

# NERC History, Mission and Current Issues

## Southern States Energy Board

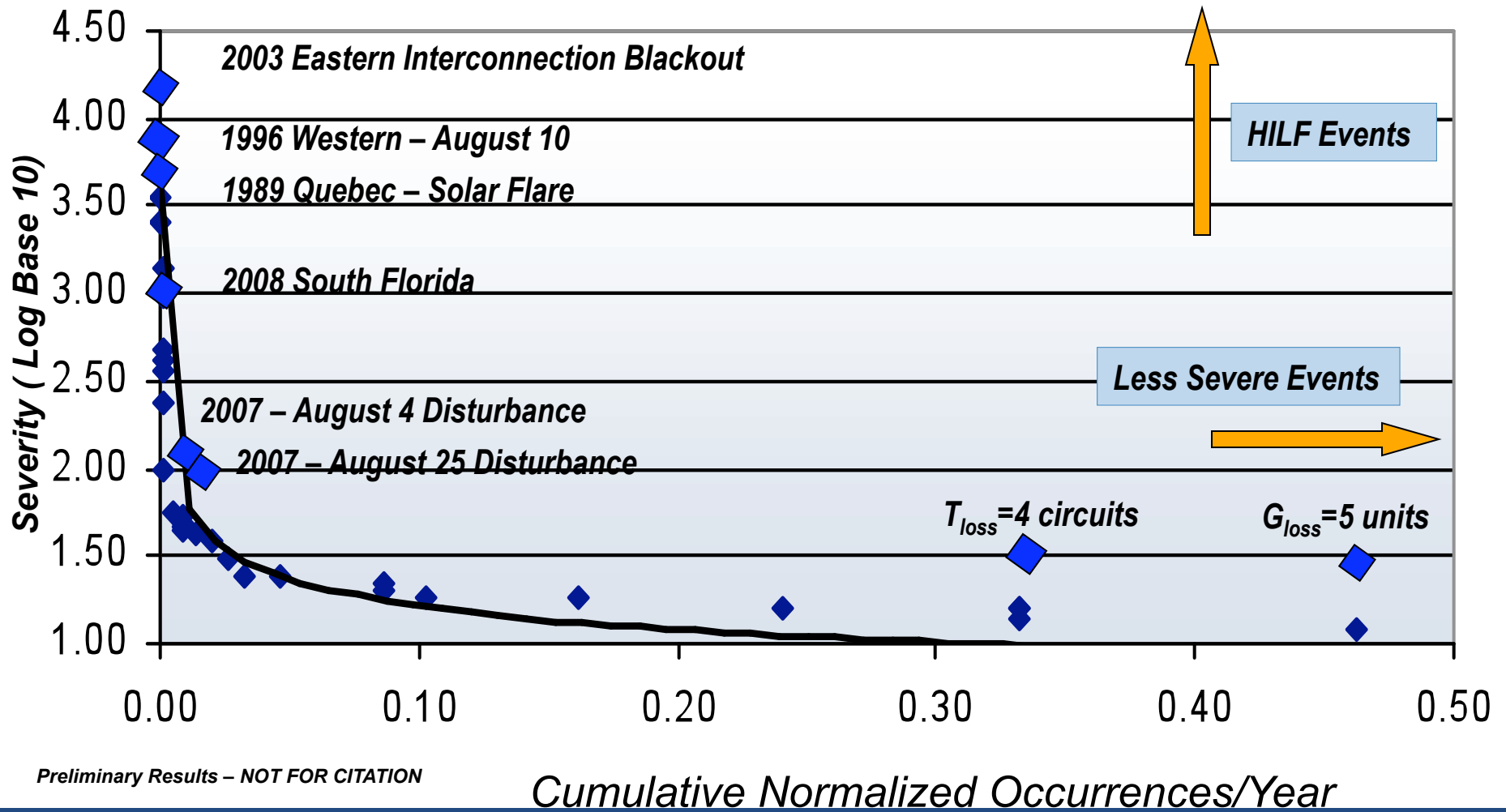
October 16, 2011

**RELIABILITY | ACCOUNTABILITY**



# Electricity – Vital to America





Preliminary Results – NOT FOR CITATION

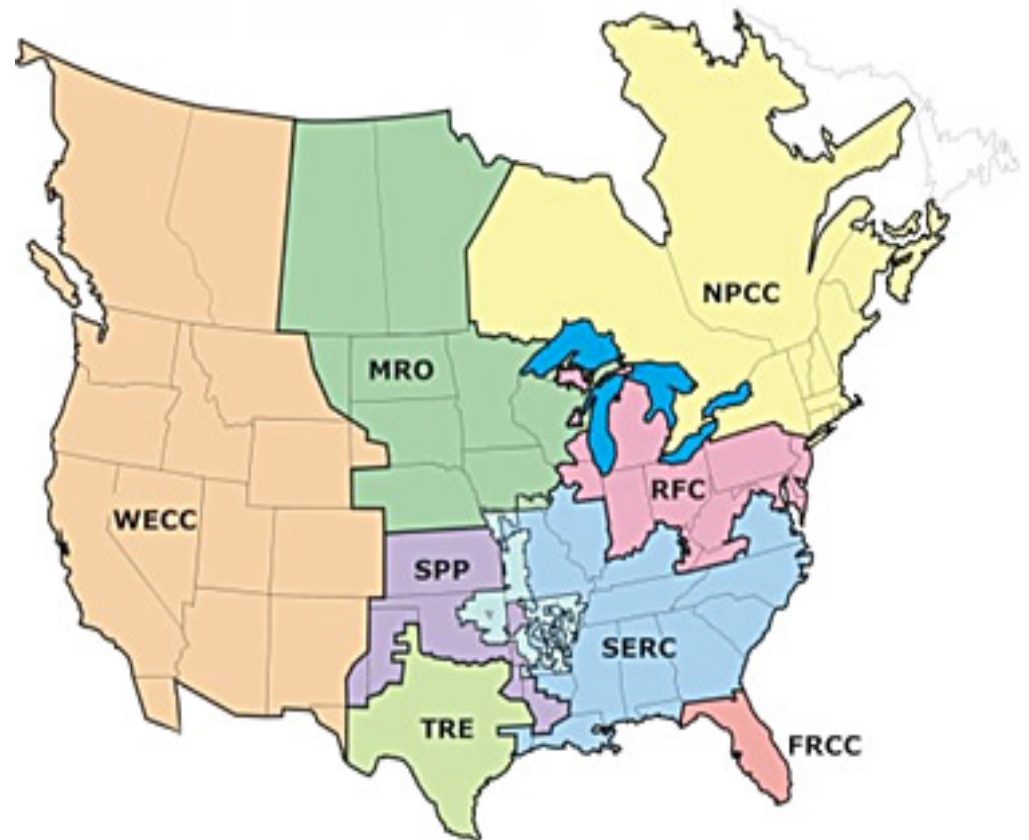
Cumulative Normalized Occurrences/Year

## *International regulatory authority for electric reliability in North America*

- Develop & enforce reliability standards
- Analyze system outages and near-misses, recommend improved practices
- Assess current and future reliability
- Promote cyber and physical security



- Independent board
- FERC oversight and participation
- Members committee
- Regional entities

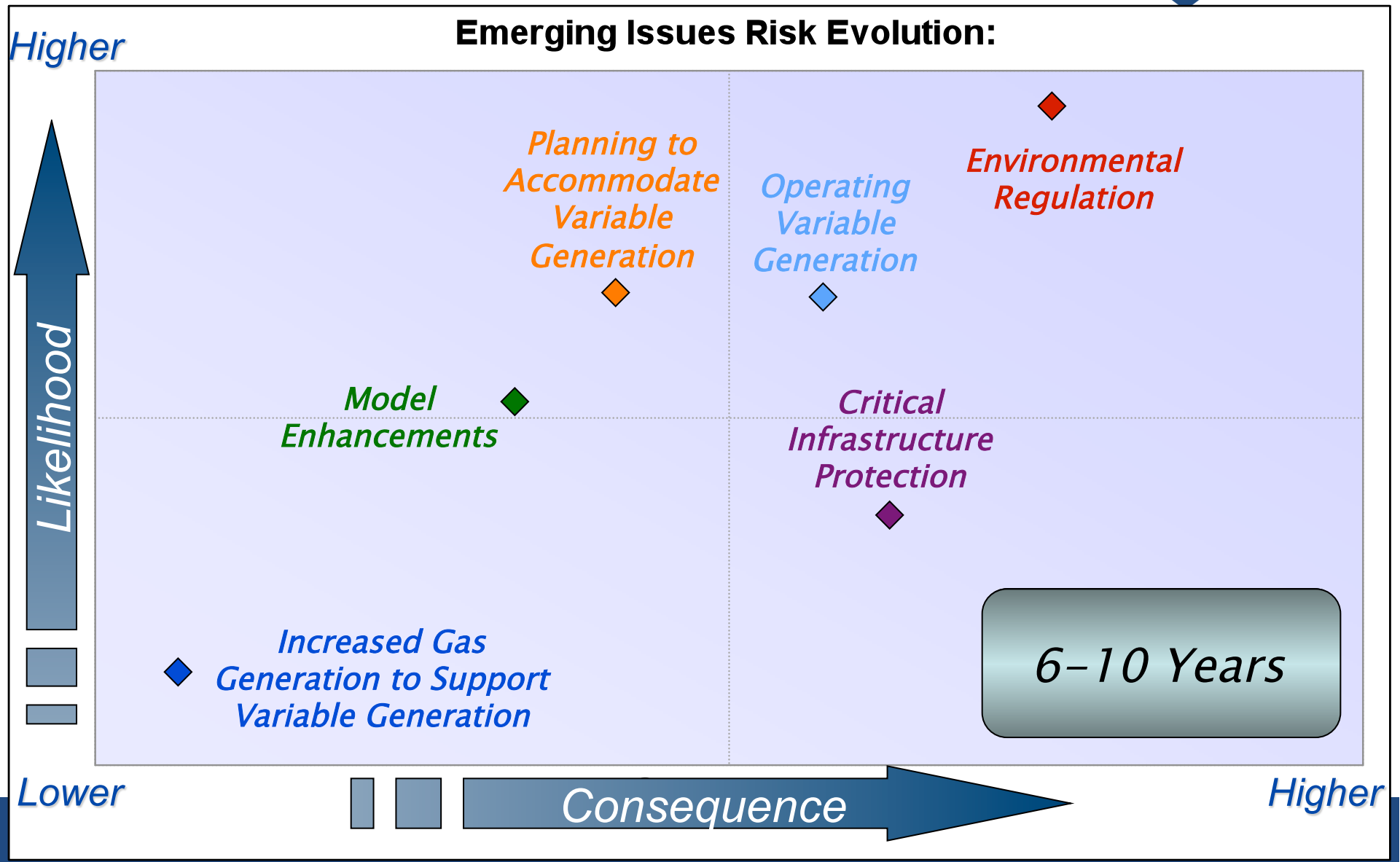


- Standards
- Compliance monitoring and enforcement
- Event analysis and investigations
- Training and education
- Reliability assessment and performance metrics
- Critical infrastructure protection

- Nine mandatory critical infrastructure protection standards
- Electricity Subsector Coordinating Council (ESCC)
- Electricity Sector-Information Sharing & Analysis Center
  - Bi-directional information sharing and government coordination
  - Security analysis and metrics development
  - Secure communications
- Security alerts:
  - VPN vulnerability
  - Aurora
  - Stuxnet
  - “*Night Dragon*”
  - Geo-magnetic disturbances

- Coordinating with DHS, DOD, DOE
  - CyberStorm III, Grid Security Conference
  - Industry access to government developed security tools
  - Risk management guidelines for the electricity sector
  - Scenarios for better design basis and resilience against emerging threats
- Current activities
  - Geomagnetic Disturbance Task Force
  - Cyber Attack Task Force
  - Severe Resilience Task Force
  - Spare Equipment Task Force

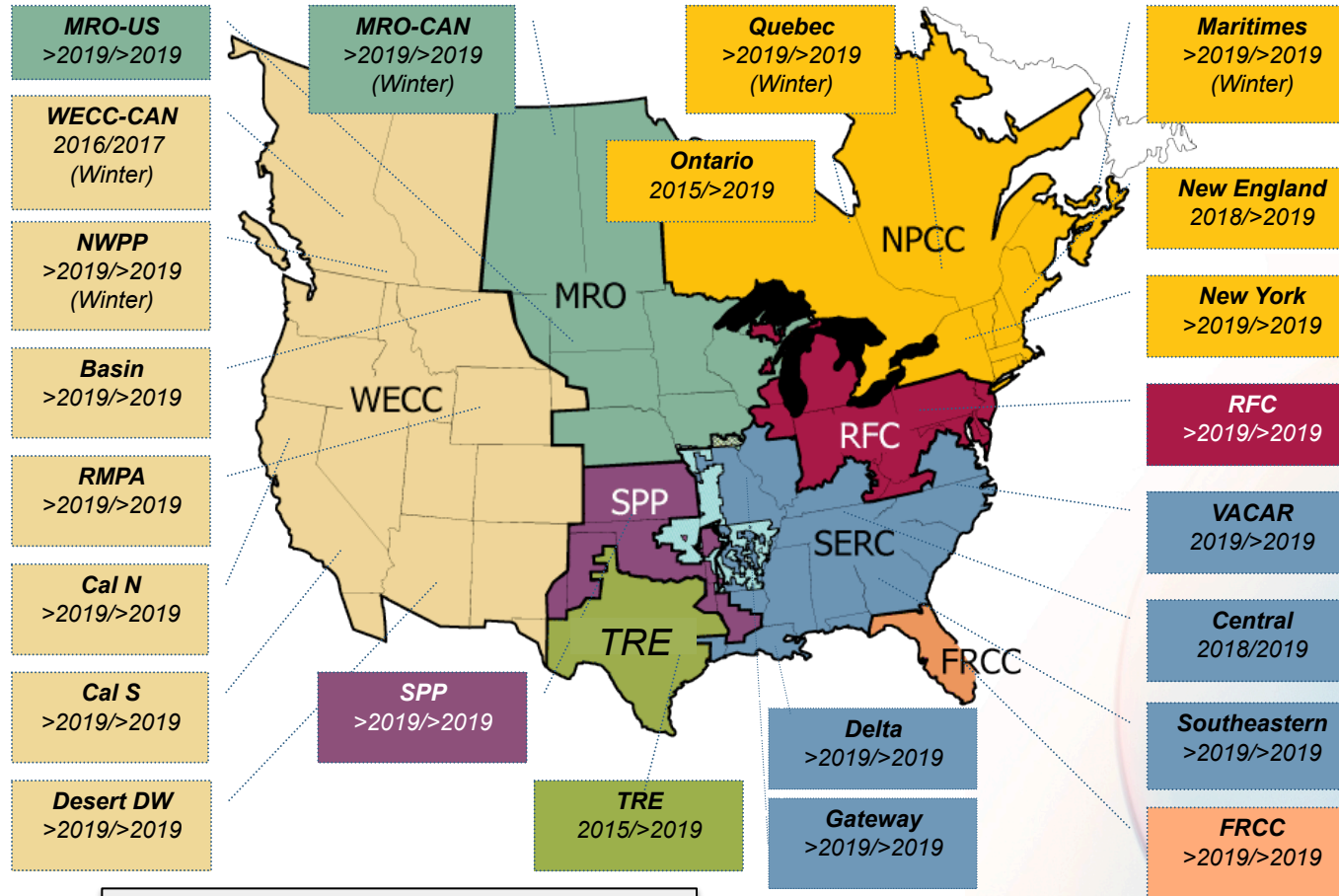
- Congress is looking at several approaches to comprehensive cybersecurity legislation.
- NERC agrees there is a need for comprehensive federal authority to address cybersecurity *emergencies*
- NERC believes we have the authority we need to address *vulnerabilities*
- NERC wants to ensure that existing processes for cybersecurity are incorporated in any federal policy contemplated
- NERC is supportive of any effort to further improve and facilitate information sharing from the federal government to the private sector



- Peak demand forecasts
- Resource adequacy
- Transmission adequacy
- Key issues and emerging Trends
- Special assessments
  - Variable generation
  - EPA regulations

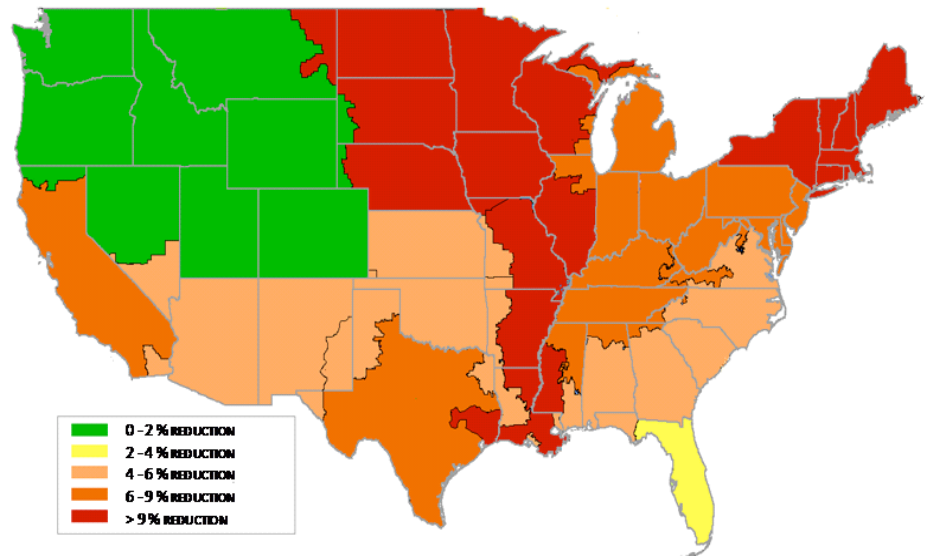


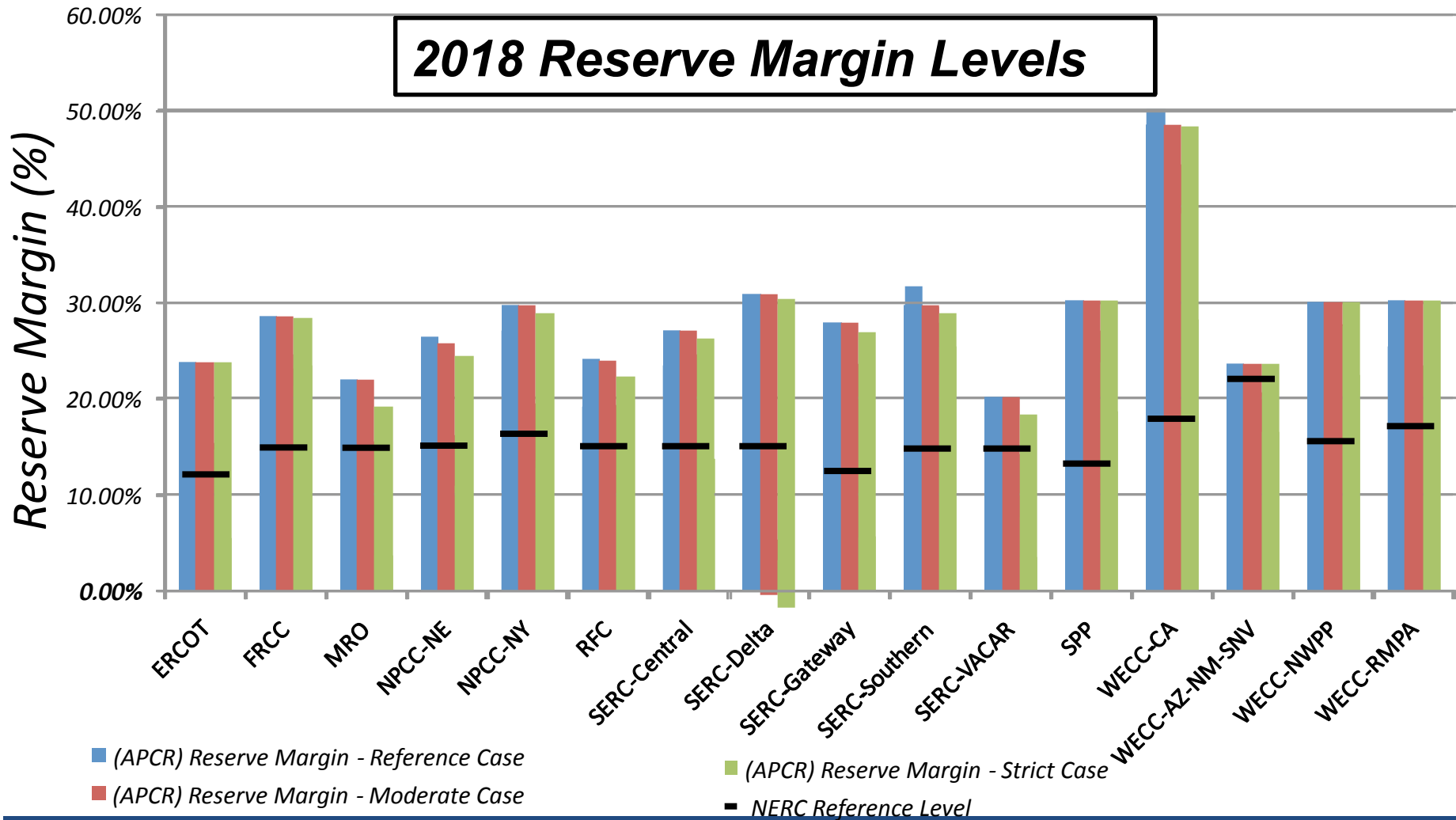
- The economic recession and demand-side management leads to higher Planning Reserve Margins
- Unprecedented change in the generation fuel mix is projected during the next ten years,
  - Increases in gas-fired, wind, solar, and nuclear generation
- Bulk transmission development begins to take shape
- Cross-industry communication and coordination is key to successful planning and operations



- Year when Reserve Margin (RM) drops below NERC Reference Margin Level:
- Anticipated RM / Adjusted Potential RM

- EPA Report October 2010
  - Identify potential outcomes of future EPA Regulations
  - Quantify potential impacts to Planning Reserve Margins
  - Examine unit retirements triggered
  - Provide results to NERC's stakeholders, industry leaders, policymakers, regulators, public
  - Highlights the affected Regions/Subregions





- Regulators
  - Consider pace and aggressiveness of regulation timing and impacts to the bulk power system
- Industry
  - Employ tools to mitigate potential issues
- NERC
  - Further assess the implications of regulations as greater certainty emerges around industry obligations, technologies, timelines, and targets
  - LTRA incremental update November 2011