Wind Integration in West Texas: 1 MW / 1 MWh Lithium-Ion Battery System

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Project Overview
The increase in renewable energy production has introduced novel challenges to the reliable operation of electricity systems.

Purpose
- To analyze field-collected information from an energy storage system integrated with wind generation and serving commercial loads
- To assess operations of energy storage systems and quantify key impacts on long term battery operation

Project Distinction
This project is unique due to its combination of MW-scale wind power and battery storage, coupled to the distribution grid.

Why wind integration?

1 MW / 1 MWh Lithium-Ion Battery System

- Strategic Advantage
  The facility in Lubbock utilizes the battery to work in concert with the load, wind turbines, and future development including solar.
- Project Scope
  - Observation and analysis
  - Single application testing
  - Dual application testing
  - Battery health testing

Resources at Reese Technology Center, Lubbock, TX

Summary/Conclusions/Future Tasks
- Operation of battery began in Q1 2014
- Project was kicked off in August 2014
- Currently, battery system is operating as expected.
- Q4 FY14
  - Observation and analysis
  - Single application testing and battery evaluation
- Q1 FY15
  - Dual application testing and battery evaluation
- Q2 FY15
  - Report of testing

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