

Implementation Plan for Coordinate Operations Standards TOP-009-1, TOP-010-1, TOP-011-1

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Prerequisite Approvals

There are no other Reliability Standards or Standard Authorization Requests (SARs), in progress or approved, that must be implemented before this standard can be implemented. To reduce confusion that could arise from having too many different types of reliability-related 'rules' in effect at one time, this standard will not be implemented until after Version 0 Standards have been adopted by the NERC Board of Trustees.

During the development of Version 0 Standards, the industry asked for clarification of the distinction in roles between the Reliability Coordinator and the Reliability Authority. A task force is addressing this issue and the task force's work may eventually result in changes to the Functional Model. If the Functional Model is changed and the title assigned to the entity with the highest authority and responsibility for Interconnection reliability is changed from the Reliability Authority to the Reliability Coordinator, or to some other title, then conforming changes will be made to the term 'Reliability Authority' throughout this set of Reliability Standards. The drafting team does not anticipate any other conforming changes will result from changes to the Functional Model.

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Retirement of Sections of Version 0 Standards

Some requirements in Reliability Standards TOP-009-1, TOP-010-1 and TOP-011-1 address the same or similar objectives as Version 0 Standards.

The tables on the following pages highlight the specific requirements contained in Version 0 Standards that duplicated in the proposed set of Reliability Standards (TOP-009-1, TOP-010-1, and TOP-011-1). The Drafting Team recommends that the noted sections of Version 0 Standards be retired when the proposed Version 1 Standards are adopted by the NERC Board of Trustees. Justification for these recommended retirements is provided in the tables on the following pages.

Version 0 Standards being recommended for retirement:

- COM-002-0_R2
- EOP-002-0_R2, R4
- IRO-003-0_R2
- IRO-004-0_R6, R7
- IRO-005-0_R7, 9, 11, 12, 15
- TOP-003-0_R4
- TOP-005-0_R3

Version 0 Standards	Proposed Replacement Requirement(s)
<p>COM-002-0_R2.</p> <p>R2. Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated. The following information shall be conveyed to others in the Interconnection via an Interconnection-wide telecommunications system:</p> <p>R2.1. The Balancing Authority is unable to purchase capacity or energy to meet its demand and reserve requirements on a day-ahead or hour-by-hour basis.</p> <p>R2.2. The Transmission Operator recognizes that potential or actual line loadings, and voltage or reactive levels are such that a single Contingency could threaten the reliability of the Interconnection. (Once a single Contingency occurs, the Transmission Operator must prepare for the next Contingency.)</p> <p>R2.3. The Transmission Operator anticipates initiating a 3% or greater voltage reduction, public appeals for load curtailments, or firm load shedding for other than local problems.</p>	<p>TOP-009-1_R1</p> <p>The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Authorities to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other Reliability Authority Areas as well as those developed in coordination with other Reliability Authorities.</p> <p>1.1. These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <p>1.1.1. Communications and notifications, including the conditions¹ under which one Reliability Authority notifies other Reliability Authorities; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Authorities.</p> <p>1.1.2. Energy and capacity shortages.</p> <p>1.1.3. Planned or unplanned outage information.</p> <p>1.1.4. Voltage control, including the coordination of reactive resources for voltage control.</p> <p>1.1.5. Coordination of information exchange to support reliability assessments.</p> <p>1.1.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Authority Areas.</p> <p>TOP-010-1_R1</p> <p>R1. The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p>

¹ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Notes:

- Only the portion of COM-002-0_R2 highlighted in yellow will be retired with the adoption of TOP-009-1. According to V0 SDT Members, the portion of COM-002-0_R2 highlighted in yellow was assumed to be assigned to the RC since the RC is the only entity with access to an interconnection-wide communication system.
- Under TOP-009-1_R1 RAs must have Operating Procedures, Processes or Plans in place for making notifications and exchanging reliability-related information with other RAs. Under V1 TOP-010-1 RAs must follow the Procedures Processes or Plans for making notifications and exchanging reliability-related information with other RAs.
- TOP-010-1 does not attempt to provide a comprehensive list of incidents that would result in an interconnection-wide announcement – the V1 Standard provides a list of topics that must be addressed and allows RAs the latitude to develop additional Procedures, Processes or Plans for making notifications and exchanging reliability-related information.
- TOP-010-1 does not require the use of an interconnection-wide telecommunication system.

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Version 0 Standards	Proposed Replacement Requirement(s)
<p>EOP-002-0_R2. Each Balancing Authority and Reliability Coordinator shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.</p>	<p>TOP-009-1_R1</p> <p>The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Authorities to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other Reliability Authority Areas as well as those developed in coordination with other Reliability Authorities.</p> <p>1.2. These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> 1.2.1. Communications and notifications, including the conditions² under which one Reliability Authority notifies other Reliability Authorities; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Authorities. 1.2.2. Energy and capacity shortages. 1.2.3. Planned or unplanned outage information. 1.2.4. Voltage control, including the coordination of reactive resources for voltage control. 1.2.5. Coordination of information exchange to support reliability assessments. 1.2.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Authority Areas. <p>TOP-010-1_R1</p> <p>The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p>

² Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Notes:

- Only the portion of EOP-002-0_R2 highlighted in yellow will be retired with the adoption of TOP-009-1. The remaining portion should be retired when the V1 Balance Resources and Demand Standards are adopted.
- Under TOP-009-1_R1, RAs must have Operating Procedures, Processes or Plans in place for making notifications and exchanging reliability-related information with other RAs. Under TOP-010-1 RAs must follow the Procedures Processes or Plans for making notifications and exchanging reliability-related information with other RAs.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>EOP-002-0_R4</p> <p>A Reliability Coordinator that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to neighboring areas.</p>	<p>TOP-009-1_R1</p> <p>R1. The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>1.3. These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> 1.3.1. Communications and notifications, including the conditions³ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs. 1.3.2. Energy and capacity shortages. 1.3.3. Planned or unplanned outage information. 1.3.4. Voltage control, including the coordination of reactive resources for voltage control. 1.3.5. Coordination of information exchange to support reliability assessments. 1.3.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas. <p>TOP-010-1_R1</p> <p>R1. The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <ul style="list-style-type: none"> R1.1. The RA shall make notifications to other RAs of conditions in its RA Area that may impact other RA Areas.

³ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Notes:

- When TOP-009-1 is adopted, all of EOP-002-0_R4 should be retired.
- Under TOP-009-1_R1, RAs must have Operating Procedures, Processes or Plans in place for making notifications and exchanging reliability-related information with other RAs. Under TO-010-1 RAs must follow the Procedures Processes or Plans for making notifications and exchanging reliability-related information with other RAs.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>EOP-002-0_R9 A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 “Energy Emergency Alert Levels.” The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.</p>	<p>TOP-009-1_R1 R1. The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>1.4. These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> 1.4.1. Communications and notifications, including the conditions⁴ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs. 1.4.2. Energy and capacity shortages. 1.4.3. Planned or unplanned outage information. 1.4.4. Voltage control, including the coordination of reactive resources for voltage control. 1.4.5. Coordination of information exchange to support reliability assessments. 1.4.6. Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas. <p>TOP-010-1_R1 R1. The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <p style="padding-left: 40px;">The RA shall make notifications to other RAs of conditions in its RA Area that may impact other RA Areas.</p>

⁴ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Notes:

- When TOP-009-1 and Top-010-1 are adopted, the highlighted sections of EOP-002-0_R9 should be retired.
- TOP-010-1 requires the RA to share data and information with other RAs. TOP-009-1 requires that each RA have Operating Procedures, Processes or Plans to address situations where one RA needs to share data or information with other RAs, or needs another RA to take actions to alleviate a scenario that has an Adverse Reliability Impact.
- Alerts may not be practical for all scenarios.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-003-0_R2</p> <p>When a Reliability Coordinator is aware of an operational concern, such as declining voltages, excessive reactive flows, or an IROL violation, in a neighboring Reliability Coordinator Area, it shall contact the Reliability Coordinator in whose area the operational concern was observed. The two Reliability Coordinators shall coordinate any actions, including emergency assistance, required to mitigate the operational concern.</p>	<p>TOP-011-1_R1.</p> <p>R1. The Reliability Authority that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Authorities shall contact the other Reliability Authority(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.</p> <p style="padding-left: 40px;">R1.1 If the involved Reliability Authorities agree on the problem and the actions to take to prevent or mitigate the system condition each involved Reliability Authority shall implement the agreed-upon solution, and notify the involved Reliability Authorities of the action(s) taken.</p> <p style="padding-left: 40px;">R1.2. If the involved Reliability Authorities cannot agree on the problem(s) each Reliability Authority shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.)</p> <p style="padding-left: 80px;">R1.2.1. If time permits, this re-evaluation shall be done before taking corrective actions.</p> <p style="padding-left: 80px;">R1.2.2. If time does not permit, then each Reliability Authority shall operate as though the problem(s) exist(s) until the conflicting system status is resolved.</p> <p style="padding-left: 40px;">R1.3. If the involved Reliability Authorities cannot agree on the solution, the more conservative solution shall be implemented.</p>
<p>Notes:</p> <ul style="list-style-type: none"> - When TOP-009-1 is adopted, all of IRO-003-0_R2 should be retired. - TOP-011-1_R1 is more comprehensive than IRO-003-0_R2 because it addresses actions to resolve differences of opinion between RAs. Resolving differences of opinion between RAs was a problem during the August 2003 Blackout. 	

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Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-004-0_R6</p> <p>When conditions warrant, the Reliability Coordinator shall initiate a conference call or other appropriate communications to address the results of its reliability analyses.</p>	<p>TOP-010-1</p> <p>R1. The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <p>R1.1 The Reliability Authority shall make notifications to other Reliability Authorities of conditions in its Reliability Authority Area that may impact other Reliability Authority Areas.</p> <p>R2. The Reliability Authority shall participate in agreed upon conference calls and other communication forums with adjacent Reliability Authorities.</p> <p>R2.1 The frequency of these conference calls shall be agreed upon by all involved Reliability Authorities and shall be at least weekly.</p>
<p>Notes:</p> <ul style="list-style-type: none"> - When TOP-010-1 is adopted, all of IRO-004-0_R6 should be retired. - TOP-010-1 requires the RA to share data and information with other RAs. TOP-009-1 requires that each RA have Operating Procedures, Processes or Plans to address situations where one RA needs to share data or information with other RAs, or needs another RA to take actions to alleviate a scenario that has an Adverse Reliability Impact. The results of reliability analyses is just one example of a scenario that may require one RA to share data or information with one or more other RAs. 	

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-004-0_R7</p> <p>If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall issue the appropriate alerts via the Reliability Coordinator Information System (RCIS) and direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation.</p>	<p>TOP-009-1_R1</p> <p>R1. The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>R1.1 These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> R1.1.1 Communications and notifications, including the conditions⁵ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other Ras. R1.1.2 Energy and capacity shortages. R1.1.3 Planned or unplanned outage information. R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. R1.1.5 Coordination of information exchange to support reliability assessments. R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas. <p>TOP-010-1_R1</p> <p>R1. The Reliability Authority shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <p>R1.1 The RA shall make notifications to other RAs of conditions in its RA Area that may impact other RA Areas.</p>

⁵ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Notes:

- When TOP-009-1 and TOP-010-1 are adopted, the highlighted sections of IRO-004-0_R7 should be retired. The remaining section of the requirement should be retired when the V1 IROL Standards are adopted. The V1 IROL Standards require the RA to act or direct others to act to prevent or mitigate instances of exceeding IROLs. Under the Functional Model the TOP is responsible for SOLs, not the RA.
- The requirement to notify other RCs (RAs) is addressed in TOP-010-1. Note that TOP-010-1 does not mention the use of a specific tool. This omission can be found throughout V1 Standards, and is intended to result in the need for fewer changes to standards. While the tool used may change in the future, the performance of making the notification would not change and by leaving out the name of the tool, no conforming changes would be needed to the standard if the tool did change.
- Alerts may not be practical for all scenarios, and the V1 Standards require the RA to notify entities who are required to act to prevent/mitigate a problem.

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Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-005-0_R7</p> <p>The Reliability Coordinator shall participate in NERC hotline discussions, assist in the assessment of reliability of the overall interconnected system, and coordinate actions in anticipated or actual emergency situations. The Reliability Coordinator shall disseminate such information within its Reliability Coordinator Area, as required.</p>	<p>TOP-009-1_R1</p> <p>R1. The RA shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>R1.1 These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> R1.1.1 Communications and notifications, including the conditions⁶ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other Ras. R1.1.2 Energy and capacity shortages. R1.1.3 Planned or unplanned outage information. R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. R1.1.5 Coordination of information exchange to support reliability assessments. R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas. <p>TOP-010-1_R1</p> <p>R1. The RA shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <p>R1.1 The RA shall make notifications to other RAs of conditions in its RA Area that may impact other RA Areas.</p> <p>R2. The RA shall participate in agreed upon conference calls and other communication forums with adjacent RAs.</p>

⁶ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Notes:

- When TOP-009-1 and TOP-010-1 are adopted, the highlighted section of IRO-005-0_R7 should be retired.
- TOP-010-1 requires the RA to share data and information with other RAs. TOP-009-1 requires that each RA have Operating Procedures, Processes or Plans to address situations where one RA needs to share data or information with other RAs, or needs another RA to take actions to alleviate a scenario that has an Adverse Reliability Impact.
- The V0 Standard is difficult to measure because no criteria are established in the standard for things such as the frequency of participation. The set of V1 Coordinate Operations Standards requires that the criteria for sharing information be identified in advance and then be shared as specified. V1 Standards do not reference or require the use of specific tools such as the NERC Hotline since the tools used and the names applied to those tools may change.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-005-0_R9</p> <p>The Reliability Coordinator shall coordinate with other Reliability Coordinators and Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations.</p> <p>The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with other Reliability Coordinators and Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real time and next-day reliability analysis timeframes.</p>	<p>TOP-009-1_R1</p> <p>R1. The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>R1.1 These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> R1.1.1 Communications and notifications, including the conditions⁷ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs. R1.1.2 Energy and capacity shortages. R1.1.3 Planned or unplanned outage information. R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. R1.1.5 Coordination of information exchange to support reliability assessments. R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas.

⁷ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Notes:

- When TOP-009-1 is adopted, the highlighted sections of IRO-005-0_R9 should be retired.
- TOP-009-1 replaces the text highlighted in yellow. Both the Balance Resources and Demand Standards require RAs to follow action plans developed under the Coordinate Operations Standards for interconnection frequency issues - IROL Standards require RAs to have and implement action plans for prevention and mitigation of IROLs. The Balance Resources and Demand Standards replace V0 CPS and DCS standards.
- TOP-009-1 requires RAs to have Operating Procedures, Processes or Plans to address exchange of information with other RAs relative to planned and unplanned outages.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-005-0_R11</p> <p>The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. If a Frequency Error, Time Error, or inadvertent problem occurs outside of the Reliability Coordinator Area, the Reliability Coordinator shall initiate a NERC hotline call to discuss the Frequency Error, Time Error, or Inadvertent Interchange with other Reliability Coordinators. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.</p>	<p>TOP-011-1_R1</p> <p>R1. The Reliability Authority that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Authorities shall contact the other Reliability Authority(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.</p> <p>R1.1. If the involved Reliability Authorities agree on the problem and the actions to take to prevent or mitigate the system condition each involved Reliability Authority shall implement the agreed-upon solution, and notify the involved Reliability Authorities of the action(s) taken.</p> <p>R1.2. If the involved Reliability Authorities cannot agree on the problem(s) each Reliability Authority shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.)</p>
<p>Notes:</p> <ul style="list-style-type: none"> - When TOP-011-1 is adopted, the highlighted section of IRO-005-0_R11 should be retired. The Balance Resource and Demand (BRD) Standards require the RA to coordinate with other RAs by following action plans developed under TOP-011-1. Note that time error and inadvertent were removed from the BRD SAR as either being business practices or not needed for reliability and should be retired when the NAESB business practices are adopted. V1 Standards don't require use of NERC Hotline or any other specific tool. - TOP-011-1_R1 requires RAs to coordinate actions to address Real-time problems involving coordination of actions between RAs. 	

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-005-0_R12</p> <p>Whenever a Special Protection System that may have an inter-Balancing Authority, inter-Transmission Operator, or inter-Reliability Coordinator Area impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.</p>	<p>TOP-009-1_R1</p> <p>R1. The Reliability Authority shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>R1.1 These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> R1.1.1 Communications and notifications, including the conditions⁸ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs. R1.1.2 Energy and capacity shortages. R1.1.3 Planned or unplanned outage information. R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. R1.1.5 Coordination of information exchange to support reliability assessments. R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas.
<p>Notes:</p> <ul style="list-style-type: none"> – When TOP-011-1 is adopted the highlighted section of IRO-005-0_R12 should be retired. – TOP-009-1_R1 requires the RAs to have Operating Processes, Procedures or Plans to address issues in one RA area that may have an Adverse Reliability Impact on other RA Areas. This includes having a procedure, process or plan that identifies the conditions under which one RA notifies another RA — and arming of an SPS is an example that may be included in this. TOP-010-1_R1 requires the RA to follow these procedures, processes or plans. 	

⁸ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>IRO-005-0_R15</p> <p>Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area, and all impacted Reliability Coordinators within the Interconnection via the Reliability Coordinator Information System (RCIS) without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, and Reliability Coordinators when the transmission problem has been mitigated.</p>	<p>TOP-011-1_R1</p> <p>R1. The RA that identifies a potential, expected, or actual problem that requires the actions of one or more other RAs shall contact the other RA(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.</p>
<p>Notes:</p> <ul style="list-style-type: none"> - When TOP-011-1 is adopted, the highlighted section of IRO-005-0_R15 should be retired. - Alerts may not be practical for all scenarios, and for almost all scenarios, TOP-010-1 and TOP-011-1 require the RA to notify entities who are required to act to prevent/mitigate a problem. With any transmission problem, all entities on the interconnection will be impacted to some degree, making this criteria too broad as a threshold for making notifications. Thus, the V1 standard requires only notifying those that must take action and those that are impacted by those actions. 	

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Version 0 Standards	Proposed Replacement Requirement(s)
<p>TOP-003-0_R4</p> <p>Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.</p>	<p>TOP-009-1_R1</p> <p>R1. The RA shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other RAs to support Interconnection reliability. These Operating Procedures, Processes or Plans shall address Scenarios that affect other RA Areas as well as those developed in coordination with other RAs.</p> <p>R1.1 These Operating Procedures, Processes or Plans shall collectively address, as a minimum, the following:</p> <ul style="list-style-type: none"> R1.1.1 Communications and notifications, including the conditions⁹ under which one RA notifies other RAs; the process to follow in making those notifications; and the data and information to be exchanged with other RAs. R1.1.2 Energy and capacity shortages. R1.1.3 Planned or unplanned outage information. R1.1.4 Voltage control, including the coordination of reactive resources for voltage control. R1.1.5 Coordination of information exchange to support reliability assessments. R1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other RA Areas. <p>TOP-011-1_R1</p> <p>R1. The RA that identifies a potential, expected, or actual problem that requires the actions of one or more other RAs shall contact the other RA(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.</p> <ul style="list-style-type: none"> R1.1. If the involved RAs agree on the problem and the actions to take to prevent or mitigate the system condition each involved RA shall implement the agreed-upon solution, and notify the involved RAs of the action(s) taken. R1.2. If the involved RAs cannot agree on the problem(s) each RA shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.)

⁹ Examples of conditions when one RA may need to notify another RA may include (but aren't limited to) sabotage events, IROL violations, voltage reductions, insufficient resources, arming of special protection systems, etc.

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Notes:

- When TOP009-1 and TOP-011-1 are adopted, the highlighted section of TOP-003-0_R4 should be retired.
- TOP-009-1_R1 requires the RA to have an Operating Process, Procedure or Plan that addresses notifications and exchange of information between RAs for planned or unplanned outage information. TOP-011-1 requires RAs to work together to resolve differences of opinion (between RAs) on operating problems and their solutions.

Version 0 Standards	Proposed Replacement Requirement(s)
<p>TOP-005-0_R3</p> <p>Upon request, each Reliability Coordinator shall, via the ISN or equivalent system, exchange with other Reliability Coordinators operating data that are necessary to allow the Reliability Coordinators to perform operational reliability assessments and coordinate reliable operations. Reliability Coordinators shall share with each other the types of data listed in Attachment 1–TOP-005-0 “Electric System Reliability Data,” unless otherwise agreed to.</p>	<p>TOP-010-1_R1</p> <p>R1. The RA shall follow its Operating Procedures, Processes or Plans for making notifications and exchanging reliability-related information with other Reliability Authorities.</p> <p>R1.1 The RA shall make notifications to other RAs of conditions in its RA Area that may impact other RA Areas.</p> <p>R2. The RA shall participate in agreed upon conference calls and other communication forums with adjacent RAs.</p>
<p>Notes:</p> <ul style="list-style-type: none"> – When TOP-010-1 is adopted, the highlighted section of TOP-005-0_R3 should be retired. The V1 Operate within IROLs (IROL) Standards require RAs to develop and distribute data specs that identify data and information needed for monitoring, analyses and assessments and requires that entities (including other RAs) provide data as specified. Note that the industry indicated it preferred to have each RA develop its own spec rather than use the data listed in V0 Attachment 1–TOP-005-0. – TOP-010-1_R2 requires the RA to participate in ‘agreed upon’ conference calls and other communication forums for exchange of data and information between RAs. The V1 Standard focuses on ‘preparation’ so that organizing a conference call at the last minute to collect information needed for routine activities, such as reliability assessments, won’t be needed. 	

Functions That Must Comply with the Proposed Standards

Standard	Functions That Must Comply With the Requirements
TOP-009-1 – Procedures to Support Coordination Between Reliability Authorities	Reliability Authority
TOP-010-1 – Notifications and Information Exchange Between Reliability Authorities	Reliability Authority
TOP-011-1 – Coordination of Real-time Activities Between Reliability Authorities	Reliability Authority

Phased-in Compliance

The following table identifies the effective date for each requirement.

The effective date is the date entities are expected to begin meeting the performance identified in this standard. Additional time (preparation time) has been added to give entities time needed to fully comply with the requirements. The justification for the effective dates is in the tables on the following pages.

Requirement	Effective Date (Date Compliance Starts)
TOP-009-1 — Procedures to Support Coordination Between Reliability Authorities	Initial self-certification within first 6 months unless there is a documented reason for not being able to meet full compliance within 6 months — full compliance no longer than 9 months from effective date
TOP-010-1 — Notifications and Information Exchange Between Reliability Authorities	Initial self-certification within first 6 months unless there is a documented reason for not being able to meet full compliance within 6 months — full compliance no longer than 9 months from effective date
TOP-011-1 — Coordination of Real-time Activities Between Reliability Authorities	Initial self-certification within first 6 months unless there is a documented reason for not being able to meet full compliance within 6 months — full compliance no longer than 9 months from effective date

Proposed Measures	Industry Preparation
<p>TOP-009-1</p> <p>M1. The Reliability Authority's System Operators shall have available for Real-Time use, the latest approved version of Operating Procedures, Processes, or Plans that require notifications, information exchange or the coordination of actions between Reliability Authorities.</p> <p>M1.1 These Operating Procedures, Processes, or Plans shall address:</p> <ul style="list-style-type: none"> M1.1.1 Communications and notifications, including the conditions under which one Reliability Authority notifies other Reliability Authorities; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Authorities. M1.1.2 Energy and capacity shortages. M1.1.3 Planned or unplanned outage information. M1.1.4 Voltage control, including the coordination of reactive resources for voltage control. M1.1.5 Coordination of information exchange to support reliability assessments. M1.1.6 Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Authority Areas. <p>M1.2 The Reliability Authority shall have evidence that these Operating Procedures, Processes or Plans were:</p> <ul style="list-style-type: none"> M1.2.1 Agreed to by all the Reliability Authorities required to take the indicated action(s). M1.2.2 Distributed to all Reliability Authorities that are required to take the indicated action(s). 	<p>Entities are expected to have these procedures, processes or plans in place, but some entities may need to formalize the evidence that there is agreement with entities expected to act as part of these procedures, processes or plans and may need to compile evidence that the documents were distributed.</p> <p>The drafting team recognizes that many entities have resources focused on ensuring compliance with Version 0 Standards and the time delay for full compliance should give entities the additional time needed to collect the evidence required by this new standard.</p>

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<p>TOP-009-1</p> <p>M2. The Reliability Authority’s Operating Procedures, Processes or Plans developed (for its System Operators’ internal use) to support a Reliability Authority to Reliability Authority Operating Procedure, Process or Plan received from another Reliability Authority shall:</p> <p>M2.1 Be available to the Reliability Authority's System Operators for Real-Time use,</p> <p>M2.2 Include a reference to the associated source document, and</p> <p>M2.3 Support the agreed-upon actions from the source document.</p>	<p>Some entities may have these documents, but they may be missing the references to the source documents. The drafting team recognizes that many entities have resources focused on ensuring compliance with Version 0 Standards and the time delay for full compliance should give entities the additional time needed to add these references required by this new standard.</p>
<p>TOP-009-1</p> <p>M3. The Reliability Authority’s Operating Procedures, Processes or Plans that addresses Reliability Authority to Reliability Authority coordination shall each include a version control number or date and a distribution list. The Reliability Authority shall have evidence that these Operating Procedures, Processes or Plans were reviewed within the last three years.</p>	<p>Some documents in existence may not include a version control number or date and a distribution list or may not have been updated within the past 3 years. The drafting team recognizes that many entities have resources focused on ensuring compliance with Version 0 Standards and the time delay for full compliance should give entities the additional time needed to make the modifications required by this new standard.</p>

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Proposed Measures	Industry Preparation
<p>TOP-010-1</p> <p>M1. The Reliability Authority shall have evidence (such as operator logs or other data sources) it has followed its Operating Procedures, Processes or Plans for notifying other Reliability Authorities of conditions in its Reliability Authority Area that may impact other Reliability Authority Areas.</p>	<p>Because there is a three month ‘grace’ period for entities to come into compliance with Requirement 101, there needs to be a corresponding ‘grace’ period for the measures that require acting in accordance with the procedures, processes or plans specified in Requirement 101.</p>
<p>M2. The Reliability Authority shall have evidence (such as operator logs or other data sources) that it participated in agreed upon (at least weekly) conference calls and other communication forums with adjacent Reliability Authorities.</p>	<p>No grace period is required to collect this documentation — however the agreements on the details of the calls are addressed in requirement 101, and there is a three month delay in enforcing compliance with Requirement 101.</p>
<p>M3. The Reliability Authority shall have evidence (such as operator logs, ext or other data sources) identifying other Reliability Authorities that have:</p> <p>M3.1 Notified them of conditions in their area that may impact the questioned Reliability Authority Area.</p>	<p>No grace period is required to collect this documentation — however the documents that address commitments to provide other RAs with information are addressed in Requirement 101, and there is a three month delay in enforcing compliance with requirement 101.</p>
<p>M4. The Reliability Authority shall have evidence that it provided requested reliability related information to other Reliability Authorities.</p>	<p>No grace period is required to collect this evidence — however the documents that address commitments to provide other RAs with information are addressed in Requirement 101, and there is a three month delay in enforcing compliance with Requirement 101</p>

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Proposed Measures	Industry Preparation
<p>TOP-011-1</p> <p>MI. For each event that requires Reliability Authority to Reliability Authority coordination, each involved Reliability Authority shall have evidence (operator logs or other data sources) of the actions taken for either the event or for the disagreement on the problem or for both.</p>	<p>The documentation to be kept is the same type of documentation typically kept in all control rooms. While no grace period is required to collect this documentation, a three month period has been provided to ensure there is sufficient time to ensure control room personnel understand the obligation to follow-up when there are disagreements between RAs.</p>