# Defense Department Releases Report On Strengthening Defense-Critical Supply Chains

## EVALUATES DEFENSE INDUSTRIAL BASE SUPPLY CHAINS AND OUTLINES STRATEGIC INVESTMENTS IN VITAL NATIONAL SECURITY ITEMS

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This is the first in a series of client alerts that will be published in the near future regarding intensive assessments of six key supply chains — including "Defense-Critical Supply Chains" — that President Biden ordered last year pursuant to Executive Order on America's Supply Chains (the "**America's Supply Chains E.O.**" or "**E.O. 14017**"). As we previously reported, E.O. 14017 required relevant agencies to conduct comprehensive, "whole-of-government" reviews of identified critical supply chains. These reviews were to be undertaken in two steps. The first step required an immediate analysis (within 100 days of the executive order) concerning four key supply chains. The second step required more intensive, sectoral-specific supply chain assessments to be completed within one year of E.O. 14017 — including a report on the Defense Industrial Base ("**DIB**"). Pursuant to the second step, the Department of Defense ("**DoD**") issued a report on February 24, 2022 entitled "Securing Defense Critical Supply Chains: An Action Plan Developed In Response To President Biden's Executive Order 14017" (the "**DoD One-Year Supply Chain Report**").

DoD's assessment highlights the need for transformative investments to strengthen the resilience of the DIB. The report focuses specifically on addressing challenges in high-priority areas critical to operational readiness, including (1) kinetic capabilities, (2) energy storage and batteries, (3) castings and forgings ("**C&F**"), (4) microelectronics, and (5) strategic and critical materials. DoD outlines a "whole-of-government" and "whole-of-Nation" strategy to strengthen "the industrial base" and establish "a network of domestic and allied supply chains to meet national security needs." The strategy identifies independent actions to be taken by DoD while also calling for greater collaboration with interagency and industry partners.

## GROWING THE DEFENSE INDUSTRIAL BASE THROUGH INCREASED USE OF DOMESTIC PROCUREMENT PREFERENCES AND STREAMLINED PROGRAM REQUIREMENTS

The DoD One-Year Supply Chain Report provides a blueprint for making targeted investments in four key industrial base sectors: (1) kinetic capabilities, (2) energy storage and batteries, (3) C&F, and (4) microelectronics. As discussed below, the DoD One-Year Supply Chain Report also provides an update to the 100-day supply chain review for strategic and critical materials. According to DoD, "procurement and budget policies create a challenging business environment for industry" operating in these sectors. Generally, DoD recommends leveraging the federal procurement process and preference for domestic sources (under the "**Made in America**" laws) to develop smoother procurement cycles. In collaboration with the commercial sector, DoD intends to "determine which policy and regulatory changes would encourage expansion of capabilities." In addition, DoD plans to engage with Congress to "minimize the effect of uneven procurement funding" on the DIB. Of particular note, DoD intends to increase private capital investment and to reduce U.S. reliance on sole-source suppliers and foreign sources.

## SECTOR-SPECIFIC RECOMMENDATIONS AND OPPORTUNITIES FOR INDUSTRY

DoD identified several funding and interagency engagement opportunities to address "fragile domestic suppliers, sole-source dependencies, [and] foreign sourcing." For example, the report discusses President Biden's intention to issue a determination pursuant to Title III of the Defense Production Act ("**DPA**") "to support battery mineral production" in the United States. The DPA Title III program is designed to address domestic production shortfalls that severely impair national defense capability. Providing support to domestic battery producers under DPA Title III (and other acquisition policies) indicates an affirmative policy choice by the United States to pivot away from "low-cost cells produced in China with inherent environmental and human rights concerns." The same is true of other essential technologies, including semiconductors. Specifically, DoD called on Congress to fully fund the $52 billion Creating Helpful Incentives to Produce Semiconductors ("**CHIPS**") Program.

Additional information on key sector-specific vulnerabilities, recommendations, and opportunities outlined in the DoD One-Year Supply Chain Report are set forth below. Manufacturers and other companies that do business with the federal government should carefully consider this information as the policy landscape unfolds this year.

### 1. Energy Storage and Batteries

According to DoD, China's dominance in the global advanced battery supply chain presents by far the largest challenge to securing the battery supply chain. DoD makes several recommendations to prioritize domestic battery production. In collaboration with the U.S. Department of Energy ("**DOE**"), DoD intends to use existing Bipartisan Infrastructure Law ("**BIL**") funding to build domestic production capacity of "high-capacity batteries, with a particular focus on lithium batteries." The BIL authorizes $3 billion in competitive grants for battery minerals and refined materials, and an additional $3 billion for competitive grants to build, retool, or expand manufacturing of batteries and battery components (such as cathodes, anodes, and electrolytes). DoD plans to coordinate BIL battery investments in close partnership with other agencies, including the U.S. Departments of Commerce and Transportation.

The DoD One-Year Supply Chain Report also states that DoD will "develop a lithium battery strategy" by early 2023 to "maximize the value of U.S. Government investment and action in support of national defense." According to DoD, this strategy will include an implementation plan identifying joint investment opportunities with industry, with a focus on aligning DoD and commercial standards to ensure future defense requirements can be produced efficiently. Taken together, this information indicates that DoD will take action to grow all tiers of the domestic battery supply chain.

## 2. Microelectronics

The DoD One-Year Supply Chain Report similarly highlights foreign dominance — namely, by Taiwan and China — in commercial production of semiconductors. This constitutes a sector-specific challenge to securing “next-generation capability development” and domestic production of microelectronics. According to DoD, China is aggressively pursuing a larger share of the commercial market, while relative U.S. production capacity in this essential supply chain decreased from 37 percent of global production capacity in 1990 to 12 percent of global production capacity in 2020. DoD’s analysis underscores the significance of microelectronics for a wide variety of commercial and defense products. According to DoD, “the migration of semiconductor manufacturing to the Asia-Pacific region, and the subsequent decline in domestic manufacturing, represents a substantive security and economic threat for the United States.” As noted above, DoD recommends that Congress fully fund $52 billion in authorized CHIPS monies “to reverse the decades-long decline in domestic semiconductor fabrication.” In addition, DoD recommends leveraging the DPA to shore up national defense critical capabilities. In preparation for anticipated funding under the DPA and CHIPS Act, DoD intends to coordinate with microelectronics suppliers to improve the business environment for companies that work with DoD.

## 3. Castings and Forgings

C&F consist of “metals or composites developed into key parts and tools through high-intensity processes,” such as by pouring molten intermediates into a mold or “pounding, pressing, or squeezing metals under great pressure” to develop metal parts. The DoD One-Year Supply Chain Report indicates that the U.S. DIB has become reliant upon China “for very large cast and forged products used in the production of some defense systems” and that domestic production “capacity and overall market share” continue to erode.

DoD will develop a C&F strategy to “inform policy and investment decisions over the coming the years,” leveraging market research to evaluate “DoD’s casting and forging demand and the commercial sector’s ability to meet DoD’s requirements.” In part, the strategy will recommend “[e]xpanding use of additive manufacturing (*i.e.*, three-dimensional (“**3D”**) printing) and digital production capabilities as a tool to enhance traditional methods” to grow the C&F industrial base in the United States. In sum, the report recognizes the harmful impact that offshoring, and consolidation have had on domestic C&F production capacity in the United States and indicates DoD’s intention to address these challenges through targeted investments in new technologies.

## 4. Kinetic Capabilities for Advanced Weapons

According to the report, there is an inherent tension between an absence of a “commercial market for kinetic capabilities” and the fact that “the commercial market drives the development cycles and production capabilities for some commodity items (*e.g.*, electronic and electrical components, rare earth elements, chemicals, *etc.*)” that are used in kinetic weapons. The weapons sector’s reliance on the other key sectors that are identified in the report (*i.e.*, batteries, microelectronics, and C&F) also magnifies these challenges. As one example, DoD recommends an intensive effort to “identify the most critical chemicals required for kinetic production” in order to inform upcoming spending and “stockpiling decisions.” The report also explains how material specifications rely on “antiquated production and quality testing requirements out of line with modern industrial practices.” This suggests that new “funding options” could be developed to “encourage alternative sourcing” from suppliers that can meet the updated material specifications. In sum, DoD intends to strengthen the resilience of its kinetic weapons capabilities by becoming more directly involved with stakeholders at every tier of the supply chain.

## STATUS UPDATE ON STRATEGIC AND CRITICAL MINERALS

The DoD One-Year Supply Chain Report also provides an update on DoD's 100-day assessment (published during Summer 2021) of "supply chain risks for critical minerals and materials" and proposals "to mitigate those challenges." Reliable access to strategic and critical materials is essential to national security and economic prosperity. The report notes that an absence of sufficient supply has forced nations throughout history "to accept performance tradeoffs — such as ammunition rationing and resource scarcity-driven production shortfalls — which contributed to their defeat on the battlefield." The report explains that efforts "to strengthen U.S. stockpiles depends on appropriate legislation from Congress" so that DoD may exercise granted acquisition authority for products such as "rare-earth oxides and permanent magnets, titanium, and high explosives for missiles and munitions." This underscores the importance of engaging with Congress on critical minerals issues in order to ensure that the involved agencies have the tools that they need to effectuate these policy goals.

The report also indicates that DoD is partnering with other agencies on critical minerals supply chain issues to expand sustainable domestic production and processing capacity, and to collaborate with "allies and partners" to move supply chains away from adversaries.

## KEY TAKEAWAYS

The DoD One-Year Supply Chain Report provides stakeholders with the agency's assessment of challenges (and potential solutions) to key supply chains that are essential to the economic and national security of the United States. DoD states that the report will help to "prioritize policy and investment decisions over the coming years as" the agency works to strengthen the defense industrial base "and improve the resilience of its supply chains." Stakeholders should consider participating in the process at the Executive Branch level and in Congress as the Biden Administration's critical supply chain policies continue to take shape.

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