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NERC requests that the Commission approve proposed Reliability Standard COM-001-3, with its new Requirements R12 and R13, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. NERC also requests that the Commission accept the proposed Implementation Plan, retirement of Reliability Standard COM-001-2.1, and VRFs and VSLs for new Requirements R12 and R13, all effective on the first day of the first calendar quarter that is 9 months after the effective date of the Commission’s order approving the standard. On this effective date, proposed Reliability Standard COM-001-3 will supersede and replace COM-001-2.1.

As required by Section 39.5(a) of the Commission’s regulations,⁵ this petition presents the technical basis and purpose of proposed Reliability Standard COM-001-3, summarizes the development history (Exhibit F), and demonstrates that the proposed Reliability Standard meets the criteria identified by the Commission in Order No. 672 (Exhibit C).⁶

I. EXECUTIVE SUMMARY

In approving Reliability Standard COM-001-2, the Commission “direct[ed] NERC to develop modifications to COM-001-2, or to develop a new standard, to address our concerns regarding ensuring the adequacy of internal communications capability whenever internal communications could directly affect the reliable operation of the Bulk-Power System.”⁷ NERC

communications that could have an impact on reliability.”). Unless otherwise designated, capitalized terms shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards* (“NERC Glossary of Terms”), available at http://www.nerc.com/files/Glossary_of_Terms.pdf.

⁵ 18 C.F.R. § 39.5(a) (2016).

⁶ The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. *See 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, at PP 262, 321-37, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

⁷ *See*, Order No. 808, at P 41.

developed Requirements R12 and R13 in proposed Reliability Standard COM-001-3 to address this directive.

Proposed Requirements R12 and R13 address internal communication capabilities whenever such communications could directly affect reliable operation of the Bulk-Power System (including through communications within functional entities). NERC's proposed revisions require that, consistent with the Commission's directive, responsible entities maintain internal Interpersonal Communication capabilities for the exchange of information necessary for Reliable Operation of the Bulk Electric System ("BES") (this includes, for example, communication capabilities between control centers and field personnel). These Requirements enhance reliability by clearly encompassing internal Interpersonal Communications within the scope of Reliability Standard COM-001-3.

NERC respectfully requests that the Commission approve proposed Reliability Standard COM-001-3, the associated Implementation Plan, and VRFs/VSLs for Requirements R12 and R13, as consistent with the directive in Order No. 808 and just, reasonable, not unduly discriminatory or preferential, and in the public interest.

II. NOTICES AND COMMUNICATIONS

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III. BACKGROUND

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,⁹ Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Nation's Bulk-Power System, and with the duties of certifying an Electric Reliability Organization ("ERO") that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1) of the FPA states that all users, owners, and operators of the Bulk-Power System in the United States will be subject to Commission-approved Reliability Standards.¹⁰ Section 215(d)(5) of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard.¹¹ Section 39.5(a) of the Commission's

⁸ Persons to be included on the Commission's service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission's regulations, 18 C.F.R. § 385.203 (2016), to allow the inclusion of more than two persons on the service list in this proceeding.

⁹ 16 U.S.C. § 824o (2012).

¹⁰ *Id.* § 824o(b)(1).

¹¹ *Id.* § 824o(d)(5).

regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.¹²

The Commission is vested with the regulatory responsibility to approve Reliability Standards that protect the reliability of the Bulk-Power System and to ensure that such Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA¹³ and Section 39.5(c) of the Commission's regulations, "the Commission will give due weight to the technical expertise of the Electric Reliability Organization" with respect to the content of a Reliability Standard.¹⁴

B. NERC Reliability Standards Development Procedure

The proposed Reliability Standard was developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.¹⁵ NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC Standard Processes Manual.¹⁶

¹² 18 C.F.R. § 39.5(a) (2016).

¹³ 16 U.S.C. § 824o(d)(2) (2012).

¹⁴ 18 C.F.R. § 39.5(c)(1) (2016).

¹⁵ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672 at P 334, FERC Stats. & Regs. ¶ 31,204, *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006) ("Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO's Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.").

¹⁶ The NERC *Rules of Procedure* are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>. The NERC *Standard Processes Manual* is available at http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf.

In its order certifying NERC as the Commission's ERO, the Commission found that NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards,¹⁷ and thus satisfy certain of the criteria for approving Reliability Standards.¹⁸ The development process is open to any person or entity with a legitimate interest in the reliability of the Bulk-Power System. NERC considers the comments of all stakeholders, and stakeholders must approve, and the NERC Board of Trustees must adopt a Reliability Standard before the Reliability Standard is submitted to the Commission for approval.

C. Procedural History of Proposed Reliability Standard COM-001-3

As described below, standard drafting team designed proposed Reliability Standard to include two new requirements on internal Interpersonal Communication capabilities in compliance with the Commission's directive in Order No. 808. This section summarizes the history leading to development of proposed Reliability Standard COM-001-3.

1. History of COM-001-2.1 and Order No. 808

NERC originally implemented Reliability Standard COM-001-0 (*Telecommunications*) on April 1, 2005. This version sought to ensure coordinated telecommunications among operating entities, and was submitted in NERC's 2006 petition for approval of proposed Reliability Standards.¹⁹ Prior to commission approval, Reliability Standard COM-001-0 was later revised and replaced by COM-001-1 to include certain missing compliance elements. In Order No. 693, the Commission approved Reliability Standard COM-001-1, while issuing directives to improve the standard, including a directive to include Generator Operators and

¹⁷ *N. Am. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 at P 250.

¹⁸ Order No. 672 at PP 268, 270.

¹⁹ *North American Electric Reliability Council & North American Electric Reliability Corp's CD containing its petition for approval of reliability standards*, Docket No. RM06-16-000 (filed Apr. 4, 2006).

Distribution Providers as applicable entities and identify specific requirements for telecommunications facilities.²⁰ An errata to the standard was accepted in 2009, resulting in Reliability Standard COM-001-1.1.

Subsequently, NERC developed further revisions to comply with the directives in Order No. 693 and improve the standard.²¹ In 2014, NERC filed Reliability Standard COM-001-2 to improve COM-001-1.1 and comply with remaining Commission directives in Order No. 693.²² Reliability Standard COM-001-2 established a clear set of requirements for the communications capabilities that various functional entities must maintain for reliable communications. On April 16, 2015, in Order No. 808, the Commission approved Reliability Standard COM-001-2, new definitions associated with the revisions, VRFs and VSLs for COM-001-2, and the proposed Implementation Plan. The Commission also directed a modification to Reliability Standard COM-001-2 to address “internal communications capabilities to the extent that such communications could involve the issuance or receipt of Operating Instructions or other communications that could have an impact on reliability.”²³ The Commission found that while Reliability Standard COM-001-2 would enhance reliability, it was not persuaded that the standard adequately covered all situations in which Operating Instructions are issued or received.²⁴

²⁰ *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, 72 Fed. Reg. 16416, FERC Stats. & Regs. ¶ 31,242, PP 487-93, 502-04, 508, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

²¹ *See, Petition of the North American Electric Reliability Corporation for Approval of Proposed Reliability Standards COM-001-2 and COM-002-4*, Docket No. RM14-13-000, at Section IV.A. and C, and Section V.A (filed May 14, 2014) (including more detailed history).

²² *Id.* (reflecting that the petition also included Reliability Standard COM-002-4 (*Operating Personnel Communications Protocols*)).

²³ Order No. 808, at P 1.

²⁴ *Id.* at P 3.

In particular, the Commission explained that Requirement R1.1 of the prior version of the standard better addressed internal Interpersonal Communication capabilities. The Commission stated that Requirement R1.1 of COM-001-1.1 provided that “each reliability coordinator, transmission operator, and balancing authority ‘shall provide adequate and reliable telecommunication facilities for the exchange of Interconnection and operating information . . . internally.’”²⁵ The Commission provided that even though Reliability Standard COM-001-2 applies to communications between functional entities within a single organization, Requirement R1.1 of COM-001-1.1 was broader by explicitly applying to internal communications within the same functional entity.²⁶ As a result, the Commission determined:

Thus, unlike the currently-effective Reliability Standard, COM-001-2 does not address the adequacy of internal telecommunications (or other internal communication systems) that may have an adverse effect on reliability, even within a single functional entity, including: (1) communications between geographically separate control centers within the same functional entity; and (2) communications between a control center and field personnel. These scenarios present a gap in reliability of the Bulk-Power System that NERC should address. Accordingly, pursuant to section 215(d)(5) of the FPA, we direct NERC to develop modifications to COM-001-2, or to develop a new standard, to address our concerns regarding ensuring the adequacy of internal communications capability whenever internal communications could directly affect the reliable operation of the Bulk-Power System.²⁷

NERC subsequently filed an errata to COM-001-2 to reflect typographical corrections, resulting in currently-effective Reliability Standard COM-001-2.1.²⁸

²⁵ *Id.* at P 41.

²⁶ *Id.* at PP 41-42.

²⁷ *Id.* at P 41.

²⁸ *Errata to Petitions of NERC for Approval of Reliability Standards BAL-003-1, COM-001-2, VAR-001-4, and Implementation Plan for Reliability Standard PRC-004-4*, Docket No. RD15-6-000 (filed Aug. 25, 2015).

2. **Project 2015-07 Internal Communications Capabilities**

NERC established Project 2015-07 Internal Communications Capabilities upon the Commission's issuance of Order No. 808, to comply with the Commission's directive to address internal communications capability, whenever such communications could directly affect Reliable Operation of the Bulk-Power System.²⁹ In order to achieve this goal, proposed Reliability Standard COM-001-3 incorporates two new Requirements R12 and R13, detailed in Section IV below. These two Requirements explicitly address internal Interpersonal Communication capabilities. The proposed standard is intended to replace and retire Reliability Standard COM-001-2.1, consistent with the Implementation Plan.

IV. JUSTIFICATION FOR APPROVAL

As discussed below and in Exhibit C, proposed Reliability Standard COM-001-3 satisfies the Commission's criteria in Order No. 672 and is just, reasonable, not unduly discriminatory or preferential, and in the public interest. The following subsections provide: (A) a description of the proposed standard, its reliability purposes, and applicable entities; (B) justification for the proposed Reliability Standard, detailing the proposed revisions; and (C) discussion of the enforceability of the proposed Reliability Standard. As discussed herein, the revised standard complies with Commission's directive in Order No. 808 for development of "modifications to COM-001-2, or ... a new standard, to address [the Commission's] concerns regarding ensuring the adequacy of internal communications capability whenever internal communications could directly affect the reliable operation of the Bulk-Power System."³⁰

²⁹ See, Standard Authorization Request, available at [http://www.nerc.com/pa/Stand/Project%20201507%20Internal%20Communications%20Capabilitie/2015-07 Internal Comm Cap SAR 06112015.pdf](http://www.nerc.com/pa/Stand/Project%20201507%20Internal%20Communications%20Capabilitie/2015-07%20Internal%20Comm%20Cap%20SAR%2006112015.pdf).

³⁰ *Id.* at P 41.

A. Proposed Reliability Standard COM-001-3 and Applicable Entities

The purpose of proposed Reliability Standard COM-001-3 is “[t]o establish Interpersonal Communication capabilities necessary to maintain reliability.”³¹ The proposed standard revises Reliability Standard COM-001-2.1 pursuant to the Commission’s directive in Order No. 808, by adding new Requirements R12 and R13 to expressly require applicable entities to “have internal Interpersonal Communication capabilities for the exchange of information necessary for the Reliable Operation of the BES. This includes communication capabilities between Control Centers within the same functional entity, and/or between a Control Center and field personnel.”³²

The standard applies to Transmission Operators, Balancing Authorities, Reliability Coordinators, Distribution Providers, and Generator Operators. These are the same entities currently subject to Reliability Standard COM-001-2.1. Inclusion of Distribution Providers and Generator Operators is also consistent with revisions made in Reliability Standard COM-001-2 to comply with the Commission’s directive in Order No. 693 that the standard should apply to Generator Operators and Distribution Providers.³³

³¹ See Exhibit A, attached herein

³² See, proposed Requirements R12 and R13. In Requirement R13, control center is not capitalized as it is a Distribution Provider control center. As reflected in the Rationale supporting Requirement R13, in Requirement R13 “control center is intended to mean the Distribution Provider facilities hosting operating personnel performing the operational functions of the Distribution Provider that are necessary for the reliable operation of the BES, often referred to as a distribution control center, or distribution center. Examples of Distribution Providers exchanging information necessary for the Reliable Operation of the BES include Distribution Providers included in restoration plans, load shed plans, load reconfiguration, and voltage control plans. The Distribution Provider must have the capability to exchange information whenever the internal Interpersonal Communications may directly impact operations of the BES.”

³³ See e.g., Order No. 693, at PP 487-493.

B. Justification for Proposed Reliability Standard COM-001-3 and Revisions

The revisions described herein and reflected at Requirements R12 and R13 of COM-001-3 are as follows:³⁴

R12. Each Reliability Coordinator, Transmission Operator, Generator Operator, and Balancing Authority shall have internal Interpersonal Communication capabilities for the exchange of information necessary for the Reliable Operation of the BES. This includes communication capabilities between Control Centers within the same functional entity, and/or between a Control Center and field personnel.

[Violation Risk Factor: High] [Time Horizon: Real-time Operations]

M12. Each Reliability Coordinator, Transmission Operator, Generator Operator, and Balancing Authority shall have and provide upon request evidence that it has internal Interpersonal Communication capability, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, operating procedures, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications.

R13. Each Distribution Provider shall have internal Interpersonal Communication capabilities for the exchange of information necessary for the Reliable Operation of the BES. This includes communication capabilities between control centers within the same functional entity, and/or between a control center and field personnel. *[Violation Risk Factor: Medium] [Time Horizon: Real-time Operations]*

M13. Each Distribution Provider shall have and provide upon request evidence that it has internal Interpersonal Communication capability, which could include, but is not limited to:

- physical assets, or
- dated evidence, such as, equipment specifications and installation documentation, operating procedures, test records, operator logs, voice recordings, transcripts of voice recordings, or electronic communications.

These modifications will explicitly require applicable entities to have internal Interpersonal Communication capabilities, in compliance with the Commission's directive in Order No. 808. As discussed in Section III.C above, in Order No. 808, the Commission was concerned that Reliability Standard COM-001-2 did not adequately address the adequacy of internal telecommunications. The proposed Requirements would ensure that Reliability

³⁴ See Exhibit A for full redline (the redline also includes edits to match NERC's Standard template, such as moving measures near the relevant requirements).

Standard COM-001-3 clearly addresses internal Interpersonal Communications capabilities that could involve the issuance or receipt of Operating Instructions or other communications that could directly impact reliability. This would include, for example, internal Interpersonal Communications capabilities for control centers within the same functional entity (including geographically separate control centers) and/or between a control center and field personnel.³⁵

The proposed Requirements are also drafted to ensure sufficient flexibility to allow for differences among individual entities regarding internal communications (such as different technologies or communication protocols arising due to different organizational structures) and avoid creating criteria that would be impractical and unnecessary.³⁶ As a result, the proposed Requirements strike a balance between ensuring that the standard expressly addresses internal Interpersonal Communications capabilities while retaining sufficient flexibility to effectuate communications and should be approved as just, reasonable, and in the public interest.

C. Enforceability of Proposed Reliability Standard COM-001-3

The Proposed Reliability Standard includes Measures that support each Requirement to help ensure that the Requirements will be enforced in a clear, consistent, non-preferential manner and without prejudice to any party. The proposed Reliability Standard also includes VRFs and VSLs for each Requirement. The VSLs and VRFs are part of several elements used to determine

³⁵ Note that in Order No. 808, the Commission stated that it “agree[d] with NERC and other commenters that Reliability Standard COM-001-2 applies to communications between functional entities within a single organization.... However, the application of COM-001-2 to different functional entities within the same organization, as discussed above, does not fully address our concern set forth in the NOPR regarding internal communications... unlike the currently-effective Reliability Standard, COM-001-2 does not address the adequacy of internal telecommunications (or other internal communication systems) that may have an adverse effect on reliability, even within a single functional entity, including: (1) communications between geographically separate control centers within the same functional entity; and (2) communications between a control center and field personnel. These scenarios present a gap in reliability of the Bulk-Power System that NERC should address. Accordingly, pursuant to section 215(d)(5) of the FPA, we direct NERC to develop modifications to COM-001-2, or to develop a new standard, to address our concerns regarding ensuring the adequacy of internal communications capability whenever internal communications could directly affect the reliable operation of the Bulk-Power System.” *See*, Order No. 808, at PP 40-41.

³⁶ *See, id.*, at P 53.

an appropriate sanction when the associated Requirement is violated. The VSLs provide guidance on the way that NERC will enforce the Requirements of the proposed Reliability Standards. The VRFs assess the impact to reliability of violating a specific Requirement.

NERC proposes updates to the VRFs and VSLs in effect for COM-001-2.1 to include the appropriate VRFs and VSLs for proposed Requirements R12 and R13. Requirement R12 (applicable to Reliability Coordinators, Transmission Operators, Generator Operators, and Balancing Authorities) has been assigned a “High” VRF and Requirement R13 (applicable to Distribution Providers) has been assigned a “Medium” VRF. These VRFs are consistent with the VRFs applicable to these functional entities under existing Requirements in Reliability Standard COM-001-2. In addition, both Requirements R12 and R13 have a “Severe” VSL because they are “binary” requirements. Exhibit E includes detailed analysis of the assignment of VRFs and the VSLs for proposed Requirements R12 and R13. As reflected in Exhibit E, the VRFs and VSLs for the new Requirements in proposed Reliability Standard comport with NERC and Commission guidelines.

V. EFFECTIVE DATE

NERC respectfully requests that the Commission accept proposed Reliability Standard COM-001-3 effective on the first day of the first calendar quarter that is 9 months after the effective date of the Commission’s order approving the standard. This effective date should provide sufficient time for applicable entities to incorporate any additional necessary infrastructure to effectuate compliance with Requirements R12 and R13 (including Generator Operators and Distribution Providers, which had not been responsible for compliance with Reliability Standard COM-001-1.1, Requirement R1.1).³⁷ In addition, NERC requests

³⁷ *Supra*, n. 20 and 33.

retirement of Reliability Standard COM-001-2.1 immediately prior to the Effective Date of COM-001-3, as the standard will replace and supersede currently-effective Reliability Standard COM-001-2.1.

VI. CONCLUSION

For the reasons set forth above, NERC respectfully requests that the Commission approve (i) proposed Reliability Standard COM-001-3 with new Requirements R12 and R13 and other associated elements included in Exhibit A; (ii) the Implementation Plan included in Exhibit B; (iii) the retirement of currently-effective Reliability Standard COM-001-2.1, and (iv) the VRFs and VSLs for new Requirements R12 and R13 included in Exhibit E.

Respectfully submitted,

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Date: August 15, 2016