Chevron Energy Solutions L.P.
CERTS: Microgrid Demonstration with Large-Scale
Energy Storage and Renewables at Santa Rita Jail

Project Description
The overarching objectives of the proposed demonstration are to significantly
reduce peak load and measurably improve power reliability at Santa Rita Jail. This
will be accomplished by implementing a CERTS ( Consortium for Electric
Reliability Technology Solutions) microgrid that incorporates one of the nation’s
largest customer-sited NaS energy storage systems with multiple distributed
energy resources. By effectively reducing peak load, the project will improve grid
reliability, increase grid efficiency and security. By providing islanding capability,
the project will meet critical customer reliability requirements.

Goals/Objectives
- Reduce peak load of utility distribution feeder by 15% via utilization of
distributed energy resources (DER)
- Demonstrate the commercial implementation of CERTS self-healing,
DOE-developed microgrid combined with large-scale (12 MWh)
distributed energy storage
- Improve power reliability by providing dispatchable renewable energy
- Increase grid efficiency and security through the development of
monitoring, diagnostic, and automation capabilities
- Providing uninterrupted power to the entire facility

Key Milestones
- Diesel Control System in service (November 2010)
- Battery in service (February 2011)
- Static Disconnect Switch in service (February 2011)
- Evaluation and reporting complete (November 2012)

Benefits
- Improve grid reliability
- Increase grid efficiency and security
- Meet critical customer reliability requirements
- Increase future commercial applications of CERTS microgrid technology
with large-scale energy storage
- Demonstrate DER “plug and play” capability
- Reduce diesel consumption by 90%