

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

Justification for Requirements in Draft 4

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.

Requirement R1

Requirement R1 requires entities that can both issue and receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies. 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 The necessary protocols include the use of the

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.

English language (from COM-001-1.1 R4), time formatting, mutually agreed nomenclature for Transmission interface Elements, alpha-numeric clarifiers, and three part communications.

Requirement R2

Requirement R2 requires entities that only receive Operating Instructions to implement documented communication protocols in a manner that identifies, assesses, and corrects deficiencies .

The two protocols (R2 , Parts 2.1 and 2.2) required are repeat back for three part communication and clarification if an “all call” communication is unclear.

Rationale

The SDT has incorporated 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 implementation of certain 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, and correcting deficiencies. It is presented in those requirements by modifying “implement” as follows:

Each ... shall implement, in a manner that identifies, assesses, and corrects deficiencies, . . .

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, and corrects 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.