Cybersecurity Basics for Energy Managers

Cybersecurity Wish List for Energy Managers

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August 15, 2017
To provide an overview of what I wished energy managers knew about cyber security and energy management systems.
Overview

- Understand the Technology
- Understand Data Traffic
- Incorporate into Design
- Wish List Overview
Understand the Technology

• Understand how cyber security is integrated into the products, systems, and solutions being provided
  – Building control system (BCS) that controls building electrical and mechanical systems (i.e. HVAC)
  – Utility control system (UCS) used for control of utility systems such as power generation or electrical distribution
  – Utility Monitoring and Control System (UMCS) is a combination of one or more BCS and UCS

• Understand the cyber security requirements, IA controls, and documentation as it relates to the technology
Understand Data Traffic

• Understand what data are transmitting within the system and where you might be targeted for attack
  – Well defined use of digital controllers, architecture and user interfaces that will monitor or control infrastructure and equipment
  – Hardware can be servers, desktops, laptops with operating system software such as Windows, Linux, etc.
  – Controllers are electronic devices with some type internal programming logic that performs control function
Incorporate Cybersecurity in Design

• Ensure you are incorporating cyber security into the design and get IA compliance personnel involved early in the process
  – Include references such as UFC 4-010-06, NIST 800-82, NIST 800-171 in contracting documentation
  – Understand required documentation and details needed for assessment and authorization process
  – Determine topology/architecture to know interfaces, boundaries, and levels for site specific details of the system
• Know the risk tolerance for your organization and approval official
Wish List for Energy Managers

• Understand the technology and how cyber security will be integrated into the system
• Employ cyber security into facility designs early in the process
  – Include cyber security requirements documents in contracts
• Recommend including funding to account for and incorporate cyber security in design reviews and accreditation process
• Coordinate with respective IA compliance personnel and details needed for documentation
Questions?