



Tennessee Public Utility Commission

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Discussion Topics

- How was SERC formed?
 - Voluntary Organization
 - Blackout 2003
 - Energy Policy Act 2005
 - Creation of the Electric Reliability Organization (ERO) Enterprise and mandatory changes to the Electric Utility Industry
- What does SERC regulate?
 - Footprint
 - Registered Entities
 - NERC Reliability Standards
- Current and Emerging Risks

History



November 9, 1965- Northeast Blackout

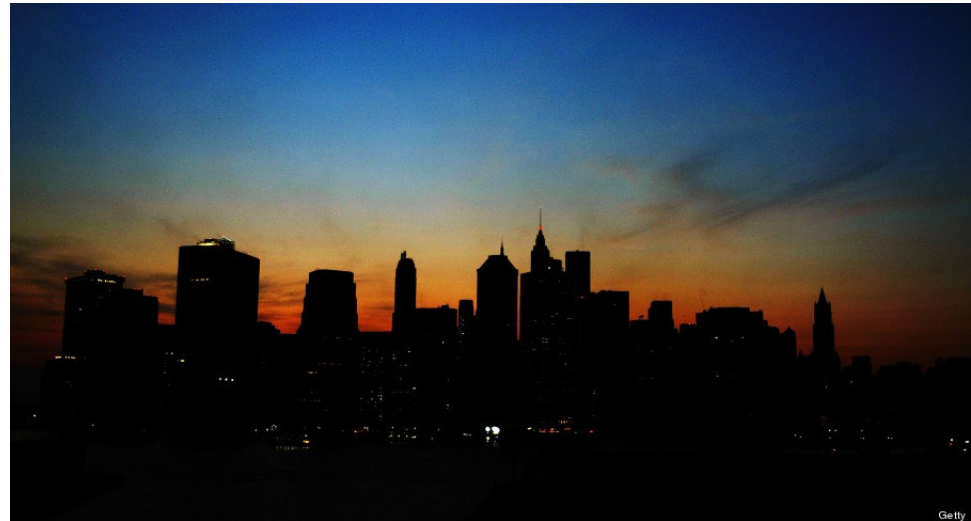
1968- National Electric Reliability Council (original NERC) was initially established by the electric industry as a *voluntary organization*

1970- Southeastern Electric Reliability Corporation (original SERC) was formed

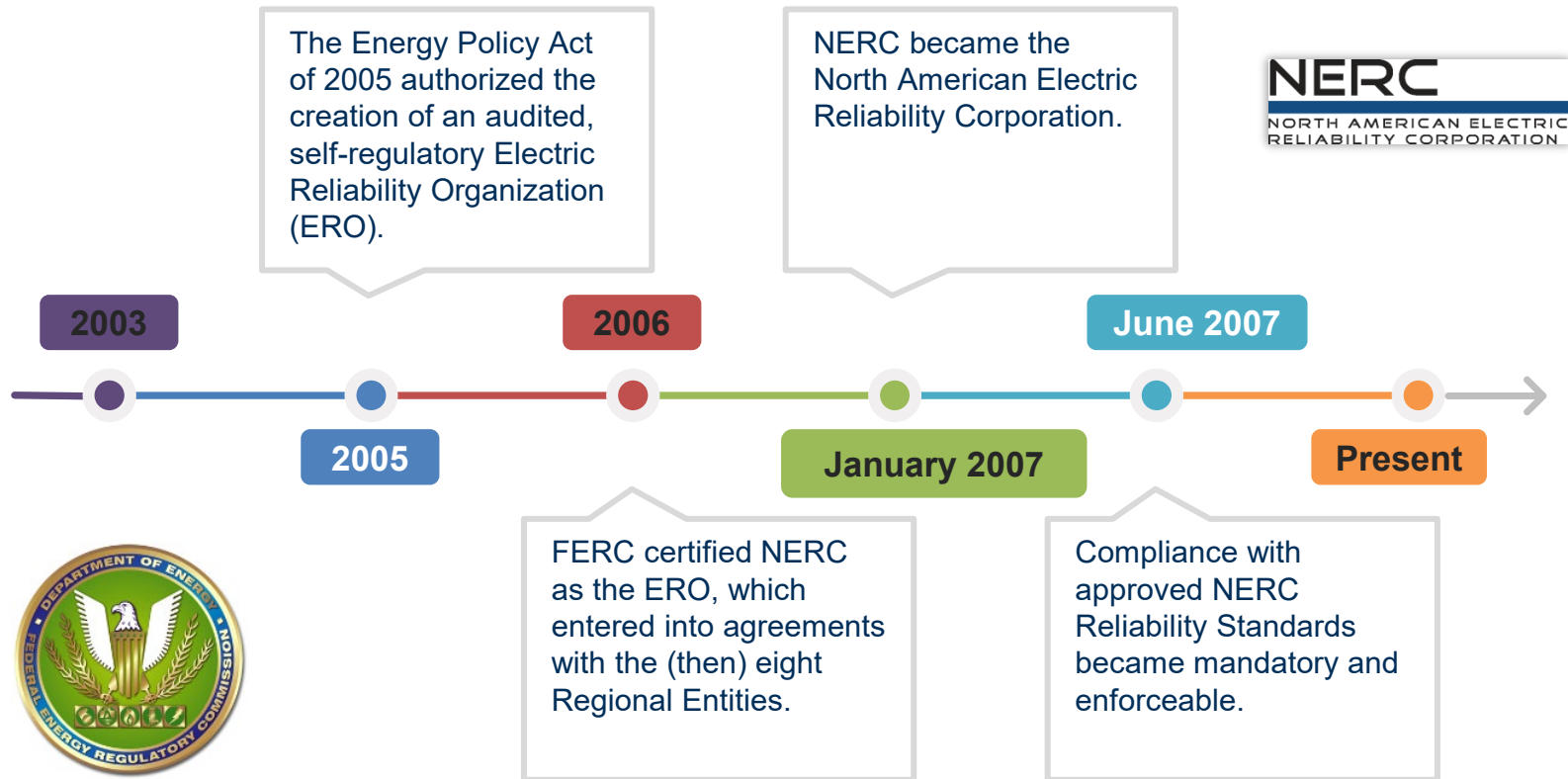
1977- Federal Energy Regulatory Commission (FERC) was created by the Department of Energy Organization Act of 1977.

2003 Northeast Blackout

- In 2003 the “Northeast Blackout” occurred where 50 million people lost power, the worst power blackout in history.
- A Task Force was formed to investigate the causes of the blackout and to make recommendations to prevent future blackouts.
- This resulted in mandatory changes in the electric utility industry.



Key changes as a result of the 2003 blackout

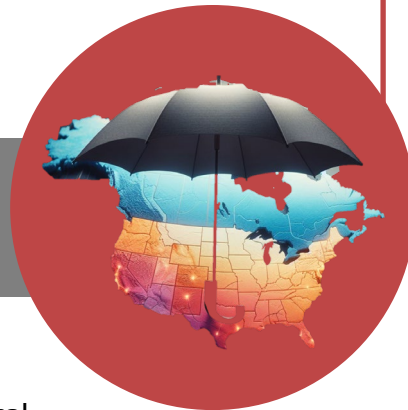


ERO Enterprise

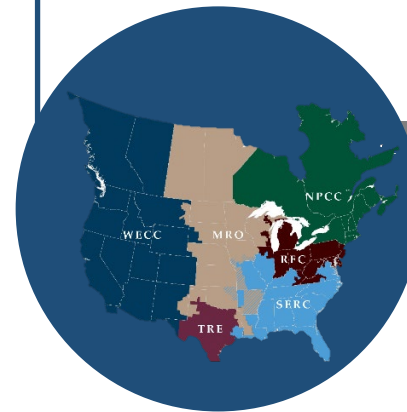
Standard Development	Assessments	Studies	Whitepapers
Over 90 Reliability Standards	Long Term and Seasonal	Risk Reliability Studies, Transfer Capability	Technical Whitepapers and Reports

Audits	Enforcement	Outreach	Regional Studies
In the field and on-site compliance verification	Mandatory Mitigation; monetary and non-monetary sanctions for non-compliance	Webinars, Workshops, Newsletters	Sub-regional assessments and studies

NERC



NERC as the ERO operates under specific authorities established in the 2005 Federal Power Act. NERC has oversight of the six regions and is evaluating reliability risk on an inter-national scale.



Regions

The regions have the authority to audit and enforce the NERC Reliability and Security Standards with their Entities. The regions also provide studies, assessments and evaluate Reliability Risk specific to their region as well as providing outreach and training

ERO Enterprise



We are regulators of the electric industry



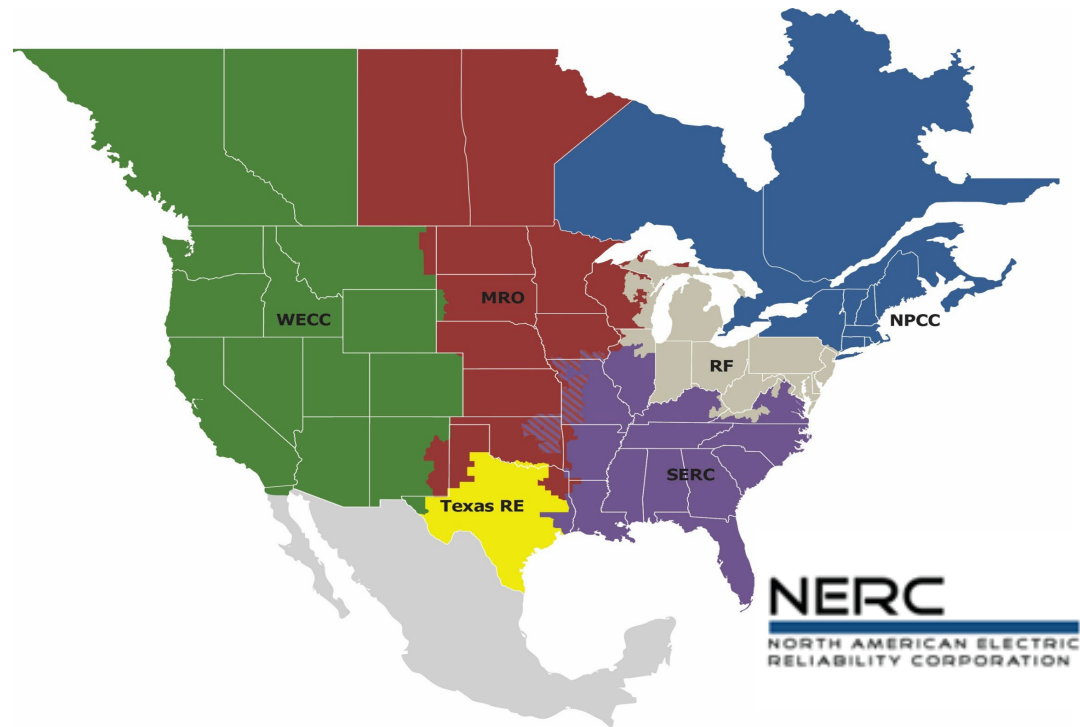
We do not own or operate grid assets or energy markets



Our mission is solely reliability and security of the bulk electric system

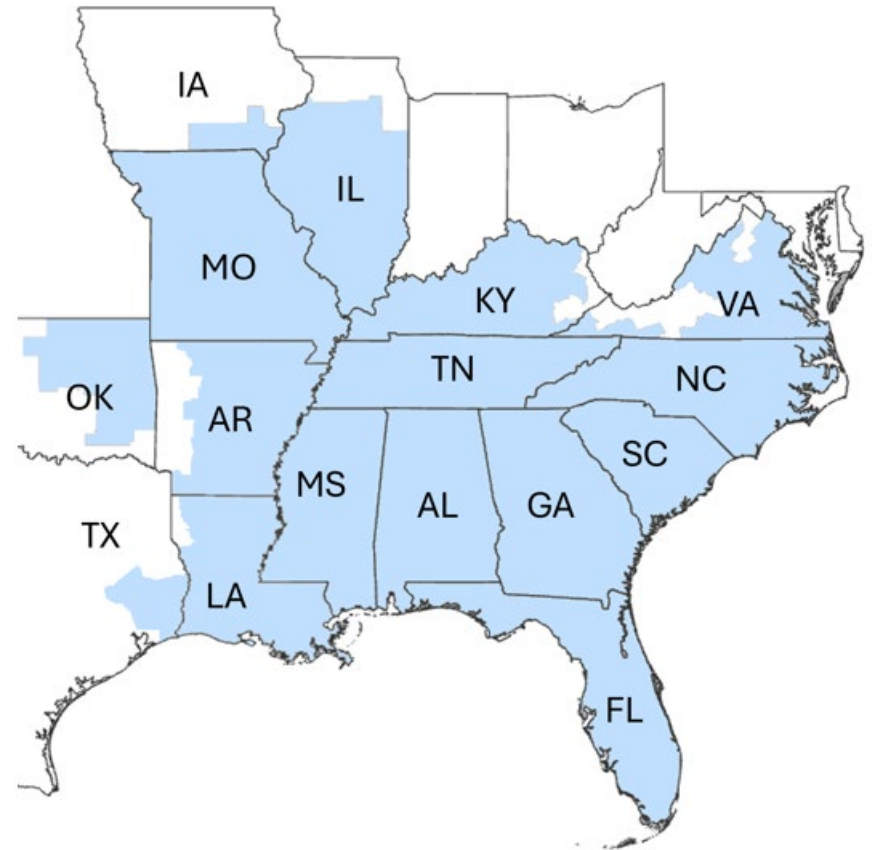


We are an objective and independent resource

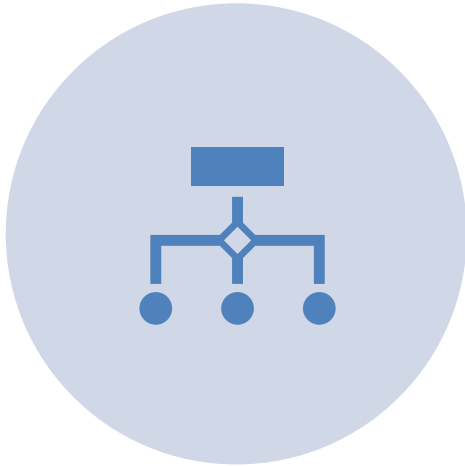


SERC Reliability Corporation (SERC) at a Glance

- 16 states
- 97 million estimated population
- 295 Registered Entities
- 118k miles of Bulk Electric System transmission lines
- 3,400 generating units
- 261 GW forecasted load in 2024



Mandatory Entity Registration

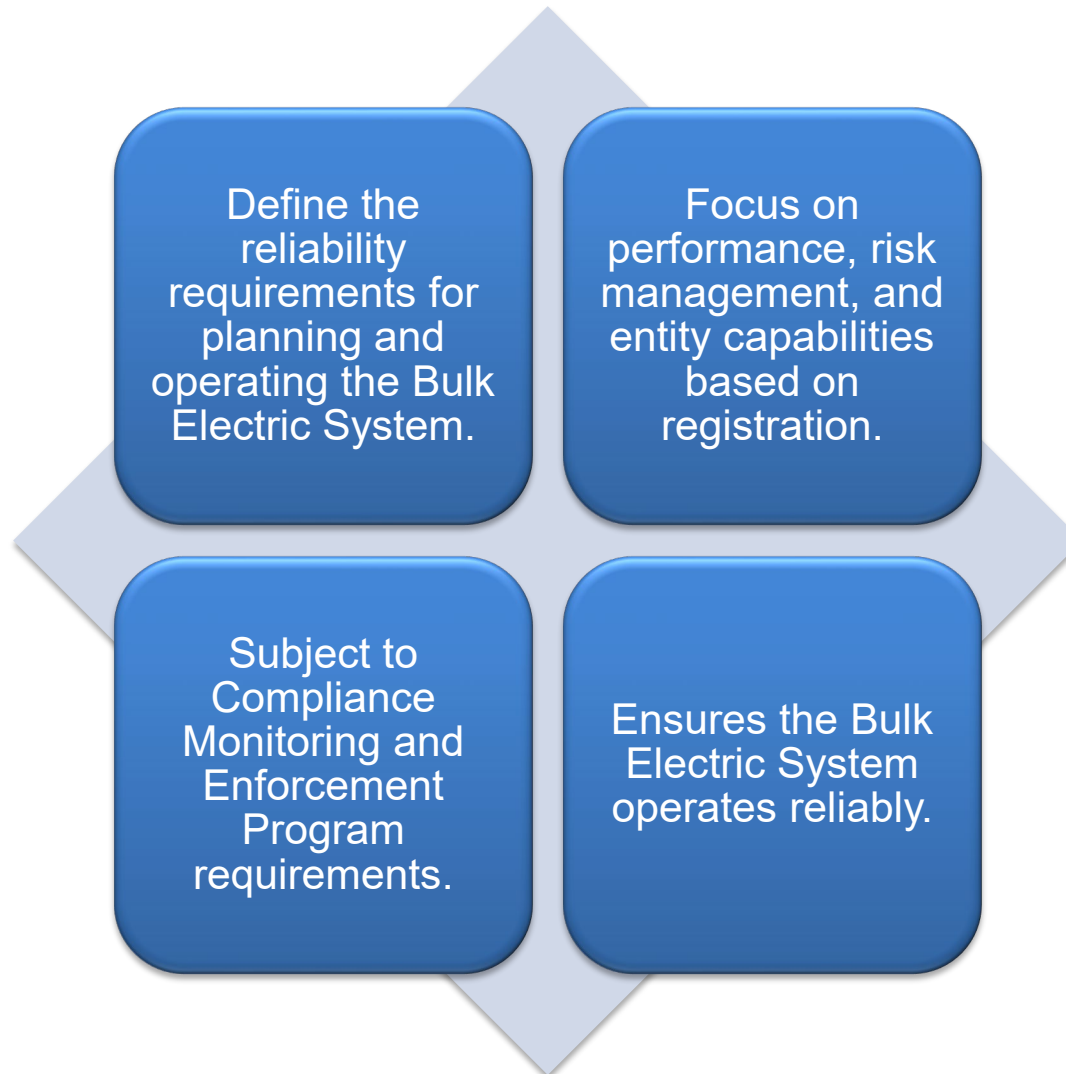


NERC and the Regions have a process that identifies organizations that may be candidates for **registration**.



NERC and the Regions identify *all owners, users, and operators who have a material impact on the Bulk Electric System* in order to develop a complete and current Compliance Registry list.

NERC Reliability Standards



Current and Emerging Risks

KEY REGIONAL RELIABILITY RISKS

Changing Resource Mix

Pace and complexity of change



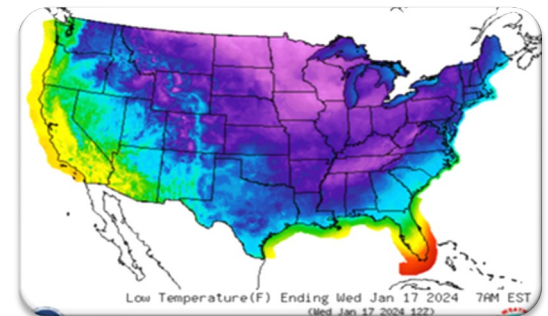
Cyber and Physical Security

Adversarial cyber attacks
Identifying and protecting critical assets
Defense needs to keep pace with threats

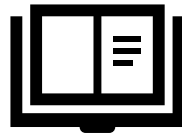


Extreme Weather Impacts

Cold weather preparedness



Resources & Contact Information



[Summer Reliability Assessment
2023-2033 LTRA
2022-2023 Regional Risk Report](#)



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