


Battery Energy Storage System Design

The background image shows a large, grey, rectangular battery energy storage system (BESS) container. The container has the text "ENERGY STORAGE SYSTEM" and a logo on its side. To the left of the container, there are several blue solar panels mounted on a rack. In the background, there are three wind turbines and a city skyline under a clear blue sky. The entire scene is overlaid with a semi-transparent dark grey filter.

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Client: Burns & McDonnell

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Project Overview

- Burns and McDonnell needs a 25 MW/100 MWh Lithium-ion Battery energy storage system
- Project will include:
 - Site location and layout
 - One-line diagram
 - Equipment chosen (batteries, inverters, transformers, cables and more)
 - Technical documentation and justifications

Ideation

- Battery and inverter technology
 - Approach: Comparing datasheets
 - Implementation: Create excel spreadsheet for easier comparison
- Prioritize cost or reliability with inverter technology
 - Approach: Weigh options
 - Implementation: What do we want to get out of this design process?



Market Research

- There are very few companies that design large scale battery energy storage systems.
- The current demand for large energy storage systems is low, but is expected to increase rapidly along side of renewable energy.



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