

LoCap Energy

Energy Storage & Efficiency Solutions



Presenters:
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- SMU Geothermal Lab

- Localized Energy Industry

- Generation
- Storage
- Efficiency
- Energy Security



- Current Need -> Fossil Fuels

- Energy Density
- Infrastructure

- Reason for Participation

- Integrators seeking feedback



Mission

● What is Peak Shaving?

- Demand vs. Consumption Energy Bill

● Monitoring Usage

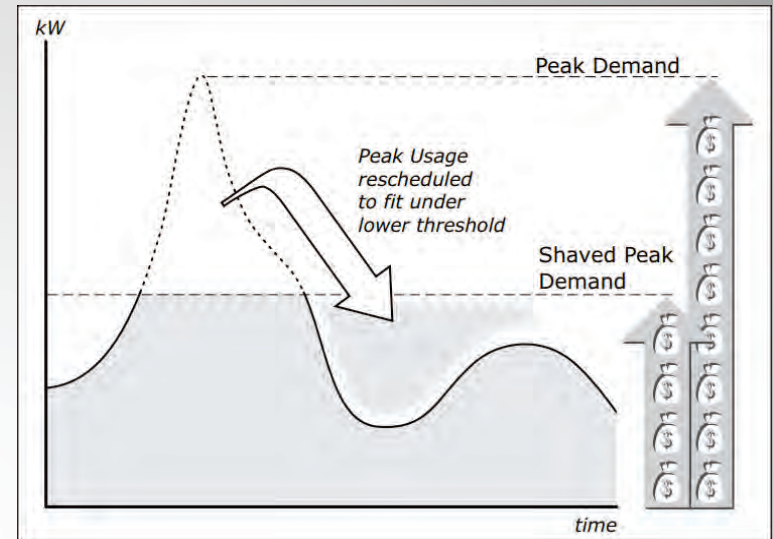
- Predict Demand

● Load Shedding

- Redistribute & Prioritize Load Schedule

● On-site Generation

- Additional Energy Available

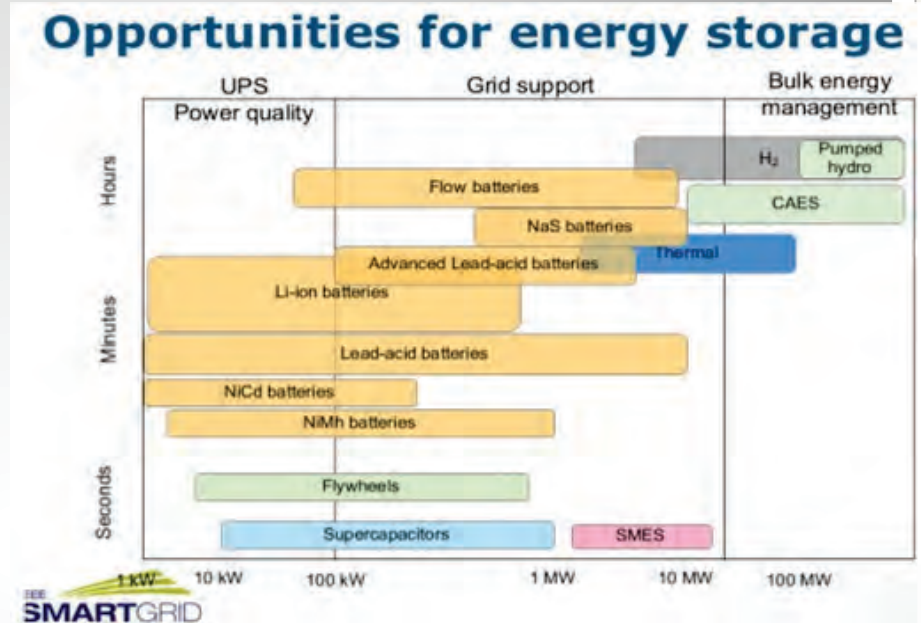


Energy Management Overview

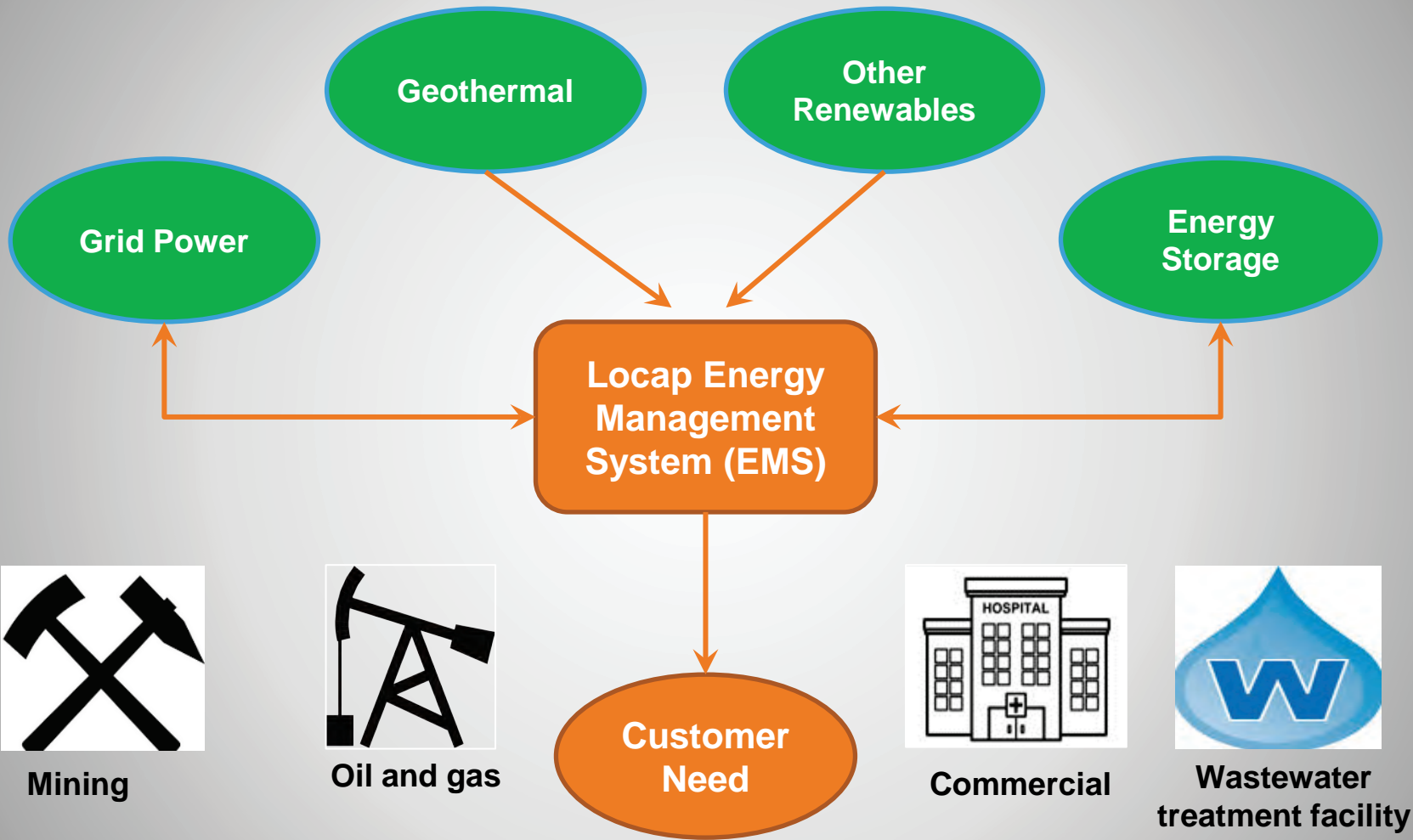
- Tesla “Powerwall”
 - Widespread interest
 - Li-ion
 - Residential/Commercial

- New Battery Tech
 - Advanced Lead-acid
 - Dual Carbon
 - Flow Batteries

- Storage Paired with Renewables
 - Stable power supply
 - Higher load potential
 - “Smart” Energy Management



Energy Storage Overview



Vision

● End to End Solutions

- Systems tailored to meet individual customer needs
 - On-site energy requirements
 - Available on-site resources
- Waste heat generator with LoCap back end storage

● Advantages LoCap vs. Traditional Peak Shaving Solution:

- Intelligent, data driven battery bank system used for energy storage & usage monitoring.
- Uses free, "waste" energy from existing operations to provide on-demand electricity.
- Zero emissions "green" solution



LoCap Peak Shaving System

- TX Injection Well Project

- System modeling & conceptual design
- Matlab analysis & data validation
- Pilot test planned

- Expand into Additional O&G Markets

- Market research on production wells energy demand

- Explore New Waste Energy Capture Technology

- Integrate cutting edge generation & storage technologies into LoCap Energy EMS solutions



Current Endeavors

Thank You!

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Questions?