

130 FERC ¶ 61,050
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Marc Spitzer, Philip D. Moeller,
and John R. Norris.

North American Electric Reliability Corporation

Docket No. RR10-1-000

ORDER APPROVING TECHNICAL FEASIBILITY EXCEPTION PROCEDURES
AND ORDERING COMPLIANCE FILING

(Issued January 21, 2010)

1. On October 29, 2009, the North American Electric Reliability Corporation (NERC) filed a petition requesting approval of two amendments to its Rules of Procedure: (i) new section 412, “Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards”; and (ii) new Appendix 4D, “Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standards.” As discussed below, pursuant to section 215(f) of the Federal Power Act (FPA) and section 39.10(a) of the Commission’s regulations, we approve the proposed amendments and direct NERC to submit a compliance filing.¹

I. Background

A. Regulatory History

2. On February 3, 2006, the Commission issued Order No. 672 to implement the requirements of section 215 of the FPA governing electric reliability. Among other things, Order No. 672 authorizes the Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards that are subject to Commission review and approval.² On August 28, 2006, NERC, acting in its capacity as the Commission-

¹ See 16 U.S.C. § 824o(f) (2006); 18 C.F.R. § 39.10(a) (2009).

² *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006), *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

certified ERO, submitted eight Critical Infrastructure Protection (CIP) Reliability Standards to the Commission for approval. The Commission approved the CIP Reliability Standards on January 18, 2008³ and directed NERC to develop modifications to the CIP Reliability Standards to address a number of concerns, including developing specific conditions that a Responsible Entity must satisfy to invoke the “technical feasibility” exception.

3. Two CIP Reliability Standards provide for exceptions from compliance with requirements based on “technical feasibility.”⁴ NERC has previously explained that “technical feasibility” refers only to engineering possibility and is expected to be a “can/cannot” determination and that such determination is to be made in light of the Responsible Entity’s existing equipment and facilities.⁵ The Commission affirmed in Order No. 706 that the underlying rationale for a technical feasibility exception is that there is long-life equipment in place that is not readily compatible with a modern environment where cyber security issues are a concern.⁶

4. In Order No. 706, the Commission proposed to allow, in the near term, exceptions from compliance with the CIP Reliability Standards based on the concept of “technical feasibility.”⁷ The Commission posited that the term “technical feasibility” should be interpreted narrowly, without reference to considerations of business judgment, but concluded that exceptions should allow for operational and safety considerations.⁸ The Commission specified that, due to the nature of technical feasibility issues, exceptions should be granted on a case-by-case basis.⁹

³ *Mandatory Reliability Standards for Critical Infrastructure Protection*, Order No. 706, 122 FERC ¶ 61,040, *order on reh’g*, Order No. 706-A, 123 FERC ¶ 61,174 (2008), *order on clarification*, Order No. 706-B, 126 FERC ¶ 61,229 (2009).

⁴ Order No. 706 at P 157 (One requirement uses the term “technical limitations” to similar effect).

⁵ *See id.* (quoting from NERC’s FAQ document its guidance on the meaning of the phrase “where technical feasible”).

⁶ *Id.* P 180.

⁷ *Id.* P 158.

⁸ *Id.* P 178.

⁹ *Id.* P 179.

5. NERC was directed to develop a set of conditions or criteria that a Responsible Entity must follow to obtain a technical feasibility exception (TFE) to specific requirements of the CIP Standards.¹⁰ The Commission clarified that the TFE is “an exception that forms an alternative obligation.”¹¹ Thus, an integral issue in individual cases where legacy equipment presents a technical feasibility issue is “whether an alternative course of action protects the reliability of the Bulk-Power System to an equal or greater degree” than Strict Compliance¹² with the specific CIP Reliability Standard requirement.¹³ The Commission specified that the TFE process must include: mitigation steps, a remediation plan, a timeline for eliminating the use of the TFE unless appropriate justification otherwise is provided, regular review of the continued need for the TFE, internal approval by senior managers, and regional approval through the ERO.¹⁴ In addition, the Commission required NERC to submit an annual report to the Commission that includes a high-level analysis regarding the use of the TFE and its effect on the Bulk-Power System’s reliability.¹⁵

B. NERC’s Petition for Approval of TFE Procedures

6. NERC’s petition includes new section 412, “Requests for Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Reliability Standards” and new Appendix 4D, “Procedure for Requesting and Receiving Technical Feasibility Exceptions to NERC Critical Infrastructure Protection Standards” to its Rules of Procedure. Section 412 and Appendix 4D are intended to implement the Commission’s directive in Order No. 706 that NERC develop and adopt a set of conditions or criteria that a Responsible Entity must follow to rely on a TFE contained in a specific CIP requirement.¹⁶

¹⁰ *Id.* P 192.

¹¹ *Id.* P 184.

¹² NERC defines “Strict Compliance” to mean “Compliance with the terms of an Applicable Requirement without reliance on a Technical Feasibility Exception.” *See* North American Electric Reliability Corporation, October 29, 2009, Petition for Approval of Amendments to the Rules of Procedures at Appendix D, § 2.26 (hereinafter “NERC Petition”).

¹³ Order No. 706 at P 183.

¹⁴ *Id.* P 222.

¹⁵ *Id.* P 220-21 & n.74.

¹⁶ NERC Petition at 1.

7. Section 412 identifies and incorporates into NERC's formal Rules of Procedure the TFE procedure as set forth in Appendix 4D. Appendix 4D sets forth the procedure by which a Responsible Entity may obtain an exception from Strict Compliance with a requirement in certain CIP Reliability Standards. Appendix 4D includes the following sections: (1) Introduction, (2) Definitions, (3) Basis for Approval of a Technical Feasibility Exception, (4) Form, Contents and Submission of a TFE Request, (5) Review, Acceptance/Rejection and Approval/Disapproval of TFE Requests, (6) Implementation and Reporting by the Responsible Entity Pursuant to an Approved TFE, (7) Amendment of a TFE Request or Approved TFE, (8) Compliance Audit Requirements Relating to Approved TFE, (9) Termination of an Approved TFE Request, (10) Hearings and Appeal Process for Responsible Entity, (11) Confidentiality of TFE Requests and Related Information, and (12) Annual Report to FERC and other Applicable Governmental Authorities. NERC explains that a TFE is available for only those requirements of CIP Reliability Standards that explicitly include the phrase "technically feasible" or "technical limitations."¹⁷ Currently, TFEs are available for the following requirements: CIP-005-1: R2.4, R2.6, R3.1, and R3.2, and CIP 007-1: R2.3, R4, R5.3, R5.3.1, R5.3.2, R5.3.3, R6, and R6.3.

8. Under the proposed TFE procedure, a TFE request must demonstrate that Strict Compliance with an applicable requirement, evaluated in the context of the Responsible Entity's covered asset that is the subject of the TFE request, is not technically feasible or is operationally infeasible.¹⁸ Section 3.1 of Appendix 4D provides that a Responsible Entity may request and obtain approval for a TFE when Strict Compliance (i) is not technically possible or is precluded by technical limitations, (ii) is operationally infeasible or could adversely affect reliability of the Bulk Electric System to an extent that outweighs the reliability benefits of Strict Compliance with the applicable requirements, (iii) while technically possible and operationally feasible, cannot be achieved by the Responsible Entity's compliance date for 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

¹⁷ *Id.* at 8 and Appendix 4D, § 1.3.

¹⁸ Under the TFE procedures, a Responsible Entity will submit its TFE request to the applicable Regional Entity for adjudication. However, the Southwest Power Pool and the Electric Reliability Council of Texas (ERCOT) each is a Responsible Entity that currently has a division that is a Regional Entity (SPP Regional Entity and Texas Regional Entity, respectively). In addition, other Regional Entities (WECC and FRCC) themselves serve as Reliability Coordinators and, as such, are Responsible Entities. The Commission understands that each of these Responsible Entities would submit any TFE request to NERC.

planned outages, (iv) would pose safety risks or issues that outweigh the reliability benefits of Strict Compliance with the applicable requirement, (v) 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, (vi) would require the incurrence of costs that far exceed the benefits to the reliability of the Bulk Electric System of Strict Compliance, or (vii) is a Class-Type TFE as posted by NERC.¹⁹

9. NERC requests Commission action on its Petition by January 21, 2010 in order to resolve “the uncertainty that currently exists among Responsible Entities as to the procedures and processes for relying on a TFE.”²⁰

II. Notice and Responsive Pleadings

10. Notice of the filing was published in the *Federal Register*, with interventions and protests due on or before November 19, 2009.²¹ Exelon Corporation, Wisconsin Electric Power Company, Baltimore Gas and Electric Company, Constellation Energy Commodities Group, Inc., Constellation Energy Nuclear Group, LLC, Constellation NewEnergy, Inc. and Constellation Power Source Generation, Inc., Modesto Irrigation District, Electric Reliability Council of Texas, Inc., and Texas Regional Entity, a division of Electric Reliability Council of Texas, Inc. filed timely motions to intervene. Edison Electric Institute (EEI), American Public Power Association (APPA) and National Rural Electric Cooperative Association (NRECA) filed timely motions to intervene and joint comments. The Electric Power Supply Association (EPSA) filed a timely motion to intervene and filed comments out-of-time.

11. EEI, APPA and NRECA (together the “Joint Trade Associations”) filed joint comments generally supporting NERC’s petition. However, the Joint Trade Associations request that the Commission direct NERC to make certain changes to Appendix 4D to avoid the unintended consequence of creating an administrative burden that far exceeds the requirements established by Order No. 706. Specifically, the Joint Trade

¹⁹ As discussed in detail *infra* at P 25-29, NERC defines Class-Type TFE as “[a] type or category of equipment, device, process or procedure for which NERC has determined that a TFE from an Applicable Requirement is appropriate, as set forth on a list of such Class-Type TFEs posted on the NERC Website.” NERC Petition at Appendix 4D, § 2.6.

²⁰ NERC Petition at 2.

²¹ 74 FR 57668 (2009).

Associations believe that (1) the Commission should direct the ERO to establish an annual reporting requirement in lieu of quarterly reports, (2) the Commission should clarify that any process for evaluating alternative measures or compensating measures does not create compliance obligations that exceed those mandated for TFEs, and (3) the Commission should direct NERC to treat violations of CIP-006-1 R.1.1 and CIP-007-1 R3 in the same manner as a TFE.

12. EPSA filed comments out-of-time in support of both NERC's petition and the comments of the Joint Trade Associations. EPSA urges that the Commission direct NERC to make the three above-described clarifying changes requested by the Joint Trade Associations.

III. Discussion

A. Preliminary Matters

13. Pursuant to Rule 214 of the Commission's Rules of Practice and Procedure, 18 C.F.R. § 385.214 (2009), the timely, unopposed motions to intervene serve to make the entities that filed them parties to this proceeding.

B. Commission Determination

14. We approve the addition of new section 412 and Appendix 4D to NERC's Rules of Procedure. However, as discussed below, we have concerns regarding several of the provisions, and direct NERC to submit a compliance filing addressing our concerns.

1. Section 1.3 Scope of the TFE Exception

15. Section 1.3 of NERC's proposed Appendix 4D states that the TFE process "is applicable only to those requirements of CIP Standards CIP-002 through CIP-009 that expressly provide either (i) that compliance with the terms of the requirement is required where or as technically feasible, or (ii) that technical limitations may preclude compliance with the terms of the requirement."²² Accordingly, a Responsible Entity may obtain a TFE for the following "Applicable Requirements," CIP-005-1: R2.4, R2.6, R3.1, and R3.2 and CIP-007-1: R2.3, R4, R5.3, R5.3.1, R5.3.2, R5.3.3, R6, and R6.3. Future versions of these requirements will be eligible for TFEs provided they continue to expressly require either compliance "where or as technically feasible" or "that technical limitations may preclude compliance."²³

²² NERC Petition at Appendix 4D, § 1.3.

²³ *Id.*

16. NERC notes that, notwithstanding the Commission's directive in Order No. 706, it purposefully removed CIP-006-1 R1.1 and CIP-007-1 R3 from the list of Applicable Requirements to which the TFE process would apply.²⁴ CIP-006-1 R1.1 requires the Responsible Entity to enclose certain cyber assets within a six-sided physical boundary and, if a "six-wall" border cannot be established, the Responsible Entity must deploy and document alternative measures to control physical access to these cyber assets. CIP-007-1 R3 requires the Responsible Entity to establish and document a security patch management program for tracking, evaluating, testing, and installing applicable cyber security software patches for certain cyber assets. However, if the Responsible Entity does not install the required security patches, the Responsible Entity must document compensating measures applied to mitigate the risk exposure. NERC deleted these two requirements from the list of current Applicable Requirements because (i) the requirements' text does not contain "technical infeasibility" language, and (ii) per the text of the requirements, use of alternative measures or compensating measures to Strict Compliance is "self-executing."²⁵ NERC concluded that the text of the CIP-006-1 R1.1 and CIP-007-1 R3 requirements already allows for self-executing use of alternative measures or compensating measures for each of these requirements.²⁶

17. The Joint Trade Associations and EPSA object to NERC's removal of CIP-006-1 R1.1 and CIP-007-1 R3 from the list of Applicable Requirements for which the TFE process is available. The commentors argue that the exclusion of CIP-006-1 R1.1 and CIP-007-1 R3 is problematic because, if the alternative measures (CIP-006-1 R1.1), compensating measures (CIP-007-1 R3), or documentation of those measures are found inadequate, the Responsible Entity will be subject to a finding of a violation without any indication of what determines adequacy until after an audit is performed.²⁷ Further, the Joint Trade Associations and EPSA note that NERC does not define the criteria it and the Regional Entities will use to determine the adequacy of the alternative and compensating measures for CIP-006-1 R1.1 and CIP-007-1 R3. The Joint Trade Associations believe that NERC's failure to define the criteria used to determine this adequacy creates the potential for Regional Entities to use varying definitions and leaves the Responsible

²⁴ *See id.* at 9-11.

²⁵ *Id.* at 10.

²⁶ *Id.*

²⁷ Joint Trade Associations' November 19, 2009 Comments at 7-8 (JTA Comments).

Entities no way to determine what measures are adequate until after the compliance review.²⁸

18. In addition, the Joint Trade Associations are concerned that the proposed TFE process allows for mitigating measures that are not the equivalent of Strict Compliance, while the alternative or compensating measures under CIP-006-1 R1.1 and CIP-007-1 R3 must offer equivalent or better protection than Strict Compliance in order to be considered compliant.²⁹ For this reason, Responsible Entities that have already prepared TFE requests for CIP-006-1 R1.1 and CIP-007-1 R3, utilizing previous NERC and Commission statements, may need to implement more costly measures to reach this higher level of compliance. Therefore, the Joint Trade Associations request that the alternative and compensating measures associated with CIP-006-1 R1.1 and CIP-007-1 R3 not be subject to a higher level of compliance than those mandated for TFEs.³⁰

19. In their comments, the Joint Trade Associations also state that the removal of CIP-006-1 R1.1 and CIP-007-1 R3 from the list of current Applicable Requirements creates the potential for entities to be subject to a finding of a violation if the alternative measures or compensating measures or the documentation of these measures are determined to be non-compliant by a regional entity long after they were implemented by the Responsible Entity. The Joint Trade Associations assert that to mitigate this concern, with respect to CIP-006-1 R1.1 and CIP-007-1 R3, Regional Entities should be required to issue notices that are similar to the notices provided for in section 5.2.5 and section 5.2.6 of the TFE Procedure.

Discussion

20. The Commission reaffirms what it previously stated in Order No. 706 with respect to CIP-006-1 R1.1 and CIP-007-1 R3. With respect to CIP-006-1 R1.1, in Order No. 706 the Commission directed NERC to utilize the TFE procedures for any alternative measures sought for CIP-006-1 R1.1.³¹ Accordingly, the Commission directs NERC to

²⁸ *Id.* at 8.

²⁹ *Id.*

³⁰ *Id.* at 9.

³¹ Order No. 706 at P 559-60 (directing NERC “to treat any alternative measures for Requirement R1.1 of CIP-006-1 as a technical feasibility exception to Requirement R1.1, subject to the conditions on technical feasibility exceptions”).

revise section 1.3 as necessary to designate CIP-006-1 R1.1 as an “Applicable Requirement” subject to the TFE procedure.

21. With respect to CIP-007-1 R3, in Order No. 706, the Commission directed NERC:

to revise Requirement R3 to remove the acceptance of risk language and to impose the same conditions and reporting requirements as imposed elsewhere in the Final Rule regarding technical feasibility. . . . While we direct [NERC] to modify Requirement R3 of CIP-007-1 to remove the acceptance of risk language, [NERC], through the Reliability Standards development process may choose to allow exceptions to this requirement for technical infeasibility, consistent with the Commission’s determination on technical feasibility above.

22. NERC was given the discretion to allow technical feasibility exceptions to CIP-007-1 R3. Having chosen to allow exceptions to CIP-007-1 R3 for technical infeasibility, however, such exceptions must be implemented using the TFE procedure. NERC was not given the discretion to apply different requirements or a different process to a CIP-007-1 R3 exception than the technical feasibility “criteria and conditions” (i.e., Appendix 4D) that NERC has developed in response to the Commission’s determination on technical feasibility in Order No. 706. Simply put, an exception to CIP-007-1 is still a technical feasibility exception. NERC cannot avoid this result by relying on the fact that CIP-007-1 R3 does not include the phrase “technical feasibility.” Accordingly, the Commission directs NERC to revise section 1.3 as necessary to designate CIP-007-1 R3 as an “Applicable Requirement” subject to the TFE procedure.

23. The Commission notes that, with respect to the Joint Trade Associations’ comment that the alternative measures and compensating measures for requirements CIP-006-1 R1.1 and CIP-007-1 R3 “should not be subject to a higher level of compliance than TFEs,” their interpretation that “the TFE process allows the implementation of mitigating measures that are *not the equivalent of Strict Compliance*” is incorrect.³² In Order No. 706, the Commission stated that a Responsible Entity must develop, document, and implement a mitigation plan for a TFE that “achieves a comparable level of security to the Requirement.”³³ The Commission stated that “comparable level of security” means action that protects the reliability of the Bulk-Power System to “an equal or greater degree” than Strict Compliance would.³⁴ Thus, as discussed above, the

³² JTA Comments at 8.

³³ Order No. 706 at P 192.

³⁴ *See, e.g., id.* P 183.

requirements for any alternative measures or compensating measures for CIP-006-1 R1.1 and CIP-007-1 R3 must be consistent with the conditions imposed on TFEs; such measures must offer protection that is equal to or greater than Strict Compliance with the requirement.

24. Last, with respect to the Joint Trade Associations' request that the Regional Entities should be required to issue notices similar to those described in sections 5.2.5 and 5.2.6 of the TFE procedure to Responsible Entities for CIP-006-1 R1.1 and CIP-007-1 R3, this issue is resolved by our determination that CIP-006-1 R1.1 and CIP-007-1 R3 shall be "Applicable Requirements" subject to the TFE procedure.

2. Sections 2.6 & 3.1 Definition and Clarification of a Class Type TFE

25. NERC sets forth the criteria for qualifying to seek a TFE in section 3.1 of Appendix 4D. NERC states that the criteria are consistent with the Commission's guidance in Order No. 706,³⁵ as they reflect operational considerations, operational reasonableness, and technical safety. Section 3.1(vii) permits a "Class-Type TFE" to qualify for a TFE.³⁶ NERC defines "Class-Type TFE" as "[a] type or category of equipment, device, process or procedure for which NERC has determined that a TFE from an Applicable Requirement is appropriate, as set forth on a list of such Class-Type TFEs posted on the NERC Website."³⁷ In its petition, NERC states that it will develop and publish a list of common types or categories of equipment, devices, processes and procedures for which TFEs to specific Applicable Requirements are appropriate.³⁸ NERC's petition includes examples of equipment that will be on the initial Class Type TFE list including (1) computer network infrastructure equipment, such as switches or routers, that cannot run anti-malware software as otherwise required by CIP-007-1 R4; and (2) substation field equipment such as protective relays that cannot be configured to provide an appropriate use banner, as otherwise required by CIP-006-1 R2.6.³⁹

³⁵ See NERC Petition at 12.

³⁶ *Id.* at Appendix 4D, § 3.1(vii).

³⁷ *Id.* at Appendix 4D, § 2.6.

³⁸ *Id.* at 12-13.

³⁹ *Id.* at 13 & n.20.

Discussion

26. The Commission questions the utility of developing “Class Types” for the TFE process. If the purpose behind such provision is to expedite the TFE review process, then NERC must clearly define its procedure, including stating its criteria for identifying equipment as a Class-Type TFE. While NERC provides general examples of equipment and devices that would qualify as Class-Type TFEs, any listed Class-Type TFE must be explicitly identified, including as much detail as possible, such as manufacturer, make, and model number.

27. However, if the Class-Type TFE list will not be used to expedite the TFE review process, the Commission questions what purpose such a list serves. That is, it is unclear what would justify a Class-Type TFE list if such list will not be used to expedite the TFE review process. The Commission is concerned that the formulation of Class-Type TFE categories could undermine the Commission’s determination that TFEs should be reviewed on a case-by-case basis.⁴⁰ The Class-Type TFE mechanism proposed by NERC is not sufficiently specified to relieve the Commission’s concerns. We therefore direct the ERO to submit a compliance filing, within 90 days of the date of this order, identifying the purpose of a Class-Type TFE list and defining the process for identifying Class-Type TFEs and the procedure for publishing and maintaining the Class-Type TFE list. Further Commission action may be necessary depending on the content of this compliance filing.

28. NERC states the Class-Type TFE list will be provided on the NERC website. However, in light of security concerns, any Class-Type TFE list should only be available to Responsible Entities and Regional Entities in a non-public forum. Furthermore, the Commission directs NERC to provide a semi-annual, non-public report to the Commission tracking additions, modifications, and deletions to the Class-Type TFE list and describing the reasons behind the changes.

29. NERC should consider the far reaching effects that Class-Type TFEs may have on the security of the Bulk-Power System, and so should take an active role in the ongoing development of mitigation strategies to ensure the consistency of such strategies, where appropriate, across the Regions. To provide such consistency, NERC may need to provide guidance on what may be acceptable mitigation strategies for particular, individual Class-Type TFEs.⁴¹

⁴⁰ See Order No. 706 at P 179.

⁴¹ To protect the security of the Bulk-Power System, the Commission expects that NERC and the Regional Entities will take steps to ensure that any guidance regarding

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**3. Section 3.1(iv) and (vi) Basis for Approval of TFE:
Incurrence of Costs and Risks that Outweigh the Benefits to
the Reliability of the Bulk Electric System**

30. Section 3.1 of Appendix 4D states:

A Responsible Entity may request and obtain approval for a TFE when Strict Compliance with an Applicable Requirement, evaluated in the context or environment of the Responsible Entity's Covered Asset that is the subject of the TFE Request:

...

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

...

(vi) 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.

Discussion

31. With respect to section 3.1, which sets forth the threshold requirements for qualifying for a TFE, the Commission notes that Order No. 706 concluded that, with respect to "the problem of technical feasibility as it relates to long-life legacy equipment," "cost is a relevant consideration for those purposes," however "recourse to reasonable business judgment is unnecessary to . . . address the problem

potential mitigation strategies will be provided to Responsible Entities in a secured manner and that NERC, the Regional Entities, and the Responsible Entities will take appropriate steps to prevent inappropriate disclosure to individuals who do not need access to the guidance.

appropriately.”⁴² The Commission further stated in Order No. 706 that “[t]he term technical feasibility should be interpreted narrowly to not include considerations of business judgment, but we agree with commenters that it should include operational and safety considerations.”⁴³ The Commission finds that NERC’s proposed section 3.1 encompasses the concepts set forth in Order No. 706 regarding its rejection of using reasonable business judgment while still recognizing cost considerations.

32. The Commission is nevertheless concerned that the proposed phrasing of sections 3.1(iv) and (vi), respectively, fails to specify (1) what entity will be responsible for determining whether a safety risk or issue outweighs the reliability benefits of Strict Compliance with the Applicable Requirements, (2) what entity will be responsible for determining whether costs “far exceed the benefits” to reliability of the Bulk Electric System, and (3) the manner in which reliability benefits are intended to be quantified as to make this determination. It also appears that section 3.1 of the TFE Procedure will require NERC or the Regional Entities to verify that the threshold requirements set forth in section 3.1 have been met for each TFE request. However, given our preference for consistency in granting exceptions, we believe a uniform framework for establishing TFEs under the criteria in Section 3.1 is necessary and appropriate to ensure the effective administration of the TFE process. We therefore direct NERC: (1) to designate which entity or entities will determine under section 3.1(iv) what safety risks or issues outweigh the benefits of Strict Compliance with the Applicable Requirement, (2) to designate the entity or entities responsible for determining under section 3.1(vi) what costs “far exceed the benefits” to the reliability of the Bulk Electric System, and (3) to specify the manner in which reliability benefits are intended to be quantified to make this determination. The modifications set forth above should be made in a compliance filing within ninety days of the date of this order. In the event that multiple entities, such as the various Regional Entities, will be responsible for making the determinations under sections 3.1(iv) and (vi), NERC must include the steps that it will take to ensure consistency and security in administering the TFE process.⁴⁴

⁴² See Order No. 706 at P 132.

⁴³ *Id.* P 186.

⁴⁴ As the Commission stated in Order No. 706, it is critical that the ERO, Regional Entities, and the Commission understand the circumstances and manner in which responsible entities invoke a TFE. See Order No. 706 at P 220. As discussed in more detail below, NERC’s annual report to the Commission should address circumstances and justifications for TFEs and the mitigation measures used to address vulnerabilities. The Commission seeks this information to ensure consistency among the Regional Entities in

(continued...)

4. Section 3.2 Basis for Approval of TFE: Alternative Compliance

Discussion

33. Section 3.2 of Appendix 4D states:

A TFE does not relieve the Responsible Entity of its obligation to comply with the Applicable Requirement. Rather, a TFE authorizes an alternative (to Strict Compliance) means of compliance with the Applicable Requirement through the use of compensating measures and/or mitigating measures.⁴⁵

The Commission is concerned that the phrasing of this section fails to convey that alternative methods of compliance must provide a comparable level of security as Strict Compliance with the CIP requirement.

34. In Order No. 706, the Commission states that an integral issue in determining the adequacy of mitigation steps taken in individual cases where legacy equipment presents a technical feasibility issue is whether an alternative course of action protects the reliability of the Bulk-Power System to an “equal or greater degree” than Strict Compliance would.⁴⁶ The Commission specifically directed the ERO to develop a requirement ensuring that the Responsible Entity develops, documents, and implements a mitigation plan that achieves a comparable level of security to the requirement.⁴⁷

35. The Commission is concerned that a failure to specify a “comparable level of security” in the TFE procedures may result in the approval of mitigation plans which do not provide at least the level of protection the CIP Reliability Standard is intended to achieve. The Commission believes that the widespread use of a TFE process that does not explicitly require a comparable level of security in the entities’ mitigation plans may degrade the overall cyber security of the Bulk-Power System. We therefore reiterate that regardless of the reason that a TFE is being employed, NERC is responsible for ensuring that the Responsible Entities protect assets that are critical to the reliable operation of the

both the basis for granting TFEs and the accepted mitigation measures among similar approved TFEs.

⁴⁵ See NERC Petition at Appendix 4D, § 3.2.

⁴⁶ Order No. 706 at P 183.

⁴⁷ *Id.* P 192.

Bulk-Power System by addressing the vulnerabilities associated with each exception, utilizing measures that establish a comparable level of security as Strict Compliance. This alternative obligation continues until Strict Compliance is attained by the Responsible Entity requesting a TFE.⁴⁸ NERC is hereby directed to modify section 3.2 of Appendix 4D to require any alternative means of compliance to achieve a comparable level of security as Strict Compliance with the requirement. NERC must submit a revised section 3.2 of Appendix 4D in a compliance filing within ninety days of the date of this order.

5. Sections 4.2, 4.3.1 Form and Format of TFE Request

36. In section 4.2, NERC indicates that a TFE request shall consist of two parts: Part A and Part B. Part A is the notification to a Regional Entity of a TFE request. Part B of the TFE Request will contain the detailed material to support the TFE Request, including the documents, drawings, and other information necessary to provide the Regional Entity the details and justification for the requested TFE.⁴⁹ The Part A notification is intended to enable the Regional Entity to receive and catalog the request.⁵⁰ Part A information is required to be submitted through a Regional Entity's secure electronic portal using a template form provided by the Regional Entity. The Part A information will be used by the Regional Entity for the initial screening to accept or reject the TFE Request.⁵¹ NERC states that it will use some of the "Part A Required Information to develop its Annual Report to the Applicable Governmental Authorities and to provide oversight to the TFE process."⁵²

37. Section 4.3.1 of Appendix 4D states that the information specified in a Regional Entity's template form will specify the Part A required information and failure to provide all of this information will result in rejection of the TFE Request as incomplete.⁵³ In Attachment 3 of its filing, NERC provides a template Part A Form and Instructions.

⁴⁸ *Id.* P 184.

⁴⁹ NERC Petition at 14. The required Part B information includes "a detailed description of the compensating measures and/or mitigating measures the Responsible Entity will implement while the TFE is in effect." *Id.* at Appendix 4D, § 4.3.1.

⁵⁰ *Id.* at 14.

⁵¹ *Id.* at Appendix 4D, § 4.2(i).

⁵² *Id.*

⁵³ *Id.*

However, NERC indicates that the Part A template is “being provided for the Commission’s information and understanding and not for purposes of requesting approval of the Part A Form. The Part A Form and Instructions are not part of Appendix 4D. The electronic Part A Form may be modified by individual Regional Entities as necessary to be usable on their respective portals.”⁵⁴

Discussion

38. The Commission is concerned that NERC’s proposal does not require consistency among the regions with respect to the data required for the initial review process in Part A. In section 4.3.1 of Appendix 4D, NERC states “Part A of a TFE Request shall contain the Part A Required Information specified by the Regional Entity in its template referred to in section 4.2.” However, section 4.2 does not contain a list of the required information. We understand that NERC submitted an illustrative Part A template rather than a required form to provide regional flexibility and to allow Regional Entities to modify the template for use on their respective portals. However, the need for regional differences appears to be a formatting issue. We believe that the scope of the information required in Part A can and should be uniform among the Regional Entities regardless of the template layout. Therefore, the Commission directs NERC to establish a uniform set of required information for the Part A submission and incorporate it into its Rules of Procedure. Creating a uniform set of required information will ensure consistency among the regions and will ensure that NERC is receiving all of the information necessary to prepare its required reports. NERC should submit the above described revisions in its compliance filing within ninety days of the date of this order.

6. Section 5.2 Substantive Review of TFE Request for Approval or Disapproval

39. In section 5.2 of Appendix 4D, NERC states that the Regional Entity shall conduct a substantive review of an accepted TFE Request to determine if it should be approved in its entirety in accordance with section 3.1 or disapproved in its entirety. Section 5.2.1 requires the Regional Entity to conduct the substantive review in accordance with the established compliance monitoring processes under the NERC Uniform Compliance Monitoring and Enforcement Program (CMEP).⁵⁵

⁵⁴ *Id.* at 14 & n.22.

⁵⁵ CMEP is incorporated into Appendix 4C to the NERC Rules of Procedure. As a part of its substantive review, the Regional Entity must have access to Part B “Required Information” including any Confidential Information, Classified National Security Information, NRC Safeguards Information, and Protected FOIA Information. NERC

(continued...)

40. In the event a Regional Entity disapproves the TFE request, section 5.2.5 requires the Regional Entity to issue a notice to the Responsible Entity, with a copy to NERC, stating that the TFE Request is disapproved and stating reasons for the disapproval. In its notice disapproving a TFE Request, the Regional Entity must provide any revisions to the TFE Request that it is able to identify that, if made by the Responsible Entity, would result in approval of the TFE Request, including, for example, revisions to the Responsible Entity's proposed compensating measures and/or mitigating measures.⁵⁶ Section 5.2.5 also states that "if the Responsible Entity submits an amended TFE request to the Regional Entity incorporating the revisions to the TFE request set forth in the notice of disapproval, then the Regional Entity shall issue a notice in accordance with section 5.2.4, approving the revised TFE Request." Finally, section 5.2.6 requires that the Regional Entity state in the notice disapproving a TFE an Effective Date which shall be no earlier than the 61st calendar day following the date of notice.

Discussion

41. The Commission is concerned that some of the provisions in section 5.2.5 may place too heavy a burden on the Regional Entities that will be responsible for processing a potentially large number of complex TFE requests. In particular, those provisions could be read to place the burden on the Regional Entities to identify approvable compensating and/or mitigating measures if the Responsible Entity's original TFE is disapproved.

42. The Commission believes that this type of burden shifting in the context of cyber security is inappropriate. While we agree with the general notion that Regional Entities should be required to identify reasons for rejection and may recommend mitigation strategies, Regional Entities should not bear the burden of identifying a comprehensive list of revisions, which, if made, would definitionally result in the Responsible Entity receiving a TFE. A Regional Entity may not have sufficient information on the details of a Responsible Entity's cyber architecture to determine the most effective compensating and/or mitigating measures. Placing the burden on the Regional Entity to identify those measures could potentially delay timely determinations as a Regional Entity struggles with what particular strategies to identify. More importantly, given time and resource

Petition at Appendix 4D, § 5.2.1 (the capitalized terms are defined terms set forth in Appendix 4D, § 2 "definitions").

⁵⁶ NERC Petition at Appendix 4D, § 5.2.5. Compensating measures and/or mitigating measures, in the context of the TFE process, refers to the act of achieving, with respect to the particular CIP requirement at issue, a level of security that is comparable to Strict Compliance with the requirement.

limitations, this requirement could result in inadequate compensating or mitigating strategies. In this regard, the Commission notes that a Regional Entity is supposed to complete its substantive review and issue a notice of approval or rejection within one year after the TFE is received, and that Regional Entities do not have unlimited resources.⁵⁷ Due to concerns over the frequency and complexity of TFE use as well as concerns over both time and the adequacy of Regional Entity resources, the Commission believes that the burden of establishing a valid TFE should remain squarely with the Responsible Entity requesting it.⁵⁸ Accordingly, we direct NERC to change section 5.2.5 of Appendix 4D to address this concern.

7. Section 5.3 No Findings of Violations or Imposition of Penalties for Violations of an Applicable Requirement for the Period a TFE Request is Being Reviewed

43. Section 5.3 of the TFE procedures establishes a period of time during which the Responsible Entity would not be in violation, and would not be subject to sanctions or penalties for violations, of a Requirement that is the subject of a TFE Request. This period generally covers the period of time that a TFE request is subject to substantive review by the Regional Entity. Specifically, section 5.3 provides:

The Responsible Entity shall not be subject to imposition of any findings of violations, or imposition of penalties or sanctions for violations, for failure to be in Strict Compliance with an Applicable Requirement that is the subject of a TFE Request, for the period from:

- (i) the earlier of (A) the date of the Regional Entity's notice that the TFE Request is accepted as complete and (B) the date that is sixty (60) calendar days after submission of the TFE Request,

⁵⁷ As the Commission indicated in its order conditionally accepting NERC's 2010 Business Plan and Budget, it continues to have concerns about the adequacy of the Regional Entities' resources budgeted for the TFEs because resource constraints may affect the length of the TFE approval periods as well as the quality of TFE review. *See North American Electric Reliability Corp.*, 129 FERC ¶ 61,040, at P 35 (2009).

⁵⁸ The Commission, the ERO, and a Regional Entity are not precluded from exercising their respective authority to review a claimed exception, whether resulting from an incident, a complaint, on its own initiative, or otherwise.

to:

- (ii) (A) the Effective Date of the Regional Entity's notice that the TFE Request is rejected, or (B) the date of the Regional Entity's notice that the TFE Request is approved, or (C) the Effective Date of the Regional Entity's notice that the TFE Request is disapproved, whichever is applicable.

44. The Effective Date can be no less than 31 days after the Regional Entity's issuance of a notice of rejection (section 5.1.5) and no less than 61 days after the Regional Entity's issuance of a notice of disapproval (section 5.2.6). However, NERC's proposal contains no outer limit on the Effective Date. Thus, under NERC's proposal, the duration of this "no findings of violation period" is open-ended and subject to the Regional Entity's discretion.

Discussion

45. The Commission approves section 5.3 and also directs NERC to revise this section as discussed below. NERC must submit revisions to section 5.3 in a compliance filing within ninety days of the date of this order. As proposed, section 5.3 establishes a period during which a Responsible Entity will not be subject to enforcement action after a Regional Entity takes adverse action on a TFE Request. In particular, section 5.3 grants a Regional Entity broad discretion in determining the maximum period of time during which the Responsible Entity would not be in violation of an Applicable Requirement for which the Regional Entity has rejected or disapproved a TFE Request. As drafted, section 5 permits the Regional Entity to set an Effective Date⁵⁹ far in the future, thus maximizing the period for which violations could not be found and penalties could not be ordered. While some discretion is useful to allow the Regional Entity to tailor each case to its unique circumstances, section 5 is entirely open-ended, setting no maximum time period for the Effective Date. A Regional Entity may, by choosing a date far into the future, effectively grant amnesty to a Responsible Entity for an unspecified and indefinite period of time after rejection or disapproval of a TFE request. The Commission believes that stricter limits and guidelines regarding the Effective Date will curb the potential for abuse and likely improve the quality of TFE requests. Accordingly, the Commission requires NERC to adopt in the TFE procedures the following revisions.

⁵⁹ As set forth in section 5.2.6 of the TFE procedure, the "Effective Date" is the date by which the Responsible Entity is subject to a notice of Alleged Violation with respect to the Requirement that was the subject of the disapproved TFE Request, unless the Responsible Entity: "(i) has submitted an amended TFE Request . . . or (ii) has achieved Strict Compliance with the Applicable Requirement."

46. First, there must be an outer limit to the Regional Entity's determination of an Effective Date. Under NERC's proposal, the Regional Entity has the discretion to set the Effective Date so as to allow indefinite protection against a finding of a violation or imposition of a penalty.⁶⁰ The Commission is concerned that, without an outer limit specification for the Effective Date, Responsible Entities may have an incentive to submit inadequate TFE requests for the sole purpose of delaying a finding of violations and penalties. To address these concerns, the Commission directs NERC to revise sections 5.1.5 and 5.2.6 to set an outer limit for the Effective Date that the Regional Entity must observe absent exceptional circumstances.⁶¹ Although NERC should propose in its compliance filing an appropriate outer limit, the Commission notes that an outer limit of no longer than 60 days after the Regional Entity's issuance of a notice of rejection and no longer than 90 days after the Regional Entity's issuance of a notice of disapproval should be sufficient in most cases for a Responsible Entity to submit and obtain approval from the Regional Entity of a mitigation plan or to bring itself into Strict Compliance with particular Applicable Requirements of the CIP Standards. Because there are a number of pending TFE requests, the Commission directs NERC to use, on an interim basis until NERC files and the Commission approves the compliance filing addressing this issue, an outer limit on Effective Dates of no longer than 60 days after issuance of a notice of rejection and no longer than 90 days after the issuance of a notice of disapproval.

47. Second, the above-described outer limit should include a qualifier that would permit, where "exceptional circumstances" warrant, the Regional Entity to set an Effective Date that accommodates situations where the applicable outer limit is not sufficient for a Responsible Entity to achieve Strict Compliance with the Reliability Standard at issue. If the Regional Entity determines that exceptional circumstances warrant an Effective Date that is after the proscribed outer limit, we direct the Regional Entity to provide a detailed explanation of such determination in the notice of

⁶⁰ In Order No. 706, the Commission stated that it does not believe that blanket waivers from an enforcement action are appropriate in this context and noted that it has previously denied requests for what are essentially "safe harbors" from enforcement. *See* Order No. 706 at P 320.

⁶¹ Including the qualifier absent "exceptional circumstances" in the provision establishing an outer limit for an Effective Date provides flexibility to accommodate situations where an Effective Date set at the outer limit would not be sufficient for a Responsible Entity to achieve Strict Compliance with the CIP Reliability Standard at issue. This exception should be used to accommodate circumstances such as instances where equipment needs to be replaced and there is an unavoidable delay due to the manufacturer's required lead time to produce specialized equipment.

rejection/disapproval to the Responsible Entity and to provide a copy of such notice to NERC. This requirement, to be added in the compliance filing, would continue to afford the Regional Entity discretion in tailoring each case to its unique circumstances but would also ensure that any extended period be supported by a clear rationale and awarded only to legitimate TFE requests subject to NERC's oversight to, among other things, ensure correct and consistent application.

48. We also find that if a TFE Request was not made in good faith or was fraudulent, the Responsible Entity should be subject to an enforcement action where the provisions and protections of section 5.3 are not applicable. The Commission will not tolerate TFE Requests that were not made in good faith or that were fraudulent and we fully expect NERC and Regional Entity staff to monitor TFE requests to detect the misuse of the exceptions procedure. Accordingly, the Commission directs NERC to add a provision to this effect in its 90-day compliance filing.

8. Section 6.3 Implementation and Reporting by the Responsible Entity Pursuant to an Approved TFE

49. Section 6.0 of NERC's proposed Appendix 4D sets forth the Responsible Entity's reporting requirements for an approved TFE. NERC states that, if the TFE Request is approved, the Responsible Entity will be required to implement the approved compensating measures and/or mitigating measures within the time schedule set forth in the approved TFE. The Responsible Entity is also required to implement steps, or conduct research and analysis, towards achieving Strict Compliance with the Applicable Requirement and eliminating the TFE. The Responsible Entity will be required to submit quarterly reports to the Regional Entity on the Responsible Entity's progress in these two areas.

50. In addition to this quarterly report requirement, section 6.5 requires Responsible Entities to submit a separate annual report. Specifically, if the Expiration Date of the TFE is more than one year after the TFE Request was submitted, the Responsible Entity must submit annual reports to the Regional Entity supporting the continuing need and justification for the TFE.

51. The Joint Trade Associations suggests the Commission should direct the ERO to establish an annual reporting requirement in lieu of quarterly reports. They believe an annual reporting requirement is sufficiently responsive to the Commission's requirement to provide a regular review of TFEs. The Joint Trade Associations indicate that the likely administrative burdens of the proposed TFE process may not correspond to its value in reliability. They view the proposed reporting requirements as diverging from recent Commission decisions to make NERC compliance enforcement processes and procedures more streamlined and efficient so that more important matters can be addressed.

Discussion

52. The Commission disagrees with the Joint Trade Associations' suggestion that quarterly reports be replaced with an annual report. The Commission is not convinced that quarterly reporting will place an excessive administrative burden on Responsible Entities and believes that, in fact, quarterly reports will promote reliability by obligating a Responsible Entity to provide frequent updates regarding CIP Reliability Standards.⁶²

53. In addition, the Commission believes that quarterly reports will assist NERC, as the ERO, in developing an annual report analyzing the effects of TFE usage on Bulk Power System reliability. In Order No. 706, the Commission directed NERC to submit an Annual Report to the Commission that provides a wide-area analysis, and specified that the report must address, at a minimum, the frequency of the use of TFE provisions, the circumstances or justifications that prompted TFE use, the interim mitigation measures used to address vulnerabilities, and efforts to eliminate future reliance on the exception.⁶³ The Commission granted NERC discretion to determine what Responsible Entity information would be necessary to fulfill its reporting obligation to the Commission.⁶⁴ In this instance, NERC and the Regional Entities have determined that quarterly reports are necessary to monitor Responsible Entity TFE usage.

54. Thus, the Commission affirms the reporting requirements proposed in section 6.3 and section 6.5.⁶⁵

⁶² See Order No. 706 at P 222 (ordering NERC to “develop a set of criteria to provide accountability when a responsible entity relies on the technical feasibility exceptions in specific Requirements of the CIP Reliability Standards. As discussed above, structural elements of this framework include mitigation steps, a remediation plan, a timeline for eliminating use of the technical feasibility exception unless appropriate justification otherwise is provided, regular review of whether it continues to be necessary to invoke the exception...”).

⁶³ See *id.* P 220.

⁶⁴ See *id.* The Commission also specified that Responsible Entities must cooperate with the ERO and the Regional Entities in providing information deemed necessary for the ERO to fulfill its reporting obligation. See *id.* P 220 & n.4.

⁶⁵ What Section 6.8 describes as a “self-report” is not necessarily the kind of “self-report” that could result in a Responsible Entity being relieved in whole or in part from an otherwise applicable penalty. *North American Electric Reliability Corp.*, 124 FERC ¶ 61,015, at P 32 (2008). For example, a Responsible Entity’s “self-report” that it did not

(continued...)

9. Section 12.1 NERC Annual Report

55. Section 12.1 of Appendix 4D requires NERC to submit an Annual Report to the Commission that provides a wide-area analysis or analyses regarding the use of TFEs and the impact on the reliability of the Bulk Electric System. The information to be included is, at a minimum: (i) the frequency of use of the TFE Request process, (ii) categorization of the submitted and approved TFE Requests to date by broad categories, (iii) categorization of the circumstances or justifications on which the approved TFEs to date were submitted and approved, (iv) categorization of the compensating measures and mitigating measures implemented and maintained by Responsible Entities, (v) a discussion of Compliance Audit results and findings concerning the implementation and maintenance of compensating measures and mitigating measures, (vi) assessments, and (vii) discussion of efforts to eliminate future reliance on TFEs.

56. Specifically, NERC proposes that the information on the frequency of use of the TFE process is to include:

- (a) the numbers of TFE requests that have been submitted, accepted/rejected, and approved/disapproved, (b) the number of approved TFEs that are still in effect as of on or about the date of the Annual Report, (c) the numbers of approved TFEs that reached their Expiration Dates, or were terminated, and (d) the number of approved TFEs that are scheduled to reach Expiration Date during the ensuing year.⁶⁶

Discussion

57. The Commission is concerned that simply reporting the total number of requested and outstanding TFEs could distort the Commission's analysis of the pervasiveness of TFE use throughout the Bulk-Power System due to the fact that there may be multiple TFEs requests for a single asset; i.e., an individual piece of equipment. To provide the Commission with a more accurate picture of the frequency of TFE use, NERC's report must also distinguish the number of TFEs approved from the number of assets with approved TFEs. In addition, in NERC's annual report the information required by section 12.1(iii) and (iv) must be detailed enough to allow the Commission to evaluate the level of consistency among the Regional Entities in both the justification for granting

timely submit a quarterly or annual report would not, in all likelihood, be a mitigating factor in determining a penalty.

⁶⁶ NERC Petition at Appendix 4D, § 12.1(i).

TFEs and the accepted mitigation measures among similar approved TFEs. This information should be provided to the Commission in such a way as to avoid security concerns accompanying individual asset identification. Further, NERC's annual report also should include for each TFE request that was granted an Effective Date beyond the outer limits to be set forth in sections 5.1.5 and 5.2.6, due to exceptional circumstances, the number of days the request was not subject to imposition of any findings of violations or imposition of penalties or sanctions under section 5.3. The Commission directs NERC to submit a compliance filing within 90 days of the date of this order modifying section 12 of Appendix 4D to track this information for and report it in the annual report, broken down by Regional Entity. In addition, NERC should consider any other additional information that may help further refine and analyze the use of TFEs and their impact on the reliability of the Bulk-Power System.

The Commission orders:

(A) NERC's amendment to its Rules of Procedure, new section 412 and Appendix 4D, are hereby approved, as discussed in the body of this order, effective as of the date of this order.

(B) NERC is hereby required to submit a compliance filing within ninety days of the date of this order, as discussed in the body of this order.

By the Commission. Commissioner Norris voting present.

(S E A L)

Kimberly D. Bose,
Secretary.