NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Project 2007-02, COM-002-4 Operating Personnel Communications Protocols Rationale and Technical Justification

Posting 8: Background and Justification for COM-002-4 Requirements

The purpose of the proposed COM-002-4 Reliability Standard is to improve communications for the issuance of Operating Instructions with predefined communications protocols to reduce the possibility of miscommunication that could lead to action or inaction harmful to the reliability of the Bulk Electric System (BES). The proposed Reliability Standard, similar to posting 7, combines COM-002-3 and former draft COM-003-1 into one standard that addresses communications protocols for operating personnel in Emergency, and non-emergency conditions. The Operating Personnel Communications Protocols Standard Drafting Draft (OPCP SDT) continues to believe that one communications protocols standard that addresses emergency and non-emergency situations will improve communications because operatoring personnel will not need to refer to a different set of protocols during the different operating conditions. A single standard will improve consistency of communications and mitigate confusion during stressful emergency situations. As a result of the combination, the standard has been renumbered as COM-002-4 to maintain the consecutive numbering of the standards (e.g., COM-001, COM-002) since the combined standard will replace COM-002-2 and COM-002-3, where necessary.

In preparing Posting 8, the OPCP SDT revised the first draft of COM-002-4 in PostingPosting 7 to develop a single communications standard that addresses protocols for operating personnel in Emergency and non-emergency conditions. The OPCP SDT considered the comments provided on Posting 7 and also drew from a variety of other resources including:

- the NERC Board of Trustees' November 7th, 2013 Resolution for Operating Personnel Communication Protocols, discussed below;[1]
- a survey distributed to a sample of industry experts by the Director of Standards Development and the Standards Committee Chair requesting feedback on the draft standard in Posting 8; and
- consultation on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations Standard Drafting Team and the Project 2006-06 Reliability Coordination Standard Drafting Team.

[1] *Resolution for Agenda Item 8.i: Operating Personnel Communication* Protocols, NERC Board of Trustees Meeting, Nov. 7, 2013, available at: http://www.nerc.com/gov/bot/Board%20of%20Trustees%20Quarterly%20Meetings/Board%20COM%20Resolution%2011.7.13%20v1%20AS%20APPROVED%20BY%20BOARD.pdf.

In this posting, the OPCP SDT seeks industry comment on the second draft of a combined communications standard. This provides an opportunity for industry to comment and ballot a combined standard prior to the Board's consideration of a communications standard at the Febuarary 2014 meeting of the Board. The latest draft reflects a results-based approach to strengthening communications during non-emergency and Emergency operating conditions. The following sections outline the OPCP SDT's revisions to the communications standards and rationale. Additional background on developments and coordination activities since the last posting is also included at the end of the document to provide additional detail to industry.

Structure of the COM-002-4 Draft

In response to the Board of Trustees' direction to draft a a combined COM-002 and COM-003 standard that addresses, at a minimum certain protocols, NERC staff prepared a "strawman" draft standard and provided it as a starting point for the standard drafting team to edit and adjust as it deemed appropriate. The structure of Posting 8 of COM-002-4 reflects the minimum elements listed by the Board in its resolution (see "Developments Following Posting 7" below for detail on the Board resolution). The structure also allows for the implementation of a compliance/enforcement approach also described by the Board's resolution that maintains the current requirement that entities should be accountable for incorrect use of communication protocols in connection with emergency communications, without exception.

In COM-002-4, the same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions – i.e. non-emergency and Emergency communications. However, the standard uses 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/enforcement approach and what is not. This is necessary to allow the creation of Violation Severity Levels for each compliance/enforcement approach. **Where "Operating Instruction during an Emergency" is not used, an entity will be assessed under a non-zero tolerance compliance/enforcement approach that focuses on whether an entity met the initial training Requirement (either R2 or R3) and/or whether an entity performed the assessment and took corrective action according to Requirement R4**.

Separately listing out Requirements R5, R6, and R7 and using "Operating Instruction during an Emergency" in them does not require a different set of protocols to be used during Emergencies or mandate the identification of a communication as an "Operating Instruction during an Emergency." The same protocols are required to be used in connection with the issuance of Operating Instructions for all operating conditions. Their use is measured for compliance/enforcement differently using the operating condition as an indicator of which compliance/enforcement approach applies.

Definition of "Operating Instruction"

The most significant change from Posting 7 to Posting 8 was the removal of the term "Reliability Directive," which was included in the previous posting as a subset within the definition of "Operating Instruction." Otherwise, the definition of "Operating Instruction" remains unchanged since Posting 7. The proposed definition of "Operating Instruction" in Posting 8 has been revised to read as follows:

> 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 to resolve Bulk Electric System operating concerns is not a command and is not considered an Operating Instruction.)

The OPCP SDT debated whether to remove the term "Reliability Directive" in response to comments suggesting it should be removed from the definition of "Operating Instruction" and in light of FERC's issuance of the TOP/IRO NOPR, which proposes to remand the definition of "Reliability Directive." A detailed description of the FERC action is included in the section below titled "Developments Following Posting 7."

In order to avoid unnecessary complications, the OPCP SDT consulted on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. The OPCP SDT ultimately voted to remove the term and incorporate the phrase "Operating Instruction during an Emergency" in the Requirements where needed to preserve the structure created to ensure that only an Operating Instruction issued during an Emergency is subject to a zero-tolerance compliance/enforcement approach.

A "command" as used in the definition refers to both oral and written commands by operating personnel. In the requirements of COM-002-4, the OPCP SDT has specified "oral" or "written" as needed to define which Operating Instructions are covered by the requirement. The definition continues to clarify that general discussions are not considered Operating Instructions. The definition is not intended to include electronic (system to system) instruction as Operating Instructions.

Applicability

In addition to Balancing Authorities, Reliability Coordinators, and Transmission Operators, the proposed standard applies to Distribution Providers and Generator Operators. The OPCP SDT added these Functional Entities in the Applicability section because they can be and are on the receiving end of some Operating Instructions. The OPCP SDT determined that it would leave a gap to not cover them in a communications standard that addresses operating personnel. The addition of Distribution Providers as an applicable entity also responds to FERC's directive in Order No. 693 to add them as applicable entities to the communications standard.

Recognizing that Generator Operators and Distribution Providers typically only receive Operating Instructions, the OPCP SDT proposed that only Requirements R3 and R6 apply to these Functional Entities. In response to the comments and the NERC Board Resolution, the OPCP SDT revised the standard to clarify that DPs and GOPs are required to a) train their operators prior to receiving an Operating Instruction, and b) use three-part communication when receiving an Operating Instruction during an Emergency. In addition, the measures have been revised to show that a DP or GOP can demonstrate compliance for use of three-part communication when receiving an Operating Instruction during an Emergency by providing an attestation from the issuer of the Operating Instruction (i.e., a voice recording is not required). If a DP or GOP never receives an Operating Instruction, no requirement in COM-002-4 would apply to them. In both Requirements R3 and R6, qualifying language that discusses the "receipt" of an Operating Instruction is included to make this point clear. This construct ensures that appropriate entities are trained and able to use three-part communication for reliability purposes, while seeking to minimize the compliance burden on DPs and GOPs.

Requirements in COM-002-4

Requirement R1

Requirement R1 requires entities that can <u>both issue and receive</u> Operating Instructions to have documented communications protocols that include a minimum set of elements, outlined in Parts 1.1 through 1.6 of the requirement. Because Operating Instructions affect Facilities and Elements of the Bulk Electric System, the communication of those Operating Instructions must be understood by all involved parties, especially when those communications occur between Functional Entities. An EPRI study reviewed nearly 400 switching mishaps by electric utilities and found that roughly 19% of errors (generally classified as loss of load, breach of safety, or equipment damage) were due to communication failures.[2] This was nearly identical to another study of dispatchers from 18 utilities representing nearly 2000 years of operating experience that found that 18% of the operators' errors were due to communication problems.[3] The necessary protocols include the use of the English language unless agreed to otherwise (except for internal operations), protcols for use of a written or oral single-party to multiple-party burst Operating Instruction, specification of instances that require time identification,

[2] Beare, A., Taylor, J. *Field Operation Power Switching Safety*, WO2944-10, Electric Power Research Institute.

[3] Bilke, T., *Cause and prevention of human error in electric utility operations*, Colorado State University, 1998.

specification of the nomenclature for Transmission interface Elements, and three-part communications (including a protocol for taking an alternate action if a response is not received or if the Operating Instruction was not understood by the receiver).

The OPCP SDT drafted Requirement R1 to ensure consistency among communications protocols while also allowing flexibility for entities to develop additional communications protocols. The OPCP SDT determined that the inclusion of the elements in Parts 1.1 through 1.6 are necessary to improve communications protocols but are not overly prescriptive. The OPCP SDT determined that this approach is the best way to promote effective communications while maintaining flexibility for entities to include additional communications protocols based on its own operating environment.

The term *documented communication protocols* in R1 refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. An entity should include as much detail as it believes necessary in their documented protocols, but they must address all of the applicable parts of Requirement R1. Where an entity does not already have a set of documented protocols that meet the parts of Requirement R1, the entity must develop the necessary communications protocols. Entities may also adopt the documented protocols of another entity as its own communications protocols, but the entity must maintain its own set of documented communications protocols to meet Requirement R1.

On September 19, 2012, the NERC Operating Committee issued a Reliability Guideline entitled: "System Operator Verbal Communications – Current Industry Practices." As stated on page one, the purpose of the Reliability Guideline ". . . is to document and share current verbal BES communications practices and procedures from across the industry that have been found to enhance the effectiveness of system operator communications programs." This guideline serves as an additional source of information on best practices that entities can draw on in creating the documented communications protocols.

Each part of Requirement R1 is discussed below:

> *1.1. Require its operating personnel that issue and receive an oral or written Operating Instruction to use the English language, unless agreed to otherwise. An alternate language may be used for internal operations.*

The OPCP SDT has included this part to carry forward the same use of English language included in COM-001-1, Requirement R4. Retirement of this Requirement in COM-001-1 was specifically referred to this Project 2007-02. The requirement continues to permit the issuer and receiver to use an agreed to alternate language. This has been retained since use of an alternate language on a case-by-case basis may serve to better facilitate effective communications where the use of English language may create additional opportunities for miscommunications. Part 1.1 requires the use of English language when issuing oral or written (e.g. switching orders) Operating Instructions. This creates a standard language (unless agreed to otherwise) for use when issuing commands that could

change or preserve the state, status, output, or input of an Element of the Bulk Electric System or Facility of the Bulk Electric System. It also clarifies that an alternate language can be used internally within the organization. The phrase has been modified slightly from the language in COM-001-1, Requirement R4 to incorporate the term "Operating Instruction," which defines the communications that require the use of the documented communications protocols.

> *1.2. Require its operating personnel that issue an oral two-party, person-to-person Operating Instruction to take one of the following actions:*
>
> - *Confirm the receiver's response if the repeated information is correct.*
> - *Reissue the Operating Instruction if the repeated information is incorrect, if the receiver does not issue a response, or if requested by the receiver.*
> - *Take an alternative if a response is not received or if the Operating Instruction was not understood by the receiver.*
>
> *1.3. Require the receiver of an oral two-party, person-to-person Operating Instruction to take one of the following actions:*
>
> - *Repeat the Operating Instruction and wait for confirmation from the issuer that the repetition was correct.*
> - *Request that the issuer reissue the Operating Instruction.*

The OPCP SDT has included part 1.2 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the issuer*. The OPCP SDT has included part 1.3 to require communications protocols for the use of three-part communications for oral two-party, person-to-person Operating Instructions *by the receiver*. This carries forward the requirement to use three-part communications in COM-002-2 and COM-002-3 and also adds an option in part 1.2 for the issuer to take an alternative action to resolve the issue if the receiver does not respond to or understand the Operating Instruction. The addition of this third bullet serves to clarify in the requirement language itself that the issuing entity can take alternate action in lieu of reissuance if necessary.

The reliability benefits of using three-part communication (Requirement R1, parts 1.2 and 1.3) are threefold:

1. The removal of any doubt that use of the documented communication protocols is required when issuing or receiving Operation Instructions. This will reduce the opportunity for confusion and misunderstanding during all operating conditions.

2. There will be no mental "transition" between protocols when operating conditions shift from non-emergency to Emergency. The documented communication protocols for the operating personnel will remain the same during transitions through all conditions.

3. The formal requirement for three-part communication will create a heightened sense of awareness in operating personnel that the task they are about to execute is critical, and recognize the risk to the reliable operation of the BES is increased if the communication is misunderstood.

1.4. Require its operating personnel that issue a written or oral single-party to multiple-party burst Operating Instruction to confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction.

The OPCP SDT has included this part to require communications protocols for an issuer for the use of a one-way burst messaging system. The drafting team has included this because the use of three-part communications is not practically possible when utilizing this type of communication. Therefore, it is necessary to include a different set of protocols for these situations.

1.5. Specify the instances that require time identification when issuing an oral or written Operating Instruction and the format for that time identification.

The OPCP SDT has included this part to add necessary clarity to Operating Instructions to reduce the risk of miscommunications. Clarifying time and time zone (where necessary) contributes to reducing misunderstandings and reduces the risk of a grave error during BES operations. Allowing a Functional Entity to specify the instances allows for circumstances where a Functional Entity does not issue or receive Operating Instructions that crosses time zones.

1.6. Specify the nomenclature for Transmission interface Elements and Transmission interface Facilities when issuing an oral or written Operating Instruction.

Project 2007-03 chose to eliminate TOP-002-2a, Requirement R18 when it developed TOP-002-3. This Requirement stated "Neighboring Balancing Authorities, Transmission Operators, Generator Operators, Transmission Service Providers and Load Serving Entities shall use uniform line identifiers when referring to transmission facilities of an interconnected network." COM-002-4, while reintroducing the concept of line identifiers, limits the scope to only Transmission interface Elements or Transmission interface Facilities (e.g. tie lines and tie substations). This supports both parties being familiar with each other's interface Elements and Facilities, minimizing hesitation and confusion when referring to equipment for the Operating Instruction. This shortens response time and improves situational awareness.

Requirements R2 and R3

Requirement R2 requires the entities listed in Requirement R1 (i.e. each Balancing Authority, Reliability Coordinator, and Transmission Operator) to conduct intial training for each of their operating

personnel responsible for the Real-time operation of the Bulk Electric System on the entity's documented communication protocols.

Requirement R3 requires Distribution Providers and Generator Operators to conduct initial training on three-part communication for each of their operating personnel who can 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. Distribution Providers and Generator Operators would have to train their operating personnel prior to placing them in a position to receive an oral two-party, person-to-person Operating Instruction. Operating Personnel that would never be in a position to receive an oral two-party, person-to-person Operating Instruction, therefore, would not need initial training unless their circumstance changes. The purpose of the language in Requirement R3, is to minimize the training burden to only those operating personnel that can receive an oral two-party, person-to-person Operating Instruction.

The OPCP SDT has included an initial training requirement in the standard in response to the NERC Board of Trustees' resolution, which directs that a training requirement be included in the COM-002-4 standard. Additionally, requiring entities who issue and or receive Operating Instructions to conduct initial training with their operating personnel will ensure that all applicable operators will be trained in three-part communication. The OPCP SDT believes this training will reduce the possibility of a miscommunication, which could eventually lead to action or inaction harmful to the reliability of the Bulk Electric System. Ongoing training would fall under an entities training program in PER-005 or could be listed as a type of corrective action under Requirement R4.

Requirement R4

Requirement R4 requires Balancing Authorities, Reliability Coordinators, and Transmission Operators to, at least once every 12 months, assess adherence by its operating personnel to the documented communication protocols in Requiremen R1 and to provide feedback to its operating personnel on their performance. This also includes any corrective action taken, as appropriate, to address deviations from the documented protocols. It also requires the aforementioned entities to assess the effectiveness of their documented communications protocols and make changes, as necessary, to improve the effectiveness of the protocols. An entity may determine that corrective action beyond identification of the misuse of the documented communications protocols to the operating personnel is not necessary, therefore, the phrase "as appropriate" is included in the Requirement R4 language to indicate that whether to take additional corrective action is determined by the entity and not dictated by the Requirement for all instances of a misuse of a documented communication protocol.

Requiring entities to assess, identify and provide feedback to its operating personnel, was also included in the November 7, 2013 NERC Board of Trustees' resolution as an element to include in the standard. Further, the OPCP SDT believes that it is good operating practice for an entity to periodically evaluate the effectiveness of their protocols and improve them when possible. Most entities currently engage in some type of assessment activity for their operating personnel. This assessment and feedback

activity by the entity improves reliability as it provides a shorter evaluation and correction cycle than a traditional audit cycle, while reducing the associated compliance burden as well.

Additionally, the OPCP SDT also believes it is good operating practice to provide operators with performance feedback on their adherence to the entity's documented protocols. Doing so, provides entities an opportunity to evaluate the performance of their operating personnel and take corrective actions where necessary, which could prevent a miscommunication from occurring and thus possibly prevent an event which could be harmful to the reliability of the Bulk Electric System.

The associated Measure M4 for Requirement R4 lists the types of evidence that an entity can provide to demonstrate compliance and also explains when an entity should show the corrective actions taken. Of particular insterest is any corrective action taken where the miscommunication is the sole or partial cause of an Emergency and the entity has opted to take a corrective action. While the Measure specifies this particular set of circumstances to highlight the importance, the Measure does not modify the Requirement to require corrective action. Again, to reiterate, whether corrective action is necessary is best determined by the entity based on the facts and circumstances of the particular communication.

Requirements R5 and R6

Requirement R5 requires entities that issue oral two-party, person-to-person Operating Instructions during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to use three-part communication or take an alternate action if the receiver does not respond or if the Operating Instruction was not understood by the receiver. The language of Requirement R5 specifically excludes written or oral single-party to multiple-party burst Operating Instructions to make clear that three-part communication is not required when issuing Operating Instructions in this manner. Requirement R5 applies to each Balancing Authority, Reliability Coordinator, and Transmission Operator since these are the entities that would be in a position to *issue* oral two-party, person-to-person Operating Instructions during an Emergency.

Requirement R6 requires entities that receive an an oral two-party, person-to-person Operating Instruction during an Emergency, excluding written or oral single-party to multiple-party burst Operating Instructions, to repeat (not necessarily verbatim) the Operating Instruction and receive confirmation from the issuer that the response was correct or request that the issuer reissue the Operating Instruction. Requirement R6 includes the same clarifying language as Requirement R5 for the exclusion of single-party to multiple-party burst Operating Instructions. Requirement R6 applies to each Balancing Authority, Distribution Provider, Generator Operator, and Transmission Operator since these are the entities that would be in a position to *receive* oral two-party, person-to-person Operating Instructions during an Emergency

The use of three-part communication when issuing and receiving Operating Instructions is always important because a miscommunication could create an Emergency. However, the use of three-

part communication is criticially important if an Emergency condition already exists, as further action or inaction could expontentially increase the harmful effects to the BES.

Requirement R7

Requirement R7 requires that when a Balancing Authoritity, Reliability Coordinator, or Transmission Operator issues a written or oral single-party to multiple-party burst Operating Instruction during an Emergency, it must confirm or verify that the Operating Instruction was received by at least one receiver of the Operating Instruction. Because written or oral single-party to multiple-party burst Operating Instruction during an Emergency are excluded from Requirements R5 and R6, this separate Requirement is necessary to specify in the whatrequirement an entity must do to validate receipt of the use of written or oral single-party to multiple-party burst Operating Instructions during an Emergency. This prevents leaving a gap in the types of communications used during an Emergency.

The OPCP SDT believes this requirement is necessary because without confirmation from at least one receiver, the issuer has no way of confirming if the Operating Instruction was transmitted and received by any of the recipients. Therefore, the issuer cannot know whether to resend the Operating Instruction, wait for the recipients to take action, or take an alternate action because the recipients cannot peform the action. As a best practice, an entity can opt to confirm receipt from more than one receipient, which is why the requirement states "at least one."

Developments Following Posting 7

Following the completion of Posting 7, two significant developments occurred that relate to Project 2007-02 – Operating Personnel Communications Protocols. First, the NERC Board of Trustees passed a resolution regarding Operating Personnel Communication Protocols. Second, the Federal Energy Regulatory Commission (FERC) issued a Notice of Proposed Rulemaking (NOPR) proposing to remand NERC's revised TOP and IRO Reliability Standards (TOP/IRO NOPR). The proposed remand includes the defined term "Reliability Directive", which has been incorporated into past drafts of COM-003-1 and COM-002-4 in this Project. Each are discussed in more detail below.

NERC Board's Resolution

At its November meeting, the Board passed a resolution that directs the Standards Committee and the standard drafting team "to continue development of a combined COM-002 and COM-003 standard that addresses, at a minimum, the following:

- Draws on the Operating Committee Guideline for good communication practice;
- Includes an essential set of communications protocols to be used by all entities that would be included in an entity's overall communications protocol approach;
    - The protocol should at a minimum require the use of three-part communications for (i) emergency and communications ("Emergency Communications") and (ii)

non-emergency communications that change or preserve the state, status, output, or input of the Bulk Electric System ("Non-Emergency Communications");
- Requires training and periodic review of communications subject to the communications protocols; and
- Requires each entity to (i) periodically self assess its effectiveness in implementing the communications protocols, (ii) self identify any necessary changes to the entity's protocols based upon experience and the results of periodic review, and (iii) provide feedback to its operators regarding their adherence to the protocols."

The resolution further directs the standard drafting team to "consider the following compliance/enforcement approach:

- Maintain the current requirement that entities should be accountable for incorrect use of communication protocols in connection with Emergency Communications, without exception.
- For all other use of communication protocols in connection with Non-Emergency Communications, the standard should provide that compliance with the standard should only entail assessing whether an entity has: (i) adopted a communications protocol consistent with the foregoing; (ii) implemented training and periodic review of communications subject to the protocols; and (iii) implemented a process to (x) periodically self assess its effectiveness in implementing the communications protocols, (y) self identify any necessary changes to the entity's protocols based upon experience and the results of periodic review, and (z) provide feedback to its operators regarding their adherence to the protocols."

FERC TOP/IRO NOPR

On April 16, 2013, in Docket No. RM13-14-000, NERC submitted for Commission approval three revised TOP Reliability Standards:
- TOP-001-2 (Transmission Operations);
- TOP-002-3 (Operations Planning);
- TOP-003-2 (Operational Reliability Data); and
- PRC-001-2 (System Protection Coordination).

Additionally, on April 16, 2013, in Docket No. RM13-15-000, NERC submitted for Commission approval four revised IRO Reliability Standards:
- IRO-001-3 (Responsibilities and Authorities);
- IRO-002-3 (Analysis Tools);
- IRO-005-4 (Current Day Operations); and
- IRO-014-2 (Coordination Among Reliability Coordinators).

On November 21, 2013, the Commission issued the TOP/IRO NOPR, which proposes to remand the proposed TOP and IRO standards.[4] In the TOP/IRO NOPR, the Commission raises a concern that NERC "has removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these aspects in the proposed standards." For the term "Reliability Directive", FERC states that the undefined term "reliability directive" used in prior standards does not appear to be limited to a specific set of circumstances. FERC continues that, in contrast, application of the proposed definition of "Reliability Directive" appears to require compliance with transmission operator directives only in emergencies, not normal or pre-emergency times. FERC states that directives from a reliability coordinator or transmission operatorshould be mandatory at all times, and not just during emergencies (unless contrary to safety, equipment, regulatory or statutory requirements). FERC states that the transition from normal to emergency operation can be sudden and indistinguishable until recognized, often after the damage is done. FERC has requested additional explanation from NERC and requested comments on its proposal to remand the term "Reliability Directive" along with the TOP and IRO standards. FERC will take final action on its proposal at time to be determined in the future.

FERC's proposal to remand the term "Reliability Directive" raised possible complications with the draft COM-002-4 standard in Posting 7 since that term was included. Should the term be remanded by FERC, the COM-002-4 standard could contain a term that is no longer acceptable. In order to avoid unnecessary complications, the OPCP SDT consulted on the use of the term "Reliability Directive" in the COM-002-4 standard with the Project 2007-03 Real-time Transmission Operations and the Project 2006-06 Reliability Coordination Standard Drafting Teams to ask whether they believed removal of the term would cause concerns. Both teams agreed that the COM-002-4 standard did not need to require a protocol to identify Reliability Directives as such and that the definition of Operating Instruction could be used absent the term Reliability Directive in COM-002-4 to set the protocols. This would leave the TOP and IRO standard drafting teams the flexibility to address the issues surrounding the term "Reliability Directive" in response to the FERC TOP/IRO NOPR.

[4] *Monitoring System Conditions- Transmission Operations Reliability Standard Transmission Operations Reliability Standards Interconnection Reliability Operations and Coordination Reliability Standards*, NOPR, 145 FERC ¶ 61,158 (2013). The TOP/IRO NOPR is available at: http://www.nerc.com/FilingsOrders/us/FERCOrdersRules/NOPR_TOP_IRO_RM13-12_RM13-14_RM13-15_20131121.pdf.