GRID RESILIENCY: The Intersection of the Utility Business Model, Regulatory Policy, and Incident Response

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The ability to defend against but if necessary to respond and recover from a threat ... whether intentional or natural
Resilience in Electric & Energy Sector

• Generation - Fuel Redundancy and Maintaining Existing Generation
• Pipelines - Need for Supply and Nexus with Generation
• Transmission - Upgrades, Hardening and Accommodating Renewables
• Distribution - System Management and Self Healing
• DER - Integration and Management
• DER - Town Center/Campuses Islanded & Black Start
• Protection of Critical Infrastructure Across All Sectors
• Nexus of Energy, Water, Telco
• Defense Critical Infrastructure and...
• Cybersecurity of the Grid Operations and Supply Chain
• And...need for a workforce to maintain the Systems!
Utility Business Model Challenges

• Monopolies vs. Competitive Markets
• Cost of Service vs. Competitive Pricing
• Energy Policies vs. Environmental Policies
• Central Station Power vs. Distributed Energy
• Traditional Generation vs. Renewables
• Reliability vs. Resilience
• Manual vs. Analog vs. Digitalization
Enhanced Use of Technology

Increased Reliance on DER / Microgrids

Enhanced National Effort for Resilient Critical Infrastructure...
  - Defense Critical Infrastructure
  - Electric, Water, Telecom Nexus and...
  - Nexus to Financial, Health, Shelter

Incident Response and Recovery
  - Increased Emphasis on Exercises and Drills
  - Workforce Training and Mutual Assistance
  - Spare Parts and Equipment
  - National, State, Local and Industry Coordination
Challenges to Delivering Grid Resilience

- Defining “Resilience”
- Challenges to the Operations of the Grid
- Maintaining the pace of Technology Advancement
- How to Value “Resilience”
- Whether the Traditional Utility Model is Workable
- Consider the Global Nature of the Threats and Responding
- How Policymakers & Regulators Respond
Delivering Grid Resilience

Resilience is how we protect from threats but also how we Respond and Recover.
Not easy right now as we need to anticipate and...invest!

Electric & Power Industry, Buyers & Sellers, Federal and State Policymakers & Regulators...and Consumers need to act.

Welcome to the Solutions!