

Standard Development Timeline

This section is maintained by the drafting team during the development of the standard and will be removed when the standard becomes effective.

Development Steps Completed

SAR posted for comment February 21, 2014 to March 24, 2014

Proposed Action Plan and Description of Current Draft

This is the first posting of the revised standard under Project 2014-03 Revisions to the TOP/IRO Reliability Standards. The SDT is working under a deadline for filing the revised standards with FERC of January 31, 2015.

Anticipated Actions	Anticipated Date
Additional ballot	August 2014
Final ballot	October 2014
BOT	November 2014

Version History

Version	Date	Action	Change Tracking
0	April 1, 2005	Effective Date	New
0	August 8, 2005	Removed "Proposed" from Effective Date	Errata
1	November 1, 2006	Adopted by Board of Trustees	Revised
1a	May 12, 2010	Added Appendix 1 – Interpretation of R8 approved by BOT on May 12, 2010	Interpretation
1a	September 15, 2011	FERC Order issued approved the Interpretation of R8 (FERC Order became effective November 21, 2011)	Interpretation
2	May 9, 2012	Adopted by Board of Trustees	Revised
3	April 2014	Revisions pursuant to Project 2014-03	Revised

Definitions of Terms Used in Standard

This section includes all newly defined or revised terms used in the proposed standard. Terms already defined in the Reliability Standards Glossary of Terms are not repeated here. New or revised definitions listed below become approved when the proposed standard is approved. When the standard becomes effective, these defined terms will be removed from the individual standard and added to the Glossary.

Rationale - The definition for Reliability Directive is not needed due to the work in proposed COM-002-4 on the definition of Operating Instruction (see NOPR paragraph 64).

Real-time Assessment - An evaluation of system conditions using Real-time data to assess existing (pre-Contingency) and potential (post-Contingency) operating conditions. The assessment shall reflect inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations. (Real-time Assessment may be provided through internal systems or through contracted services.)

Rationale - Changes made to the proposed definition were made in order to respond to issues raised in NOPR paragraphs 55, 73, and 74 dealing with analysis of SOLs in all time horizons, questions on Protection Systems and Special Protection Systems in NOPR paragraph 78, and recommendations on phase angles from the SW Outage Report (recommendation 27). The intent of such changes is to ensure that Real-time Assessments contain sufficient details to result in an appropriate level of situational awareness. For example, analysis of phase angles may result in an Operating Plan to adjust generation or curtail transactions so that a Transmission facility may be returned to service.

When this standard has received ballot approval, the text boxes will be moved to the Application Guidelines Section of the Standard.

A. Introduction

1. **Title: Transmission Operations**
2. **Number: TOP-001-3**
3. **Purpose:** To prevent instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Interconnection by ensuring prompt action to prevent or mitigate such occurrences.
4. **Applicability:**
 - 4.1. Balancing Authority
 - 4.2. Transmission Operator
 - 4.3. Generator Operator
 - 4.4. Distribution Provider
 - 4.5. Load-Serving Entity

5. **Effective Date:**

The standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date that the standard is approved by an applicable governmental authority or as otherwise provided for in a jurisdiction where approval by an applicable governmental authority is required for a standard to go into effect. Where approval by an applicable governmental authority is not required, the standard shall become effective on the first day of the first calendar quarter that is twelve (12) months after the date the standard is adopted by the NERC Board of Trustees or as otherwise provided for in that jurisdiction.

6. **Background:**

On April 16, 2013, NERC submitted two petitions requesting Commission approval of TOP and IRO standards. [One petition](#) addresses three revised TOP Reliability Standards: TOP-001-2 (Transmission Operations), TOP-002-3 (Operations Planning), TOP-003-2 (Operational Reliability Data), and one Protection Systems (PRC) Reliability Standard, PRC-001-2 (System Protection Coordination) to replace the eight currently-effective TOP standards. The [second petition](#) addresses four revised IRO Reliability Standards: IRO-001-3 (Responsibilities and Authorities), IRO-002-3 (Analysis Tools), IRO-005-4 (Current Day Operations), and IRO-014-2 (Coordination Among Reliability Coordinators) to replace six currently-effective IRO standards.

On November 21, 2013, the Commission issued a [NOPR](#) proposing to remand these TOP and IRO Standards, stating that NERC “has removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these

aspects in the proposed standards.” For example, the Commission cites the fact that the proposed TOP Standards do not require Transmission Operators to plan and operate within all System Operating Limits (“SOLs”), which is a requirement in the currently effective standards.

On December 20, 2013, NERC filed a [motion](#) requesting that the Commission defer action on the NOPR until January 31, 2015 to provide NERC and the industry the opportunity to thoroughly examine the technical concerns raised in the NOPR and afford time to review the proposed TOP and IRO Standards through the NERC standards development process to ensure that a technically justified set of solutions is in place for reliability. That motion to defer action was granted on January 14, 2014.

On February 12, 2014, the Standards Committee appointed a Standard Drafting Team to take on the task of revising the aforementioned standards in response to the NOPR issues and the recommendations made by the Independent Expert Review Panel, the IRO FYRT, and the SW Outage Report.

B. Requirements and Measures

Rationale: The Reliability Directive replaced throughout by Operating Instruction as new definition now covers SDT intent.

New Requirements R1 and R2 added in response to IERP Report recommendations.

- R1.** Each Transmission Operator shall act, or direct others within its Transmission Operator Area to act by issuing Operating Instructions, to address its reliability functions within its Transmission Operator Area. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M1.** Each Transmission Operator shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted, or directed others to act by issuing Operating Instructions to address its reliability functions within its Transmission Operator Area.
- R2.** Each Balancing Authority shall act, or direct others within its Balancing Authority Area to act by issuing Operating Instructions, to address its reliability functions within its Balancing Authority Area. *[Violation Risk Factor: High][Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M2.** Each Balancing Authority shall have and provide evidence which may include, but is not limited to dated operator logs, dated records, dated and time-stamped voice recordings or dated transcripts of voice recordings, electronic communications, or equivalent documentation, that will be used to determine that it acted, or directed others to act by issuing Operating Instructions to address its reliability functions within its Balancing Authority Area.

Rationale for Requirement R3: Additional phrasing ‘cannot be physically implemented’ included for consistency with proposed IRO-001-4, Requirement R2. This term means that a Transmission Operator may request something to be done that is not physically possible to do due its lack of knowledge of the system involved.

- R3.** Each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall comply with each Operating Instruction issued by its Transmission Operator(s), unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High]*
[Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]
- M3.** Each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall make available upon request, evidence that it complied with each Operating Instruction issued by the Transmission Operator(s) unless such action could not be physically implemented or it would have violated safety, equipment, regulatory, or statutory requirements. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format. In such cases, the Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Transmission Operator’s Operating Instruction. If such a situation has not occurred, the Balancing Authority, Generator Operator, Distribution Provider, or Load-Serving Entity may provide an attestation.
- R4.** Each Balancing Authority, Generator Operator, Distribution Provider, and Load-Serving Entity shall inform its Transmission Operator of its inability to perform an Operating Instruction issued by its Transmission Operator in Requirement R3 citing one of the specific reasons shown in Requirement R3. *[Violation Risk Factor: High]*
[Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]
- M4.** Each Balancing Authority, Generation Operator, Distribution Provider, and Load-Serving Entity shall make available upon request, evidence which may include, but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence in electronic or hard copy format, that it informed its Transmission Operator of its inability to comply with its Operating Instruction issued in Requirement R3 citing one of the specific reasons shown in Requirement R3. If such a situation has not occurred, the Balancing Authority, Generator Operator, Distribution Provider, or Load-Serving Entity may provide an attestation.

Rationale: Requirements R5 and R6 added for consistency with requirements applying to Transmission Operators. Entity list compiled from Functional Model v5 items 27 and 28 for Balancing Authority.

- R5.** Each Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall comply with each Operating Instruction issued by its Balancing Authority, unless such action cannot be physically implemented or it would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High]*
[Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]
- M5.** Each Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall make available upon request, evidence that it complied with each Operating Instruction issued by the Transmission Operator(s) unless such action could not be physically implemented or it would have violated safety, equipment, regulatory, or statutory requirements. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format. In such cases, the Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall have and provide copies of the safety, equipment, regulatory, or statutory requirements as evidence for not complying with the Balancing Authority's Operating Instruction. If such a situation has not occurred, the Transmission Operator, Generator Operator, Distribution Provider, or Load-Serving Entity may provide an attestation.
- R6.** Each Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall inform its Balancing Authority of its inability to perform an Operating Instruction issued by that Balancing Authority. *[Violation Risk Factor: High]*
[Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]
- M6.** Each Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall make available upon request, evidence which may include, but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or equivalent evidence in electronic or hard copy format, that it informed its Balancing Authority of its inability to comply with its Operating Instruction. If such a situation has not occurred, the Balancing Authority, Generator Operator, Distribution Provider, or Load-Serving Entity may provide an attestation.

Rationale for Requirement R7: ‘Emergency’ deleted as the assistance is assistance in response to the other entities’ emergency. ‘Effective’ added as it makes no sense to do anything unless it will be effective in mitigating the problem. ‘Comparable’ deleted as it is impossible to measure comparability and the main concept is that the originating entity has implemented its emergency procedures. These changes are in response to IERP recommendations.

- R7.** Each Transmission Operator and Balancing Authority shall assist Transmission Operators, if requested, provided that the requesting entity has implemented its emergency procedures, unless such actions cannot be physically implemented or would violate safety, equipment, regulatory, or statutory requirements. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*
- M7.** Each Transmission Operator and Balancing Authority shall make available upon request, evidence that requested assistance was provided to other Transmission Operators unless such actions cannot be physically implemented or would have violated safety, equipment, regulatory, or statutory requirements. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence in electronic or hard copy format. If no request for assistance was received, the Transmission Operator may provide an attestation.

Rationale for Requirement R8: Original Requirement R3 has been merged with original Requirement R5 in response to concerns raised in NOPR paragraphs 80 -83 to have consistent terminology and actions across all time horizons.

- R8.** Each Transmission Operator shall inform its Reliability Coordinator, impacted Balancing Authorities, and impacted Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency. Examples of such operations are relay or equipment failures; and changes in generation, Transmission, or Load. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]*
- M8.** Each Transmission Operator shall make available upon request, evidence that it informed its Reliability Coordinator and other Transmission Operators of its actual or expected operations that result in, or could result in, an Emergency. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence. If no Emergency has occurred, the Transmission Operator may provide an attestation.

Rationale for Requirement R9: Additional terms added in response to SW Outage Report recommendation 15.

- R9.** Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator and negatively impacted interconnected NERC registered entities of outages of telemetering and telecommunication equipment, control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities. *[Violation Risk Factor: Medium] [Time Horizon: Operations Planning, Same-Day Operations, Real-Time Operations]*
- M9.** Each Balancing Authority and Transmission Operator shall make available upon request, evidence that it notified its Reliability Coordinator and negatively impacted interconnected NERC registered entities of planned outages of telemetering and telecommunication equipment, control equipment, monitoring and assessment capabilities, and associated communication channels. Such evidence could include, but is not limited to, dated operator logs, voice recordings or transcripts of voice recordings, electronic communications, or other equivalent evidence. If such a situation has not occurred, the Balancing Authority or Transmission Operator may provide an attestation.

Rationale for Requirement R10: New proposed Requirement R10 is derived from approved IRO-003-2, Requirement R1, adapted to the Transmission Operator Area. This new requirement is in response to NOPR paragraph 60 concerning monitoring capabilities for the Transmission Operator. New Requirement R11 covers the Balancing Authorities.

- R10.** Each Transmission Operator shall monitor Facilities within its Transmission Operator Area and neighboring Transmission Operator Areas to maintain reliability within its Transmission Operator Area including sub-100 kV facilities needed to maintain reliability and the status of Special Protection Systems within its Transmission Operator Area. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*
- M10.** Each Transmission Operator shall have, and provide upon request, evidence that could include, but is not limited to, Energy Management System description documents, computer printouts, SCADA data collection, or other equivalent evidence that will be used to confirm that it monitors Facilities within its Transmission Operator Area and neighboring Transmission Operator Areas to maintain reliability within its Transmission Operator Area including sub-100 kV facilities needed to maintain reliability and the status of Special Protection Systems within its Transmission Operator Area.

R11. Each Balancing Authority shall monitor its Balancing Authority Area, including the status of Special Protection Systems that impact generation or Load, to ensure that it is able to perform its reliability functions. *[Violation Risk Factor: High] [Time Horizon: Real-Time Operations]*

M11. Each Balancing Authority shall have, and provide upon request, evidence that could include, but is not limited to, system description documents, computer printouts, SCADA data collection, or other equivalent evidence that will be used to confirm that it monitors its Balancing Authority Area, including the status of Special Protection Systems that impact generation or Load, to ensure that it is able to perform its reliability functions.

R12. Each Transmission Operator shall not operate outside any identified Interconnection Reliability Operating Limit (IROL) for a continuous duration exceeding its associated IROL T_v . *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

M12. Each Transmission Operator shall make available evidence for any occasion in which it has operated outside any identified Interconnection Reliability Operating Limit (IROL) for a continuous duration exceeding its associated IROL T_v . Such evidence could include but is not limited to dated computer logs or reports in electronic or hard copy format specifying the date, time, duration, and details of the excursion. If such a situation has not occurred, the Transmission Operator may provide an attestation that an event has not occurred.

Rationale for Requirement R13: The new Requirement R13 is in response to NOPR paragraphs 55 and 60 concerning Real-time analysis responsibilities for Transmission Operators and is copied from approved IRO-008-1, Requirement R2.

R13. Each Transmission Operator shall perform a Real-time Assessment at least once every 30 minutes. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*

M13. Each Transmission Operator shall have, and make available upon request, evidence to show it conducted a Real-Time Assessment at least once every 30 minutes. This evidence could include, but is not limited to, dated computer logs showing times the assessment was conducted, dated checklists, or other evidence.

Rationale for Requirement R14: The original Requirement R8 was deleted and original Requirements R9 and R11 were revised in order to respond to NOPR paragraph 42 which raised the issue of handling all SOLs and not just a sub-set of SOLs. The SDT has developed a white paper on SOL exceedances that explains its intent on what needs to be contained in such an Operating Plan. The intent is not to have a 1,000 page document with every possible Contingency cited but to have a plan and philosophy that can be followed by an operator.

- R14.** Each Transmission Operator shall initiate its Operating Plan to mitigate an SOL exceedance identified as part of its Real-time monitoring or Real-time Assessment. *[Violation Risk Factor: High] [Time Horizon: Real-time Operations]*
- M14.** Each Transmission Operator shall have evidence that it initiated its Operating Plan for mitigating SOL exceedances identified as part of its Real-time monitoring or Real-time Assessments. This evidence could include, but is not limited to, dated computer logs showing times the Operating Plan was initiated, dated checklists, or other evidence.
- R15.** Each Transmission Operator shall inform its Reliability Coordinator of its actions to return the system to within limits when an SOL has been exceeded. *[Violation Risk Factor: Medium] [Time Horizon: Real-Time Operations]*
- M15.** Each Transmission Operator shall make available evidence that it informed its Reliability Coordinator of actions taken to return the system to within limits when an SOL was exceeded. Such evidence could include but is not limited to dated operator logs, voice recordings or transcripts of voice recordings, or dated computer printouts. If such a situation has not occurred, the Transmission Operator may provide an attestation.

Rationale for Requirements R16 and R17: In response IERP Report recommendation 3 on authority.

- R16.** Each Transmission Operator shall provide its System Operators with the authority to approve planned outages of its own monitoring and Real-time Assessment capabilities. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*
- M16.** Each Transmission Operator shall have, and provide upon request, evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Transmission Operator has provided its System Operators with the authority to approve planned outages of its own monitoring and Real-time Assessment capabilities.

R17. Each Balancing Authority shall provide its System Operators with the authority to approve planned outages of its own monitoring and analysis capabilities. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*

M17. Each Balancing Authority shall have, and provide upon request, evidence that could include, but is not limited to, a documented procedure or equivalent evidence that will be used to confirm that the Balancing Authority has provided its System Operators with the authority to approve planned outages of its own monitoring and analysis capabilities.

Rationale for Requirement R18: Moved from approved IRO-005-3.1a, Requirement R10. Transmission Service Provider, Distribution Provider, Load-Serving Entity, and Purchasing-Selling Entity deleted as those entities will receive instructions on limits from the responsible entities cited in the requirement.

R18. Each Transmission Operator, Balancing Authority, and Generator Operator shall always operate to the most limiting parameter in instances where there is a difference in derived limits. *[Violation Risk Factor: High] [Time Horizon: Operations Planning, Same-Day Operations, Real-time Operations]*

M18. Each Transmission Operator, Balancing Authority, and Generator Operator shall have, and provide upon request, evidence that could include, but is not limited to, operator logs, voice recordings, electronic communications, or equivalent evidence that will be used to determine if it operated to the most limiting parameter in instances where there is a difference in derived limits.

C. Compliance

1. Compliance Monitoring Process

1.1. Compliance Enforcement Authority

As defined in the NERC Rules of Procedure, “Compliance Enforcement Authority” (CEA) means NERC or the Regional Entity in their respective roles of monitoring and enforcing compliance with the NERC Reliability Standards.

1.2. Compliance Monitoring and Enforcement Processes

Compliance Audit

Self-Certification

Spot Checking

Compliance Investigation

Self-Reporting

Complaint

Exception Reporting

1.3. Data Retention

The following evidence retention periods identify the period of time an entity is required to retain specific evidence to demonstrate compliance. For instances where the evidence retention period specified below is shorter than the time since the last audit, the Compliance Enforcement Authority may ask an entity to provide other evidence to show that it was compliant for the full time period since the last audit.

Each Balancing Authority, Transmission Operator, Generator Operator, Distribution Provider, and Load-Serving Entity shall each keep data or evidence for each applicable Requirement R1 through R11, R13, and R14 through R18 and Measure M1 through M11, M13, and M14 through M18 for the current calendar year and one previous calendar year, with the exception of voice recordings which shall be retained for a minimum of ninety calendar days, unless directed by its Compliance Enforcement Authority to retain specific evidence for a longer period of time as part of an investigation.

Each Transmission Operator shall retain evidence for three calendar years of any occasion in which it has exceeded an identified IROL and its associated IROL T_v as specified in Requirement R12 and Measure M12 and that it initiated its Operating Plan to mitigate an SOL exceedance as specified in Requirement R14 and Measurement M14.

If a Balancing Authority, Transmission Operator, Generator Operator, Distribution Provider, or Load-Serving Entity is found non-compliant, it shall keep information related to the non-compliance until mitigation is complete and approved or the time period specified above, whichever is longer.

The Compliance Enforcement Authority shall keep the last audit records and all requested and submitted subsequent audit records.

1.4. Additional Compliance Information

None.

Table of Compliance Elements

R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R1	Operations Planning, Same-Day Operations, Real-time Operations	High	N/A	N/A	N/A	The Transmission Operator failed to act, or direct others within its Transmission Operator Area to act, to address its reliability functions within its Transmission Operator Area.
R2	Operations Planning, Same-Day Operations, Real-time Operations	High	N/A	N/A	N/A	The Balancing Authority failed to act, or direct others within its Balancing Authority Area to act, to address its reliability functions within its Balancing Authority Area.
R3	Operations Planning, Same-Day Operations, Real-Time Operations	High	N/A	N/A	N/A	The responsible entity did not comply with an Operating Instruction issued by the Transmission Operator, and such action could have been physically implemented and would not have violated safety, equipment, regulatory, or statutory requirements.
R4	Operations Planning, Same-Day Operations,	High	N/A	N/A	N/A	The responsible entity did not inform its Transmission Operator of its inability to perform an Operating

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
	Real-Time Operations					Instruction issued by its Transmission Operator in Requirement R3 citing one of the specific reasons shown in Requirement R3.
R5	Operations Planning, Same-Day Operations, Real-time Operations	High	N/A	N/A	N/A	The responsible entity did not comply with an Operating Instruction issued by the Balancing Authority, and such action could have been physically implemented and would not have violated safety, equipment, regulatory, or statutory requirements.
R6	Operations Planning, Same-Day Operations, Real-Time Operations	High	N/A	N/A	N/A	The responsible entity did not inform its Balancing Authority of its inability to perform an Operating Instruction issued by that Balancing Authority.
R7	Real-Time Operations	High	N/A	N/A	N/A	The Transmission Operator or Balancing Authority did not provide assistance to Transmission Operators, if requested, when the requesting entity had implemented its emergency procedures, and such actions could have been physically

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
						implemented and would not have violated safety, equipment, regulatory, or statutory requirements.
<p>For the Requirements R8 and R9 VSLs only, the intent of the SDT is to start with the Severe VSL first and then to work your way to the left until you find the situation that fits. In this manner, the VSL will not be discriminatory by size of entity. If a small entity has just one affected reliability entity to inform, the intent is that that situation would be a Severe violation.</p>						
R8	Operations Planning, Same-Day Operations, Real-Time Operations	High	The Transmission Operator did not inform one other Transmission Operator or 5% or less of the affected Transmission Operators, whichever is less, of its actual or expected operations that result in, or could result in, an Emergency on respective Transmission Operator Areas when conditions did permit such communications.	The Transmission Operator did not inform two other Transmission Operators or more than 5% and less than or equal to 10% of the affected Transmission Operators, whichever is less, of its actual or expected operations that result in, or could result in, an Emergency on respective Transmission Operator Areas when conditions did permit such communications.	The Transmission Operator did not inform three other Transmission Operators or more than 10% and less than or equal to 15% of the affected Transmission Operators, whichever is less, of its actual or expected operations that result in, or could result in, an Emergency on respective Transmission Operator Areas when conditions did permit such communications.	The Transmission Operator did not inform its Reliability Coordinator of its actual or expected operations that result in, or could result in, an Emergency on those respective Transmission Operator Areas when conditions did permit such communications. OR The Transmission Operator did not inform four or more other Transmission Operators or more than 15% of the affected Transmission Operators, whichever is less, of its actual or expected operations that result in, or could result in, an Emergency on those respective Transmission Operator Areas when

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
						conditions did permit such communications.
R9	Operations Planning, Same-Day Operations, Real-Time Operations	Medium	The responsible entity did not notify one negatively impacted interconnected NERC registered entity or 5% or less of the negatively impacted NERC registered entities, whichever is less, of a planned outage of telemetering and telecommunication equipment, monitoring and assessment capabilities, control equipment, and associated communication channels between the affected entities.	The responsible entity did not notify two negatively impacted interconnected NERC registered entities or more than 5% and less than or equal to 10% of the negatively impacted NERC registered entities, whichever is less, of a planned outage of telemetering and telecommunication equipment, monitoring and assessment capabilities, control equipment, and associated communication channels between the affected entities.	The responsible entity did not notify three negatively impacted interconnected NERC registered entities or more than 10% and less than or equal to 15% of the negatively impacted NERC registered entities, whichever is less, of a planned outage of telemetering and telecommunication equipment, monitoring and assessment capabilities, control equipment and associated communication channels between the affected entities.	The responsible entity did not notify its Reliability Coordinator of a planned outage of telemetering and telecommunication equipment, monitoring and assessment capabilities, control equipment, and associated communication channels. OR, The responsible entity did not notify four or more negatively impacted interconnected NERC registered entities or more than 15% of the negatively impacted NERC registered entities, whichever is less, of a planned outage of telemetering and telecommunication equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities.

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R10	Real-Time Operations	High	N/A	N/A	N/A	The Transmission Operator did not monitor Facilities within its Transmission Operator Area and neighboring Transmission Operator Areas to maintain reliability within its Transmission Operator Area including sub-100 kV facilities needed to maintain reliability and the status of Special Protection Systems within its Transmission Operator Area.
R11	Real-Time Operations	High	N/A	N/A	N/A	The Balancing Authority did not monitor its Balancing Authority Area, including the status of Special Protection Systems that impact generation or Load, to ensure that it is able to perform its reliability functions.
R12	Real-Time Operations	High	N/A	N/A	N/A	The Transmission Operator exceeded an identified Interconnection Reliability Operating Limit (IROL) for a continuous duration greater than its associated IROL T _v .

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R13	Same-Day Operations, Real-Time Operations	High	The Transmission Operator performed Real-time Assessments but did so at a periodicity of more than 30 minutes but less than 35 minutes.	The Transmission Operator performed Real-time Assessments but did so at a periodicity of more than or equal to 35 minutes and less than 40 minutes.	The Transmission Operator performed Real-time Assessments but did so at a periodicity of more than or equal to 40 minutes and less than 45 minutes.	The Transmission Operator did not perform Real-time Assessments. OR The Transmission Operator performed Real-time Assessments but did so at a periodicity of more than or equal to 45 minutes.
R14.	Real-Time Operations	High	N/A	N/A	N/A	The Transmission Operator did not initiate its Operating Plan for mitigating an SOL exceedance identified as part of its Real-time monitoring or Real-time Assessment
R15.	Real-Time Operations	Medium	N/A	N/A	N/A	The Transmission Operator did not inform its Reliability Coordinator of actions being taken to return the system to within limits when an SOL had been exceeded.
R16.	Operations Planning, Same-Day Operations, Real-Time Operations	High	N/A	N/A	N/A	The Transmission Operator did not provide its System Operators with the authority to approve planned outages of its own monitoring and Real-time Assessment capabilities.

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R #	Time Horizon	VRF	Violation Severity Levels			
			Lower VSL	Moderate VSL	High VSL	Severe VSL
R17.	Operations Planning, Same-Day Operations, Real-Time Operations	High	N/A	N/A	N/A	The Balancing Authority did not provide its System Operators with the authority to approve planned outages of its own monitoring and analysis capabilities.
R18	Operations Planning, Same-Day Operations, Real-time Operations	High	N/A	N/A	N/A	The responsible entity failed to operate to the most limiting parameter in instances where there was a difference in derived limits.

D. Regional Variances

None.

E. Interpretations

None.

F. Associated Documents

White paper on SOL Exceedances to be placed here.