NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

NERC Compliance Process Bulletin #2009-006

Interim Approach to Technical Feasibility Exceptions

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The purpose of this Compliance Process Bulletin is to provide guidance to Regional Entities and affected Registered Entities concerning the applicability and implementation of NERC Critical Infrastructure Protection (CIP) Reliability Standards that refer to "technical feasibility" and/or "technical limitations" pending the adoption of a permanent program to address technical feasibility exceptions (TFEs).

Background

Certain requirements under NERC Reliability Standards CIP-002 through CIP-009 provide for exceptions based on technical feasibility and/or technical limitations.[1] In approving these reliability standards in Order No. 706,[2] FERC required NERC to establish a structure for accountability for those who rely on a TFE as an exception to compliance with the explicitly stated requirements in the reliability standards. Specifically, the Commission directed NERC as the ERO *"to develop a set of conditions or criteria that a responsible entity must follow when relying on the technical feasibility exception contained in specific requirements of the CIP Reliability Standards."* Order No. 706 at P 178. The Commission also ruled that *"technical feasibility exceptions should be reported and justified and subject to approval by the ERO or the relevant Regional Entity."* Order No. 706 at P 209. To effectuate that approach, the Commission reached the following conclusions:

> 213. The Commission agrees with National Grid that Regional Entities should, in the first instance, receive and catalogue notices of technical feasibility exceptions that are claimed. Such notices must include estimates of the degree to which mitigation measures achieve the goals set by a CIP reliability standard and be in sufficient detail to allow verification of whether reliance on exceptions (or the associated mitigation measures) adequately maintains reliability and does not create reliability

[1] The "technically feasible" phrase is found in CIP-005-2 (and also CIP-005-1) Requirements R2.4, R2.6, R3.1, R3.2 and CIP-007-2 (and also CIP-007-1) Requirements R4, R5.3, R6, R6.3. Additionally, CIP-007 Requirement R2.3 uses "technical limitations" to similar effect.

[2] *Mandatory Reliability Standards for Critical Infrastructure Protection, 122 FERC ¶ 61,040 (2008).*

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> issues for neighboring systems. Initial submission of notices should be provided by responsible entities at least by the "compliant" stage of implementation in order to allow Regional Entities to plan for auditing exceptions, as described in more detail below.
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> 214. The Commission also agrees with National Grid, EEI and others that actual evaluation and approval of technical feasibility exceptions should be performed in the first instance in the audit process. This would allow assessment of exceptions within their specific context and thus facilitate greater understanding in valuating individual exceptions, as well as related mitigation steps and remediation plans. This also would increase the amount of sensitive information that remains on-site and reduces the risk of improper disclosure. In addition, it will allow the ERO and Regional Entities, informed by the initial notices discussed above, to include personnel in audit teams with sufficient expertise to judge the need for a technical feasibility exception and the sufficiency of preferred mitigation measures.
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> Order No. 706 at PP 213-214.

In terms of ongoing obligations of a Registered Entity relying on technical feasibility, the Commission directed NERC as ERO to develop:

> (1) A requirement that the responsible entity must develop, document and implement a mitigation plan that achieves a comparable level of security to the Requirement; and
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> (2) A requirement that use of the technical feasibility exception by a responsible entity must be accompanied by a remediation plan and timeline for elimination [of] the use of the technical feasibility exception.
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> Order No. 706 at P 192.

In developing the procedures and structure for Registered Entities to make use of TFEs, NERC staff and the Standards Drafting Team developed a proposed program under which an entity could request and receive approval of an exception from the terms of certain requirements on the grounds of technical feasibility and technical limitations.[3] Although the Commission had concluded that *"pre-approval could tax ERO and Regional Entity resources, delay implementation, and possibly create undue risks that sensitive information will be disclosed"* (Order No. 706 at P 212), the TFE Program Proposal was structured as a pre-approval process because of concerns that review of TFEs in the context of audits would require specialized expertise beyond that of existing

[3] "Request for Comments on Proposed Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standards and Related Amendments to NERC Rules Of Procedure," http://www.nerc.com/files/TFE_RoP_Changes_Posting_Letter_%2020090313%20FINAL.pdf, (March 16, 2009) ("TFE Program Proposal).

auditors, could take too long to complete, and expose the BPS to undue risk until an audit is completed.

The TFE Program Proposal was posted as a proposed amendment to the NERC Rules of Procedure (RoP) for public comment on March 16, 2009. Over 50 different sets of comments were submitted in late April and early May in response to the posting, and review of those comments and the evaluation of additional approaches are ongoing. Given that approval by both the NERC Board of Trustees and FERC may be required before a permanent TFE program could be implemented, an interim process will be required to address the assertion of TFEs in CIP audits, investigations, and spot-checks for reliability standards requirements for which certain Registered Entities reach the "compliant" stage on July 1, 2009.

Approach

With many Registered Entities having to be compliant with NERC Reliability Standards CIP-002 through CIP-009 by July 1, 2009 and without the adoption of a formal TFE process, NERC and the Regional Entities will need to address Registered Entities' requests for TFEs in the context of specific actions to implement and enforce the CIP-002 through CIP-009 standards. CIP audits, investigations and spot-checks are the most likely situations where questions about the appropriateness of a TFE will be addressed during the period prior to implementation of a formal TFE approval process.

Registered Entities that intend to assert a TFE in an audit, investigation, or spot-check are advised that they must provide documentary support for the assertion of that TFE. Specifically, Registered Entities will need to provide basic information about the particulars of the TFE to be asserted, information justifying the appropriateness of the TFE, and information concerning mitigating and compensating measures to be implemented along with the TFE in order to minimize any risk to reliability of the Bulk Electric System.

A Registered Entity seeking to rely on a TFE to establish compliance with one of the CIP Requirements should submit its request for a TFE to its Regional Entity through an appropriately secure means acceptable to that Regional Entity, such as through a secure portal or appropriately encrypted e-mail. Such requests should be submitted prior to the time the Registered Entity receives a notice of a CIP audit or spot-check and ideally at the time the Registered Entity is in the "compliant" stage of implementation.[4] However, Regional Entities should provide a reasonable amount of time for submission of TFE requests by those Registered Entities that will reach the "compliant" stage for specific requirements on July 1, 2009 or that have already received notices of CIP audits or spot-checks prior to July 1, 2009. The amount of time offered by a Regional Entity in such circumstances may depend on the facts of any particular case, but the Regional

[4] Order No. 706 at P 213.

Entity should, with few exceptions, receive any TFE request at least 30 days prior to the site visit portion of any audit or spot-check.[5]

In submitting a request for a TFE, a Registered Entity must include the following information in their submission of any requested TFE to its Regional Entity (or to NERC in the context of a NERC-led audit, investigation or spot-check):

1. Identification of the NERC Reliability Standard requirements for which the TFE is being asserted;
2. A description of the assets, critical assets, and critical cyber assets affected by the TFE, including vendor documentation detailing specific limitations of relevant equipment;
3. An explanation regarding why the requested exception is necessary;
4. Documentation reflecting the date that the requested exception was approved by the senior manager or delegate(s);
5. A brief description of the mitigating and compensating measures taken by the Registered Entity to address all risks to the reliability of the Bulk Electric System;
6. A list of any other Region in which the Registered Entity is seeking the requested TFE; and
7. The time period for which the TFE is requested to remain in place.[6]

As noted above, Registered Entities will be required to offer evidence to the auditor or investigator that the assertion of the TFE is in fact required. While obviously not currently in effect or binding, the proposed Section 3.0 of Appendix 4D to the RoP, which was included in the TFE Program Proposal, outlines a number of factors that could

[5] The CIP audits and spot-checks may, but are not required to, be done in conjunction of a routine compliance audit. To allow the Registered Entities sufficient time for providing all required information prior to a CIP spot-check, NERC or Regional Entities will provide a Registered Entity with at least 45 days notice of a CIP spot-check, so the Registered Entity may provide all required documentation and evidence to NERC or the Regional Entity at least 30 days prior to the CIP spot-check.

In the case of an investigation of a possible violation of a CIP standard in which the Registered Entity would not have an opportunity to provide an advanced submittal of a TFE request, the Registered Entity will need to work out with the compliance violation investigation team an appropriate time during the course of the investigation address any TFE. In most cases, the Registered Entity may simply provide the same submission it has made or would have made to the Regional Entity at the time the Registered Entity reaches the "Compliant" stage or in advance of a scheduled audit or spot-check.

[6] The time period must specify both the time when the TFE would become effective (assuming the conditions for which the TFE is required did not occur until after the effective date of the relevant requirement) and the actual or expected ending point after which the TFE would no longer be required due to full compliance without exception.

be taken into account in evaluating the appropriateness of a TFE. These factors include when "strict compliance"[7] with an applicable requirement:

(i) is not technically possible, is operationally infeasible, is precluded by technical limitations, or could adversely affect reliability of the Bulk Electric System to an extent that outweighs the reliability benefits of Strict Compliance with the Applicable Requirement; or

(ii) while technically possible and operationally feasible, cannot be achieved by the date by which the Responsible Entity is required to be in compliance with the Applicable Requirement, due to factors such as scarce technical resources, limitations on the availability of required equipment or components, or the need to construct, install or modify equipment during planned outages; or

(iii) would pose safety risks or issues that outweigh the reliability benefits of Strict Compliance with the Applicable Requirement; or

(iv) would conflict with, or cause the Responsible Entity to be non-compliant with, a separate statutory or regulatory requirement applicable to the Responsible Entity, the Covered Asset or the related Facility that must be complied with and cannot be waived or exempted; or

(v) would require the incurrence of costs that far exceed the benefits to the reliability of the Bulk Electric System of Strict Compliance with the Applicable Requirement, such as for example by requiring the retirement of existing equipment that is not capable of Strict Compliance with the Applicable Requirement but is far from the end of its useful life and replacement with newer-generation equipment that is capable of Strict Compliance, where the incremental risk to the reliable operation of the Covered Asset, the related Facility and the Bulk Electric System of continuing to operate with the existing equipment can be shown to be minimal.[8]

Without prejudging the outcome of NERC's consideration of comments on the TFE Program Proposal or FERC's consideration of any TFE approval process that might ultimately be filed, the foregoing factors provide an illustrative list of the kind of factors that would be taken into consideration in determining whether compliance could be found based on the assertion of a TFE.

One other key consideration for auditors and investigators in evaluation of a Registered Entity's claim to a TFE will need to be the Registered Entity's plans to mitigate or compensate for any risk to reliability of the Bulk Electric System associated

[7] The TFE Program Proposal defined "Strict Compliance" to be: "Compliance with the terms of an Applicable Requirement without reliance on a Technical Feasibility Exception." Proposed Section 2.46 of Appendix 4D of the TFE Program Proposal.
[8] Proposed Section 3.1 of Appendix 4D of the TFE Program Proposal.

with the assertion of a TFE. As noted above, FERC was concerned that reliance on TFEs should not adversely affect reliability of the Bulk Electric System. To that end, auditors and investigators will require Registered Entities that seek to rely on TFEs as the basis for compliance to provide: (1) documentation and evidence of implementation of a plan that achieves a comparable level of security to the requirement for which a TFE is being claimed; and (2) a remediation plan and timeline for eliminating the use of the TFE or evidence establishing that remediation by a date certain is not feasible due to technical limitations or other just cause. In the absence of a formal review and approval process like the TFE Program Proposal, these plans will be reviewed based on their individual merits in the context of an audit, investigation, or spot-check by NERC or the Regional Entity.

Compliance auditors conducting CIP audits and spot-checks will be expected to document in their audit or spot-check reports whether a Registered Entity has asserted a TFE claim; the basis for accepting any TFE claims as part of their findings of compliance; and the basis for rejecting any TFE claims as part of their findings of possible violations. Contrary to current practice, any spot-check report documenting one or more TFE claims must be submitted to NERC whether or not a possible violation was determined. Compliance investigators are similarly directed to document the assertion and any resolution of a TFE requested during the course of an investigation of a possible violation of a NERC CIP Reliability Standard.

In a case where a Registered Entity has asserted a TFE claim that was rejected by the team conducting the audit, investigation or spot-check after substantive review of the TFE request, the team shall issue a notice to the Registered Entity and to NERC stating that the TFE Request was disapproved and the reasons for the disapproval. The notice may also suggest revisions to the TFE request that, if made by the Registered Entity, would result in the team's approval of the TFE request. The notice shall also specify an effective date, which shall be no earlier than the thirty-first day following the date of the notice. During the period from the date of the notice to the effective date, the audit, investigation or spot-check will remain open, and the Registered Entity may submit a revised TFE request in accordance with the revisions suggested by the audit, investigation, or spot-check team. If the Registered Entity submits a revised TFE Request incorporating the revisions to the TFE request set forth in the notice of disapproval, then the team shall issue a revised notice approving the TFE and shall consider the TFE in its findings. If the entity does not submit a revised TFE request, then the case will be submitted to enforcement staff for processing of any possible violations found by the audit, investigation or spot-check team, and the entity will be afforded all due process rights associated with such actions.

In a case where a Registered Entity has been found in compliance on the basis of a TFE, that finding will remain in effect until the earlier of (1) the Registered Entity's next audit; (2) a subsequent compliance action identifies a failure by the Registered Entity to comply with the mitigation, compensation, or remediation plans provided in support of the TFE; or (3) the effective date of any program adopted to review and

approve TFEs, including the TFE Program Proposal, at which point the Registered Entity would be expected to make a formal TFE submission through that program.

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Process disclaimer: NERC reserves the right to issue new process bulletins or modify existing process bulletins when necessary and at its discretion.

REVISION HISTORY

Version	Date	Reviewers	Revision Description
1	July 1, 2009	NERC and Regional Entity Staff	Version 1.0