

Five-Year Review Recommendation to Affirm FAC-008-3: Facility Ratings

Introduction

NERC has an obligation to conduct periodic reviews of each Reliability Standard developed through NERC's American National Standards Institute-accredited Reliability Standards development process.¹ While FAC-008-3 is not yet due for a review, as it only recently became enforceable on January 1, 2013, it is being reviewed as part of a comprehensive review project for all FAC standards.

The NERC Standards Committee appointed six industry experts to serve on the FAC five-year review team (FYRT) on April 22, 2013. Five-Year Review Teams (FYRTs) use the background information and the questions set forth in the Five-Year Review Template developed by NERC and approved by the NERC Standards Committee, along with associated worksheets and reference documents, to guide a comprehensive review that results in a recommendation that a Reliability Standard should be (1) affirmed as is (i.e., no changes needed); (2) revised (which may include revising or retiring one or more requirements); or (3) withdrawn.

The FYRT recommends **AFFIRMING** FAC-008-3, with some recommendations for additional clarity in guidance documents that support the standard.

¹ The currently effective Standard Processes Manual (SPM), which became effective on June 27, 2013, obligates NERC to conduct periodic reviews of all Reliability Standards at least once every ten years, and periodic reviews only of those standards that are American National Standards (approved by the American National Standards Institute) at least once every five years. None of the FAC standards is an American National Standard, and thus the FAC standards would only require review at least once every ten years under the current SPM. However, the former SPM, which became effective on January 31, 2012, required all standards to undergo a five-year review, and this five-year review process was launched under that SPM. The periodic review process is addressed on page 45 of the current SPM:

http://www.nerc.com/pa/Stand/Resources/Documents/Appendix_3A_StandardsProcessesManual.pdf.

Applicable Reliability Standard: FAC-008-3**Team Members:**

1. John Beck (Chair), Consolidated Edison Co. of New York
2. Michael Steckelberg (Vice Chair), Great River Energy
3. Brian Dale, Georgia Power Company
4. Ruth Kloecker, ITC Holdings
5. Stewart Rake, Luminant Generation Company
6. Ganesh Velumylyum, Northern Indiana Public Service Company
7. Mallory Huggins (Lead Standards Developer), NERC
8. Sean Cavote (Supporting Standards Developer), NERC
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Date Review Completed: 07/19/13

Background Information (completed by NERC staff)

1. Are there any outstanding Federal Energy Regulatory Commission directives associated with the Reliability Standard?

Yes

No

2. Have stakeholders requested clarity on the Reliability Standard in the form of an Interpretation (outstanding, in progress, or approved), Compliance Application Notice (CAN) (outstanding, in progress, or approved), or an outstanding submission to NERC's Issues Database? (If there are, NERC staff will include a list of the Interpretation(s), CAN(s), or stakeholder-identified issue(s) contained in the NERC Issues Database that apply to the Reliability Standard.)

Yes

No

While there are no interpretations or CANs associated with this version of FAC-008, there were two CANs associated with FAC-008-1 and FAC-009-1. Those standards were combined in FAC-008-3.

CAN-0009² is associated with FAC-008-1 and FAC-009-1. It provides instruction for assessing compliance with FAC-008-1 R1 and FAC-009-1 R1 when an entity's constructed Facilities do not match its design specification.

CAN-0018³ is associated with FAC-008-1. In CAN-0018, NERC compliance states that "terminal equipment" (referenced in R2.4.1 and R3.4.1) refers to wave traps, current transformers, disconnect switches, breakers, primary fuses, and any piece of series-connected equipment that comprises a Facility and that could have the most limited applicable Equipment Rating. FAC-008-3 contains similar references to "terminal equipment."

3. Is the Reliability Standard one of the most violated Reliability Standards? If so, does the root cause of the frequent violation appear to be a lack of clarity in the language?

² CAN-0009 can be found here:

[http://www.nerc.com/pa/comp/Resources/Compliance%20Application%20Notices%20DL/CAN-0009%20FAC-008%20and%20FAC-009%20Facility%20Ratings%20and%20Design%20Specifications%20\(Revised\).pdf](http://www.nerc.com/pa/comp/Resources/Compliance%20Application%20Notices%20DL/CAN-0009%20FAC-008%20and%20FAC-009%20Facility%20Ratings%20and%20Design%20Specifications%20(Revised).pdf).

³ CAN-0018 can be found here:

[http://www.nerc.com/pa/comp/Resources/Compliance%20Application%20Notices%20DL/CAN-0018%20FAC-008%20R1.2.1%20Terminal%20Equipment%20\(Revised\).pdf](http://www.nerc.com/pa/comp/Resources/Compliance%20Application%20Notices%20DL/CAN-0018%20FAC-008%20R1.2.1%20Terminal%20Equipment%20(Revised).pdf).

Yes No

Please explain: FAC-009-1 was the 9th most violated standard in 2012, and FAC-008-1 was the 13th most violated standard in 2012.⁴ Because of this, a Compliance Analysis Report⁵ was developed in 2010 to “provide information on compliance, including reasons for violations and identification of process enhancements and lessons learned to assist Registered Entities in improving compliance and thus enhancing reliability.” These statistics and the Compliance Analysis Report, however, do not relate to FAC-008-3, which recently became enforceable on January 1, 2013.

Some of the requirements in FAC-008-3 appear on the 2013 Actively Monitored List.⁶ R6 and R7 are Tier 1; R1, R2, and R3 and their subparts are Tier 2; and R8 is Tier 3. R4 and R5 are not on the list.

4. Does the Reliability Standard need to be converted to the results-based standard format as outlined in *Attachment 1: Results-Based Standards*? (Note that the intent of this question is to ensure that, as Reliability Standards are reviewed, the formatting is changed to be consistent with the current format of a Reliability Standard. If the answer is yes, the formatting should be updated when the Reliability Standard is revised.)

 Yes No

While FAC-008-3 is not in the Results-Based Standard template, its requirements are clear, measurable, and enforceable and fulfill the purpose of the Results-Based Standards process by describing a function that is performance-, risk-, or competency-based. The requirements also support one or more of NERC’s reliability principles.

R1, R2, and R3 are competency-based requirements; they define a set of capabilities an entity needs to have to demonstrate it is able to perform its designated reliability functions. These requirements ensure that the applicable entities can demonstrate that they developed Facility Ratings that have accounted for a variety of reliability functions.

⁴ The 2012 Compliance Monitoring and Evaluation Annual Report can be found here:

http://www.nerc.com/pa/comp/Reports%20DL/2012_CMEP_Report_Rev1.pdf.

⁵ The Compliance Analysis Report for FAC-008-1 and FAC-009-1 can be found here:

<http://www.nerc.com/pa/comp/Compliance%20Analysis%20Reports%20DL/1FAC-008-009%20Analysis%20Combined%20FINAL%20POSTED.pdf>.

⁶ The 2013 Actively Monitored List can be found here:

http://www.nerc.com/pa/comp/Resources/_layouts/xlviewer.aspx?id=/pa/comp/Resources/ResourcesDL/2013%20Actively_Monitored_Reliability_Standards_rev3.xlsx&Source=http%3A%2F%2Fwww%2Energ%2Ecom%2Fpa%2Fcomp%2FResources%2FPages%2Fdefault%2Easp&DefaultItemOpen=1&DefaultItemOpen=1.

R4 and R5 have been approved for retirement by NERC's Board of Trustees.

R6 is a performance-based requirement; it describes an action that must be performed. It ensures that the applicable entities actually apply the Facility Ratings for which they developed a methodology or documentation in R1, R2, and R3.

R7 and R8 are performance-based requirements; they describe actions that must be performed. They ensure that the applicable entities provide their Facility Ratings to those other entities that may be affected by the Facility Ratings, so that the associated entities can continue to perform their reliability functions.

Collectively, these requirements support reliability principle 1 ("Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards") and reliability principle 3 ("Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably").

It is not essential that the standard be converted into a new template; the requirements already fulfill the Results-Based Standard guidelines.

Questions for SME Review Team

1. **Paragraph 81:** Does one or more of the requirements in the Reliability Standard meet criteria for retirement or modification based on Paragraph 81 concepts? Use *Attachment 2: Paragraph 81 Criteria* to make this determination.

Yes

No

Please summarize your application of Paragraph 81 Criteria, if any: Not applicable.

2. **Clarity:** If the Reliability Standard has an Interpretation, CAN, or issue associated with it, or is frequently violated because of ambiguity, it probably needs to be revised for clarity. Beyond these indicators, is there any reason to believe that the Reliability Standard should be modified to address a lack of clarity? Consider:

- a. Is this a Version 0 Reliability Standard?
- b. Does the Reliability Standard have obviously ambiguous language or language that requires performance that is not measurable?
- c. Are the requirements consistent with the purpose of the Reliability Standard?

Yes

No

Please summarize your assessment: This is not a Version 0 Reliability Standard and the requirements are consistent with the purpose of the Reliability Standard.

The FYRT has identified two opportunities to clarify ambiguous language in FAC-008-3, but the team does not believe that the standard needs to be revised in order to clarify that language.

The first opportunity for clarification is with the undefined term “terminal equipment.” CAN-0018, originally issued on June 27, 2011, clarifies that “terminal equipment” refers to wave traps, current transformers, disconnect switches, breakers, primary fuses, and any piece of series-connected equipment that comprises a Facility and that could have the most limited applicable Equipment Rating. NERC plans to retire all CANs by the end of the year, and the FYRT believes it is important to memorialize this explanation in writing elsewhere. NERC standards staff and compliance staff discussed this concern and will ensure that the clarification is incorporated into the revised FAC-008-3 RSAW and shared with the FYRT for its review.

The FYRT notes that CAN-0009, originally issued on January 7, 2011, applied to FAC-008-1 and FAC-009-1. That CAN provides instruction for assessing compliance on the previously enforceable FAC standards, and the FYRT does not believe it is within its scope, as a standards-focused team, to determine the best way to offer that compliance guidance going forward.

The second opportunity to clarify ambiguous language relates to the reference to Facility Ratings “provided by equipment manufacturers or obtained from equipment manufacturer specifications such as nameplate rating” in R3. R3.1 requires Transmission Owners to have a documented methodology used to establish Facility Ratings that is consistent with one of three methods. One of those methods is obtaining ratings from the equipment manufacturer, but the other methods do not require knowledge of the equipment manufacturer rating and instead allow ratings to be developed based on “one or more industry standards developed through an open process such as Institute of Electrical and Electronics Engineers (IEEE) or International Council on Large Electric Systems (CIGRE)” or “a practice that has been verified by testing, performance history or engineering analysis.” R3.2 requires that “each of the following” be considered: “Equipment Rating standard(s) used in development of this methodology,” “Ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications,” “Ambient conditions (for particular or average conditions or as they vary in real-time),” and “Operating limitations.”

The FYRT believes it is possible to apply R3.2 in a way that requires entities to have ratings provided by equipment manufacturers, even in cases where the equipment is decades old and does not have nameplate ratings, nor does the manufacturer still exist. This interpretation could occur, in part, because the main requirement says that each Transmission Owner must have a documented methodology for determining Facility Ratings “that contains all of the following.” It is possible that “all of the following” could be construed to refer to every subpart of the requirement, despite the qualifications in R3.1 (“...at least one of the following”) and R3.2 (“...how each of the following were considered”). This concern was also noted in the development of FAC-008-2. At that time, the Project 2009-06 drafting team dismissed the concern because the drafting team found the language to be clear, as did most stakeholders.⁷

The FYRT believes there could be value in clarifying the application of FAC-008-3, Requirement R3. Thus, the FYRT recommended that NERC compliance staff confirm, in writing, that R3 should not be construed to require entities to have Facility Ratings from equipment manufacturers in cases where those ratings are not available. NERC standards staff and compliance staff discussed this concern and will ensure that the clarification is incorporated into the revised FAC-008-3 RSAW and shared with the FYRT for its review.

⁷ See P. 9 in the Project 2009-06 comment report from March 4, 2010:
http://www.nerc.com/pa/Stand/Project%20200906%20Facility%20Ratings%20DL/Comment_Report_In-ballot_2009-06_Facility_Ratings_20100304.pdf.

3. **Definitions:** Do any of the defined terms used within the Reliability Standard need to be refined?

Yes

No

Please explain: None of the defined terms used within the Reliability Standard need to be refined, though, as the team notes above, the undefined term “terminal equipment” should be better explained.

4. **Compliance Elements:** Are the compliance elements associated with the requirements (Measures, Data Retention, VRFs, and VSLs) consistent with the direction of the Reliability Assurance Initiative and FERC and NERC guidelines? If you answered “No,” please identify which elements require revision, and why:

Yes

No

5. **Consistency with Other Reliability Standards:** Does the Reliability Standard need to be revised for formatting and language consistency among requirements within the Reliability Standard or consistency with other Reliability Standards? If you answered “Yes,” please describe the changes needed to achieve formatting and language consistency:

Yes

No

6. **Changes in Technology, System Conditions, or other Factors:** Does the Reliability Standard need to be revised to account for changes in technology, system conditions, or other factors? If you answered “Yes,” please describe the changes and specifically what the potential impact is to reliability if the Reliability Standard is not revised:

Yes

No

7. **Consideration of Generator Interconnection Facilities:** Is responsibility for generator interconnection Facilities appropriately accounted for in the Reliability Standard?

Yes

No

Guiding Questions:

If the Reliability Standard is applicable to GOs/GOPs, is there any ambiguity about the inclusion of generator interconnection Facilities? (If generation interconnection Facilities could be perceived to be excluded, specific language referencing the Facilities should be introduced in the Reliability Standard.) No.

If the Reliability Standard is not applicable to GOs/GOPs, is there a reliability-related need for treating generator interconnection Facilities as transmission lines for the purposes of this Reliability Standard? (If so, GOs and GOPs that own or operate relevant generator interconnection Facilities should be explicit in the applicability section of the Reliability Standard.) Not applicable.

DRAFT

Recommendation

The answers to the questions above, along with a preliminary recommendation of the SMEs conducting the review of the Reliability Standard, will be posted for a 45-day informal comment period, and the comments publicly posted. The SMEs will review the comments to evaluate whether to modify their initial recommendation, and will document the final recommendation which will be presented to the Standards Committee.

Preliminary Recommendation from the FYRT:

- AFFIRM
- REVISE
- RETIRE

Technical Justification *(If the SME team recommends that the Reliability Standard be revised, a draft SAR may be included and the technical justification included in the SAR):* The requirements in FAC-008-3 are generally clear, measurable, and enforceable and thus, the FYRT recommends affirming the standard with no standard revisions. The FYRT has worked with NERC staff to ensure that the undefined term “terminal equipment” in R2.4.1 and R3.4.1 and the references to Facility Ratings obtained from the equipment manufacturer in R3 are clarified in the updated FAC-008-3 RSAW.

Preliminary Recommendation posted for industry comment (date): **MM/DD/13**

Final Recommendation (to be completed by the SME team after it has reviewed industry comments on the preliminary recommendation):

- AFFIRM *(This should only be checked if there are no outstanding directives, interpretations or issues identified by stakeholders.)*
- REVISE
- RETIRE

Technical Justification *(If the SME team recommends that the Reliability Standard be revised, a draft SAR may be included and the technical justification included in the SAR):*

Date submitted to NERC Staff:

Attachment 1: Results-Based Standards

The fourth question for NERC staff asks if the Reliability Standard needs to be converted to the results-based standards (RBS) format. The information below will be used by NERC staff in making this determination, and is included here as a reference for the SME team and other stakeholders.

RBS standards employ a defense-in-depth strategy for Reliability Standards development where each requirement has a role in preventing system failures and the roles are complementary and reinforcing. Reliability Standards should be viewed as a portfolio of requirements designed to achieve an overall defense-in-depth strategy and comply with the quality objectives identified in the resource document titled, "[Acceptance Criteria of a Reliability Standard](#)."

A Reliability Standard that adheres to the RBS format should strive to achieve a portfolio of performance-, risk-, and competency-based mandatory reliability requirements that support an effective defense-in-depth strategy. Each requirement should identify a clear and measurable expected outcome, such as: a) a stated level of reliability performance, b) a reduction in a specified reliability risk, or c) a necessary competency.

- a. **Performance-Based**—defines a particular reliability objective or outcome to be achieved. In its simplest form, a results-based requirement has four components: who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome?
- b. **Risk-Based**—preventive requirements to reduce the risks of failure to acceptable tolerance levels. A risk-based reliability requirement should be framed as: who, under what conditions (if any), shall perform what action, to achieve what particular result or outcome that reduces a stated risk to the reliability of the bulk power system?
- c. **Competency-Based**—defines a minimum set of capabilities an entity needs to have to demonstrate it is able to perform its designated reliability functions. A competency-based reliability requirement should be framed as: who, under what conditions (if any), shall have what capability, to achieve what particular result or outcome to perform an action to achieve a result or outcome or to reduce a risk to the reliability of the bulk power system?

Additionally, each RBS-adherent Reliability Standard should enable or support one or more of the eight reliability principles listed below. Each Reliability Standard should also be consistent with all of the reliability principles.

1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.

2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.
3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.
4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.
5. Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk power systems.
6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.
7. The reliability of the interconnected bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.
8. Bulk power systems shall be protected from malicious physical or cyber attacks.

If the Reliability Standard does not provide for a portfolio of performance-, risk-, and competency-based requirements or consistency with NERC's reliability principles, NERC staff should recommend that the Reliability Standard be reformatted in accordance with RBS format.

Attachment 2: Paragraph 81 Criteria

The first question for the SME Review Team asks if one or more of the requirements in the Reliability Standard meet(s) criteria for retirement or modification based on Paragraph 81 concepts.⁸ Use the Paragraph 81 criteria explained below to make this determination. Document the justification for the decisions throughout and provide them in the final assessment in the Five-Year Review worksheet.

For a Reliability Standard requirement to be proposed for retirement or modification based on Paragraph 81 concepts, it must satisfy **both**: (i) Criterion A (the overarching criterion) and (ii) at least one of the Criteria B listed below (identifying criteria). In addition, for each Reliability Standard requirement proposed for retirement or modification, the data and reference points set forth below in Criteria C should be considered for making a more informed decision.

Criterion A (Overarching Criterion)

The Reliability Standard requirement requires responsible entities (“entities”) to conduct an activity or task that does little, if anything, to benefit or protect the reliable operation of the BES.

Section 215(a) (4) of the United States Federal Power Act defines “reliable operation” as: “... operating the elements of the bulk-power system within equipment and electric system thermal, voltage, and stability limits so that instability, uncontrolled separation, or cascading failures of such system will not occur as a result of a sudden disturbance, including a cybersecurity incident, or unanticipated failure of system elements.”

Criteria B (Identifying Criteria)

B1. Administrative

The Reliability Standard requirement requires responsible entities to perform a function that is administrative in nature, does not support reliability and is needlessly burdensome.

This criterion is designed to identify requirements that can be retired or modified with little effect on reliability and whose retirement or modification will result in an increase in the efficiency of the ERO compliance program. Administrative functions may include a task that is related to developing procedures or plans, such as establishing communication contacts. Thus, for certain requirements, Criterion B1 is closely related to Criteria B2, B3 and B4. Strictly administrative functions do not inherently negatively impact reliability directly and, where possible, should be eliminated or modified for purposes of efficiency and to allow the ERO and entities to appropriately allocate resources.

⁸ In most cases, satisfaction of the Paragraph 81 criteria will result in the retirement of a requirement. In some cases, however, there may be a way to modify a requirement so that it no longer satisfies Paragraph 81 criteria. Recognizing that, this document refers to both options.

B2. Data Collection/Data Retention

These are requirements that obligate responsible entities to produce and retain data which document prior events or activities, and should be collected via some other method under NERC's rules and processes.

This criterion is designed to identify requirements that can be retired or modified with little effect on reliability. The collection and/or retention of data do not necessarily have a reliability benefit and yet are often required to demonstrate compliance. Where data collection and/or data retention is unnecessary for reliability purposes, such requirements should be retired or modified in order to increase the efficiency of the ERO compliance program.

B3. Documentation

The Reliability Standard requirement requires responsible entities to develop a document (*e.g.*, plan, policy or procedure) which is not necessary to protect BES reliability.

This criterion is designed to identify requirements that require the development of a document that is unrelated to reliability or has no performance or results-based function. In other words, the document is required, but no execution of a reliability activity or task is associated with or required by the document.

B4. Reporting

The Reliability Standard requirement obligates responsible entities to report to a Regional Entity, NERC or another party or entity. These are requirements that obligate responsible entities to report to a Regional Entity on activities which have no discernible impact on promoting the reliable operation of the BES and if the entity failed to meet this requirement there would be little reliability impact.

B5. Periodic Updates

The Reliability Standard requirement requires responsible entities to periodically update (*e.g.*, annually) documentation, such as a plan, procedure or policy without an operational benefit to reliability.

This criterion is designed to identify requirements that impose an updating requirement that is out of sync with the actual operations of the BES, unnecessary, or duplicative.

B6. Commercial or Business Practice

The Reliability Standard requirement is a commercial or business practice, or implicates commercial rather than reliability issues.

This criterion is designed to identify those requirements that require: (i) implementing a best or outdated business practice or (ii) implicating the exchange of or debate on commercially sensitive information while doing little, if anything, to promote the reliable operation of the BES.

B7. Redundant

The Reliability Standard requirement is redundant with: (i) another FERC-approved Reliability Standard requirement(s); (ii) the ERO compliance and monitoring program; or (iii) a governmental regulation (*e.g.*, Open Access Transmission Tariff, North American Energy Standards Board (“NAESB”), etc.).

This criterion is designed to identify requirements that are redundant with other requirements and are, therefore, unnecessary. Unlike the other criteria listed in Criterion B, in the case of redundancy, the task or activity itself may contribute to a reliable BES, but it is not necessary to have two duplicative requirements on the same or similar task or activity. Such requirements can be retired or modified with little or no effect on reliability and removal will result in an increase in efficiency of the ERO compliance program.

Criteria C (Additional data and reference points)

Use the following data and reference points to assist in the determination of (and justification for) whether to proceed with retirement or modification of a Reliability Standard requirement that satisfies both Criteria A and B:

C1. Was the Reliability Standard requirement part of a FFT filing?

The application of this criterion involves determining whether the requirement was included in a FFT filing.

C2. Is the Reliability Standard requirement being reviewed in an ongoing Standards Development Project?

The application of this criterion involves determining whether the requirement proposed for retirement or modification is part of an active Standards Development Project, with consideration for the status of the project. If the requirement has been approved by Registered Ballot Body and is scheduled to be presented to the NERC Board of Trustees, in most cases it will not need to be addressed in the five-year review. The exception would be a requirement, such as the Critical Information Protection (“CIP”) requirements for Version 3 and 4, that is not due to be retired for an extended period of time. Also, for informational purposes, whether the requirement is included in a future or pending Standards Development Project should be identified and discussed.

C3. What is the VRF of the Reliability Standard requirement?

The application of this criterion involves identifying the VRF of the requirement proposed for retirement or modification, with particular consideration of any requirement that has been assigned as having a Medium or High VRF. Also, the fact that a requirement has a Lower VRF is not dispositive that

it qualifies for retirement or modification. In this regard, Criterion C3 is considered in light of Criterion C5 (Reliability Principles) and C6 (Defense in Depth) to ensure that no reliability gap would be created by the retirement or modification of the Lower VRF requirement. For example, no requirement, including a Lower VRF requirement, should be retired or modified if doing so would harm the effectiveness of a larger scheme of requirements that are purposely designed to protect the reliable operation of the BES.

C4. In which tier of the most recent Actively Monitored List (AML) does the Reliability Standard requirement fall?

The application of this criterion involves identifying whether the requirement proposed for retirement or modification is on the most recent AML, with particular consideration for any requirement in the first tier of the AML.

C5. Is there a possible negative impact on NERC's published and posted reliability principles?

The application of this criterion involves consideration of the eight following reliability principles published on the NERC webpage.

Reliability Principles

NERC Reliability Standards are based on certain reliability principles that define the foundation of reliability for North American bulk power systems. Each reliability standard shall enable or support one or more of the reliability principles, thereby ensuring that each standard serves a purpose in support of reliability of the North American bulk power systems. Each reliability standard shall also be consistent with all of the reliability principles, thereby ensuring that no standard undermines reliability through an unintended consequence.

Principle 1. Interconnected bulk power systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.

Principle 2. The frequency and voltage of interconnected bulk power systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.

Principle 3. Information necessary for the planning and operation of interconnected bulk power systems shall be made available to those entities responsible for planning and operating the systems reliably.

Principle 4. Plans for emergency operation and system restoration of interconnected bulk power systems shall be developed, coordinated, maintained, and implemented.

Principle 5. Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk power systems.

Principle 6. Personnel responsible for planning and operating interconnected bulk power systems shall be trained, qualified, and have the responsibility and authority to implement actions.

Principle 7. The reliability of the interconnected bulk power systems shall be assessed, monitored, and maintained on a wide-area basis.

Principle 8. Bulk power systems shall be protected from malicious physical or cyber attacks. (footnote omitted).

C6. Is there any negative impact on the defense in depth protection of the BES?

The application of this criterion considers whether the requirement proposed for retirement or modification is part of a defense in depth protection strategy. In other words, the assessment is to verify whether other requirements rely on the requirement proposed for retirement or modification to protect the BES.

C7. Does the retirement or modification promote results or performance based Reliability Standards?

The application of this criterion considers whether the requirement, if retired or modified, will promote the initiative to implement results- and/or performance-based Reliability Standards.