BATT
BATTERY ADVOCACY
FOR TECHNOLOGY TRANSFORMATION

July 14, 2025

Mr. Calvin Huggins
Legislative Clerk
Committee on Energy and Commerce
2125 Rayburn House Office Building
Washington, DC 20515

Dear Mr. Huggins,

On behalf of the Battery Advocacy for Technology and Transformation (BATT) Coalition, and our member companies, thank you for providing us the opportunity to provide testimony before the Committee on Energy and Commerce on Wednesday, May 21, 2025, to testify at the Subcommittee on Oversight and Investigations hearing entitled "Examining Ways to Enhance Our Domestic Critical Mineral Supply Chains." Policy actions in the 119th Congress are important to building and protecting the domestic upstream battery materials supply chain. This is a critical area for U.S. energy dominance and innovation, as well as presents an urgent national security imperative to establish a strong supply chain free of Chinese influence. Please find our responses to the additional Questions-for-Record received on June 27, 2025.

The Honorable Lori Trahan (D-MA)

1. **Mr. Howell, in your written testimony you mentioned the importance of the DOE's Loan Programs Office and Battery Materials Processing and Battery Manufacturing and Recycling Program as key in a comprehensive strategy to promote domestic battery manufacturing. How do these two programs work to support a resilient domestic battery manufacturing industry?**

   Response: By 2035, the U.S. high-capacity battery manufacturing supply chain value could reach over $100 Billion per year. Creating a sustainable U.S. high-capacity battery manufacturing industry is an urgent priority, and will be increasingly important in the near-term, as battery demand for grid storage, and transportation and defense applications, accelerates over the next decade.

   The Chinese Communist Party invests billions in this area each year and their long-term investment, dating back to more than 15 years, has been the key to their strategy to dominate the battery supply chain. China dominates all segments of the supply chain, bolstered by decades of government support, market manipulation, and questionable environmental practices that have made U.S. competitiveness difficult.

While the U.S. has been successful at increasing battery cell production at a rate that is roughly equivalent to the rate of increased demand, this is not the case with the upstream supply chain for batteries. This upstream supply chain includes everything from refined critical minerals such as lithium, graphite, nickel, and cobalt, to components. In addition, there are a multitude of specialty chemicals, such as ethylene carbonate and fluorochemicals, that are essential to battery production for which the U.S. has a massive trade imbalance.

The Department of Energy (DOE) Loan Program Office (LPO) and the Manufacturing and Energy Supply Chains Office (MESC) oversee important Federally-funded manufacturing investment initiatives that are critical to achieve a resilient domestic battery manufacturing industry and ecosystem.

DOE Infrastructure Investment and Jobs Act (IIJA) Section 40207 Battery Materials Processing and Battery Manufacturing & Recycling Program: Section 40207 provided DOE with $6.0 Billion to support competitive cost-shared grants aimed at building, retooling, or expanding manufacturing of batteries, battery components (such as cathodes, anodes, and electrolytes), battery materials refining and processing, and establishing recycling facilities to ensure that the United States has a viable domestic manufacturing and recycling capability to support a North American battery supply chain.

Execution of this Federal support is critical to continue the progress of establishing a domestic battery and materials supply chain. Most projects jointly funded by the MESC's Battery Materials Processing and Battery Manufacturing and Recycling Program support first-of-a-kind production and manufacturing facilities for the U.S. The IIJA funding offers a "shared risk" investment that attracts substantial private sector capital. These cost-shared grants attract significant private sector funding (for every $1 of Federal funds spent the private sector match more than $2) to establish the large-scale manufacturing and production facilities needed to compete with global competitors.

MESC has significant funds left to spend on commercial and large-scale manufacturing infrastructure investments, and the BATT Coalition advocates that Congress continues to support full funding and timely execution of this initiative.

DOE Loan Program Office funding: LPO provides loans and loan guarantees available to help finance large-scale domestic energy and transportation manufacturing projects with industry. While significant capital is available for innovative energy and advanced transportation technologies, many domestic firms lack access to adequate debt capital. LPO bridges this gap by providing access to needed loans and guarantees when private lenders are reluctant until the technology has reached full market acceptance.

LPO has significant Federally appropriated funds available to invest in commercial and large-scale manufacturing infrastructure investments, and the BATT Coalition advocates that Congress continues to support full funding and timely execution of the DOE loan program. In addition, we advocate that LPO prioritize applications that support critical materials

(including refined products) manufacturing facilities specifically important to establish domestic battery materials production.

In addition to MESC and LPO programs, the DOE battery R&D activities for decades have been instrumental in developing innovative battery technologies for commercial markets such as electric vehicles and grid storage. These innovations have also been essential for the development of advanced battery technology needed for defense applications such as drones, unmanned systems, directed energy capabilities, tactical vehicle electrification, dismounted warfighter communications, and distributed operations. Current funding priorities at the Department of Energy have the potential to dismantle the Nation's capability to innovate next generation battery technology and leapfrog Chinese capabilities. The development of next generation battery technologies like solid state batteries, lithium-metal, lithium sulfur, or batteries with silicon anodes (rather than graphite) are jeopardized with significantly reduced funding levels proposed by the Administration. In addition, processing and materials innovations that could relieve some of the Nation's dependence on critical battery materials will be diminished. And research of non-lithium batteries, such as sodium-ion batteries, will be negatively impacted. Most batteries in the market today, commercial and defense, trace back to DOE's R&D initiatives, specifically those related to electric vehicles and grid storage. The proposed cuts to these R&D programs will decimate the Nation's ability to compete with global competitors on future battery technology.

2. **Mr. Howell, you have experience on both sides of public-private partnerships, and in your testimony, you spoke to the level of trust the private sector must have in the government to participate in the programs. What effect will the gutting of key programs like the Office of Manufacturing and Energy Supply Chains have for the budding domestic battery manufacturing industry?**

Response: The U.S. Department of Energy's Office of Manufacturing and Energy Supply Chains (MESC) is responsible for strengthening and securing manufacturing and energy supply chains needed to modernize the nation's energy infrastructure. Established in 2022, MESC aims to support scale-up and deployment of the nation's manufacturing capacity through programs that are focused on establishing critical domestic supply chains while increasing circularity and leveraging private sector investment. Initially, MESC was supported with funds and authorities provided by the IIJA, the Inflation Reduction Act (IRA), and the Defense Production Act., MESC is strengthening Batteries & Critical Materials supply chains by supporting the establishment of new domestic manufacturing capacity for batteries, critical materials, and recycling.

The MESC Office at DOE is uniquely positioned to address critical gaps in the supply chain. There have been significant investments in this area to date with the IIJA Section 40207 and Section 40208 provisions[i], and the IRA tax credits[ii], particularly the Section 45X advanced manufacturing production credit. Though this represents a significant investment by the federal government, the IIJA provisions only support commercial-ready technologies and are limited to projects with a minimum size of $100 to $200 million dollars. This has left a funding gap in the commercialization spectrum for the upstream battery supply chain that

MESC is uniquely qualified to fill. Support for the scale-up of innovative materials and processes is still needed to fill in the gap between R&D-scale and large commercial deployments.

The IIJA requirement for relatively large-scale projects leaves little room for more high-risk, high-reward investments, which is precisely where the U.S. has a competitive advantage over China. New technologies, including materials extraction and refining, advanced materials synthesis, and cell manufacturing technology (such as solid-state), can significantly impact critical material demand and supply chain needs. However, the capital requirements and investment risks for the necessary facilities and equipment that can support manufacturing and processing validation at a relevant scale present an insurmountable barrier for many entities with otherwise promising technologies.

Though battery R&D is well funded in the $5-10 million per project range, this leaves a 10x jump between R&D and commercial scale deployment. Enabling pilot-scale projects and funding for $10-30 million-dollar federal share investments will serve as a critical steppingstone between R&D and commercial scale[iii] and enable U.S. innovations to leapfrog established Chinese supply chain facilities.

Without this funding, ongoing efforts to build domestic capability and capacity to produce next generation battery materials and technologies will be impacted and the U.S. will remain heavily reliant on Chinese and other foreign sources.

Partnerships between industry, national laboratories, and academic institutions are needed to deploy solutions to the systems of systems challenges posed by process integration and the manufacturing process scale-up of new technologies and deploy the innovative solutions necessary to achieve and sustain U.S. dominance in base chemical processing and establish a resilient domestic critical material processing capability. New technologies, including materials extraction and refining, advanced materials synthesis, can significantly impact critical material demand and supply chain needs. Enabling scale-up is key to translating U.S. innovation to U.S. manufacturing. Stakeholders include material innovators, battery material and cell manufacturers, equipment manufacturers, prototyping operations, national laboratories, and universities.

The BATT Coalition submitted a FY 2026 Energy and Water Development Appropriations Request to provide funding to the Department of Energy (DOE) Manufacturing and Energy Supply Chains Office (MESC) to support scale-up of upstream battery supply chain innovations with the potential to significantly advance critical mineral processing with $200 million for FY 2026.

Recommended FY 2026 MESC Report Language

The Committee provides not less than $200,000,000 to the Manufacturing and Energy Supply Chains Office for up to 15 industry-led projects to scale up domestic capacity of next generation battery materials, cell technologies, and manufacturing processes to support increased onshoring of the upstream battery supply chain.

The Honorable Kathy Castor (D-FL)

1. **What do you think the Department of Energy can do to implement price support tools for critical minerals with its existing authority and funding?**

   Response: Establishing a domestic supply chain for critical material production takes time. Long-lasting Federal policies are needed that transcend political administrations and dynamics. Downstream product developers and end-users cannot switch supply chains quickly. It often takes several years or as long as a decade to bring new upstream material suppliers online. Unpredictable and ever-changing regulatory and political environments create unstable demand and supply signals, hindering investment and commercialization.

   In addition, some estimates for battery critical materials show that U.S.-produced materials and components have landed costs that are at least 10–20% higher than similar materials imported from Asia. Typically, product developers and end-users have no incentive to pay a premium for U.S.-produced materials. Without incentives, U.S.-based battery manufacturers will likely choose to import critical minerals and materials from outside the United States to take advantage of their lower landed costs.

   The committee should consider the following to improve investment attractiveness to catalyze new capacity investment in the United States and support uptake of domestically produced critical materials by product developers and end-users.

   - Production incentives for Critical Materials: Expand incentives to offset production-related costs (e.g., production tax credit) by supporting "H.R. 3200: The Critical Minerals and Manufacturing Support Act'. On May 5, 2025, Congressman Raul Ruiz (D-36th CA) and Congressman Gabe Evans (R-8th CO) introduced the H.R. 3200 'Critical Minerals and Manufacturing Support Act (CMMA)' Bipartisan House Bill focused on securing a domestic battery critical mineral and processing supply chain. With regards to battery materials and components, the incentives in 45X for domestic critical material producers are far less than the incentives for producers in the midstream and downstream supply chain. The CMMA rectifies both the issues of Foreign Entities of Concern and the insufficient incentives for critical material producers by including strong sourcing requirements and FEOC restrictions for the domestic battery supply chain and increasing the incentive from 10 to 25 percent for upstream producers of domestic critical minerals and materials. Specifically, CMMA would:
     - Increase the 45X incentive to 25% more closely align these materials with the 45X incentives for battery module production, although the proposed tax credit for electroactive materials is still well below the 45X tax credit for cell production. In addition, all these supply chains serve dual use markets, so these incentives should have the direct impact of lessening the dependence of the DoD on Chinese materials markets.
     - Add North American/FTA material sourcing requirements to the eligibility rules for 45X credits for battery components and materials.

- Modifies electrode active material definition to include (1) electrode active precursor materials used in the production of cathode and anode materials, (2) binders, (3) solid-state electrolytes, and (4) adds "Silicon which is silicon or silicon composite used as an electrode active material in battery anode" as applicable critical material.

- Materials Price Incentives and Off-Sets
  - The market price for many critical minerals and materials is controlled by FEOC incumbents. Allocate funds to DOE to provide capability for Domestic companies to "Contract for Difference" related to critical materials production vs foreign competitor price.
  - Create insurance pools for domestically produced critical minerals and intermediate chemical precursors and materials to hedge against price fluctuations and market manipulation by incumbent producers and foreign governments.
  - Assess potential Material Stockpile and/or Buyers Club Options that provide a ready reserve of critical materials for industry to access to mitigate price manipulation or supply interruptions.
- Demand Incentives
  - Leverage government procurement programs to support domestically sourced minerals and intermediate materials and provide advanced market commitments that reduce commercialization risk.
  - Support consumer incentives for U.S. products that contain critical materials and include domestic content requirements to promote the use of domestically sourced or produced upstream and midstream materials.

2. **What else can the Energy & Commerce Committee do to ensure policies are carefully calibrated for specific minerals?**

Response: The Committee should assure DOE supports a broad spectrum of critical energy minerals and mineral resources including geological resources, unconventional resources, and recycling resources. In addition, the Department should expand its focus to include upstream refined materials, processed materials and chemical precursors necessary to manufacture energy component materials and products.

The Committee should support the DOE MESC "Modeling, Mapping, And Analysis Program" to continue the development of a robust methodology that can not only identify critical mineral and material gaps in the U.S. but also develop scenario planning to identify where the U.S. has a current supply chain strength that may be vulnerable to future concerns or vulnerabilities.

Regarding the high-capacity battery supply chain, the BATT Coalition advocates for the Committee to direct Federal agencies to align and leverage dozens of programs and efforts across the Federal government to support and grow the entire battery supply chain.. Federal investments and activities, domestic and international, should be aligned to accelerate the

development of the full end-to-end battery supply chain, including the critical minerals and materials we need to meet production and deployment goals—lithium, cobalt, nickel, graphite, and manganese.

To fully secure the Nation's critical mineral supply chains, and ensure that we uphold and strengthen environmental and labor standards, a mineral-by-mineral approach is needed, the Committee should:

- Direct and support Federal agency activities to reform mining laws, regulations, and practices to strengthen standards while increasing efficiency. Outdated mining laws and regulations should be modernized to ensure strong environmental and labor standards throughout the full mining process.
- Direct the Federal government to improve interagency cooperation and coordination during environmental review and permitting, in concert with project proponents, state, Tribal, and local governments, and communities to improve permitting times, reduce conflict, and improve environmental, social, and economic outcomes.
- Direct and support sustainable and responsible domestic production, including mining, processing, recycling, and recovery from conventional, unconventional, and secondary sources, such as mine waste and geothermal brine.
- Direct and support Federal agencies working with allies and partners to diversify global supply chains.

3. **What safeguards are necessary to ensure we're not supporting projects, especially unviable ones, indefinitely?**

Response: Given the scope and magnitude of the responsibility in implementing the IIJA and the IRA, it is critical for DOE to conduct stringent oversight of program designs and rollouts. This will protect taxpayers' investment and keep program operations running efficiently to ensure that our provisions and initiatives are launched in a timely manner.

The DOE LPO and MESC programs support the establishment of U.S. manufacturing and production facilities that are high-risk and often first-of-a kind production plants or facilities that will supply an early commercial market. The DOE MESC and LPO programs should continue to incorporate a rigorous project selection review process and an award negotiation process that includes identification of project technical risks, financial risks, market risks, and project execution risks before the project is launched. Once the project is underway, continual oversight by DOE is required to ensure that execution remains on track, schedule or financial hurdles are identified, and project execution mitigation strategies are developed and implemented as needed.

One key recommendation relates to adequately staffing the Department to provide critical oversight of funded programs and projects. The BATT Coalition is concerned that recent staffing reductions at the DOE may negatively impact on the Department's ability to provide core project and program oversight functions adequately. We recommend that the DOE

retain or hire project and program oversight specialists, contracting officers, and budget oversight staff that are required to responsibly oversee the tremendous investment Congress has made.

In addition, DOE program offices such as MESC and LPO, should routinely engage with the Office of Inspector General (OIG) to mitigate risks in the programs under their purview. The Department's OIG plays a critical oversight function in ensuring that programs mitigate the risk of fraud, waste, and abuse. The OIG should engage in periodic performance reviews and audits to assure viability of projects that have been identified as "highest risk".

Regarding DOE's technology discovery and innovation programs, sustained federal funding should be focused on long-term R&D for high-risk, high-reward technologies. Technical viability and/or market viability are not always clear when supporting innovations that could enable substantial improvements over or possibly leapfrog the current state-of-the-art. Prematurely stopping research may impede progress, noting that research failures often eventually lead to research success. Constant changes in research priorities are detrimental to overall progress in fully developing impactful technologies that have the potential to solve the Nation's energy and economic security problems. The Department of Energy should develop a comprehensive "Blueprint" cataloging the Nation's major energy and manufacturing supply chain issues and threats, identifying innovation and deployment pathways that have the potential to mitigate those issues and threats, and providing a longer term (5-year) R&D investment strategy that inform and help industry and research organizations planning.

We appreciate the Committee's leadership and consideration of these vital reforms to support the growth of the U.S. critical materials supply chain. The BATT Coalition stands by to be a resource on these critical matters.

Sincerely,

David Howell

David Howell
Strategy Director
The BATT Coalition

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[i] Bipartisan Infrastructure Law Guidebook: https://www.whitehouse.gov/build/guidebook/

[ii] Inflation Reduction Act Guidebook: https://www.whitehouse.gov/cleanenergy/inflation-reduction-act-guidebook/

[iii] Pilot-scale projects are critical in limiting the risk as a technology moves from small-scale laboratory demonstration to volume manufacturing.