



November 8, 2021

The Honorable Matthew S. Borman
Deputy Assistant Secretary for Export Administration
Bureau of Industry and Security
U.S. Department of Commerce
1401 Constitution Avenue NW
Washington, DC 20230

RE: Comments Responding to Bureau of Industry and Security Request for Public Comments on Risks in the Semiconductor Supply Chain

Dear Deputy Assistant Secretary Borman:

The purpose of this letter is to respond to the September 24, 2021 Notice of Request for Comments on Risks in the Semiconductor Supply Chain.

The National Electrical Manufacturers Association (NEMA) represents nearly 325 electrical equipment and medical imaging manufacturers that make safe, reliable, and efficient products and systems. Our combined industries account for 370,000 American jobs in more than 6,100 facilities covering every state. These industries produce \$130 billion in shipments and \$38 billion in exports of electrical equipment and medical imaging technologies per year. NEMA represents 58 product sectors serving seven major U.S. markets: Building Systems, Building Infrastructure, Lighting Systems, Industrial Products & Systems, Utility Products & Systems, Transportation Systems, and Medical Imaging.

SUMMARY OF RECOMMENDATIONS

- NEMA believes public policy should focus on incentivizing efficient and stable supply chains so that society can continue to enjoy 21st century quality products and services utilizing semiconductors.
- NEMA support rebuilding American semiconductor manufacturing capability through funding of the *Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act* and passing the *Facilitating American Built Semiconductors (FABS) Act*.
- Federal policymakers should resist the urge to take upon themselves the task of directing or otherwise allocating available supplies of semiconductors.

- Policymakers must recognize that not all semiconductors are the same, so attention should also be paid to the needs of manufacturers using less advanced chips to meet demand at an affordable cost.

DISCUSSION

Over the past year, NEMA has been closely monitoring developments related to supply chains in general and the semiconductor supply chain in particular. It is clear that these disruptions are lowering the competitiveness of our industry and hindering our Members' manufacturing capabilities. Trade distortions and the COVID-19 pandemic have resulted in shortages of essential components, the effects of which have exposed the severe and worsening deficiencies in the U.S. logistics network and have led to delays and costly inflation at every stage of the manufacturing supply chain. These issues are made worse with ongoing labor shortages, and added together, they disrupt domestic production, result in temporary shutdowns, reduced sales, increased consumer costs, and delayed delivery of critical products. All of this combines to stall the U.S. economy.

NEMA joined with the Association of Home Appliance Manufacturers and the Air-Conditioning, Heating, and Refrigeration Institute on a May 7, 2021 letter¹ to Commerce Secretary Raimondo emphasizing the importance of adequate supplies of semiconductors and similar products to ensure Americans' continued access to the equipment and systems manufactured by our Member companies. We noted that our Member companies' products perform essential functions across critical infrastructure sectors including healthcare, energy, grid, information technology, medical imaging, transportation, schools, water/wastewater, low carbon commercial buildings, and efficient home appliances. All of these sectors depend on an adequate global supply of semiconductors. Examples of products utilizing semiconductors include electricity meters; control gear for medium and high voltage switching and breaking equipment; advanced industrial automation equipment including robots and control panels; light emitting diode (LED) drivers for new/replacement lighting; lighting dimmers; sensors for indoor/outdoor lighting; thermostats; fire alarms; medical imaging equipment; submeters; and security systems. Without semiconductors, production slows or stops. Disruptions in the marketplace for semiconductors are creating production problems for our Member companies, which in turn affects their customers.

In our letter we acknowledged that Administration efforts supporting the manufacturing sector were a high priority. Indeed, Executive Order 14017, America's Supply Chains, establishes Administration policy of strengthened supply chain resilience and calls for multi-departmental analyses to advance that policy. However, we also stated that during this shortage, ***it is essential that the nation's semiconductor supply be available across industry sectors and that Administration policy should not—explicitly or implicitly—favor any one sector over others.***

¹ <https://www.nema.org/docs/default-source/advocacy-document-library/letter-to-secretary-raimondo-nema-aham-ahri.pdf>

We ask now, as then, for fairness so that the health, safety, comfort, productivity, and other needs of Americans can be met to ensure that people can stay safe and healthy.

The situation confronting the semiconductor supply chain is closely tied to broader supply chain problems. The effects of COVID-19 have exposed long-standing weaknesses in U.S. logistical networks that are decreasing U.S. competitiveness. Our Members need supportive public policy so they can continue to provide beneficial products to consumers in a timely, affordable way.

Tariffs on raw materials, low tech/cost components, equipment, and finished goods which are not adequately produced in the U.S., are causing delivery delays of critical products and/or higher consumer costs. Section 232 tariffs on imported steel and aluminum are causing record high metal prices (for many metals, producers won't even provide price quotes), outright unavailability of metal, and increasingly long delivery lead times. Likewise, the Section 301 tariffs on imports from China are causing a lack of supply and/or higher prices of substitute components/products, lack of time and resources to find new sources of components, and multiple companies sourcing from the same pool of non-Chinese supplier alternatives. NEMA believes the Commerce Department has leverage and speed to improve this situation by focusing attention on Section 301 in addition to Section 232 tariff impacts.

Hardly a day goes by without headlines describing current logistical and infrastructure bottlenecks. Ocean freight rates have more than tripled during the past 12 months, presenting an unsustainable economic burden for manufacturers and distributors and raising costs for consumers. Other associated ocean freight costs, such as detention, congestion fees, and surcharges, have elevated total costs to historic highs. This is coupled with a lack of available pier and storage space and substantial increases in transit times resulting in higher cost of goods and lower inventory levels. Labor shortages have worsened the problem, as a lack of longshoremen to unload ships has backlogged ports, and a lack of truck drivers has resulted from demographic changes, and an inability to train new drivers during the COVID-19 pandemic.

Our ability to move confidently into a modernized electrified future will be tied to our ability to resolve the challenges associated with the semiconductor supply chain. Americans broadly agree that our nation's infrastructure needs to be repaired and updated. People, goods, and services all suffer when our physical and digital connections degrade or fall behind. Without these technologies, the U.S. cannot meet our global climate and sustainability commitments. For example, for lighting and controls, the implications of problems in the semiconductor supply chain affect manufacturers' ability to meet energy efficiency and carbon reduction goals as well as safety and security for buildings, germicidal lighting solutions, roadways, and other public spaces.

The time is past due for policymakers to fulfill their roles in providing for the infrastructure America needs today—and into the future—if we are to maintain our competitiveness and provide the products and services that our citizens need and desire. Similarly, efficient and reliable supply chains support U.S. jobs in domestic manufacturing and assembly operations.

In medical imaging, the current semiconductor shortage presents a significant threat to manufacturers to meet known demand, which is particularly concerning as imaging remains so important to COVID-related care as well as other major health challenges. Many medical imaging technologies like ultrasound, MRI, X-ray, and CT rely on semiconductor chips to function and provide essential and timely patient care. The primary disruptions that continue to affect this industry in accessing semiconductors are decommits, cancellations, quantity reductions, allocation and lead time extensions with no notice. Another challenge for the medical imaging industry is its small market share relative to other industries such as automotive. Some medical device companies have invested in semiconductor sourcing by placing employees directly at key overseas production facilities to improve communication, but for many companies, it is very difficult to implement any kind of vertical integration, especially during the COVID-19 global public health emergency.

RECOMMENDATIONS

Public policy should focus on incentivizing efficient and stable supply chains so that society can enjoy 21st century quality products and services. The *Infrastructure Investment and Jobs Act of 2021* recently passed by Congress will provide significant positive incentives in this area. However, continued disruptions to supply chains will dampen our ability to implement new policies and programs embodied by that initiative for the benefit of American citizens and the environment.

More specifically to the semiconductor issue, NEMA underscores the importance of rebuilding American semiconductor manufacturing capability. This can be facilitated through funding of the *Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act* and passing the *Facilitating American Built Semiconductors (FABS) Act*. Over time, these laws would encourage domestic manufacturing of these products which will in turn lower costs and expand supply. That will present significant opportunities for NEMA members and is the long-run solution to this problem.

NEMA further believes that federal policymakers should resist the urge to take upon themselves the task of directing or otherwise allocating available supplies of semiconductors. This situation will require significant time to ramp up domestic production and may not address the full breadth of semiconductor technologies, so global supply will remain an important consideration for the long-term. Having said this, though, NEMA reiterates the need for these same policymakers to act appropriately to create an economic and policy environment in which adequate supplies of these products move smoothly from supplier to purchaser, regardless of whether they are based in the U.S. or overseas.

Policymakers also must recognize that semiconductors differ in terms of technology capabilities and costs. Because of this, government policy solutions and capacity building should not be focused exclusively on high-tech chips but also accommodate the needs of manufacturers using less advanced chips that many products in the marketplace have come to rely on. Countless

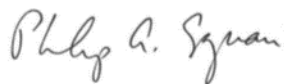
products critical to the safe and reliable operation of American infrastructure utilize older generation chip technology. Older technology is chosen because it meets the needs of the application at an affordable cost. Beyond the cost of the semiconductor itself and the component containing it, manufacturers can face design change, testing, and supply chain modification requirements when accommodating newer generation chip technology, further adding to the cost burden. Policies that focus exclusively on “next generation” chips will fail to fully address the identified problem. Moreover, investments in domestic manufacturing are unlikely to address the full breadth of, or demand for semiconductor technology. Therefore, trade policies and global supply are essential to supplement domestic investments to ensure a robust semiconductor supply for all consumer, commercial, and industrial products.

CONCLUSION

As demand for semiconductors continues to surge at the same time the electroindustry faces global supply constraints, we strongly urge the Administration to implement policies that expand the availability of semiconductors and chips immediately and invest in their future production so as to increase reliable semiconductor production capacity and access.

As the Department works through responsive comments in the docket, we would be happy to facilitate a meeting with you to discuss the electroindustry views of semiconductor supply chain challenges specifically and reliable supply chains generally. Please feel free to contact me (Philip.Squair@nema.org) to arrange greater engagement with NEMA.

Sincerely

A handwritten signature in cursive script that reads "Philip A. Squair".

Philip A. Squair
Vice President, Government Relations