Li-Bridge
NAATBatt Update

February 2025

Li-Bridge brings together public and private sector

Goal: ecosystem to connect the Li-battery supply chain

NY BES+ NEW YORK BATTERY AND ENERGY STORAGE TECHNOLOGY CONSORTIUM

NAATBatt INTERNATIONAL

FEDERAL SECTOR WILL BE ENGAGED THROUGH THE FEDERAL CONSORTIUM FOR ADVANCED BATTERIES (FCAB)

FCAB FEDERAL CONSORTIUM FOR ADVANCED BATTERIES

> 14 Federal Agencies, including DOE

U.S. PRIVATE SECTOR WILL BE ENGAGED THROUGH U.S.-BASED TRADE ASSOCIATIONS

> 300 Industrial partners

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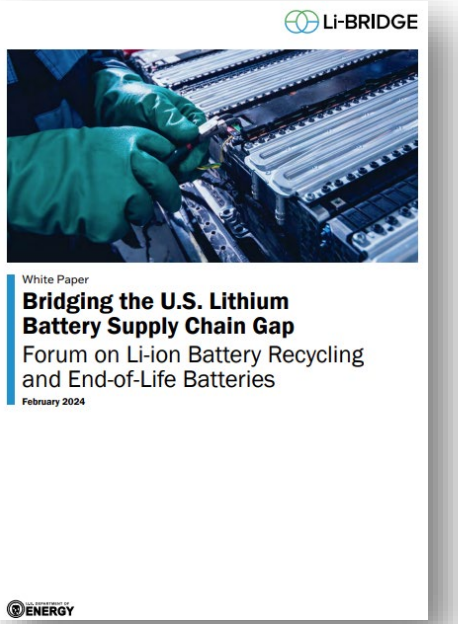
Milestones 2024

- Published Battery Industry Workforce Needs assessment
- Published End-of-Life whitepaper
- Pilot Line Network demand study results released internally
  - TRL / MRL Harmonization chart published
- Met with 15 labs (5 in person) to assess readiness for PLN
- Issued internal DOE PLN report and recommendations
- Coordinated Traceability workshop between government & industry
- Published internal report on the path to traceability in the US
- Guided whitepaper drafting for SAE use on traceability standardization
- Supported the FCAB Blueprint update initiative



Readiness Assessment Framework

	Technology Readiness Level TRL		Manufacturing Readiness Level MRL		Specialty Commercializatio	and High Volume	Military and Specialty Volumes		Automotive and High Volumes	
	Level	Description	Level	Description	5000.2	Process	Specialty Materials		Main Materials	
	TRL 0	Idea. Unproven concept, no testing has been performed			Sample Level	Sample Level	Material Quantities	Cell Quantities	Material Quantities	Cells Quantities
Concept	TRL 1	Basic Research, principles postulated and observed but no experimental proof available	MRL 1	Basic concept but no proof available	Pre - MSA A	Demonstration	gr - 1 Kg cm - 1 m	10 - 100 all formats	gr - 1 Kg cm - 1 m	10 - 100 all formats
	TRL 2	Technology formulation Concept and application have been formulated		Basic production model avaialble with grounded data						
	TRL 3	Applied research. First laboratory tests completed; proof of concept	MRL 2	Identify production concept, cost model meets equipment/facility model						
Prototype	TRL 4	Small Scale prototype, Built in a laboratory environment ("ugly" prototype)	MRL 3	Verify correctness of production concept	Material Solutions Analysis	Concept Validation A	1 - 100 Kg 1 - 100 m	100 - 1000 all formats	1 - 100 Kg 1 - 100 m	100 - 1000 all formats
	TRL 5	Large scale prototype Tested in intended environment	MRL 4	Immitate prodcution steps from identified concept with expected quality	Technology Maturation and Risk Reduction B					
	TRL 6	Prototype System. Tested in intended environment close to expected performance	MRL 5	Test manufacturing prototypes in production-related circumstances						
Develop & Test	TRL 7	Demonstration system. Operating in operational environment at pre-commercial scale	MRL 6	Collect and analyze statistical data, plan steps of raw material supply	Engineering & Manufacturing Development	Design Validation B	100 +Kg 100+m	Low Volume Manufacturing <10MWh/yr Production Format	100 Kg - 1KT 100 km - 1Mm	Pilot Manufacturing 1k - 10k Production Format
	TRL 8	First of a Kind commercial system. Manufacturing issues solved	MRL 7	Test manufacturing prototypes and access quality risks	C					
	TRL 9	Full commercial application. Technology available for customers	MRL 8	Test in manufacturing real circumstance and test examine prodcution quality	Production & Development	Product Validation C	Quantity As Needed	Quantities As Needed Production Format	1 - 20 KT or Mm	Low-Medium Volume Manufacturing 10-1000 MWhr Production Format
Commercialize			MRL 9	Achieve the required quantity and standard required						
			MRL 10	Develop dynamic and effective product capability		High Volume Manufacturing D			20 - 100s KT or MM	High Volume 1 GWh/yr - 100 GWh/yr or as needed Production

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Communications Update

Outbound:

1. Will continue to present and attend industry conferences
2. Host quarterly industry-government updates (Spring Update - May 2025)
3. Post semi-regular column distributed via NAATBatt's weekly email
4. Activating Li-Bridge's LinkedIn account coinciding with this conference

Inbound:

1. Would industry like to see quarterly meetings have different content or format?
2. What are the top pressing issues facing the industry?
3. Are investors still optimistic about financing the industry?
4. Are you seeing any impact on tariff policy on the industry?

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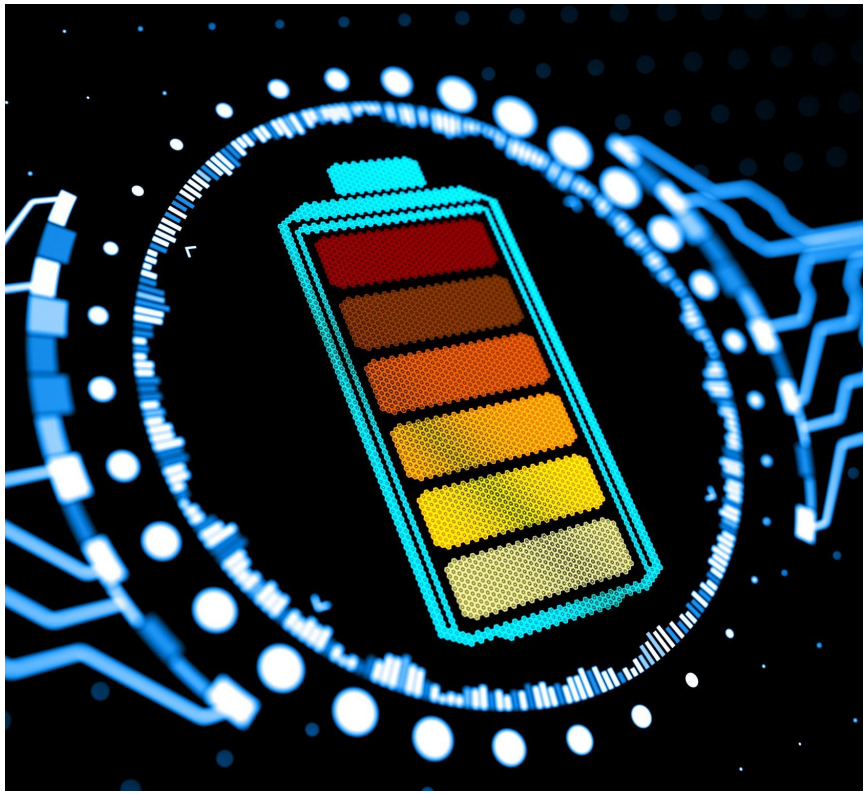
Li-Bridge process & progress



Government Goals:

Promote Made in USA with domestic supply chain
Prevent leakage + increase “urban mining” of critical minerals
Industry-led solution to increase adoption + harmonize

Met in August 2024 with 50+ entities

Purpose: understand actual landscape of traceability

Key Takeaways

Landscape is fragmented.
Some companies comply with EU Digital Product Passport.
Some not engaged in traceability.
No consistent practice or reporting.
Supply chain is disorganized and inefficient.

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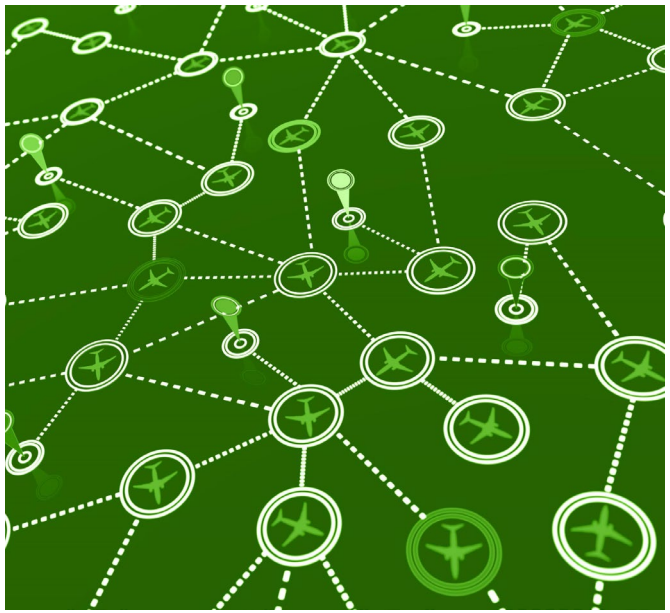
How to solve this problem?

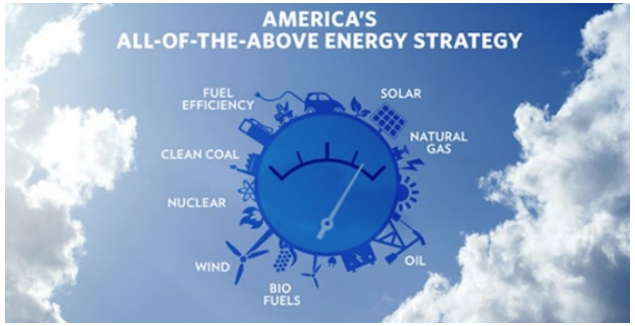


SAE International and Li-Bridge
Assembled a working group to write a framework that focuses on key data points for traceability:

1. Battery capacity
2. Date of Service
3. Identification and proportions of critical minerals with a focus on “the electric eighteen.”
4. Producer information, especially identifying FEOC
5. Battery components (e.g. modules and cells)

Objective is to hand this off to an SAE committee for (rapid) standardization.

2025+ Expectations



2017-2020 Review:

a. Energy Independence
b. America-first Trade Policy
c. EV incentives eliminated
d. Increased domestic lithium production

2025-2029 Preview - Durable Energy Dominance (Sec. Wright):

a. Advance energy addition, not subtraction (Energy independence)
b. Unleash American energy innovation (Energy independence)
c. Return to regular order on LNG exports (Energy independence)
d. Promote affordability and consumer choice in home appliances
e. Refill the Strategic Petroleum Reserve (Energy independence)
f. Modernize America's nuclear stockpile (Energy independence)
g. Unleash Commercial Nuclear Power (Energy independence)
h. Strengthen grid reliability and security (Energy independence)
i. Streamlining permitting & identify undue burdens (Increased domestic lithium production)

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Thank you!

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