Mitigating Risk & Increasing Reliability of Critical Infrastructure

Topics:

- Backup Power Solutions
- Protecting Scada Systems

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Our Panel

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- CEO - SurveillanceGRID Integration Inc
- Industry Veteran
- Wireless Networking
- Integrated Solutions

Robert Reynolds

- CEO - Solis Energy, Inc.
- Manufacturer of Industrial, Outdoor Battery-Backup Systems
- IEEE Entrepreneurship Committee

Jeff Rosenberger

- CISO - SurveillanceGRID Integration Inc.
- MIS Director
- Cyber Professional
- Developer of Virtual Technology

The Need

Constant, Reliable, System-Wide Control

The Challenge

- No power available/accessible
- Part-time power
- Poor quality power
- Harsh environments
- Equipment sensitive to spikes, sags, surges, noise

Uninterruptible Power Supply (UPS)

“Spotty Power”

Problem: Grid Power has interruptions!

- Temporary, planned, or accidental interruptions

Power Solution: Battery sub-system scaled to support acceptable timeframe of backup, based on system draw

Security Solution: AI and motion analytics detect and record video. AI used to detect license plates

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Solar Power Plant (SPP)

For Sites with No Power Or Extended Outages

Problem: No power, no infrastructure to install security system

Power Solution: Solar panels and battery sub-system configured to system power draw and deployment location's solar data

Security Solution: Thermal Cameras and motion analytics to create alarm for guard response

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Continuous Power Bridge (CPB)

"Scheduled Power Loss"

Need: A security camera with radio network connection in a parking lot

Problem: Gang-switched lightpoles are off during the day

Power Solution: Continuous Power Bridge (CPB) that runs 24/7/365

Security Solution: 360°, 4-lens camera to detect & record motion

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Protection from Power Shutoffs with Battery Backup Systems

Configurable Power System

- Instant Battery Backup for Mission-Critical Equipment
- Designed for Intermitent and Rolling Power Outages
- Complete Turn-Key System
  - NEMA enclosure, charge controller, batteries, etc
- Add Solar / Wind Power
- SNMP Monitoring Equipped
- Mountable to a Pole, Wall, Fence, or Ground Skid
- Quick Field Deployment
- Cost & Time Efficient

The New Challenge:

Extended Fire Safety Outage

Augment Surveillance Solutions with:

AI Analytics

- Thermal Imaging
- Analytics-Enabled Cameras
- Radar, Motion Detection
- High Resolution Technology

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Considerations for a Power Strategy

1) Identify Current Power Situation
   A. Availability
   B. Quality
   C. Reliability
   D. Understand the *Cascading Effect*
2) Goals
3) Total Lifecycle Cost

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Another New Challenge:

Cyber Risk

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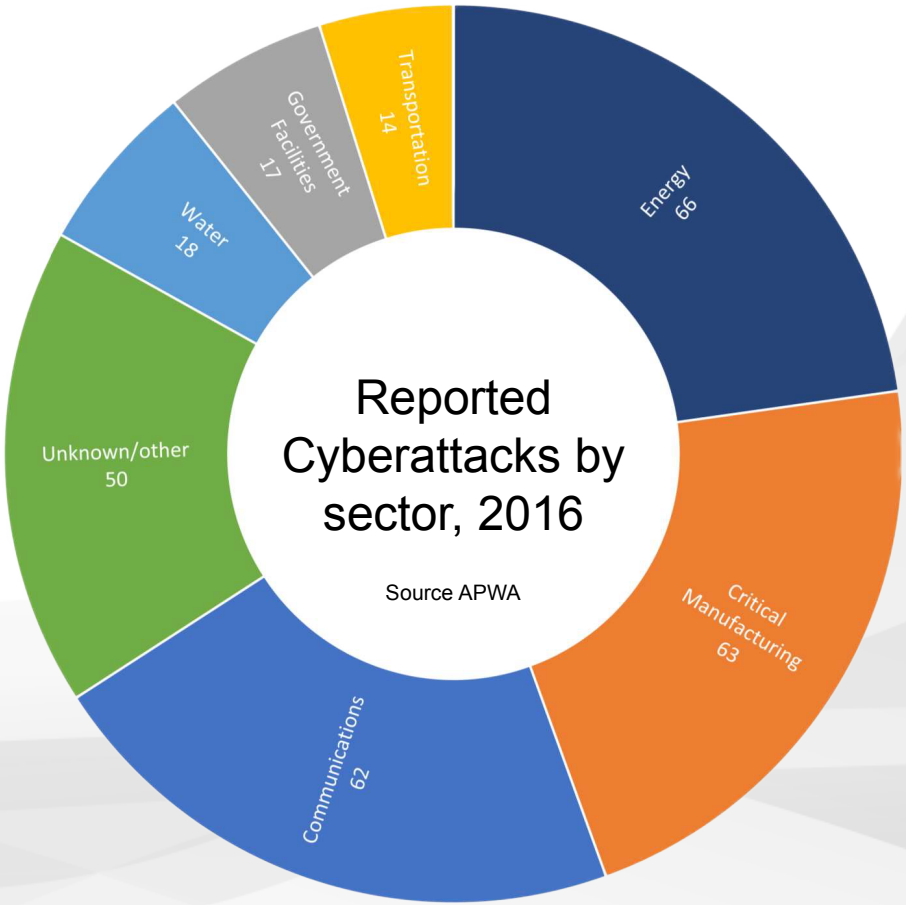
Rethinking Cyber Strategies for Critical Infrastructure

Seamless Security℠

- Public Works can not remain separate from IT – Performance, reliability and risk expectations need to align.
- Protecting Infrastructure is a continuous process – Changes in technology increase both risk and can provide better security.
- You are not an early adopter – Standardized frameworks, guidance and trainings are readily available.
- Cybersecurity a Federal priority – Executive orders and Senate bills implement programs to strengthen cybersecurity workforce.
- Don’t do it all yourself – Collaboration with private sector security SME’s can realize quick gains.



Cyber Risks: Slammer (2003) to Verkada (2021)

Seamless Security℠

Case Study: Oldsmar Water Treatment Plant

What Happened:

- Changed sodium hydroxide levels from 100 to 11,100 parts per million
- Control computers attached to Internet
- Super-user ID and password found on internet.
- If done at a different time results would have been disastrous

Prevention and Containment:

- Real time security monitoring - DarkTrace
- Automated IoT device monitoring - Viakoo
- Secure Policy and Procedure – NIST / AWWA / APWA
- Zero Trust – Fortinet / Palo Alto / Cloudflare / Okta

Infrastructure Cybersecurity Priorities

Seamless Security℠

Build

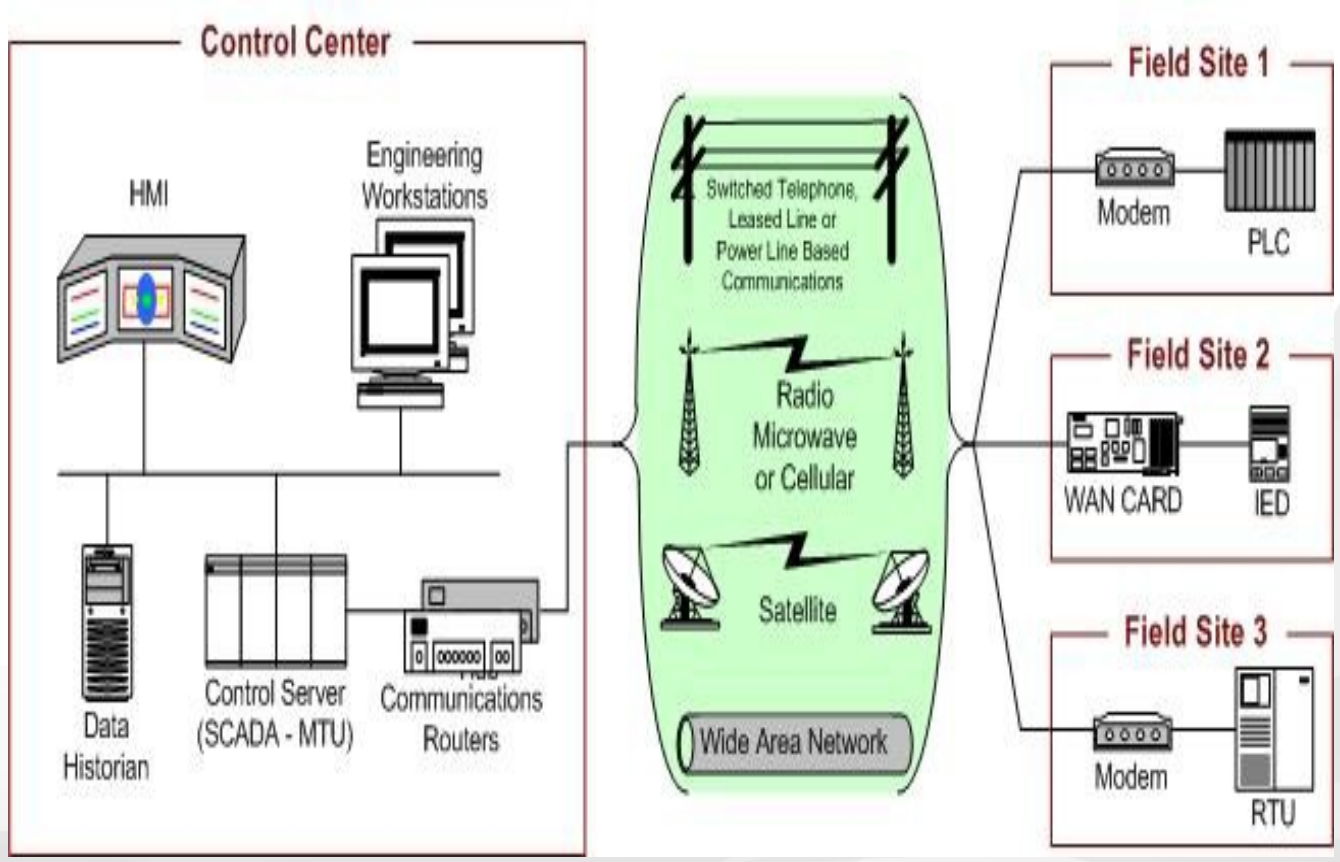
- Build security standards with policies and procedures

Protect

- Protect endpoints by managing the network – ZeroTrust

Maintain

- Maintain security by patching all systems that have access to the internet



Q&A SESSION

Creating Safe Places to Live, Work and Learn through Community Partnerships and Technology.