ELECTRICITY COMMITTEE

BUSINESS MEETING

Electricity Committee

Chair:
Hon. Ann Rendahl, Washington

Vice Chairs:
Hon. Matt Schuerger, Minnesota
Hon. Talina Mathews, Kentucky

Legal Update

Jennifer Murphy, Esquire, NARUC

PROTECT OUR POWER

Institute for Energy and the Environment

VERMONT LAW SCHOOL

Mission

- Build consensus among government and industry to strengthen our electric grid against all potential attacks
- Independent, not-for-profit organization – 501 (c)(3) and (c)(4) status
- Robust, highly-experienced Board of Directors, Staff and Advisory Panel from across government, industry and private sectors

Goals

- Define and prioritize Best Practices that must be implemented in short- and long-term to make the electric grid more robust and resilient
- Identify the measures to ensure that urgent improvements and upgrades be implemented
- Develop innovative proposals to fund improvements, including methods that incentivize utilities to accelerate making grid more resistant to attacks

Leadership

John Lang

Chairman

Fmr. Corporate Treasurer, Aetna

Jim Cunningham

Executive Director

Fmr. President, Pennsylvania Electric Association

Suedeen Kelly

Regulatory Counsel

Fmr. FERC Commissioner

Paul Feldman

Technical Director

Fmr. Chairman, Midcontinent ISO

Richard Mroz

Senior Advisor State, Government Relations

Fmr. President, NJ Board of Public Utilities

Laurence Moskowitz

Strategic Communications Director

CEO, Lumentus

Institute for Energy and the Environment, Vermont Law School

- Provides accessible resources on contemporary energy law and policy with a focus on a cleaner and more resilient grid of the future
- Distributes scholarly, technical, and practical publications; provides forums and conferences for professional education and issue development
- Serves as a center for graduate research on energy issues, with environmental awareness
- IEE research associates are selected from students in the energy and environmental programs at Vermont Law School
- Vermont Law School top-ranked in the nation for environmental law

Purpose of Research

- Identify a pathways or model approaches for state electric utility commissions and their utilities
- Assess opportunities for state governments to advance grid security and resilience quickly
- Develop streamlined approach that can be used in every state to incentivize utilities and assure complete recovery of costs
- Provide needed uniformity to help regulatory agencies make timely decisions on need and cost

Phase 1 Research Methodology

- **Collected and reviewed primary and secondary sources**
  - Utility commission dockets, orders and reports
  - State statutes and regulations on utility commission jurisdiction and confidential information
  - Cybersecurity policies for national trade organizations, state governments, and federal government departments
- **Conducted interviews with**
- Investor-owned utilities, electric membership cooperatives, public power utilities, national trade associations, and public utility commissions
- Former Commissioners, Commission staff, Chief Information Security Officers, Chief Executive Officers, Vice-Presidents of Operations, Directors of Regulatory Affairs

Reasons for Action

DISTRIBUTION SYSTEM VULNERABILITY IS RISING

- Anticipatory threat challenges not being adequately met
- As interconnections and devices increase, so does grid vulnerability
- Dissimilar systems are being linked
- Bright lines between IT and OT fading
- Every access point creates potential vulnerability - IOU, coop or public power

COMPREHENSIVE COORDINATION REQUIRED

- Managing system vulnerabilities requires plan, action from every entity
- Plan must focus on sharing threat and vulnerability information, establishing best practices, facilitating investment via ratepayer benefits
- Continuous communication is key to addressing cybersecurity vulnerabilities
- Utilities, commissions, legislatures, and governors can lead

Phase 1 - Key Areas of Focus

Protecting Confidential Information

Cost Considerations + Cost Recovery Methods

Diversity of Distribution Utilities

Resiliency Metrics

Phase 2 - Key Areas of Focus

Protecting Confidential Information

Reports and Audits

Cost Considerations + Cost Recovery Methods

Resiliency Metrics

Grid Modernization

Phase 2 - Research Methodology

Actors

- Governors
- Legislatures
- Commissions

Actions

- Executive orders
- Agency actions
- Statutes
- Commission dockets
- Commission orders

Pathways to Action

- Pathways are examples of states taking action to address issues that limit the response to cyber threats
- Pathways reveal that many of the tools needed to address cybersecurity issues already exist or can be developed from existing processes
- Pathways are a forerunner of shared norms, practices, and principles
- Our research pulls examples from 26 states and the federal government

Principles

- Flexible and adaptive
- Respectful of grid architecture
- Considerate of institutional capacity
- Secure movement of information
- Protective of the public interest

Protecting Confidential Information

Issue Addressed: Protecting Critical Infrastructure Confidential Information

Information sharing between utilities and regulators builds environment of trust and action. Creating concrete steps to facilitate the flow of information builds trust.

Steps

1. **Defining Critical Infrastructure Information**
    a. Federal Definition
    b. State Definitions
    c. Public Records and Public Meetings Laws
2. **Limiting Commission Access to Confidential Information**
    1. Limiting Collection of Information
    2. Limiting Retention of Information
3. **Balancing the Public's Right to Access Information**

Reports and Audits

Issue Addressed: Enhancing Commission Knowledge of Utility Cybersecurity Practices

Reports and audits are a simple way to increase the information that a commission receives from its regulated utilities.

- **Cybersecurity reports**
  - Mandatory or voluntary formats
- **Smart grid reports**
  - Maturation of smart grid implementation programs is an opportunity
- **Management and operations audits**
  - Flexible design allows for customization

Cost Recovery Mechanisms

Issue Addressed: Incentivizing Investment in Cybersecurity Protections

The impact of regulatory lag on cybersecurity investments will grow as system needs increase.

Key Questions

1. **Does the alternative rate mechanism exist?**
2. **Should the Commission deploy the alternative rate mechanism?**
3. **How can the alternative rate mechanism be designed to protect the public interest?**

Resiliency Metrics

Issue Addressed: Filling in Information Gaps

Resiliency metrics are not widely deployed or accepted in the utility sector. Consistent use will help utilities transition to best practices-based approach to cyber risk management.

- **Historical adoption and refinement of reliability metrics**

- **Options for accelerating integration of resiliency metrics**
  - Technical working groups
  - Legislative mandates
  - Re-tasking existing metrics reporting obligations
  - Developing new metrics for grid modernization

Grid Modernization

Issue Addressed: How to Make Cybersecurity a Core Part of Grid Modernization

The pace of change on the grid is accelerating. Commissions must take an active role in controlling and shaping the coming changes.

Key Elements

1. **Define cybersecurity**
   - Clear, unambiguous definition of what is cybersecurity
2. **Define boundaries of investigation**
   - Acknowledge changing grid architecture and the growing role of third parties
3. **Design process for flexibility and efficiency**
   - Set goals, objectives, and policies and allow room for change

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