

**Testimony on Behalf of The Aluminum Association's Aluminum Transportation Group (ATG)**

*Submitted by Ganesh Panneer, ATG Chairman and Vice President and General Manager of Automotive, Novelis to the U.S. Environmental Protection Agency*

Regarding Reconsideration of the Final Determination of the Mid-term Evaluation of GHG Emissions Standards for Model Year 2022-2025 Light-duty Vehicles and Model Year 2021 GHG Emissions Standards

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Good afternoon. My name is Ganesh Panneer. I am vice president and general manager of automotive at Novelis, the world's largest producer of flat-rolled aluminum products. I'm here on behalf of the Aluminum Association's Transportation Group, whose members serve as key suppliers to the automotive industry. Our industry supports 186 billion dollars in economic output, more than 713,000 American jobs, and, since 2013, aluminum companies have invested 2.3 billion dollars in US plant expansions.

Thank you for the opportunity to address this important topic. Finalizing a national CO<sub>2</sub> emissions regulation is a formidable task.

A strength of the 2012 regulation was the inclusion of proposed standards through 2025. This approach has proven beneficial for automakers and suppliers as many automotive technologies take more than 5 years to engineer, develop, validate and establish production capacity. Clarity in the 2012-2025 standards has been instrumental in supporting the unprecedented improvements in efficient technologies seen over the past five years. As such, the aluminum industry recommends the agencies consider including a greenhouse gas and fuel economy standard forecast out to 2030 as part of the 2022-25 regulation.

2021 standards—adjusted either up or down—would significantly increase uncertainty in the aluminum industry. We ask that the full potential impact of any change be well understood before action is taken. Reducing stringency could result in adverse economic impact—including

loss of jobs—given the substantial investments made by automakers and aluminum suppliers based on the finalized 2021 standards.

Aluminum is a key enabler in helping automakers meet national fuel efficiency and emissions goals. There is ample evidence to suggest vehicles can be significantly, safely and economically downweighted—not downsized—to maximize efficiency, increase energy security and minimize emissions.

Several recent independent studies support this conclusion.

First, Ducker Worldwide concluded that to achieve greater efficiency and lower CO<sub>2</sub> emissions, automakers need to reduce average vehicle weight by 7% by 2025—that’s a total mass savings of 270 pounds, consistent with agency estimates earlier this year. To meet this, over the next decade, automakers plan to increase aluminum use at a faster pace than any time in history. Several vehicles with significant aluminum body content will launch between 2024 and 2028, increasing the aluminum content from 400 lbs today to 565 pounds per vehicle by 2028. Major aluminum producers such as Novelis, Arconic, Aleris, Constellium and others, have recently added capacity to meet demand growth by 2020. And, the aluminum industry is prepared to make additional investments and add upwards of 6,500 additional jobs as growth surges.

Second, the overall recycling rate for automotive aluminum is 91%, according to a recent Worcester Polytechnic Institute study. Researchers attribute this high rate to the metal’s recyclability and high intrinsic economic value.

In addition, automakers are rapidly implementing “closed-loop” recycling systems, which have proven to be highly successful in capturing economic and environmental benefits, helping reduce the net cost of mass reduction. With a closed loop, up to 40% of pre-consumer aluminum scrap is recovered and recycled to make the same automotive alloys. The Association recommends that the agencies continue to recognize closed-loop recycling of aluminum as a

significant factor in reducing the cost and environmental footprint of lightweighting with aluminum.

Third, nearly 80% of all metal supplied to the US auto industry is produced using hydroelectric power, helping lower the metal's overall environmental impact. The lifecycle assessment study conducted by Oak Ridge National Laboratory concluded aluminum use in new vehicles offers the smallest total carbon footprint among competing materials. An independent study conducted by the Ford Motor Company also came to the same conclusion.

Fourth, studies also confirm aluminum's safety and performance benefits. Aluminum is more crash absorbent than steel, and vehicles made lighter with aluminum accelerate faster, brake at shorter distances and handle better.

In conclusion, aluminum companies need predictability and consistency in the regulatory conditions under which they operate. To that end, the aluminum industry strongly supports harmonization through one national program and we look forward to our continued work with the EPA, NHTSA and the California Air Resources Board.