

## DE-FOA-0002502: Request for Information on Risks in the High-Capacity Batteries, including Electric Vehicle Batteries Supply Chain

DATE: March 26, 2021  
SUBJECT: Request for Information (RFI)

### Description

The Vehicle Technologies Office (VTO), within the U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy (EERE), seeks public comment on its Request for Information (RFI) number DE-FOA-0002502 regarding the Risks in the High-Capacity Batteries, including Electric Vehicle Batteries Supply Chain. On February 24, 2021, President Biden issued an Executive order on "America's Supply Chains," which directs several Federal agency actions to secure and strengthen America's supply chains. One of these directions is for the Secretary of Energy (the Secretary), to submit, within 100 days and in consultation with the heads of appropriate agencies, a report to the President identifying risks in the high-capacity batteries, including electric-vehicle batteries, supply chain and policy recommendations to address these risks.

### Background

On February 24, 2021, President Biden issued Executive Order 14017, "America's Supply Chains" (86 FR 11849). E.O. 14017 focuses on the need for resilient, diverse, and secure supply chains to ensure U.S. economic prosperity and national security. Such supply chains are needed to address conditions that can reduce critical manufacturing capacity and the availability and integrity of critical goods, products, and services. In relevant part, E.O. 14017 directs that within 100 days, the Secretary shall submit a report to the President, through the Assistant to the President for National Security Affairs (APNSA) and the Assistant to the President for Economic Policy (APEP), identifying the risks in the supply chain for high-capacity batteries, including electric vehicle batteries, and policy recommendations to address these risks.

### Purpose

The purpose of this RFI is to solicit information from industry, academia, research laboratories, government agencies, and other stakeholders directed to the policy objectives listed in E.O.

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14017 as they affect the supply chain for high-capacity batteries, including electric vehicle batteries.

**This is solely a request for information and not a Funding Opportunity Announcement (FOA). EERE is not accepting applications.**

## **Request for Information Elements**

DOE is requesting information regarding how the following elements affect the supply chain for high-capacity batteries, including electric vehicle batteries:

- (i) Critical materials including battery grade nickel, cobalt and lithium, underlying the supply chain for high-capacity batteries, including electric vehicle batteries;
- (ii) Manufacturing and other capabilities necessary to produce high-capacity batteries, including extraction of raw materials, refining, production of advanced cathode and anode powders, separators, electrolytes, current collectors, and advanced recycling technologies for high-capacity batteries;
- (iii) The availability of the key skill sets and personnel necessary to sustain a competitive U.S. high-capacity batteries ecosystem, including the domestic education and manufacturing workforce skills needed for high-capacity battery manufacturing; the skills gaps therein, and any opportunities to meet future workforce needs;
- (iv) Risks or contingencies that may disrupt the high-capacity batteries supply chain (including defense, intelligence, cyber, homeland security, health, climate, environmental, natural, market, economic, geopolitical, human-rights or forced labor risks):
  - (a) Risks resulting from lack of or failure to develop domestic manufacturing capabilities, including emerging capabilities;
- (v) The resilience and capacity of the high-capacity battery supply chain to support national and economic security and emergency preparedness, including:
  - (a) Manufacturing, recycling, or other needed capacities (including ability to modernize to meet future needs);
  - (b) Gaps in manufacturing capabilities, including nonexistent, threatened, or single-point-of-failure capabilities, or single or dual suppliers;

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- (c) Location of key manufacturing and production assets, and risks posed by these assets' physical location;
  - (d) Exclusive or dominant supply of critical or essential goods and materials by or through nations that are, or may become, unfriendly or unstable;
  - (e) Availability of substitutes or alternative sources for critical or essential goods and materials;
  - (f) Need for research and development capacity to sustain leadership in the development of goods and materials critical or essential to high-capacity battery manufacturing;
  - (g) Current domestic education and manufacturing workforce skills and any identified gaps, opportunities, and potential best practices;
  - (h) Role of transportation systems in supporting the high-capacity battery supply chain and risks associated with these transportation systems;
  - (i) Risks posed by climate change to the availability, production, or transportation of goods and materials critical to high-capacity manufacturing;
- (vi) Potential impact of the failure to sustain or develop elements of the high-capacity supply chain in the United States on other key downstream capabilities. Also, the potential impact of purchases of high-capacity batteries products by downstream customers, including volume and price, product generation and alternate inputs.
- (vii) Policy recommendations or suggested executive, legislative, regulatory changes, or actions to ensure a resilient supply chain for high-capacity batteries (e.g., reshoring, nearshoring, or developing domestic suppliers, cooperation with allies to identify or develop alternative supply chains, building redundancy into supply chains, ways to address risks due to vulnerabilities in digital products or climate change).
- (viii) Any additional comments relevant to the assessment of the high-capacity batteries manufacturing and advanced packing supply chains required by E.O. 14017.

DOE encourages commenters, when addressing the elements above, to structure their comments using the same text as identifiers for the areas of inquiry to which their comments respond to assist DOE in more easily reviewing and summarizing the comments received in response to these specific comment areas. For example, a commenter submitting comments responsive to (i) critical and essential goods and materials underlying the high-capacity battery

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supply chain, would use that same text as a heading in the public comment followed by the commenter's specific comments in this area.

### **Disclaimer and Important Notes**

This RFI is not a Funding Opportunity Announcement (FOA); therefore, EERE is not accepting applications at this time. EERE may issue a FOA in the future based on or related to the content and responses to this RFI; however, EERE may also elect not to issue a FOA. There is no guarantee that a FOA will be issued as a result of this RFI. Responding to this RFI does not provide any advantage or disadvantage to potential applicants if EERE chooses to issue a FOA regarding the subject matter. Final details, including the anticipated award size, quantity, and timing of EERE funded awards, will be subject to Congressional appropriations and direction.

Any information obtained as a result of this RFI is intended to be used by the Government on a non-attribution basis for planning and strategy development; this RFI does not constitute a formal solicitation for proposals or abstracts. Your response to this notice will be treated as information only. EERE will review and consider all responses in its formulation of program strategies for the identified materials of interest that are the subject of this request. EERE will not provide reimbursement for costs incurred in responding to this RFI. Respondents are advised that EERE is under no obligation to acknowledge receipt of the information received or provide feedback to respondents with respect to any information submitted under this RFI. Responses to this RFI do not bind EERE to any further actions related to this topic.

### **Confidential Business Information**

Pursuant to 10 CFR 1004.11, any person submitting information that he or she believes to be confidential and exempt by law from public disclosure should submit via email: one copy of the document marked "confidential" including all the information believed to be confidential, and one copy of the document marked "non-confidential" with the information believed to be confidential deleted. Submit these documents via email. DOE will make its own determination about the confidential status of the information and treat it according to its determination.

### **Evaluation and Administration by Federal and Non-Federal Personnel**

Federal employees are subject to the non-disclosure requirements of a criminal statute, the Trade Secrets Act, 18 USC 1905. The Government may seek the advice of qualified non-Federal personnel. The Government may also use non-Federal personnel to conduct routine, nondiscretionary administrative activities. The respondents, by submitting their response, consent to EERE providing their response to non-Federal parties. Non-Federal parties given access to responses must be subject to an appropriate obligation of confidentiality prior to being given the access. Submissions may be reviewed by support contractors and private consultants.

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## Request for Information Response Guidelines

Responses to this RFI must be submitted electronically to [Vto@ee.doe.gov](mailto:Vto@ee.doe.gov) no later than **5:00pm (ET) on April 14, 2021**. Include “High-Capacity Batteries Supply Chain RFI” in the subject line of the email. Responses must be provided as attachments to an email. It is recommended that attachments with file sizes exceeding 25MB be compressed (i.e., zipped) to ensure message delivery. Responses must be provided as a Microsoft Word (.docx) attachment to the email, and no more than 10 pages in length, 12-point font, 1-inch margins. Only electronic responses will be accepted.

Please provide your answers by responding to a specific question(s) and reference the Number (for example iv.a) for each question and answer. Please follow the question numbering convention provided in the RFI to identify the answer. Respondents may answer as many or as few questions as they wish.

EERE will not respond to individual submissions or publish publicly a compendium of responses. A response to this RFI will not be viewed as a binding commitment to develop or pursue the project or ideas discussed.

Respondents are requested to provide the following information at the start of their response to this RFI:

- Company / institution name;
- Company / institution contact;
- Contact's address, phone number, and e-mail address.

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