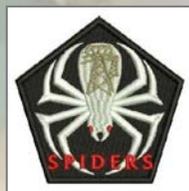


SPIDERS JCTD Industry Day June 18, 2013



**Co-hosted by:
Department of Energy
National Defense University**

SPIDERS JCTD Industry Day
June 18, 2013
National Defense University



AGENDA

7:30 – 8:00 All participants sign in and obtain name tags in atrium area.

8:00 – 8:15 Presenters and guests stand and introduce themselves by name and affiliation.

8:15 – 8:30 Bill Anderson, California Trapdoor Spider, NAVFAC, SPIDERS Transition Manager

Objectives for Today and Rules of Engagement

- Identify key requirements and standards for secure microgrids, back-up generation, and on-site energy resources, together with their information and control systems: government and private sector; civilian, defense and intelligence
- Provide guidance and lessons learned for procedures and best practices to design and implement a SPIDERS-type solution
- Focused presentations: What we did and what we are doing
- Slides can be requested after the workshop and a list of attendees emailed
- Limited time for questions; there will be a more open-format opportunity afterwards

8:30 – 9:30 David Barr, Skeleton Tarantula Spider, Burns & McDonnell

Eric Putnam, Sazima's Tarantula Spider, Burns & McDonnell

Specifying and Implementing a Secure Microgrid

- Concept of Operations (CONOPS)
- Integrating renewable energy, storage, on-site generation
- Increased reliability of back-up power for mission-critical loads (momentary outages, extended outages)
- Normal operating mode: reduce energy use, energy cost, fossil fuel use
- Increased efficiency and resiliency during outages
- Enhanced operational performance in grid-tied modes
- Site specific considerations
- Overview of SPIDERS Phase I and Phase II implementation
- Elements needed in the Site Data Package to solicit bids
- Cognizant standards for electrical operation and relaying/protection
- List types of interconnection and IA considerations and interconnection agreements required, including interface with third-party owned renewable power generation assets (from Phase 2, Fort Carson)
- Site specific considerations (i.e., grounding, outages during implementation)

Brief questions for clarification or requests for follow-up



9:30 – 10:15 Darrell Massie, *Golf Widow Spider*, IPERC

Microgrid Controls

- Control hierarchy requirements
- Interface with SCADA, operations, and other systems
- Guidance for incorporating legacy systems/equipment
- Specification of local controllers

Brief questions for clarification or requests for follow-up

10:15 – 10:45 Break

10:45 – 11:45 Robert Bradford, *Yellow Garden Spider*, Burns & McDonnell

Cyber Security Requirements/Procedures

Michael Kilcoyne, *Yellow Sac Spider*, NAVFAC CIO

Information Assurance Requirements

- SPIDERS JBPHH is not, and will not be, connected to any functioning network other than the WWTP
 - SPIDERS Fort Carson and later: The CS and IA requirements for a DOD microgrid integrated with facility operations. Specifically, what is 1) needed, 2) useful, and 3) feasible for CS and IA.
- Relevant standards and requirements for information assurance
- Relevant standards and requirements for cyber security
- Authorization to operate and certification authorities (civilian, government, defense)
- Test procedures, steps, suggestions for cyber-security and information assurance
- The role of FERC, utilities, independent system operators, states, others

Brief questions for clarification or requests for follow-up

11:45 – 12:15 Bill Anderson, *California Trapdoor Spider*, NAVFAC, SPIDERS Transition Manager

Example Application of SPIDERS to a Secure Microgrid Installation

- Needs and challenges of Camp Lemonnier
- Types of information, best practices, lessons learned, etc. from SPIDERS & CLDJ
- How does technology transition from SPIDERS to support future DOD microgrids?

Brief questions for clarification or requests for follow-up



12:15 – 12:45 Kevin Schneider, PNNL, Deputy Transition Team Manager

Transitioning SPIDERS Technology to the Civilian Sector

- What microgrids can offer to a utility
- Goals of the SPIDERS Phase 1 Operational Demonstration (OD)
- Goals of the SPIDERS Implementation Directive (ID)
- Goals for Phase 1 at Joint Base Pearl Harbor-Hickam (JBPHH)
- Results of the SPIDERS Phase 1 Utility Assessment Report (UAR)
 - How they pertain to utilities
- Reduced fuel consumption through increased efficiency
- Reduced fuel consumption through integration of renewable resources
- Improved reliability during islanded operation
- Cyber Security Evaluation Tool (CSET)

12:45 – 1:00 Bill Anderson, California Trapdoor Spider, NAVFAC, SPIDERS Transition Manager

Questions and wrap-up



**For SPIDERS and Camp Lemonnier related inquiries:
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