

NERC System Protection and Control Subcommittee

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Project Name Power Plant and Transmission System Protection Coordination Draft Number: 6.5

	Comment Nature (T - technical, E - editorial, G - general)	Comment	Suggested Correction
<p>Comment #:1 Page #:11</p> <p>Section # 2</p> <p>Table 2</p>	T	<p>Function 51N - ground overcurrent protection is often utilized in the transmission system protection.</p> <p>The SPCS has added this device number in the second column of Table 2 and in the excerpt of Table 2 in Section 3.9. The need to coordinate device 51TG of the transformer with device 51G is discussed in Section 3.9. A reference has been added to refer to both devices 51N and 51G.</p>	<p>Add 51N function to Transmission System Protection Function column for Generator Protection Function 51T and 51TG.</p>
<p>Comment #:2 Page #:12</p> <p>Section # 2</p> <p>Table 3</p>	G	<p>For the strictly generator protective functions such as 21, 24, 27, 40, 46, 50/27, 51V, 59, 59GN/27TH, 78, and 81, it is unclear why the Transmission Owner would need all the details of these functions from the Generator Owner and be involved in coordinating the generator protection with the transmission system protection. It is understood that the Transmission Owner will provide all the necessary data to the Generator Owner for his purpose of setting and coordinating the generator protection with the transmission system protection. However, involving the Transmission Owner in the effort to coordinate the generator protection with the transmission system protection could make the Transmission Owner liable in case of undesirable operation.</p> <p>The Technical Document summarizes the requirements for the Transmission Owner in Table 2 and Table 3. For some protection requirements, such as 21, 27, 46, 51V, 59GN/27TH, and 78 there are specific requirements for the Transmission Owner to provide data and participate in the coordination process. In other cases, such as 24, 40, 50/27, and 81 the requirements for Transmission Owners are limited to providing general information that may be required. The</p>	<p>Please review this aspect of the document and revise if necessary.</p>

		<p><u>SPCS notes that where multiple entities are included in the coordination process, the responsibility for coordination is shared by those entities. However, the responsibility for adequately protecting equipment is the sole responsibility of the entity that owns the equipment.</u></p> <p>The SPCS has modified the <u>coordination process in the text</u> for some protection functions to <u>align with Tables 2 and 3</u> to include the Planning Coordinator rather than the Transmission Owner in the coordination process. These changes have been made for protection functions relating to programs for which the Planning Coordinator has design responsibility, such as coordinating the UFLS program with generator V/Hz (24) and under/overfrequency (81) protection. The SPCS notes that where multiple entities are included in the coordination process, the responsibility for coordination is shared by those entities. However, the responsibility for adequately protecting equipment is the sole responsibility of the entity that owns the equipment.</p>	
<p>Comment #:3 Page #:12</p> <p>Section # 2</p> <p>Table 3</p>	G	<p>A recently released IEEE PSRC C Subcommittee Report <i>Performance of Relaying During Wide-Area Stressed Conditions</i> is an excellent reference and should be utilized as an input to the present document.</p> <p><u>This subcommittee report is focused on relaying performance during stressed system conditions. While it only makes brief mention of the topic of coordination, the SPCS agrees this report should be added to the list of reference documents in the SPCS Technical Document. The Technical Document has been modified accordingly.</u></p>	<p>Review the report and update the document with the report's findings if necessary. It is available on the IEEE PSRC website www.pes-psrc.org under Published Reports.</p>
<p>Comment #:4 Page #:16</p> <p>Section #3</p>	T	<p>High voltage transmission line impedances (positive and zero sequence) and mutually coupled impedances (zero sequence) are listed as being provided by the Generator Owner. They are correctly listed under <i>Transmission or Distribution Owner Data and Information Requirements</i>.</p> <p><u>The SDT notes that the list of data is preceded by the qualifier, "where applicable." In cases where the Generator Owner has ownership of a circuit that connects the generator step-up (GSU) transformer to the point of interconnection with</u></p>	<p>High voltage transmission line impedances (positive and zero sequence) and mutually coupled impedances (zero sequence) should be removed from the <i>Generator Owner Data and Information Requirements</i> listing.</p>

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		the transmission system, the Generator Owner would be responsible for providing impedance data for this circuit.	
Comment #:5 Page #:16 Section #:3	T	Reclosing scheme and its timing is not listed in <i>Transmission or Distribution Owner Data and Information Requirements</i> while it is important data for the Generator Owner. While the SPCS agrees exchange of such information may be a good practice, the SPCS has decided not to include this information in the Technical Document as it is not necessary for coordination of power plant and transmission system protection.	Reclosing scheme and its timing should be added to <i>Transmission or Distribution Owner Data and Information Requirements</i> .
Comment #:6 Page #:18 Section #:3.1.1 Paragraph #:1 Line # :3	E	"...backup protection for system faults that have not cleared by transmission system..." The SPCS has modified the technical document to include this change.	"...backup protection for system faults that have not been cleared by transmission system..."
Comment #:7 Page #:68 Section #:3.5.4 Paragraph #:1 Line # :4	E	There is a reference to figure 3.5.7 in this paragraph. Figure 3.5.7 does not exist. The SPCS has modified the technical document to correct the reference to this figure.	Remove reference to figure 3.5.7 or reference a correct figure as necessary.
Comment #:8 Page #:70 Section #:3.5.5.1	E	There is a reference to figure 3.5.4 in the proper coordination example. Figure 3.5.4 does not exist. The SPCS has modified the technical document to correct the reference to this figure.	Remove reference to figure 3.5.4 or correct it as necessary.
Comment #:9 Page #:129 Section #:3.13.4.1.2 Paragarph #: 4	E	"A proper angular separation δ_5 between the generator and the system..." The SPCS has modified the technical document to include this change.	"A proper angular separation δ_5 between the generator and the system..."

<p>Comment #:10 Page #:133</p> <p>Section #:3.13.5.2</p> <p>Paragraph #: Located right under Figure 3.13.7</p>	<p>E</p>	<p>"Figure 3.13.8 shows three different types of swing characteristics..."</p> <p>The SPCS has modified the technical document to correct the reference to this figure.</p>	<p>"Figure 3.13.7 shows three different types of swing characteristics..."</p>
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