Order No. 817 Citation	Directive/Guidance	Resolution
P 35	Revise Reliability Standard TOP-001-3, Requirement R10 to require real-time monitoring of non-BES facilities.	The directive is addressed in proposed TOP-001-4 Requirement R10. Parts 10.3 and 10.6 cover non-BES facilities.
		Proposed TOP-001-4 R10. Each Transmission Operator shall perform the following for determining System Operating Limit (SOL) exceedances within its Transmission Operator Area:
		10.1. Monitor Facilities within its Transmission Operator Area;
		10.2. Monitor the status of Remedial Action Schemes within its Transmission Operator Area;
		10.3. Monitor non-BES facilities within its Transmission Operator Area identified as necessary by the Transmission Operator;
		10.4. Obtain and utilize status, voltages, and flow data for Facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator;
		10.5. Obtain and utilize the status of Remedial Action Schemes outside its Transmission Operator Area identified as necessary by the Transmission Operator; and
		10.6. Obtain and utilize status, voltages, and flow data for non-BES facilities outside its Transmission Operator Area identified as necessary by the Transmission Operator.

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P 47	Modify Reliability Standards TOP-001-3, Requirements R19 and R20 to include the requirement that the data exchange capabilities of the transmission operators and balancing authorities require redundancy and diverse routing. In addition, [the Commission directs] NERC to clarify that "redundant infrastructure" for system monitoring in Reliability Standards IRO-002-4, Requirement R4 is equivalent to redundant and diversely routed data exchange capabilities.	Proposed TOP-001-4 Requirements R20 and R23 address the directive for Transmission Operators (TOP) and Balancing Authorities (BA), respectively. For consistency, the Standards Drafting Team (SDT) developed proposed IRO-002-5 Requirement R2 to address the directive for Reliability Coordinators (RCs) rather than develop a modification to IRO-002-4 Requirement R4.
		Proposed TOP-001-4 R20. Each Transmission Operator shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Transmission Operator's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Balancing Authority, and the entities it has identified it needs data from in order for it to perform its Real-time monitoring and Real-time Assessments.
		R23. Each Balancing Authority shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Balancing Authority's primary Control Center, for the exchange of Real-time data with its Reliability Coordinator, Transmission Operator, and the entities it has identified it needs data from in order for it to perform its Real-time monitoring and analysis functions.
		Proposed IRO-002-5 R2. Each Reliability Coordinator shall have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the Reliability Coordinator's primary Control Center, for the exchange of Real-time data with its Balancing Authorities and Transmission Operators,

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		and with other entities it deems necessary, for performing its Real-time monitoring and Real-time Assessments.
P 51	Develop a modification to the TOP and IRO standards that addresses a data exchange capability testing framework for the data exchange capabilities used in the primary control centers to test the alternate or less frequently used data exchange capabilities of the reliability coordinator, transmission operator and balancing authority.	The directive is addressed in proposed TOP-001-4 Requirements R21 and R24, and proposed IRO-002-5 Requirement R3. Proposed TOP-001-3 R21. Each Transmission Operator shall test its primary Control Center data exchange capabilities specified in Requirement R20 for redundant functionality at least once every 90 calendar days. If the test is unsuccessful, the Transmission Operator shall initiate action within two hours to restore redundant functionality. R24. Each Balancing Authority shall test its primary Control Center data exchange capabilities specified in Requirement R23 for redundant functionality at least once every 90 calendar days. If the test is unsuccessful, the Balancing Authority shall initiate action within two hours to restore redundant functionality.
		Proposed IRO-002-5 R3. Each Reliability Coordinator shall test its primary Control Center data exchange capabilities specified in Requirement R2 for redundant functionality at least once every 90 calendar days. If the test is unsuccessful, the Reliability Coordinator shall initiate action within two hours to restore redundant functionality.