Sandia National Laboratories Energy Industry Acceptance - Storage Projects

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Sandia National Laboratories

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Program Sponsor: DOE/OE Stationary Energy Storage Program - Dr. Imre Gyuk
Six Sandia Thrust Areas to Meet Grid Challenges

- **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

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Nanoscopic

Macroscopic

2
SNL Industry Acceptance

Team/Partners

- Sandia Team
  - Ben Schenkman
  - Ray Byrne
  - Cole Benson
  - Meghann ManGold
  - Tu Nguyen
  - Frank Maldanado
  - 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
International Projects:
- Singapore
- ECOULT

International Projects:
- NELHA
- HELCO

FY17 - 16 Projects
Burlington Airport
GMP
Sterling
Cape and Vineyard / Holyoke
HELIX
EPB

Thanks

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