

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
- 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

Modeling Data: Simulation tools model individual components and their control systems, when applicable. The models form the building blocks of power system studies in the planning and operations horizons. Models that entities have verified as accurate are critical to a range of reliability studies, including transmission planning assessments and establishing System Operating Limits (SOL) and Interconnection Reliability Operating Limits (IROL), as well as state estimation for Real-time Assessments (RTA) and Operation Planning Assessments (OPA). The validity of those assessments depends on modeling data, including correct Facility Ratings, verified generator real and reactive capability, and knowing how control systems respond to dynamic system conditions. Failure to provide data in a timely manner and at intervals to ensure model accuracy during retirements and new construction may compromise Bulk Power System (BPS) reliability and security.

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 category mentioned above and MOD-032-1. You may want to consider these four objectives:

Control Objective 1: Establish consistent modeling data requirements and reporting procedures to support analysis of the reliability of the interconnected transmission system. (Planning Coordinator (PC) and Transmission Planner (TP))

Control Objective 2: Communicate data specifications and reporting procedures to applicable entities (PC, TP)

Control Objective 3: Provide data or written confirmation of no change (Balancing Authority, Generator Owner, Load Serving Entity, Resource Planner, Transmission Owner, and Transmission Service Provider)

Control Objective 4: Review data and request corrected data (PC, TP)

Control Objective 5: Make models available to ERO or designee. (PC)

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.



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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 consistent modeling data requirements and reporting procedures to support analysis of the reliability of the interconnected transmission system. (PC, TP)

Control Activity A: Coordinate with neighboring entities (Relates to risk associated R1)

1. How does your entity work with neighboring entities to define the boundaries of your PC or TP area?
 - a. Have you identified all the entities within your PC footprint who own the data necessary to ensure the planning models are accurate? (PC)
 - b. Have you identified your PC? (TP)
2. Does your entity have a defined process to coordinate with applicable entities to develop requirements, data specifications, and reporting procedures?

Control Activity B: Determine the case types or scenarios your entity will be modeling for the planning horizon to ensure BPS reliability and security. (Relates to risk associated R1)

1. How does your entity determine the modeling it should perform for the planning horizon to ensure BPS reliability and security?
2. How does your entity coordinate the development of scenarios with the base cases in support of the Regional Organization (RO)?
3. How does your entity ensure it is using the most recent ERO-approved dynamic model?
4. Did your entity hire an independent third party to assess the validity of its modeling for the planning horizon?
 - a. If not, how do you validate the results of its modeling studies for the planning horizon?

Control Activity C: Develop data requirements. (Relates to risk associated R1)

1. Has your entity documented modeling data specifications for steady-state, dynamic, short-circuit studies?
2. How does your entity identify the data it needs to develop planning horizon cases to analyze BPS reliability in its PC area?
 - a. Do you use the WECC Data Preparation Manual?
 - b. Do you collect any additional data beyond the data required by Attachment 1?
 - c. Do you include data developed to perform the GMD studies for TPL-007-1?
 - d. What verification do you perform to confirm all necessary data is identified?
3. How does your entity ensure the level of detail required is clear?
 - a. Do you periodically review the request to ensure requested assumptions and operating



conditions are easy to understand?

- b. Have you received agreement or acknowledgement from the data providers that they understand and agree they can provide the data requested in the specification?
4. How does your entity ensure the requested format can be easily provided by all applicable entities?
 - a. Do you request standard formats?
 - b. Do you have a process to handle new technologies or user-written models where no standard models exist?

Control Activity D: Develop reporting procedures. (Relates to risk associated with R1)

1. Do the reporting procedures describe the expected timeline for annual data submittal?
2. Do the reporting procedures describe the process and expected timeline for providing updates to model information?
 - a. Does this include both new and modified facilities?
 - b. Does this include data verification conducted under MOD-025, MOD-026, or MOD-027?
 - c. Does this include unplanned changes?
 - d. Does this include updates to load and resource data when new, improved forecasts are created?

Control Objective 2: Communicate data specifications and reporting procedures to applicable entities (PC and TP)

Control Activity A: Identify entities who should be submitting data.

1. How does your entity determine the entities to which it would send the data requirements and reporting procedures for steady-state, dynamics and short-circuit modeling?
 - a. Are all entities who hold the data identified in your jointly developed requirements and reporting procedures?
 - b. How do you ensure new entities are aware of the data specifications?

Control Activity B: Ensure specifications for distributing or posting the data are available to entities responsible for providing data.

1. How do you ensure contact information is up to date?
 - a. Does the jointly developed process speak to verifying contact information or change management if staff changes?
 - b. Are backup contacts listed?
2. Does the jointly developed process contain a section that speaks to the distribution of the data specification and the expectations and timelines for providing the data?
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. How does your entity ensure all applicable entities have access to the data?



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5. If changes are made to the data specification, how are the changes communicated to applicable entities?
 - a. Are the changes highlighted in some way to draw attention to them?
6. How is contact information for the responsible party at your entity provided?
 - a. Is it a mailbox or other form of communication that is monitored by multiple parties?

Control Objective 3: Provide data or written confirmation of no change (Balancing Authority, Generator Owner, Load Serving Entity, Resource Planner, Transmission Owner, and Transmission Service Provider)

Control Activity A: Implement a process to provide requested data on the prescribed timeline. (Relates to risk associated with R2)

1. Has your entity identified your TP and PC?
2. Does your entity participate with your TP /PC to develop their MOD-032 process?
3. Has your entity defined roles and responsibilities for providing data?
4. Does your entity have a process to request clarification from the TP or PC if data requirements are not clear?
5. Does your entity perform verification to ensure data is current, accurate, and in accordance with specifications?

Control Activity B: Implement a process to provide updated data in a timely manner when changes occur. (Relates to risk associated with R2)

1. Does this include both new and modified facilities?
2. Does this include data verification conducted under MOD-025, MOD-026 or MOD-027?
3. Does this include unplanned changes to the system?
4. Does this include updates to load data when new improved load and resource forecasts are created?

Control Activity C: Implement a process to provide requested data when notified of concerns with data submitted ((Relates to risk associated with R3)

Control Objective 4: Review Data and request corrected data (PC and TP)

Control Activity A: Review data

1. Does your entity use any automated tools to review data that is submitted?
2. Do you have any job aids (e.g., checklists, workflows, desk-level procedures) for use when reviewing submitted data?
3. Do these tools include checks for:
 - a. Formatting?
 - b. Data entry errors?
 - c. Poor verification testing results
 - d. Inaccurate estimation techniques.



- e. Physically impossible data
- f. Suspect Model Parameters
- g. Improper model initialization when entered into the interconnection-wide base case.
- h. No-Disturbance Flat Run
- i. Unstable Performance
- j. Poor model fidelity:

Control Objective B: Request corrected data as needed.

1. What tools does your entity have in place to track resubmission of data to confirm the corrected data is incorporated into the models?

Control Objective 5: Make Models available to ERO or designee. (PC)

Control Activity A: Provide models to the ERO or designee when requested.

1. What technology does your entity use (e.g., workflows, alerts) to track the completion of the models and the submittal to the ERO or designee?
2. How does your entity ensure models are made available within the requested time frame?

Control Activity B: Review model for accuracy prior to submitting it to the ERO or designee.

1. How does your entity verify the model solves before sending it to the ERO or designee?

Control Activity C: Periodically update models to reflect new data or changes to topology.

1. How does your entity track changes in topology in its planning area?
 - a. Describe how your entity ensures it timely updates its model(s) when changes in topology occur in its planning area?
 - b. How does your entity verify it timely updated its model(s) when changes in topology occurred in its planning area?

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): Failure to jointly develop data requirements that include all the items listed in Attachment 1.

1. Does your entity have written, signed procedures to perform MOD-032-1 R1?
2. Does your entity have a written, signed agreement that identifies compliance responsibilities?

Potential Failure Point (R1): Failure to develop specifications for the data consistent with building the



interconnection-wide case(s).

1. Do your entity's data specifications address data format?
2. Do your entity's data specifications address the level of detail to which equipment shall be modeled?
3. Do your entity's data specifications include case types or scenarios to be modeled?

Potential Failure Point (R1): Failure to specify a schedule for data submission at least once every 13 calendar months.

Potential Failure Point (R1): Failure to distribute or post the data requirements and reporting procedures to those entities responsible for providing the data.

Potential Failure Point (R2): Failure to provide steady-state, dynamics, and short-circuit modeling data your entity's TP(s) and PC(s) according to the data requirements and reporting procedures or provide written confirmation that the data has not changed.

1. Does your entity use any technology (e.g., reminders, workflows) to ensure data is provided per the schedule required?

Potential Failure Point (R3): Failure to provide updated data or an explanation with a technical basis for maintaining the current data in response to written notification regarding technical concerns.

Potential Failure Point (R3): Failure to respond to written notification regarding technical concerns within 90 days unless a longer period is agreed upon.

1. How does your entity track these notifications to confirm they have been responded to?
 - a. Do you use any technology to track the receipt or the timing of the response?

Potential Failure Point (R4): Failure to submit models to the ERO or its designee in support of the creation of the interconnection-wide case(s).