

Sandia National Laboratories Energy Industry Acceptance - Storage Projects

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DOE-OE Peer Review
October, 2017

Program Sponsor: DOE/OE Stationary Energy
Storage Program - Dr. Imre Gyuk



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Six Sandia Thrust Areas to Meet Grid Challenges



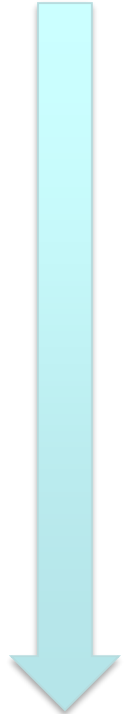
U.S. DEPARTMENT OF
ENERGY



Sandia
National
Laboratories

- **Materials and Systems Development**
 - Leading the **development** of next-generation technologies
 - Improving current **technology** (flow batteries, flywheels, etc.)
- **Power Electronics**
 - **Developing** and testing new wide-bandgap power-electronic devices
- **Component and systems analysis and safety**
 - Analysis from battery cells through MW size ES systems
 - ES system testing protocols
 - ES system safety R&D
- ***Industry Acceptance (IA)***
 - ***ES System Field deployments and commissioning***
 - ***State-Initiated Demonstrations***
 - ***Technical support***
- **Grid Analytics and Policy**
 - Providing **assessments** of the impact of storage placement
- **Outreach** - Leading publications and meetings to **help** educate the Grid Energy community

Nanoscopic



Macroscopic

SNL Industry Acceptance Team/Partners



- Sandia Team
 - Ben Schenkman
 - Ray Byrne
 - Cole Benson
 - Meghann ManGold
 - Tu Nguyen
 - Frank Maldonado
 - Megan Brace
- Clean Energy States Alliance
 - Todd Olinsky-Paul
- OE Lab Partners
 - PNNL - Patrick Balducci
 - ORNL - Michael Starke
- Industry Partners:
 - Matt Lazarewicz (HELIX)
 - Jim Glass (EPB)
 - Will Price/Matt Ibaracki (EWEB)
 - HELCO
 - Laurence Sombardier (NELHA)
 - Jeremy Lewis (EMNRD)
 - Diane Broad (Oregon DOE)
 - Josh Castonguay (GMP)
 - Marc Mueller-Stoffels (UoA)
 - Los Alamos County DPU
 - UniEnergy Technology
 - East Penn/ECOULT
 - GS Yuasa
 - Energy Market Authority of Singapore (EMA)

MISSION STATEMENT: Encourage investment in Energy Storage

APPROACH: - Work with national and international entities to:

- Develop and Deploy Energy Storage Projects
- Support State and International renewable/resiliency/Energy Storage initiatives

** Partnering relationship with sister Labs – PNNL, ORNL, NREL

SNL Industry Acceptance – ES Projects Team



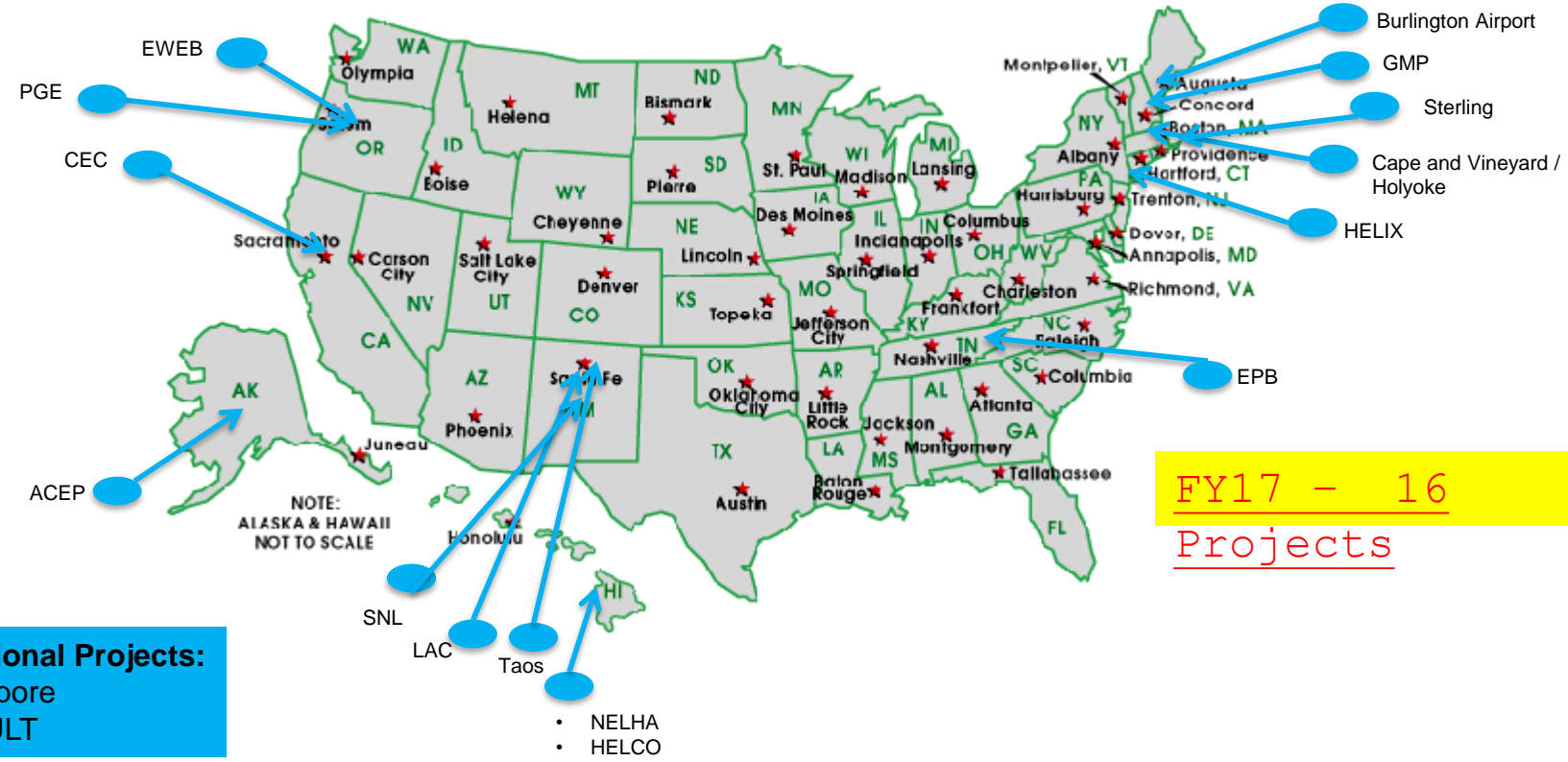
Capabilities

- Project Development and Implementation
 - RFI & RFP
 - Project designs and specifications
 - Data Acquisition Systems (DAS)
 - Technical support during the construction
 - ESS commissioning/testing plan development and implementation.

- System monitoring
 - Remote monitoring and data acquisition
 - Analysis of operational test data

- Policy, regulatory and state support through CESA resources
 - Webinars, Papers, Presentations

SNL Industry Acceptance - ES Projects 2017



FY17 - 16
Projects

Thanks

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