

**NERC**

NORTH AMERICAN ELECTRIC  
RELIABILITY CORPORATION

# Independent Evaluation of NERC's Standard Process Manual Requirements

December 19, 2017

**RELIABILITY | ACCOUNTABILITY**



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# Executive Summary

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Pursuant to Section 400, Paragraph 405 of the North American Electric Reliability Corporation (“NERC” or “The Company”) Rules of Procedures (ROP), NERC is required to conduct an independent evaluation of its Reliability Standards Development processes and procedures through its Compliance and Certification Committee (CCC). The independent evaluation of the ROP was conducted by independent expert auditors selected by the NERC Board of Trustees. Under the direction of Mechelle Thomas, NERC’s Director of Internal Audit and Corporate Risk Management, and with active participation from CCC Observers, NERC engaged an independent audit firm (“independent auditor”) to conduct a review of NERC’s Reliability Standards Development procedures, determine compliance with the ROP, and evaluate enhancements to the Reliability Standards Development processes subsequent to the last independent review in 2014. This report has been prepared by the independent auditor.

## Scope and Method

To satisfy the ROP requirement, the independent auditor conducted a review of NERC’s compliance with the Reliability Standards Development sections of the ROP, Section 300, to cover the three year period between July 2014 and June 2017. As part of the NERC independent evaluation of the Reliability Standards Development requirements, the independent auditor performed the following procedures between May 2017 and August 2017:

- Obtained relevant ROP “shall statements” from NERC staff and assessed the completeness of the population of “shall statements” and the statements’ relevance to the audit objectives;
- Met with key process owners and gained an understanding of the Reliability Standards Development policies, processes and procedures;
- Assessed whether NERC is performing its responsibilities as set forth in the ROP and whether the existing policies, processes or procedures support the requirements outlined in the NERC ROP with respect to Reliability Standards Development;
- Assessed whether remediation efforts related to the 2014 independent review are designed appropriately and operating as intended; and
- Identified areas of non-compliance and process improvement opportunities, as needed.

The scope of the ROP included in the review (the “in-scope sections”) was as follows:

- **Section 300:** Reliability Standards Development (including Appendices 3A, 3B, and 3D)

To support compliance with the ROP, this report includes the independent auditor’s observations on areas where NERC generally conformed to the ROP, areas of non-compliance with the ROP, and specific process improvement opportunities. The criteria used to determine non-compliance was based on either the observation of specific evidence that NERC did not comply with the ROP requirements, or the lack of specific evidence to demonstrate that NERC clearly complied.

The independent auditor identified process improvement recommendations where evidence indicated that ROP requirements were achieved, but additional activities and internal controls could be implemented to enhance execution.

Between May 2017 and August 2017, the independent auditor met with NERC staff and performed detailed testing procedures on processes supporting the requirements of the in-scope Sections of the ROP, including related appendices. This report summarizes the meetings with key members of NERC staff and testing procedures performed by the independent auditor, as well as the independent auditor’s assessment of the areas of general compliance, areas of non-compliance, and areas of process improvement within the in-scope sections of the ROP. [Appendix A](#) provides the listing of NERC staff interviewed during the independent evaluation and

corresponding processes reviewed within the in-scope sections of the ROP.

This report includes the following sections:

- Summary descriptions of procedures performed to arrive at the conclusions and recommendations provided;
- Testing strategy, procedures and related results; and
- Recommended changes to the policies, processes, or procedures that could be improved.

The independent auditor's services were performed in accordance with Standards for Consulting Services established by the American Institute of Certified Public Accountants. The independent auditor's work was limited to the specific procedures and analysis described herein and was based only on the information made available through July 1, 2017. Accordingly, changes in circumstances after this date could affect the findings outlined in this report. The sections below detail the areas observed during the review where NERC generally conforms to the ROP, as well as relevant observations and recommendations to further improve Reliability Standards Development activities supporting the ROP.

## General Compliance with the ROP

As a result of the interviews and testing procedures performed within the in-scope sections of the ROP (including related appendices), the independent auditor identified many areas where NERC generally conformed to the ROP and showed improvement from the 2014 independent evaluation. The key themes of general compliance with the ROP were as follows:

- Alignment of Standards Development resources with other NERC departments, including Legal, Compliance and Standards to improve the quality and timeliness of standards development processes;
- Enhanced systematic method for storing required documents on the NERC website for Standards Development;
- Continued maturity of technologies related to Reliability Standards balloting;
- Improvement of tracking Standards Authorization Requests and Requests for Interpretation; and
- Development and implementation of the annual Registered Ballot Body attestation process

Observations from the 2014 evaluation have generally been addressed. In addition to addressing these observations, the areas of general compliance with the ROP indicate NERC's proactive approach to continue to enhance Reliability Standards Development processes.

## Standards Applicable to NERC

As part of the NERC independent evaluation of the Reliability Standards Development requirements, the independent auditor did not conduct a review of NERC-approved Reliability Standards Applicable to NERC (SAN), and did not assess NERC's compliance with the applicable requirements as SAN are not currently in effect and were only applicable in a limited way for a portion of the three year period between July 2014 and June 2017. NERC's General Counsel provided an explanation to the independent auditor of both the limited applicability of SAN over the three year period and how they complied. As of the end of the scope period, there were no reliability standards applicable to NERC.

## Observations

In addition to identifying areas where NERC generally conformed, the independent auditor noted specific observations of non-compliance with the ROP as well as areas for process improvement opportunities. For each observation, the corresponding recommendations include specific and actionable activities that NERC could implement to enhance overall compliance with the Reliability Standards Development ROP Section 300. While NERC has demonstrated a commitment to further improve its activities supporting the ROP, NERC also has

opportunities to enhance several of its key processes. Key observation themes on areas of non-compliance and process improvement include the following:

### Non-Compliance

1. If the Standards Committee officers determine a need for a special election, the Standards Committee shall communicate a request to the director of standards, who shall initiate a process to conduct the election. The SPM shall post a request for nominations on the NERC web page and distribute the announcement to applicable NERC e-mail lists, e.g., the Registered Ballot Body (RBB) of the Segment(s) involved. The election will be held 30 days after the announcement and shall use the same election process and formula employed in regular elections. The Board of Trustees shall be notified of the election results.

NERC was unable to provide evidence the Standards Committee notified the Board of Trustees of the special election for the period February 26 - March 9, 2015 for Segments 8 and 9. The election announcement was posted by an individual other than the Manager of Standards Information, who has assumed the responsibilities of the SPM.

There is a risk the Standards Committee does not notify the Board of Trustees of the results of special elections because there is no specific ownership of the notification, which could result in nonconformance with the ROP.

We recommend NERC notify the Board of Trustees of the results of the special election to remediate the current finding. In addition, we recommend NERC assign a specific person responsibility for communicating the election results to the Board of Trustees.

2. To be eligible for nomination to the Standards Committee, the ROP requires a nominee be an employee or agent of an entity registered in the applicable Segment. To allow verification of affiliation, a nominee shall be a registered user in the NERC RBB. In addition, the ROP also states the nominee is not required to be the same person as the entity's RBB representative for that Segment.

The ROP provides conflicting requirements regarding whether nominees to the Standards Committee must be members of the RBB. During the audit period, NERC accepted nominees to the Standards Committee who were not registered members of the RBB.

We recommend NERC review and revise the ROP to clearly state the eligibility requirements for nomination to and participation in the Standards Committee, in regards to membership in the RBB.

### Process Improvement Opportunities

1. (a) Enhance the annual self-selection (attestation) process for members of the RBB to consider not just (1) the entity's continued eligibility to participate in segments in which it is currently a member, but also (2) the individual representatives' continued eligibility to continue as representatives for the member entity and segment that the representative represents.  
(b) Secure the attestation process via user authentication to ensure only valid RBB member entity representatives complete the attestation.
2. Enhance written policies and procedures around (a) manual voting and (b) what to do when a quorum is not achieved.
3. Enhance the request tracking process for standards and revisions to ensure requests are identified and acted upon timely, and appropriate audit evidence of action is maintained.
4. Update the ROP to either reassign the duties of the Standards Process Manager (SPM) or provide for a formal delegation structure to ensure duties of the SPM have clear accountability.

Please see "Detailed Observations" for more information.

## Observation Themes and Associated ROP Sections

The heat map below summarizes the specific sections of the ROP where the independent auditor has identified areas of non-compliance or process improvement. Please refer to “Detailed Observations” for specifics on the observations of non-compliance and process improvement along with corresponding recommendations.

| Key Themes   | NERC Observation Themes and Associated ROP Sections |                                   |             |             |             |
|--|---|-----------------------------------|-------------|-------------|-------------|
|  | All   | Reliability Standards Development |             |             |             |
|  |   | 300                               | Appendix 3A | Appendix 3B | Appendix 3D |
| Registered Ballot Body Annual Voter Self-Selection (Attestation) |   |                                   |             |             |             |
| Notification to NERC Board of Trustees                           |   |                                   |             |             |             |
| Eligibility for Nomination to the Standards Committee            |   |                                   |             |             |             |
| Written Policies/Procedures                                      |   | 1                                 | 2           |             |             |
| Request Tracking   |   |                                   |             |             |             |
| Duties of the Standards Process Manager (SPM)                    |   |                                   |             |             |             |

1 – Policies/procedures around when members of the RBB do not cast their own ballot, and NERC records a vote on their behalf (“manual voting”).

2 – Policies/procedures when a quorum is not achieved in the 10 day period specified by the ROP.

**Legend:**

|  |                                   |
|--|-----------------------------------|
|  | Area of non-compliance            |
|  | Process improvement opportunities |

To evaluate compliance with the Reliability Standards Development requirements, the following criteria were used to determine whether an observation was an area of non-compliance with the ROP or an area of process improvement.

**Non-Compliance:** Non-compliance was based on either the observation of specific evidence that did not comply with the ROP or the lack of specific evidence to demonstrate that NERC clearly complied with ROP requirements.

**Process Improvement Opportunities:** Process improvement opportunities were identified where evidence indicated that the ROP requirements were achieved; however, the efficiency or effectiveness of the process could be improved.

## General Compliance with the ROP

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To evaluate the Reliability Standards Development processes in place between July 2014 and June 2017, the independent auditor met with 12 individuals on NERC's staff between May 2017 and August 2017 and collected supporting evidence across the three year review period. Please refer to [Appendix A](#) for the list of NERC staff interviewed during this review and to [Appendix B](#) for the evidence collected during the review. During walkthroughs and testing, a number of areas were observed where NERC generally complies with the Reliability Standards Development ROP requirements. Furthermore, it was noted that the non-compliance observation with the ROP from the 2014 independent review was remediated by NERC and many of the recommendations for improvement have also been addressed.

Throughout the review, NERC staff was accommodating and responsive to the requests of the independent auditor. NERC worked diligently to provide supplemental information requested by the independent auditor and answered questions in a timely manner.

### Areas of General Compliance with the ROP

Based on the procedures performed within the scope of Reliability Standards Development processes, and the results of those procedures, the independent auditor identified the following areas where NERC generally conforms to the requirements in the ROP.

1. NERC continues to align its Standards Development resources with other NERC departments, including Legal and Compliance teams to improve the quality of and streamline the Reliability Standards Development processes. Improvements in areas of performance of quality reviews, project tracking, and compliance monitoring contribute to the improvement of the Reliability Standards Development processes
2. NERC established a systematic method for publicly posting and maintaining required documents pertinent to the Reliability Standards Development processes on the NERC website.
3. NERC dedicates effort to maintaining and enhancing the Reliability Standards balloting system and its ability to effectively and efficiently report on ballot results.
4. NERC dedicates resources to track incoming requests and uses its existing tools and technology to track and manage requests such as Standards Authorization Requests and Requests for Interpretation.
5. NERC dedicates resources to manage the Registered Ballot Body (RBB) membership and established procedures to assess the RBB membership annually.

## Detailed Observations

This section of the report includes the independent auditor's observations and recommendations resulting from testing procedures and results. Detailed recommendations are designed with specific and actionable activities to enhance overall compliance with in-scope sections of the ROP.

### Registered Ballot Body Annual Voter Self-Selection (Attestation)

#### Compliance

The independent auditor noted no related instances of non-compliance.

#### Process Improvements

In accordance with Section 305 and Appendix 3D of the NERC ROP, the RBB comprises all organizations, entities, and individuals that (1) qualify for one of the Segments, (2) are registered with NERC as potential ballot participants in the voting on Reliability Standards, and (3) are current with any designated fees. Each applicant for membership to the RBB is vetted by NERC's General Counsel as part of the approval process, and membership in the RBB is verified annually.

A corporation or other organization with integrated operations or with affiliates that qualifies to belong to more than one Segment (e.g., Transmission Owners and Load-Serving Entities) may join once in each Segment for which it qualifies, provided that each Segment constitutes a separate membership and the organization is represented in each Segment by a different representative (§305). Entity representatives who join a segment are granted accounts in the NERC Standards Balloting System (NERC SBS) for the purpose of voting on actions related to reliability standards.

Each participant in the RBB, when initially registering to join, and annually thereafter, shall self-select to belong to one of the Segments (Appendix 3D).

| Process Improvement   |  |   |
|---|--|---|
| NERC ROP §:   | 305, ¶ 3.1<br>Appendix 3D, ¶ 2 (p.1)   |   |
| Observation   | Recommendation   | NERC Response   |
| <p>Effective identity access management (IAM) programs include periodic reviews of all user accounts and related privileges.</p> <p>Currently, NERC facilitates an annual self-selection process where individual representatives in the RBB can attest that they (or the entity they represent) are eligible to remain members of the RBB for the Segment(s) in which they are a member. For entities registered in multiple segments, NERC allows one individual representative to attest for their</p> | <p>In support of an effective IAM program, we recommend NERC implement a periodic review of SBS user accounts and related privileges. The review should be formally documented, and performed at regular intervals.</p> <p>This may be accomplished by formally designating one point of contact at each RBB member entity to perform the periodic review for user accounts to ensure each user account assigned to a representative at their entity is still valid and appropriate.</p> | <p>NERC staff will develop a procedure to implement a periodic review of SBS user accounts and related privileges, as recommended by the audit team.</p> <p>NERC staff will investigate the ability of the RBB software to be used to authenticate the attestation of RBB member entities and implement that capability if feasible.</p> <p>Based on the multiple conversations that occurred</p> |



**Detailed Observations**

|  |   |  |
|--|---|--|
| <p>entity's membership in all segments. During this annual self-selection process, individual representatives are not presented with, and do not attest to the individual representatives in their entity who represent the entity's other segments.</p> <p>While representatives are vetted during the initial application to join the RBB, the current annual attestation process does not include a review of NERC SBS users and related privileges (e.g., voting, commenting).</p> <p>NERC uses a system called "Checkbox" to facilitate the individual member attestations. This system provides an attestation form for RBB members, but the online form is not protected via user authentication (i.e., users do not have to log in to complete the attestation form). Anyone with the link provided by Checkbox can access and submit the attestation form.</p> <p>There is a risk that individuals who are no longer representatives maintain active accounts in the NERC SBS because no periodic review of NERC SBS user accounts and access privileges is performed. This could result in ineligible representatives casting unauthorized ballots in NERC SBS.</p> <p>In addition, there is a risk that NERC cannot provide assurance valid RBB representatives complete the attestation because Checkbox does protect the attestation form through user authentication. This could result in allowing ineligible RBB representatives to perform the required annual attestation.</p> | <p>Because NERC owns the SBS, user privileges for representatives at RBB member entities who vote should be reviewed by NERC.</p> <p>We also recommend NERC secure the attestation process via user authentication to ensure only valid RBB member entity representatives complete the attestation.</p> <p>Based on these recommendations and their action plan, NERC should evaluate the impact to the ROP and make any updates or clarifications to the ROP and related appendices as needed.</p> | <p>during the audit to clarify the attestation expectations outlined in Appendix 3D of the Rules of Procedure, NERC staff will evaluate whether modification to Appendix 3D should be proposed to industry to clarify language.</p> <p><u>Completion Date:</u><br/>2019 Q2</p> |
|--|---|--|

## Notification to NERC Board of Trustees

### Compliance

In accordance with Appendix 3B of the NERC ROP, the Registered Ballot Body (RBB) facilitates the election of industry Segment representatives to the NERC Standards Committee, who reports to the NERC Board of Trustees and is responsible for managing the NERC Standards Process Manual and other duties assigned by the Board. As Standards Committee membership vacancies occur between regular term elections, the Standard Committee is required to conduct special elections and notify the Board.

| Non-Compliance  |  |  |
|---|--|--|
| NERC ROP §:   | Appendix 3B, ¶ 1 (p. 6)  |  |
| Observation   | Recommendation   | NERC Response  |
| <p>If the Standards Committee officers determine a need for a special election, the Standards Committee shall communicate a request to the director of standards, who shall initiate a process to conduct the election. The SPM shall post a request for nominations on the NERC web page and distribute the announcement to applicable NERC e-mail lists, e.g., the RBB of the Segment(s) involved. The election will be held 30 days after the announcement and shall use the same election process and formula employed in regular elections. The Board of Trustees shall be notified of the election results.</p> <p>NERC was unable to provide evidence the Standards Committee notified the Board of Trustees of the special election for the period February 26 - March 9, 2015 for Segments 8 and 9. The election announcement was posted by an individual other than the Manager of Standards Information, who has assumed the responsibilities of the SPM.</p> <p>There is a risk the Standards Committee does not notify the Board of Trustees of the results of special elections because there is no specific ownership of the</p> | <p>We recommend NERC notify the Board of Trustees of the results of the special election to remediate the current finding. In addition, we recommend NERC assign a specific person responsibility for communicating the election results to the Board of Trustees.</p> | <p>NERC staff will provide a notification of the results of the special election in an upcoming quarterly report to the Board of Trustees.</p> <p>NERC staff will develop a procedure to ensure that the documentation of future special election results to the Board of Trustees is retained.</p> <p><u>Completion Date:</u><br/>2018 Q2</p> |

**Detailed Observations**

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| notification, which could result in nonconformance with the ROP. |  |  |
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**Process Improvements**

The independent auditor noted no significant related opportunities for process improvement.

**Eligibility for Nomination to the Standards Committee**

**Compliance**

In accordance with Appendix 3B of the NERC ROP, the Standards Committee membership term lasts two years, and elections are held annually. The Standard Committee is comprised of representatives from each valid Segment and any person or entity may submit a nomination, however the NERC ROP provides conflicting requirements for nominees.

| <b>Non-Compliance</b>   |  |  |
|---|--|--|
| <b>NERC ROP §:</b>  | <b>Appendix 3B, ¶ 3 (p. 3)</b>   |  |
| <b>Observation</b>  | <b>Recommendation</b>  | <b>NERC Response</b>   |
| <p>To be eligible for nomination to the Standards Committee, the ROP requires a nominee be an employee or agent of an entity registered in the applicable Segment. To allow verification of affiliation, a nominee shall be a registered user in the NERC RBB. In addition, the ROP states the nominee is not required to be the same person as the entity’s RBB representative for that Segment.</p> <p>The ROP provides conflicting requirements regarding whether nominees to the Standards Committee must be members of the RBB. During the audit period, NERC accepted nominees to the Standards Committee who were not registered members of the RBB.</p> | <p>We recommend NERC review and revise the ROP to clearly state the eligibility requirements for nomination to and participation in the Standards Committee, with regard to membership in the RBB.</p> | <p>NERC staff will work with the Standards Committee to review the language in Appendix 3B of the ROP, and revise the language if necessary, to ensure the eligibility requirements for nomination to and participation in the Standards Committee are clearly stated.</p> <p>Clarification statements will be added to the Standards Committee (SC) Nominations and Elections website, and the SC Nomination form.</p> <p><u>Completion Date:</u><br/>2019 Q2</p> |

**Process Improvements**

The independent auditor noted no significant related opportunities for process improvement.

**Written Policies/Procedures**

**Compliance**

The independent auditor noted no related instances of non-compliance.

**Process Improvements**

In accordance with the NERC ROP, the RBB serves as the consensus body voting to approve each new or proposed Reliability Standard, definition, Variance, and Interpretation. NERC has the ability to manually vote on behalf of the RBB, which is not specified in the ROP, and NERC should develop a formal written policy detailing the procedures for manual voting to ensure consistency with the Reliability Standards development process.

| Process Improvement   |   |   |
|---|---|---|
| <b>NERC ROP §:</b>  | <b>305, ¶ (p. 6)</b><br><b>Appendix 3A – Standards Process Manual</b>   |   |
| Observation   | Recommendation  | NERC Response   |
| <p>NERC Reliability Standards shall be approved by a RBB prior to submittal to the Board and then to Applicable Governmental Authorities for their approval. Decisions on Reliability Standards votes should be supported by evidence of individual votes cast by RBB members. This evidence should clearly support the individual votes, and the votes should support the approval decision by the RBB.</p> <p>Members of the RBB typically cast votes through the NERC Standards Balloting System (NERC SBS). In certain circumstances, NERC allows administrative staff to record votes in the SBS on behalf of RBB members ("manual voting"). The ROP does not address manual voting, and NERC has not developed a formal, written policy or procedure for manual voting. When manual voting occurs, NERC retains an email as evidence of the RBB member's vote through an informal process.</p> <p>Without a formal policy and procedures for manual voting, there is a risk that NERC does not consistently maintain sufficient evidence for votes cast manually by NERC staff. Without sufficient evidence, there is a risk that NERC cannot evidence the RBB member's desired vote in the</p> | <p>We recommend NERC develop a formal, written policy and procedure for manual voting. The policy and procedure should address the following:</p> <ul style="list-style-type: none"> <li>&gt; Definition of a manual vote</li> <li>&gt; when manual voting is appropriate</li> <li>&gt; who may cast a manual vote, and who may record the vote</li> <li>&gt; the process for NERC to record a manual vote, including how evidence is maintained</li> </ul> | <p>NERC will develop a formal, written policy and procedure for manual voting. The policy and procedure will address the following:</p> <ul style="list-style-type: none"> <li>• Definition of a manual vote</li> <li>• When manual voting is appropriate</li> <li>• Who may cast a manual vote, and who may record the vote</li> <li>• The process for NERC to record a manual vote, including how evidence is maintained</li> </ul> <p>The policy and procedure will be reviewed and approved by the Manager of Standards Information and Director of Standards. The document will be stored in a shared document space (e.g., Info Hub). Training covering the document will be conducted with the appropriate employees and/or stakeholders.</p> <p><u>Completion Date:</u><br/>2018 Q4</p> |

**Detailed Observations**

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|--|--|--|
| event of a dispute between members of the RBB and the Standards Committee. |  |  |
|--|--|--|

The ROP defines a quorum for voting, but does not address procedures for how to handle situations where a quorum is not achieved. NERC should develop a formal written policy detailing the procedures for achieving quorum to ensure consistency with the essential attributes of the Reliability Standards process such as balance and transparency.

| Process Improvement   |   |   |
|---|---|---|
| Observation   | Recommendation  | NERC Response   |
| <p><b>NERC ROP §:</b></p>   | <p><b>304</b> (p. 5)<br/><b>Appendix 3A, ¶ 1, 5</b> (p. 4)</p>  |   |
| <p>When the RBB conducts balloting, the voting window is open for a period of ten (10) calendar days, but may be extended until a quorum is achieved.</p> <p>When a quorum is not achieved, NERC follows up with RBB members who have not voted using a function in the SBS that sends an email reminder to those who have not yet cast a vote. The SBS does not currently maintain evidence of this email activity, and does not retain evidence of when a quorum was achieved.</p> <p>There is a risk that RBB members question the required openness of the process because NERC cannot clearly evidence fair email activity in the SBS, which could result in disputes between the RBB and the Standards Committee.</p> | <p>We recommend NERC develop a formal, written policy and procedure for responding to situations where a quorum is not achieved. The policy and procedure should address:</p> <ul style="list-style-type: none"> <li>&gt; what actions should be taken</li> <li>&gt; who should perform the actions</li> <li>&gt; when the actions should be taken</li> <li>&gt; how the actions should be evidenced</li> </ul> | <p>NERC will develop a formal, written policy and procedure for responding to situations where a quorum is not achieved. The policy and procedure will address:</p> <ul style="list-style-type: none"> <li>• What actions should be taken</li> <li>• Who should perform the actions</li> <li>• When the actions should be taken</li> <li>• How the actions should be evidenced</li> </ul> <p>The policy and procedure will be reviewed and approved by the Manager of Standards Information and Director of Standards. The document will be stored in a shared document space (e.g., Info Hub). Training covering the document will be conducted with the appropriate employees and/or stakeholders.</p> <p><u>Completion Date:</u><br/>2019 Q4</p> |

# Request Tracking

## Compliance

The independent auditor noted no related instances of non-compliance.

## Process Improvements

In accordance with the ROP, NERC is required to respond to standards authorization requests and requests for interpretation timely. To ensure all items are tracked, and acted upon timely, NERC should have a defined workflow tool to manage various requests related to the Reliability Standards development process to ensure accountability and compliance with the ROP.

| Process Improvement   |  |   |
|---|--|---|
| NERC ROP §:   | Appendix 3A, ¶ 3 (p. 30)   |   |
| Observation   | Recommendation   | NERC Response   |
| <p>Entities may submit to NERC requests for (a) a new standard, (b) a revision to a standard, (c) interpretation of a standard, (d) variation from the requirements of a standard, or (e) waiver of the ROP related to a standard. In addition, entities may notify NERC of errors related to standards. Under the ROP, NERC is required to take action within a certain timeframe, based on the request. Evidence of the action taken and date of the action should be retained in order to evidence compliance with the ROP. To ensure NERC and the Standards Committee take action on requests from entities timely, and maintains evidence of compliance, NERC should have a system in place to track and document these requests from submission through disposition.</p> <p>NERC receives incoming Standards Authorization Requests (SARs), Requests for Interpretation (RFIs), variations, errata, and waivers via a shared email account ("SARCOM" inbox). During testing we determined that:</p> <p>&gt; There is no formal process to gain access to the SARCOM inbox, and upon inquiry, the NERC</p> | <p>We recommend NERC implement a mechanism to allow entities to submit these requests into a workflow tool that tracks the request from submission through disposition. The tool should:</p> <ul style="list-style-type: none"> <li>&gt; allow entities to submit requests directly into the workflow (avoiding any manual processing)</li> <li>&gt; track all requests from submission through disposition</li> <li>&gt; track the current status of the request</li> <li>&gt; track dates of action taken, including the person taking action</li> <li>&gt; have elevated access to maintain the workflow tool provisioned/managed through the normal NERC IT process</li> </ul> | <p>NERC staff currently uses an Excel tracker for SAR, RFI, variations, and waivers that are submitted to NERC, and meets to review the accuracy tracker on a quarterly basis. All items have been resolved on this tracker. Requests of these types are also sent to the same email address (sarcomm@nerc.net) as mailing list change requests and general inquiries. NERC will research, and implement a mechanism if economically feasible, that allows entities to submit these requests into a workflow tool that tracks the request from submission through disposition. The tool will consider:</p> <ul style="list-style-type: none"> <li>• Allowing entities to submit requests directly into the workflow (avoiding any manual processing)</li> <li>• Tracking all requests from submission through disposition</li> <li>• Tracking the current status of the request</li> <li>• Tracking dates of</li> </ul> |

Detailed Observations

|   |  |   |
|---|--|---|
| <p>Standards Team manually maintains the population of individuals who currently have access to the SARCOM inbox.</p> <p>&gt; The NERC Standards Team did not have a formal process to consider the completeness of the population of incoming requests.</p> <p>&gt; Tracking of incoming items is accomplished through the native features of the email account (e.g., read/unread indicators).</p> <p>There is a risk that all incoming requests (e.g., SARs, RFIs) are not acted upon because a user with access to the SARCOM inbox inadvertently moves, deletes, or marks as read an email with a request, which could result in nonconformance of the ROP requirements to take action on requests within certain timeframes.</p> <p>In addition, there is a risk that all incoming requests (e.g., SARs, RFIs) are not acted upon because the process to identify actionable requests within the SARCOM inbox is manual, and currently has no check for completeness of emails received, which could result in nonconformance of the ROP requirements to take action on requests within certain timeframes.</p> <p>There is also a risk that requests requiring action under the terms of the ROP are not identified and acted upon because they are not identified upon receipt in the shared email account, which could result in nonconformance with the timelines required under the ROP.</p> |  | <p>action taken, including the person taking action</p> <ul style="list-style-type: none"> <li>• Having elevated access to maintain the workflow tool provisioned/managed through the normal NERC IT process</li> </ul> <p>If an automated workflow is not pursued or feasible, NERC will consider creating a separate email address for general standards inquiries and mailing list changes, in order to distinguish the different work streams and levels of service. In addition, NERC will communicate these changes with industry stakeholders to clarify the issue.</p> <p><u>Completion Date:</u><br/>2020 Q4</p> |
|---|--|---|

## Duties of the Standards Process Manager (SPM)

### Compliance

The independent auditor noted no related instances of non-compliance.

### Process Improvements

The responsibilities of the SPM, as required by the NERC ROP, are informally delegated to the Manager of Standards Information or their designees, and should be formally delegated for accountability.

| Process Improvement  |  |  |
|--|--|--|
| NERC ROP §:  | <b>307, ¶ 1</b> (p. 8)<br><b>317, ¶ 1</b> (p. 16)<br><b>Appendix 3B</b>  |  |
| Observation  | Recommendation   | NERC Response  |
| <p>The implementation and maintenance of certain provisions of the ROP should be administered by the SPM.</p> <p>The ROP has multiple provisions that identify the responsibilities of the SPM, but currently NERC does not have anyone with that title. The duties of the SPM have been assumed by the Manager of Standards Information. These responsibilities appear to be shared by other individuals on the Standards Information Team as well.</p> <p>There is a risk that duties required of the SPM under the ROP are not fulfilled because NERC does not currently have anyone with that title and has not formally delegated the duties required of the SPM.</p> | <p>We recommend NERC review and revise the ROP to either (a) reassign the duties of the SPM to a current position or (b) formalize a delegation structure for the duties of the SPM.</p> | <p>NERC Director of Standards in coordination with NERC Legal will formally assign or delegate the duties of Standards Process Manager (SPM) to the Manager of Standards Information, or their designee(s). In addition, NERC staff will review and propose appropriate revision(s) to the ROP where necessary.</p> <p><u>Completion Date:</u><br/>2018 Q4</p> |



## Appendix A: NERC Staff Interviewed

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Between May 2017 and August 2017, the independent auditor met with 12 individuals on NERC staff supporting the Reliability Standards Development processes. Please refer to the chart below for the staff interviewed.

| NERC Staff                                |       |                         |   |
|---|-------|-------------------------|---|
| Process                                   | ROP § | NERC Staff              | Title                                     |
| Reliability Standards Development Process | All   | Chris Larson            | Manager of Standards Information          |
|   |       | Darrel Richardson       | Senior Standards Developer                |
|   |       | Howard Gugel            | Senior Director, Standards, and Education |
|   |       | Lauren Perotti          | Legal Counsel                             |
|   |       | Mat Bunch               | Standards Developer                       |
|   |       | Monica Bales            | Senior Reliability Standards Analyst      |
|   |       | Scott Barfield-McGinnis | Senior Standards Developer                |
|   |       | Sean Cavote             | Manager of Standards Development          |
|   |       | Shamai Elstein          | Legal Senior Counsel                      |
|   |       | Soo Jin Kim             | Manager of Standards Development          |
|   |       | Steven Noess            | Director of Standards Development         |
|   |       | Wendy Muller            | Standards Development Specialist          |

## Appendix B: Catalog of NERC Documents Reviewed

During May 2017 and August 2017, the independent auditor reviewed internal NERC documentation related to the key Reliability Standards Development processes supporting the ROP requirements. Please refer to the chart below for a short summary of documents used as evidence during the review (some documents have been removed from the list due to confidentiality requirements). Evidence used by the independent auditor during the review were either reviewed via hard copy or soft copy, or observed on-screen with the assistance of NERC staff, in order to maintain confidentiality.

| Data Request Catalog                             |       |  |
|--|-------|--|
| Process  | ROP § | Document Name  |
| Reliability Standards Development                | All   | <ul style="list-style-type: none"> <li>• Charter for Standards Committee</li> <li>• Drafting Team Reference Manual</li> <li>• Drafting Team Rosters during the scope period</li> <li>• Drafting Team Scope/Guidelines</li> <li>• NERC Board of Trustees Meeting Agendas and Minutes during the scope period</li> <li>• Petitions to FERC during the scope period</li> <li>• Population of approved new or revised Reliability Standards during the scope period</li> <li>• Population of FERC directives during the scope period</li> <li>• Population of Standards Authorization Requests received during the scope period</li> <li>• Project Management Oversight Subcommittee (PMOS) Annual Calendars during the scope period</li> <li>• Project Tracking Spreadsheets during the scope period</li> <li>• Registered Ballot Body membership during the scope period</li> <li>• Reliability Standard Implementation Plans during the scope period</li> <li>• Reliability Standards Announcements during the scope period</li> <li>• Reliability Standards Ballot Results during the scope period</li> <li>• Reliability Standards Consideration of Comments during the scope period</li> <li>• Standards Committee Agendas and Meeting Minutes during the scope period</li> <li>• Standards Committee Meeting Schedule during the scope period</li> <li>• Standards Committee Rosters during the scope period</li> <li>• VRF/VSL Justifications during the scope period</li> <li>• VSL Guidelines</li> </ul> |
| Standards Process Management                     | 307   | <ul style="list-style-type: none"> <li>• Manager of Standards Information Job Description</li> </ul>   |
| Annual Reliability Standards Development Plan    | 310   | <ul style="list-style-type: none"> <li>• Annual Reliability Standards Development Plans during the scope period</li> </ul>   |
| Regional Entity Standards Development Procedures | 311   | <ul style="list-style-type: none"> <li>• Regional Criteria during the scope period</li> <li>• Regional Reliability Standards Development Procedures during the scope period</li> </ul>   |

Appendix B: Catalog of NERC Documents Reviewed

| Data Request Catalog  |       |   |
|---|-------|---|
| Process   | ROP § | Document Name   |
| Regional Reliability Standards  | 312   | <ul style="list-style-type: none"> <li>Population of approved new or revised Regional Reliability Standards during the scope period</li> </ul>  |
| Revisions to NERC Standard Processes Manual                                 | 315   | <ul style="list-style-type: none"> <li>Revisions to the NERC Standards Process Manual during the scope period</li> </ul>  |
| Accreditation   | 316   | <ul style="list-style-type: none"> <li>ANSI Accreditation Filings during the scope period</li> <li>NERC Board of Trustees Standards Oversight and Technology Committee Mandate</li> </ul>   |
| Coordination with the North American Energy Standards Board                 | 318   | <ul style="list-style-type: none"> <li>Member Representatives Committee membership</li> <li>North American Energy Standards Board Membership List</li> </ul>  |
| Archived Standards Information  | 319   | <ul style="list-style-type: none"> <li>Archived Reliability Standards</li> </ul>  |
| Appendix 3A – Standards Process Manual                                      | All   | <ul style="list-style-type: none"> <li>Glossary of Terms used in NERC Reliability Standards</li> <li>Reliability Standard Audit Worksheets (RSAWs) during the scope period</li> <li>Reliability Standard Quality Review Forms during the scope period</li> <li>Population of Requests for Interpretations received during the scope period</li> <li>Population of Appeals received during the scope period</li> <li>Population of Reliability Standards with an approved Variance during the scope period</li> <li>Standards Committee Procedure Approving Errata</li> <li>Population of Errata during the scope period</li> <li>Population of deviations, exceptions, and waivers to the Standards Process Manual during the scope period</li> </ul> |
| Appendix 3B – Procedures for Election of Members of the Standards Committee | All   | <ul style="list-style-type: none"> <li>Standards Committee Nominations during the scope period</li> <li>Standards Committee Special Elections during the scope period</li> <li>Standards Committee Term Elections during the scope period</li> </ul>  |
| Appendix 3D – Registered Ballot Body Criteria                               | All   | <ul style="list-style-type: none"> <li>Review of Self-Attestations received during the scope period</li> <li>Revisions to ROP Appendix 3D Registered Ballot Body Criteria during the scope period</li> </ul>  |

## Appendix C: Summary of Results of Independent Review

The chart below lists the in-scope ROP statements in section 300, including applicable appendices (3A, 3B, 3D) covered by this report. For each statement, the independent auditor has indicated whether NERC Generally Conforms, is an area of Process Improvement, or Non-Compliance. The criteria used to assess an area of general compliance with the ROP was based on observation or inspection of evidence that NERC performs Reliability Standards Development processes in line with the ROP requirement. The criteria used to assess a section of the ROP as Non-Compliance was based on the observation of specific evidence that did not comply with the ROP requirements, or the lack of specific evidence to show that NERC complied. The criteria used to assess a section of the ROP as Process Improvement was based upon evidence that indicated the ROP requirements were achieved; however, additional activities could be implemented to enhance the execution.

| Process   | Section | Paragraph/Sub-Section | Observation         |
|---|---------|-----------------------|---------------------|
| Reliability Standards Development   | All     | All                   | Process Improvement |
| Reliability Standards Development – General   | 301     | 1                     | Generally Conforms  |
| Essential Attributes for Technically Excellent Reliability Standards                | 302     | 1-10                  | Generally Conforms  |
| Relationship between Reliability Standards and Competition                          | 303     | 1-5                   | Generally Conforms  |
| Essential Principles for the Development of Reliability Standards                   | 304     | 1-6                   | Generally Conforms  |
| Registered Ballot Body  | 305     | 0                     | Process Improvement |
|   |         | 1-5                   | Generally Conforms  |
|   |         | 6                     | Process Improvement |
| Standards Committee   | 306     | 1-4                   | Generally Conforms  |
| Standards Process Management  | 307     | 1                     | Process Improvement |
| Steps in the Development of Reliability Standards                                   | 308     | 1-3                   | Generally Conforms  |
| Filing of Reliability Standards for Approval by Applicable Governmental Authorities | 309     | 1-3                   | Generally Conforms  |
| Annual Reliability Standards Development Plan                                       | 310     | 1                     | Generally Conforms  |
| Regional Entity Standards   | 311     | 1-5                   | Generally Conforms  |

**Appendix C: Summary of Results of Independent Review**

| Process   | Section | Paragraph/Sub-Section | Observation         |
|---|---------|-----------------------|---------------------|
| Development Procedures  |         |                       |                     |
| Regional Reliability Standards  | 312     | 1-5                   | Generally Conforms  |
| Other Regional Criteria, Guides, Procedures, Agreements, Etc.                               | 313     | 1-2                   | Generally Conforms  |
| Conflicts with Statutes, Regulations, and Orders  | 314     | 1-2                   | Generally Conforms  |
| Revisions to NERC Standard Processes Manual   | 315     | 1                     | Generally Conforms  |
| Accreditation   | 316     | 1                     | Generally Conforms  |
| Periodic Review of Reliability Standards  | 317     | 1                     | Process Improvement |
| Coordination with the North American Energy Standards Board                                 | 318     | 1                     | Generally Conforms  |
| Archived Standards Information  | 319     | 1                     | Generally Conforms  |
| Procedure for Developing and Approving Violation Risk Factors and Violation Severity Levels | 320     | 1-3                   | Generally Conforms  |
| Appendix A – Introduction   | 1.0     | 1-5                   | Process Improvement |
| App. A - Elements of a Reliability Standard   | 2.0     | 1-5                   | Generally Conforms  |
| App. A - Reliability Standards Program Organization   | 3.0     | 1-11                  | Generally Conforms  |
| App. A - Process for Developing, Modifying, Withdrawing or Retiring a Reliability Standard  | 4.0     | 0-19                  | Process Improvement |
| App. A - Process for Developing a Defined Term  | 5.0     | 0-2                   | Generally Conforms  |
| App. A - Process for Developing an Interpretation   | 7.0     | 1                     | Process Improvement |
| App. A - Process for  | 8.0     | 0-2                   | Generally Conforms  |

**Appendix C: Summary of Results of Independent Review**

| Process   | Section | Paragraph/Sub-Section | Observation         |
|---|---------|-----------------------|---------------------|
| Appealing an Action or Inaction   |         |                       |                     |
| App. A - Process for Developing a Variance                                  | 9.0     | 0-2                   | Generally Conforms  |
| App. A - Process for Approving Supporting Documents                         | 11.0    | 1                     | Generally Conforms  |
| App. A - Process for Correcting Errata                                      | 12.0    | 1                     | Generally Conforms  |
| App. A - Process for Conducting Periodic Reviews of Reliability Standards   | 13.0    | 1                     | Generally Conforms  |
| App. A - Public Access to Reliability Standards Information                 | 14.0    | 2                     | Generally Conforms  |
| App. A - Process for Updating Standard Processes                            | 15.0    | 1                     | Generally Conforms  |
| App. A - Waiver   | 16.0    | 1                     | Generally Conforms  |
| Appendix 3B - Procedures for Election of Members of the Standards Committee | All     | All                   | Non-Compliance      |
| Appendix 3D – Registered Ballot Body Criteria                               | All     | All                   | Process Improvement |

| <b>Legend:</b> |                                   |
|----------------|-----------------------------------|
|                | Area of non-compliance            |
|                | Process improvement opportunities |