Research and Development
BATTERY NETWORK (BATTNET)

Program Info

Program Manager: Matt Hutchens
Matt.Hutchens@dla.mil

DLA'S TRANSFORMATION IMPERATIVES

PEOPLE — Build Organization Agility Through Our People and Culture

PRECISION — Calibrate Resilient And Responsive Logistics Solutions On Support Of Military Readiness

POSTURE — Enhance Support To Integration Deterrence Across The Continuum Of Conflict In Contested Logistics Environments

PARTNERSHIPS — Lead Logistics Interoperability Across The Department, Allies, Whole Of Government, And Industrial Base

OBJECTIVE

BATTNET is a designated Defense Operational Energy Program and is managed under the Defense ManTech Program. BATTNET improves battery logistics and performance by developing and leveraging advanced manufacturing technologies through key industry partnerships. The program is focused on improving the operational environment and production supply chain, and on developing performance improvements for batteries such as better shelf life, reduced premature disposals, increased safety, and increased availability.

The BATTNET Broad Agency Announcement (BAA) 0006-21 topic areas are:

- MANUFACTURING AND AUTOMATION INNOVATIONS
- BATTERY STANDARDIZATION
- ADVANCEMENT OF MANUFACTURING READINESS FOR ALTERNATIVE SUPPLIES
- OPTIMIZE DESIGN FOR MANUFACTURABILITY
- SUPPLY CHAIN MANAGEMENT IMPROVEMENT
- IMPROVEMENTS TO THE DOMESTIC BATTERY SUPPLY CHAIN
- PROCESS IMPROVEMENTS
- TRANSFER COMMERCIAL TECHNOLOGY FOR USE IN DLA BATTERIES

INNOVATION & TECHNOLOGY

- Prototyping lighter, high-performance lead-acid batteries with Bipolar technologies and production processes
- Safety, performance and design improvements for soldier and small system batteries
- Pilot or Enhance manufacturing capabilities for essential or emerging batteries linked to DLA supply resilience
- Replace obsolete legacy Nickel Cadmium batteries with improved technologies
- Cost and quality improvements for battery electrode manufacturing
- Automated, modern production capabilities for critical batteries

STRATEGIC THRUSTS

Partner projects address the following: automation, production capabilities, supportability, diminishing manufacturing sources and supply, lithium battery safety, advanced recycling, reducing acquisition costs, improving shelf life and cycle life, supply chain logistics, surge/sustainment, and technology transition/insertion.

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THE CHALLENGE

Current military operations and plans demonstrate the critical need for high performance batteries in all DoD equipment. Effective Warfighter power sources depend on developing and implementing new suppliers, production methods, new technologies and products to continuously improve the battery supply chain for DLA's customers.

WARFIGHTER READINESS

THE BENEFITS

Improves the operational energy performance for the Warfighter: Higher energy, increased availability, improved reliability, decreased logistics footprint, and reduced soldier burden

Increases in energy density and energy capacity enable a reduction in the number of batteries required and the weight carried per mission as well as reductions in maintenance time and operational cost.

https://www.dla.mil/Information-Operations/Research-And-Development/

INDUSTRY AND WHOLE OF GOVERNMENT PARTNERSHIPS

- **ARMY Combat Capabilities Development Command (CC-DEVCOM):**
- **Army Research Laboratory (ARL)**
- **Ground Vehicle Systems Center (GVSC)**
- **Command, Control, Communication, Computers, Cyber Intelligence Renaissance Center (C5ISR)**
- **Army Aviation and Missile Center (AVMC)**
- **AIR FORCE Research Laboratory (AFRL)**
- **NAVY Air, Surface, Underwater Systems Commands (NAWC, NSWC, NUWC)**
- **Naval Research Laboratory (NRL)**
- **Defense Industrial Base**
- **DLA Land & Maritime / DLA Aviation**
- **Joint Defense Manufacturing Technology Panel (JDMTP), Electronics Fabrication sub-panel, Power Sources technical working group**

ACCOMPLISHMENTS & ONGOING EFFORTS

- ManTech Achievement Awards:
  - 2014 (Fabrication for CFx enabled BA-5790 battery);
  - 2018 (Integrated Li-ion power source to address TOW2 component obsolescence);
  - 2023 (Bipolar design and manufacturing for lightweight, high power 6TAGM lead-acid battery)
- Advanced manufacturing designs and processes for new lithium-ion and bipolar lead-acid power sources for US military vehicles, aircraft, and equipment
- New manufacturing innovations for low-cost battery and domestic materials production