Policy 9 – Reliability Coordinator Procedures

Version 3

Subsections

A. Next Day Operations Planning Process
B. Current Day Operations – Energy
C. Current Day Operations – Transmission

Terms

Operating Authority. An entity that:

1. Has ultimate accountability for a defined portion of the BULK ELECTRIC SYSTEM to meet one or more of three reliability objectives – generation/demand balance, transmission ~~security~~reliability, and/or emergency preparedness, and

2. Is accountable to NERC and its Regional Reliability Councils for complying with NERC and Regional Policies, and

3. Has the authority to control or direct the operation of generating resources, transmission facilities, or loads, to meet these Policies.

Reliability Coordinator Area. That portion of the Bulk Electric System under the purview of the RELIABILITY COORDINATOR.

Operating Authority Area. That portion of the Bulk Electric System under the purview of the OPERATING AUTHORITY.

Introduction

This document contains the process and procedures that the NERC RELIABILITY COORDINATORS are expected to follow to ensure the operational reliability of the INTERCONNECTIONS. These include:

- Planning for next-day operations, including reliability analyses (such as pre- and post-contingency thermal monitoring, system reserves, area reserves, reactive reserves, voltage decline, stability, etc.) and identifying special operating procedures that might be needed,
- Analyzing current day operating conditions, and
- Implementing procedures (local, Interconnection-wide, or other) to mitigate ~~overloads or limit~~ System Operating Limit and Interconnected Reliability Limit violations on the transmission system. Regardless of the process, the Reliability Coordinator must ensure their Control Areas return their transmission system to within ~~Operating Security Limits~~Interconnected Reliability Limits as soon as possible, but no longer than 30 minutes as indicated in Policy 2.

Operating Authorities shall not burden others. The RELIABILITY COORDINATOR shall ensure that all OPERATING AUTHORITIES ~~shall~~ will operate to prevent, contain, and minimize the likelihood that a disturbance, action, or non action in one area ~~could~~will ~~adversely affect another party's system or any system~~result in a SYSTEM OPERATING LIMIT or INTERCONNECTED RELIABILITY LIMIT VIOLATION in another area of ~~in~~ the Interconnection. Doing otherwise is considered a "burden" that one Operating Authority places on another. The Bulk Electric System shall be operated to the most conservative parameter, if Reliability Coordinator study results differ??.

Operating under known conditions. OPERATING AUTHORITIES shall ensure they operate their systems under known conditions at all times and also ensure they reprepare their systems following contingency events within approved timelines, regardless of the number of contingency events that occur.

A. Next Day Operations Planning Process

When disseminating system analysis information, RELIABILITY COORDINATORS are expected to comply with the provisions of NERC's "Confidentiality Agreement for Electric System Reliability." **[Appendix 4B]**

Requirements

1. **Performing security analysis.** The RELIABILITY COORDINATOR shall conduct next-day reliability analyses for its Reliability Area to ensure that the bulk power system can be operated in anticipated normal and contingency conditions.

1.1. **Sharing information.** Each CONTROL AREA in the RELIABILITY AREA shall provide information required for system studies, such as critical facility status, load, generation, operating reserve projections, and known INTERCHANGE TRANSACTIONS. This information shall be available by 1200 Central Standard Time for the Eastern INTERCONNECTION, and 1200 Pacific Standard Time for the Western INTERCONNECTION.

Does this need to go into Policy 6 also? Aimed at the CA.

1.2. **Performing system Studies.** The RELIABILITY COORDINATOR shall conduct contingency analysis-based studies to identify potential interface and other INTERCONNECTED RELIABILITY LIMIT violations, including overloaded transmission lines and transformers, voltage and stability limits, etc. Particular attention should be given to parallel flows to ensure one ~~area~~ RELIABILITY AREA does not place an unacceptable or undue burden on an adjacent ~~entity~~ RELIABILITY AREA.

1.3. **Developing action plans.** The RELIABILITY COORDINATOR shall develop action plans that may be required including reconfiguration of the transmission system, redispatching of generation, reduction or curtailment of INTERCHANGE TRANSACTIONS or reduce firm load to maintain transmission loading within acceptable limits.

2. **Sharing study Results**. The RELIABILITY COORDINATOR shall share the results of its system studies, when conditions warrant or upon request, with other RELIABILITY COORDINATORS, ~~TRANSMISSION PROVIDERS,~~ and ~~CONTROL AREAS~~OPERATING AUTHORITIES within their RELIABILITY AREA. Study results shall be available no later than 1500 Central Standard Time for the Eastern INTERCONNECTION, and 1500 Pacific Standard Time for the Western INTERCONNECTION, unless circumstances warrant otherwise. ~~If the results of these studies indicate potential reliability problems, the RELIABILITY COORDINATORS shall issue the appropriate alerts via the Reliability Coordinator Information System (RCIS) and direct their OPERATING AUTHORITIES to take any necessary action the RELIABILITY COORDINATOR deems appropriate to address the potential reliability concern. OPERATING AUTHORITIES shall comply with their Reliability Coordinator's direction.~~

3. **Communication of next day reliability concerns.**

3.1. Any time that conditions warrant, a conference call or other appropriate communications shall be initiated by any RELIABILITY COORDINATOR to address whatever problems are revealed by the reliability analyses.

3.2. If the results of these studies indicate potential reliability problems, the RELIABILITY COORDINATORS shall issue the appropriate alerts via the Reliability Coordinator Information System (RCIS) and direct their OPERATING AUTHORITIES to take any

necessary action the RELIABILITY COORDINATOR deems appropriate to address the potential reliability concern. OPERATING AUTHORITIES shall comply with their Reliability Coordinator's direction.

~~3.~~4. OPERATING AUTHORITIES shall comply with their Reliability Coordinator's direction.

5. **~~Identifying special operating procedures.~~** ~~Potential~~The ~~RELIABILITY COORDINATOR shall identify special operating procedures that may be required shall be identified, including reconfiguration of the transmission system, redispatching of generation, reduction or curtailment of INTERCHANGE TRANSACTIONS or if necessary, a plan to reduce firm load to maintain transmission loading within acceptable limits.~~

B. Current Day Operations – Energy

[Appendix 5B, Subsection A, "Energy Emergency Alerts"]

Requirements

1. ~~Analyzing~~ **Monitoring CONTROL AREA generation resource availability.** The RELIABILITY COORDINATOR shall ~~analyze~~ monitor generation resource availability and reserve levels for the CONTROL AREAS, RESERVE-SHARING GROUPS, and LOAD-SERVING ENTITIES in its RELIABILITY ~~COORDINATOR~~ AREA to determine any actual or potential energy deficiencies. The RELIABILITY COORDINATOR is expected to direct its OPERATING AUTHORITIES to take whatever action the RELIABILITY COORDINATOR deems appropriate to address the potential reliability concern. OPERATING AUTHORITIES shall comply with their RELIABILITY COORDINATOR'S direction.

2. **Authority to provide emergency assistance.** The RELIABILITY COORDINATOR shall have the authority to take or direct whatever action is needed to mitigate an energy emergency within ~~his~~ its RELIABILITY AREA including load shedding. OPERATING AUTHORITIES shall ensure the direction of the RELIABILITY COORDINATOR is implemented as directed. ~~This action includes all resources in the RELIABILITY COORDINATOR'S footprint including load shedding if so directed. OPERATING AUTHORITIES shall ensure the direction of the RELIABILITY COORDINATOR is implemented as directed.~~ Reliability Coordinators shall provide assistance to other Reliability Coordinators experiencing an emergency in accordance with Appendix 5B, Subsection A, "Energy Emergency Alerts."

~~**3.Notifying**~~ **Communication of Energy Emergencies** ~~**others**~~. Each RELIABILITY COORDINATOR that is experiencing a potential or actual energy emergency within any CONTROL AREA, RESERVE-SHARING GROUP, or LOAD-SERVING ENTITY within ~~his~~ its RELIABILITY AREA shall initiate an ENERGY EMERGENCY ALERT as detailed in **Appendix 5B, Subsection A – "Energy Emergency Alert Levels."** The RELIABILITY COORDINATOR shall also act to ~~address the emergent condition~~ to mitigate ~~the~~ emergency condition, including a request for emergency assistance if required.

3. **Determining causes of Interconnection** FREQUENCY ERROR**.** A~~ny~~ny ~~RELIABILITY COORDINATOR~~FREQUENCY MONITOR noticing an Interconnection Frequency Error in excess of 0.03 Hz (Eastern Interconnection) or 0.05 Hz (Western and ERCOT Interconnections) for more than 20 minutes shall initiate a Reliability Coordinator Hotline conference call, or notification via the RCIS, to determine the Control Area(s) with the energy emergency or control problem.

3.1. If a RELIABILITY COORDINATOR determines there is a reliability issue related to one or more of its CONTROL AREAS' contributing to the Frequency Error, the associated RELIABILITY COORDINATOR shall direct the CONTROL AREA(S) to immediately balance its system by using all resources available to it, including load shedding. The OPERATING AUTHORITY(S) shall comply with the Reliability Coordinator request.

Is this requirement too burdensome to RCs?

C. Current Day Operations – Transmission

[Policy 3A, "Interchange – Interchange Transaction Implementation"]
[Appendixes 9C1, 9C2, 9C3, "Transmission Loading Relief Procedures]

Requirements

1. **INTERCHANGE TRANSACTION information.** The RELIABILITY COORDINATOR shall be aware of all INTERCHANGE TRANSACTIONS that wheel-through, source or sink in ~~the~~ its RELIABILITY ~~COORDINATOR~~ AREA and make that INTERCHANGE TRANSACTION information available to all RELIABILITY COORDINATORS in the INTERCONNECTION. (Note: This requirement is satisfied by the Interchange Distribution Calculator and E-Tag process for the Eastern Interconnection.)

~~1.1.~~2. **~~Notifying~~ Communication with RELIABILITY COORDINATORS of potential problems.** The RELIABILITY COORDINATOR who foresees a transmission problem (such as an Interconnected Reliability Limit violation, loss of reactive reserves, etc.) within its RELIABILITY ~~COORDINATOR~~ AREA shall issue an alert to all CONTROL AREAS and Transmission Providers in its RELIABILITY ~~COORDINATOR~~ AREA, and all RELIABILITY COORDINATORS within the INTERCONNECTION via the RCIS[1] without delay.

3. **Implementing relief procedures.** If transmission loading progresses or is projected to progress beyond the System Operating Limit or ~~OPERATING RELIABILITY LIMIT~~INTERCONNECTED RELIABILITY LIMIT, the RELIABILITY COORDINATOR will perform the following procedures as necessary:

~~Subsections rearranged for better "flow."~~Definitions of SOL and ILR included in Glossary of Terms

~~**2.1.Managing INTERCHANGE TRANSACTIONS.** The RELIABILITY COORDINATORS will continue to manage INTERCHANGE TRANSACTIONS through their respective CONTROL AREAS during this period to help mitigate the INTERCONNECTED RELIABILITY LIMIT violation.~~

2.1 isn't clear. What does "manage" mean? Combine this with 2.2?

~~2.2.~~3.1. Selecting transmission loading relief procedure. The RELIABILITY COORDINATOR experiencing a constraint on a transmission system within ~~his~~ its RELIABILITY AREA shall, at his discretion, select from either a "local" (Regional, Interregional, or subregional) transmission loading relief procedure or an INTERCONNECTION-wide procedure, such as those listed in Appendix 9C1, 9C2, or 9C3.

~~2.2.1.~~3.1.1. Using local transmission loading relief procedure. The RELIABILITY COORDINATOR may use local transmission loading relief or congestion management procedures, provided the transmission system experiencing the constraint is a party to those procedures.

~~2.2.1.1.~~3.1.1.1. Using with an Interconnection-wide Procedure. A Reliability Coordinator may implement a local transmission loading relief or congestion management procedure simultaneously with an Interconnection-wide procedure. However, he is obligated to follow the curtailments as directed by the Interconnection-wide procedure. If the Reliability Coordinator desires to use a local procedure as a substitute for curtailments as directed by the Interconnection-wide procedure, he may

[1] Reliability Coordinator Information System

do so only if such use is approved by the NERC Operating Reliability Subcommittee and Operating Committee[2].~~2~~

~~2.2.1.2.Updating the IDC. The Reliability Coordinator must enter, or have entered on his behalf, into the IDC all Interchange Transaction changes that result from the implementation of the local procedure. [Eastern Interconnection Requirement]~~

Still and RC requirement? No. This requirement should be addressed in Policy 3.

~~2.2.2.~~3.1.2. **Using an INTERCONNECTION-wide loading relief procedure.** The RELIABILITY COORDINATOR may implement an INTERCONNECTION-wide procedure as detailed in Appendixes 9C1, 9C2, or 9C3.

~~2.2.2.1.~~3.1.2.1. **Complying with procedures.** When implemented, all RELIABILITY COORDINATORS shall comply with the provisions of the INTERCONNECTION-wide procedure. This may include action by RELIABILITY COORDINATORS in other INTERCONNECTIONS to, for example, curtail an INTERCHANGE TRANSACTION that crosses an INTERCONNECTION boundary.

~~2.2.3.~~3.1.3. **Complying with Interchange Policies.** During the implementation of relief procedures, and up to the point that emergency action is necessary, RELIABILITY COORDINATORS and CONTROL AREAS shall comply with the Requirements of Policy 3, "Interchange."

~~2.3.Managing transmission service. The RELIABILITY COORDINATORS shall direct their those OPERATING AUTHORITIES who are providing transmission service to discontinue selling transmission service that exacerbates the OSL Interconnected Reliability Limit violation during the period of heavy loading.~~

Capture this concept in Policy 6 (ATC/AFC coordination).

~~2.4.~~3.2. **Mitigating System Operating Limit and Interconnected Reliability Limit Violations.** Regardless of the process used the RELIABILITY COORDINATOR must direct its OPERATING AUTHORITIES to return ~~its~~ the transmission system to within ~~Operating Security Limits~~ System Operating Limits and INTERCONNECTED RELIABILITY LIMITS as soon as possible, but no longer than 30 minutes as indicated in Policy 2. With this in mind, RELIABILITY COORDINATORS and their OPERATING AUTHORITIES must be aware that Transmission Loading Relief procedures may not be able to address the transmission issue in a timely fashion. Under these circumstances other actions such as reconfiguration, redispatch or load shedding may be necessary until the relief requested by the TLR process is achieved. In these instances the Reliability Coordinator shall direct, and entities shall comply with the more timely requests.

~~3.~~4. **Implementing emergency procedures.** If the RELIABILITY COORDINATOR deems that the transmission loading condition ~~is deemed critical to~~ is placeings the bulk electric system reliability at an immediate risk ~~by a RELIABILITY COORDINATOR~~, the RELIABILITY COORDINATOR

The point is that the BES is at "an immediate risk" and the RC must act now.

[2] Examples would be 1) a local procedure that curtails INTERCHANGE TRANSACTIONS in a different order or ratio than the INTERCONNECTION-wide procedure, or 2) a local redispatch procedure.

shall haves the authority and obligation to immediately direct the CONTROL AREAS in its RELIABILITY AREA to redispatch generation, reconfigure transmission, manage INTERCHANGE TRANSACTIONS , or reduce system demand[3], or if directed, shed firm load to mitigate the critical conditionimmediate risk until INTERCHANGE TRANSACTIONS can be reduced utilizing a transmission loading relief procedure, or other procedures, to return the system to a reliable state. The RELIABILITY COORDINATOR shall coordinate these emergency procedures with other RELIABILITY COORDINATORS as appropriateneeded. All CONTROL AREAS shall comply with all directives from their RELIABILITY COORDINATOR as authorized by the Regional Reliability Plan.[4] **[See also Policy 5, "Emergency Operations"]**

4.5. Reestablishing normal operations. Once the System Operating Limit or Interconnected Reliability Limit violation or other operating emergency has been mitigated, tThe Reliability Coordinator may take the following actions in whatever order is appropriate:

4.1.5.1. Reestablishing Interchange Transactions. The RELIABILITY COORDINATOR shall coordinate with the Control AreasOPERATING AUTHORITIES in its Reliability Area, and with other RELIABILITY COORDINATORS as appropriate, the reestablishment of the INTERCHANGE TRANSACTIONS that were curtailed. The reestablishment of these INTERCHANGE TRANSACTIONS and the resulting INTERCHANGE SCHEDULES shall be in compliance with Policy 3, "Interchange.

4.2.5.2. Restoring system dispatch. The Reliability Coordinator shall notify its OPERATING AUTHORITIES that they may reestablish their normal resource dispatch.

4.3.5.3. Reestablishing Load. The Reliability Coordinator shall coordinate with the Control AreasOperating Authorities in their its Reliability Area, and with other RELIABILITY COORDINATORS as appropriate, the reestablishment of the firm loads that were curtailed.

6. Compliance with Reliability Coordinator Directives. All Operating Authorities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment or regulatory/statutory requirements. Under these circumstances the Operating Authorities must immediately inform the Reliability Coordinator of the inability to perform the directive so that alternate remedial actions may be implemented.

[3] The Reliability Coordinator may use any number of methods to reduce system demand, including shedding firm load. The Reliability Coordinator must also consider the location of the demand reduction to ensure its effectiveness in reducing the transmission loading.

[4] Compliance with directives must consider public safety and equipment limits and good utility practice.