

148 FERC ¶ 61,210  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

Docket No. RM14-13-000

Communications Reliability Standards

(September 18, 2014)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Commission proposes to approve Communications Reliability Standard COM-001-2 and Operating Personnel Communications Protocols Reliability Standard COM-002-4, developed by the North American Electric Reliability Corporation (NERC), which the Commission has certified as the Electric Reliability Organization responsible for developing and enforcing mandatory Reliability Standards. The Commission believes that the proposed Reliability Standards will enhance reliability over the currently-effective COM standards in several respects by, among other things, requiring adoption of predefined communication protocols, annual assessment of those protocols and operating personnel's adherence thereto, training on the protocols, and use of three-part communications. However, the Commission proposes to direct NERC to modify proposed Reliability Standard COM-001-2 to include internal communications capabilities.

DATES: Comments are due **[INSERT DATE 60 days after publication in the FEDERAL REGISTER]**.

ADDRESSES: Comments, identified by docket number, may be filed in the following ways:

- Electronic Filing through <http://www.ferc.gov>. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format.
- Mail/Hand Delivery: Those unable to file electronically may mail or hand-deliver comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Comment Procedures Section of this document.

FOR FURTHER INFORMATION CONTACT:

Vincent Le (Technical Information)  
Office of Electric Reliability  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426  
(202) 502-6204  
[Vincent.le@ferc.gov](mailto:Vincent.le@ferc.gov)

Michael Gandolfo (Technical Information)  
Office of Electric Reliability  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426  
(202) 502-6817  
[Michael.gandolfo@ferc.gov](mailto:Michael.gandolfo@ferc.gov)

Julie Greenisen (Legal Information)  
Office of the General Counsel  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426  
(202) 502-6362  
[julie.greenisen@ferc.gov](mailto:julie.greenisen@ferc.gov)

Robert T. Stroh (Legal Information)  
Office of the General Counsel  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426  
Telephone: (202) 502-8473  
[Robert.Stroh@ferc.gov](mailto:Robert.Stroh@ferc.gov)

SUPPLEMENTARY INFORMATION:

148 FERC ¶ 61,210  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Communications Reliability Standards

Docket No. RM14-13-000

NOTICE OF PROPOSED RULEMAKING

(September 18, 2014)

1. Pursuant to section 215 of the Federal Power Act (FPA),<sup>1</sup> the Commission proposes to approve two Reliability Standards, COM-001-2 (Communications) and COM-002-4 (Operating Personnel Communications Protocols), developed by the North American Electric Reliability Corporation (NERC), which the Commission has certified as the Electric Reliability Organization responsible for developing and enforcing mandatory Reliability Standards. In addition, the Commission proposes to approve three new terms to be added to the NERC Glossary of Terms, and the violation risk factors, violation severity levels, and proposed implementation plan for both revised standards.
2. Proposed Reliability Standard COM-001-2 is intended to establish a clear set of requirements for the communications capabilities that applicable functional entities must have in place and maintain. Proposed Reliability Standard COM-002-4 requires applicable entities to develop communication protocols with certain minimum requirements, including use of three-part communication when issuing Operating

---

<sup>1</sup> 16 U.S.C. § 824o (2012).

Instructions.<sup>2</sup> Proposed Reliability Standard COM-002-4 also sets out certain communications training requirements for all issuers and recipients of Operating Instructions, and establishes a flexible enforcement approach for failure to use three-part communication during non-emergencies and a “zero-tolerance” enforcement approach for failure to use three-part communications during an emergency.

3. The Commission believes that the proposed Reliability Standards will enhance reliability over the currently-effective COM standards in several respects. For example, the proposed Reliability Standards expand applicability to include generator operators and distribution providers and eliminate certain ambiguities in the currently-effective standard. Thus, the Commission proposes to approve the modified COM standards. However, the Commission seeks additional information and explanation on responsibility for use of three-part communication by transmission owners and generation owners that receive Operating Instructions. In addition, the Commission proposes to direct NERC to modify proposed Reliability Standard COM-001-2 to include internal communication capabilities, and seeks additional information on the lack of a testing requirement for distribution providers and generator operators in COM-001-2 and on the intended

---

<sup>2</sup> NERC proposes to define Operating Instruction as “[a] command by operating personnel responsible for the Real-time operation of the interconnected Bulk Electric System to change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. (A discussion of general information and of potential options or alternatives . . . is not considered an Operating Instruction.)”

meaning and use of the proposed terms Interpersonal Communication and Alternative Interpersonal Communication.

## I. Background

### A. Regulatory Background

4. Section 215 of the FPA requires a Commission-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval.<sup>3</sup> Once approved, the Reliability Standards may be enforced by the ERO subject to Commission oversight, or by the Commission independently.<sup>4</sup> In 2006, the Commission certified NERC as the ERO pursuant to FPA section 215.<sup>5</sup>

5. The Commission approved Reliability Standard COM-001-1 in Order No. 693.<sup>6</sup> In addition, the Commission directed NERC to develop modifications to (1) expand the applicability of the standard to include generator operators and distribution providers, (2) identify specific requirements for telecommunications facilities for use in normal and emergency conditions that reflect the roles of the applicable entities, and (3) include

---

<sup>3</sup> 16 U.S.C. §§ 824o(c) and (d).

<sup>4</sup> *See id.* § 824o(e).

<sup>5</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

<sup>6</sup> *See Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 508, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007); *see also North American Electric Reliability Corp.*, Docket No. RD09-2-000 (2009) (delegated letter order accepting Reliability Standard COM-001-1.1).

adequate flexibility for compliance to allow for the adoption of new technologies and cost-effective solutions.<sup>7</sup>

6. In Order No. 693, the Commission also approved Reliability Standard COM-002-

2. In addition, the Commission directed NERC to develop modifications to (1) include distribution providers as applicable entities and (2) establish tightened communications protocols, especially for communications during alerts and emergencies.<sup>8</sup>

7. NERC initiated Project 2006-06 to address the Order No. 693 directives related to Reliability Standards COM-001 and COM-002, resulting in two proposed Reliability Standards, COM-001-2 and COM-002-3. NERC also initiated Project 2007-02 to develop a new Reliability Standard (COM-003) that would require real-time system operators to use standardized communication protocols during normal and emergency operations, in order to improve situational awareness and shorten response time. The two projects ultimately merged when drafts of Reliability Standard COM-002-3 and COM-003-1 were combined into a single proposed Reliability Standard, COM-002-4.

**B. NERC Petition**

8. On May 14, 2014, NERC filed a petition seeking approval of two revised communication standards, COM-001-2 (Communications) and COM-002-4 (Operating

---

<sup>7</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 508.

<sup>8</sup> *Id.* PP 531-535, 540.

Personnel Communications Protocols).<sup>9</sup> Proposed Reliability Standard COM-001-2 establishes a set of requirements for the communications capabilities various functional entities must maintain to enable communications with identified functional entities. Proposed Reliability Standard COM-002-4 requires applicable entities to develop documented communications protocols. NERC states that the proposed standards are intended to address all relevant Commission directives from Order No. 693.<sup>10</sup> In addition, NERC states that the revisions reflected in proposed COM-002-4 are intended to address Recommendation No. 26 from the final report on the August 2003 blackout issued by the U.S.-Canada Power System Outage Task Force (Blackout Report) concerning the need to “[t]ighten communications protocols, especially for communications during alerts and emergencies.”<sup>11</sup>

#### **Proposed Reliability Standard COM-001-2**

9. NERC states in its petition that proposed Reliability Standard COM-001-2 is intended to establish requirements for Interpersonal Communication capabilities

---

<sup>9</sup> The proposed COM Reliability Standards are not attached to the NOPR. The complete text of the proposed Reliability Standards is available on the Commission’s eLibrary document retrieval system in Docket No. RM14-13 and is posted on the ERO’s web site, *available at* <http://www.nerc.com>.

<sup>10</sup> NERC Petition at 3.

<sup>11</sup> *Id.* (quoting *U.S.-Canada Power System Outage Task Force, Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations* at 3 (April 2004), *available at* <http://energy.gov/sites/prod/files/oeprod/DocumentsandMedia/BlackoutFinal-Web.pdf>).



necessary to maintain reliability.<sup>12</sup> NERC explains that proposed Reliability Standard COM-001-2 applies to reliability coordinators, balancing authorities, transmission operators, generator operators, and distribution providers. The proposed Reliability Standard includes eleven requirements and two new defined terms, “Interpersonal Communication” and “Alternative Interpersonal Communication,” that, according to NERC, collectively provide a comprehensive approach to establishing communications capabilities necessary to maintain reliability.<sup>13</sup> NERC states that the definitions provide clarity that an entity’s communication capability must be redundant and that each of the capabilities must not utilize the same medium.<sup>14</sup> According to NERC, the definitions improve the language used in the current Reliability Standard by eliminating the use of the more ambiguous phrases “adequate and reliable” and “redundant and diversely routed” that relate to “telecommunications facilities for the exchange of Interconnection and operating information.”<sup>15</sup>

10. The first six requirements address the Interpersonal Communication capability and Alternative Interpersonal Communication capability of the reliability coordinator,

---

<sup>12</sup> *Id.* at 15.

<sup>13</sup> *Id.* NERC defines Interpersonal Communication as “[a]ny medium that allows two or more individuals to interact, consult, or exchange information” and Alternative Interpersonal Communication as “[a]ny Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.” *Id.*

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at 15-16.

transmission operator, and balancing authority. Requirement R1 requires each reliability coordinator to have Interpersonal Communication capability with all transmission operators and balancing authorities within its reliability coordinator area, and with each adjacent reliability coordinator within the same interconnection. Requirement R2 requires each reliability coordinator to designate Alternative Interpersonal Communication capability with those same identified entities. Requirements R3 and R4 set out the communications capability requirements for a transmission operator. Under Requirement R3, Interpersonal Communication capability is required between the transmission operator's reliability coordinator, each balancing authority within its transmission operator area, each distribution provider and generator operator within its transmission operator area, and each adjacent transmission operator whether synchronously or asynchronously connected. Under Requirement R4, Alternative Interpersonal Communication capability must be designated between the transmission operator's reliability coordinator, each balancing authority within its transmission operator area, and each adjacent transmission operator. Requirements R5 and R6 set out similar requirements for each balancing authority, again identifying the specific functional entities for which the balancing authority must maintain Interpersonal Communication capability and for which it must designate Alternative Interpersonal Communication capability.

11. Requirements R7 and R8 address the communications capability that distribution providers and generator operators must maintain, with each required to have

Interpersonal Communications capability with its balancing authority and its transmission operator.

12. Requirement R9 requires each reliability coordinator, transmission operator, and balancing authority to test its Alternative Interpersonal Communication capability at least once each calendar month, and to initiate action to repair or designate a replacement if the test is unsuccessful. Requirement R10 requires the same entities to notify applicable entities (as identified in R1, R3 and R5) of the detection of an Interpersonal Communication capability failure that lasts 30 minutes or longer. Finally, Requirement R11 requires distribution providers and generator operators to consult with affected balancing authorities and transmission operators when a failure is detected in their Interpersonal Communication capability, and to determine a mutually agreeable action for the restoration of that capability.

13. NERC states in its petition that proposed Reliability Standard COM-001-2 improves the currently-effective Reliability Standard by: (1) eliminating terms that do not adequately specify the desired actions that applicable entities are expected to take in relation to their telecommunication facilities; (2) clearly identifying the need for applicable entities to be capable of Interpersonal Communication and Alternative Interpersonal Communication; (3) not requiring specific technology or systems to be utilized; and (4) including the distribution provider and generator operator as applicable

entities.<sup>16</sup> NERC adds that the proposed Reliability Standard also addresses the Commission's directives from Order No. 693 related to COM-001 by (1) adding generator operators and distribution providers as applicable entities; (2) identifying specific requirements for telecommunications capabilities for use in all operating conditions that reflect the roles of the applicable entities and their impact on reliability; and (3) including adequate flexibility to permit the adoption of new technologies.<sup>17</sup>

14. NERC proposes to retire the currently effective COM-001 Reliability Standard when proposed Reliability Standard COM-001-2 becomes effective, with the exception of Requirement R4, which addresses communications protocols. NERC requests that Requirement R4 be retired when proposed Reliability Standard COM-002-4 becomes effective.<sup>18</sup>

#### **Proposed Reliability Standard COM-002-4**

15. NERC states that proposed Reliability Standard COM-002-4 improves communications surrounding the issuance of Operating Instructions by requiring use of predefined communications protocols to reduce the possibility of miscommunication that

---

<sup>16</sup> NERC Petition at 18.

<sup>17</sup> NERC Petition at 4; *see also supra* n.6 and accompanying text.

<sup>18</sup> *Id.* at 22. NERC notes that the substance of Requirement R5 in the currently effective standard, COM-001-1.1, is addressed by Requirement R1 of EOP-008-1. Accordingly, NERC explains that the requirement has not been carried forward in proposed COM-001-2. In addition, NERC notes that Requirement R6 in the currently effective standard, which requires adherence to certain policies when using NERCnet, is not being carried forward, as NERC is in the process of transitioning NERCnet to industry, and in order to preserve NERC's ability to respond to new technologies without requiring modification of a Reliability Standard. *Id.* at 22-23.

could lead to action or inaction harmful to reliability.<sup>19</sup> NERC notes that the proposed standard requires use of the same protocols regardless of operating condition (i.e., Emergency or non-emergency), but requires operating personnel to use the documented communication protocols for three-part communications “without exception” during an Emergency.<sup>20</sup> As NERC explains:

[T]he proposed Reliability Standard employs the phrase “Operating Instruction during an Emergency” in certain requirements (R5, R6, R7) to provide a demarcation for what is subject to a zero-tolerance compliance approach and what is not.<sup>21</sup>

NERC explains that, for Operating Instructions issued during non-emergency operations, “an entity will be assessed under a compliance approach that focuses on whether an entity meets the initial training Requirement (either R2 or R3) and whether an entity performed the assessment and took corrective actions according to Requirement R4.”<sup>22</sup>

---

<sup>19</sup> *Id.* at 23. NERC states that COM-002-3 (which was adopted by the NERC Board but not submitted to the Commission for approval) is proposed for retirement in the Implementation Plan because the proposed Reliability Standard has been combined with proposed COM-003-1 to create proposed Reliability Standard COM-002-4. NERC states that Reliability Standard COM-002-3 has not been submitted to the Commission for approval, therefore, the currently effective version of COM-002 is COM-002-2. *Id.* at 23 n.43. The proposed Reliability Standard combines proposed Reliability Standard COM-002-3 and the former draft COM-003-1 into a single standard that addresses communications protocols for operating personnel in Emergency and non-emergency conditions. *Id.* at 23-24.

<sup>20</sup> *Id.* at 3.

<sup>21</sup> *Id.* at 25.

<sup>22</sup> *Id.* at 26.

16. Finally, NERC states that the proposed Reliability Standard includes distribution providers and generator operators as applicable entities, in accordance with the Commission's directive in Order No. 693, and in recognition of the fact that these types of entities can be recipients of Operating Instructions.<sup>23</sup>

17. Proposed Reliability Standard COM-002-4 includes seven requirements. Requirement R1 requires entities that can both issue and receive Operating Instructions (balancing authorities, reliability coordinators and transmission operators) to have documented communications protocols that include a minimum set of elements, including use of the English language unless otherwise specified, and required use of three-part communications for issuance and receipt of Operating Instructions.<sup>24</sup> Requirement R2 requires these same entities to conduct initial training on the communications protocols for each of their operating personnel responsible for the real-time operation of the bulk electric system. Requirement R3 requires distribution providers and generator operators (who generally only receive but do not issue Operating Instructions) to conduct initial training on three-part communication for each of their operating personnel who can receive an oral two-party, person-to-person Operating Instruction, prior to that individual operator receiving an oral two-party, person-to-person Operating Instruction.

---

<sup>23</sup> *Id.* at 27-28.

<sup>24</sup> *See id.* at 29.

18. Requirement R4 requires each balancing authority, reliability coordinator and transmission operator to assess, at least once every twelve months, its operating personnel's adherence to the documented communication protocols required in Requirement R1, and to provide feedback to its operating personnel on their performance.

19. Requirement R5 requires balancing authorities, reliability coordinators and transmission operators that issue an oral two-party, person-to-person "Operating Instruction during an Emergency" to use three-part communication, and to take an alternative action if a confirmation is not received. Requirement R6 requires all applicable entities (balancing authorities, distribution providers, generator operators, and transmission operators) that receive an oral two-party, person-to-person "Operating Instruction during an Emergency" to use three-part communication, i.e., to repeat the Operating Instruction and receive confirmation from the issuer that the response was correct, or request that the issuer reissue the Operating Instruction. Both Requirement R5 and R6 include the clarification that the requirement does not apply to single-party to multiple-party "burst" Operating Instructions. As noted above, NERC explains that Requirements R5 and R6 require use of three-part communication during an Emergency without exception, because "use of three-part communication is critically important if an Emergency condition already exists, as further action or inaction could increase the harmful effects to the Bulk Electric System."<sup>25</sup> NERC further explains, however, that

---

<sup>25</sup> *Id.* at 39.

applicable entities are expected to use three-part communications at all times when issuing and receiving Operating Instructions.<sup>26</sup>

20. Finally, Requirement R7 requires that when a balancing authority, reliability coordinator, or transmission operator issues a written or oral single-party to multiple-party “burst” Operating Instruction during an Emergency, they must confirm or verify that at least one receiver received the Operating Instruction.

21. NERC requests that proposed Reliability Standard COM-002-4 become effective on the first day of the first calendar quarter that is twelve months after the date that the standard is approved.

## **II. Discussion**

22. Pursuant to section 215(d)(2) of the FPA, the Commission proposes to approve proposed Reliability Standards COM-001-2 and COM-002-4, the three new definitions referenced in the proposed standards (Operating Instruction, Interpersonal Communication, and Alternative Interpersonal Communication), and the assigned violation risk factors and violation severity levels and proposed implementation plan for each standard. We believe that proposed COM-001-2 will enhance reliability by expanding the applicability of currently effective COM-001-1.1 to include generator operators and distribution providers. Further, this modification to the applicability provision satisfies the Commission’s directive in Order No. 693.

---

<sup>26</sup> *Id.* at 25-26.



23. Likewise, we believe that proposed Reliability Standard COM-002-4 enhances reliability by expanding the applicability of the standard to include distribution providers that receive Operating Instructions, in accordance with the directive in Order No. 693. Moreover, proposed COM-002-4 requires the development of communication protocols for operating personnel that issue or receive Operating Instructions that require the use of three-part communication, and adopts a zero-tolerance approach in enforcing the use of three-part communications during an Emergency. While the zero-tolerance approach applies only during an Emergency, Requirement R4 imposes an important requirement for an entity to assess, at least once every twelve months, its operating personnel's adherence to the documented communication protocols required in Requirement R1, and to provide feedback to its operating personnel on their performance. This requirement should help ensure a high level of compliance with three-part communication at all times, not just during an Emergency. Without this mechanism, poor performance at routine times could eventually lead to poor performance at critical times. The Commission believes that the establishment of clear communication protocols based on three-part communication provides a fundamental element of maintaining Bulk-Power System reliability. Thus, the revisions reflected in proposed Reliability Standard COM-002-4 appear to address Recommendation No. 26 from the final report on the August 2003 blackout issued by the U.S.-Canada Power System Outage Task Force (Blackout Report) concerning the need to "[t]ighten communications protocols, especially for

communications during alerts and emergencies.”<sup>27</sup> Finally, COM-002-4 eliminates the ambiguity surrounding the meaning of “directive” in the currently-effective version of COM-002-2.

24. While we propose to approve COM-001-2 and COM-002-4 for the reasons stated above, we also have questions regarding specific provisions of the proposed Reliability Standards, and we seek further explanation or comment from NERC and others.

Accordingly, we discuss below the following issues: (1) responsibility for use of three-part communication by transmission owners and generation owners that receive Operating Instructions; (2) whether proposed COM-001-2 should be modified to address internal communication capability requirements, or to address testing requirements for distribution providers and generator operators; and (3) clarifications regarding the proposed terms Interpersonal Communication and Alternative Interpersonal Communication.

**A. Applicability of Communications Standard Requirements to Transmission Owners and Generator Owners**

25. Consistent with the Commission directives in Order No. 693, proposed Reliability Standard COM-001-2 will apply to generator operators and distribution providers (in addition to transmission operators, balancing authorities, and reliability coordinators).

Likewise, proposed Reliability Standard COM-002-4 will apply to distribution providers

---

<sup>27</sup> *U.S.-Canada Power System Outage Task Force, Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations* at 3 (April 2004) (Blackout Report), available at <http://www.ferc.gov/industries/electric/indus-act/blackout.asp>.

(in addition to balancing authorities, reliability coordinators, transmission operators, and generator operators).

26. Proposed Reliability Standards COM-001-2 and COM-002-4 do not identify transmission owners or generator owners as applicable entities. Are there instances, however, in which transmission owners or generation owners may receive and act on “Operating Instructions,” such as in areas operated by Regional Transmission Organizations or Independent System Operators?

27. We seek an explanation from NERC and other commenters regarding the obligations of an applicable entity identified in COM-001-2 and COM-002-4 when communicating with a transmission owner or generator owner. For example, if a transmission operator, presumably required to use three-part communication under the proposed standards, communicates an Operating Instruction to a transmission owner or generation owner, which entity (if any) is responsible if the transmission owner or generation owner fails to perform three-part communication properly?<sup>28</sup> Among other things, NERC should explain its auditing practices in reviewing operating agreements between transmission operators and transmission owners and generation owners (or other agreements for assigning operational and compliance responsibility), and its approach in

---

<sup>28</sup> We understand that NERC has issued a Compliance Bulletin that discusses, in a general manner, the compliance obligations of registered entities and various contractual mechanisms for sharing or assigning compliance responsibility. *See* NERC Compliance Bulletin #2010-004 (Guidance for Entities that Delegate Reliability Tasks to a Third Party Entity). Here, however, we seek a better understanding of such obligations in the specific context of the proposed COM standards.

reviewing the protocols of any transmission owner or generator owner that acts on Operating Instructions to ascertain that they use three-part communication when and as required under proposed COM-002-4.

**B. Scope of COM-001-2 - Internal Communications Capability and Testing Requirements for Distribution Providers and Generator Operators**

28. Requirement R1.1 of currently-effective Reliability Standard COM-001-1.1 states 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.” Thus, COM-001-1.1 explicitly requires applicable entities to have adequate infrastructure for *internal* communications. We believe such a requirement is appropriate, since internal communications can have an impact on reliability, including certain communications between a control center and a generating unit operator and other field personnel or between two control centers (where operated by a single entity).

29. Proposed Reliability Standard COM-001-2 does not carry forward the explicit requirement with respect to internal communications. Instead, it requires applicable entities to have “Interpersonal Communication”<sup>29</sup> capability with other identified functional entities, as specified in the individual requirements. For example, Requirement R1 provides:

---

<sup>29</sup> As noted above, NERC proposes to define Interpersonal Communication as “[a]ny medium that allows two or more individuals to interact, consult, or exchange information.” NERC Petition at 15.

Each Reliability Coordinator shall have Interpersonal Communication capability with the following entities . . . .

- 1.1. All Transmission Operators and Balancing Authorities within its Reliability Coordinator Area.
- 1.2. Each adjacent Reliability Coordinator within the same Interconnection.

NERC's petition does not address the elimination of the explicit requirement related to internal communications capability.

30. The Commission believes that maintaining adequate internal communications capability can be critical to reliability. For example, the 2003 Blackout Report recommended improvements in internal communication effectiveness along with improvements to external communications.<sup>30</sup> Moreover, the Blackout Report listed as one of the causes of the blackout that First Energy's "control center computer support staff and operations staff did not have effective internal communications procedures" and "lacked procedures to ensure that its operators were continually aware of the functional state of their critical monitoring tools."<sup>31</sup> The Blackout Report found that these factors contributed to First Energy's "inadequate situational awareness" and its failure "to recognize or understand the deteriorating condition of its system" during that event.<sup>32</sup>

However, the proposed Reliability Standard does not retain an explicit requirement with

---

<sup>30</sup> Blackout Report at 161 ("NERC should work with reliability coordinators and [balancing authorities] to improve the effectiveness of internal and external communications . . . .").

<sup>31</sup> *Id.* at 18.

<sup>32</sup> *Id.* at 18; *see also id.* at 51-53, 56 and 65-67.

respect to internal communications capability. We accordingly propose to direct NERC to develop modifications to COM-001 (or to develop a separate standard) that ensures that entities maintain adequate internal communications capability, at least 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. Alternatively, a requirement for internal communications capability may be implicit in the proposed requirements for communications capability between functional entities such as Reliability Coordinators and Transmission Operators, since the proposed requirements are not explicitly limited to functional entities that are different utilities and could be understood as including communications capability within a utility performing and registered for multiple functions. We seek comment on whether the proposed requirements can and should be understood this way.

31. In addition, the Requirement 9 monthly testing requirement in COM-001-2 applies to reliability coordinators, balancing authorities, and transmission operators, but not generator operators and distribution providers. We seek comment on why generator operators and distribution providers should not have some form of requirement to test or actively monitor vital primary and emergency telecommunication facilities, particularly given the assumptions the Commission made in Order No. 749 when approving Reliability Standard EOP-005-2 (System Restoration from Blackstart Resources ).<sup>33</sup> In

---

<sup>33</sup> See *System Restoration Reliability Standards*, Order No. 749, 134 FERC ¶ 61,215 at PP 26-28 (2011).

that order, the Commission relied on NERC's assurances not only that COM-001-2 would be revised to include distribution providers and generator operators, but that such revisions would address the Commission's concerns about the lack of certain testing requirements in EOP-005-2:

The Commission believes the objectives of [the project to revise COM-001-1.1] in managing, alarming, testing and/or actively monitoring vital primary and emergency telecommunication facilities will close this gap in the Reliability Standard after it is completed and approved.<sup>34</sup>

Is the same objective intended to be addressed by Requirement 11? ("Each Distribution Provider and Generator Operator that detects a failure of its Interpersonal Communication capability shall consult each entity affected by the failure, as identified in Requirement R7 for a Distribution Provider or Requirement R8 for a Generator Operator, to determine a mutually agreeable action for the restoration of its Interpersonal Communication capability.") If so, we ask NERC to provide support for this approach.

**C. Reliability Standard COM-001-2 – Definition of Interpersonal Communications and Alternative Interpersonal Communication**

32. Finally, we seek clarification regarding the scope and meaning of the proposed definitions of Interpersonal Communication and Alternative Interpersonal Communication. As noted above, NERC proposes to define those terms, respectively, as follows:

---

<sup>34</sup> *Id.* P 28.

Interpersonal Communication – Any medium that allows two or more individuals to interact, consult, or exchange information.

Alternative Interpersonal Communication – Any Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation.

NERC indicates that it developed these definitions to eliminate the ambiguity of the terms “adequate and reliable” in requirement R1 of COM-001-1.1, and the terms “redundant and diversely routed” in Requirement R1.4.<sup>35</sup>

33. While the Commission understands the need to allow flexibility as to the type of communication medium or infrastructure to be used, the definitions do not state explicitly a minimum expectation of communication performance such as speed and quality to ensure that the communication is sufficient to maintain the reliable operation of the bulk power system. Further, while currently-effective Reliability Standard COM-001-1.1, Requirement R1, addresses “telecommunications facilities for the exchange of Interconnection and operating information,” a term that appears to include facilities that directly exchange or transfer data, the proposed definition of Interpersonal Communication refers to exchanges between individual persons. It is unclear whether the definition of Interpersonal Communications includes mediums used directly to exchange or transfer data. Thus, we seek further explanation from NERC and other

---

<sup>35</sup> NERC Petition at 15-16.



interested commenters regarding acceptable (and unacceptable) performance of communication for both Interpersonal and Alternative Interpersonal Communications.

### **III. Information Collection Statement**

34. The collection of information contained in this Notice of Proposed Rulemaking is subject to review by the Office of Management and Budget (OMB) under section 3507(d) of the Paperwork Reduction Act of 1995.<sup>36</sup> OMB's regulations require approval of certain information collection requirements imposed by agency rules.<sup>37</sup> Upon approval of a collection(s) of information, OMB will assign an OMB control number and an expiration date. Respondents subject to the filing requirements of a rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

35. We solicit comments on the need for this information, whether the information will have practical utility, the accuracy of the burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected or retained, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques. Specifically, the Commission asks that any revised burden or cost estimates submitted by commenters be supported by sufficient detail to understand how the estimates are generated.

---

<sup>36</sup> 44 U.S.C. § 3507(d) (2012).

<sup>37</sup> 5 CFR § 1320.11 (2013).

36. This notice proposes to approve Reliability Standards COM-001-2 and COM-002-4, and to retire Reliability Standards COM-001-1.1 and COM-002-2. Proposed Reliability Standard COM-001-2 will establish Interpersonal Communication capability necessary to maintain reliability, while proposed Reliability Standard COM-002-4 will improve communications related to Operating Instructions, requiring issuers of Operating Instructions to adopt predefined communications protocols and requiring both issuers and recipients of Operating Instructions to use three-part communications.

Public Reporting Burden: Proposed Reliability Standards COM-001-2 and COM-002-4 do not require responsible entities to file information with the Commission. However, the proposed Reliability Standards require applicable entities to develop and maintain certain information, subject to audit. In particular, COM-001-2 requires that transmission operators, balancing authorities, reliability coordinators, distribution providers, and generator operators must maintain documentation of Interpersonal Communication capability and designation of Alternate Interpersonal Communication, as well as evidence of testing of the Alternate Interpersonal Communication facilities. COM-002-4 requires balancing authorities, distribution providers, reliability coordinators, transmission operators, and generator operators to develop and maintain documented communication protocols, and to be able to provide evidence of training on the protocols and of their annual assessment of the protocols. Additionally, all applicable entities (balancing authorities, reliability coordinators, transmission operators, generator operators, and distribution providers) must be able to provide evidence of three-part communication when issuing or receiving an Operating Instruction during an Emergency.

Many of the record retention or information collection requirements in proposed COM-001-2 and COM-002-4 are translated in some form from the currently-effective Reliability Standards (COM-001-1 and COM-002-2). For these requirements, the Commission estimates a zero net change in burden. Accordingly, our estimate below shows the increase in record-retention or information collection burden, based on the new requirements to:

- (1) develop communications protocols (a one-time burden under COM-002-4, R1);
- (2) maintain evidence of required training, assessments, and use of three-part communications, as applicable (an on-going burden under COM-002-4 R2, R3, R4, R5 and R6); and
- (3) maintain evidence to demonstrate Interpersonal Communication capability (a new, on-going burden for distribution providers and generator operators under COM-001-2 R7 and R8).

The Commission's estimate of the number of respondents is based on the NERC compliance registry as of August 15, 2014. According to the NERC compliance registry, NERC has registered 179 transmission operators, 107 balancing authorities, 15 reliability coordinators, 475 distribution providers, and 853 generator operators within the United States. However, under NERC's compliance registration program, entities may be registered for multiple functions, so these numbers incorporate some double counting, which has been accounted for in the table below. The Commission estimates the annual reporting burden and cost as follows:

<b>Information Collection Requirement</b>	<b>Number and Type of Respondents (1)</b>	<b>Annual Number of Responses per Respondent (2)</b>	<b>Total Number of Responses (1)*(2)=(3)</b>	<b>Avg. Burden &amp; Cost Per Response<sup>38</sup> (4)</b>	<b>Total Annual Burden Hours &amp; Total Annual Cost (3)*(4)=(5)</b>
(One-time) Development of Communication Protocols [COM-002-4 R1]	212 (BA, RC & TOP)	1	212	8 hrs. & \$485.60	1,696 hours & \$102,947.20
(On-going) Maintain evidence of Interpersonal Communication capability [COM-001-2 R7 and R8] <sup>39</sup>	1,217 (DP & GOP)	1	1,217	4 hrs. & \$115.72	4,868 hours & \$140,831.24
(On-going) Maintain evidence of training and assessments [COM-002-4 R2, R4, R5 and R6]	212 (BA, RC & TOP)	1	212	8 hrs. & \$231.44	1,696 hours & \$102,947.20

<sup>38</sup> The estimated hourly costs (salary plus benefits) are based on Bureau of Labor Statistics (BLS) information (*available at* [http://bls.gov/oes/current/naics3\\_221000.htm#17-0000](http://bls.gov/oes/current/naics3_221000.htm#17-0000)) for an electrical engineer (\$60.70/hour for review and documentation), and for a file clerk (\$28.93/hour for record retention). The first row of the table (one-time burden) is done by an engineer, and the latter three rows (ongoing burden) are done by a file clerk.

<sup>39</sup> No change is expected in the record-keeping burden under COM-001-2 for reliability coordinators, balancing authorities, and transmission operators as compared to the currently-effective COM-001 standard.

(On-going) Maintain evidence of assessments [COM-002-4 R3, and R6]	1,217 (DP & GOP)	1	1,217	8 hrs. & \$231.44	9,736 hours & \$281,662.48
TOTAL			2,858		17,996 hours & \$574,506.20

Title: Mandatory Reliability Standards for the Bulk-Power System: COM Reliability Standards.

Action: Proposed FERC-725V.

OMB Control No: To be determined.

Respondents: Businesses or other for-profit institutions; not-for-profit institutions.

Frequency of Responses: One-time and ongoing.

Necessity of the Information: Reliability Standard COM-001-2 and COM-002-4, if adopted, would implement the Congressional mandate of the Energy Policy Act of 2005 to develop mandatory and enforceable Reliability Standards to better ensure the reliability of the nation’s Bulk-Power System. Specifically, the purpose of the proposed Reliability Standards is to establish Interpersonal Communication capability necessary to maintain reliability, and to improve communications for the issuance of Operating Instructions with predefined communications protocols. The proposed Reliability Standards require entities to maintain records subject to review by the Commission and NERC to ensure compliance with the Reliability Standards.

Internal Review: The Commission has reviewed the requirements pertaining to the proposed Reliability Standards for the Bulk-Power System and determined that the proposed requirements are necessary to meet the statutory provisions of the Energy Policy Act of 2005. These requirements conform to the Commission's plan for efficient information collection, communication and management within the energy industry. The Commission has assured itself, by means of internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

37. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, Office of the Executive Director, e-mail: [DataClearance@ferc.gov](mailto:DataClearance@ferc.gov), phone: (202) 502-8663, fax: (202) 273-0873].

38. Comments concerning the information collections proposed in this NOPR and the associated burden estimates should be sent to the Commission in these dockets and may also be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at the following e-mail address: [oira\\_submission@omb.eop.gov](mailto:oira_submission@omb.eop.gov). Please reference FERC-725V and the docket numbers of this Notice of Proposed Rulemaking (Docket No. RM14-13-000) in your submission.

#### IV. Regulatory Flexibility Act Certification

39. The Regulatory Flexibility Act of 1980 (RFA)<sup>40</sup> generally requires a description and analysis of proposed rules that will have significant economic impact on a substantial number of small entities. Proposed Reliability Standard COM-001-2 is expected to impose burdens for the first time on 1,217 entities (i.e., distribution providers and generator operators). Proposed Reliability Standard COM-002-4 may apply to as many as 1,279 entities.<sup>41</sup> Comparison of the applicable entities with FERC's small business data indicates that approximately 934 of the 1,279 entities are small entities.<sup>42</sup>

40. Proposed Reliability Standard COM-002-4 will serve to enhance reliability by, among other things, requiring adoption of predefined communication protocols, annual assessment of those protocols and operating personnel's adherence thereto, training on the protocols, and use of three-part communications. The Commission estimates that each small balancing authority, reliability coordinator, and transmission operator subject to proposed Reliability Standard COM-002-4 will incur one-time compliance costs of about \$486 (i.e. development of communication protocols), plus on-going annual costs of

---

<sup>40</sup> 5 U.S.C. § 601-612.

<sup>41</sup> The applicable entities are balancing authorities, reliability coordinators, transmission operators, generator operators, and distribution providers. After accounting for entities registered for more than one function, the total count is 1,279 entities.

<sup>42</sup> The Small Business Administration sets the threshold for what constitutes a small business. Public utilities may fall under one of several different categories, each with a size threshold based on the company's number of employees, including affiliates, the parent company, and subsidiaries. The possible categories for the applicable entities have a size threshold ranging from 250 employees to 1,000 employees. We are using the 1000 employee threshold for this analysis.

about \$717 (i.e. performing training and maintaining evidence of training and assessments).<sup>43</sup> The Commission estimates that each of the small distribution provider and generator operator entities potentially subject to proposed Reliability Standards COM-001-2 and COM-002-4 will incur on-going annual costs of about \$833 (i.e. performing training and maintaining evidence of interpersonal communication capability and of training).<sup>44</sup> The Commission does not consider the estimated costs per small entity to have a significant economic impact on a substantial number of small entities. Accordingly, the Commission certifies that this NOPR will not have a significant economic impact on a substantial number of small entities.

## V. Environmental Analysis

41. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.<sup>45</sup> The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do

---

<sup>43</sup> The one-time paperwork-related implementation cost estimate is based on a burden of eight hours at \$60.70/hour, and the annual ongoing cost estimate is based on a burden of eight hours at \$28.93/hour for maintaining evidence, and eight hours at \$60.70/hour for performing training.

<sup>44</sup> The ongoing cost is based on burden of 12 hours at \$28.93/hour for maintaining evidence, and eight hours at \$60.70/hour for performing training.

<sup>45</sup> *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, FERC Stats. & Regs. ¶ 30,783 (1987).



not substantially change the effect of the regulations being amended.<sup>46</sup> The actions proposed herein fall within this categorical exclusion in the Commission's regulations.

## **VI. Comment Procedures**

42. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due [**INSERT DATE 60 days after publication in the FEDERAL REGISTER**]. Comments must refer to Docket No. RM14-13-000, and must include the commenter's name, the organization they represent, if applicable, and address.

43. The Commission encourages comments to be filed electronically via the eFiling link on the Commission's web site at <http://www.ferc.gov>. The Commission accepts most standard word processing formats. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format. Commenters filing electronically do not need to make a paper filing.

44. Commenters that are not able to file comments electronically must send an original of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426.

45. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section

---

<sup>46</sup> 18 CFR § 380.4(a)(2)(ii).

below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

## **VII. Document Availability**

46. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington, DC 20426.

47. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

48. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at 202-502-6652 (toll free at 1-866-208-3676) or email at [ferconlinesupport@ferc.gov](mailto:ferconlinesupport@ferc.gov), or the Public Reference

Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

By direction of the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.