

Template for Developing a Reliability Coordinator Reliability Plan

Draft 5

Reliability Plan Subsections

- A. Responsibilities – Authorization**
 - B. Responsibilities – Delegation of Tasks**
 - C. Common Tasks for Current-Day and Next-Day Operations**
 - D. Next-Day Operations**
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Introduction

This document outlines the requirements that a RELIABILITY COORDINATOR shall address in its Reliability Plan.

Initial Reliability Coordinator's Reliability Plan

A RELIABILITY COORDINATOR shall prepare a Reliability Plan in accordance with this template that documents that it has the processes, procedures, tools, and agreements in place to perform the reliability functions and responsibilities assigned to RELIABILITY COORDINATORS in the Operating Policies or the successor Version 0 Reliability Standards. The initial Reliability Plan will outline the physical boundaries of its Reliability Coordinator Area.

Approval process for changes to a Reliability Coordinator's Reliability Coordinator Area

Changes to a RELIABILITY COORDINATOR'S Reliability Coordinator Area must be:

1. Endorsed by the applicable NERC Regional Reliability Council(s).
2. Accompanied by an update of all impacted Regional Council's Regional Operating Reliability Plans to reflect the Reliability Coordinator Area remaining within the Regional Council's purview.
3. Submitted to the Operating Reliability Subcommittee for review as an amendment to the Reliability Coordinator's Reliability Plan.
4. The Operating Reliability Subcommittee forwards the results of its review to the NERC Operating Committee.
5. Approved by Operating Committee before implementation.

Reliability Coordinator's Reliability Plan Approval Process

The RELIABILITY COORDINATOR shall submit its initial or revised Reliability Plan to all Regional Reliability Councils, within which the RELIABILITY COORDINATOR will operate, and the Operating Committee for endorsement. The NERC Board of Trustees will review the Operating Committee's recommendation in instances where a state, federal or provincial legislative or regulatory body requires notification of NERC's endorsement of the RELIABILITY COORDINATOR'S Reliability Plan.

The Operating Committee shall endorse all revisions to a RELIABILITY COORDINATOR'S Reliability Plan prior to implementation of the proposed revision.

Reliability Coordinator Audits

The RELIABILITY COORDINATOR shall be audited at the direction of the NERC Vice President of Compliance prior to implementing its initial Reliability Plan, and on a periodic basis thereafter as determined by the NERC Board of Trustees.

The RELIABILITY COORDINATOR may be audited at the direction of the NERC Vice President of Compliance when any of the following events occurs within a RELIABILITY COORDINATOR'S Reliability Coordinator Area:

1. A change in RELIABILITY COORDINATOR membership resulting in a change in the Reliability Coordinator Area.
2. A change in scope within the RELIABILITY COORDINATOR'S Reliability Coordinator Area, e.g. the start-up of a market operation.

Comments

Audit Requirements and expectations must be clearly defined. Changes in RC area need better definition, i.e. would a new, small CA "carved out" from a larger CA require an RC audit? . Starting up of a market operation would not effect RC operations and therefore not automatically trigger an audit. 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.

A. Responsibilities – Authorization

The RELIABILITY COORDINATOR shall provide documentation within its Reliability Plan that it has the authorization of GENERATOR OPERATORS, TRANSMISSION OPERATORS, LOAD-SERVING ENTITIES, PURCHASING-SELLING ENTITIES, BALANCING AUTHORITIES, and TRANSMISSION SERVICE PROVIDERS within its RELIABILITY COORDINATOR AREA to perform the following responsibilities:

1. The Reliability Plan shall document that the RELIABILITY COORDINATOR is responsible for the reliable operation of the BULK ELECTRIC SYSTEM in accordance with NERC, Regional and sub-Regional practices within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement A.1)
 - 1.1. The Reliability Plan shall document that the RELIABILITY COORDINATOR has a WIDE AREA view, the operating tools, processes and procedures, including the authority, to prevent or mitigate emergency operating situations in both next-day analysis and during real-time conditions. (Policy 9 Requirement A.1.1)
 - 1.2. The Reliability Plan shall document that the RELIABILITY COORDINATOR has clear decision-making authority to act and to direct actions to be taken by BALANCING AUTHORITIES, GENERATOR OPERATORS, TRANSMISSION OPERATORS, TRANSMISSION SERVICE PROVIDERS, LOAD-SERVING ENTITIES, and PURCHASING-SELLING ENTITIES within its RELIABILITY COORDINATOR AREA to preserve the integrity and reliability of the BULK ELECTRIC SYSTEM. (Policy 9 Requirement A.1.2)
 - 1.3. The Reliability Plan shall document that the RELIABILITY COORDINATOR has not delegated its responsibilities. (Policy 9 Requirement A.1.3)
2. The Reliability Plan shall document that the RELIABILITY COORDINATOR will act in the interests of reliability for the overall RELIABILITY COORDINATOR AREA and its INTERCONNECTION before the interests of any other entity. (Policy 9 Requirement A.2)
3. The Reliability Plan shall document how all BALANCING AUTHORITIES, GENERATOR OPERATORS, TRANSMISSION OPERATORS, TRANSMISSION SERVICE PROVIDERS, LOAD-SERVING ENTITIES, and PURCHASING-SELLING ENTITIES within its RELIABILITY COORDINATOR AREA shall comply with its directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. The Reliability Plan shall document that under these circumstances the BALANCING AUTHORITY, GENERATOR OPERATOR, TRANSMISSION OPERATOR, TRANSMISSION SERVICE PROVIDER, LOAD-SERVING ENTITY, and PURCHASING-SELLING ENTITY must immediately inform the RELIABILITY COORDINATOR of the inability to perform the directive so that it may implement alternate remedial actions. (Policy 9 Requirement A.3)

Comments

This template should provide only an outline or Table Of Contents of what is expected to be covered by the Reliability Plan as a guide for the developers of the RC Plans. It should not list requirements for the RC, as these should be covered by the soon to be implemented Version 0 standards. Templates approved outside the Standard Process create the potential of having inconsistent requirements or of adding new requirements that are not part of the standards.

The Reliability Plans should clearly address how the RC meets the standards rather than

restating them and saying he does.

B. Responsibilities – Delegation of Tasks

The RELIABILITY COORDINATOR shall document within its Reliability Plan its delegation of tasks to other entities, including a listing of those entities. The RELIABILITY COORDINATOR shall document within its Reliability Plan how it ensures that all delegated tasks are understood, communicated, and addressed within its RELIABILITY COORDINATOR AREA.

The RELIABILITY COORDINATOR shall document within its Reliability Plan that NERC certified RELIABILITY COORDINATOR operators are performing all delegated tasks. (Policy 9 Requirement B.1, B.2, B.3, and B.4)

Comments

The SRC supports having a single entity for a specified area to have the overall accountability for reliability. However, it needs to be recognized that in some areas (e.g. in WECC) the RC may need agreements with other parties, such as BA's, Top's, etc to carry out certain functions, such as shedding of load.

C. Common Tasks for Next-Day and Current-Day Operations

The RELIABILITY COORDINATOR'S Reliability Plan shall document how it conducts next-day and current-day reliability analysis within in its RELIABILITY COORDINATOR AREA. At a minimum this documentation shall address the following:

The RELIABILITY PLAN shall document how the RELIABILITY COORDINATOR coordinates operations in regards to SOLS and IROLS for real time and next-day operations for its RELIABILITY COORDINATOR AREA including thermal, voltage and stability related analysis. The Reliability Plan shall document how the results, (e.g. identification of SOL violations) of reliability assessments, up to and including next-day assessments, conducted by TRANSMISSION OPERATORS, are reported to the RELIABILITY COORDINATOR. The RELIABILITY COORDINATOR shall ensure that its WIDE AREA view is modeled to ensure coordinated operations. (Policy 9 Requirement C.1.1)

1. The RELIABILITY COORDINATOR shall document the processes it uses to determine IROLS. This documentation shall address the processes the RELIABILITY COORDINATOR uses to ensure that it becomes aware of an IROL violation created by the outage of multiple, normally non-critical facilities. The Reliability Plan shall document how the RELIABILITY COORDINATOR will disseminate the results of these analyses within its RELIABILITY COORDINATOR AREA and to any neighboring RELIABILITY COORDINATORS (Policy 9 Requirement C.1.2)
2. The Reliability Plan shall document how the RELIABILITY COORDINATOR ensures that all BALANCING AUTHORITIES, GENERATOR OPERATORS, TRANSMISSION OPERATORS, TRANSMISSION SERVICE PROVIDERS, LOAD-SERVING ENTITIES, and PURCHASING-SELLING ENTITIES operate to prevent the likelihood that a disturbance, action, or non-action in its RELIABILITY COORDINATOR AREA will result in a SOL or IROL violation in another area of the INTERCONNECTION. The Reliability Plan shall document how the RELIABILITY COORDINATOR will operate in instances where there is a difference in derived limits. (Policy 9 Requirement C.1.3 and Policy 5 Requirement A.6)
3. The Reliability Plan shall document how the RELIABILITY COORDINATOR ensures that its BALANCING AUTHORITIES and TRANSMISSION OPERATORS are always operating under known and studied conditions and also how it ensures that they reassess and reposture their systems following CONTINGENCY events without delay, and no longer than 30 minutes, regardless of the number of CONTINGENCY events that occur or the status of their monitoring, operating and analysis tools. (Policy 9 Requirement C.1.4)
4. The Reliability Plan shall document how the RELIABILITY COORDINATOR makes known to TRANSMISSION SERVICE PROVIDERS within its RELIABILITY COORDINATOR AREA, SOLs or IROLS within its WIDE AREA view. (Policy 9 Requirement C.1.5)
5. The Reliability Plan shall document the process the RELIABILITY COORDINATOR uses to issue directives in a clear, concise, definitive manner within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement C.1.6)

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.

D. Next-Day Operations

The Reliability Plan shall document how the RELIABILITY COORDINATOR conducts next-day reliability analyses for its RELIABILITY COORDINATOR AREA to ensure that the BULK ELECTRIC SYSTEM can be operated reliably in anticipated normal and CONTINGENCY event conditions. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document how the RELIABILITY COORDINATOR conducts CONTINGENCY analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc. (Policy 9 Requirement D.1.1)
 - 1.1. The Reliability Plan shall document how the RELIABILITY COORDINATOR ensures that the impact of parallel flows from its RELIABILITY COORDINATOR AREA does not place an unacceptable or undue BURDEN on an adjacent RELIABILITY COORDINATOR AREA (Policy 9 Requirement D.1.2)
2. The Reliability Plan shall document the process used to obtain the information required for system studies, such as critical facility status, load, generation, operating reserve projections, and known INTERCHANGE TRANSACTIONS from BALANCING AUTHORITIES, INTERCHANGE AUTHORITIES, TRANSMISSION OWNERS, TRANSMISSION OPERATORS, GENERATION OWNERS, GENERATION OPERATORS, and LOAD-SERVING ENTITIES within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement D.2)
3. The RELIABILITY COORDINATOR shall document the process it uses to share the results of its system studies, when conditions warrant or upon request, with other RELIABILITY COORDINATORS, and BALANCING AUTHORITIES, TRANSMISSION OPERATORS, GENERATION OPERATORS, and TRANSMISSION SERVICE PROVIDERS within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement D.4)
4. The Reliability Plan shall document the conditions that warrant the initiation of a conference call or other appropriate communications to address the results of its reliability analyses. (Policy 9 Requirement D.5)

Comments

<p>See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.</p>

E. Current-Day Operations

The Reliability Plan shall document how the RELIABILITY COORDINATOR conducts current-day reliability analyses for its RELIABILITY COORDINATOR AREA to ensure that the BULK ELECTRIC SYSTEM can be operated reliably in anticipated normal and CONTINGENCY event conditions. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document the process the RELIABILITY COORDINATOR uses to monitor all BULK ELECTRIC SYSTEM facilities, including sub-transmission information, within its RELIABILITY COORDINATOR AREA and adjacent RELIABILITY COORDINATOR AREAS as necessary to ensure that, at any time, regardless of prior planned or unplanned events, the RELIABILITY COORDINATOR is able to determine any potential SOL and IROL violations within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement E.1.1)
 - 1.1. The Reliability Plan shall document the process used to notify a neighboring RELIABILITY COORDINATOR of an operational concern (e.g. declining voltages, excessive reactive flows, or an IROL violation) that it identifies within the neighboring RELIABILITY COORDINATOR'S RELIABILITY COORDINATOR AREA. The Reliability Plan shall document how the RELIABILITY COORDINATOR shall coordinate any actions with neighboring RELIABILITY COORDINATORS, including the provision of emergency assistance, required to mitigate the operational concern. (Policy 9 Requirement E.1.1.1)
2. The Reliability Plan shall document how the RELIABILITY COORDINATOR maintains awareness of the status of all current critical facilities whose failure, degradation or disconnection could result in an SOL or IROL violation within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall also document how the RELIABILITY COORDINATOR maintains awareness of the status of any facilities that may be required to assist RELIABILITY COORDINATOR AREA restoration objectives. (Policy 9 Requirement E.1.2)
3. The Reliability Plan shall document the processes the RELIABILITY COORDINATOR uses to be continuously aware of conditions within its RELIABILITY COORDINATOR AREA and how the RELIABILITY COORDINATOR includes this information in its reliability assessments. The Reliability Plan shall document how the RELIABILITY COORDINATOR monitors its RELIABILITY COORDINATOR AREA parameters, including but not limited to the following (Policy 9 Requirement E.1.3):
 - 3.1. Current status of BULK ELECTRIC SYSTEM elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems and system loading)
 - 3.2. Current pre-CONTINGENCY element conditions (voltage, thermal, or stability)
 - 3.3. Current post- CONTINGENCY element conditions (voltage, thermal, or stability)
 - 3.4. System real and reactive reserves (actual versus required)
 - 3.5. Capacity and energy adequacy conditions
 - 3.6. Current ACE for all its BALANCING AUTHORITIES
 - 3.7. Current local or TLR procedures in effect
 - 3.8. Planned generation dispatches
 - 3.9. Planned transmission or generation outages

3.10. CONTINGENCY events

4. The Reliability Plan shall document the process the RELIABILITY COORDINATOR uses to monitor BULK ELECTRIC SYSTEM parameters that may have significant impacts upon its RELIABILITY COORDINATOR AREA and neighboring RELIABILITY COORDINATOR AREAS with respect to (Policy 9 Requirement E.1.4):
 - 4.1. The Reliability Plan shall document how the RELIABILITY COORDINATOR maintains awareness of all INTERCHANGE TRANSACTIONS that wheel-through, source, or sink in its RELIABILITY COORDINATOR AREA and how the RELIABILITY COORDINATOR makes that INTERCHANGE TRANSACTION information available to all RELIABILITY COORDINATORS in the INTERCONNECTION.
 - 4.2. The Reliability Plan shall document how the RELIABILITY COORDINATOR, in concert with the BALANCING and INTERCHANGE AUTHORITIES within its RELIABILITY COORDINATOR AREA evaluates and assesses any additional INTERCHANGE SCHEDULES that would violate SOLS OR IROLS. The Reliability Plan shall document that the RELIABILITY COORDINATOR is authorized to utilize all resources, including load shedding, to address a potential or actual IROL violation.
 - 4.3. The Reliability Plan shall document how the RELIABILITY COORDINATOR monitors BALANCING AUTHORITY parameters to ensure that the required amount of OPERATING RESERVES are provided and available as required to meet NERC Control Performance Standard and Disturbance Control Standards. The Reliability Plan shall document that, if necessary, the RELIABILITY COORDINATOR will direct the BALANCING AUTHORITIES in its RELIABILITY COORDINATOR AREA to arrange for assistance from neighboring BALANCING AUTHORITIES.
 - 4.4. The Reliability Plan shall document how the RELIABILITY COORDINATOR identifies the cause of potential or actual SOL or IROL violations. The Reliability Plan shall document how the RELIABILITY COORDINATOR shall initiate control actions or emergency procedures to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Plan shall document that the RELIABILITY COORDINATOR is authorized to direct utilization of all resources, including load shedding, to address a potential or actual IROL violation.
 - 4.5. The Reliability Plan shall document how the RELIABILITY COORDINATOR will communicate start and end times for time error corrections to all BALANCING AUTHORITIES within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document how the RELIABILITY COORDINATOR will ensure that all BALANCING AUTHORITIES, TRANSMISSION OPERATORS, and GENERATION OPERATORS within its RELIABILITY COORDINATOR AREA are aware of Geo-Magnetic Disturbance (GMD) forecast information and how the RELIABILITY COORDINATOR will assist in the development of any required response plans.
 - 4.6. The Reliability Plan shall document that the RELIABILITY COORDINATOR will participate in NERC Hotline discussions, assist in the assessment of reliability of the Regions and the overall interconnected system, and coordinate actions in anticipated or actual emergency situations. The Reliability Plan shall document how the RELIABILITY COORDINATOR will disseminate this information within its RELIABILITY COORDINATOR AREA.
 - 4.7. The Reliability Plan shall document how the RELIABILITY COORDINATOR monitors system frequency and its BALANCING AUTHORITIES' performance, and the procedures the RELIABILITY COORDINATOR will follow for directing any necessary rebalancing to return to CPS and DCS compliance. The Reliability Plan shall document that at the direction of the

RELIABILITY COORDINATOR its BALANCING AUTHORITIES shall utilize all resources, including firm load shedding, to relieve the emergent condition.

- 4.8. The Reliability Plan shall document how the RELIABILITY COORDINATOR coordinates with other RELIABILITY COORDINATORS and BALANCING AUTHORITIES, GENERATION OPERATORS, and TRANSMISSION OPERATORS, as needed, the development and implementation of action plans to mitigate potential or actual SOL, IROL, CPS or DCS violations. The Reliability Plan shall document how the RELIABILITY COORDINATOR coordinates pending generation and transmission maintenance outages with other RELIABILITY COORDINATORS and BALANCING AUTHORITIES, GENERATION OPERATORS, and TRANSMISSION OPERATORS, as needed, in both the real time and next-day reliability analysis timeframes.
 - 4.9. The Reliability Plan shall document how the RELIABILITY COORDINATOR will assist the BALANCING AUTHORITIES in its RELIABILITY COORDINATOR AREA in arranging for assistance from neighboring RELIABILITY COORDINATORS or BALANCING AUTHORITIES.
 - 4.10. The Reliability Plan shall document how the RELIABILITY COORDINATOR identifies sources of large AREA CONTROL ERRORS that may be contributing to frequency, time error, or inadvertent interchange and the procedures the RELIABILITY COORDINATOR shall follow to implement corrective actions with the appropriate BALANCING AUTHORITY.
 - 4.11. The Reliability Plan shall document how the RELIABILITY COORDINATOR maintains awareness that a Special Protection System that may impact an inter-BALANCING AUTHORITY, inter-TRANSMISSION OPERATOR, or inter-RELIABILITY COORDINATOR AREA (e.g. could potentially affect transmission flows resulting in a SOL or IROL violation) is armed. The Reliability Plan shall document that the RELIABILITY COORDINATOR shall be informed of the status of the Special Protection System including any degradation or potential failure to operate as expected by the TRANSMISSION OPERATOR.
5. The Reliability Plan shall document the procedure the RELIABILITY COORDINATOR will use to issue an alert to all BALANCING AUTHORITIES and TRANSMISSION OPERATORS in its RELIABILITY COORDINATOR AREA, and all RELIABILITY COORDINATORS within the INTERCONNECTION via the Reliability Coordinator Information System when it foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document how the RELIABILITY COORDINATOR will disseminate this information to its BALANCING AUTHORITIES and TRANSMISSION OPERATORS. (Policy 9 Requirement E.1.5)
 6. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR uses to confirm reliability assessment results and to determine the effects within its own and adjacent RELIABILITY COORDINATOR AREAS. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will follow to derive and discuss options to mitigate potential or actual SOL or IROL violations and to identify and implement only those actions as necessary as to always act in the best interests of the INTERCONNECTION at all times. (Policy 9 Requirement E.1.6)

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.
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F. Emergency Operations

The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will follow to respond to BULK ELECTRIC SYSTEM alerts and emergencies within its RELIABILITY COORDINATOR AREA, and to alerts and emergencies originating in neighboring RELIABILITY COORDINATOR AREAS. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document the process and procedures the RELIABILITY COORDINATOR uses to direct its BALANCING AUTHORITIES and TRANSMISSION OPERATORS to return the transmission system to within the IROL as soon as possible, but no longer than 30 minutes. The Reliability Plan shall document the actions (e.g. reconfiguration, redispatch or load shedding) the RELIABILITY COORDINATOR will direct until relief requested by the TLR process is achieved. (Policy 9 Requirement F.1)
2. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement when it deems that IROL violations are imminent. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR shall follow when directing its BALANCING AUTHORITIES and TRANSMISSION OPERATORS to redispatch generation, reconfigure transmission, manage INTERCHANGE TRANSACTIONS, or reduce system demand to mitigate the IROL violation 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 Plan shall also document how the RELIABILITY COORDINATOR will coordinate its alert and emergency procedures with other RELIABILITY COORDINATORS. (Policy 9 Requirement F.2)
3. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement in the event the loading of transmission facilities progresses to or is projected to progress to a SOL or IROL violation. At a minimum, the Reliability Plan shall document how the RELIABILITY COORDINATOR will perform the following procedures as necessary (Policy 9 Requirement F.3):
 - 4.1. The Reliability Plan shall document the processes and procedures used to determine when the RELIABILITY COORDINATOR will implement a local (Regional, Interregional, or subregional) transmission loading relief procedure or an INTERCONNECTION-wide procedure for resolving a potential or actual SOL or IROL violation on the transmission system within its RELIABILITY COORDINATOR AREA.
 - 4.2. The Reliability Plan shall identify for each local transmission loading relief or congestion management procedure the TRANSMISSION OPERATORS to which the procedure applies.
 - 4.3. As appropriate, the Reliability Plan shall document how the RELIABILITY COORDINATOR will implement a local transmission loading relief or congestion management procedure simultaneously with an INTERCONNECTION-wide procedure.
 - 4.4. The Reliability Plan shall document how the RELIABILITY COORDINATOR will comply with the provisions of the INTERCONNECTION-wide procedure including action by RELIABILITY COORDINATORS in other INTERCONNECTIONS to, for example, curtail an INTERCHANGE TRANSACTION that crosses an INTERCONNECTION boundary.

- 4.5. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will follow during the implementation of relief procedures, up to the point that emergency action is necessary.
4. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement when the INTERCONNECTION frequency error is in excess of 0.03 Hz (Eastern INTERCONNECTION) or 0.05 Hz (Western and ERCOT INTERCONNECTIONS) for more than 20 minutes. The Reliability Plan shall document the processes and procedures the Reliability Coordinator will implement when it determines that one or more of its BALANCING AUTHORITIES is contributing to the frequency error. (Policy 9 Requirement F.4)
5. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement to mitigate an energy emergency within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document how the RELIABILITY COORDINATOR shall provide assistance to other RELIABILITY COORDINATORS experiencing an energy emergency in accordance with Appendix 5C, Subsection A, "Energy Emergency Alerts." (Policy 9 Requirement F.5)
6. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement when it is experiencing a potential or actual Energy Emergency within any BALANCING AUTHORITY, RESERVE-SHARING GROUP, or LOAD-SERVING ENTITY within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will implement to mitigate the emergency condition, including a request for emergency assistance if required. (Policy 9 Requirement F.6)

Comments

Again, this section seems to add some new specific requirements that should be in standards which should not be permitted as the template does not go through the ANSI standard process.

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.

G. System Restoration

The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will follow to respond to BULK ELECTRIC SYSTEM outages originating within its RELIABILITY COORDINATOR AREA, and to BULK ELECTRIC SYSTEM outages originating in neighboring RELIABILITY COORDINATOR AREAS. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document that the RELIABILITY COORDINATOR is knowledgeable of the restoration plan of each BALANCING AUTHORITY and TRANSMISSION OPERATOR in its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document the RELIABILITY COORDINATOR'S role in monitoring the restoration progress and coordinating any needed assistance. (Policy 9 Requirement G.1)
2. The Reliability Plan shall document that the RELIABILITY COORDINATOR has a restoration plan for its RELIABILITY COORDINATOR AREA that provides coordination between individual BALANCING AUTHORITY and TRANSMISSION OPERATOR restoration plans and that ensures reliability is maintained during system restoration events. (Policy 9 Requirement G.2)
3. The Reliability Plan shall document the processes and procedures the RELIABILITY COORDINATOR will follow for disseminating information regarding restoration to neighboring RELIABILITY COORDINATORS and BALANCING AUTHORITIES or TRANSMISSION OPERATORS not immediately involved in restoration. (Policy 9 Requirement G.3)

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.

H. Coordination Agreements and Data Sharing

The Reliability Plan shall document that the RELIABILITY COORDINATOR has coordination agreements with adjacent RELIABILITY COORDINATORS to ensure that SOL or IROL violation mitigation requiring actions in adjacent RELIABILITY COORDINATOR AREAS are coordinated. At a minimum this documentation shall address the following:

The Reliability Plan shall document the data requirements to support the RELIABILITY COORDINATOR'S reliability coordination tasks, and the procedures to request such data from its BALANCING AUTHORITIES, INTERCHANGE AUTHORITIES, TRANSMISSION OWNERS, TRANSMISSION OPERATORS, GENERATION OWNERS, GENERATION OPERATORS, and LOAD-SERVING ENTITIES or adjacent RELIABILITY COORDINATORS, in accordance with the provisions of Policy 4, "System Coordination." (Policy 9 Requirement H.1, H.2, and H.3 and Policy 4 Requirement B.4)

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.

I. Facility

The Reliability Plan shall document that the RELIABILITY COORDINATOR has the facilities to perform its responsibilities. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document that the RELIABILITY COORDINATOR has adequate communications (voice and data links) to appropriate entities within its RELIABILITY COORDINATOR AREA, which are staffed and available to act in addressing a real time emergency condition. (Policy 9 Requirement I.1.1 and Policy 7 Requirement A.1)
2. The Reliability Plan shall document that the RELIABILITY COORDINATOR has multi-directional capabilities between it and its BALANCING AUTHORITIES and TRANSMISSION OPERATORS and also between it and its neighboring RELIABILITY COORDINATOR(S) for both voice and data exchange as required to meet reliability needs of the INTERCONNECTION. (Policy 9 Requirement I.1.2)
3. The Reliability Plan shall document that the RELIABILITY COORDINATOR has detailed real-time monitoring capability of its RELIABILITY COORDINATOR AREA and sufficient monitoring capability of surrounding RELIABILITY COORDINATOR AREAS to ensure that potential or actual SOL or IROL violations are identified. The Reliability Plan shall document that the RELIABILITY COORDINATOR has monitoring systems that provide information that can be easily understood and interpreted by the RELIABILITY COORDINATOR, giving particular emphasis to alarm management and awareness systems, automated data transfers, synchronized information systems, over a redundant and highly reliable infrastructure. (Policy 9 Requirement I.1.3)

The Reliability Plan shall document that the RELIABILITY COORDINATOR monitors BULK ELECTRIC SYSTEM elements (generators, transmission lines, busses, transformers, breakers, etc.) that could result in SOL or IROL violations within its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document that the RELIABILITY COORDINATOR monitors both real and reactive power system flows, OPERATING RESERVES, and the status of BULK ELECTRIC SYSTEM elements that are or could be critical to SOLs and IROLs and system restoration requirements within its RELIABILITY COORDINATOR AREA. (Policy 9 Requirement I.1.3.1)

4. Study and analysis tools. (Policy 9 Requirement I.1.4)
 - 4.1. The Reliability Plan shall document that the RELIABILITY COORDINATOR has adequate analysis tools such as State Estimation, pre- and post-CONTINGENCY analysis capabilities (thermal, stability, and voltage) and WIDE AREA overview displays.
 - 4.2. The Reliability Plan shall document that the RELIABILITY COORDINATOR continuously monitors its RELIABILITY COORDINATOR AREA. The Reliability Plan shall document that the RELIABILITY COORDINATOR has provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. The Reliability Plan shall document how the RELIABILITY COORDINATOR will ensure that SOL and IROL monitoring and derivations will continue if the main monitoring system is unavailable.
 - 4.3. The Reliability Plan shall document the processes and procedures used by the RELIABILITY COORDINATOR to ensure control of its analysis tools, including approvals for planned maintenance. The Reliability Plan shall document that the RELIABILITY COORDINATOR has procedures in place to mitigate the affects of analysis tool outages.

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.

J. Staffing

The Reliability Plan shall document that the RELIABILITY COORDINATOR has adequate staff and facilities. At a minimum this documentation shall address the following:

1. The Reliability Plan shall document that the RELIABILITY COORDINATOR is staffed with adequately trained and NERC -Certified RELIABILITY COORDINATOR operators, 24 hours/day, seven days/week. The Reliability Plan shall document that the RELIABILITY COORDINATOR requires its RELIABILITY COORDINATOR operators to complete a minimum of five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel. (Policy 9 Requirement J.1.1 and Policy 8 Requirements B.1 and C.1)
2. The Reliability Plan shall document how the RELIABILITY COORDINATOR ensures that its RELIABILITY COORDINATOR operators have a comprehensive understanding of its RELIABILITY COORDINATOR AREA and interaction with neighboring RELIABILITY COORDINATOR AREAS. The Reliability Plan shall document that the RELIABILITY COORDINATOR operators have an extensive understanding of the BALANCING AUTHORITIES, TRANSMISSION OPERATORS, and GENERATION OPERATORS within its RELIABILITY COORDINATOR AREA, such as staff, operating practices and procedures, restoration priorities and objectives, outage plans, equipment capabilities and restrictions. The Reliability Plan shall document the protocols that are in place to ensure that the RELIABILITY COORDINATOR has the best available information at all times. (Policy 9 Requirement J.1.2 and Policy 4 Requirement A.3)
3. **Standards of Conduct.** The Reliability Plan shall document that the entity responsible for the RELIABILITY COORDINATOR function has signed and will adhere to the NERC RELIABILITY COORDINATOR Standards of Conduct. (Policy 9 Requirement J.1.3)

Comments

See comments for item A. This lists requirements that should be in the standards & hence there is no need for them here. This template should only be a high level outline of what aspects the RC Plan should address.