

2012 Smart Grid Program Peer Review Meeting

Interoperability of Demand Response Resources in NY

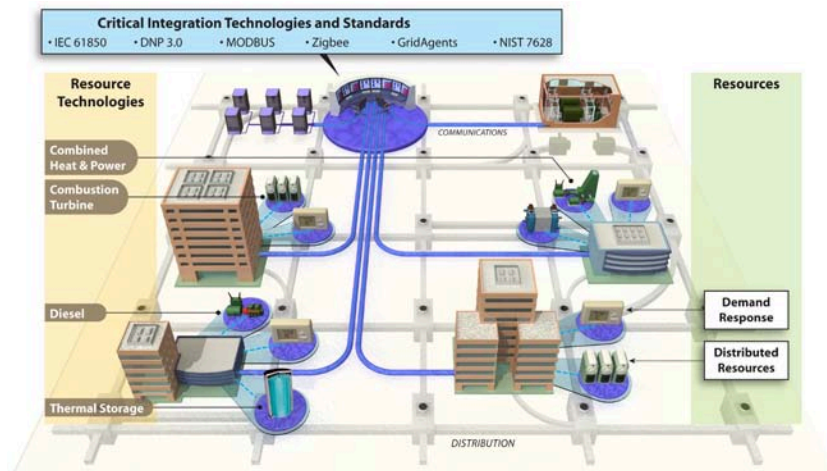
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Con Edison

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Interoperability of Demand Resource Resources in NY

Objective

Develop and demonstrate technology required to integrate customer owned resources into the electrical distribution system



Life-cycle Funding (\$M)

FY08 – FY13

\$6.8 million

Technical Scope

- Evaluate interconnection designs
- Design and install thermal storage plant with enhanced capabilities
- Develop AutoDR application for targeted distributed resources

Needs and Project Targets

Develop the technology required to integrate customer owned distributed resources into the distribution system to enable the of deferral capital investments.

- Remote dispatch of customer resources
- Secure communication to distributed resources
- Aggregate distributed resources – 28 sites/20 MW
- Interconnect resources to low voltage distribution networks

Technical Approach

Communication Technology/Architecture

- Secure
- Cost effective
- Scalable

Demand Response Command Center (DRCC) Application

- Reliable Dispatch of Resources
- Standard Interfaces
- Load Forecasting
- Resource Aggregation

Distributed Customer Resources

- Targeted Demand Response
- Real-time Feedback
- Distribution System Support

Thermal Storage Plant

- Rapid Response
- Peak Shifting and Market Based Activities

Technical Accomplishments

FY2010

- Performed site surveys of customer facilities
- Developed energy efficiency profiles for participating sites
- Evaluated designs to interconnect to low voltage networks

FY2011

- Developed AutoDR application for the Demand Response Command Center
- Installed and tested a temporary Demand Response Command Center
- Completed a remote signal activation test of system

Technical Accomplishments

FY2012

- Demonstrated interoperability to Enterprise Service Bus (ESB)
- Commissioning of thermal storage plant – October 2012

FY2013

- Commission of permanent Demand Response Command Center - March 2013
- Gather operational data

Significance and Impact

Secure Communication Architecture

- Increased access to resources
- Faster response to signal activation

Demand Response Command Center

- Increased situational awareness of distributed resources
- Increase in response reliability

Thermal Storage Plant

- Enhanced resource capabilities
- Increased resource value

Interactions & Collaborations

Con Edison

- Distribution Engineering
- Distribution Control Centers – Operations
- Energy Efficiency and Demand Management

Electric Power Research Institute (EPRI)

Edison Electric Institute (EEI)

- Energy Internet Case Study
- Distributed Energy Networks eforum

Contact Information

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