

## WECC Intent

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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 Electric 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](mailto:internalcontrols@WECC.org) with suggestions on controls guidance and potential failure points questions.*

## Definitions

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**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

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**Entity Coordination:** Coordination, internally and externally, as with third-party suppliers and contractors before making changes to the system or taking any actions with the potential to affect another entity and, in turn, affect BPS reliability and security. Coordination should address the risk associated with operating horizon, planning horizons and during emergencies. Failure to coordinate may affect bulk power system (BPS) reliability and security.

**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 System Operating Limits (SOL) and transfer capabilities, analysis of disturbances and misoperations, proper design of Underfrequency Load Shedding (UFLS) and Undervoltage Load Shedding (UVLS) programs, and response to geomagnetic disturbance (GMD) events. Failure will likely result in gaps and may compromise BPS reliability and security.

### Control Objective(s)

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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-002-4. You may want to consider these two objectives:

**Control Objective 1:** Study the impact of interconnecting new or changed Facilities on the Bulk Electric System. (Long-term Studies/Assessments)

**Control Objective 2:** Coordinate data required to conduct reliability impact studies. (Entity Coordination, Long-term Studies/Assessments)

### Reliability and Security Control Activities

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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: Study the impact of interconnecting new or changed Facilities on the Bulk Electric System.**

**Control Activity A:** Define parameters for reliability impact studies. (Relates to risk associated with R1)

1. Does your entity have a documented procedure that sets the criteria or defines when steady-state, short-circuit, and dynamic studies need to be performed?
2. Does your entity incorporate any other standards into the study parameters (e.g., IEEE, UL)
3. Has your entity defined roles and responsibilities for conducting the studies?
  - a. What group is responsible for the coordination of the reliability impact studies?
  - b. Does the same group coordinate both interconnection and qualified change studies?

**Control Activity B:** Ensure that all necessary studies for inverter-based resource (IBR) connections are being performed. (Relates to risk associated with R1)

1. Are IBRs explicitly addressed in your entity's interconnection study processes?
2. How does your entity ensure study assumptions and system performance considerations used to determine the reliability impact of new IBR interconnections are adequate?
  - a. What is your review or approval process?
3. How does your entity ensure that:
  - a. In steady-state power flow base cases, limits and collector system equivalent impedances are within reasonable tolerances?
  - b. Dynamic models reflect actual responses in the field?
  - c. For short-circuit models, correct assumptions on inverter performance during faults are included?
4. Any use of momentary cessation is correctly represented in the data submitted by the GO?

**Control Activity C:** Ensure studies are performed before interconnection or completion of qualified change. (Relates to risk associated with R1)

1. Does your entity have someone responsible for tracking the required actions to ensure the process will be completed on time?
  - a. Do you use any automated tools (e.g., project management software) to track the study process?
  - b. Do you use any technology to track and document requests and data submittals?



2. Does your entity have a review or approval process to ensure the study has been completed before the interconnection or project completion date?

**Control Activity D:** Ensure reliability impact studies yield acceptable results.

1. Does your entity validate the data that is submitted?
  - a. If so, do you use any job aids (e.g., checklists) to confirm validation is performed?
  - b. If so, do you employ technology solutions to flag suspect data?
  - c. If suspect data is identified, do you have a process for coordinating updates to that data?
2. Does your entity rely on third parties (e.g., contractors, other registered entities) to perform reliability impact studies?
  - a. If so, what review is conducted to confirm adequacy of the studies?
3. What group is responsible for verification or reviews of the reliability impact studies?
4. Does your entity re-perform studies using as-built data to ensure accuracy?

**Control Objective 2:** Coordinate data required to conduct reliability impact studies.

**Control Activity A:** Determine what constitutes a qualified change. (Relates to risk associated with R6)

1. How does your entity determine what constitutes a qualified change?
2. How does your entity ensure that definition meets the needs of performing reliability impact studies?
3. How frequently does your entity review the definition of qualified change?
  - a. If changes to the definition of qualified change are made, how is that communicated to other entities?
5. If changes to the definition of qualified change are made, how do you work with other entities to transition to the new definition?

**Control Activity B:** Ensure timeliness of data submissions and reliability impact studies. (Relates to risk associated with R1, R2, R3, R4, R5)

1. At what stage in the project does your entity begin the process of performing reliability impact studies? (PC, TP)
  - a. Do you take proactive steps to encourage the submission of data during the project planning stage if a request has not yet been made?
    - i. If so, how do you become aware of planned projects?
  - b. Do you perform preliminary engineering studies?
2. At what stage in the project (how far in advance of the expected commissioning or completion date) does your entity contact your PC or TP for the coordination of an interconnection study? (GO, TO, DP)
3. When and how does your entity discuss the milestone timeline for completion of the studies?
4. Does your entity have a review or approval process to ensure the study has been completed before



the interconnection date?

**Control Activity B:** Coordinate and provide data for reliability impact studies. (Relates to risk associated with R2, R3, R4, R5)

1. Does your entity have a documented procedure that outlines 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?
2. How does your entity ensure all qualified changes are recognized for inclusion in the FAC-002 process?
  - a. If you have more than one PC, how do you manage potentially different definitions of qualified change?
3. Does your entity use any job aids (e.g., checklists, workflows) that address data provisioning?
  - a. If so, are they for new interconnections, qualified changes, or both?
4. Does your entity use any technology to track and document requests and data submittals?
5. Does your entity have a process to verify receipt of the data submission?

**Control Activity C:** Resolve items that could negatively affect system performance.

1. Does your entity have a documented process to resolve items that could negatively affect system performance?

## Compliance Potential Failure Points

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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):** Failure to study the impact of interconnecting new generation, transmission, or electricity end-user Facilities, including:

1. The reliability impact on affected systems.
2. Adherence to applicable NERC Reliability Standards.
3. Adherence to regional and Transmission Owner planning criteria.
4. Adherence to Facility interconnection requirements.
5. System performance under both normal and contingency conditions.

**Potential Failure Point (R1):** Failure to document study assumptions, alternatives considered, and coordinated recommendations.

**Potential Failure Point (R1):** Failure to study the reliability impact of Facilities seeking to make qualified changes including each area outlined in R1.



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**Potential Failure Point (R1):** Failure to verify the validity of studies performed by a third party.

**Potential Failure Point (R2, R3, R4):** Failure to coordinate and cooperate on studies with the Transmission Planner or Planning Coordinator when seeking to interconnect new Facilities.

**Potential Failure Point (R2, R3, R4):** Failure to coordinate and cooperate on studies with the Transmission Planner or Planning Coordinator when seeking to make a qualified change.

**Potential Failure Point (R5):** Failure to coordinate and cooperate with the Transmission Planner or Planning Coordinator on studies regarding requested interconnections to your entity's Facilities. (GO)

**Potential Failure Point (R6):** Failure to define qualified change for facility interconnection.

**Potential Failure Point (R6):** Failure to make the definition of qualified change publicly available.

