NERC Reliability Leadership Summit

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Improving RELIABILITY and mitigating RISKS to the Bulk Power System
Keynote speakers
- Cheryl LaFleur
- Dr. Edmund O. Schweitzer III

Identification of risk in the following areas:
- Challenges in operating the bulk power system
- Resiliency and security
- Emerging risks to reliability
Change drives reliability challenges
- Growth of natural gas
- Distributed technologies

Infrastructure

Regulatory

Grid resilience and security
Legacy systems had margin we need back
Intermittent sources and “stiffer” loads
Power systems are “twitchier” with less mass
Faster protection improves stability margin
Distribution systems are becoming busses
Share state information in real time
Never connect critical infrastructure to the internet
Lack of situational awareness
Planning and forecasting
Overlapping regulatory responsibilities
Distribution system can impact BES reliability
Data Management and Security
Gas/Electric improve planning coordination
Gas pipeline as N-1
Focus on interdependence of the 15 critical infrastructures
Resiliency

- Look at all hazards – don’t focus on just one
  - May overspend
  - Miss the next hazard

- Standards are not the answer

- Need timely intelligence
  - Operators of the system and government

- Spare equipment

- Impact of losing large amount of DER
Security

- **Regulatory model not nimble enough to prevent cyber threats**
  - Standards process too long to respond to threats
  - Learn from failures
  - Disincent entities from bringing forth problems

- **Need information government has on supply chain**

- **Translate techniques from large to small utilities**

- **EMP**
  - Initial EPRI work indicates threat may not be as bad as first thought
  - Wait on regulation until EPRI has finished their work

- **Need to understand threats**
“Skilled” workforce should be “changing” workforce
Skills evolving
Compliance requirements
RISC report does not appear to have any gaps
  • Risks may be accelerating

DER, Cyber Security, and Changing Workforce are highest risk areas

Fragmented regulatory structure is a challenge

Standards are not the answer for everything
For questions, contact: rogunde@nppd.com