

### Controls Guidance and Compliance Failure Points

EOP-011-4 May 2025

Emergency Operations Emergency Operations Planning Entity Coordination Operating During Emergencies/Backup & Recovery

#### **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 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 control 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 <u>internalcontrols@WECC.org</u> with suggestions on controls guidance and potential failure points questions.

#### Definitions

**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**

**Emergency Operations Planning**: Entities must have the necessary facilities, tools, processes, and procedures to prevent or respond to system events, emergencies, or unexpected conditions. Failure to develop adequate plans may result in gaps that could lead to a compromise of bulk power system (BPS) reliability and security.

By requiring an entity to analyze the likelihood and impact of specific events (such as extreme weather) on their system, EOP-011-4 encourages entities to develop plans that either prevent failures (such as preventative maintenance) or provide guidance for operation during the most likely scenarios.

**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 impact another entity and, in turn, impact BPS reliability and security. Coordination should address the risk associated with operating horizon, planning horizons, and during emergencies. Failure to coordinate may affect BPS reliability and security.

EOP-011-4 also provides extensive guidance on coordination between functional entities in advance of and during emergencies to minimize the impact on grid reliability.

**Operating During Emergencies/Backup & Recovery**: Entities must act during an emergency, system event, or unexpected conditions that could result in instability, uncontrolled separation, or cascading outages within an interconnection. This can include:

- Ensure personnel are sufficiently prepared and have adequate access to the procedures, processes, tools, and facilities to respond appropriately and effectively.
- Ensure adherence to processes and procedures.
- Ensure proper operation, availability, and use of facilities and tools.

### **Control Objectives**

Your entity should perform a risk assessment and identify entity-specific control objectives to mitigate those risks. To help entities get started, WECC has identified generic control objectives to mitigate the



risks associated with the risk categories mentioned above and EOP-011-4. You may want to consider these six objectives:

**Control Objective 1:** Ensure risks associated with operating during emergencies are identified and analyzed. (Relates to Emergency Operations Planning)

**Control Objective 2:** Ensure processes are in place to prepare for and mitigate operating emergencies. (Relates to Emergency Operations Planning)

**Control Objective 3:** Ensure processes are in place to operate during emergencies (resiliency plans). (Relates to Operating During Emergencies/Backup & Recovery)

Control Objective 4: Coordinate during emergencies. (Relates to Entity Coordination)

**Control Objective 5:** Ensure processes are in place to return to normal operations. (Relates to Operating During Emergencies/Backup & Recovery)

**Control Objective 6:** Review and update Emergency Operating Plans. (Relates to Emergency Operations Planning)

### **Reliability and Security Control Activities**

Control activities are how your entity meets your control objectives. When designing and maturing controls, they should be tailored to meet the applicable 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: Ensure risks associated with operating during emergencies are identified and analyzed.

**Control Activity A**: Ensure all appropriate personnel participate in identifying risks associated with operating emergencies.

- 1. Does your entity include SMEs from other departments, agencies, entities, or groups outside operations in the risk assessment process?
  - a. Are natural gas entities included in the risk assessment?
- 2. Does your entity include SMEs from multiple locations in the risk assessment process?
- 3. Have these entities been included during a review of the emergency Operating Plan(s) to help identify risks?

**Control Activity B**: Perform extreme weather risk assessments. (Relates to risks associated with R1.2.6, R2.2.9)

- 1. Does your entity take the following into account:
  - a. Geographic location?

- b. Historical performance?
- c. Operating limitations?
- d. Supply inventories?
- e. Equipment design operating capabilities?
- f. Personnel concerns?
- 2. Has your entity identified potential critical equipment/failure points?
- 3. How does your entity determine the potential reliability impacts of extreme weather conditions?

Control Activity C: Identify risks associated with the supply chain.

- 1. Has your entity entered into contracts with suppliers of critical equipment to mitigate risk during emergency operations?
- 2. Has your entity identified sources for long lead-time parts?
- 3. Has your entity identified critical chemicals (e.g., fuels for trucks, de-icer)?
- 4. Has your entity vetted suppliers for security ahead of the emergency? (emergency procurement)

**Control Activity D**: Identify and prioritize critical natural gas infrastructure load. (Relates to risks associated with R1.2.5.5, R2.2.8, R8.1.5)

- 1. How does your entity define critical natural gas infrastructure load?
  - a. Do you consider the quantity that can be supplied? Wellheads? Compression Stations? Other?
  - b. How do you ensure the definition is not so broad it becomes meaningless?
- 2. How does your entity identify critical natural gas infrastructure load?
  - a. Do you coordinate with natural gas entities to determine natural gas infrastructure load based on your criteria?
  - b. Do you use historical information?
  - c. Do you identify or share critical natural gas infrastructure outside of your footprint?
- 3. Does your entity maintain a priority-ranked or tiered list of critical natural gas infrastructure?
  - a. Do you define priorities based on outage duration, season, or other conditions?

## Control Objective 2: Ensure processes are in place to prepare for and mitigate operating emergencies.

Control Activity A: Perform maintenance and inspections. (Relates to risk associated with R1.2)

- 1. Does your entity perform seasonal maintenance to prevent operating emergencies?
  - a. If so, how are maintenance needs identified?
  - b. If so, how is maintenance activity tracked?
- 2. Does your entity perform event-driven preventative maintenance?
  - a. If so, how are maintenance needs identified?

- i. Is maintenance performed based on imminent events (e.g., weather predictions)?
- ii. Are facilities inspected after emergencies to determine maintenance needs?
- iii. What other events would trigger inspections or maintenance?
- b. Does event-driven preventative maintenance include alternate communications capabilities or backup facilities?

**Control Activity B**: Develop and implement a plan to allow entities additional time to coordinate energy resources before implementing an Energy Emergency Alert (EEA).

- 1. Does your entity have a pre-EEA or EEA watch plan?
  - a. What forecasting or triggers does this plan include?
  - b. What coordination does this plan include?
    - i. Internal conservation measures?
    - ii. Contacting customers to coordinate conservation actions once an EEA is declared?
    - iii. Government agencies to determine options for implementing conservation efforts or easing environmental constraints?
    - iv. Restricting scheduled maintenance?

### Control Objective 3: Ensure processes are in place to operate during emergencies (resiliency plans).

Control Activity A: Define roles and responsibilities.

- 1. How are roles and responsibilities defined?
  - a. Do you consider departments outside of operations, including other agencies, neighbor entities, etc.?
  - b. Are roles and responsibilities specific by location?
  - c. Are roles and responsibilities specific to event types?

**Control Activity B**: Ensure personnel understand their roles and responsibilities.

- 1. Are roles and responsibilities for emergency operations included in your Real-time reliabilityrelated tasks?
- 2. Does your entity provide training on emergency response to staff outside of operations?
  - a. Who provides the training?
  - b. How is training content determined?
    - i. Does your entity provide training on EEA levels and load shed?
    - ii. Do you perform any QA/QC to confirm the training is effective?
    - iii. How often is training content updated?
  - c. How is training delivered?
    - i. Do you use simulators?
    - ii. Do you conduct/participate in drills?

- d. How are your training efforts tracked?
  - i. Do you have a central training tracking system?
- e. How are personnel identified for training?
- f. How frequently do personnel receive training?
- 3. What resources/tools are in place for your personnel to guide operations during emergencies? (e.g., checklists, decision trees)
  - a. Is guidance in place for triggering the plan(s)?
    - i. Has your entity defined what an operating emergency looks like?
    - ii. Does your plan define the criteria to activate the plan and notify the Reliability Coordinator (RC) to declare an emergency?
  - b. Are playbooks used for communication?
  - c. How do you ensure tools allow flexibility to adapt to unpredictable conditions?
  - d. Are contingency plans in place to account for shutdowns and trips?

#### Control Activity C: Mitigate emergencies. (Relates to risk associated with R1.2, R2.2, R8.1)

- 1. How does your entity define Transmission emergencies? (Transmission Operator (TOP))
- 2. What controls are in place to respond to (TOP):
  - a. Approaching SOL/IROL exceedances?
  - b. Short-term SOL/IROL limits?
  - c. Adjustments to transmission capacity?
  - d. Implementation of Transmission Loading Relief (TLR) to respect SOL/IROLs?
  - e. Manual load shedding?
  - f. Cancellation or recall of Transmission and generation outages?
  - g. Transmission system reconfiguration?
  - h. Redispatch of generation request?
- 3. What controls are in place to manage generating resources in your Balancing Authority (BA) Area:
  - a. Capability and availability?
  - b. Fuel supply and inventory concerns?
  - c. Fuel switching capabilities?
  - d. Environmental constraints?
- 4. What processes and guidelines have been established for: (BA)
  - a. Reduction of internal utility energy use?
  - b. Use of Interruptible Load, curtailable Load, and demand response?
- 5. What processes and guidelines have been established for operator-controlled manual Load shedding, undervoltage load shed (UVLS), or underfrequency load shed (UFLS) during an Emergency that:



- a. Minimize the overlap of circuits that are designated for manual Load shed, UVLS, or UFLS and circuits that serve designated critical loads;
- b. Minimize the overlap of circuits that are designated for manual Load shed and circuits that are utilized for UFLS or UVLS; and
- c. Are capable of being implemented in a time frame adequate for mitigating the Emergency?
- 6. What processes are in place to reevaluate and revise SOLs and IROLs (RC)?

**Control Activity D**: Ensure Transmission Owners (TO), Distribution Providers (DP), and UFLS-Only Distribution Providers (DP – UFLS Only) understand their roles and responsibilities during load shedding. (Relates to risk associated with R7)

- 1. How does your entity identify TOs, DPs, and DP UFLS-Only who have are required to assist in the case of emergency load-shedding?
- 2. Does your entity have any controls to ensure they are notified of their roles and responsibilities?
  - a. Do you require a response or follow-up in the case of non-response?
- 3. Does your entity have any controls to ensure a timely review of their Load shedding plan?

**Control Activity E**: Plan for personnel needs during operating emergencies.

- 1. Does your entity alter personnel schedules during events?
  - a. If so, how? (e.g., increased staffing levels, longer shifts)
- 2. What resources does your entity have on hand for personnel during operating emergencies? (e.g., food, living space, portable generators, heaters, etc.)
  - a. Have you considered dependent timelines? (e.g., supply delivery time, personnel travel time)
- 3. What safety protocols does your entity have in place for emergency operations? (e.g., Access, road or walkway clearing, etc.)
  - a. Are the protocols location-specific?
  - b. Are the protocols event-specific?

**Control Activity E**: Ensure processes are in place to monitor operations during an event. (Relates to risk associated with R1.2, R2.2)

- 1. What processes or technology does your entity have in place to monitor Load during an emergency?
- 2. What processes does your entity have in place to monitor weather conditions during an emergency?
- 3. What technology or processes are used to monitor equipment conditions during emergencies?

### Control Objective 4: Coordinate during emergencies.

**Control Activity A**: Coordinate with interconnected entities. (Relates to risk associated with R1.2, R2.2, R5, R6)

1. Has your entity designated emergency coordination teams who do not have system reliability responsibilities to handle communications and coordination during operating emergencies?

- a. How do you ensure they understand the NERC time requirements?
- 2. What processes are in place to
  - a. Notify your entity's RC and affected entities when emergency conditions are projected?
  - b. Notify your entity's RC and affected entities during emergency operations?
  - c. Update your entity's RC and affected entities during emergency operations?

Control Activity B: Coordinate with vendors and suppliers.

1. Does your entity have arrangements with local vendors for supply delivery and rental equipment?

Control Activity C: Coordinate with emergency services during events.

1. What processes are in place to request government agencies implement their programs to achieve necessary energy reductions?

Control Activity D: Coordinate with consumers during events. (BA)

1. What processes are in place to make public appeals for voluntary Load reductions?

Control Activity E: Ensure contact lists are accessible during emergencies.

- 1. How does your entity ensure contact lists (both internal and external) are up to date?
- 2. How does your entity ensure contact lists are available during an emergency?

### Control Objective 5: Ensure processes are in place to return to normal operations.

Control Activity A: Identify roles and responsibilities for return to normal operations.

- 1. Does your plan identify criteria to determine when the event is over?
- 2. Who is responsible to declare a return to normal operations?
  - a. To whom do they communicate this?
- 3. Has your entity defined processes or workflows, or communication trees based on event types or scenarios to aid in the return to normal operations?

### Control Objective 6: Review and update Emergency Operating Plans.

**Control Activity A**: Ensure lessons learned are incorporated into future Operating Plans after events occur.

- 1. Does your entity have a post-event process to review events?
  - a. Are documents reviewed?
  - b. Are positive actions acknowledged?
  - c. Are lessons learned documented?
- 2. How does your entity track lessons learned and follow up on mitigation actions?
- 3. If a Load shed is performed, is the resulting data incorporated into future calculations?

Control Activity B: Review prioritized list of critical natural gas infrastructure load.

- 1. How frequently does your entity review the list of critical natural gas infrastructure to ensure it reflects the current conditions?
  - a. Is it periodic?
  - b. Is it based on events? Known construction? Other?
- 2. Does your entity review the list of critical natural gas infrastructure with natural gas companies or other entities?

Control Activity C: Review Emergency Operating Plans.

- 1. What criteria or guidelines does your entity employ to review Operating Plans?
  - a. Compatibility and inter-dependency with other BA and TOPs' Operating Plans? (Relates to risk associated with R3) (RC)
  - b. Coordination to avoid risk to Wide Area reliability? (Relates to risk associated with R3) (RC)
- 2. Who reviews your entity's Operating Plans (in addition to the RC/TOP)?
  - a. Subject Matter Experts?
  - b. Compliance personnel?
  - c. Executive Management?

**Control Activity D**: Ensure reliability risks identified by your entity's RC are addressed in your Operating Plan. (Relates to risk associated with R4)

- 1. What tools does your entity use to track Operating Plan reliability risks and that your entity addressed them within the specified time frame?
- 2. Does your entity perform any QA/QC of the Operating Plan review and update process?

### **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, R8)**: Failure to develop Operating Plan(s) that include all the elements listed in R1 (TOP), R2 (BA), and R8 (TO, DP, DP UFLS).

Potential Failure Point (R1, R2): Failure to obtain a RC review of the Operating Plan.

- 1. Does your entity have a review cycle and RC distribution date defined in the emergency plan?
- 2. Does your entity use a reminder system to ensure the emergency plan is reviewed and submitted to the RC on time?

**Potential Failure Point (R1, R2, R8)**: Failure to maintain evidence (such as operator logs) during an emergency that indicates the Operating Plan was used.



- 1. During an emergency event, how does your entity ensure operator logs or other records are maintained and are accurate?
- 2. Are additional staff called in to assist with logging?

Potential Failure Point (R2.2.2): Failure to request Energy Emergency Alert per Attachment 1.

- 1. What processes are in place to request an EEA?
  - a. What QA/QC is performed to verify the EEA request accords with Attachment 1?
  - b. How do you confirm all generation units are online and Demand-Side Management activated before requesting an EEA 3?

**Potential Failure Point (R2.2.2)**: Failure to coordinate during Energy Emergency Alerts per Attachment 1.

- 1. Does your entity have a process or checklist in place to remember hourly status notifications to the RC during an EEA?
- 2. What processes are in place to coordinate with TOPs during EEA 2 or EEA 3?
- 3. What processes are in place to evaluate system conditions to verify an EEA level can be downgraded?

**Potential Failure Point (R3)**: Failure to review an Operating Plan and notify the appropriate entity of the results within 30 days of receipt. (RC)

- 1. What tools does your entity use to track Operating Plan reviews from receipt to notification?
- 2. Does your entity perform any QA/QC of the Operating Plan review process?

**Potential Failure Point (R4)**: Failure to address any reliability risks identified by your entity's RC and resubmit your Operating Plan(s) to your RC within the specified time period.

- 1. Does your entity have a process to:
  - a. Receive RC-reviewed emergency plans?
  - b. Ensure appropriate staff who can modify the emergency plan receive it?
  - c. Modify the plan if needed?
  - d. Return the plan to the RC within the stated timeline?

**Potential Failure Point (R5)**: Failure to notify, within 30 minutes of receiving an Emergency notification, other BAs and TOPs in its RC Area, and neighboring RCs.

Potential Failure Point (R6): Failure to declare an EEA as detailed in Attachment 1.

- 1. What processes are in place to declare an EEA?
- 2. How does your entity ensure personnel understand the criteria and conditions to declare an EEA for each EEA Level?
- 3. What processes are in place to ensure timely notification of BAs, TOPs, market participants, and RCs upon receipt of an Emergency notification, upon declaration of an EEA, or upon downgrading or terminating an EEA?
  - a. Do you perform any QA/QC to verify all appropriate entities were notified?

4. What processes are in place to coordinate with TOPs during EEA 2 or EEA 3?)

**Potential Failure Point (R7)**: Failure to notify DPs, DP - UFLS-Only, and TOs that are required to assist with the mitigation of operating Emergencies.

1. Does your entity periodically review the list of entities that have been notified to ensure it is complete?

Potential Failure Point (R8): Failure to obtain a TOP review of the Operating Plan.

- 1. Does your entity have a review cycle and TOP distribution date defined in the emergency plan?
- 2. Does your entity use a reminder system to ensure the emergency plan is reviewed and submitted to the TOP on time?

