



Foundations of Operations and Planning (O&P) Compliance Programs

Phil Bracy
O&P Compliance Analyst II

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Upcoming Sessions

June 3 – History and Introduction to Texas RE

June 4 – Registration & Certification

June 5 – Intro to Align

June 6 – Risk-Based Approach to Reliability

June 10 – Foundations of CIP Programs

June 11 – Foundations of O&P Programs

June 12 – Navigating Noncompliance Resolutions

June 13 – NERC Data Collection, Events Analysis, and Guidelines

June 17 – Reliability 201: CIP















June 18 – Reliability 201: O&P

June 24 – Reliability 201: CMEP Feedback Loop

June 25 – Reliability 201: Compliance in Align Walkthrough

June 25 – Reliability 201: Reliability Services

JUNE 2024

SUN	MON	TUE	WED	THU	FRI	SAT
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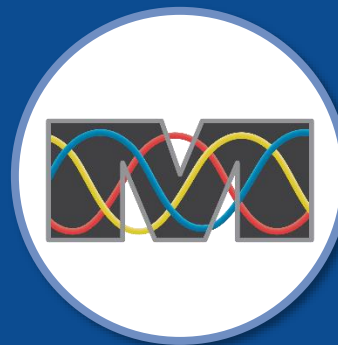


Upcoming ERO Enterprise Events



May - July, 2024

GADS Wind & Solar Template
and Application Training



June 27, 2024

Regional Summer Assessment
Webinar



July 22, 2024

Technical Talk with RF



slido

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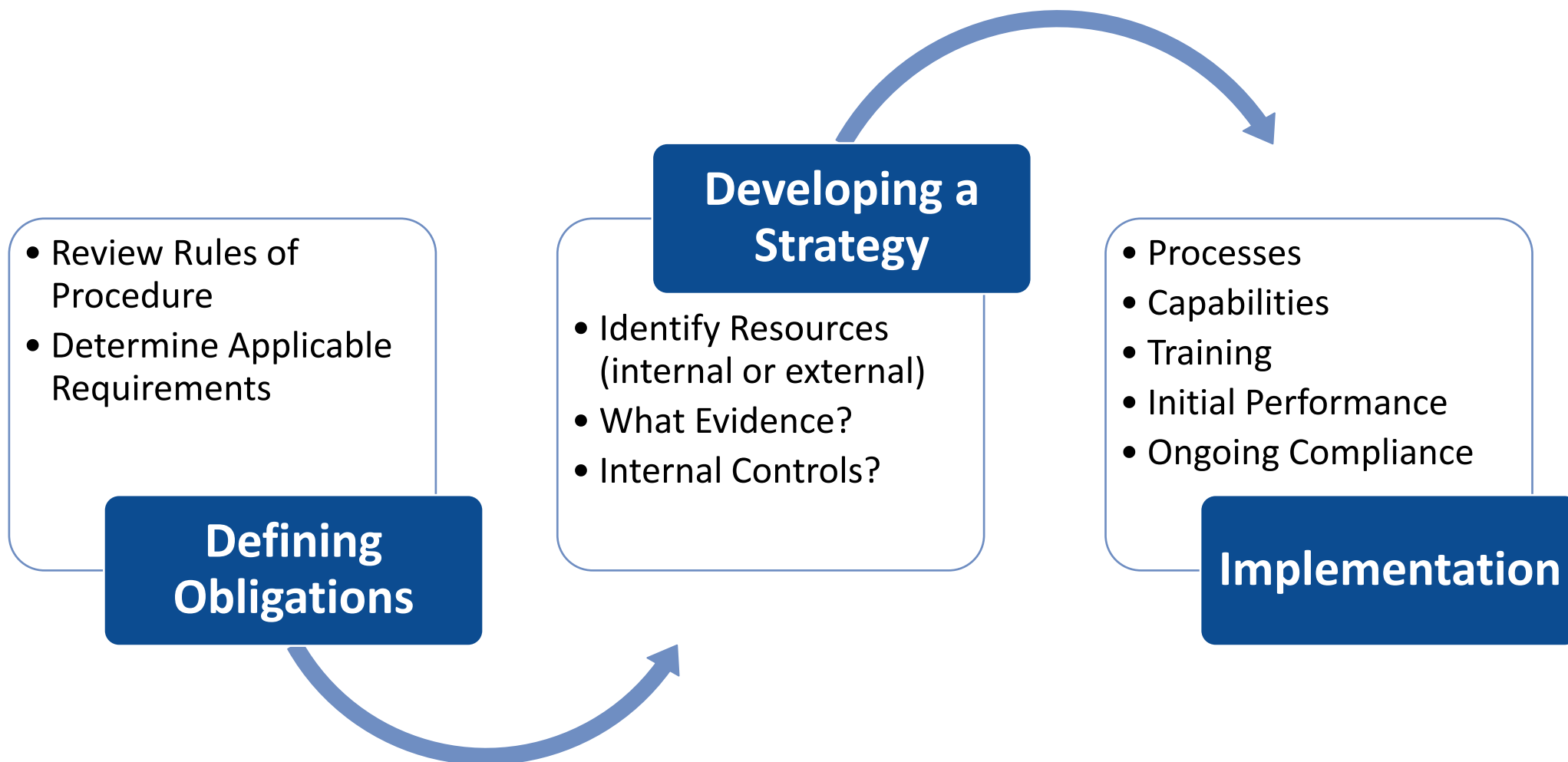
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Establishing a Foundation



Novice Power Company



Novice Power Company will be registering as a GO and GOP



The entity has an expected Commercial Operations Date in 8 months

Define Entity Obligations

Rules of Procedure (ROP) Identify a Registered Entity's Obligations within the Regulatory Framework of the ERO Enterprise

- Monitoring methods—types and general process
- Provision of evidence
- Disposition of findings

Numerous Resources to Identify Applicable Reliability Standards and Requirements

- NERC “US Effective Date Status Functional Applicability” spreadsheet
 - <https://www.nerc.com/pa/Stand/Pages/default.aspx>
- Texas RE provides information as part of Registration process



Define Entity Obligations

Novice Power Company has evaluated the functional [applicability spreadsheet](#) from the NERC website to identify its compliance obligations.

	Status	Standard Family	Standard	Standard Version	Req. Number	Effective Date of Standard	Phased-in Implementation Dates (if applicable)	Inactive Date	GO
1									
4757	Subject to Enforcement	MOD	MOD-026	MOD-026-1	2.1.5.		07/01/2018		GO
4758	Subject to Enforcement	MOD	MOD-026	MOD-026-1	2.1.6.		07/01/2018		GO
4759	Subject to Enforcement	MOD	MOD-026	MOD-026-1	R3.	7/1/2014			GO
4760	Subject to Enforcement	MOD	MOD-026	MOD-026-1	R4.	7/1/2014			GO
4761	Subject to Enforcement	MOD	MOD-026	MOD-026-1	R5.	7/1/2014			GO
4767	Subject to Enforcement	MOD	MOD-027	MOD-027-1	R2.		07/01/2018		GO
4768	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.		07/01/2018		GO
4769	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.1.		07/01/2018		GO
4770	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.2.		07/01/2018		GO
4771	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.3.		07/01/2018		GO
4772	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.4.		07/01/2018		GO
4773	Subject to Enforcement	MOD	MOD-027	MOD-027-1	2.1.5.		07/01/2018		GO
4774	Subject to Enforcement	MOD	MOD-027	MOD-027-1	R3.	7/1/2014			GO
4775	Subject to Enforcement	MOD	MOD-027	MOD-027-1	R4.	7/1/2014			GO
5217	Subject to Enforcement	MOD	MOD-032	MOD-032-1	R2.		07/01/2016		GO
5218	Subject to Enforcement	MOD	MOD-032	MOD-032-1	R3.		07/01/2016		GO
5219	Subject to Enforcement	MOD	MOD-032	MOD-032-1	3.1.		07/01/2016		GO
5220	Subject to Enforcement	MOD	MOD-032	MOD-032-1	3.2.		07/01/2016		GO
5686	Subject to Enforcement	PRC	PRC-002	PRC-002-2	R12.		10/01/2016		GO



Develop a Strategy

Registered Entities Should Develop a Strategy to Meet Identified Obligations

- Identify prescribed tasks where internal resources are insufficient and third-party contractors may be required
- Assign subject matter experts to perform prescribed tasks and assume responsibility for specific Reliability Standards and Requirements
- Determine the evidence that will be retained to demonstrate compliance
- Assess areas of need for internal controls
- Review resources (e.g., [New Generator Welcome Package](#), NSRF, Implementation Guidance, Practice Guides, [Enforcement and Mitigation \(nerc.com\)](#) etc.)



Novice Power Company Strategy

Identified internal subject matter experts for a number of applicable Standards.

Identified numerous Standards for which external resources will be necessary.

Identified evidence it will retain to demonstrate compliance with applicable Standards.

Identified various Standards/Requirements for which internal controls are needed to help meet obligations and demonstrate compliance.

Reviewed various resources designed to help understand obligations and demonstrate compliance.



Slido Question

What Standards has your organization identified that internal controls are necessary to maintain and demonstrate compliance?



Implementation

Registered Entities Will Need to Implement a Strategy to Develop and Maintain a Robust Compliance Program

Document processes to detail how an entity plans to meet obligations

Verify capabilities are in place to meet obligations

Train personnel on processes and responsibilities

Complete initial performance of prescribed tasks

Implement internal controls to address ongoing compliance

Periodic review



Implementation—Required Process Examples

EOP-011-2 R7

- Cold Weather Preparedness Plan(s)

FAC-008-5 R1-R3

- Documentation or a Methodology

FAC-003-4 R4

- Documented Vegetation Maintenance Strategies, Procedures, Processes, or Specifications

PRC-005-6 R1

- Protection System Maintenance Program

PRC-027-1 R1

- Process for Developing New and Revised Protection System Settings



Implementation—Required Process Examples (EOP-011-2)

- R7.** Each Generator Owner shall implement and maintain one or more cold weather preparedness plan(s) for its generating units. The cold weather preparedness plan(s) shall include the following, at a minimum: *[Violation Risk Factor: High] [Time Horizon: Operations Planning and Real-Time Operations]*
- 7.1.** Generating unit(s) freeze protection measures based on geographical location and plant configuration;
 - 7.2.** Annual inspection and maintenance of generating unit(s) freeze protection measures;
 - 7.3.** Generating unit(s) cold weather data, to include:
 - 7.3.1.** Generating unit(s) operating limitations in cold weather to include:
 - 7.3.1.1.** capability and availability;
 - 7.3.1.2.** fuel supply and inventory concerns;
 - 7.3.1.3.** fuel switching capabilities; and
 - 7.3.1.4.** environmental constraints.
 - 7.3.2.** Generating unit(s) minimum:
 - 7.3.2.1.** design temperature; or
 - 7.3.2.2.** historical operating temperature; or



Implementation—Required Process Examples (FAC-008-5)

R2. Each Generator Owner shall have a documented methodology for determining Facility Ratings (Facility Ratings methodology) of its solely and jointly owned equipment connected between the location specified in R1 and the point of interconnection with the Transmission Owner that contains all of the following. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

2.1. The methodology used to establish the Ratings of the equipment that comprises the Facility(ies) shall be consistent with at least one of the following:

- Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications such as nameplate rating.
- One or more industry standards developed through an open process such as Institute of Electrical and Electronic Engineers (IEEE) or International Council on Large Electric Systems (CIGRE).
- A practice that has been verified by testing, performance history or engineering analysis.



Implementation—Additional Process Examples

BAL-001-TRE-2

- Notify BA of Change in Governor Status

COM-001-3

- Consult with Parties Affected by Interpersonal Communication Capability Failures

PRC-004-6

- Analyze BES Interrupting Device Operations
- Notify Owners of Shared Composite Protection Systems
- Develop CAPs for Misoperations

TOP-001-5

- Comply with Operating Instructions
- Notify of Inability to Comply with Operating Instructions

VAR-002-4.1

- Maintain Voltage Schedule
- Notify TOP of Change in AVR/PSS Status



Implementation—Required Capability Examples

COM-001-3 R8

- Interpersonal Communication capability with BA and TOP

COM-001-3 R12

- Interpersonal Communication capability between Control Centers and/or between Control Centers and field personnel



Implementation—Additional Capability Examples

Data Provision

- Satisfy data specification provided by TOP or RC (IRO-010-3, TOP-003-4)

Monitoring and Control

- Identify status changes (BAL-001-TRE-2, VAR-002-4.1)
- Comply with Operating Instructions (TOP-001-5)
- Maintain voltage schedule (VAR-002-4.1)





- Conduct initial training for operating personnel on use of three-part communication when receiving an Operating Instruction



- Provide unit-specific training to its maintenance or operations personnel responsible for implementing the cold weather preparedness plan(s)



- Train operating personnel on the operational functionality of Protection Systems and RAS that affect the output of the generating Facilities



Implementation—Additional Examples

Operating Personnel

- Event reporting (EOP-004-4)
- Notification requirements (BAL-001-TRE-2, COM-001-3, TOP-001-5, VAR-002-4.1)
- Facility operations (TOP-001-5, VAR-002-4.1)

Facility Personnel

- Data and model verification (MOD-025-2, MOD-026-1, MOD-027-1)
- Data provision (IRO-010-3, MOD-032-1, TOP-003-4)
- Protection Systems (PRC-019-2, PRC-024-2, PRC-025-2, PRC-027-1)
- Periodic maintenance and testing (FAC-003-4, PRC-005-6)



Slido Question

What Standards are emphasized in your organization's internal training program?



Implementation—Initial Performance Examples

BAL-001-TRE-2 R6

- Ensure Governor settings are set in accordance with R6

FAC-008-5 R6

- Establish Facility Ratings that are consistent with the associated Facility Ratings methodology or documentation for determining its Facility Ratings

MOD-025-2 R1, R2

- Verify Real and Reactive Power capabilities
- Complete and provide to Transmission Planner within 12 calendar months of commercial operations date

MOD-026-1 R2, MOD-027-1 R2

- Verify generating unit model response matches recorded response
- Transmit model documentation and data to Transmission Planner within 365 calendar days after commissioning date



Implementation—Initial Performance Examples

PRC-005-6 R3

- Commission Protection Systems to establish initial performance dates

PRC-019-2 R1

- Coordinate voltage regulating controls, limit functions, equipment capabilities and Protection System settings

PRC-024-3 R1, R2

- Set generator protective relays are set such that generating units remain connected during defined frequency and voltage excursions

PRC-027-1 R2

- Perform Protection System Coordination Study (2027); or
- Establish Fault current baseline (2021)



Ongoing Compliance Examples



After the foundation of an O&P compliance program has been established, internal controls are essential to ensure ongoing compliance with Reliability Standards.

- Alarms and notifications
- Change management
- Internal review
- Inventory tracking
- Onboarding
- Processes and procedures
- Periodic verification
- Training



Slido Question

What are the three phases we discussed for building your O&P compliance program(s)?



Contact



Phil Bracy
O&P Compliance Analyst II
Phil.Brac@texasre.org | 512-583-4930



The background of the slide features a blurred image of the Texas state flag on the left and a close-up of a wind turbine's hub and blades on the right, set against a clear blue sky.

Questions?



TEXAS RE

Ensuring electric reliability for Texans