

Policy Update: White House Outlines Policies to Secure Domestic Supply Chain After 100-Day Review

Lewis-Burke Associates LLC – June 15, 2021

The White House released its 100-day supply chain review report, which presents a roadmap of challenges, risks, and opportunities to strengthen domestic supply chains in key industries. This report represents a significant step in creating resilient and sustainable domestic supply chains. The Biden-Harris Administration will likely pursue policy recommendations made in this report as a part of future legislation for health, defense, energy, and commerce issues. Strengthening U.S. manufacturing and industry is a key part of the Administration's "Build Back Better" campaign.

"The Department of Energy (DOE) notes that, today, China refines 60 percent of the world's lithium and 80 percent of the world's cobalt, two core inputs to high-capacity batteries—which presents a critical vulnerability to the future of the U.S. domestic auto industry." (from the Executive Summary, page 7)

Mandated by President Biden's February 25 [Executive Order](#) (EO) 14017, "America's Supply Chains," the review assesses risks and provides recommendations in four areas:

- **Semiconductors and Advanced Packaging**, led by the Department of Commerce (DOC).
- **Large Capacity Batteries**, including those used in electric vehicles, led by DOE.
- **Critical Minerals and Rare Earth Elements**, led by the Department of Defense (DOD), which will include an update on work conducted under President Trump's September 20, 2020 EO 13953 "Addressing the Threat to the Domestic Supply Chain from Reliance on Critical Minerals from Foreign Adversaries and Supporting the Domestic Mining and Processing Industries."
- **Pharmaceuticals and Active Pharmaceutical Ingredients**, led by the Department of Health and Human Services (HHS).

For each sector, the review examines the global supply chain, manufacturing processes, domestic manufacturing capability gaps, risks to national security, and recommendations to strengthen resiliency and "onshore" supply chains. The report's troubling conclusions include a decline in domestic manufacturing capacity and the number of higher education programs offered for industrial base-related disciplines, such as mining.

"Economists have estimated that about 25 percent of job losses can be attributed to the rise of China, particularly following its entrance into the World Trade Organization." (page 10)

Specific Recommendations

1. Rebuild our production and innovation capabilities. New legislation may include the following:

- a. Provide dedicated funding for semiconductor manufacturing and R&D.
 - b. Provide consumer rebates and tax incentives to spur consumer adoption of electric vehicles.
 - c. Provide financing across the full battery supply chain.
 - d. Establish a new Supply Chain Resilience Program at DOC.
 - e. Deploy the Defense Production Act (DPA) to expand production capacity in critical industries.
 - f. Invest in the development of next generation batteries.
 - g. Invest in the development of new pharmaceutical manufacturing and processes.
 - h. Work with industry and labor to create pathways to quality jobs through sector-based community college partnerships, apprenticeships, and on-the-job training.
 - i. Support small, medium, and disadvantaged businesses in critical supply chains.
 - j. Examine the ability of the U.S. Export-Import Bank (EXIM) to use existing authorities to further support domestic manufacturing.
2. Develop domestic markets that invest in workers, value sustainability, and drive quality.
 - a. Create 21st century standards for the extraction and processing of critical minerals.
 - b. Identify potential U.S. production and processing locations for critical minerals.
 - c. Improve transparency throughout the pharmaceuticals supply chain.
 3. Leverage the government's role as a purchaser of and investor in critical goods.
 - a. Use federal procurement to strengthen U.S. supply chains.
 - b. Strengthen domestic production requirements in federal grants for R&D.
 - c. Reform and strengthen U.S. stockpiles.
 - d. Ensure that new automotive battery production adheres to high labor standards.
 4. Strengthen international trade rules, including trade enforcement mechanisms.
 - a. Establish a trade strike force.
 - b. Evaluate the need for a Section 232 investigation on imports of neodymium magnets.
 5. Work with allies and partners to decrease vulnerabilities in the global supply chains.
 - a. Expand multilateral diplomatic engagement, including hosting a Presidential Forum.
 - b. Leverage the U.S. Development Finance Corporation (DFC) and other financing tools to support supply chain resilience.
 6. Monitor supply chain disruptions as the economy reopens from the COVID-19 pandemic.
 - a. Establish a Supply Chain Disruptions Task Force.
 - b. Create a data hub to monitor near term supply chain vulnerabilities.

Key observations Lewis-Burke discovered in the recommendations include:

- Expand investments in STEM education and workforce development, as the key sectors covered require high-skilled labor, and workforce shortfalls were identified in each agency's assessment. The report identified key mechanisms to achieve this such as:
 - The Department of Labor (DOL) Employment and Training Administration's (ETA) H1-B Skills Training Grants and Registered Apprenticeship programs;
 - Increasing employment-based visas and lifting per-country caps to attract global talent as proposed in President Biden's U.S. Citizenship Act; and
 - Investing in research grants specifically to Minority Serving Institutions (MSIs) that have a track record of closing racial gaps in STEM.
- Update manufacturing requirements in federal awards to ensure that taxpayer funding leads to products made in the United States.

- Reverse the defunding of higher mining and metallurgy education programs to produce new talent in manufacturing and keep pace with Chinese investments in its own workforce development.

The report also provides findings and recommendations specific to each industrial sector reviewed. Details that may shape the Administration's future R&D priorities follow:

Semiconductors

- Fund efforts to support semiconductor manufacturing and R&D in the U.S., as proposed in the *Creating Helpful Incentives to Produce Semiconductors (CHIPS) for America Act* and authorized in the fiscal year (FY) 2021 *National Defense Authorization Act (NDAA)*.
- *The U.S. Innovation and Competition Act (USICA)*, which was recently passed by the Senate, would provide \$52 billion in mandatory spending for CHIPS, which would provide:
 - \$39 billion over five years for DOC to establish incentives to “build, expand, or modernize commercial semiconductor fabrication, assembly, testing, advanced packaging, and R&D facilities.” This would be funded at \$19 billion in FY 2022 and \$5 billion each year through FY 2026. This would require applicants to secure commitments from institutions of higher education and other regional educational and training entities to provide workforce training including support for disadvantaged individuals.
 - \$10.5 billion over five years (\$5 billion in FY 2022) for R&D programs authorized at DOC. This includes funding a National Semiconductor Technology Center, microelectronics research at the National Institute of Standards and Technology (NIST), and the creation of a new Manufacturing USA Institute focused on microelectronics.
 - \$2 billion authorized for DOD R&D programs including a National Network for Microelectronics Research and Development.

High-Capacity Batteries:

- Increase support for National Labs R&D to reduce battery cell costs, strengthen performance, and reduce dependency on critical or scarce materials. This includes R&D for processes to profitably recycle and re-use materials from “spent” lithium batteries into the supply chain.
- Create a Manufacturing USA Institute for high-capacity batteries.

Critical Materials

- Develop sustainability standards for strategic and critical material industries.
- Fund R&D efforts authorized through the *Energy Act of 2020*, of which provisions were included in the *Fiscal Year 2021 Consolidated Appropriations Act*, for demonstration and commercialization projects for critical materials.
 - The report noted current interagency R&D had been focused on early-stage research, but more efforts were needed to transition new technologies to the market.
 - The report recommended that DOE and DOD work to strengthen links between early-stage research, DPA Title III Grants, and other incentives such as the Small Business Innovation Research (SBIR) program.
- Conduct a joint study between DOE, the Department of Education (ED), a Federally Funded Research and Development Center, and other stakeholders, to evaluate the establishment of an integrated education and R&D center for strategic and critical materials development.

Active Pharmaceutical Ingredients (API)

- Establish a Consortium for Advanced Manufacturing and Onshoring of Domestic Essential Medicines Production, using Title 7 of the DPA, led by HHS with support from other federal agencies and private companies to help companies build domestic drug production capabilities. HHS and the White House plan to host a summit on drug supply chain resilience to start this initiative.
- Invest in R&D for new manufacturing processes and technologies to support supply chain resilience. This includes support in commercialization through DOD's Defense Production Act (DPA) Title III Office and HHS, as well as a creation of an HHS task force to work with domestic manufacturers and universities to study and implement novel manufacturing technologies.

The Administration is expected to produce additional reports, as the EO also calls for a one-year review of six broader U.S. sectors to include industrial bases and supply chains in:

- Defense
- Public health and biological preparedness
- Information and communications technology (ICT)
- Energy
- Transportation
- Agricultural commodities and food production

This review will examine factors such as manufacturing and R&D needs to retain U.S. leadership in the associated industries, gaps in education and manufacturing workforce skills, potential impacts from climate change, and more. The reviews will consult with outside stakeholders in academia, industry, non-governmental organizations, communities and local governments, unions, and other potential partners.

Sources and Additional Information:

- The 100-Day Review, entitled "Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth" can be found [here](#).
- President Biden's February 24 EO on America's Supply Chains can be found [here](#), and a fact sheet on the EO can be found [here](#).