

WECC Intent

The *Controls Guidance and Compliance Failure Points* document guides registered entities in assessing risks associated with their business activities and designing appropriate internal controls in response. WECC's intent is to provide examples supporting the efforts of registered entities to design controls specific to operational risk *and* compliance with the North American Reliability Corporation (NERC) Reliability Standards. The registered entity may use this document as a starting point in assessing risk and designing appropriate internal controls. Each registered entity should perform a risk assessment to identify its entity-specific risks and design appropriate internal controls to mitigate those risks; WECC does not intend for this document to establish a standard or baseline for entity risk assessment or controls objectives.

***Note:** Guidance questions help an entity understand and document controls. Any responses, including lack of affirmative feedback, will have no consequences on an entity's demonstration of compliance during a Compliance Monitoring and Enforcement Program (CMEP) engagement.*

** Please send feedback to internalcontrols@WECC.org with suggestions on controls guidance and potential failure points questions.*

Definitions and Instructions

Control Objective: The aim or purpose of specified controls; control objectives address the risks related to achieving an entity's larger objectives.

Control Activities: The policies, procedures, techniques, and mechanisms that enforce management's directives to achieve the entity's objectives and address related risks.

Internal Control: The processes, practices, policies or procedures, system applications and technology tools, and skilled human capital that an entity employs to address risks associated with the reliable operation of its business. Internal control components include:

- Control Environment;
- Risk Assessment;
- Control Activities;
- Information and Communication; and
- Monitoring.

Quality Assurance / Quality Control (QA/QC): How an entity *verifies* whether it performed an activity or

verifies an activity was performed *correctly* (examples include separation of duties, having a supervisor double-check someone's work, etc.).

Risk Category: Type of operational and inherent risks identified by the Electric Reliability Organization (ERO) Enterprise for use in the Compliance Oversight Plan (COP). Entities should use Risk Categories to understand, monitor, and mitigate known and future risks.

Risk Category

Long-term Studies/Assessments: Long-term studies and assessments evaluate whether the system can reliably operate in real-time, including correct identification and protection of transmission and generation assets, properly designed plans for System Restoration from Blackstart Resources, impact studies for new and revised facilities, correct methods to determine and communicate SOLs and transfer capabilities, analysis of disturbances and misoperations, proper design of UFLS and UVLS programs, and response to GMD events. Failure will likely result in gaps and may compromise BPS reliability and security.

To ensure reliable data is provided for these studies, entities must document and make Facility interconnection requirements available so that entities seeking to interconnect will have the necessary information.

Control Objective(s)

Your entity should perform a risk assessment and identify entity-specific control objectives to mitigate those risks. To help your entity get started, WECC has identified generic control objectives to mitigate the risks associated with the risk categories mentioned above and FAC-001-4. You may want to consider these three objectives:

Control Objective 1: Establish Facility interconnection requirements to ensure the system can reliably operate.

Control Objective 2: Update Facility interconnection requirements as needed based on changes to the system or standards.

Control Objective 3: Make Facility interconnection requirements available to entities seeking to connect to the system.

Reliability and Security Control Activities

Control activities are how your entity meets your control objectives. As you design controls, your entity should tailor them to entity-specific control objectives.

Below are examples of control activities based on good practices WECC has observed that are designed to meet the objectives listed above. WECC does not intend for these activities or the associated questions to be prescriptive. Rather, they should help your entity consider how you might meet your objectives in your



own unique environment. They also may help your entity identify controls you did not realize you had.

Control Objective 1: Establish Facility interconnection requirements to ensure the system can reliably operate.

Control Activity A: Develop procedures for coordinated studies during the process of interconnecting or making changes to existing interconnections. (Relates to risk associated with R3, R4)

1. Do your entity's procedures for coordinated studies outline roles and responsibilities, coordination expectations (internally and externally), and any periodic reviews associated with the process for providing data for new interconnections and qualified changes?
 - a. Do you provide checklists or other internal controls for the data provisioning process?
 - b. Do you require a finalized model of the interconnected facility prior to operation?
 - c. For software or hardware changes, do you require an updated model prior to operation with the new software or hardware?
 - d. How frequently do you require updated data or models?
2. How does your entity ensure all data required to properly model and study the interconnection is clearly outlined?
 - a. How do you coordinate with other entities including your PC(s) and TP(s)?
3. Do you maintain a list of approved models for use by entities during the process of interconnecting or making changes to existing interconnections? If your entity is a TO, how does your entity ensure minimum static and dynamic reactive power requirements are met by your interconnection requirements?
4. Do your coordinated study procedures address each of the items in the Guidelines and Technical Basis?
 - a. Voltage level and MW and MVAR capacity or demand at the point of interconnection
 - b. Breaker duty and surge protection
 - c. System protection and coordination
 - d. Metering and telecommunications
 - e. Grounding and safety issues
 - f. Insulation and insulation coordination
 - g. Voltage, Reactive Power (including specifications for minimum static and dynamic reactive power requirements), and power factor control
 - h. Power quality impacts
 - i. Equipment ratings
 - j. Synchronizing of Facilities
 - k. Maintenance coordination
 - l. Operational issues (abnormal frequency and voltages)
 - m. Inspection requirements for new or materially modified existing interconnections
 - n. Communications and procedures during normal and emergency operating conditions

FAC-001-4 Controls Guidance and Compliance Failure Points

5. Does your entity have a documented process (or internal controls) that specifically address inverter-based resource interconnections?
 - a. Have you considered:
 - i. Designed-vs-built inverter-based resource capabilities?
 - ii. Voltage/frequency ride-through settings?
 - iii. Use of momentary cessation?
 - iv. Hybrid facilities (e.g., BESS and solar at a single point of interconnection)?
 - b. How do you provide clarity to expected performance to ensure consistent response and behavior across the generation fleet?
 - i. Do your IBR requirements consider IEEE Standard 2800-2022 or other industry standards?

Control Activity B: Develop procedures for notifying those responsible for the reliability of affected system(s). (Relates to risk associated with R3, R4)

1. How does your entity determine who is responsible for the reliability of affected systems?
2. How does your entity ensure they are notified?
 - a. Do you maintain contact lists?
 - b. If you provide written notification, do you have a step to follow up to confirm receipt of the notification?
 - c. Do you have an internal control to track the sending and receipt of the notification?

Control Activity C: Develop procedures for confirming that new Facilities or existing Facilities seeking to make a qualified change are within a Balancing Authority Area.

1. Who is responsible for confirming that new or changed Facilities are within a Balancing Authority Area?
2. What tools are used to make that confirmation?
3. Does your entity obtain confirmation from the Balancing Authority that they are aware of the new or changed Facility?

Control Objective 2: Update Facility interconnection requirements as needed based on changes to the system or standards.

Control Activity A: Periodically review interconnection requirements. (Relates to risk associated with R1)

1. How frequently does your entity review interconnection requirements?
2. Does your entity have a defined list of considerations for that review?
3. Does the review consider:
 - a. Current system needs; and
 - b. Internal lessons learned and best practices as highlighted by the IRPTF, Reliability Guidelines, NERC Alerts, Event Reports, etc.



Control Activity B: Update interconnection requirements based on outside changes. (Relates to risk associated with R1)

1. Does your entity have a process to review and update interconnection requirements based on other changes?
2. If so, what would trigger a review of interconnection requirements?
 - a. Modifications to NERC standards?
 - i. If so, which standards?
 - b. Modifications to the definition of qualified change?
 - c. Changes to reliability study data specifications?
 - d. NERC Alerts?
 - e. Event Reports?

Control Objective 3: Make Facility interconnection requirements available to entities seeking to connect to the system.

Control Activity A: Ensure entities are aware of interconnection requirements. (Relates to risk associated with R1, R2)

1. How do entities contact your entity to obtain a copy of the interconnection requirements?
 - a. How is contact information for the responsible party at your entity provided?
 - b. Is it a mailbox or other form of communication that is monitored by multiple parties?
2. Does your entity have a process or system to track interconnection requests to ensure requirements have been provided?
3. Is the data specification posted in an easily accessible place or sent directly to the applicable entities (or some combination of the two)?
4. If changes are made to the interconnection requirements, how are the changes communicated to applicable entities?
 - a. Are specific entities notified?
 - b. If so, how do you determine which entities need notifications?
 - c. Are posted changes highlighted in some way to draw attention to them?
 - d. If the changes to interconnection requirements are significant enough to affect reliability if not changed in the field, how do you address the concern?

Compliance Potential Failure Points

The control activities listed above are specifically targeted at mitigating risk to the reliability and security of the BPS, but also promote compliance with the referenced standard. Your entity should also develop controls specifically to mitigate compliance risk. The following compliance potential failure points relate directly to compliance risk and warrant consideration.

Potential Failure Point (R1, R2): Failure to establish interconnection requirements that address all



FAC-001-4 Controls Guidance and Compliance Failure Points

applicable registrations and technologies.

Potential Failure Point (R2): Failure to document and make interconnection requirements available within 45 calendar days of full execution of an Agreement to conduct a study on the reliability impact of interconnecting a third-party Facility.

1. How does your entity track the documentation of Facility interconnection requirements after execution of an agreement to conduct reliability impact studies?
2. How does your entity track requests for Facility interconnection requirements?

Potential Failure Point (R3, R4): Failure to address all items outlined in R3 or R4 in the interconnection requirements.

1. How does your entity verify all items outlined in R3 and R4 are adequately addressed in the interconnection requirements?

