

**Request for Information (RFI)**  
**Under the**  
**Expeditionary Missions Consortium – Crane (EMC<sup>2</sup>)**  
**Number: N00164-24-9-0001**

**EMC<sup>2</sup>-RFI-26-04**  
**Lithium Battery Abusive Testing Capabilities**

**RFI Issue Date: 26 February 2026**

**RFI Responses Due: 13 May 2026**

## **Abstract**

Lithium batteries are a critical power source for a wide range of military applications. To ensure the safety and reliability of these batteries in demanding operational environments, the Department of War (DoW) requires robust testing capabilities to evaluate their performance under abusive conditions. This includes, but is not limited to, thermal, mechanical, and electrical abuse. The DoW is seeking information from industry on the capabilities available for the abusive testing of lithium batteries. Capabilities of interest include cell, module, and battery propagation testing (full casualty), heat release rate testing, gas analysis, and environmental testing.

## **Background**

This Request for Information (RFI) is issued by the Expeditionary Missions Consortium – Crane (EMC<sup>2</sup>) in support of the Naval Surface Warfare Center for the specific topic area identified below. The Topic Sponsor desires to collaborate with EMC<sup>2</sup> Members and industry to discuss the topic and possibly shape future EMC<sup>2</sup> Request for Solutions (RFS).

**Feedback will not be provided and responses to the RFI papers will not be returned.**

## **RFI Topic**

**EMC<sup>2</sup>-RFI-26-XX:** [Lithium Battery Abusive Testing Capabilities]

**RFI Topic Sponsor:** [Battery Development Safety Office, DON Operational Energy Department]

## **Objectives**

**Subject:** Request for Information (RFI) on Capabilities for Abusive Testing of Lithium Batteries.

## **Introduction**

The Department of War (DoW) is seeking information from industry on the capabilities available for the abusive testing of lithium batteries. This RFI is intended to gather information on the current state of the market and to identify potential sources for conducting such testing. This is for information and planning purposes only and does not constitute a solicitation for proposals.

## **Background**

Lithium batteries are a critical power source for a wide range of military applications. To ensure the safety and reliability of these batteries in demanding operational environments, the DoW requires robust testing capabilities to evaluate their performance under abusive conditions. This includes, but is not limited to, thermal, mechanical, and electrical abuse.

## **Information Requested**

Interested parties are requested to provide information on their capabilities in the following areas:

## **Topics to be Addressed within RFI Response**

### **1. Testing Environment:**

Please describe your testing facilities and indicate whether your capabilities are for indoor or outdoor testing environments.

### **2. Testing Services:**

Please provide details on your capability to perform the following types of abusive testing:

- Short Circuit
- Overcharge
- Overdischarge / Voltage Reversal
- High-Temperature
- Battery Management System

DISTRO A: Document has been approved for public release

- Electrical Safety Device
  - Propagation (cell-to-cell within module, module-to-module within battery)
  - Crush
  - Nail Penetration
  - Bullet Penetration
  - Environmental (temperature, humidity, altitude, vibration, shock, acceleration)
  - Non-Abusive Testing (long-term life-cycle testing, etc)
3. **Test Capacity:**  
Describe your capacities for thermal, mechanical, and electrical abuse testing. Specify the maximum voltage that can be tested. Specify the maximum battery size (e.g., dimensions, weight, capacity in kWh) that your facility can accommodate for these tests.
4. **Heat Release Rate Testing:**  
Describe your methodology and the equipment used to measure the heat release rate of lithium batteries during thermal runaway events.  
Specify the maximum battery size for which you can perform heat release rate testing and the maximum heat energy (MW) that can be measured.
5. **Gas Analysis:**  
Detail your capabilities for analyzing the composition of gases released during battery failure, including the identification and quantification of flammable and toxic gases, generation rate, and total amount generated. Specify the maximum battery size that can be tested with your gas analysis equipment.
6. **Business Information:**  
Please provide the following information about your organization:
- **Testing Standards:** (Navy S9310, UN 38.3, UL, SAE, IEEE, ISO, etc)
  - **Willingness to Collaborate:** State your company's willingness to work with the DoW.
  - **Business Structure:** Indicate whether your company is an independent testing facility or part of a larger battery vendor or manufacturer. Note any potential concerns working with proprietary data.
  - **Testing Constraints:** Are there any constraints to the type or amount of testing that can be performed at your facility? (location, environmental permit restrictions, etc)

### **Format Requirements of the RFI Papers**

- 10-page limit, inclusive of contact information.
- Times New Roman 10 (or larger) Single-spaced, single-sided, 21.6 x 27.9 cm (8.5 by 11 inches).
- Smaller type may be used in figures and tables, but must be clearly legible.
- No pictures of a marketing/advertising nature or hyperlinks are allowed.
- File format must be Microsoft Word or PDF.

- These RFI submissions will be shared with the Sponsor; therefore, all information must be **non-proprietary**.
- Do not submit classified information.

### **Eligibility**

Any industry member is authorized to submit a solution for the listed RFI above. However, to be eligible to respond to any future RFS, respondents must be a member of the EMC<sup>2</sup> Consortium and be a 'Member in Good Standing'.

### **Submission Instructions**

Respondents are required to submit complete RFI documents that demonstrate the objectives identified above.

Submit responses and technical questions to the ATI email address listed below:

[emc.responses@ati.org](mailto:emc.responses@ati.org)

For general submission questions or if you need a secure link to send CUI documents,, please contact the EMC<sup>2</sup> Consortium Manager, ATI, at [emc@ati.org](mailto:emc@ati.org) or visit the EMC<sup>2</sup> website at [emccrane.org](http://emccrane.org) for membership requirements.

This RFI is issued solely for information purposes. It does not constitute an RFS or a promise to issue an RFS in the future. This RFI does not commit the Government to contract for any supply or service in any manner. Respondents are advised that the U.S. Government will not pay for any information or administrative costs incurred in response to this RFI; all costs associated with responding to this RFI will be solely at the interested parties' expense. Not responding to this RFI does not preclude participation in any future RFS, if any is issued.