



# **NERC Compliance Enforcement Program & ERO Formation**

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**ERCOT Cyber Security Workshop  
Austin, Texas  
November 1, 2006**

**Mark Henry  
ERCOT Compliance**



# What Is NERC and the ERO about?

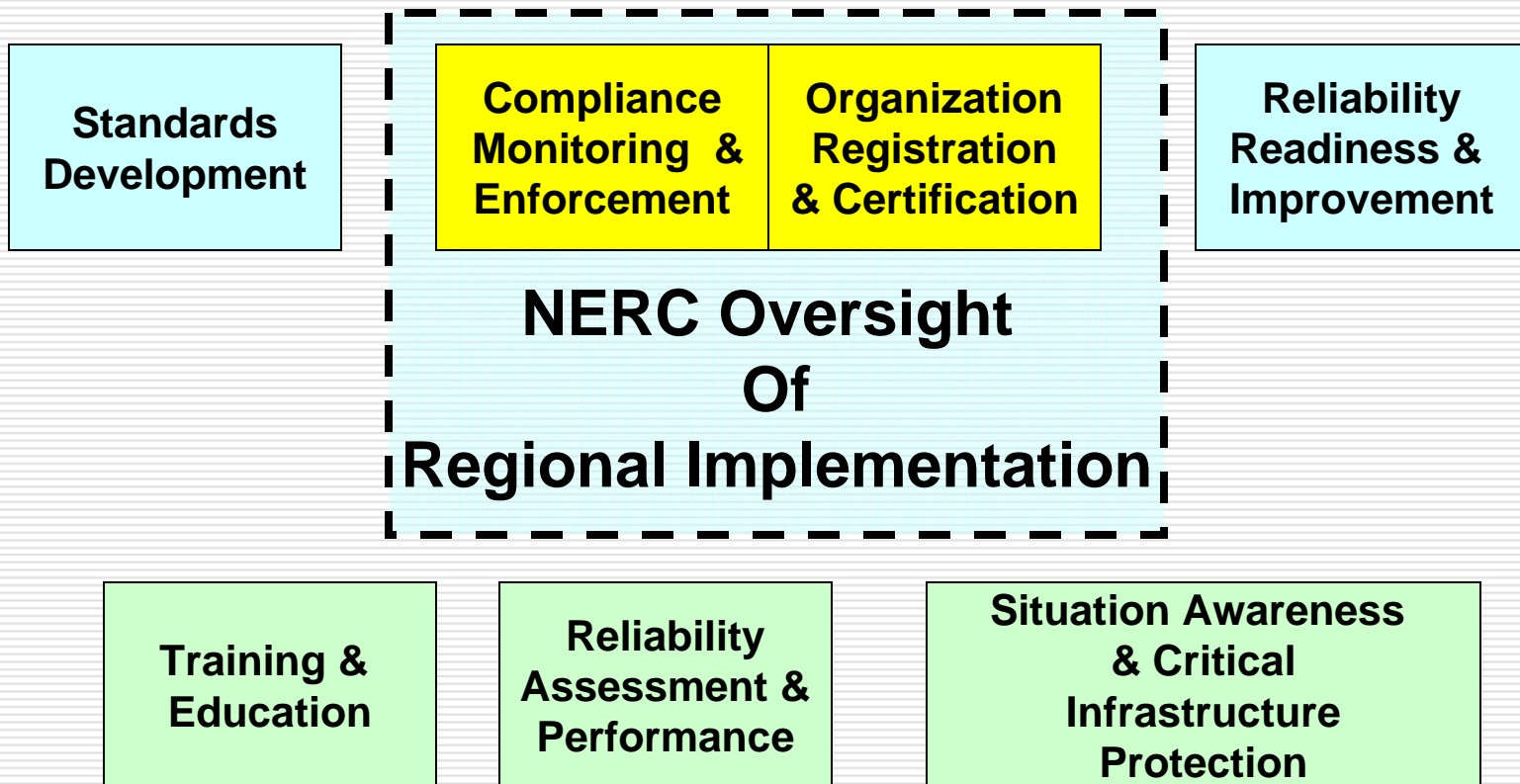
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- ☐ North American Electric Reliability Council
  - ☐ Industry Association Formed in 1968 in Response to Northeast Blackout
  - ☐ Monitored Compliance with Voluntary Standards
  - ☐ Energy Policy Act of 2005 Mandated an Electric Reliability Organization (ERO)
  - ☐ NERC named ERO July 20, 2006
  - ☐ Mandatory Standards with Fines
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# NERC Programs

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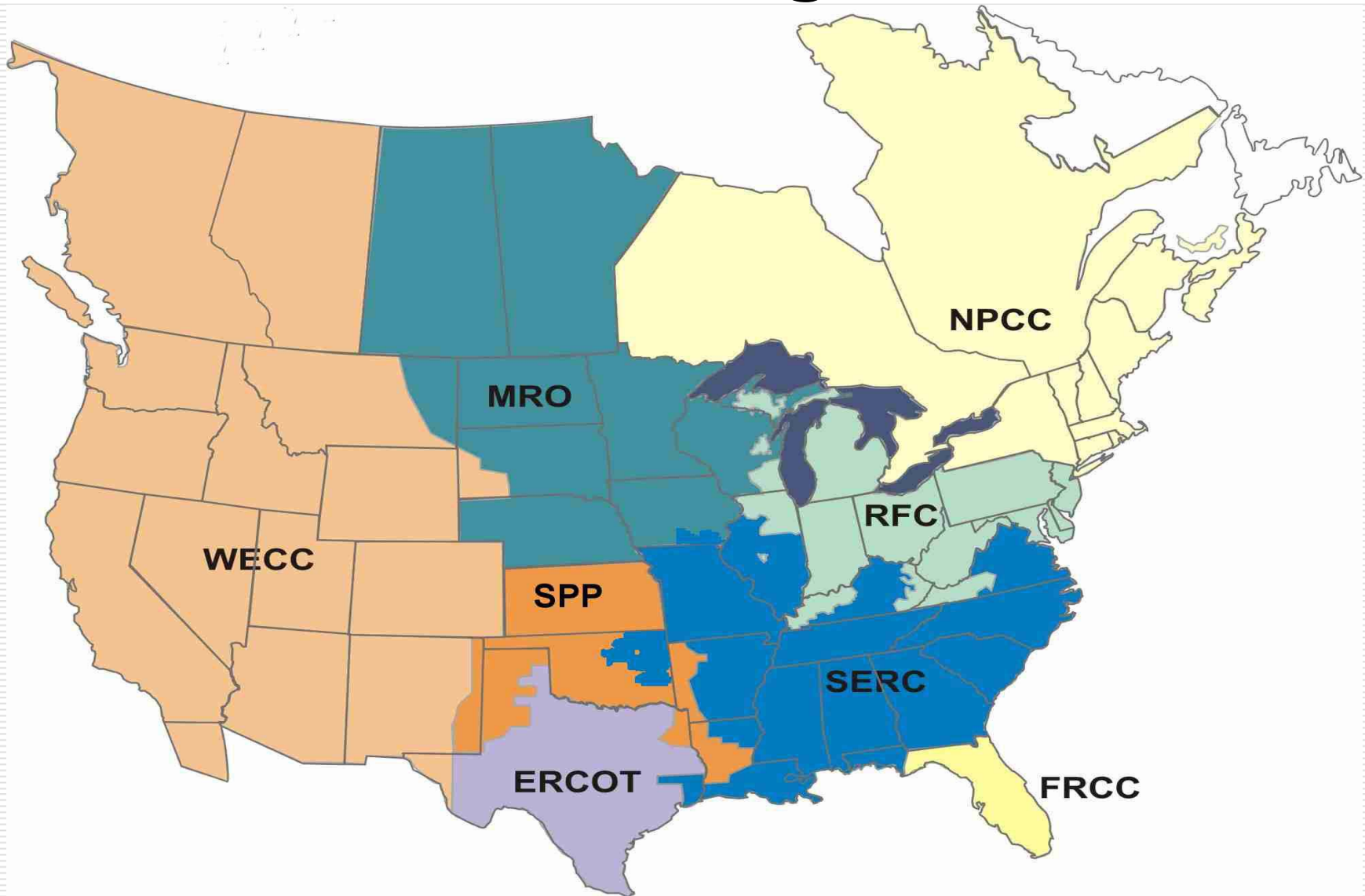




# NERC Standards

<b>BAL</b>	<u><a href="#">Resource and Demand Balancing</a></u>
<b>MOD</b>	<u><a href="#">Modeling, Data, &amp; Analysis</a></u>
<b>CIP</b>	<u><a href="#">Critical Infrastructure Protection</a></u>
<b>ORG</b>	<u><a href="#">Organization Certification</a></u>
<b>COM</b>	<u><a href="#">Communications</a></u>
<b>PER</b>	<u><a href="#">Personnel Performance, Training, &amp; Qualifications</a></u>
<b>EOP</b>	<u><a href="#">Emergency Preparedness and Operations</a></u>
<b>PRC</b>	<u><a href="#">Protection and Control</a></u>
<b>FAC</b>	<u><a href="#">Facilities Design, Connections and Maintenance</a></u>
<b>TOP</b>	<u><a href="#">Transmission Operations</a></u>
<b>INT</b>	<u><a href="#">Interchange Scheduling &amp; Coordination</a></u>
<b>TPL</b>	<u><a href="#">Transmission Planning</a></u>
<b>IRO</b>	<u><a href="#">Interconnection Reliability Operations &amp; Coordination</a></u>
<b>VAR</b>	<u><a href="#">Voltage and Reactive</a></u>

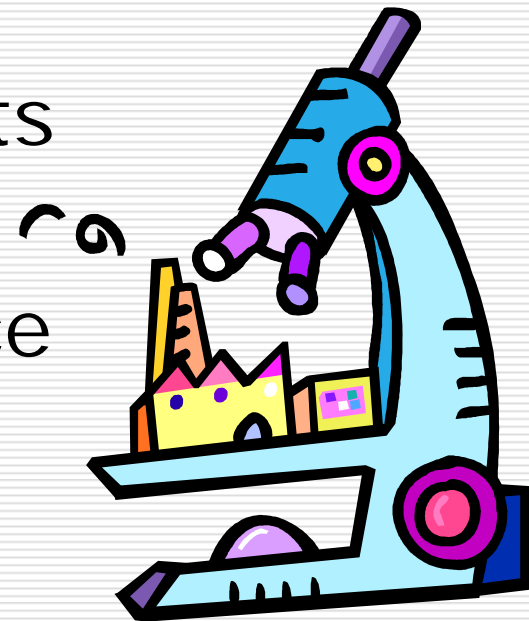
# What is the Region's role?



# Why a Compliance Enforcement Program?

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- ❑ Voluntary compliance with reliability rules has proven inadequate
- ❑ Competitive pressures
- ❑ New industry participants
- ❑ Lack of incentive to correct poor performance
- ❑ Energy Policy Act





# ERO Transition Timeline

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04/04/06	NERC filed ERO application (U.S. & Can.)
07/20/06	FERC named NERC as ERO
08/02/06	NERC Board approves 2007 ERO budgets
08/24/06	NERC budget filed at FERC
09/04/06	ERCOT submitted entity registration to NERC
10/24/06	FERC approves '07 ERO budget & 83 standards
11/07/06	Regional delegation agreements filed <u>- delayed</u>
01/01/07	NERC begins ERO operation
06/01/07	Initial Mandatory Standards in Place

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FUTURE DATES ARE SUBJECT TO CHANGE

# Who Must Comply?

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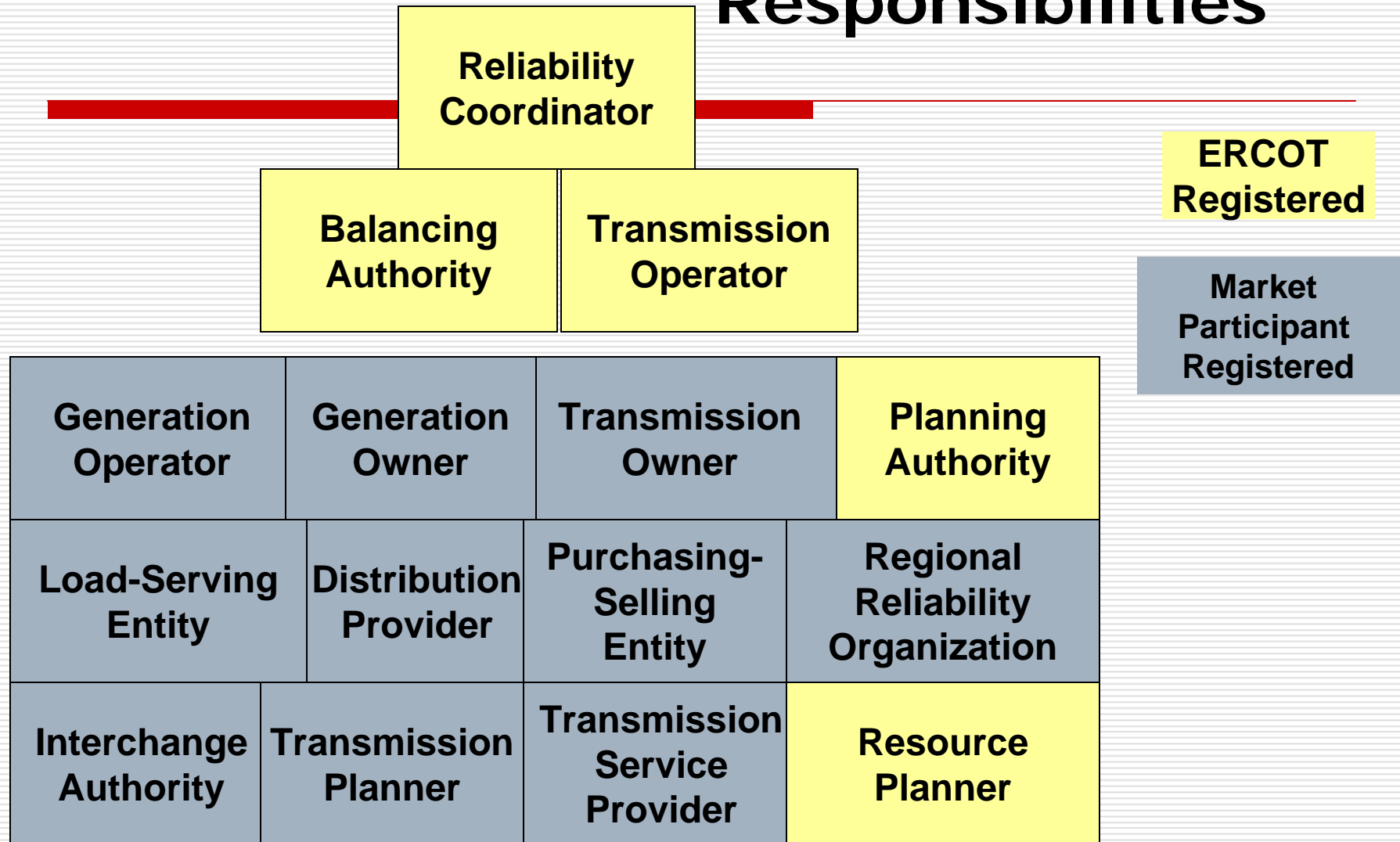
- ☐ Any entity responsible for any part of bulk power system reliability
  - **Historically defined as control areas and reliability coordinators**
- ☐ Functional entities
  - **Aligns reliability requirements with functional unbundling**







# Functional Model Responsibilities



# Compliance Monitoring

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- ☐ Self-certification
  - ☐ Periodic reporting
  - ☐ Exception reporting
  - ☐ Investigations
  - ☐ Random spot checking or audits
  - ☐ Compliance audits
  - ☐ **SELF REPORTING**
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# Base Penalty Amount Table (Proposed)

	Violation Severity Level							
Viol. Risk Factor	Lower		Moderate		High		Severe	
	Range Limits		Range Limits		Range Limits		Range Limits	
	Low	High	Low	High	Low	High	Low	High
Lower	\$1K	\$3K	\$2K	\$7.5K	\$3K	\$15K	\$5K	\$25K
Medium	\$2K	\$30K	\$4K	\$100K	\$6K	\$200K	\$10K	\$335K
High	\$4K	\$125K	\$8K	\$300K	\$12K	\$625K	\$20K	\$1M

Note: Generally “per incident” but can be “per day” where warranted.



# How Will Penalties Be Applied?

- ☐ **Penalties will be applied by the Regional Entity**
  - Staff will determine initial penalty or sanction
  - Regions may reach settlement – must file with FERC
  - Penalties may be appealed
- ☐ **Once final, NERC files “notice of penalty”**
  - Penalties may be adjusted by FERC
  - Penalties become effective 31 days after filing
  - Remedial actions may be applied immediately to preserve reliability



# **NERC CIP Standards**

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**CIP-002 – Critical Cyber Assets**

**CIP-003 – Security Management Controls**

**CIP-004 – Personnel and Training**

**CIP-005 – Electronic Security**

**CIP-006 – Physical Security**

**CIP-007 – Systems Security Management**

**CIP-008 – Incident Reporting & Response Mgmt**

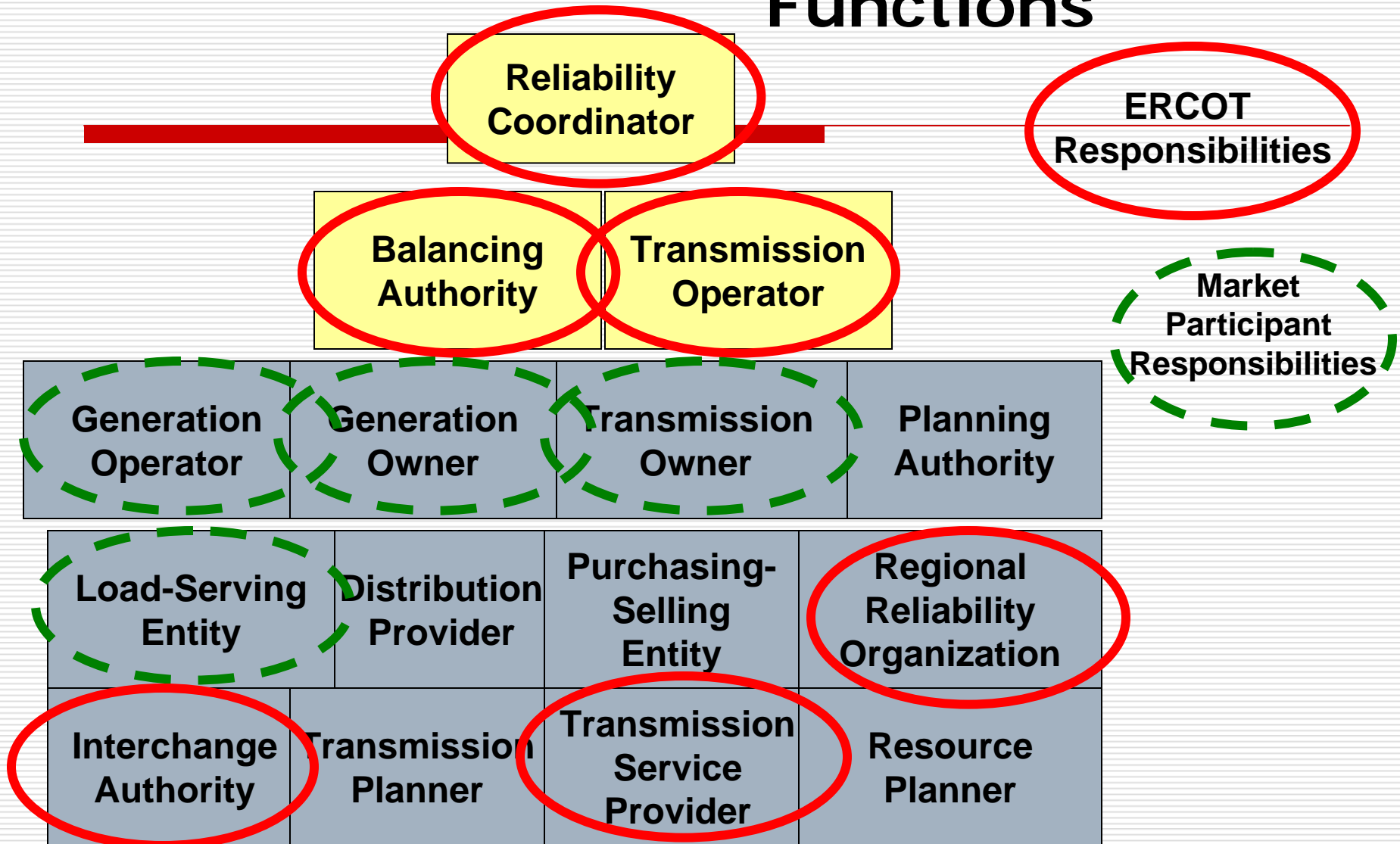
**CIP-009 – Recovery Plans**

**Implementation Plan**

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# CIP Standard Functions





# Current Status of CIP Standards

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- ☐ **Approved by Industry:**
    - **Second Ballot complete March 24, 2006**
    - **88.82% Approval by industry**
    - **NERC Board Approval May 2, 2006**
    - **“Effective Implementation” June 1, 2006**
  
  - ☐ **Submitted to FERC on August 28, 2006**
    - **Waiting for FERC Action (Docket RM06-22)**
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# Implementation Plan

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- ❑ Implementation Plan tables specified by CIP Standard and individual Requirement
  - ❑ 4 years for all currently (2006) registered entities to reach “Auditable Compliant” (2007 to 2010)
    - Maximum of 3 years to complete work and achieve “Compliant” (2009)
    - Some requirements in Table 1 reach “Compliant” in 2008
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# 4 Stage Implementation Plan

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- “BW” – Begin Work - Entity has a plan to address requirements
  - “SC” – Substantially Compliant - Entity is implementing its plan
  - “C” – Compliant - Entity has completed technical work, but does not have a full year of required logs and records
  - “AC” – Auditably Compliant - Entity meets full requirements of standard – with all logs and records
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# Implementation Plan Tables

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- 1) Balancing Authorities and Transmission Operators that *were* required to self-certify compliance to UA1200, and Reliability Coordinators – (ERCOT Operations)
- 2) Transmission Operators and Balancing Authorities that *were not* required to self-certify compliance to UA1200, Transmission Providers, and the Offices of NERC and the Regional Reliability Organizations

**MAIN  
ERCOT**



# Implementation Plan Tables (cont'd)

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3) All entities required to register to the Functional Model during calendar year 2006 (pursuant to the NERC / ERO filing activities) – ERCOT Market Participants.

4) All entities registering to a Functional Model function in 2007 and thereafter.

☐ Entities that currently do not  
"exist"

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# Questions

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