The Boeing Company

Boeing Smart Grid Solution

Project Description

Boeing and its partner PJM Interconnection will demonstrate the benefits of advanced technologies for improving cyber security in an energy management environment. This project is differentiated by its ability to leverage network architecture and industry leading security experience and capabilities that are scalable and interoperable with both legacy systems and new smart grid technologies.

The PJM project region covers all or part of 13 states and the District of Columbia, includes over 243,000 square miles, and serves more than 61 million people. This densely populated region accounts for more than 26% of total generation and load for the entire Eastern Interconnection.

Boeing will demonstrate a combination of technologies that it has successfully implemented in the commercial, defense, and intelligence communities that will result in enhanced situational awareness and security. The project will commence with an in-depth security assessment of the regional network and the evolving communication, telemetry, and advanced controls required for a secure, reliable power grid. Assessment results will determine the set of selected technologies to be evaluated, integrated and tested for inclusion as part of the cyber security suite for the strong, secure, smart grid. The project will conclude with operational demonstrations conducted for government and industry stakeholders.

Deliverables will include reports on technology benefits achieved through analysis, experimentation and demonstration. Results will contribute significantly to providing metrics for assessing smart grid progress for the transmission system. Thus the project will advance the DOE's ultimate goals of increasing the reliability of the grid, providing greater security, and establishing a baseline for grid-wide replication.

Goals/Objectives

- Provide enhanced ability to achieve network security situational awareness
- Provide enhanced ability to detect and respond to adverse network events
- Capture the value of enhanced cyber security capabilities at the regional transmission level

Key Milestones

- Risk-based assessment (June 2012)
- Design and develop cybersecurity solutions (May 2013)
- Deploy cybersecurity solution iterations at PJM (Aug 2013)
- Operational Demo (Jan 2014)

Benefits

- Increase bulk electric system security and reliability
- Baseline for national grid replication of cybersecurity solution
- Enhanced protection and detection of cybersecurity threats
- Public awareness and acceptance of secure grid technologies

CONTACTS

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PARTNERS

PJM Interconnection LLC

PROJECT DURATION

1/1/2010–3/31/2014

BUDGET

Total Project Value
$17,172,844

DOE/Non-DOE Share
$8,561,396/$8,611,448

EQUIPMENT

FireEye Malware Detection Products
Packet Capture Appliance
Servers for Continuous Monitoring Software

DEMONSTRATION STATES

California
Missouri
Pennsylvania

CID: OE0000191

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