NIST and Smart Grid Cybersecurity

Marianne Swanson, Senior Advisor Information Systems Security Information Technology Laboratory



Smart Grid Cybersecurity Committee

- Established in March 2009 to address the cross cutting issues of cybersecurity.
- Moved under the NIST Smart Grid Interoperability Panel (SGIP) as a standing working group and was renamed the Cyber Security Working Group (CSWG).
- In January 2013, SGIP transitioned to a membership fee based group and renamed the Smart Grid Cybersecurity Committee (SGCC).



Key SGCC Accomplishments

- NIST Interagency Report 7628, "Guidelines for Smart Grid Cyber Security"- August 2010
- Completed the review and analysis of over 60 Smart Grid related standards or requirements against the high-level security requirements in NISTIR 7628
- Collaborated with DOE and NERC to develop a harmonized electricity sector enterprise-wide risk management process
- Published White Papers:
 - CSWG/DOE's NESCOR collaboration on SEP 1.0 and 1.1 Mitigation Strategies
 - Automating Smart Grid Security



NIST Smart Grid Related Projects

- Partnering with Department of Energy and Oak Ridge
 National Laboratory to test the AMI Upgradeability Standard
- Developing a Smart Grid Cybersecurity Test bed at NIST
- Executive Order Framework



Potential Future Work

- Security Content Automation Protocol (SCAP) extension to cover cyber-physical systems
- Research in lightweight, low-power cryptography
- Collaboration with Brazil Inmetro on developing additional AMI security failure scenarios
- Collaboration with DOE on Smart Grid supply chain security issues



Contact Information

Marianne Swanson

marianne.swanson@nist.gov

