

Acceptance Criteria of a Reliability Standard

Quality Objectives

Note: The Federal Energy Regulatory Commission (FERC) has established in Order No. 672 criteria that will be used to assess reliability standards that are submitted to the Commission for approval. Each criterion has been provided for reference in a text box following the Quality Objective that addresses the specific issue.

Drafting teams working on assigned projects are charged to ensure their work adheres to the following quality objectives:

- 1. Applicability** — Each reliability standard shall clearly identify the functional classes¹ of entities responsible for complying with the reliability standard, with any specific additions or exceptions noted. The applicability section of the standard should include any limitations on the applicability of the standard based on electric facility characteristics, such as a requirement that applies only to the subset of distribution providers that own or operate underfrequency load shedding systems.

Must be applicable to users, owners, and operators of the bulk power system, and not others

“322. The proposed Reliability Standard may impose a requirement on any user, owner, or operator of such facilities, but not on others.”

- 2. Purpose** — Each reliability standard shall have a clear statement of purpose that describes how the standard contributes to the reliability of the bulk power system.
- 3. Requirements** — Each reliability standard shall state one or more requirements, which if achieved by the applicable entities, will provide for a reliable bulk power system, consistent with good utility practices and the public interest.

Requirements should have the following characteristics:

- Each requirement should establish an objective that is the best approach for bulk power system reliability, taking account of the costs and benefits of implementing the proposal.
- To the maximum extent possible the requirement should be designed to apply throughout the interconnected North American Bulk-Power System.

¹ These functional classes of entities are documented in NERC’s Statement of Compliance Registry Criteria. When a standard identifies a class of entities to which it applies, that class must be defined in the Glossary of Terms Used in Reliability Standards and must be identified in the Statement of Compliance Registry Criteria.

- Each requirement should identify what functional entity shall do what, under what conditions, for what reliability benefit.
- Each requirement should be aimed at achieving one objective at a time.

It is permissible to include prescriptive, administrative (document something), and commercial requirements within the reliability standard, however these types of requirements should be limited in number.

Reliability standards should not contain:

- Requirements that prescribe commercial business practices which do not contribute directly to reliability.
- Requirements that duplicate or conflict with one another.

Must be designed to achieve a specified reliability goal

“321. The proposed Reliability Standard must address a reliability concern that falls within the requirements of section 215 of the FPA. That is, it must provide for the reliable operation of bulk power system facilities. It may not extend beyond reliable operation of such facilities or apply to other facilities. Such facilities include all those necessary for operating an interconnected electric energy transmission network, or any portion of that network, including control systems. The proposed Reliability Standard may apply to any design of planned additions or modifications of such facilities that is necessary to provide for reliable operation. It may also apply to cyber security protection.”

“324. The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO’s process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.”

Must be designed to apply throughout North American to the maximum extent achievable with a single reliability standard while not favoring one area or approach

“331. A proposed Reliability Standard should be designed to apply throughout the interconnected North American Bulk-Power System; to the maximum extent this is achievable with a single Reliability Standard. The proposed Reliability Standard should not be based on a single geographic or regional model but should take into account geographic variations in grid characteristics, terrain, weather, and other such factors; it should also take into account regional variations in the organizational and corporate structures of transmission owners and operators, variations in generation fuel type and ownership patterns, and regional variations in market design if these affect the proposed Reliability Standard.”

Should achieve a reliability goal effectively and efficiently - but does not necessarily have to reflect “best practices” without regard to implementation cost

“328. The proposed Reliability Standard does not necessarily have to reflect the optimal method, or “best practice,” for achieving its reliability goal without regard to implementation cost or historical regional infrastructure design. It should however achieve its reliability goal effectively and efficiently.”

Cannot be “lowest common denominator,” i.e., cannot reflect a compromise that does not adequately protect bulk power system reliability

“329. The proposed Reliability Standard must not simply reflect a compromise in the ERO’s Reliability Standard development process based on the least effective North American practice — the so-called “lowest common denominator”—if such practice does not adequately protect Bulk-Power System reliability. Although the Commission will give due weight to the technical expertise of the ERO, we will not hesitate to remand a proposed Reliability Standard if we are convinced it is not adequate to protect reliability.”

Balance with other vital public interests

“335. Finally, we understand that at times development of a proposed Reliability Standard may require that a particular reliability goal must be balanced against other vital public interests, such as environmental, social and other goals. We expect the ERO to explain any such balancing in its application for approval of a proposed Reliability Standard.”

No undue negative effect on competition or restriction of the grid

“332. As directed by section 215 of the FPA, the Commission itself will give special attention to the effect of a proposed Reliability Standard on competition. The ERO should attempt to develop a proposed Reliability Standard that has no undue negative effect on competition. Among other possible considerations, a proposed Reliability Standard should not unreasonably restrict available transmission capability on the Bulk-Power System beyond any restriction necessary for reliability and should not limit use of the Bulk-Power System in an unduly preferential manner. It should not create an undue advantage for one competitor over another.”

4. Measurability — Each requirement should be stated so as to be objectively measurable by a third party with knowledge or expertise in the area addressed by that requirement. Each requirement should have one or more associated measures used to objectively evaluate compliance with the requirement. If specific results can be practically measured quantitatively, metrics should be provided within the requirement to indicate satisfactory performance.

- Words and phrases such as “sufficient”, “adequate”, “be ready”, “be prepared”, “consider”, etc. should not be used.
- When an exact level of performance can’t be specified, the required performance should be bounded by measurable conditions/parameters.

Must identify clear and objective criterion or measure for compliance, so that it can be enforced in a consistent and non-preferential manner

“327. There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.”

5. Technical Basis in Engineering and Operations — Each reliability standard should be based upon sound engineering and operating judgment and the collective experience of the Standard Drafting Team members. Analysis of data collection activities, field test

results and the comments received from industry experts should also be utilized in the development of each reliability standard.

Must contain a technically sound method to achieve the goal

“324. The proposed Reliability Standard must be designed to achieve a specified reliability goal and must contain a technically sound means to achieve this goal. Although any person may propose a topic for a Reliability Standard to the ERO, in the ERO’s process, the specific proposed Reliability Standard should be developed initially by persons within the electric power industry and community with a high level of technical expertise and be based on sound technical and engineering criteria. It should be based on actual data and lessons learned from past operating incidents, where appropriate. The process for ERO approval of a proposed Reliability Standard should be fair and open to all interested persons.”

6. Completeness — Each reliability standard should be complete and self-contained. A standard should not depend on external information to determine the required level of performance.

7. Consequences for Noncompliance — Each reliability standard shall establish a combination of elements (identified below) which will serve as guidelines for the determination of penalties and sanctions when assessing the consequences of violating a standard.

- **Time Horizon** - Each requirement shall have an associated Time Horizon to identify the time frame an entity would have to correct a violation of the requirement. Time horizons are used as a factor in determining the size of a penalty or sanction for noncompliance with a requirement.
- **Violation Risk Factor** - Each requirement shall have an associated Violation Risk Factor (VRF). The VRF is a factor in determining the size of a penalty or sanction for noncompliance with a requirement.
- **Violation Severity Levels** – Each requirement shall have an associated set of Violation Severity Levels (VSLs) that identify degrees of noncompliance with the associated requirement.

Must include clear and understandable consequences and a range of penalties (monetary and/or non-monetary) for a violation

“326. The possible consequences, including range of possible penalties, for violating a proposed Reliability Standard should be clear and understandable by those who must comply.”

8. Clear Language — Each reliability standard should be stated using clear and unambiguous language. Responsible entities, using reasonable judgment and in keeping with good utility practices, should be able to arrive at a consistent interpretation of the required performance.

Must be clear and unambiguous as to what is required and who is required to comply

“325. The proposed Reliability Standard should be clear and unambiguous regarding what is required and who is required to comply. Users, owners, and operators of the Bulk-Power System must know what they are required to do to maintain reliability.”

- 9. Practicality** — Each reliability standard should establish requirements that can be practically implemented by the assigned responsible entities within the specified effective date and thereafter.

Costs to be considered for smaller entities but not at consequence of less than excellence in operating system reliability

“330. A proposed Reliability Standard may take into account the size of the entity that must comply with the Reliability Standard and the cost to those entities of implementing the proposed Reliability Standard. However, the ERO should not propose a “lowest common denominator” Reliability Standard that would achieve less than excellence in operating system reliability solely to protect against reasonable expenses for supporting this vital national infrastructure. For example, a small owner or operator of the Bulk-Power System must bear the cost of complying with each Reliability Standard that applies to it.”

Implementation time

“333. In considering whether a proposed Reliability Standard is just and reasonable, the Commission will consider also the timetable for implementation of the new requirements, including how the proposal balances any urgency in the need to implement it against the reasonableness of the time allowed for those who must comply to develop the necessary procedures, software, facilities, staffing or other relevant capability.”

- 10. Consistent Terminology** — Each reliability standard should use a set of standard terms and definitions (NERC Glossary of Terms) that were developed and approved through the NERC Reliability Standards Development Process.
- 11. Regulatory Directives** – Standard Drafting Teams (SDTs) should adequately address all applicable FERC regulatory directives when revising or developing reliability standards.
- 12. Consideration of Comments** – SDTs should be responsive to all comments received during the formal comment periods and to the formal comments received during the initial ballot periods. Appropriate technical justification should be provided by the SDT for each response to the comments and stakeholder issues.

Whether the reliability standard process was open and fair

“334. Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO’s Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by the Commission.”