



2020 EPIC Symposium:

How Technologies are Supporting Rural Communities

Demonstration of a Mobile Battery Energy Storage System (MBESS)

October 20, 2020



Topics



- Overview
- Scope
 - Project Modules
 - Community Resource Centers (CRCs)
- Lessons Learned
- Questions
- Contact Information

Objective



The objective of this project is to undertake a pre-commercial demonstration of a mobile battery energy storage system. The project will examine the possibilities for using a mobile battery at its home base (tentatively the Port of San Diego (“Port”)) and at secondary energy hubs (such as SDG&E® substations or large customers) within the service area.

The battery will be used at the Port cruise ship terminal during the peak cruise ship season and in other applications at other locations during non-peak season. The objective is to evaluate the effectiveness of mobile batteries when rotated between applications and identify preferred applications and strategy for the rotation.

Scope



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Module 1 Port of San Diego Application

Demonstration and evaluation of stacked benefits identified through utilizing a mobile BESS at multiple locations with multiple use cases

e.g., assist the Port District and other surrounding energy hubs to manage demand needs and/or other applications

Module 2 Community Resource Center Application

Demonstration as a backup power solution during planned safety outages and in emergency events such as response to wildfires

e.g., CRCs and/or other critical loads in rural communities



Community Resource Center (CRC)

- Provide emergency and back-up power to a CRC
- CRCs are located in High-Fire Threat Districts supporting rural communities
- Potentially support critical loads due to:
 - Public Safety Power Shutoff (PSPS) during wildfire season
 - Other unplanned emergency outages
- Potentially interface with customer solar systems to extend these capabilities, where applicable

Lessons Learned



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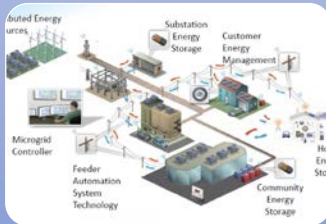
USDOT/Caltrans Rules & Standards

- 3 axel limit
- 21,000 lbs. per axel
- 6+ month permit approvals



Commercial Availability & System Design

- Lack of commercially available mobile solutions
- Auxiliary equipment configuration and considerations (e.g. transformer, switches, etc.)
- Spatial and weight constraints



Grid Interconnection Study

- Required for generation sources interconnected with the grid, even if temporary
- One application per location
- 3-6 month turnaround

Lessons Learned Cont'd...



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Cost Recovery

- Permits and Licenses
- Interconnection Study
- Environmental/Cultural Assessments
- Transportation and Relocation



Safety

- Safeguarding the public
- Grounding the system and auxiliary equipment

Questions





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