

Review of IRO-008-1—Reliability Coordinator Operational Analyses and Real-time Assessments (Deferred and Filing 2)

<http://www.nerc.com/files/IRO-008-1.pdf>

VRFs for Requirement R1:

Standard, Requirement	Requirement Language	VRF Assignment	Comments
IRO-008-1, R1	Each Reliability Coordinator shall perform an Operational Planning Analysis to assess whether the planned operations for the next day within its Wide Area, will exceed any of its Interconnection Reliability Operating Limits (IROLs) during anticipated normal and Contingency event conditions.	Medium High	<p>FERC cited possible inconsistencies with Guidelines 2, 3, and 4. With respect to Guideline 2, FERC was concerned about inconsistency with the High VRF assignment in IRO-008-1, R2. With respect to Guideline 3, FERC is concerned that there is an inconsistency with the High VRF assignment for IRO-004-1, R1.</p> <p>NERC staff believes that the distinction between the Operations Planning time frame in IRO-008-1 R1 and the Real-time Operations time frame in IRO-008-1 R2 is essential to the proper analysis of R1's Medium VRF and R2's High VRF. Based on those analyses, the difference in VRF assignments does seem appropriate. IRO-004-1 is inactive, but because IRO-004-2 R1 requires next-day assessments to be treated in the same manner as Real-time operating events, it does seem appropriate to assign the same VRFs for IRO-008-1 R1 and IRO-008-1 R2. Thus, NERC staff proposes changing the R1 VRF assignment to High.</p>

Original R1 VRF Guideline Explanation from [December 31, 2009 IRO-008-1 Petition](#):

The following discussion addresses how the drafting team considered FERC's VSL Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC's Reliability Standards and implies that these requirements should be assigned a "High" VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The team believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

- *FERC's Guideline 2:* Consistency within a Reliability Standard. The requirement has no subrequirements so only one VRF was assigned. Therefore, there is no conflict.
- *FERC's Guideline 3:* Consistency among Reliability Standards. There is a similar requirement (Requirement R1) in IRO-004-1 that is assigned a High VRF. The VRF assigned to IRO-008 Requirement R1 is lower than IRO-004-1 R1. The drafting team recognizes that the VRF for IRO-008-1 Requirement R1 is lower than the VRF for the similar requirement IRO-004-1 which is assigned a High VRF, however the IRO drafting team and stakeholders support the Medium VRF based on NERC's criteria for VRFs. The assignment of the Medium VRF was made based on the premise that failure to have a single Operational Planning Analysis, by itself, would not directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures. For a requirement to be assigned a "High" VRF, there should be the expectation that failure to meet the required performance "will" result in instability, separation, or cascading failures. This is not the case when a Reliability Coordinator fails to conduct a single Operational Planning Analysis. While the drafting team agrees that, under some circumstances, it is possible that a failure to have a single Operational Planning Analysis may put the Reliability Coordinator in a position where it is not as prepared as it should be to address the operating day, the failure to have a new Operational Planning Analysis would not, by itself, result in instability, separation, or cascading failures. If the Reliability Coordinator failed to conduct an Operational Planning Analysis, it would still be expected to perform Real-time Assessments at least every 30 minutes. The results of these analyses should provide the Reliability Coordinator's competent system operators with information needed to prevent and/or mitigate instances of exceeding IROLs. The NERC Uniform Compliance Monitoring and Enforcement Program and the Sanctions Guidelines give the Compliance Enforcement Authority the right to provide a higher sanction for failure to meet multiple requirements. And if the Reliability Coordinator failed to have an Operational Planning Analysis and also failed to conduct Real-time Assessments, or if the Reliability Coordinator failed to have an Operational Planning Analysis and also failed to have system operators who were competent in analyzing real-time operating issues, the expectation is that the sanction for noncompliance would be higher than for the failure to conduct a single Operational Planning Analysis with no other violations.
- *FERC's Guideline 4:* Consistency with NERC's Definition of a VRF. Failure to perform an analysis for the "next day" could directly affect the electrical state or the capability of the bulk electric system, and could affect the Reliability Coordinator's ability to effectively monitor and control the bulk electric system. However, violation of this requirement is unlikely to lead to bulk power system instability,

separation, or cascading failures. Because the Reliability Coordinator is also required (under IRO-008-1, Requirement R2) to conduct a real-time assessment every thirty minutes, if there is an instance of approaching or exceeding an IROL, the Reliability Coordinator’s system operators are required to have the competence (under PER-005-1, Requirement R2) to react to changing system conditions and would be expected to take actions to prevent instability, separation, or cascading failure. Thus, this requirement meets NERC’s criteria for a Medium VRF. Failure to have an analysis of the next day will not, by itself, lead to instability, separation, or cascading failures.

- *FERC’s Guideline 5: Treatment of Requirements that Co-mingle More Than One Objective.* IRO-008-1 Requirement R1 contains only one objective, therefore only one VRF was assigned.

VRFs for Requirement R3:

Standard, Requirement	Requirement Language	VRF Assignment	Comments
IRO-008-1, R3	When a Reliability Coordinator determines that the results of an Operational Planning Analysis or Real-Time Assessment indicates the need for specific operational actions to prevent or mitigate an instance of exceeding an IROL, the Reliability Coordinator shall share its results with those entities that are expected to take those actions.	Medium	<p>FERC cited possible inconsistencies with Guidelines 2, 3, and 4. With respect to Guideline 2, FERC was concerned about inconsistency with the High VRF assignment in IRO-008-1, R2. With respect to Guideline 3, FERC is concerned that there is an inconsistency with the High VRF assignment for IRO-004-1, R5.</p> <p>NERC staff continues to support the drafting team’s rationale for the Medium VRF assignment for R3: “For a requirement to be assigned a “High” VRF, there should be the expectation that failure to meet the required performance “will” result in instability, separation, or cascading failures. This is not the case when a Reliability Coordinator fails to share the results of its analyses. While the drafting team agrees that if the Reliability Coordinator fails to share the results of its analyses, this failure will put other entities in a position where they are not as prepared as they should be to address instances of preventing or exceeding IROLs. However, even if the Reliability Coordinator failed</p>

			<p>to share this information in advance, the Reliability Coordinator is still required, under IRO-009-1, Requirements R1 through R4, to have action plans for preventing and mitigating instances of exceeding IROLs and for implementing action plans to prevent or mitigate exceeding each IROL within IROL Tv. If IRO-009-1, Requirements R1 through R4 are met, then the failure to meet IRO-008-1, Requirement R3 should not result in instability, separation, or cascading failures.”</p>
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Original R3 VRF Guideline Explanation from [December 31, 2009 IRO-008-1 Petition](#):

The following discussion addresses how the drafting team considered FERC’s VSL Guidelines 2 through 5. The team did not address Guideline 1 directly because of an apparent conflict between Guidelines 1 and 4. Whereas Guideline 1 identifies a list of topics that encompass nearly all topics within NERC’s Reliability Standards and implies that these requirements should be assigned a “High” VRF, Guideline 4 directs assignment of VRFs based on the impact of a specific requirement to the reliability of the system. The team believes that Guideline 4 is reflective of the intent of VRFs in the first instance and therefore concentrated its approach on the reliability impact of the requirements.

- *FERC’s Guideline 2:* Consistency within a Reliability Standard. The requirement has no subrequirements; only one VRF was assigned so there is no conflict.
- *FERC’s Guideline 3:* Consistency among Reliability Standards. IRO-004-1 Requirement R5 includes actions similar to those required in IRO-008-1, Requirement R3. The VRF for IRO-004-1, Requirement R5 is “High.” The drafting team recognizes that the VRF for IRO-008-1 Requirement R3 is lower than the VRF for the similar requirement IRO-004-1 which is assigned a High VRF; however, the IRO drafting team and stakeholders support the Medium VRF based on NERC’s criteria for VSLs. IRO-008-1 Requirement R3 requires the Reliability Coordinator to share the results of its analyses with entities that are expected to take actions to prevent or mitigate instances of exceeding an IROL. The assignment of the “Medium” VRF was made based on the premise that failure to share this information, by itself, would not directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures. For a requirement to be assigned a “High” VRF, there should be the expectation that failure to meet the required performance “will” result in instability, separation, or cascading failures. This is not the case when a Reliability Coordinator fails to share the results of its analyses.

While the drafting team agrees that if the Reliability Coordinator fails to share the results of its analyses, this failure will put other entities in a position where they are not as prepared as they should be to address instances of preventing or exceeding IROLs. However, even if the Reliability Coordinator failed to share this information in advance, the Reliability Coordinator is still required, under IRO-009-1, Requirements R1 through R4 to have action plans for preventing and mitigating instances of exceeding IROLs and for implementing action plans to prevent or mitigate exceeding each IROL within IROL Tv. If IRO-009-1, Requirements R1 through R4 are met, then the failure to meet IRO-008-1, Requirement R3 should not result in instability, separation, or cascading failures. The NERC Uniform Compliance Monitoring and Enforcement Program and the Sanctions Guidelines give the Compliance Enforcement Authority the right to provide a higher sanction for failure to meet multiple requirements – and if the Reliability Coordinator failed to share the results of its analyses and also failed to direct actions to prevent or mitigate exceeding an IROL within its IROL Tv, the expectation is that the sanction for noncompliance would be higher than for the failure to share the results of analyses with no other violations.

- *FERC’s Guideline 4: Consistency with NERC’s Definition of a VRF.* Failure to share the results of its analyses or assessments will impact the situational awareness of the operating entities involved, and thus could affect the Transmission Operator’s or Balancing Authority’s ability to effectively monitor and control the BES, however violation of this requirement is unlikely to lead to BES instability, separation or cascading failures. Because the Reliability Coordinator is required to have and implement action plans to mitigate and prevent instances of exceeding each identified IROL (IRO-009-1 Requirements R1 and R2) and the Reliability Coordinator is required to either implement an action plan or direct actions (IRO-009-1 Requirements R3 and R4), the impact of not sharing the analyses and assessments should not result in instability, separation, or cascading failures. Thus, this requirement meets the criteria for a Medium VRF.
- *FERC’s Guideline 5: Treatment of Requirements that Co-mingle More Than One Objective.* IRO-008-1, Requirement R3 contains only one objective, therefore only one VRF was assigned.

VSLs for Requirement R3 (Filing 2):

Standard, Requirement	Requirement Language	Lower	Moderate	High	Severe	Notes
IRO-008-1, R3	When a Reliability Coordinator determines that the results of an Operational Planning Analysis or Real-Time Assessment	N/A	N/A The Reliability Coordinator shared the results with some but not all of the entities that were required to take action.	N/A	The Reliability Coordinator failed to share the results of its analyses or assessments with any of the entities that were	Citing a Guideline 1 issue, FERC staff stated that this requirement might be better suited to a binary VSL.

	<p>indicates the need for specific operational actions to prevent or mitigate an instance of exceeding an IROL, the Reliability Coordinator shall share its results with those entities that are expected to take those actions.</p>				<p>required to take action.</p>	<p>NERC agreed and modified the requirement accordingly.</p>
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Original Guideline Explanation for R3 VSLs in [December 1, 2010 VSL Filing 2](#):

In accordance with Guideline 2, the VSLs were modified for clarity and consistency with other standards and VSLs.

- *Guideline 1:* This is a new standard. Accordingly, no historic performance has been established.
- *Guideline 2:* The VSLs were modified for clarity and consistency with other standards and VSLs. Additionally, NERC has reviewed the VSL text and has determined that, as written, the VSL text is clear, specific and objective and does not contain general, relative or subjective language satisfying Guideline 2b. Thus, the text is not subject to the possibility of multiple interpretations of the VSL(s) and provides the clarity needed to permit the consistent and objective application of the VSL(s) in the determination of penalties by the Compliance Enforcement Authority.
- *Guideline 3:* NERC compared the existing VSLs to the stated requirement language to ensure the VSLs do not redefine or undermine the reliability goal of the requirement. In accordance with Guideline 3, the VSL assignments are consistent with the requirement and the degree of compliance can be determined objectively and with certainty.
- *Guideline 4:* The VSL assignments comply with Guideline 4, because they are based on a single violation of a Reliability Standard and are not based on a cumulative number of violations of the same requirement over a period of time.