



Calhoun: The NPS Institutional Archive
DSpace Repository

Faculty and Researchers

Faculty and Researchers' Publications

2021

Commercial Batteries for Navy Use (Continuation)

Lewis, Ira A.; Doerr, Kenneth H.

Monterey, California: Naval Postgraduate School

<http://hdl.handle.net/10945/69789>

This publication is a work of the U.S. Government as defined in Title 17, United States Code, Section 101. Copyright protection is not available for this work in the United States.

Downloaded from NPS Archive: Calhoun



Calhoun is the Naval Postgraduate School's public access digital repository for research materials and institutional publications created by the NPS community. Calhoun is named for Professor of Mathematics Guy K. Calhoun, NPS's first appointed -- and published -- scholarly author.

Dudley Knox Library / Naval Postgraduate School
411 Dyer Road / 1 University Circle
Monterey, California USA 93943

<http://www.nps.edu/library>

Battery Trends

- Batteries are becoming smaller, safer, and more powerful
- Existing and emerging weapons systems have significantly greater power demands
- Battery shortages have been experienced during major military operations
- Manufacturing capacity is concentrated in China, Japan, and South Korea



Typical Military Batteries

Cost Modeling and Battery Acquisition



Cost Models Support Decision-Making

- The Department of Defense has been placing increased emphasis on long-term solutions to industrial base and security of supply issues
- U.S. battery startup firms need a relationship with government that will promote long-term investment in battery design and manufacturing
- Cost models play an important role in support effective decision-making by leaders that considers both budgets and readiness

What Could the Navy Do?

- Use cost models such as the one we developed to evaluate alternative procurement scenarios
- Explore the range of acquisition approaches available, including those based on the Federal Acquisition Regulations (FAR), non-FAR approaches, and the Defense Production Act



U.S. Battery Manufacturing Plant