



SERC Overview

Overview

- Background on mandatory enforcement
- FERC, NERC, and SERC roles
- Key FERC Actions
- SERC Organization
- Registration / Applicability
- Reliability Standards
- Compliance Monitoring & Enforcement Program
- Being Prepared to Demonstrate Compliance
- Key Messages

Background on Mandatory Enforcement

- August 2003 Blackout
- Parts of 8 States, 1 Canadian Province in dark
- 50 million customers affected
- Billions of dollars in losses
- **PREVENTABLE**

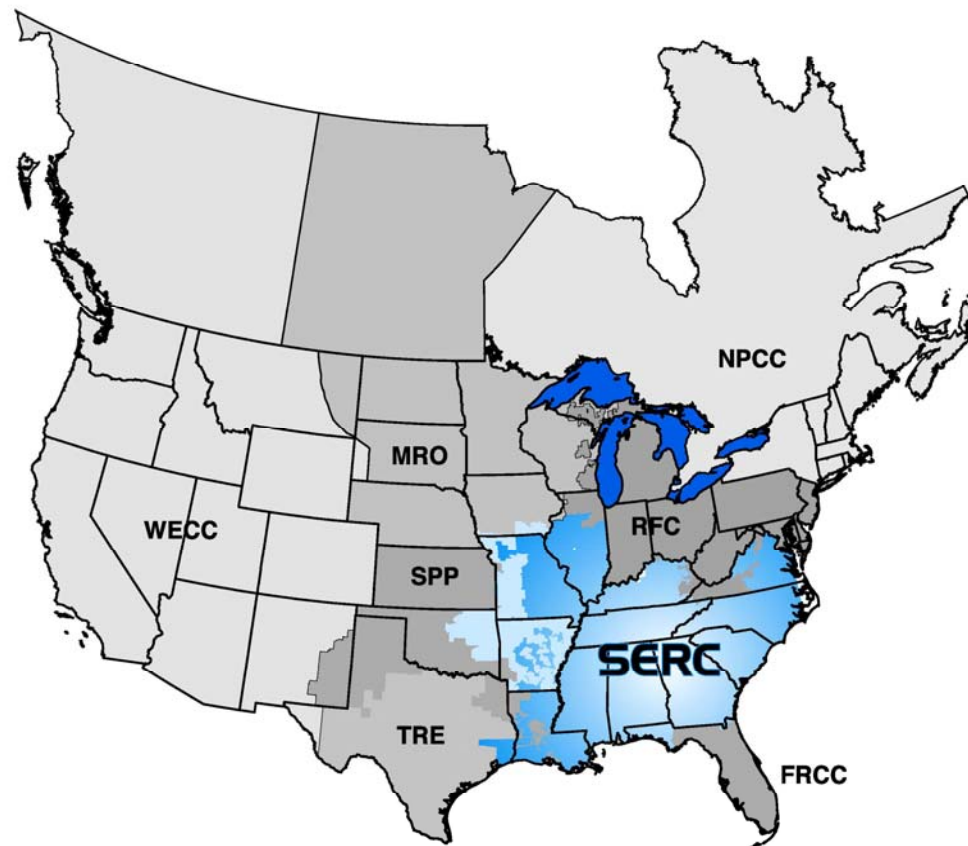
FERC and NERC

- **FERC** (Federal Energy Regulatory Commission)
 - Independent U.S. Agency
 - Regulates interstate transmission (gas, oil, electricity)
 - Responsible for Bulk-Power System Reliability / Security
- **NERC** (North American Electric Reliability Corp.)
 - NERC is industry self-regulatory organization
 - U.S. / Canada's Electric Reliability Organization (ERO)
- **NERC / Regions funded by Load Serving Entities**
 - Net energy for load basis

Key FERC Actions

- Feb 2006 Order
 - Implements Federal Power Act section 215
 - Provides ERO certification, mandatory standards & compliance
- July 2006 Order: Certified NERC as ERO
- Oct 2006 Order
 - FERC Notice of Proposed Rulemaking
 - Approved 83 of 107 Reliability Standards as mandatory
- April 2007 Order approved CMEP, Delegation Agreements
- June 18, 2007: Standards mandatory & enforceable

Regional Entities



SERC

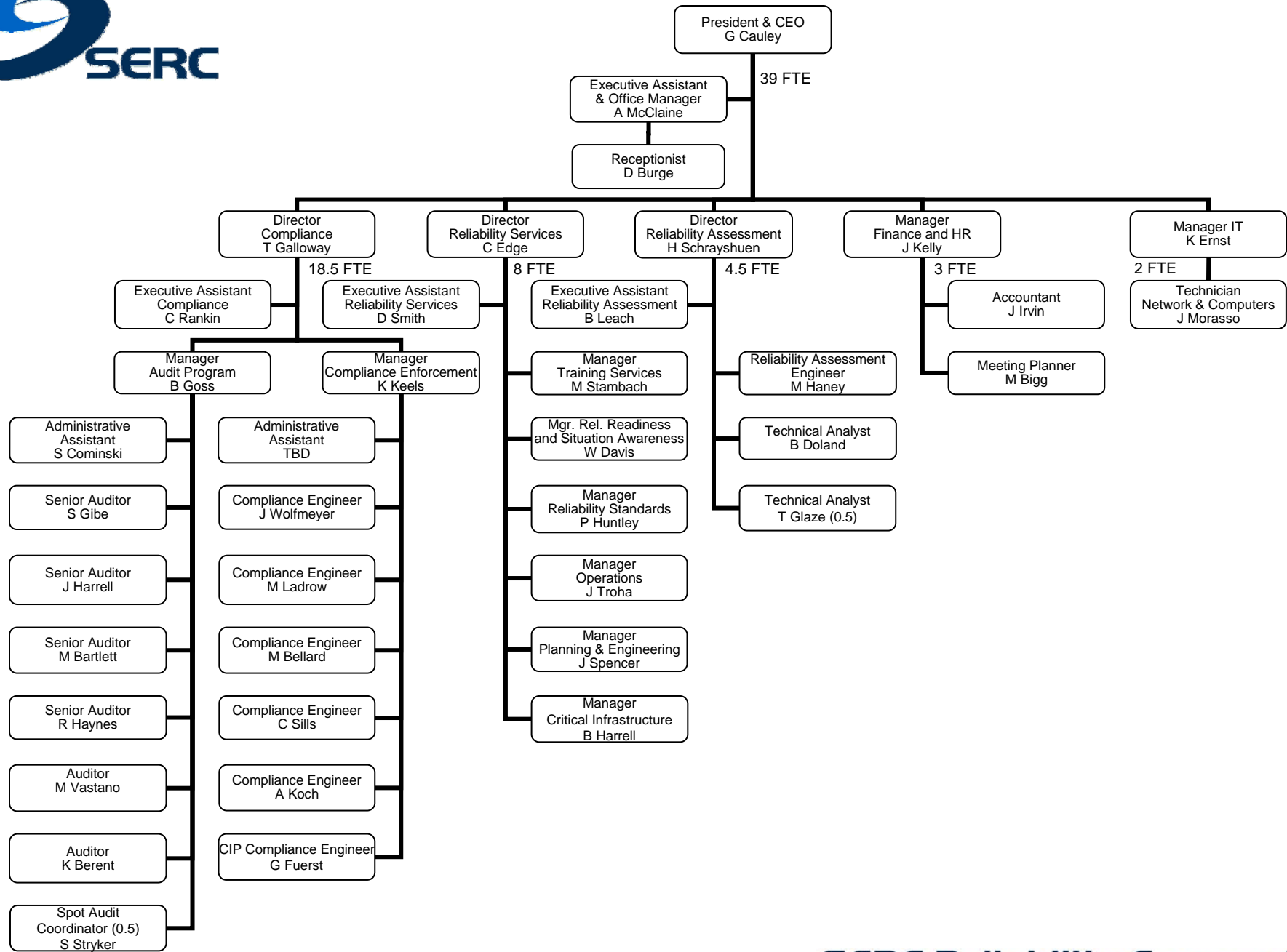
- One of eight (8) Regional Entities
- Contracted (delegation agreement) to implement ERO functions
- No longer “Southeastern”
- All / portions of 16 central and southeastern states
- 560,000 square miles
- Over 200,000 MW peak demand
- 220+ Registered Entities
- Monitor and enforce compliance with Reliability Standards
- Determine and propose penalties and sanctions

SERC

- Proposes Regional Reliability Standards for FERC approval
- Regional Reliability Assessment
- Other activities pursuant to Federal Power Act 215
 - Organization Registration/Compliance Registry
 - Situation Awareness and Event Analysis
 - Training
 - Critical Infrastructure Protection
- www.serc1.org



LACE Conference – SERC Overview



Registration (Applicability)

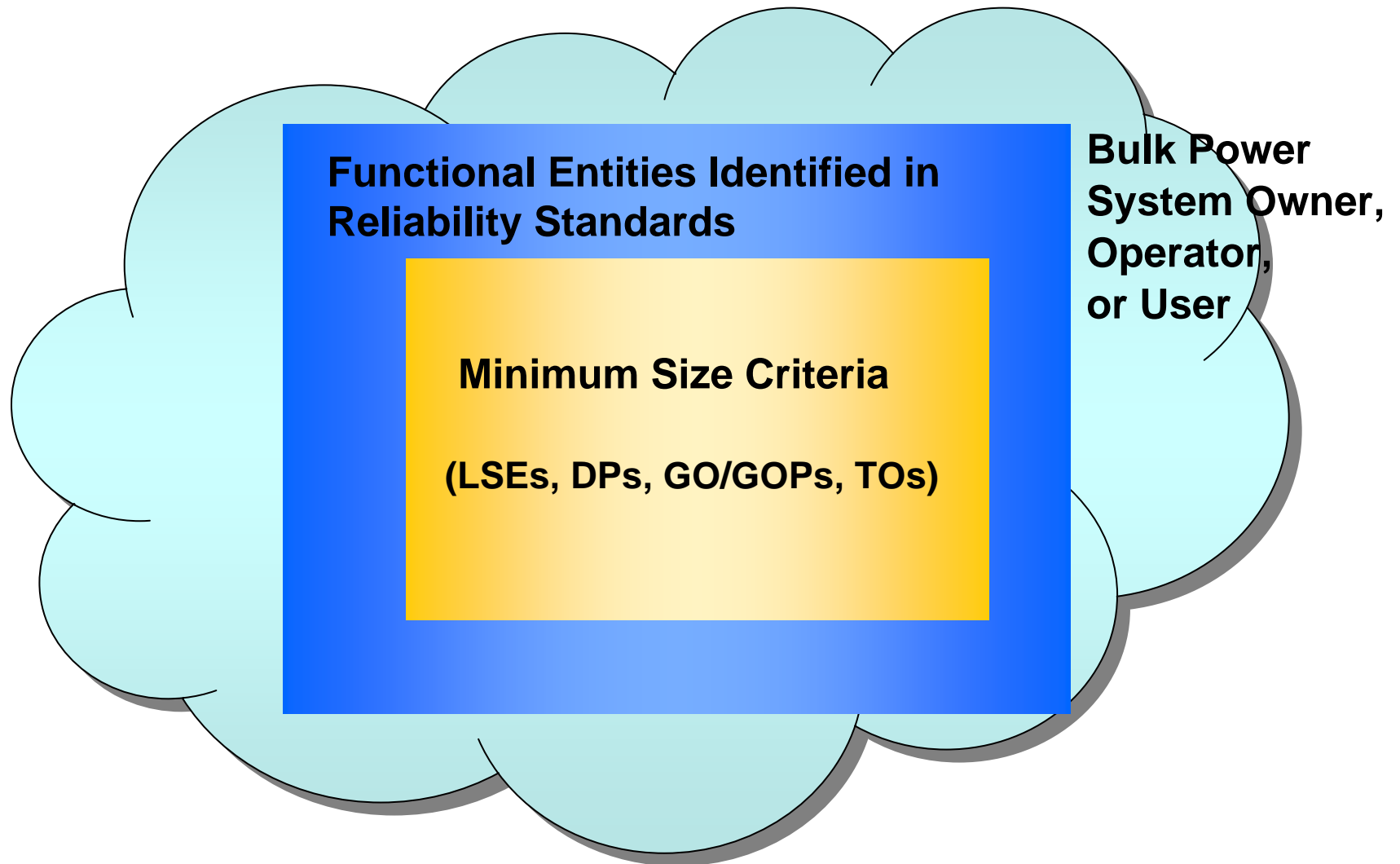
- Energy Policy Act and FERC Implementing Rules require **all** owners, operators, and users of the Bulk-Power System in the U.S. to comply with Reliability Standards
- Registry Criteria established to define subset of users, owners and operators that are material to the reliability of bulk power system
- Compliance Registry determines who must comply
 - Establishes scope of Compliance Monitoring Program
 - Separate from funding or membership
- Criteria Revision 4 just issued (include Interchange Authorities)
- NERC maintains the official registration list
- Registration covers all Entity functions performed
- Functions dictate Reliability Standard applicability
- Disputes can be appealed



Functional Types Required to Register

Function Type	Acronym	Function Type	Acronym
Balancing Authority	BA	Reliability Coordinator	RC
Distribution Provider	DP	Reserve Sharing Group	RSG
Generator Operator	GOP	Resource Planner	RP
Generator Owner	GO	Transmission Owner	TO
Load-Serving Entity	LSE	Transmission Operator	TOP
Planning Authority	PA	Transmission Planner	TP
Purchasing-Selling Entity	PSE	Transmission Service Provider	TSP
Interchange Authority	IA		

Registration Selection Criteria



What Has Changed?

Compliance With Reliability Standards

Then - Voluntary

- Bottom-Up Approach
- Utility Members of Regions
 - Some Cooperative
 - Some Municipal
 - Some Merchant
- Regions Comprise NERC Membership
- Peer Pressure
- “Monopoly Money”*

* Most Regions

Now - Mandatory

- Top-Down Approach
- FERC Jurisdiction
- NERC is Electric Reliability Organization (ERO)
- Regional Entities with Delegated Authority
- Compliance Required by Law
- Real Financial Penalties

What Has Changed?

Involvement in Reliability Activities

Then - Voluntary

- Members Only
- All Voluntary
- Peer Review of Compliance
- Stakeholder Participation
- Region and NERC Staff in Support/Facilitating Role

Now - Mandatory

- Membership in NERC is Optional
- Membership in Region is Optional
- All Entities Must Comply Regardless of Membership
- Stakeholder Participation
- NERC in Directing Role
- Independent Staff Makes Initial Compliance Determinations

What Has Changed?

Funding of Reliability Activities

Then - Voluntary

- Bottom-Up Approach
- Members Fund Regions Through Member Dues
 - Peak Load, Miles of Transmission, MW of Generation
- Regions Fund NERC Through Assessments
 - Allocated based on each Region's Net Energy for Load
- Region Budgets Approved by Regional Governing Bodies
- NERC Budgets Approved by Members and Board

Now - Mandatory

- NERC Funds Regions
- Regions Submit Budgets to NERC for Approval
- NERC Submits ERO and Regional Entity Budgets to FERC for Approval
- Source of Funding is ALL End-Users
 - Funding by Load-serving Entities Based on Net Energy For Load
 - Allocation of NERC Costs/Regional Entity Costs
- Load-serving Entities Required to Fund Even if not on Compliance Registry



Reliability Standards

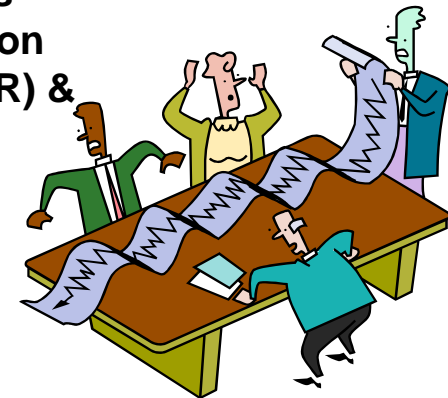
- Developed through an open standards development process
- Industry segment voting to achieve balance
- All standards must be approved by NERC and FERC
- Applicability based on registration (functions)
- FERC approved 83 Reliability Standards in April 2007
- Mandatory and enforceable beginning June 18, 2007
- Additional standards currently in approval process
- FERC approved 3 additional Reliability Standards in December 2007
- Eight cyber security standards approved by FERC in January 2008
- Work plan underway on 34 standards development projects for additional standards and improvements to existing standards
- Total # of FERC Approved Continent-Wide Standards: 94

Participating in the Standards Process



Standards Requestors

Standards Authorization Request (SAR) & Standard Drafting Teams



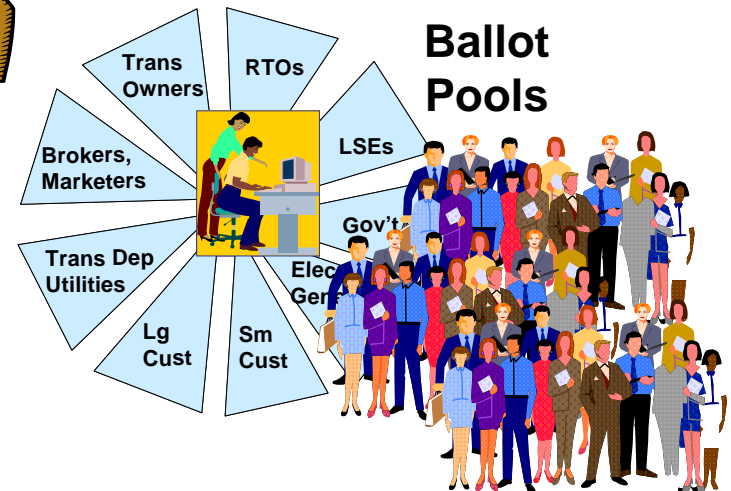
Elected Standards Committee



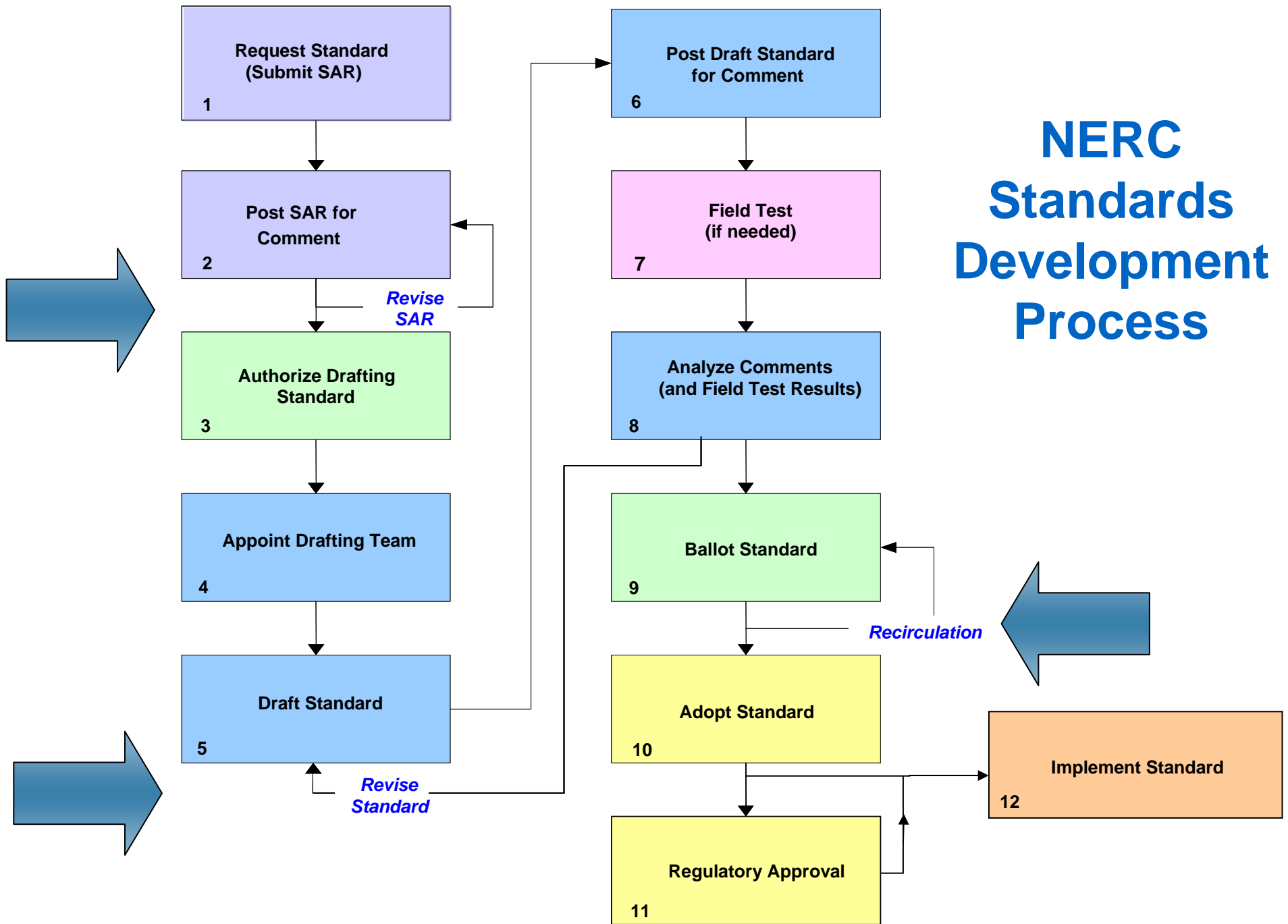
Standards Comment Periods



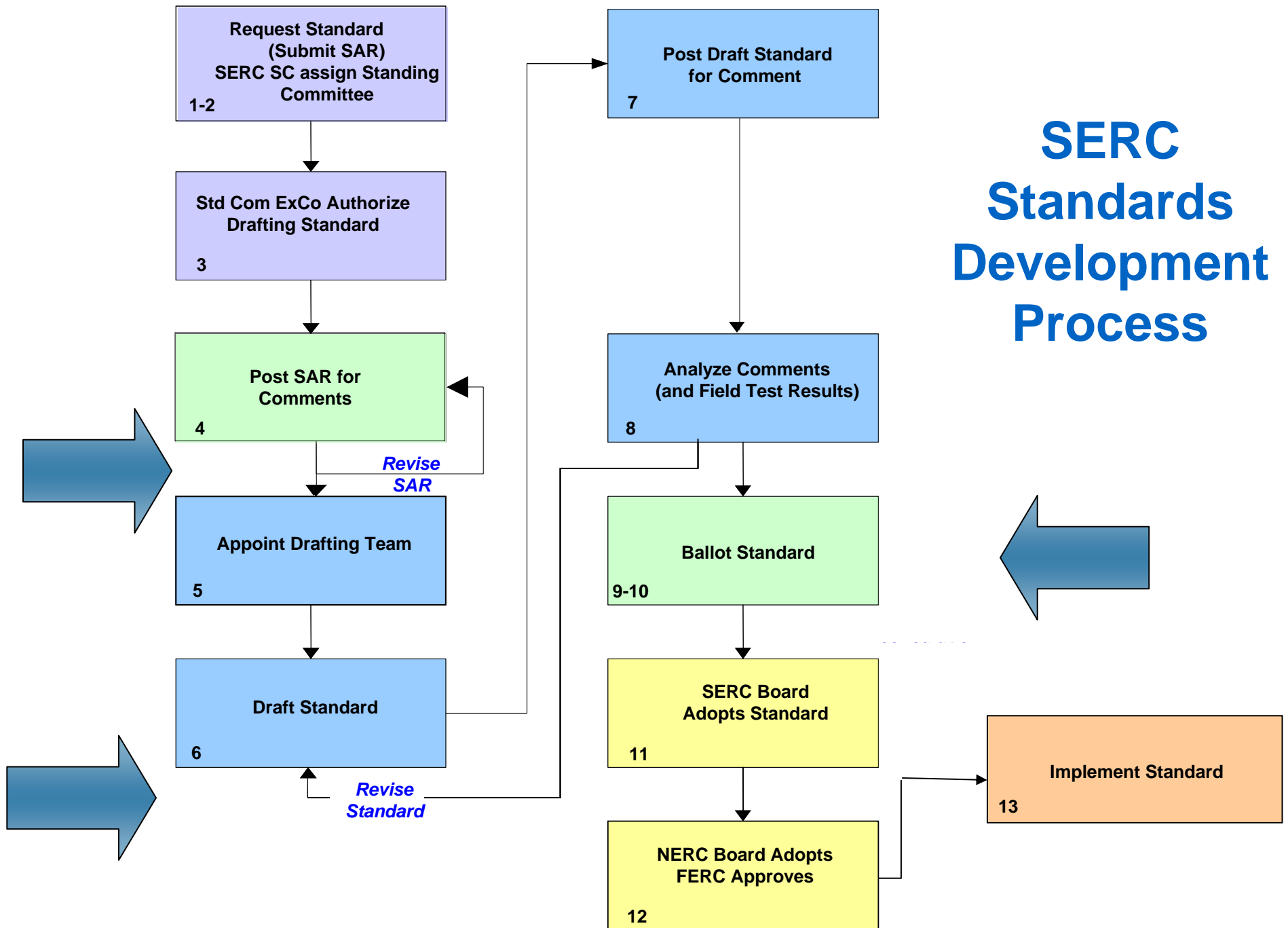
Ballot Pools



NERC Standards Development Process



SERC Standards Development Process



Reliability Standards

- Regional Reliability Standards to be Developed
 - Underfrequency Load Shedding (PRC-006) - **In Process**
 - Disturbance Control Performance (BAL-002)
 - Disturbance Monitoring Equipment (PRC-002)
 - Special Protection Systems (PRC-012, 013, 014)

Reliability Standards

- Status of SERC UFLS Standard Development
 - Step 1: SERC Regional Reliability SAR: Feb 27, 2008
 - Step 2: Assignment of SAR: SERC Standards Committee assigned to Engineering Committee (EC) on Feb 27, 2008
 - Step 3: Acceptance of SAR: SERC EC ExCo accepted SAR on Apr 25, 2008
 - Step 4: Posting of SAR for Comments: posted from Apr 25 through May 27, 2008
 - Step 5: Formation of a Responsible SERC Subgroup: EC ExCo assigned drafting team Jun 20, 2008.
 - Step 6: Drafting of a SERC Regional Reliability Standard: 2 face-to-face and 3 WebEx team meetings (1st meeting on Jul 21, 2008)
 - Step 7: Posting of a Draft SERC Regional Reliability Standard: Draft-1 posted for **30-day comment period from Sep 19 through Oct 20, 2008.**

<http://www.serc1.org/Application/DocumentFolderView.aspx?P=SERC%20Standards%20Committee%5cSERC%20Draft%20SARs-Standards%20Posted%20for%20Comment>

Reliability Standards

- SERC Standing Committee Documents (supplements, guidelines, procedures, etc.)
 - Offer technical reference information to promote consistent practices among SERC stakeholders
 - Approved by a standing committee
 - CIPC: none
 - EC: 15 active // 2 inactive
 - OC: 14
 - Initially designed to be responsive to NERC Fill-in-the-Blank standards
 - NOT STANDARDS!

Reliability Standards

- **Non-Official Advisory Guidance Request Process (Rollout In Process)**
 - **Purpose:** to promptly address requests to SERC staff concerning their understanding of a NERC standard, SERC regional standard, or SERC regional criteria with a good faith, but Non-Official response
 - Manager of Reliability Standards will administer
 - Assigned to a subject matter expert
 - Goal is to provide response within 24 hours (some requests may take up to a week)
 - Request can be via telephone or email (request form can be downloaded)
 - Response posted on website (requester name NOT listed)
 - Requester must be made to understand that any non-official response provided is only the opinion of the individual or the group

Reliability Standards Lessons Learned

- Reliability Standard Audit Worksheets (RSAWs)
 - Understand evidence expectations
 - Be prepared to demonstrate compliance
- Capitalized words – defined terms defined in glossary
- CIP-001-1 applies to LSE even if no critical assets are identified

Compliance Monitoring & Enforcement Program (CMEP)

- NERC Rules of Procedure (ROP) define requirements
- NERC CMEP provides more focus
- SERC CMEP = NERC CMEP (adopted w/o exception)
- SERC Board Compliance Committee (BCC)
- Compliance Implementing Procedures
- Compliance Advisory Groups
- Cross-Regional Consistency
 - Regional Managers / NERC
 - Regional Compliance Implementation Group (RCIG)
 - Working Groups

Board Compliance Committee (BCC)

- Subset of the full SERC Board
- 12 representatives, covering 7 industry sectors
- Provides compliance program governance
- Final regional approval on compliance actions
- Serves as hearing body for contested issues
- Approval authority for implementing procedures

Compliance Advisory Groups

- 3 groups – Operating, Engineering, CIP
- Industry expertise to compliance program
- Provides advice to Compliance Director (CD)
- Help to staff volunteers on compliance audits

Monitoring Processes (Overview)

- Self-Reports
- Audits
- Spot Checks
- Complaints
- Self-Certification
- Periodic Data Submittal
- Exception Reporting
- Compliance Violation Investigations (CVIs)

Self-Reports

- Ability to find and fix own problems is key
- Entities self-report as soon as aware of possible violations
- Prompt initial self-report – base data, make Region aware
- More detailed (but timely) Entity follow-up, allow full credit
- Region validates issues, prosecutes based on merits
- Self-reporting is a strong mitigating factor in penalties

Self-Reports - Lessons Learned

- Conservative self-reporting is positive
- Self-reports will be reviewed by Region
 - Need to determine sufficient bases
- Self-reports need added information – full credit
- Some self-reports have been too narrow
- Entities should look at root causes

Compliance Audits

- Long range schedule based on registration / audit frequency
- RC, BA, TOP audited every three (3) years
- Other functions audited every six (6) years
- Annual audit schedule posted as part of compliance plan
- Each audit led by a member of compliance staff, other staff as members
- Industry volunteers used as team members for most audits
- Entity contact, information requests start 6 to 9 months ahead

Compliance Audits

- Registration confirmed, audit scope and team defined
- Entity can object to individual team members
 - Need to cite basis
- Evidence must be provided at the time of the audit
- All possible alleged violations communicated to entity at audit exit
- All possible alleged violations turned over to enforcement for action
- Developing expertise for future CIP audits

Audits – Lessons Learned

- Evidence must be produced at time of audit, not later
- Advanced preparation is key
- Learn from peer experience
- Participate as industry volunteer on an audit team

Spot Checks

- Smaller scope, mini-audits
- Focused on selected standards
- Written requests for information
- Purposes: Validate Self-Certification, regional themes, and “for cause”

Complaints

- Can be anonymous
- Entity can complain directly to NERC
- If valid, the initiation of a Compliance Violation Investigation is considered

Self-Certification

- A Self-Certification is not the same as a Self-Report
- Covers a specified time period, not a snapshot
- Filing requirements (Standards / Dates) on website
- Simplifying Self-Certification filings (look like standards)
- Certifications now due by filing due date
 - Electronic signature is required

Periodic Data Submittal / Exception Reporting

- Many Reliability Standards require Entities to submit data to the Regions
 - Portal used for majority of data submittals
- Many Reliability Standards require Entities to provide an Exception Report to the Region when a violation occurs (see Compliance Monitoring Process section of the standard)
- Filing requirements (Standards / Dates) on website
- Submittals due by filing due date

Compliance Violation Investigation (CVI)

- Triggered by Events / Complaints / Director decision
- More formal – advance notice, data retention required
- Team, with NERC / FERC participation possible
- Used for more complex, consequential issues

Enforcement Processes (Overview)

- Alleged Violation Determination
- Entity Notification and Response
- Contested Alleged Violations
- Sanctions and Penalty Determinations
- Mitigation Plans
- Remedial Action Directives (RADs)
- Settlement Agreements

Alleged Violation Lifecycle

1. Discovery/Identification of Possible Alleged Violation
2. Preliminary Determination and Report to NERC
3. Alleged Violation and Proposed Penalty Determination
4. Formal Notification and Entity Response
5. Violation Confirmation
6. Notice of Penalty, Submittal to FERC, Public Posting

Note: Settlement discussions can commence at any point

Alleged Violation Lifecycle

(Step 1 – Discovery/Identification)

- Possible Alleged Violations (PAV) from any source
- Tracking number / file created if warranted (low threshold)
- Compliance staff screener reviews for operational / reliability impact
- Need for Remedial Action Directive (RAD) determined
 - If RAD, prompt reporting required
- Staff Single Point of Contact (SPOC) assigned
- Initial reviews, interactions with entity commence

Alleged Violation Lifecycle

(Step 2 – Preliminary Determination and Report to NERC)

- SPOC: preliminary determination of alleged violation basis
 - Determines if mandatory and enforceable
- Initial violation description and cause
- Preliminary assessment of reliability impact based on assigned Violation Risk Factor (VRF)
- SPOC sends entity a Compliance Assessment Notice
 - Initial assessment of compliance to one or more standards has commenced
 - Entity must retain relevant information
- The possible alleged violation is reported to NERC
 - NERC reports to FERC
- Enforcement staff initiates detailed compliance assessment

Alleged Violation Lifecycle

(Step 3 – Alleged Violation and Proposed Penalty Determination)

- SPOC interacts with the Entity
- Requests added information as needed
- Confirms registration and applicable standard / requirement
- Determines basis for formally alleging violation
- Determines Violation Severity Level (VSL)
- Determines other relevant considerations
- Determines proposed penalty or sanction

Alleged Violation Lifecycle

(Step 4 – Formal Notice and Entity Response)

- Preliminary Notice of Alleged Violation and Proposed Sanction or Penalty Conference
 - Compliance staff previews its allegation and proposed penalty
 - Compliance staff provides basis for alleged violation and factors used in determining proposed penalty
 - Overview of next steps, response options and answer questions

Alleged Violation Lifecycle

(Step 4 – Formal Notice and Entity Response)

- Formal Notice of Alleged Violation and Proposed Sanction or Penalty
 - Sent to Entity via email and certified mail
 - Provides detailed basis for alleged violation and factors used in determining proposed penalty
 - Provides information on mitigation plans submittal requirements
 - Entity has thirty (30) calendar days to respond
 - Details response options: accept / contest
 - If no Entity response, deemed accepted
 - If contested, reconcile or hearing
 - Entity response from authorized individual, on company letterhead

Alleged Violation Lifecycle

(Step 5 – Confirmed Violations)

- Accepted / uncontested issues sent to BCC
- BCC provides regional confirmation
 - BCC could remand back to staff
- Staff issues Notice of Confirmation to the Entity with a copy to NERC
 - Includes the entire record of the violation
- Entity can provide a statement to accompany public posting when Notice of Penalty is filed
- NERC reviews for adequacy, cross-regional consistency
 - NERC could remand back to the region

Alleged Violation Lifecycle

(Step 6 – Notice of Penalty, Submittal to FERC, Public Posting)

- NERC files Final Notice of Penalty with FERC
- Violation is posted publicly including details
- FERC reviews and issues order
- Penalty amounts due and payable

Contested Alleged Violations

- Entities can contest alleged violations and/or proposed sanctions and penalties
- Initial conference held within 10 days
- 40 days to reconcile or hearing can be requested
- Formal process, like a trial with testimony
- Administrative Law Judge to manage process
- BCC serves as the hearing body
- Entity can further appeal to NERC, FERC, or Courts

Sanctions / Penalties

- Regional Entities retain some discretion
- Sanction and Penalty Guidelines
 - Penalty to bear “Reasonable relation to the seriousness of the violation”
- Violation Risk Factor (VRF)
- Violation Severity Level (VSL)
- Base Penalty Amount Table



Base Penalty Amount Table

Violation Risk Factor	Violation Severity Level							
	Lower		Moderate		High		Severe	
	Range Limits		Range Limits		Range Limits		Range Limits	
	Low	High	Low	High	Low	High	Low	High
Lower	\$1,000	\$3,000	\$2,000	\$7,500	\$3,000	\$15,000	\$5,000	\$25,000
Medium	\$2,000	\$30,000	\$4,000	\$100,000	\$6,000	\$200,000	\$10,000	\$335,000
High	\$4,000	\$125,000	\$8,000	\$300,000	\$12,000	\$625,000	\$20,000	\$1,000,000

From NERC Rules of Procedure Appendix 4B: Sanction Guidelines of the North American Electric Reliability Corporation

Penalties are applied per day, per violation

Sanctions / Penalties

- NERC reviews penalties for consistency
- Details of penalty determination factors included in the Notice of Penalty filing and public posting

Mitigation Plans

- Encouraged to start mitigation ASAP
- Mitigation Plan submittal is NOT an admission
- Mitigation Plans
 - Correct the violation
 - Prevent recurrence
- Staff reviews, directs changes, accepts
- BCC provides final regional acceptance
- NERC approves Mitigation Plans, submits to FERC
- Mitigation Plans are confidential until Notice of Penalty is filed, at which time they may be publicly posted

Mitigation Plans

- Mitigation Plan is a CONTRACT (Entity & SERC)
- Mitigation Plan form on website must be used
- Offers cover from added violations / penalties during implementation
- Requires action steps (milestones) not > 90 days apart
- Entity provides quarterly status update
 - Milestones complete, end date on track
- Entity extension requests at least 5 business days before end date
- MUST get extensions approved by SERC in advance
- Entity MUST certify completion and provide evidence supporting completion PRIOR to scheduled completion date
- Inadequate completion = added penalty exposure

Remedial Action Directives

- SERC can direct remedial actions to protect Bulk-Power System
- Expect need for infrequent use
- Directives congruent with any Reliability Coordinator directives
- Expedited timelines
- Entity can contest, request expedited hearing
- Failure to comply is an aggravating penalty factor

Settlement Agreements

- Entity can initiate settlement discussions at any time
- Staff does NOT have to engage in settlement
- Staff must still assert violation occurred
- Contain detailed bases for violation, penalty, final agreement
- Entity: Can Agree or Neither Admit, Nor Deny
- Mitigation Plans must be submitted and are appended to the settlement
- Can supply terms to offset financial penalties
- Cannot result in violation
- NERC approves settlements, files with FERC for approval
- Final Settlement Agreements publicly posted

Being Prepared to Demonstrate Compliance

- Establish a Compliance Culture
- Identify Applicable Standards
- Gap Analysis
- Documentation and Evidence of Compliance
- Key Messages

Establish a Compliance Culture

- Communications
 - Top down; Executive management driven
 - Conveyed throughout the organization, including your contractors
- Key objective of the Entity
 - “What gets measured gets done”
- Compliance oversight at an appropriate level
 - Clear responsibility and authority
 - High level position

Establish a Compliance Culture

- Well documented
 - Explicit vs. Implicit
 - Approved by appropriate executive management official
- Training/Awareness programs
 - Formal training for those directly responsible for compliance
 - Awareness for all employees; similar to safety programs

Identify Applicable Standards

- Matrix of Reliability Standards by Function Type
 - Also called Violation Risk Factor (VRF) matrix
- Must document why requirement does not apply
- High Profile Standards (FAC-003-1, PRC-005-1, CIP-001-1, CIP-002-1 to 009-1)

Perform Gap Analysis

- Self assessment and internal auditing
- Determine where compliance gaps exist
 - Self-Report and mitigate promptly
 - Implement steps to prevent recurrence
- Goal is to demonstrate compliance at a moment's notice

Documentation and Evidence of Compliance

- Entity has burden of proof to demonstrate compliance
 - Documentation should be well organized so as to be readily available
 - Show relevant section and text of document
- Best practices:
 - Be prepared well in advance
 - Identify specific individual to coordinate Audit preparations
 - Have lead individual participate on an Audit in advance of your own key staff attend WebEx to familiarize with process / specific scope
 - Contact Regional staff with any question prior to onsite
 - Embed applicable documents (PDF) with RSAW
 - Highlight the key sections / words of documents
 - Have knowledgeable Entity staff standing by to answer questions

Reliability Standard Audit Worksheets

- RSAWs used as tool by Audit / Compliance staff
- Lists evidence supporting compliance
- Entities can use as tool to prepare and organize evidence

Key Messages

- The point of a compliance program is to improve reliability
- Compliance culture equals continuous self assessment; being prepared to demonstrate compliance at all times
- Stay informed
- Proactive self-reporting and voluntary corrective action is the preferred course of action

Dates to Remember

Learning Opportunities

- SERC Compliance Open Forum
 - WebEx - October 29 (2:00 – 4:00 Eastern)
- Compliance Conference sponsored by E.ON U.S.
 - Louisville, KY - November 6 (8:00 – 4:30 Central)
- CIP-002 to 009 mini-workshop
 - WebEx - November 21 (9:00-12:00 Eastern)
- 2009 Compliance Seminars
 - Atlanta (April), St. Louis (May), Nashville (Sept), Charlotte (Oct)

Dates to Remember

Filing and Reporting Requirements

- SERC 2009 Annual Implementation Plan Posting
 - November 1, 2008 (approximate)
- Filing Deadlines
 - PRC-004-1 (December 1, 2008)
 - CIP-002 through 009 (January 15, 2009)



Questions?

For additional information

www.serc1.org