



April 5, 2021

Matthew Borman
Deputy Assistant Secretary
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Ave, NW
Washington, D.C. 20230

RE: Request for Comments on Risks in the Semiconductor Manufacturing and Advanced Packaging Supply Chain

Dear Deputy Assistant Secretary Borman:

The Alliance for Automotive Innovation (“Auto Innovators”) is pleased to submit comments to the Department of Commerce (“Department”) in response to its Request for Comments on Risks in the Semiconductor Manufacturing and Advanced Packaging Supply Chain. As you know, the auto industry has been uniquely and significantly impacted by the current semiconductor shortage. We appreciate the continued engagement and commitment of the Administration and the Department on this critical supply chain issue and welcome the opportunity to provide additional input and feedback.

Auto Innovators is the singular, authoritative, and respected voice of the automotive industry. Focused on creating a safe and transformative path for personal mobility, Auto Innovators represents the manufacturers that produce nearly 99 percent of cars and light trucks sold in the United States. Members of Auto Innovators include motor vehicle manufacturers, original equipment suppliers, technology companies, and others within the automotive ecosystem. As you are well aware, as the nation’s largest manufacturing sector, the auto industry contributes \$1.1 trillion to the United States economy and represents 5.5 percent of the country’s GDP. As a significant engine for our nation’s economy, the auto sector is responsible for 10.3 million jobs and \$650 billion in paychecks.

Semiconductors are currently used in a wide and growing variety of automotive electronic components that perform vehicle control, safety, emissions, driver information, and other functions. Many innovations that are underway in the automotive space will define the future of mobility – including electrification, automation, and connectivity – and are highly dependent on semiconductors. With the increased incorporation of new safety and further emission reduction technologies, there is no doubt that auto production represents a growth sector for the semiconductor industry.

The chips that are generally used in vehicles are not the same chips used in consumer electronics devices. As with many defense and industrial control users, auto production largely relies on chips made using mature nodes. These chips are more robust and reliable than the advanced node chips that are used in consumer electronics devices and, as a result, can withstand the challenging environments in which vehicles operate and can last the life of a vehicle.

The microchip shortage that the auto industry is facing is an outgrowth of the unprecedented shutdown in auto production that occurred in the early weeks of the COVID pandemic. During that eight-week shutdown across all North America manufacturing plants (and similar shutdowns across the globe), silicon wafer foundries reallocated capacity away from auto grade chips to chips used in consumer electronics and other products. As you are aware, auto production has since resumed. However, the auto industry's demand for auto grade chips is not currently being met.

The microchip supply shortage facing the auto industry has been further exacerbated in recent weeks by severe weather in Texas that impacted domestic suppliers, a fire at a major overseas chip supplier, congestion at West Coast ports, and the significant stoppage of global trade through the Suez Canal shipping route. These additional challenges have further strained the existing supply of auto grade chips and have bolstered industry concerns and economic impacts.

The chip shortage has forced a number of automakers to halt production and cancel shifts in the United States, with serious consequences for their workers and the communities in which they operate. Our immediate priority, and one that we appreciate is shared by the Department, is reducing the severity and longevity of the microchip shortage for the auto industry in order to protect American jobs and minimize the negative impact to the broader economy.

We have been conducting anonymized surveys of our member companies since the onset of the chip shortage. The most recent survey was conducted within the last couple of weeks and, unfortunately, the high end projections indicate an even more significant impact to United States auto production than was projected in previous surveys. This survey, which is generally aligned with recent projections made by IHS Markit¹ and AlixPartners², revealed that the projected impact for 2021 could be as high as 1.276 million fewer vehicles produced. While there is no consensus among our member companies on how long the shortage will continue to impact production, some companies are predicting up to 6 more months of additional disruption.

The current semiconductor supply chain crisis has certainly exposed overall capacity limits in the semiconductor sector and revealed significant risks in the current automotive semiconductor supply chain. There is clearly a need to expand semiconductor capacity to meet the growing demand for semiconductors in the auto industry and across the economy. Policies that can incentivize this additional capacity in the United States, such as the programs authorized under the *CHIPS for America Act* and included in the *FY 2021 National Defense Authorization Act*, are essential to addressing the longer-term challenges. For this reason, Auto Innovators strongly supports full and robust funding for the programs authorized under the *CHIPS for America Act*.

That being said, it is critical that federal programs focused on increasing domestic capacity of semiconductors benefit all impacted industries and their workers. Given the importance of chips to current auto production and future automotive innovation, it would be regrettable if none of the funding under the *CHIPS for America Act*, once appropriated, was used to increase the resiliency of automotive supply chains through the construction of new facilities that produce or have the ability to produce auto grade chips. For this reason, we suggest that at least some portion of any *CHIPS for America Act* funding be used to build new capacity that will support the auto industry and mitigate the risks to the automotive

¹ On March 31, IHS Markit reported that it now expects the chip shortage to disrupt the production of nearly 1.3 million global light vehicles, up from a prior forecast of 1 million in the first quarter.

² AlixPartners recently predicted that automakers will produce 1.5 million to 5 million fewer vehicles worldwide than planned due to the microchip shortage.

supply chain evidenced by the current chip shortage. This could be accomplished by, for example, specifying that a particular percentage – that is reasonably based on the projected needs of the auto industry – be allocated for facilities that will support the production of auto grade chips in some manner.

New foundries take years to build, so Auto Innovators also recommends that policies be implemented that support increased chip capacity in the mid-term. This includes enactment of a semiconductor manufacturing investment tax incentive. Such an incentive can help companies offset the cost of creating new lines within existing facilities or reallocating current production to meet evolving needs.

A significant investment in and sustained commitment to building additional domestic semiconductor capacity that meets the future needs of the auto industry in the United States is absolutely essential. We appreciate your focus and attention to this critical issue and look forward to continuing to work with you to ensure that the auto industry in the United States continues to lead the world in innovation and in building a cleaner, safer, and smarter transportation future.

Sincerely,

A handwritten signature in black ink that reads "John Bozzella". The signature is written in a cursive style with a large initial "J" and "B".

John Bozzella
President and CEO

