



Motor & Equipment Manufacturers Association

Comments to

U.S. Department of Defense

RE: Notice and Request for Comments; Identifying Risks in the Supply Chain for Strategic and Critical Materials

Docket No: DoD–2021–OS–0022

April 28, 2021

The Motor & Equipment Manufacturers Association (MEMA) submits the following comments regarding the U.S. Department of Defense’s (DoD) Notice and Request for Comments on Identifying Risks in the Supply Chain for Strategic and Critical Materials.¹

Introduction

MEMA represents more than 1,000 companies that manufacture original equipment (OE) and aftermarket motor vehicle parts, components, systems, and materials for use in passenger vehicles and commercial trucks.² U.S. motor vehicle parts manufacturers provide more than 907,000 direct jobs, making it the nation’s largest employer of manufacturing jobs with a presence in all 50 states. Direct, indirect, and induced vehicle supplier employment accounts for over 4.8 million U.S. jobs. Moreover, vehicle suppliers contribute 2.5 percent of U.S. GDP. The average U.S. wage for direct vehicle supplier jobs reached \$80,300 – exceeding the average of all U.S. manufacturing sectors.³

Across the entire range of new vehicle innovation – from automated to zero-emission technologies – vehicle suppliers are leading the way. Vehicle suppliers conceive, design, and manufacture the OE components and technologies that make up about 77 percent of the value in every vehicle. Additionally, vehicle suppliers also manufacture aftermarket parts and materials for the maintenance and repair of 290 million vehicles on the road.

MEMA supports legislation that accelerates the development, commercialization, manufacture, and deployment of new, advanced technologies in the United States. This includes the more rapid deployment of critical building-block technologies needed to reach the targets for electrified and automated vehicles. The promotion of technology development will allow the U.S. to be more innovative and globally competitive and lead the world on the path of enhanced mobility for all Americans. It will also strengthen U.S. and global supply chains.

Global companies have a choice on where to grow their businesses and where to invest in research, development, and manufacturing of new products. Companies choose new facility locations based on complex analysis including customers and suppliers, consumer markets,

¹ 86 FedReg at 19230.

² MEMA represents its member companies through its four divisions: Automotive Aftermarket Suppliers Association (AASA); Heavy Duty Manufacturers Association (HDMA); MERA - The Association for Sustainable Manufacturing; and Original Equipment Suppliers Association (OESA).

³ [U.S. Labor and Economic Impact of Vehicle Supplier Industry](#), MEMA and IHS Markit. February 2021.

workforce capabilities, tax and regulatory policies, direct government incentives, local consumer demand, skilled workforce capabilities, and export potential. MEMA will continue to work with the Biden Administration and the Congress to ensure that both supply chain and infrastructure incentives are a force for progress addressing these concerns.

Motor Vehicle Parts Supply Chain Crisis

Since the end of 2020, the U.S. motor vehicle parts sector has faced a significant supply chain crisis. Although the shortage of semiconductors has been the focus of this crisis, the issues are more widespread (semiconductors, resins and foam, rubber, steel, and many other materials and components), as well as delays at our nation's ports. These shortages and delays lead to price increases on motor vehicle part inputs, cutting profits and funds available for research and development and other long-term priorities.

We support two key goals to enhance a robust, competitive domestic supply chain. The first is to develop and enhance the capability to produce cutting-edge technology in the U.S., such as state of the art semiconductor chips and wafers. That keeps America in the lead in a given technology and helps to restore our domestic strengths. At the same time, it is vital to adequately safeguard supply chain resiliency to in turn protect America's current manufacturing jobs and economic and national security. For example, in the semiconductor arena that means ensuring an adequate supply of critical established technology such as legacy chips that are critical to motor vehicle production. For that reason, MEMA supports requiring capacity to produce motor vehicle grade chips is a necessary addition to the CHIPS Act.

Due to these supply chain induced shortages, the industry is anticipating an overall decline in motor vehicle production for the first three quarters of 2021 with adverse employment impacts for vehicle parts manufacturers.

The current crisis reinforces the need to build more robust and steady global supply chains. The President's Executive Order and review of critical semiconductor, advanced battery and strategic and critical minerals could not be more timely. These supply chains must focus on boosting both domestic production and global availability. Over time, the U.S. must create greater sourcing of critical components and technologies for the domestic market. Additional sourcing from allies will also be helpful. Increasing and diversifying supplies of components and materials around the globe, including in the U.S., are vital to domestic motor vehicle parts manufacturers. Ultimately, diversifying supply helps create more sourcing opportunities and supply chain stability. The high-tech wafers comprising the critical technology in semiconductors is instructive. The global economy has become dependent on one company from one small country for more than half of these vital wafers. So, supply chains must focus on both domestic production and global availability. Over time, greater domestic U.S. sourcing of critical components and technologies for the U.S. market is a worthy objective.

At the same time, additional sourcing from allies will also be extremely helpful and will help rebuild frayed alliances. Yet some sourcing from adversaries and weak states will probably always be necessary. This fact is especially true with strategic and critical minerals, given the lack of availability of certain of these critical products and resources. The overall goal needs to be to minimize inputs from adversaries and maximize input from U.S. sources and our allies. Special consideration needs to be given to key U.S. allies in Asia and Europe as well as our USMCA allies Canada and Mexico.

Impacts of Current Strategic and Critical Materials Supply Chain on U.S. Vehicle Parts Suppliers

In these comments, MEMA is responding to the core general statement as well as some other elements of the outline provided in the DoD *Federal Register* notice:

“The DoD is particularly interested in comments and information directed to the policy objectives listed in E.O. 14017 as they affect the U.S. and global supply chains for strategic and critical materials. The Department is seeking input, from both consumers and producers of strategic and critical materials and downstream products containing these materials...”⁴ As a manufacturing sector with large strategic and critical materials consumption, we have some definitive views on the topic.

According to the Defense Logistics Agency, strategic and critical materials include: 28 metals, 11 miscellaneous non-metals, five ores and compounds, 16 rare earths, three precious metals, and three alloys.⁵ Within this group are 35 critical minerals as identified by the Department of the Interior in 2018.⁶

In 2019, the U.S. relied entirely on imports for 14 of the 35 critical minerals (except for a small amount of recycling). By contrast, China led global production of 16 of these minerals. The U.S. is a leading global producer of only two, beryllium and helium, although we have some primary production of nine others. However, the U.S. historically produced most of these vital minerals. In fact, through the 1980s, the U.S. led global production of most of the 35, then China made a national decision to take that leadership slot, which it had successfully done by the year 2000.⁷ With the right national resolve, the U.S. can decide to regain broad domestic capacity; however, it will take time. Work should be done in conjunction with key allies like Australia, Canada, the EU, Japan, and Chile to enhance overall competitiveness and production.

MEMA is providing information on a few materials as examples. This allows for a discussion of the major issues and decisions that might be applicable to all categories on the DOD list. The major products to be discussed are aluminum, the components of steel, and the components of lithium-ion batteries. Given the abbreviated timeline of the DoD’s request for comments, MEMA will continue to work with our members to refine a broad list of critical materials needed for successful supply chain development in the 21st century. We will have some additional thoughts over the next year on this topic as we provide broader comments in the next stage of the year-long Biden Administration supply chain evaluation.

Aluminum

Both raw and finished aluminum is imported from our allies, with some raw and significant finished produced in the United States. Aluminum is used in a wide range of motor vehicle products including batteries, body frame, engine parts, wheels, air conditioning condensers and tubing, brake parts, valves and more. Canada is a large aluminum producer and a USMCA partner. The U.S. is a net importing country of aluminum ingot. First, Section 232 tariffs on Canadian aluminum and then informal restrictions on imports were imposed by the Trump Administration. Those informal quotas need to end and a full supply of finished and raw aluminum from our USMCA partners and allies needs to be restored immediately. Then, the U.S. needs to end tariffs on aluminum from key allies like the EU and Japan. Broad supply sourcing from the U.S. and key allies is helpful to our

⁴ 86 FedReg at 19230.

⁵ Defense Logistics Agency, Strategic Materials list <https://www.dla.mil/HQ/Acquisition/StrategicMaterials/Materials/>

⁶ “[Critical Minerals and U.S. Public Policy](#),” by Marc Humphries, Congressional Research Service, R45810, June 28, 2019.

⁷ *Ibid*

sector and America's competitiveness. Ending of Section 232 tariffs will make allies more likely to work with us on pushing China toward a more market-oriented economy and restoring the effectiveness of multilateral organizations like the WTO. If we can move China toward being a more rules-based player in the international economic system, that will benefit U.S. and allied economic security.

MEMA urges the Biden Administration to repeal Section 232 aluminum trade restrictions on key allies. U.S. economic and national security is undermined by unilateral trade restrictions – tariffs, quotas, or other measures – against our allies. Trade restrictions have led to a variety of supply disruptions, cost increases, R&D diversions, and has harmed U.S. commercial and defense competitiveness. Positive incentives to increase U.S. production could include more R&D funding, government grants and tax incentives. The goal should not be to shift production away from allies, but to increase overall U.S. market share over time. Increased allied production is also important.

Steel Components

Steel is used in as many motor vehicle components as aluminum. Various grades of specialty steel are needed for because of a wide array of properties and applications. Nearly 20 critical materials from copper to gallium to nickel are used in steel production. Broad supply sourcing from the U.S. and key allies is helpful to our sector and America's competitiveness. Ending of Section 232 tariffs will make allies more likely to work with us on pushing China toward a more market-oriented economy and restoring the effectiveness of multilateral organizations like the WTO. If we can move China toward being a more rules-based player in the international economic system, that will benefit U.S. and allied economic security.

MEMA urges the Biden Administration to repeal Section 232 steel trade restrictions on key allies. U.S. economic and national security is undermined by unilateral trade restrictions – tariffs, quotas, or other measures – against our allies. Informal steel quotas were imposed on our Mexican USMCA allies as well. These trade restrictions have led to a variety of supply disruptions, cost increases, R&D diversions, and harmed U.S. commercial and defense competitiveness. These Section 232 and USMCA trade restrictions should cease. Positive incentives to increase U.S. production could include more R&D funding, government grants and tax incentives. The goal should not be to shift production away from allies, but to increase overall U.S. market share over time. Increased allied production is also important.

Lithium-Ion Battery Components

As our sector moves rapidly toward greater EV production, the need for lithium-ion battery components will accelerate. Critical materials such as aluminum, cobalt, copper, lithium magnesium, nickel, and silicon carbonate will be needed in much greater quantities. The U.S. has significant lithium production as do Australia and Chile. Shortages in production of the other critical materials by the U.S. and allies do exist. In addition to the sourcing of these materials, considerations must be made for where the materials are refined. Production and refining of critical materials for EVs need to move to the U.S. and to our allies over time.

Given the importance of EVs to our country's energy future, as well as DOD's vision of a greener approach to national security, it needs to be a top priority to generate more U.S. production through more r& d funding, government grants and tax incentives. The goal should not be to shift production away from allies, but to increase overall U.S. market share over time. Increased allied production is also important.

Recycling of Critical Materials

Similarly, the U.S. should increase funding for R&D and deployment of an infrastructure for recycling critical materials. The government should support and increase the recycling that already exists and provide funding to expand and improve recycling. Recycling is environmentally friendly and expands the sources of materials (e.g., electronics, circuit boards, batteries) that can be made available to the vehicle industry and many other sectors. The goals of this R&D should be increasing the share of recycled inputs and decreasing the domestic reliance on virgin critical materials as the EV market develops over time. Regulations that could stifle the development of the U.S. recycling infrastructure such as CERCLA and hazardous waste transportation restrictions should be evaluated and streamlined if possible. The U.S. should also evaluate ways to develop further domestic material processing capacity which is very limited in the U.S.

Workforce

Motor vehicle parts suppliers rely on a strong technical workforce, particularly in the wake of the transformation of vehicle technology and mobility. For the supplier industry to continue to innovate and remain competitive, companies need the right workers with the right skills at the right time. Workforce development and training is a necessary tool to provide workers the right skills to satisfy employment needs. The hiring and retention of skilled workers is a key challenge. Over the next decade, nearly 3.5 million manufacturing jobs likely need to be filled. The current skills gap is expected to leave 2 million of those jobs going unfilled. This is an unacceptable trajectory.

The motor vehicle parts sector has a skills gap and workforce shortage that keeps thousands of available positions unfilled. Broad application of federal, state, and local worker training and skills development is important to combat the current situation and longer-term challenges. Congressional passage of up to an additional \$100 billion in worker training funding as proposed in the American Jobs Act by President Biden will be extremely helpful on this issue. We will press for full funding and realistic and feasible approaches to federal program and partnerships.

MEMA understands that the talent of our workforce is a critical U.S. advantage and that our success relies on the ingenuity and technical expertise of our workers. New skillsets in areas such as computer science, data analytics, and robotics are needed to power the advanced manufacturing economy. Approaches that both businesses and education institutions should take to generate these skillsets include apprenticeships, career and technical training, internships, and STEM education and training. Industry needs to also do more with DoD supporting the transition for veterans into the civilian workforce.

The U.S. also needs additional engineer capability and incentives for engineering and technology graduates from universities. Our nation needs to restore open immigration and H1B and L visa policies. The Trump Administration's suspension of these visas expired on March 31, 2021. Now these key immigration quotas must be gradually expanded, and red tape streamlined to make progress in this key area of U.S. competitiveness for our sector and more broadly. As they deal with the immediate crisis on the southern border, the Biden Administration and the Congress must also remember to also keep the focus on reform the H1B and L visa programs to make them more friend to business and economic growth.

More specifically, the motor vehicle parts industry's workforce needs are evolving with the push to vehicle electrification and automation. In response to these changing needs, worker training programs must advance to continue providing U.S. workers with the necessary skills to manufacture and maintain new technologies. The industry will require a diverse workforce with

occupations across many industries with varying levels of education, training, and experience. Most of these occupations will require specialized training or work experience.

For example, skills necessary for EV and advanced battery development and production in our sector include: mining then refining materials; active materials production; cell production; module and pack production; automation enhancements; and, inserting cells and testing units. Finally, motor vehicle parts manufacturers involved in EV development and production need much more advanced mechatronic (electronic, electrical, and mechanical) engineering systems training. Also, as systems advance, more high voltage production training will also be necessary. Many of these skills are also needed for strategic and critical materials production.

Conclusion

MEMA is grateful that the Biden Administration is focused on the critical materials supply chain. Vehicle parts, components and systems have incredibly long and complex supply chains. MEMA appreciates the opportunity to provide this preliminary feedback to address a few examples of our supply chain concerns in this vital area for both current and new motor vehicle parts technologies.

MEMA would encourage the Biden Administration to consider other opportunities for public input and comments over the rest of the year as the Biden Administration takes in more comments on longer term supply chain issues. Also, MEMA urges the administration to work with the Congress to provide some incentives from the American Jobs Act to expand U.S. competitiveness and production capacity for critical materials. Finally, MEMA reiterates that it is important to work with our allies on all aspects of the supply chain to enhance our mutual competitiveness. Increasing and diversified supplies of critical materials at home and with allies around the globe are vital to U.S. motor vehicle parts manufacturers and to our defense industrial base.

For any additional information or questions, please contact Bill Frymoyer, vice president of public policy at bfrymoyer@mema.org.