



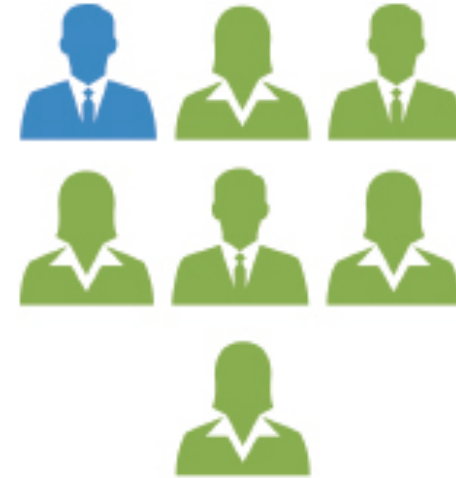
Robert Jagusch

Director of Engineering and Policy Analysis
Minnesota Municipal Utilities Association



APPA Members

- 1 400+ public power utilities
- Retail service in 49 states
- Very large to very small systems
- Median size: 1,977 meters
- 14.4% of sales to electric consumers



1 IN 7

electricity customers in the U.S.
are served by public power



MMUA Members

- 124 Municipal electric utilities
- 33 Municipal natural gas utilities
- Rochester - 52,000 meters, Whalan - 38 meters
- Median size: 1,256 meters
- Serve 375,00 meters total
- About 14% of Minnesota electrical load
- MMUA has Mutual Aid Agreements with all members

Cyber and Physical Preparedness

- Help members develop “all-hazards” approach to disaster preparation and response
- Show federal and state policymakers public power’s commitment to security and mutual aid
- Strengthen government/industry partnerships
- Minimize new federal regulation





DOE Cooperative Agreement Overview

Goal:

Develop a culture of cyber security within public power utilities.

Objective:

Engage with public power distribution utilities to understand their cyber security awareness, capabilities and risks.

Year 1 Tasks:

1. Cyber security risk assessments
2. Onsite cyber vulnerability assessments
3. Pilot existing and emerging security technologies
4. Improve how we communicate cyber threats

Acknowledgement: *These activities are based upon work supported by the Department of Energy under Award Number DE-OE0000811.*



Cybersecurity Scorecard

- Use existing cybersecurity models to inform a product that is useable by all public power utilities
- Developed a self-assessment tool called the public power **Cybersecurity Scorecard**,
- Usable by small to mid-sized public power utilities to start evaluating their cybersecurity program.
- Also scalable where all public power utilities will find it useful.

Acknowledgement: *These activities are based upon work supported by the Department of Energy under Award Number DE-OE0000811.*

Foundational Cybersecurity Practices



1. Cyber Asset Inventory
2. Configuration Baseline
3. Access Control
4. Vulnerability Management
5. Threat Management
6. Cyber Risk Management
7. Cyber Event Detection
8. Cyber Incident Response

Foundational Cybersecurity Practices (continued)



1. Monitoring Cyber System Activity
2. Cyber Threat and Event Information Sharing
3. Supply Chain Risk
4. Workforce Management and Cybersecurity Training
5. Cybersecurity Program Management



VIKING
SHADOW



Powering Strong
Communities

IT OT

C2M2 - Cybersecurity Capability Maturity Model

AT APPA Test
Axio, Inc.

Powered by axio

NEW ASSESSMENT

WELCOME APPA

IT OT
Apr. 5th, 2018 - 11:55am
1

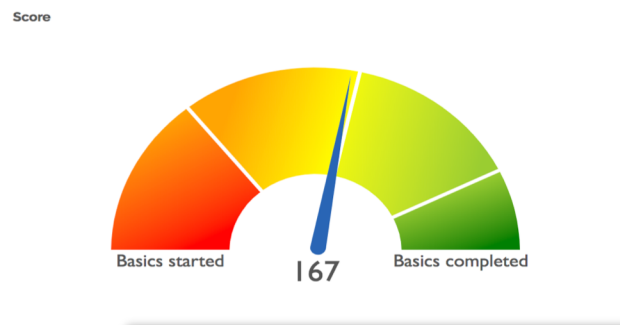
OT
Apr. 5th, 2018 - 11:39am
1

Untitled
Mar. 23rd, 2018 - 11:33am
22 2

Created On: Apr. 5th, 2018 - 11:41am
By: APPA Test
Last Updated: Apr. 5th, 2018 - 11:55am

0	0
0	1

Improvements to reach target
72

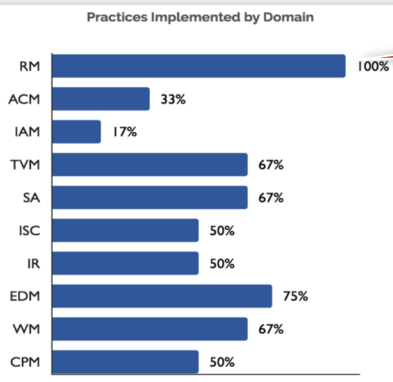


Public Power Retweeted
MRES @MRESnews
Using helium-filled balloons? Follow a few simple safety tips to keep balloons safe and fun!

USING HELIUM-FILLED BALLOONS?
Follow a few simple safety tips to keep balloons safe and fun!

1. Secure the balloon with a weight heavy enough to prevent it from drifting away.
2. Never bundle metallic balloons together.

Scorecard results will populate your dashboard



Results breakdown by domain

✓ Action Items

Recommendations

- Develop an inventory of high-value information assets. (more)
ACM-1b There is an inventory of information assets that are important to the delivery of the function (e.g., SCADA set points, customer information, financial data); management of the inventory may be ad hoc
- Issue credentials for all entities requiring access to assets. (more)
IAM-1b Credentials are issued, at least in an ad hoc manner, for personnel and other entities that require access to assets (e.g., passwords, smart cards, certificates, keys)
- Discard or destroy identity profiles and all associated credentials when a person changes roles or leaves the organization or when an object or entity ceases to exist in the organization. (more)

Improvement recommendations based on scorecard responses



Cybersecurity Resources

- Share **best practices** using the Scorecard platform
- Develop a **roadmap** to guide public power utilities in developing their cybersecurity programs
- Continue onsite cybersecurity **assessments** to conduct a deep dive at select utilities
- Consider development of a public power **cyber asset tracking system.**



Resources Page:

www.publicpower.org/gridsecurity

cybersecurity@publicpower.org

Questions?



Contact Info

Nathan Mitchell

Senior Director of Electric Reliability Standards and Security

American Public Power Association

2451 Crystal Drive, Suite 1000

Arlington, VA 22202

Direct: 202.467.2925

Email: nmitchell@publicpower.org

Robert C. Jagusch

Director of Engineering and Policy Analysis

Minnesota Municipal Utilities Association

3025 Harbor Lane North, Suite 400

Plymouth, MN 55447

Mobile: 612.840.9697

Email: rjagusch@mmua.org