

Template for Developing a NERC Regional Operating Reliability Plan

Draft 5

Introduction

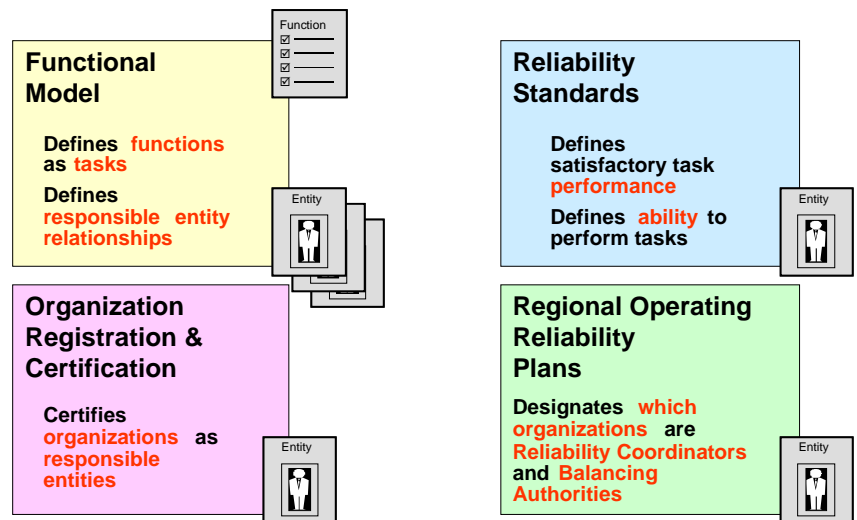
The NERC Template for Developing a Regional Operating Reliability Plan provides the detailed requirements for ensuring adequate reliability oversight and coordination. Each Regional Council is expected to submit a Regional Operating Reliability Plan to the NERC Operating Committee for review and approval, and must review and keep its Regional Operating Reliability Plan up to date as required by NERC.

The NERC Regional Operating Reliability Plans complement the NERC Reliability Functional Model and NERC Version 0 Reliability Standards. The Reliability Functional Model provides the foundation and framework upon which NERC develops and maintains its Reliability Standards. The Regional Operating Reliability Plan requirements focus on specific responsible entities to which the Reliability Standards are written. Those entities are the Reliability Coordinator¹ and the Balancing Authority.

The figure on the right explains the relationship among the Regional Operating Reliability Plan, the Reliability Functional Model, the Certification requirements, and the Reliability Standards.

Background – The Reliability Coordinator and the Balancing Authority

From “NERC Reliability Functional Model Technical Document,” dated October 31, 2003 and NERC Version 0 Reliability Standard.



Reliability Coordinator

The Reliability Coordinator is the highest-level authority and can direct all operational reliability functions within its Reliability Coordinator Area. The Reliability Coordinator is responsible for the reliable operation of its Reliability Coordinator Area within the Bulk Electric System in accordance with NERC, Regional and sub-Regional standards and practices. The Reliability Coordinator determines Interconnected Reliability Operating Limits based upon Transmission and Generation Owners' specified equipment ratings, system operating limits calculated by the Transmission Operator(s), plus system studies. The Reliability Coordinator monitors its Reliability Coordinator Area to ensure the system operates within its thermal, voltage, and stability limits. The Reliability Coordinator monitors and ensures transmission system reliability at all times. It also specifies the requirements for Interconnected Operations Services to ensure transmission reliability.

¹ The Functional Model defines the Reliability Authority rather than today's Reliability Coordinator. However, until the various authorities and protocols of the Reliability Authority are sorted out, the initial set of [reliability](#) standards ("Version 0") includes the Reliability Coordinator, as it exists today.

The Reliability Coordinator's purview must be broad enough to enable it to calculate Interconnection Reliability Operating Limits, which may be based on the operating parameters of other transmission systems beyond the Transmission Operator's vision. The Transmission Operator is responsible for the reliability of its "local" transmission system, and may not be aware that its system is violating an Interconnection Reliability Operating Limit. Therefore, the Reliability Coordinator shall have the authority to direct the Transmission Operators or Balancing Authorities within its Reliability Coordinator Area to take action to mitigate System Operating Limits and Interconnected Reliability Operating Limits.

The Reliability Coordinator also assists the Transmission Operator in relieving equipment or facility overloads through transmission loading relief measures if market-based dispatch procedures are not effective.

Balancing Authority

The Balancing Authority operates within the metered boundaries that establish the Balancing Authority Area. Every generator, transmission facility, and end-use customer must be in a Balancing Authority Area. The Balancing Authority's mission is to maintain the balance between loads and resources in real time within its Balancing Authority Area by keeping its actual interchange equal to its scheduled interchange and providing its frequency bias obligation.

Comments

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Regional Operating Reliability Plan Requirements — Reliability Coordinators

1. **Designation of Reliability Coordinators.** The Regional Council shall provide the Operating Committee with a list of the Reliability Coordinators within the Regional Council’s boundary and provide updates whenever that list changes.
 - 1.1. **Balancing Authorities.** The Reliability Coordinator list shall include a list of all Balancing Authorities under the purview of each Reliability Coordinator. The list shall also include all anticipated changes and the dates of those changes.
2. **Reliability Coordinator Reliability Plan.** The Regional Council shall ensure that each Reliability Coordinator provides a Reliability Plan to the NERC Operating Committee for its approval. That Reliability Plan must address the requirements listed in the NERC Template for Developing a Reliability Coordinator Reliability Plan document. Through regional participation of its Reliability Coordinators, the Regional Operating Reliability Plan can serve as the Reliability Coordinator Reliability Plan.
 - 2.1. **Multiple Reliability Coordinators operating within the Regional Council.** If the Regional Council’s Regional Operating Reliability Plan indicates that more than one Reliability Coordinator operates within the Region, the Regional Council’s Regional Operating Reliability Plan shall address the interrelationships among the Reliability Coordinators within its boundary, and how those Reliability Coordinators coordinate their operations with one another and with their adjacent Reliability Coordinators in other Regional Councils. The Regional Council’s Regional Operating Reliability Plan can incorporate the coordination information for both its and adjacent Reliability Coordinators.
 - 2.1.1. **Communications.** The Regional Operating Reliability Plan shall document how the Reliability Coordinators will communicate with each other and with Reliability Coordinators in other Regional Councils.
 - 2.1.2. **Delegation of tasks.** If reliability coordination requires the delegation of tasks, the Regional Council shall document how that delegation is accomplished. The Regional Council shall also explain that the responsibilities of the delegated tasks remain with the individual Reliability Coordinators.
 - 2.1.3. **Coordination.** The Regional Operating Reliability Plan shall document how the Reliability Coordinators will coordinate their operations, including the mitigation of System Operating Limit violations and Interconnected Reliability Operating Limit violations along their boundaries. A list of all operating agreements between the Reliability Coordinators within the Regional Council and a list of all operating agreements with Reliability Coordinators in other Regional Councils shall be provided in the Regional Operating Reliability Plan.
 - 2.1.4. **Feasibility.** The Regional Operating Reliability Plan must be feasible in the opinion of the NERC Operating Committee. While feasibility is subjective, it includes the following attributes that must be considered together:
 - 2.1.5. Manageable number of Reliability Coordinators
 - Ability of each Reliability Coordinator to have the real-time “big picture,” or Wide Area view
 - Ability of each Reliability Coordinator to calculate Interconnected Reliability Operating Limits and mitigate IROL violations

- Ability of the Reliability Coordinators to communicate effectively among themselves and with Reliability Coordinators in other Regional Councils
3. **Compliance with NERC Reliability Standards.** The Regional Council shall monitor all Reliability Coordinators within its boundary for compliance with NERC Reliability Standards.
- 3.1. **Compliance procedures.** The Regional Council shall provide to NERC the procedure it uses to ensure and verify the Reliability Coordinators' compliance with NERC Reliability Standards.
- 3.2. **Reliability Coordinator Audits.** The Regional Council shall ensure that each Reliability Coordinator is audited in accordance with the directives of the NERC Vice President of Compliance.
- 3.3. **Corrective actions.** The Regional Council shall ensure that the Reliability Coordinator mitigates any instances of non-compliance with NERC Reliability Standards identified in a Reliability Coordinator Audit.

Comments

The above requirements would be better located in the template for the Reliability Coordinator Reliability Plan(RC RP). (alternatively, the RC RP template requirements could be included here.) It makes little sense to have both a RC RP and a Regional Operating Plan which are addressing the same subject. Otherwise, this will create extra workload and poses the potential for inconsistency between the two.

The document should provide the timelines for implementation of this template and provide NERC's expectations of Reliability Coordinators to evolve existing RC plans to this format.

Regional Operating Reliability Plan Requirements — Balancing Authorities

1. **Balancing Authority Integrated Operational Plan.** The Regional Council shall ensure that each Balancing Authority, certified to operate within its Regional Council boundary, has developed a Balancing Authority Integrated Operational Plan that addresses the requirements identified in the NERC Template for Developing a Balancing Authority Integrated Operational Plan document.
 - 1.1. **Balancing Authority Integrated Operational Plan Approval.** The Regional Council shall ensure that each Balancing Authority provides an Integrated Operational Plan to the Region for its approval.
2. **Balancing Authority boundaries.** The Regional Council shall ensure that every generator, transmission facility, and customer is within the metered boundaries of a single Balancing Authority.
 - 2.1. **Contiguity of Balancing Authority Areas.** The Regional Council shall ensure that Balancing Authority Areas do not overlap.
 - 2.2. **Reliability Coordinator purview.** The Regional Council shall ensure that every Balancing Authority is within the purview of a single Reliability Coordinator.
3. **Compliance with NERC Reliability Standards.** The Regional Council shall monitor all Balancing Authorities within its boundary for compliance with NERC Reliability Standards.
 - 3.1. **Compliance procedures.** The Regional Council shall provide the procedure it uses to ensure and verify the Balancing Authorities' compliance with NERC Reliability Standards to the NERC Vice President of Compliance
 - 3.2. **Corrective actions.** The Regional Council shall ensure that the Balancing Authority mitigates any instances of non-compliance with NERC Reliability Standards identified by the Regional Council.

Comments

The above requirements would be better located in the template for the Balancing Authority Plan (BA Pn). (Alternatively, the BA Pn template requirements could be included here.)