



TEXAS RE

talk with
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O&P Practice Guide Review

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Upcoming Texas RE Events



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December 5, 2023

Supply Chain/Risk
Management Best
Practices



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December 7, 2023

2024 Implementation
Plan



talk with
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December 19, 2023

Asset Management,
the Foundation of a
Solid Cybersecurity
Program

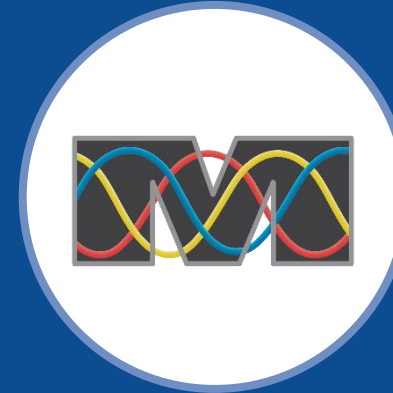


Upcoming ERO Events



December 11, 2023

Technical Talk with RF



December 12, 2023

MRO Regional Winter Assessment
Webinar



#TXRE

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Slido Question

How familiar are you with CMEP Practice Guides?

- A. Very familiar
- B. Somewhat familiar
- C. Unfamiliar
- D. Do you mean the Implementation Guidance?











NERC Website

Header 'Program Areas & Departments'

'Compliance Guidance' on left navigation pane

CMEP Practice Guides

Type	Title	Date	Standards Family
	CMEP Practice Guide Phased Implementation Completion Percentages	3/24/2017	
	CMEP Practice Guide: Deference for Implementation Guidance	5/20/2016	
	CMEP Practice Guide TOP-001-4 and IRO-002-5 Redundant and Diversely Routed	7/11/2018	TOP
	CMEP Practice Guide Calendar Month Annual	4/19/2019	
	CMEP Practice Guide BES Cyber System Information	4/26/2019	CIP
	CMEP Practice Guide Evaluation of Facility Ratings and System Operating Limits	6/17/2020	FAC
	CMEP Practice Guide TOP-002-4, R6, R7 Determination of Provisions of Operating Plans	7/15/2020	TOP
	CMEP Practice Guide Regarding Inverter-Based Resources	7/15/2020	



Practice Guides Overview



Practice Guides address how CMEP staff executes compliance monitoring and enforcement activities and are not compliance approaches to comply with standards.

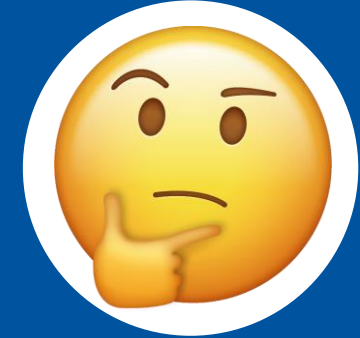


Meant to provide direction to ERO Enterprise CMEP staff:

- Create a uniform, consistent approach across ERO
- Foster transparency to registered entities



Practice Guides are developed solely by the ERO Enterprise, however, in some cases, policy discussions will be held with industry stakeholders beforehand.



Scenario in which a Standard needs to be revised:

- CMEP Practice Guide can be an interim solution

Practice Guides vs. Implementation Guidance

Practice Guides

- Developed by the ERO Enterprise
- Direction to ERO Enterprise CMEP staff on how to approach compliance monitoring & enforcement
- Sometimes input from stakeholders

Implementation Guidance

- Examples for how an entity could comply with a Standard
- Developed by industry
 - Pre-qualified organizations
 - [List of Pre-Qualified Organizations](#)
 - [Application to become a Pre-qualified Org](#)
- Submitted to and then endorsed by the ERO Enterprise
- Draft (Proposed) Implementation Guidance documents
- Approved versions → ERO Enterprise-Endorsed Guidance



Overview of Implementation Guidance

ERO Enterprise-Endorsed Implementation Guidance (23)

CIP (12)

FAC (2)

FAC-002-4 R6 Definition of Qualified Change (2020-05 SDT)

FAC-008-3 Facility Ratings (MRO SC)

PRC (5)

PRC-019-2 R1_R2 Generator Voltage Control Coordination (RSTC)

PRC-002-2 Fault Recorder Trigger Setting Requirements (MRO CMEPAC)

PRC-024-2 R2 Generator Frequency and Voltage Protective Relay Settings (PC)

PRC-023-4 R1 Determination of Practical Transmission Relaying Loadability Settings (PC)

PRC-005-6 Protection System Maintenance (MRO SC)

TOP (3)

TOP-001-4 and IRO-002-5 Data Exchange Infrastructure and Testing (OC)

TOP-010-1(i) R3 and IRO-018-1(i) R2 - RTA Quality of Analysis (OC)

TOP-001-3 R13 and IRO-008-2 R4 Real Time Assessments (OC)

TPL (1)

TPL-001-4 System Planning Performance Requirements (MRO SC)

ERO Enterprise-Endorsed Implementation Guidance (23)

CIP (12)

CIP-013 Supply Chain Risk Management Plans (NATF)

CIP-013 Using Independent Assessments of Vendors (NATF)

CIP-012-1 Communications Between Control Centers (2016-02 SDT)

CIP-013-1 Supply Chain Risk Management Plans (NATF)

CIP-014-2, R5 Developing and Implementing Physical Security Plans (NATF)

CIP-002-5.1a R1 Shared Ownership of BES Facilities (CIPC)

CIP-014-2 R4 Evaluating Potential Physical Security Attack (NATF)

CIP-010-3 R1.6 Software Integrity and Authenticity (NATF)

CIP-004-6 R3 - NGOP Employee Access to TO Sites (CIPC)

CIP-013-1 Supply Chain Risk Management Plans (2016-03 SDT)

CIP-014-2, R1 Transmission System Risk Assessment (NATF)

CIP-002-5.1 R1 Identify and Categorize BES Cyber Systems and Cyber Assets (MRO SC)



Frequently Asked Questions

Q: Who develops Implementation Guidance?

A: Pre-Qualified Organizations (PQOs), Standards Drafting Teams, or Regional Stakeholder Committee OR *registered entity*

Q: Who develops the CMEP Practice Guides?

A: ERO Enterprise

Q: Some of the guidance documents are dated several years ago. Are they still current/active?

A: Yes, posted guidance documents posted are current.



Practice Guide: Facility Ratings & SOLs

ERO Enterprise CMEP Practice Guide: Evaluation of Facility Ratings and System Operating Limits

- Two-fold purpose
 - Assist CMEP staff in determining compliance
 - Help CMEP staff understand how an entity mitigates risk
- Validation of Facility Ratings
 - Examples of items CMEP Staff considers:
 - ◆ Discrepancies in Facility Rating between different types of models?
 - ◆ Does Facility Rating reflect the Most Limiting Equipment Rating?
 - ◆ Consistency between Facility Ratings and the Facility Rating methodology (FRM)
 - ◆ Temperature adjusted rating or seasonal ambient temperature rating?
- System Operating Limits (SOLs)
 - RC and TOP: Consistency between Real-time (RT) models and Operational Planning Analysis models?
 - PA/PC and TP: Consistency in planning models?



Practice Guide: Facility Ratings & SOLs (Cont.)

Facility Ratings & FAC-008-5 R6

- General Audit Approach
 - Comparing equipment in Facility Ratings with supporting documentation and the FRM
 - Non-statistical sampling & understanding what internal controls an entity has, if any
 - Comparing Rating in the Facility Rating databases with data in the various models
 - Consistency and inclusion of all equipment
 - Identification of the Most Limiting Series Element (for each owner and joint owner)?
 - Identification of Normal and Emergency Ratings?
- Supporting Documentation
 - CMEP Staff cannot accept design drawings as stand-alone evidence
 - As-built one-line diagrams



Slido Question

What are some methods or controls you use to verify your Facility Ratings are accurate?



Practice Guide: Facility Ratings & SOLs

Risk-Based Approach & Internal Controls

- Review of Controls is part of CMEP approach
 - Any change management procedures, periodic review process, etc.
 - Overall, how entity verifies actual field ratings against its database

Potential Requests for Information (RFIs) on Controls

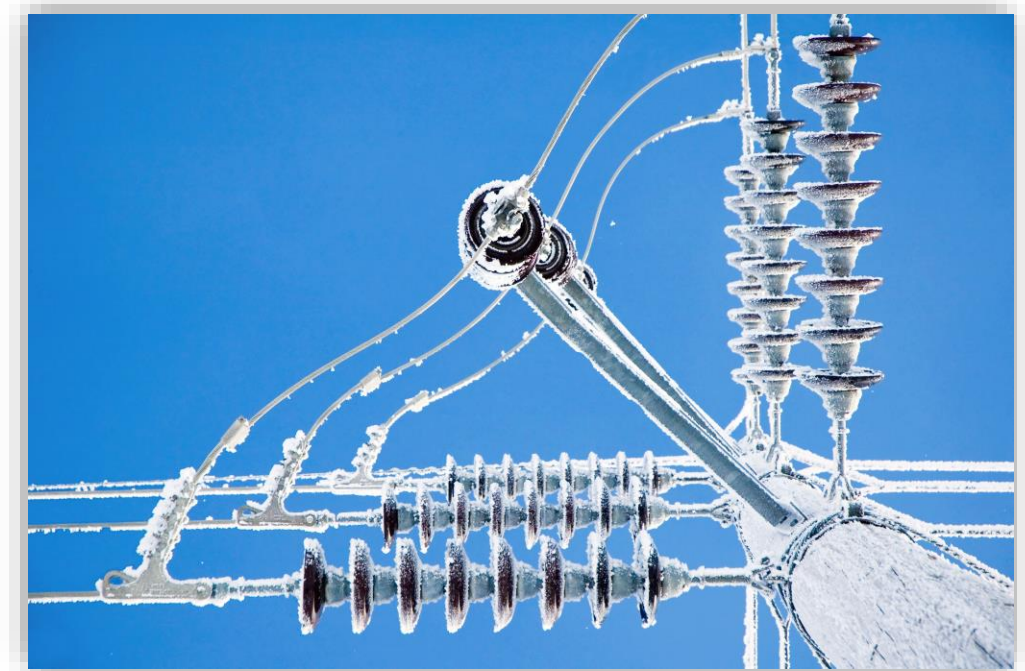
- What tools do you use to track and update your Equipment and Facility Ratings in your Facility Ratings database?
- How often do you conduct substation walkdowns to ensure what's in the field matches system one-lines and/or drawings?
- What is your process following an acquisition or merger to incorporate the new equipment into the Facility Rating database?
- What is the Asset Change Management process following a change of equipment in the field, for either a scheduled project or unplanned/emergency repair?
- When Facility Ratings are changed, how are the revised Facility Ratings communicated with other relevant entities (e.g., the TOP, RC, TP, PA, etc.)?



Practice Guide: Cold Weather Preparedness

ERO Enterprise CMEP Practice Guide: Cold Weather Preparedness

- Created as a result of the February 2021 Texas cold weather event, the Cold Weather Reliability Standards, and Cold Weather Preparations for Extreme Weather Events Alert
- Designed to assist CMEP staff in two ways:
 - Help determine compliance with cold weather Standards
 - Understand how an entity mitigates risk
- **Why does assessing risk mitigation matter?**
 - Risk-based approach and ERO Enterprise
 - Information CMEP Staff learn can affect monitoring activities going-forward



Slido Question

How do you define cold weather?



Practice Guide: Cold Weather Preparedness

Example Questions for Reliability Coordinator (RC) & Balancing Authority (BA)

What is your definition or criteria for “cold weather” relative to your documented data specifications for Real-time monitoring, and for performing Operational Planning Analyses (OPA) and Real-time Assessments (RTA)?
(IRO-010-4 R1)

Do you have one or more Reliability Coordinator-reviewed Operating Plan(s) to mitigate Capacity Emergencies and Energy Emergencies within your BA area?
(BAL-002-3 R1)

Do you consider increasing the reserve requirement during extreme cold weather events to compensate for the probability that some generating units might fail?

Do you review the distribution of reserves to ensure they are usable and deliverable during extreme cold weather event contingencies?
(IRO-017-1 R2, BAL-002-3 R1)



Practice Guide: Cold Weather Preparedness

Example Questions for Transmission Operator (TOP)

What is your definition or criteria for “cold weather” relative to your documented data specifications for Real-time monitoring, and for performing OPA and RTA? (TOP-003-5 R1)

What are your provisions for notification of current Protection System and Remedial Action Scheme (RAS) status or degradation that impacts System reliability? (TOP-003-5 R1.3)

How do you maintain a documented specification for the data necessary to perform Real-time monitoring, OPA, and RTA?

- Accounting for operating limitations?
- Notifying GOs of minimum temperatures?

How do you ensure transformer operation in cold weather?

How do you manage awareness and actions associated with natural gas generation resources that receive their supplies from a common gas supply?



Practice Guide: Cold Weather Preparedness

Example Questions for Generator Owner (GO)/Generator Operator (GOP)

Do you have one or more cold weather preparedness plan(s) for your generating units?

Last time you assessed your unit's temperature design parameters?

- Consideration of life expectancy of cold weather mitigations

Describe inspection and maintenance program

- How do you ensure required inspections and maintenance are performed?
- Communication and protocols

Training

- How do you ensure all operators and support personnel receive training?

Winter-specific and plant-specific training?

- Staffing ahead of anticipated cold weather events
- Training materials
- Winter preparedness/extreme cold weather checklist

Natural gas generation resources and supply issues?



Practice Guide: Cold Weather Preparedness

Example Questions for BA, TOP, GO, & GOP

Fuel Switching Capability and Remaining On-line During Gas Curtailments

- How do you verify the adequacy of fuel switch capable units to remain on-line?

How do BA/TOP obtain forecasts of real output capability from GO/GOP prior to anticipated extreme cold weather events?

- Potential for natural gas curtailments
- BAs—proactive decisions regarding:
 - Cancellation of planned outages
 - Advanced fuel switching
 - Directing startup of units
 - Advance requests for conservation

Extent of communication and coordination with fuel providers (suppliers and pipelines)

Awareness of generation resources that could be affected by the different kinds of outages

- Common pipeline section(s)
- Common compressor station(s)
- Outage due to cyber-attack of a common control system



Additional Resources

- **NERC Compliance Guidance:**

<https://www.nerc.com/pa/comp/guidance/Pages/default.aspx>

- Practice Guides

- ERO Enterprise CMEP Practice Guide: Evaluation of Facility Ratings and System Operating Limits
- ERO Enterprise CMEP Practice Guide: Cold Weather Preparedness

- **Implementation Guidance**

- List of Pre-Qualified Organizations: <https://www.nerc.com/pa/comp/guidance/Documents/Pre-Qualified Organizations.pdf>

- Application to become a Pre-qualified Org:
<https://www.nerc.com/pa/comp/guidance/Documents/Pre-Qualified Organization Application.pdf>

- **Compliance Guidance Frequently Asked Questions:**

<https://www.nerc.com/pa/comp/guidance/Documents/Compliance Guidance Frequently Asked Questions.pdf>



The background of the slide features a blurred Texas state flag on the left and a target with several darts on the right. The darts are clustered in the center of the target, suggesting a focus or a goal.

Questions?



TEXAS RE

Ensuring electric reliability for Texans