Mitch Needham
Manager, Compliance and Standards

Tennessee Valley Authority
Transmission/Power Supply
Electric System Operations
The TVA Control Area Includes

**Generation:**
- TVA native load – 158 distributors & 62 direct serve ~ 30,000 MW
- 12 IPPs – ~ 7,375 MW
- There are no Generation-Only Control Area’s within TVA

**Transmission:**
- 17,000 miles of transmission lines (500, 345, 230, 161-kV)
- Responsible for switching in over 550 substations
EHV System Overview

Transmission System Overview EHV/HV
Welcome to the TVA Control Area

NERC/SERC/FERC Audit Team
April 21-22, 2004
Readiness Audit Company Process

- Prior to NERC audit process deployment, develop agency task list (example to follow)
- Develop comprehensive response to the self-assessment
  - Gather demonstrative procedures
  - Assemble evidence of procedural adherence
  - Ensure infrastructure and training to be adequate
- Determine subject matter experts to discuss issues with the audit team
- Ensure system operator backup to allow interviews to be unhurried
ESO Organization

W. Terry Boston
Executive Vice President
Transmission/Power Supply

Van Wardlaw
Vice President, Electric System Operations

Chuck Feagans
Manager, Operations Management

James Regg
Manager, Transmission Operations

Bob Dalrymple
Manager, Trans. System Services

Jeff Newsome
Manager, Asset Scheduling

Larry Akens
Manager, Operations Analysis

Russell Robertson
Manager, Control Systems

Gary Bullock
Chief System Engineer

Edd Forsythe
Balancing Authority

Rocky Roberts
Interchange Authority

Byrom, Landers, Lewis, Owens
Sr. Trans. Operators

Stuart Goza
Reliability Coordinator

Mitch Needham
Manager, Comp. and Stds.
Electric System Operations

- Organizational Engagement
- Facilities
- Operating Systems Control
- Outage Coordination/Communication
Emergency Preparedness

TPS EMERGENCY PREPAREDNESS AND RESPONSE PROGRAM

OPERATIONS/RELIABILITY

SYSTEM OPERATIONS

POWER SYSTEM ALERT/EMERGENCIES

EMERGENCY LOAD CURTAILMENT PLAN (ELCP)

RELIABILITY OPERATIONS

OTHER ORGS

TRANS. SYSTEM ALERT/EMERGENCIES

TRANSMISSION OPERATIONS

OTHER ORGS

TRANSMISSION EMERGENCY PLAN (TEP)

SECURITY

PHYSICAL SECURITY PLAN - ASSESSMENT & ASSURANCE:
1. CRITICAL ASSET ID
2. THREAT ASSESSMENT
3. VULNERABILITY ASSESSMENT
4. RISK ASSESSMENT
5. MITIGATING ACTIONS

SECURITY PROCEDURES & PROCESSES:
1. OPERATIONS:
   1. Threat Alert Levels and Security Measures
   2. Threat Alert Level Change Notification
   3. Bomb Threat
   4. Reporting Suspicious People, Objects & Activities
   5. NERC/SERC/VACAR Hotlines

2. PHYSICAL:
   1. SOC Access Control
   2. ROC Access Control
   3. Substation Security/Access Control
   4. MA Key Control

3. CYBER:
   1. Control Systems Cyber Security
   2. Control Systems Self Assessment on Security Issues and Vulnerability

EMERGENCY PROCEDURES & PROCESSES:
1. SOC Emergency Evacuation
2. ROC Emergency Evacuation
3. SOC Emergency Evacuation
4. Loss of SCADA and/or EMS
5. Backup SOC Activation
6. Backup Reliability Center Activation
7. Backup ROC Station Activation
8. SOC Fire Prevention & Response
9. ROC Fire Prevention & Response
10. SOC/ROC Emergency Shutting Provision
11. SOC/ROC Intrusion Response
12. SERC Assistance/Control Area Emergency Power
13. Black Start
14. Power System Restoration
15. Electronic Incident Response
17. Control Systems Disaster Recovery
18. Environmental Event Response
19. Injury/illness Response
20. Suspicious, Unstable & Disruptive Behavior
21. Internal Notification/Communication
22. External TVA Reporting of Incidents, Threats, System Disturbances & Emergencies
23. Training/Drill Requirements