

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
	)	ET Docket No. 11-90
Amendment of Sections 15.35 and 15.253 of	)	RM-11555
the Commission's Rules Regarding Operation	)	
of Radar Systems in the 76.0-77.0 GHz Band.	)	
	)	
Amendment of Section 15.253 of the	)	
Commission's Rules to Permit Fixed Use of	)	ET Docket No. 10-28
Radar in the 76-77 GHz Band.	)	

**COMMENTS OF THE**

**ALLIANCE OF AUTOMOBILE MANUFACTURERS**

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Pursuant to Section 1.405 of the Federal Communications Commission's Rules,<sup>1</sup> the Alliance of Automobile Manufacturers submits these comments in response to the *Notice of Proposed Rule Making* (NPRM) issued by the Commission in the above-captioned proceeding. The Alliance of Automobile Manufacturers ("Alliance") is a trade association of vehicle manufacturers and represents 77% of all car and light truck sales in the United States. Its members are BMW Group, Chrysler Group LLC, Ford Motor Company, General Motors Company, Jaguar Land Rover, Mazda, Mercedes-Benz USA, Mitsubishi Motors, Porsche, Toyota, Volkswagen Group of America and Volvo Cars of North America. The Alliance often participates in Commission proceedings that are important to all segments of the automobile industry.

The auto industry represents the largest manufacturing sector in the U.S. and supports 8

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<sup>1</sup> 47 C.F.R. §1.405.

million American jobs.<sup>2</sup> The Alliance strongly supports the Commission’s proposal to modify §§ 15.35 and 15.253 of its rules to enable enhanced vehicular radar technologies in the 76–77 GHz band to improve collision avoidance, driver safety, and driver convenience. However, the Alliance has concerns with the portion of the Commission’s proposal that would allow fixed radar installations operating in the 76 -77 GHz band, regardless of location, despite a lack of supporting analysis of the potential for interference from these fixed radar systems to vehicular radar. The Alliance respectfully urges the Commission to separate these distinct proposals. We urge the Commissioners to finalize the proposed changes regarding enhanced vehicular radars, but to defer action on whether to allow unlicensed fixed systems in this frequency band for a future rulemaking, after further research is completed. The potential for interference resulting from unrestricted fixed radars in this spectrum is of great concern, because unlike potential interference issues among vehicular radars, there exists no means (and no incentive on the part of fixed radar installers) to cooperatively address such interference issues. To date, the auto industry has effectively coordinated efforts to address interference concerns among vehicular radars via industry associations, such as the Alliance and the Strategic Automotive Radar Frequency Allocation Group (“SARA”).

## **VEHICULAR RADAR SYSTEMS**

In 1995, the Federal Communications Commission (“Commission”) adopted the rules and electromagnetic emission limits for vehicular radar systems set forth in Section 15.253 of the Commission's Rules and Regulations. Since that time the industry has experienced significant growth in vehicular radar systems as a result of consumer demand and the potential of these

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<sup>2</sup> Center for Automotive Research, *Contributions of the Automotive Industry to the Economies of All Fifty States and the United States*, 8

technologies to improve safety and the driving experience. Automakers use radar systems for various driver assistance technologies such as adaptive cruise control (ACC), forward collision warning (FCW), lane departure warning (LDW) and blind spot detection. Radar technology is also an integral component of autonomous braking systems capable of substantially mitigating or avoiding most forward collisions. These technologies mitigate the potential for collision between vehicles and have the potential to improve highway safety overall.

The Commission proposes to modify § 15.253 of its rules to increase the average power density limit to 50 dBm (88  $\mu\text{W}/\text{cm}^2$  at 3 m) and decrease the peak power density limit to 55 dBm (279  $\mu\text{W}/\text{cm}^2$  at 3m) for vehicular radar systems regardless of the illumination direction of the vehicular radar system (insert citation). Alliance members agree with these suggested modifications to the rules and believe they will facilitate the introduction of new automotive radar technologies in the marketplace and will also result in aligning vehicular radar emission limits in the United States with those in other international markets. This will allow automakers to improve product development, reduce the costs ultimately borne by consumers and allow automakers to deploy these new radar technologies more quickly.

As noted by the Commission, the different in-motion and not-in-motion emission limits were originally adopted to prevent unnecessary and prolonged harmful human exposure to radio frequency (RF) radiation. However, since the proposed emission limit of 88  $\mu\text{W}/\text{cm}^2$  is below the current average threshold limit of 1  $\text{mW}/\text{cm}^2$  adopted for human exposure to RF radiation, the Alliance agrees that the in-motion versus not-in-motion distinction becomes unnecessary.

## **FIXED RADAR SYSTEMS**

The Alliance is concerned that the Commission is responding to Era Systems petition to amend § 15.253 of its rules to permit the use of 76–77 GHz unlicensed fixed radars at airports for monitoring terrestrial vehicle movements by proposing to generally allow unlicensed fixed radar installations regardless of location or proximity to roadways. The Era Systems petition was limited to fixed radars installed at airports, and included numerous restrictions to mitigate potential interference with vehicular radars on public roadways. The Alliance is concerned with potential interference to vehicular radar systems and recommends that action on this petition be separated from the Commission’s response to Toyota’s petition, ET Docket No. 11-90 RM-11555 until further research on any potential interference is complete. It is the understanding of the Alliance that SARA is currently undertaking that research in the European Initiative MOSARIM ([www.mosarim.edu](http://www.mosarim.edu)). This research includes evaluating the actual radar interference potential among vehicular radars, fixed radars and off the shelf radar sensors. The results of this research are expected early in 2012. We recommend that the Commission defer further action on the Era Systems petition until those results are known.