



DLA

DEFENSE LOGISTICS AGENCY
Established 1961



The Nation's Combat Logistics Support Agency



Research & Development

BATTERY NETWORK (BATTNET)



Program Manager: Matt Hutchens



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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**

**OPTIMIZE DESIGN FOR
MANUFACTURABILITY**

**IMPROVEMENTS TO THE
DOMESTIC BATTERY
SUPPLY CHAIN**

**BATTERY
STANDARDIZATION**



**PROCESS
IMPROVEMENTS**

**ADVANCEMENT OF
MANUFACTURING READINESS
FOR ALTERNATIVE SUPPLIES**

**SUPPLY CHAIN
MANAGEMENT IMPROVEMENT**

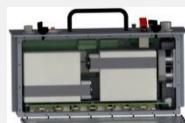
**TRANSFER COMMERCIAL
TECHNOLOGY FOR USE IN
DLA BATTERIES**

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
- Rapid Li-ion battery deactivation and recycling technology for critical materials
- 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.





DLA RESEARCH & DEVELOPMENT BATTNET PROGRAM



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

- 2014 ManTech Achievement Award (BA-5790 battery) – Developed and implemented manufacturing technology on existing fabrication lines. 110% increase in energy capacity using CFx materials
- 2018 ManTech Achievement Award (TOW2 battery) – Developed an integrated Li-ion based power system that increased run time, eliminated several pieces of legacy equipment, and mitigated obsolescence
- 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 materials production

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WARFIGHTER ALWAYS