Core business areas / focus

CAMX Power is a technology development company with a unique combination of technologies, facilities, and expertise in batteries and power generation. Our focus areas include:

- Development and scale-up of active materials for high performance Li-ion batteries.
- Development, prototyping, and production of Li-ion battery packs with performance attributes not available in COTS batteries.
- Fabrication of custom Li-ion cells in a wide range of sizes and formats including 18650s, 21700s, and laminate pouch cells.
- Development and fabrication of high-performance sensors for a wide range of applications.
- Development of materials, components and systems for impact protection and crash energy management.

CAMX Power is developing energy and power-related technologies for multiple Government agencies. CAMX Power also has a robust commercial business focused on technology licensing and project-based services.

R&D highlights projects

CAMX Power (previously a division of TIAX LLC) has been developing lithium-ion battery-related technologies for more than 15 years. In that time, we have successfully developed and commercialized:

- State-of-the-art high energy density cathode materials for Li-ion batteries (licensed to BASF and Johnson Matthey for high volume production).
- Active cell balancing technology (licensed to a major US-based electronics manufacturer).
- Technology for detection of internal short circuits (being adapted for Navy's unmanned underwater subs and used to assess health of Boeing Dreamliner batteries on behalf of the NTSB).

In addition to these materials and electronics technologies, CAMX Power manufactures custom batteries for niche applications using in-house cell and pack prototyping facilities. These batteries incorporate CAMX Power's own cells (18650, 21700, or laminate pouch cells) with chemistry specifically selected for DOD needs.

Example ongoing projects include:

- Development of non-invasive technologies for detection of internal short circuits in Li-ion cells for US Navy applications.
- Development of an instrument for screening Li-ion cells prior to their assembly into battery packs developed on behalf of Defense Logistics Agency (DLA), now being adapted for Navy use.
- Development of a 6T Li-ion battery that can be fully discharged to zero V and stored indefinitely prior to use on behalf of the DLA.
- Development of a Li-ion battery that can be integrated into the chassis of military vehicles on behalf of Ground Vehicle System Command (GVSC).
- Development of high specific energy 18650 and pouch cells incorporating next generation of anode and cathode active materials for DOE and US Navy.

Technical Expertise

- Development and scale-up of active materials for high performance batteries
- Development, prototyping, and production of Li-ion batteries with performance attributes not available in COTS batteries.
- Development and prototyping of battery management systems.
• Fabrication of custom Li-ion cells in a wide range of sizes and formats including 18650s, 21700s, and laminate pouch cells.
• Custom battery management systems including embedded technologies for detection of internal short circuits in Li-ion cells.
• Rapid screening of Li-ion cells for defects.
• Computer modeling to assist in designing safe Li-ion cells and batteries.
• Design, fabrication and testing of impact protection materials and components.
• Design, fabrication and testing of crash energy management systems.
• Development and fabrication of high-performance sensors for a wide range of applications.