why such a change is necessary or well-advised. Such a change in status would demote C-V2X devices to secondary priority in the band, increasing the chance that such devices could encounter harmful interference, and jeopardizing the efficacy of the service.⁸

Accordingly, Auto Innovators urges the FCC to clarify in the second report and order that C-V2X operations will: (1) have access to the entire 5.895-5.925 GHz band; and (2) maintain their current co-primary status with federal incumbents in the 5.895-5.925 GHz band.

Respectfully submitted,

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allocations for the federal radiolocation service and non-federal mobile service, where a coordination process was implemented to protect federal radar operations.”).

⁸ See Comments of the Alliance for Automotive Innovation, ET Docket No. 19-138, at 5-6 (filed July 22, 2021) (“Reduced communications ranges [caused by interference] could mean that delivery of critical safety warnings is delayed, which would give a driver less time to react to traffic or road hazards.”).

