Microgrid / IoT
Cybersecurity Issues

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Overview

- Vulnerabilities – Enterprise vs. Home
  - Internet of Things, Connectivity
- Broader System Issues
  - Emergent Behavior
- Open / Harder Issues
  - Confidence, Stress, Crime
Micro Grids vs. Security

**Institutional**
- Dedicated / Contracted Team
- Process / Standards

**Home / Consumer**
Compounding Issues

• Internet of Things
  – Cheap
  – Rarely Patched
    ◦ Headless
    ◦ Effort
  – Not Isolated
    ◦ WiFi / Bluetooth
  – Poor Security “Hygiene”
    ◦ Passwords
Why It Matters - Scale

Sony PSN downed; hacking group claims DDOS attack
DDoS and Beyond

• DDoS
  – Distributed Denial of Service
• Cyber Physical Attack
  – Economic
  – Physical Damage
• Emergent Behavior
  – A + B yields C

Warning sirens in Dallas, meant to alert the public to emergencies like severe weather, started sounding around 11:40 p.m. Friday, and were not shut off until 1:20 a.m. Rex C. Curry for The New York Times

By Eli Rosenberg and Maya Salam
April 8, 2017

Officials in Dallas said the city’s warning system was hacked late on Friday night, disrupting the city when all 156 of its emergency sirens
Broader Thoughts

• Consumer Confidence
  – Who to blame?

• Targeted Stress
  – Election day, start of school

• Cyber Crime
  – Buy / sell on open market

Do microgrids help diversify and improve security or make us more vulnerable?
Quick Links / Collaboration

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