

Project 2007-02, COM-003-1 Operating Personnel Communication Protocols Rationale and Technical Justification

Justification for Requirements in Draft ~~35~~

Rationale and Technical Justification

The Quality Review team for the draft 2 posting of COM-003-1 highly recommended that the OPCPSDT provide a justification or rationale document to aid reviewers in their examination of this draft of COM-003-1. The OPCPSDT agrees with the QR recommendation and has developed the following to support the standard and to help stakeholders understand the intent and scope of the standard. This version of the standard features a non traditional approach to standards that could alleviate concerns that surfaced in comments in drafts one, two, ~~and three~~ and four.

Background

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.¹ 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.²

¹ [Beare, A., Taylor, J. Field Operation Power Switching Safety, WO2944-10, Electric Power Research Institute.](#)

² [Bilke, T., Cause and prevention of human error in electric utility operations, Colorado State University, 1998.](#)

Requirement R1

Requirement R1 requires entities that can both issue and receive Operating Instructions to develop and implement documented communication protocols that outline the communications expectations of its operators in a manner that identifies, assesses, and corrects deficiencies. The necessary protocols include address the use of the English language (from COM-001-1.1 R4), time formatting, mutually agreed nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications. There are added protocols to address operator training periodicity and to address the need for entities to coordinate their protocols for consistency among affected applicable entities. Only applicable protocols need to be addressed.

Requirement R2

Requirement R2 requires entities that both issue and receive “Operating Instructions” to develop method(s) to assess System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1. perform a quarterly assessment of its System Operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R1.

Requirement R2-R3

Requirement R2-R3 requires entities that only receive “Operating Instructions” to develop and implement documented communication protocols that outline the communications expectations of its operators implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies. Only applicable protocols need to be addressed.

The first (R3, Part 3.1) protocol includes requires the use of the English language. The two other protocols (protocols (R2, R3, Parts 2.3.1-2 and 2.3.23) required are repeat back for three part communication and clarification if an “all call” communication is unclear. There is an added protocol to address the training periodicity.

Requirement R4

Requirement R4 requires entities that only receive Operating Instructions to develop method(s) to assess operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for perform a quarterly assessment of its operators’ communication practices and implement corrective actions necessary to meet the expectations in its documented communication protocols developed for Requirement R3.

Rationale

The SDT has incorporated-maintained within this standard a recognition that these requirements should not focus on individual instances of failure as a basis for violating the standard. In particular, the SDT has incorporated an approach to empower and enable the industry to identify, assess, and correct

deficiencies in the communication practices~~implementation of certain requirements the standard's requirements~~. The intent is to change the basis of a violation in those requirements so that they are not focused on whether there is a deficiency, but on identifying~~assessing~~ communication practices~~operator performance~~, and correcting deficiencies to reduce the possibility of miscommunication~~improve operator performance~~. It is presented in those requirements by modifying "implement" as follows:

~~Each ... to perform a quarterly assessment of its System Operators' communication practices and implement corrective actions necessary shall implement, in a manner that identifies, assesses, and corrects deficiencies, ...~~

The term implement means incorporating the communication protocols into, but not limited to policies, procedures, training programs and assessment programs to support setting and attaining the communication expectations of operators (R3) and System Operators (R1).

The term *documented communication protocols* refers to a set of required protocols specific to the Functional Entity and the Functional Entities they must communicate with. This term does not imply any particular naming or approval structure beyond what is stated in the requirements. An entity should include as much as it believes necessary in their documented protocols, but they must address all of the applicable parts of the Requirement. The documented protocols themselves are not required to include the ". . . identifies, assesses~~assessment~~, and correction~~s~~ deficiencies, . . ." elements ~~described in the preceding paragraph~~, as those aspects are related to the manner of implementation of the documented protocols and could be accomplished through other controls or compliance management activities.

The changes and rationale for draft 5 were a result of stakeholder comment and participation in the Communications in Operations Conference held on February 14 and 15, 2013. Stakeholders and the ERO conducted informational sessions, expressed concerns and conducted a workshop that provided guidance to the OPCPSDT to prepare draft 5. The changed language was a collaborative effort between industry and ERO.