Standard Number	Req. Number	Text of Requirement	Functional Entity Responsibility for Requirement														Impact on PJM Transmission Categories			Probable Impact
			BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	
BAL-001-0	R1.	Each Balancing Authority shall operate such that, on a rolling 12-month basis, the average of the clock-minute averages of the Balancing Authority's Area Control Error (ACE) divided by 10B (B is the clock-minute average of the Balancing Authority Area's Frequency Bias) times the corresponding clock-minute averages of the Interconnection's Frequency Error is less than a specific limit. This limit is a constant derived from a targeted frequency bound (separately calculated for each Interconnection) that is reviewed and set as necessary by the NERC Operating Committee.***See Standard for Formula.***	BA														No	No	No	
BAL-001-0	R2.	Each Balancing Authority shall operate such that its average ACE for at least 90% of clock-ten-minute periods (6 non-overlapping periods per hour) during a calendar month is within a specific limit, referred to as L_{10}. ***See Standard for Formula.***	BA														No	No	No	
BAL-001-0	R3.	Each Balancing Authority providing Overlap Regulation Service shall evaluate Requirement R1 (i.e., Control Performance Standard 1 or CPS1) and Requirement R2 (i.e., Control Performance Standard 2 or CPS2) using the characteristics of the combined ACE and combined Frequency Bias Settings.	BA														No	No	No	
BAL-001-0	R4.	Any Balancing Authority receiving Overlap Regulation Service shall not have its control performance evaluated (i.e. from a control performance perspective, the Balancing Authority has shifted all control requirements to the Balancing Authority providing Overlap Regulation Service).	BA														No	No	No	
BAL-002-0	R1.	Each Balancing Authority shall have access to and/or operate Contingency Reserve to respond to Disturbances. Contingency Reserve may be supplied from generation, controllable load resources, or coordinated adjustments to Interchange Schedules.	BA														No	No	No	
BAL-002-0	R1.1.	A Balancing Authority may elect to fulfill its Contingency Reserve obligations by participating as a member of a Reserve Sharing Group. In such cases, the Reserve Sharing Group shall have the same responsibilities and obligations as each Balancing Authority with respect to monitoring and meeting the requirements of Standard BAL-002.	BA														No	No	No	
BAL-002-0	R3.	Each Balancing Authority or Reserve Sharing Group shall activate sufficient Contingency Reserve to comply with the DCS.	BA														No	No	No	
BAL-002-0	R3.1.	As a minimum, the Balancing Authority or Reserve Sharing Group shall carry at least enough Contingency Reserve to cover the most severe single contingency. All Balancing Authorities and Reserve Sharing Groups shall review, no less frequently than annually, their probable contingencies to determine their prospective most severe single contingencies.	BA														No	No	No	
BAL-002-0	R4.	A Balancing Authority or Reserve Sharing Group shall meet the Disturbance Recovery Criterion within the Disturbance Recovery Period for 100% of Reportable Disturbances. The Disturbance Recovery Criterion is:	BA														No	No	No	
BAL-002-0	R4.1.	A Balancing Authority shall return its ACE to zero if its ACE just prior to the Reportable Disturbance was positive or equal to zero. For negative initial ACE values just prior to the Disturbance, the Balancing Authority shall return ACE to its pre-Disturbance value.	BA														No	No	No	
BAL-002-0	R4.2.	The default Disturbance Recovery Period is 15 minutes after the start of a Reportable Disturbance. This period may be adjusted to better suit the needs of an Interconnection based on analysis approved by the NERC Operating Committee.	BA														No	No	No	
BAL-002-0	R6.	A Balancing Authority or Reserve Sharing Group shall fully restore its Contingency Reserves within the Contingency Reserve Restoration Period for its Interconnection.	BA														No	No	No	
BAL-002-0	R6.1.	The Contingency Reserve Restoration Period begins at the end of the Disturbance Recovery Period.	BA														No	No	No	
BAL-002-0	R6.2.	The default Contingency Reserve Restoration Period is 90 minutes. This period may be adjusted to better suit the reliability targets of the Interconnection based on analysis approved by the NERC Operating Committee.	BA														No	No	No	
BAL-003-0	R1.	Each Balancing Authority shall review its Frequency Bias Settings by January 1 of each year and recalculate its setting to reflect any change in the Frequency Response of the Balancing Authority Area.	BA														No	No	No	
BAL-003-0	R1.1.	The Balancing Authority may change its Frequency Bias Setting, and the method used to determine the setting, whenever any of the factors used to determine the current bias value change.	BA														No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
BAL-003-0	R1.2.	Each Balancing Authority shall report its Frequency Bias Setting, and method for determining that setting, to the NERC Operating Committee.	BA														No	No	No	
BAL-003-0	R2.	Each Balancing Authority shall establish and maintain a Frequency Bias Setting that is as close as practical to, or greater than, the Balancing Authority's Frequency Response. Frequency Bias may be calculated several ways:	BA														No	No	No	
BAL-003-0	R2.1.	The Balancing Authority may use a fixed Frequency Bias value which is based on a fixed, straight-line function of Tie Line deviation versus Frequency Deviation. The Balancing Authority shall determine the fixed value by observing and averaging the Frequency Response for several Disturbances during on-peak hours.	BA														No	No	No	
BAL-003-0	R2.2.	The Balancing Authority may use a variable (linear or non-linear) bias value, which is based on a variable functio of Tie Line deviation to Frequency Deviation. The Balancing Authority shall determine the variable frequency bi value by analyzing Frequency Response as it varies with factors such as load, generation, governor characteristics, and frequency.	BA														No	No	No	
BAL-003-0	R3.	Each Balancing Authority shall operate its Automatic Generation Control (AGC) on Tie Line Frequency Bias, unless such operation is adverse to system or Interconnection reliability.	BA														No	No	No	
BAL-003-0	R4.	Balancing Authorities that use Dynamic Scheduling or Pseudo-ties for jointly owned units shall reflect their respective share of the unit governor droop response in their respective Frequency Bias Setting.	BA														No	No	No	
BAL-003-0	R4.1.	Fixed schedules for Jointly Owned Units mandate that Balancing Authority (A) that contains the Jointly Owned Unit must incorporate the respective share of the unit governor droop response for any Balancing Authorities that have fixed schedules (B and C). See the diagram below.	BA														No	No	No	
BAL-003-0	R4.2.	The Balancing Authorities that have a fixed schedule (B and C) but do not contain the Jointly Owned Unit shall n include their share of the governor droop response in their Frequency Bias Setting. ***See Standard for Graphic***	BA														No	No	No	
BAL-003-0	R5.	Balancing Authorities that serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of the Balancing Authority's estimated yearly peak demand per 0.1 Hz change.	BA														No	No	No	
BAL-003-0	R5.1.	Balancing Authorities that do not serve native load shall have a monthly average Frequency Bias Setting that is at least 1% of its estimated maximum generation level in the coming year per 0.1 Hz change.	BA														No	No	No	
BAL-003-0	R6.	A Balancing Authority that is performing Overlap Regulation Service shall increase its Frequency Bias Setting to match the frequency response of the entire area being controlled. A Balancing Authority shall not change its Frequency Bias Setting when performing Supplemental Regulation Service.	BA														No	No	No	
BAL-004-0	R1.	Only a Reliability Coordinator shall be eligible to act as Interconnection Time Monitor. A single Reliability Coordinator in each Interconnection shall be designated by the NERC Operating Committee to serve as Interconnection Time Monitor.									RC						No	No	No	
BAL-004-0	R2.	The Interconnection Time Monitor shall monitor Time Error and shall initiate or terminate corrective action orders in accordance with the NAESB Time Error Correction Procedure.									RC						No	No	No	
BAL-004-0	R3.	Each Balancing Authority, when requested, shall participate in a Time Error Correction by one of the following methods:	BA														No	No	No	
BAL-004-0	R3.1.	The Balancing Authority shall offset its frequency schedule by 0.02 Hertz, leaving the Frequency Bias Setting normal; or	BA														No	No	No	
BAL-004-0	R.3.2.	The Balancing Authority shall offset its Net Interchange Schedule (MW) by an amount equal to the computed bias contribution during a 0.02 Hertz Frequency Deviation (i.e. 20% of the Frequency Bias Setting).	BA														No	No	No	
BAL-004-0	R4.	Any Reliability Coordinator in an Interconnection shall have the authority to request the Interconnection Time Monitor to terminate a Time Error Correction in progress, or a scheduled Time Error Correction that has not begun, for reliability considerations.									RC						No	No	No	
BAL-004-0	R4.1.	Balancing Authorities that have reliability concerns with the execution of a Time Error Correction shall notify the Reliability Coordinator and request the termination of a Time Error Correction in progress.	BA														No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
BAL-005-0	R1.	All generation, transmission, and load operating within an Interconnection must be included within the metered boundaries of a Balancing Authority Area.				GOP		LSE						TOP			**Yes Additional data must be reported by each entity**	**Yes Additional data must be reported by each entity**	**Yes Additional data must be reported by each entity**	Minor impact.
BAL-005-0	R1.1.	Each Generator Operator with generation facilities operating in an Interconnection shall ensure that those generation facilities are included within the metered boundaries of a Balancing Authority Area.				GOP											No	No	No	
BAL-005-0	R1.2.	Each Transmission Operator with transmission facilities operating in an Interconnection shall ensure that those transmission facilities are included within the metered boundaries of a Balancing Authority Area.												TOP			**Yes Additional data must be reported by each entity**	**Yes Additional data must be reported by each entity**	**Yes Additional data must be reported by each entity**	Minor impact.
BAL-005-0	R1.3.	Each Load-Serving Entity with load operating in an Interconnection shall ensure that those loads are included within the metered boundaries of a Balancing Authority Area.						LSE									No	No	No	
BAL-005-0	R2.	Each Balancing Authority shall maintain Regulating Reserve that can be controlled by AGC to meet the Control Performance Standard.	BA														No	No	No	
BAL-005-0	R3.	A Balancing Authority providing Regulation Service shall ensure that adequate metering, communications and control equipment are employed to prevent such service from becoming a Burden on the Interconnection or other Balancing Authority Areas.	BA														No	No	No	
BAL-005-0	R4.	A Balancing Authority providing Regulation Service shall notify the Host Balancing Authority for whom it is controlling if it is unable to provide the service, as well as any Intermediate Balancing Authorities.	BA														No	No	No	
BAL-005-0	R5.	A Balancing Authority receiving Regulation Service shall ensure that backup plans are in place to provide replacement Regulation Service should the supplying Balancing Authority no longer be able to provide this service.	BA														No	No	No	
BAL-005-0	R6.	The Balancing Authority's AGC shall compare total Net Actual Interchange to total Net Scheduled Interchange plus Frequency Bias obligation to determine the Balancing Authority's ACE. Single Balancing Authorities operating asynchronously may employ alternative ACE calculations such as (but not limited to) flat frequency control. If a Balancing Authority is unable to calculate ACE for more than 30 minutes it shall notify its Reliability Coordinator.	BA														No	No	No	
BAL-005-0	R7.	The Balancing Authority shall operate AGC continuously unless such operation adversely impacts the reliability o the Interconnection. If AGC has become inoperative, the Balancing Authority shall use manual control to adjust generation to maintain the Net Scheduled Interchange.	BA														No	No	No	
BAL-005-0	R8.	The Balancing Authority shall ensure that data acquisition for and calculation of ACE occur at least every six seconds.	BA														No	No	No	
BAL-005-0	R8.1.	Each Balancing Authority shall provide redundant and independent frequency metering equipment that shall automatically activate upon detection of failure of the primary source. This overall installation shall provide a minimum availability of 99.95%.	BA														No	No	No	
BAL-005-0	R9.	The Balancing Authority shall include all Interchange Schedules with Adjacent Balancing Authorities in the calculation of Net Scheduled Interchange for the ACE equation.	BA														No	No	No	
BAL-005-0	R9.1.	Balancing Authorities with a high voltage direct current (HVDC) link to another Balancing Authority connected asynchronously to their Interconnection may choose to omit the Interchange Schedule related to the HVDC link from the ACE equation if it is modeled as internal generation or load.	BA														No	No	No	
BAL-005-0	R10.	The Balancing Authority shall include all Dynamic Schedules in the calculation of Net Scheduled Interchange for the ACE equation.	BA														No	No	No	
BAL-005-0	R11.	Balancing Authorities shall include the effect of Ramp rates, which shall be identical and agreed to between affected Balancing Authorities, in the Scheduled Interchange values to calculate ACE.	BA														No	No	No	
BAL-005-0	R12.	Each Balancing Authority shall include all Tie Line flows with Adjacent Balancing Authority Areas in the ACE calculation.	BA														No	No	No	

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BAL-005-0	R12.1.	Balancing Authorities that share a tie shall ensure Tie Line MW metering is telemetered to both control centers, and emanates from a common, agreed-upon source using common primary metering equipment. Balancing Authorities shall ensure that megawatt-hour data is telemetered or reported at the end of each hour.	BA														No	No	No	
BAL-005-0	R12.2.	Balancing Authorities shall ensure the power flow and ACE signals that are utilized for calculating Balancing Authority performance or that are transmitted for Regulation Service are not filtered prior to transmission, except for the Anti-aliasing Filters of Tie Lines.	BA														No	No	No	
BAL-005-0	R12.3.	Balancing Authorities shall install common metering equipment where Dynamic Schedules or Pseudo-Ties are implemented between two or more Balancing Authorities to deliver the output of Jointly Owned Units or to serve remote load.	BA														No	No	No	
BAL-005-0	R13.	Each Balancing Authority shall perform hourly error checks using Tie Line megawatt-hour meters with common time synchronization to determine the accuracy of its control equipment. The Balancing Authority shall adjust the component (e.g., Tie Line meter) of ACE that is in error (if known) or use the interchange meter error (IME) term of the ACE equation to compensate for any equipment error until repairs can be made.	BA														No	No	No	
BAL-005-0	R14.	The Balancing Authority shall provide its operating personnel with sufficient instrumentation and data recording equipment to facilitate monitoring of control performance, generation response, and after-the-fact analysis of area performance. As a minimum, the Balancing Authority shall provide its operating personnel with real-time values for ACE, Interconnection frequency and Net Actual Interchange with each Adjacent Balancing Authority Area.	BA														No	No	No	
BAL-005-0	R15.	The Balancing Authority shall provide adequate and reliable backup power supplies and shall periodically test these supplies at the Balancing Authority's control center and other critical locations to ensure continuous operation of AGC and vital data recording equipment during loss of the normal power supply.	BA														No	No	No	
BAL-005-0	R16.	The Balancing Authority shall sample data at least at the same periodicity with which ACE is calculated. The Balancing Authority shall flag missing or bad data for operator display and archival purposes. The Balancing Authority shall collect coincident data to the greatest practical extent, i.e., ACE, Interconnection frequency, Net Actual Interchange, and other data shall all be sampled at the same time.	BA														No	No	No	
BAL-005-0	R17.	Each Balancing Authority shall at least annually check and calibrate its time error and frequency devices against a common reference. The Balancing Authority shall adhere to the minimum values for measuring devices as listed below: ***See Standard for Values***	BA														No	No	No	
BAL-006-1	R1.	Each Balancing Authority shall calculate and record hourly Inadvertent Interchange.	BA														No	No	No	
BAL-006-1	R2.	Each Balancing Authority shall include all AC tie lines that connect to its Adjacent Balancing Authority Areas in its Inadvertent Interchange account. The Balancing Authority shall take into account interchange served by jointly owned generators.	BA														No	No	No	
BAL-006-1	R3.	Each Balancing Authority shall ensure all of its Balancing Authority Area interconnection points are equipped wi common megawatt-hour meters, with readings provided hourly to the control centers of Adjacent Balancing Authorities.	BA														No	No	No	
BAL-006-1	R4.	Adjacent Balancing Authority Areas shall operate to a common Net Interchange Schedule and Actual Net Interchange value and shall record these hourly quantities, with like values but opposite sign. Each Balancing Authority shall compute its Inadvertent Interchange based on the following:	BA														No	No	No	
BAL-006-1	R4.1.	Each Balancing Authority, by the end of the next business day, shall agree with its Adjacent Balancing Authorities to:	BA														No	No	No	
BAL-006-1	R4.1.1.	The hourly values of Net Interchange Schedule.	BA														No	No	No	
BAL-006-1	R4.1.2.	The hourly integrated megawatt-hour values of Net Actual Interchange.	BA														No	No	No	
BAL-006-1	R4.2.	Each Balancing Authority shall use the agreed-to daily and monthly accounting data to compile its monthly accumulated Inadvertent Interchange for the On-Peak and Off-Peak hours of the month.	BA														No	No	No	
BAL-006-1	R4.3.	A Balancing Authority shall make after-the-fact corrections to the agreed-to daily and monthly accounting data only as needed to reflect actual operating conditions (e.g. a meter being used for control was sending bad data). Changes or corrections based on non-reliability considerations shall not be reflected in the Balancing Authority's Inadvertent Interchange. After-the-fact corrections to scheduled or actual values will not be accepted without agreement of the Adjacent Balancing Authority(ies).	BA														No	No	No	

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BAL-006-1	R5.	Adjacent Balancing Authorities that cannot mutually agree upon their respective Net Actual Interchange or Net Scheduled Interchange quantities by the 15th calendar day of the following month shall, for the purposes of dispute resolution, submit a report to their respective Regional Reliability Organization Survey Contact. The report shall describe the nature and the cause of the dispute as well as a process for correcting the discrepancy.	BA														No	No	No	
CIP-001-1	R1.	Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Load-Servin Entity shall have procedures for the recognition of and for making their operating personnel aware of sabotage events on its facilities and multi site sabotage affecting larger portions of the Interconnection.	BA			GOP		LSE			RC			TOP			No	No	No	
CIP-001-1	R2.	Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Load-Servin Entity shall have procedures for the communication of information concerning sabotage events to appropriate parties in the Interconnection.	BA			GOP		LSE			RC			TOP			No	No	No	
CIP-001-1	R3.	Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Load-Servin Entity shall provide its operating personnel with sabotage response guidelines, including personnel to contact, for reporting disturbances due to sabotage events.	BA			GOP		LSE			RC			TOP			No	No	No	
CIP-001-1	R4.	Each Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, and Load-Servin Entity shall establish communications contacts, as applicable, with local Federal Bureau of Investigation (FBI) or Royal Canadian Mounted Police (RCMP) officials and develop reporting procedures as appropriate to their circumstances.	BA			GOP		LSE			RC			TOP			No	No	No	
CIP-002-1	R1.	Critical Asset Identification Method — The Responsible Entity shall identify and document a risk-based assessment methodology to use to identify its Critical Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	No	Minor impact.
CIP-002-1	R1.1.	The Responsible Entity shall maintain documentation describing its risk-based assessment methodology that includes procedures and evaluation criteria.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R1.2.	The risk-based assessment shall consider the following assets:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R1.2.1.	Control centers and backup control centers performing the functions of the entities listed in the Applicability section of this standard.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R1.2.2.	Transmission substations that support the reliable operation of the Bulk Electric System.											TO	TOP			**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	**No**	Minor impact.
CIP-002-1	R1.2.3.	Generation resources that support the reliable operation of the Bulk Electric System.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R1.2.4.	Systems and facilities critical to system restoration, including blackstart generators and substations in the electrica path of transmission lines used for initial system restoration.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	Minor impact.
CIP-002-1	R1.2.5.	Systems and facilities critical to automatic load shedding under a common control system capable of shedding 300 MW or more.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R1.2.6.	Special Protection Systems that support the reliable operation of the Bulk Electric System.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	No	Minor impact.

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-002-1	R1.2.7.	Any additional assets that support the reliable operation of the Bulk Electric System that the Responsible Entity deems appropriate to include in its assessment.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	No	Minor impact.
CIP-002-1	R2.	Critical Asset Identification — The Responsible Entity shall develop a list of its identified Critical Assets determined through an annual application of the risk-based assessment methodology required in R1. The Responsible Entity shall review this list at least annually, and update it as necessary.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	No	Minor impact.
CIP-002-1	R3.	Critical Cyber Asset Identification — Using the list of Critical Assets developed pursuant to Requirement R2, the Responsible Entity shall develop a list of associated Critical Cyber Assets essential to the operation of the Critical Asset. Examples at control centers and backup control centers include systems and facilities at master and remote sites that provide monitoring and control, automatic generation control, real-time power system modeling, and real-time inter-utility data exchange. The Responsible Entity shall review this list at least annually, and update it as necessary. For the purpose of Standard CIP-002, Critical Cyber Assets are further qualified to be those having at least one of the following characteristics:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	**Yes Each entity may have to identify additional 100KV+ facilities**	**Yes Each entity may have to identify additional 100KV+ facilities**	No	Minor impact.
CIP-002-1	R3.1.	The Cyber Asset uses a routable protocol to communicate outside the Electronic Security Perimeter; or,	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R3.2.	The Cyber Asset uses a routable protocol within a control center; or,	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R3.3.	The Cyber Asset is dial-up accessible.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-002-1	R4.	Annual Approval — A senior manager or delegate(s) shall approve annually the list of Critical Assets and the list of Critical Cyber Assets. Based on Requirements R1, R2, and R3 the Responsible Entity may determine that it has no Critical Assets or Critical Cyber Assets. The Responsible Entity shall keep a signed and dated record of the senior manager or delegate(s)'s approval of the list of Critical Assets and the list of Critical Cyber Assets (even if such lists are null.)	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R1.	Cyber Security Policy — The Responsible Entity shall document and implement a cyber security policy that represents management's commitment and ability to secure its Critical Cyber Assets. The Responsible Entity shall, at minimum, ensure the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R1.1.	The cyber security policy addresses the requirements in Standards CIP-002 through CIP-009, including provision for emergency situations.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R1.2.	The cyber security policy is readily available to all personnel who have access to, or are responsible for, Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R1.3.	Annual review and approval of the cyber security policy by the senior manager assigned pursuant to R2.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R2.	Leadership — The Responsible Entity shall assign a senior manager with overall responsibility for leading and managing the entity's implementation of, and adherence to, Standards CIP-002 through CIP-009.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R2.1.	The senior manager shall be identified by name, title, business phone, business address, and date of designation.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R2.2.	Changes to the senior manager must be documented within thirty calendar days of the effective date.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R2.3.	The senior manager or delegate(s), shall authorize and document any exception from the requirements of the cyber security policy.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R3.	Exceptions — Instances where the Responsible Entity cannot conform to its cyber security policy must be documented as exceptions and authorized by the senior manager or delegate(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R3.1.	Exceptions to the Responsible Entity's cyber security policy must be documented within thirty days of being approved by the senior manager or delegate(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R3.2.	Documented exceptions to the cyber security policy must include an explanation as to why the exception is necessary and any compensating measures, or a statement accepting risk.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

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CIP-003-1	R3.3.	Authorized exceptions to the cyber security policy must be reviewed and approved annually by the senior manage or delegate(s) to ensure the exceptions are still required and valid. Such review and approval shall be documented.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R4.	Information Protection — The Responsible Entity shall implement and document a program to identify, classify, and protect information associated with Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R4.1.	The Critical Cyber Asset information to be protected shall include, at a minimum and regardless of media type, operational procedures, lists as required in Standard CIP-002, network topology or similar diagrams, floor plans o computing centers that contain Critical Cyber Assets, equipment layouts of Critical Cyber Assets, disaster recovery plans, incident response plans, and security configuration information.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R4.2.	The Responsible Entity shall classify information to be protected under this program based on the sensitivity of the Critical Cyber Asset information.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R4.3.	The Responsible Entity shall, at least annually, assess adherence to its Critical Cyber Asset information protection program, document the assessment results, and implement an action plan to remediate deficiencies identified duri the assessment.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.	Access Control — The Responsible Entity shall document and implement a program for managing access to protected Critical Cyber Asset information.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.1.	The Responsible Entity shall maintain a list of designated personnel who are responsible for authorizing logical or physical access to protected information.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.1.1.	Personnel shall be identified by name, title, business phone and the information for which they are responsible for authorizing access.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.1.2.	The list of personnel responsible for authorizing access to protected information shall be verified at least annually	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.2.	The Responsible Entity shall review at least annually the access privileges to protected information to confirm that access privileges are correct and that they correspond with the Responsible Entity's needs and appropriate personnel roles and responsibilities.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R5.3.	The Responsible Entity shall assess and document at least annually the processes for controlling access privileges to protected information.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-003-1	R6.	Change Control and Configuration Management — The Responsible Entity shall establish and document a process of change control and configuration management for adding, modifying, replacing, or removing Critical Cyber Asset hardware or software, and implement supporting configuration management activities to identify, control ar document all entity or vendor-related changes to hardware and software components of Critical Cyber Assets pursuant to the change control process.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R1.	Awareness — The Responsible Entity shall establish, maintain, and document a security awareness program to ensure personnel having authorized cyber or authorized unescorted physical access receive on-going reinforcement in sound security practices. The program shall include security awareness reinforcement on at least a quarterly basis using mechanisms such as:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	-	Direct communications (e.g., emails, memos, computer based training, etc.);	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	-	Indirect communications (e.g., posters, intranet, brochures, etc.);	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	-	Management support and reinforcement (e.g., presentations, meetings, etc.).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.	Training — The Responsible Entity shall establish, maintain, and document an annual cyber security training program for personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets, and review the program annually and update as necessary.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.1.	This program will ensure that all personnel having such access to Critical Cyber Assets, including contractors and service vendors, are trained within ninety calendar days of such authorization.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.2.	Training shall cover the policies, access controls, and procedures as developed for the Critical Cyber Assets covered by CIP-004, and include, at a minimum, the following required items appropriate to personnel roles and responsibilities:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.2.1.	The proper use of Critical Cyber Assets;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.2.2.	Physical and electronic access controls to Critical Cyber Assets;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-004-1	R2.2.3.	The proper handling of Critical Cyber Asset information; and,	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.2.4.	Action plans and procedures to recover or re-establish Critical Cyber Assets and access thereto following a Cyber Security Incident.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R2.3.	The Responsible Entity shall maintain documentation that training is conducted at least annually, including the da the training was completed and attendance records.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R3.	Personnel Risk Assessment —The Responsible Entity shall have a documented personnel risk assessment progran in accordance with federal, state, provincial, and local laws, and subject to existing collective bargaining unit agreements, for personnel having authorized cyber or authorized unescorted physical access. A personnel risk assessment shall be conducted pursuant to that program within thirty days of such personnel being granted such access. Such program shall at a minimum include:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R3.1.	The Responsible Entity shall ensure that each assessment conducted include, at least, identity verification (e.g., Social Security Number verification in the U.S.) and seven-year criminal check. The Responsible Entity may conduct more detailed reviews, as permitted by law and subject to existing collective bargaining unit agreements, depending upon the criticality of the position.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R3.2.	The Responsible Entity shall update each personnel risk assessment at least every seven years after the initial personnel risk assessment or for cause.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R3.3.	The Responsible Entity shall document the results of personnel risk assessments of its personnel having authorized cyber or authorized unescorted physical access to Critical Cyber Assets, and that personnel risk assessments of contractor and service vendor personnel with such access are conducted pursuant to Standard CIP-004.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R4.	Access — The Responsible Entity shall maintain list(s) of personnel with authorized cyber or authorized unescorted physical access to Critical Cyber Assets, including their specific electronic and physical access rights t Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R4.1.	The Responsible Entity shall review the list(s) of its personnel who have such access to Critical Cyber Assets quarterly, and update the list(s) within seven calendar days of any change of personnel with such access to Critical Cyber Assets, or any change in the access rights of such personnel. The Responsible Entity shall ensure access list(s) for contractors and service vendors are properly maintained.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-004-1	R4.2.	The Responsible Entity shall revoke such access to Critical Cyber Assets within 24 hours for personnel terminated for cause and within seven calendar days for personnel who no longer require such access to Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.	Electronic Security Perimeter — The Responsible Entity shall ensure that every Critical Cyber Asset resides with an Electronic Security Perimeter. The Responsible Entity shall identify and document the Electronic Security Perimeter(s) and all access points to the perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.1.	Access points to the Electronic Security Perimeter(s) shall include any externally connected communication end point (for example, dial-up modems) terminating at any device within the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.2.	For a dial-up accessible Critical Cyber Asset that uses a non-routable protocol, the Responsible Entity shall define an Electronic Security Perimeter for that single access point at the dial-up device.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.3.	Communication links connecting discrete Electronic Security Perimeters shall not be considered part of the Electronic Security Perimeter. However, end points of these communication links within the Electronic Security Perimeter(s) shall be considered access points to the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.4.	Any non-critical Cyber Asset within a defined Electronic Security Perimeter shall be identified and protected pursuant to the requirements of Standard CIP-005.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R1.5.	Cyber Assets used in the access control and monitoring of the Electronic Security Perimeter(s) shall be afforded th protective measures as a specified in Standard CIP-003, Standard CIP-004 Requirement R3, Standard CIP-005 Requirements R2 and R3, Standard CIP-006 Requirements R2 and R3, Standard CIP-007, Requirements R1 and R3 through R9, Standard CIP-008, and Standard CIP-009.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-005-1	R1.6.	The Responsible Entity shall maintain documentation of Electronic Security Perimeter(s), all interconnected Critical and non-critical Cyber Assets within the Electronic Security Perimeter(s), all electronic access points to th Electronic Security Perimeter(s) and the Cyber Assets deployed for the access control and monitoring of these access points.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.	Electronic Access Controls — The Responsible Entity shall implement and document the organizational processes and technical and procedural mechanisms for control of electronic access at all electronic access points to the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.1.	These processes and mechanisms shall use an access control model that denies access by default, such that explicit access permissions must be specified.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.2.	At all access points to the Electronic Security Perimeter(s), the Responsible Entity shall enable only ports and services required for operations and for monitoring Cyber Assets within the Electronic Security Perimeter, and shall document, individually or by specified grouping, the configuration of those ports and services.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.3.	The Responsible Entity shall maintain a procedure for securing dial-up access to the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.4.	Where external interactive access into the Electronic Security Perimeter has been enabled, the Responsible Entity shall implement strong procedural or technical controls at the access points to ensure authenticity of the accessing party, where technically feasible.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.5.	The required documentation shall, at least, identify and describe:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.5.1.	The processes for access request and authorization.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.5.2.	The authentication methods.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.5.3.	The review process for authorization rights, in accordance with Standard CIP-004 Requirement R4.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.5.4.	The controls used to secure dial-up accessible connections.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R2.6.	Appropriate Use Banner — Where technically feasible, electronic access control devices shall display an appropriate use banner on the user screen upon all interactive access attempts. The Responsible Entity shall maintain a document identifying the content of the banner.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R3.	Monitoring Electronic Access — The Responsible Entity shall implement and document an electronic or manual process(es) for monitoring and logging access at access points to the Electronic Security Perimeter(s) twenty-four hours a day, seven days a week.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R3.1.	For dial-up accessible Critical Cyber Assets that use non-routable protocols, the Responsible Entity shall implement and document monitoring process(es) at each access point to the dial-up device, where technically feasible.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R3.2.	Where technically feasible, the security monitoring process(es) shall detect and alert for attempts at or actual unauthorized accesses. These alerts shall provide for appropriate notification to designated response personnel. Where alerting is not technically feasible, the Responsible Entity shall review or otherwise assess access logs for attempts at or actual unauthorized accesses at least every ninety calendar days.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.	Cyber Vulnerability Assessment — The Responsible Entity shall perform a cyber vulnerability assessment of the electronic access points to the Electronic Security Perimeter(s) at least annually. The vulnerability assessment shall include, at a minimum, the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.1.	A document identifying the vulnerability assessment process;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.2.	A review to verify that only ports and services required for operations at these access points are enabled;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.3.	The discovery of all access points to the Electronic Security Perimeter;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.4.	A review of controls for default accounts, passwords, and network management community strings; and,	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R4.5.	Documentation of the results of the assessment, the action plan to remediate or mitigate vulnerabilities identified in the assessment, and the execution status of that action plan.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-005-1	R5.	Documentation Review and Maintenance — The Responsible Entity shall review, update, and maintain all documentation to support compliance with the requirements of Standard CIP-005.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R5.1.	The Responsible Entity shall ensure that all documentation required by Standard CIP-005 reflect current configurations and processes and shall review the documents and procedures referenced in Standard CIP-005 at least annually.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R5.2.	The Responsible Entity shall update the documentation to reflect the modification of the network or controls within ninety calendar days of the change.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-005-1	R5.3.	The Responsible Entity shall retain electronic access logs for at least ninety calendar days. Logs related to reportable incidents shall be kept in accordance with the requirements of Standard CIP-008.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.	Physical Security Plan — The Responsible Entity shall create and maintain a physical security plan, approved by senior manager or delegate(s) that shall address, at a minimum, the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.1.	Processes to ensure and document that all Cyber Assets within an Electronic Security Perimeter also reside within an identified Physical Security Perimeter. Where a completely enclosed ("six-wall") border cannot be established, the Responsible Entity shall deploy and document alternative measures to control physical access to the Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.2.	Processes to identify all access points through each Physical Security Perimeter and measures to control entry at those access points.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.3.	Processes, tools, and procedures to monitor physical access to the perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.4.	Procedures for the appropriate use of physical access controls as described in Requirement R3 including visitor pass management, response to loss, and prohibition of inappropriate use of physical access controls.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.5.	Procedures for reviewing access authorization requests and revocation of access authorization, in accordance with CIP-004 Requirement R4.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.6.	Procedures for escorted access within the physical security perimeter of personnel not authorized for unescorted access.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.7.	Process for updating the physical security plan within ninety calendar days of any physical security system redesign or reconfiguration, including, but not limited to, addition or removal of access points through the physical security perimeter, physical access controls, monitoring controls, or logging controls.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.8.	Cyber Assets used in the access control and monitoring of the Physical Security Perimeter(s) shall be afforded the protective measures specified in Standard CIP-003, Standard CIP-004 Requirement R3, Standard CIP-005 Requirements R2 and R3, Standard CIP-006 Requirement R2 and R3, Standard CIP-007, Standard CIP-008 and Standard CIP-009.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R1.9.	Process for ensuring that the physical security plan is reviewed at least annually.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R2.	Physical Access Controls — The Responsible Entity shall document and implement the operational and procedural controls to manage physical access at all access points to the Physical Security Perimeter(s) twenty-four hours a day, seven days a week. The Responsible Entity shall implement one or more of the following physical access methods:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R2.1.	Card Key: A means of electronic access where the access rights of the card holder are predefined in a computer database. Access rights may differ from one perimeter to another.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R2.2.	Special Locks: These include, but are not limited to, locks with "restricted key" systems, magnetic locks that can be operated remotely, and "man-trap" systems.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R2.3.	Security Personnel: Personnel responsible for controlling physical access who may reside on-site or at a monitoring station.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R2.4.	Other Authentication Devices: Biometric, keypad, token, or other equivalent devices that control physical access to the Critical Cyber Assets.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R3.	Monitoring Physical Access — The Responsible Entity shall document and implement the technical and procedural controls for monitoring physical access at all access points to the Physical Security Perimeter(s) twenty-four hours a day, seven days a week. Unauthorized access attempts shall be reviewed immediately and handled in accordance with the procedures specified in Requirement CIP-008. One or more of the following monitoring methods shall be used:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-006-1	R3.1.	Alarm Systems: Systems that alarm to indicate a door, gate or window has been opened without authorization. These alarms must provide for immediate notification to personnel responsible for response.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R3.2.	Human Observation of Access Points: Monitoring of physical access points by authorized personnel as specified in Requirement R2.3.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R4.	Logging Physical Access — Logging shall record sufficient information to uniquely identify individuals and the time of access twenty-four hours a day, seven days a week. The Responsible Entity shall implement and document the technical and procedural mechanisms for logging physical entry at all access points to the Physical Security Perimeter(s) using one or more of the following logging methods or their equivalent:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R4.1.	Computerized Logging: Electronic logs produced by the Responsible Entity's selected access control and monitoring method.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R4.2.	Video Recording: Electronic capture of video images of sufficient quality to determine identity.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R4.3.	Manual Logging: A log book or sign-in sheet, or other record of physical access maintained by security or other personnel authorized to control and monitor physical access as specified in Requirement R2.3.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R5.	Access Log Retention — The responsible entity shall retain physical access logs for at least ninety calendar days. Logs related to reportable incidents shall be kept in accordance with the requirements of Standard CIP-008.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R6.	Maintenance and Testing — The Responsible Entity shall implement a maintenance and testing program to ensure that all physical security systems under Requirements R2, R3, and R4 function properly. The program must include, at a minimum, the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R6.1.	Testing and maintenance of all physical security mechanisms on a cycle no longer than three years.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R6.2.	Retention of testing and maintenance records for the cycle determined by the Responsible Entity in Requirement R6.1.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-006-1	R6.3.	Retention of outage records regarding access controls, logging, and monitoring for a minimum of one calendar year.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R1.	Test Procedures — The Responsible Entity shall ensure that new Cyber Assets and significant changes to existing Cyber Assets within the Electronic Security Perimeter do not adversely affect existing cyber security controls. For purposes of Standard CIP-007, a significant change shall, at a minimum, include implementation of security patches, cumulative service packs, vendor releases, and version upgrades of operating systems, applications, database platforms, or other third-party software or firmware.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R1.1.	The Responsible Entity shall create, implement, and maintain cyber security test procedures in a manner that minimizes adverse effects on the production system or its operation.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R1.2.	The Responsible Entity shall document that testing is performed in a manner that reflects the production environment.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R1.3.	The Responsible Entity shall document test results.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R2.	Ports and Services — The Responsible Entity shall establish and document a process to ensure that only those ports and services required for normal and emergency operations are enabled.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R2.1.	The Responsible Entity shall enable only those ports and services required for normal and emergency operations.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R2.2.	The Responsible Entity shall disable other ports and services, including those used for testing purposes, prior to production use of all Cyber Assets inside the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R2.3.	In the case where unused ports and services cannot be disabled due to technical limitations, the Responsible Entity shall document compensating measure(s) applied to mitigate risk exposure or an acceptance of risk.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R3.	Security Patch Management — The Responsible Entity, either separately or as a component of the documented configuration management process specified in CIP-003 Requirement R6, shall establish and document a security patch management program for tracking, evaluating, testing, and installing applicable cyber security software patches for all Cyber Assets within the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-007-1	R3.1.	The Responsible Entity shall document the assessment of security patches and security upgrades for applicability within thirty calendar days of availability of the patches or upgrades.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R3.2.	The Responsible Entity shall document the implementation of security patches. In any case where the patch is not installed, the Responsible Entity shall document compensating measure(s) applied to mitigate risk exposure or an acceptance of risk.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R4.	Malicious Software Prevention — The Responsible Entity shall use anti-virus software and other malicious software ("malware") prevention tools, where technically feasible, to detect, prevent, deter, and mitigate the introduction, exposure, and propagation of malware on all Cyber Assets within the Electronic Security Perimeter(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R4.1.	The Responsible Entity shall document and implement anti-virus and malware prevention tools. In the case where anti-virus software and malware prevention tools are not installed, the Responsible Entity shall document compensating measure(s) applied to mitigate risk exposure or an acceptance of risk.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R4.2.	The Responsible Entity shall document and implement a process for the update of anti-virus and malware prevention "signatures." The process must address testing and installing the signatures.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.	Account Management — The Responsible Entity shall establish, implement, and document technical and procedural controls that enforce access authentication of, and accountability for, all user activity, and that minimize the risk of unauthorized system access.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.1.	The Responsible Entity shall ensure that individual and shared system accounts and authorized access permissions are consistent with the concept of "need to know" with respect to work functions performed.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.1.1.	The Responsible Entity shall ensure that user accounts are implemented as approved by designated personnel. Refer to Standard CIP-003 Requirement R5.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.1.2.	The Responsible Entity shall establish methods, processes, and procedures that generate logs of sufficient detail to create historical audit trails of individual user account access activity for a minimum of ninety days.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.1.3.	The Responsible Entity shall review, at least annually, user accounts to verify access privileges are in accordance with Standard CIP-003 Requirement R5 and Standard CIP-004 Requirement R4.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.2.	The Responsible Entity shall implement a policy to minimize and manage the scope and acceptable use of administrator, shared, and other generic account privileges including factory default accounts.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.2.1	The policy shall include the removal, disabling, or renaming of such accounts where possible. For such accounts that must remain enabled, passwords shall be changed prior to putting any system into service.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.2.2.	The Responsible Entity shall identify those individuals with access to shared accounts.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.2.3.	Where such accounts must be shared, the Responsible Entity shall have a policy for managing the use of such accounts that limits access to only those with authorization, an audit trail of the account use (automated or manual), and steps for securing the account in the event of personnel changes (for example, change in assignment or termination).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.3.	At a minimum, the Responsible Entity shall require and use passwords, subject to the following, as technically feasible:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.3.1	Each password shall be a minimum of six characters.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.3.2	Each password shall consist of a combination of alpha, numeric, and "special" characters.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R5.3.3	Each password shall be changed at least annually, or more frequently based on risk.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R6.	Security Status Monitoring — The Responsible Entity shall ensure that all Cyber Assets within the Electronic Security Perimeter, as technically feasible, implement automated tools or organizational process controls to monitor system events that are related to cyber security.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R6.1.	The Responsible Entity shall implement and document the organizational processes and technical and procedural mechanisms for monitoring for security events on all Cyber Assets within the Electronic Security Perimeter.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R6.2.	The security monitoring controls shall issue automated or manual alerts for detected Cyber Security Incidents.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-007-1	R6.3.	The Responsible Entity shall maintain logs of system events related to cyber security, where technically feasible, support incident response as required in Standard CIP-008.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R6.4.	The Responsible Entity shall retain all logs specified in Requirement R6 for ninety calendar days.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R6.5.	The Responsible Entity shall review logs of system events related to cyber security and maintain records documenting review of logs.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R7.	Disposal or Redeployment — The Responsible Entity shall establish formal methods, processes, and procedures for disposal or redeployment of Cyber Assets within the Electronic Security Perimeter(s) as identified and documented in Standard CIP-005.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R7.1.	Prior to the disposal of such assets, the Responsible Entity shall destroy or erase the data storage media to prevent unauthorized retrieval of sensitive cyber security or reliability data.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R7.2.	Prior to redeployment of such assets, the Responsible Entity shall, at a minimum, erase the data storage media to prevent unauthorized retrieval of sensitive cyber security or reliability data.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R7.3.	The Responsible Entity shall maintain records that such assets were disposed of or redeployed in accordance with documented procedures.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R8.	Cyber Vulnerability Assessment — The Responsible Entity shall perform a cyber vulnerability assessment of all Cyber Assets within the Electronic Security Perimeter at least annually. The vulnerability assessment shall include, at a minimum, the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R8.1.	A document identifying the vulnerability assessment process;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R8.2.	A review to verify that only ports and services required for operation of the Cyber Assets within the Electronic Security Perimeter are enabled;	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R8.3.	A review of controls for default accounts; and,	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R8.4.	Documentation of the results of the assessment, the action plan to remediate or mitigate vulnerabilities identified in the assessment, and the execution status of that action plan.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-007-1	R9.	Documentation Review and Maintenance — The Responsible Entity shall review and update the documentation specified in Standard CIP-007 at least annually. Changes resulting from modifications to the systems or controls shall be documented within ninety calendar days of the change.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.	Cyber Security Incident Response Plan — The Responsible Entity shall develop and maintain a Cyber Security Incident response plan. The Cyber Security Incident Response plan shall address, at a minimum, the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.1.	Procedures to characterize and classify events as reportable Cyber Security Incidents.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.2.	Response actions, including roles and responsibilities of incident response teams, incident handling procedures, and communication plans.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.3.	Process for reporting Cyber Security Incidents to the Electricity Sector Information Sharing and Analysis Center (ES ISAC). The Responsible Entity must ensure that all reportable Cyber Security Incidents are reported to the ES ISAC either directly or through an intermediary.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.4.	Process for updating the Cyber Security Incident response plan within ninety calendar days of any changes.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.5.	Process for ensuring that the Cyber Security Incident response plan is reviewed at least annually.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R1.6.	Process for ensuring the Cyber Security Incident response plan is tested at least annually. A test of the incident response plan can range from a paper drill, to a full operational exercise, to the response to an actual incident.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-008-1	R2.	Cyber Security Incident Documentation — The Responsible Entity shall keep relevant documentation related to Cyber Security Incidents reportable per Requirement R1.1 for three calendar years.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R1.	Recovery Plans — The Responsible Entity shall create and annually review recovery plan(s) for Critical Cyber Assets. The recovery plan(s) shall address at a minimum the following:	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R1.1.	Specify the required actions in response to events or conditions of varying duration and severity that would activate the recovery plan(s).	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R1.2.	Define the roles and responsibilities of responders.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R2.	Exercises — The recovery plan(s) shall be exercised at least annually. An exercise of the recovery plan(s) can range from a paper drill, to a full operational exercise, to recovery from an actual incident.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
CIP-009-1	R3.	Change Control — Recovery plan(s) shall be updated to reflect any changes or lessons learned as a result of an exercise or the recovery from an actual incident. Updates shall be communicated to personnel responsible for the activation and implementation of the recovery plan(s) within ninety calendar days of the change.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R4.	Backup and Restore — The recovery plan(s) shall include processes and procedures for the backup and storage of information required to successfully restore Critical Cyber Assets. For example, backups may include spare electronic components or equipment, written documentation of configuration settings, tape backup, etc.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
CIP-009-1	R5.	Testing Backup Media — Information essential to recovery that is stored on backup media shall be tested at least annually to ensure that the information is available. Testing can be completed off site.	BA		GO	GOP	IA	LSE			RC		TO	TOP		TSP	No	No	No	
COM-001-1	R1.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:	BA								RC			TOP			**Yes PJM may require additonal 100KV+ facilities to be monitored and controlled**	**Yes PJM may require additonal 100KV+ facilities to be monitored and controlled**	No	Medium Impact Additional metering may be required
COM-001-1	R1.1.	Internally.	BA								RC			TOP			No	No	No	
COM-001-1	R1.2.	Between the Reliability Coordinator and its Transmission Operators and Balancing Authorities.	BA								RC			TOP			**Yes PJM may require additonal 100KV+ facilities to be monitored and controlled**	**Yes PJM may require additonal 100KV+ facilities to be monitored and controlled**	No	Medium Impact Additional metering may be required
COM-001-1	R1.3.	With other Reliability Coordinators, Transmission Operators, and Balancing Authorities as necessary to maintain reliability.	BA								RC			TOP			**"**	**"**	No	
COM-001-1	R1.4.	Where applicable, these facilities shall be redundant and diversely routed.	BA								RC			TOP			**Yes Additional facilities must be monitored and controlled Also monitoring must be redundant**	**Yes Additional facilities must be monitored and controlled Also monitoring must be redundant**	No	Medium Impact Additional redundant metering may be required
COM-001-1	R2.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall manage, alarm, test and/or actively monitor vital telecommunications facilities. Special attention shall be given to emergency telecommunications facilities and equipment not used for routine communications.	BA								RC			TOP			**Yes Additional facilities must be tested both primary and back-up telecommunications**	**Yes Additional facilities must be tested both primary and back-up telecommunications**	No	Medium Impact Additional alarming and testing of metering may be required
COM-001-1	R3.	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall provide a means to coordinate telecommunications among their respective areas. This coordination shall include the ability to investigate and recommend solutions to telecommunications problems within the area and with other areas.	BA								RC			TOP			No	No	No	
COM-001-1	R4.	Unless agreed to otherwise, each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use English as the language for all communications between and among operating personnel responsible for the real-time generation control and operation of the interconnected Bulk Electric System. Transmission Operators and Balancing Authorities may use an alternate language for internal operations.	BA								RC			TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
COM-001-1	R5.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have written operating instructions and procedures to enable continued operation of the system during the loss of telecommunications facilities.	BA								RC			TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
COM-001-1	R6.	Each NERCNet User Organization shall adhere to the requirements in Attachment 1-COM-001-0, "NERCNet Security Policy."															No	No	No	
COM-002-2	R1.	Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition.				GOP								TOP			**Yes Additional facilities must be monitored and controlled**	**Yes Additional facilities must be monitored and controlled**	No	Medium Impact Additional redundant metering may be required
COM-002-2	R1.1.	Each Balancing Authority and Transmission Operator shall notify its Reliability Coordinator, and all other potentially affected Balancing Authorities and Transmission Operators through predetermined communication paths of any condition that could threaten the reliability of its area or when firm load shedding is anticipated.									RC			TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
COM-002-2	R2.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall issue directives in a clear, concise, and definitive manner; shall ensure the recipient of the directive repeats the information back correctly; and shall acknowledge the response as correct or repeat the original statement to resolve any misunderstandings.												TOP			No	No	No	
EOP-001-0	R1.	Balancing Authorities shall have operating agreements with adjacent Balancing Authorities that shall, at a minimum, contain provisions for emergency assistance, including provisions to obtain emergency assistance from remote Balancing Authorities.	BA														No	No	No	
EOP-001-0	R2.	The Transmission Operator shall have an emergency load reduction plan for all identified IROLs. The plan shall include the details on how the Transmission Operator will implement load reduction in sufficient amount and time to mitigate the IROL violation before system separation or collapse would occur. The load reduction plan must be capable of being implemented within 30 minutes.												TOP			No	No	No	
EOP-001-0	R3.	Each Transmission Operator and Balancing Authority shall:	BA											TOP			No	No	No	
EOP-001-0	R3.1.	Develop, maintain, and implement a set of plans to mitigate operating emergencies for insufficient generating capacity.	BA											TOP			No	No	No	
EOP-001-0	R3.2.	Develop, maintain, and implement a set of plans to mitigate operating emergencies on the transmission system.	BA											TOP			No	No	No	
EOP-001-0	R3.3.	Develop, maintain, and implement a set of plans for load shedding.	BA											TOP			No	No	No	
EOP-001-0	R3.4.	Develop, maintain, and implement a set of plans for system restoration.	BA											TOP			**Yes Restoration Procedures must address 100+ KV facilities**	**Yes Restoration Procedures must address 100+ KV facilities**	**Yes Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R4.	Each Transmission Operator and Balancing Authority shall have emergency plans that will enable it to mitigate operating emergencies. At a minimum, Transmission Operator and Balancing Authority emergency plans shall include:	BA											TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R4.1.	Communications protocols to be used during emergencies.	BA											TOP			No	No	No	
EOP-001-0	R4.2.	A list of controlling actions to resolve the emergency. Load reduction, in sufficient quantity to resolve the emergency within NERC-established timelines, shall be one of the controlling actions.	BA											TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R4.3.	The tasks to be coordinated with and among adjacent Transmission Operators and Balancing Authorities.	BA											TOP			No	No	No	
EOP-001-0	R4.4.	Staffing levels for the emergency.	BA											TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-001-0	R5.	Each Transmission Operator and Balancing Authority shall include the applicable elements in Attachment 1-EOP-001-0 when developing an emergency plan.	BA											TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R6.	The Transmission Operator and Balancing Authority shall annually review and update each emergency plan. The Transmission Operator and Balancing Authority shall provide a copy of its updated emergency plans to its Reliability Coordinator and to neighboring Transmission Operators and Balancing Authorities.	BA											TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R7.	The Transmission Operator and Balancing Authority shall coordinate its emergency plans with other Transmission Operators and Balancing Authorities as appropriate. This coordination includes the following steps, as applicable:	BA											TOP			No	No	No	
EOP-001-0	R7.1.	The Transmission Operator and Balancing Authority shall establish and maintain reliable communications betwee interconnected systems.	BA											TOP			No	No	No	
EOP-001-0	R7.2.	The Transmission Operator and Balancing Authority shall arrange new interchange agreements to provide for emergency capacity or energy transfers if existing agreements cannot be used.	BA											TOP			No	No	No	
EOP-001-0	R7.3.	The Transmission Operator and Balancing Authority shall coordinate transmission and generator maintenance schedules to maximize capacity or conserve the fuel in short supply. (This includes water for hydro generators.)	BA											TOP			**Yes Transmission outage systems must include 100+ facilities PJM will now approve all 100KV+ facility outages**	**Yes Transmission outage systems must include 100+ facilities PJM will now approve all 100KV+ facility outages**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-001-0	R7.4.	The Transmission Operator and Balancing Authority shall arrange deliveries of electrical energy or fuel from remote systems through normal operating channels.	BA											TOP			No	No	No	
EOP-002-2	R1.	Each Balancing Authority and Reliability Coordinator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its respective area and shall exercise specific authority to alleviate capacity and energy emergencies.	BA														No	No	No	
EOP-002-2	R2.	Each Balancing Authority shall implement its capacity and energy emergency plan, when required and as appropriate, to reduce risks to the interconnected system.	BA														No	No	No	
EOP-002-2	R3.	A Balancing Authority that is experiencing an operating capacity or energy emergency shall communicate its current and future system conditions to its Reliability Coordinator and neighboring Balancing Authorities.	BA														No	No	No	
EOP-002-2	R4.	A Balancing Authority anticipating an operating capacity or energy emergency shall perform all actions necessary including bringing on all available generation, postponing equipment maintenance, scheduling interchange purchases in advance, and being prepared to reduce firm load.	BA														No	No	No	
EOP-002-2	R5.	A deficient Balancing Authority shall only use the assistance provided by the Interconnection's frequency bias for the time needed to implement corrective actions. The Balancing Authority shall not unilaterally adjust generation in an attempt to return Interconnection frequency to normal beyond that supplied through frequency bias action an Interchange Schedule changes. Such unilateral adjustment may overload transmission facilities.	BA														No	No	No	
EOP-002-2	R6.	If the Balancing Authority cannot comply with the Control Performance and Disturbance Control Standards, then it shall immediately implement remedies to do so. These remedies include, but are not limited to:	BA														No	No	No	
EOP-002-2	R6.1.	Loading all available generating capacity.	BA														No	No	No	
EOP-002-2	R6.2.	Deploying all available operating reserve	BA														No	No	No	
EOP-002-2	R6.3.	Interrupting interruptible load and exports.	BA														No	No	No	
EOP-002-2	R6.4.	Requesting emergency assistance from other Balancing Authorities.	BA														No	No	No	
EOP-002-2	R6.5.	Declaring an Energy Emergency through its Reliability Coordinator; and	BA														No	No	No	
EOP-002-2	R6.6.	Reducing load, through procedures such as public appeals, voltage reductions, curtailing interruptible loads and firm loads.	BA														No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-002-2	R7.	Once the Balancing Authority has exhausted the steps listed in Requirement 7, or if these steps cannot be completed in sufficient time to resolve the emergency condition, the Balancing Authority shall:	BA														No	No	No	
EOP-002-2	R7.1.	Manually shed firm load without delay to return its ACE to zero; and	BA														No	No	No	
EOP-002-2	R7.2.	Request the Reliability Coordinator to declare an Energy Emergency Alert in accordance with Attachment 1-EOP-002-0 "Energy Emergency Alert Levels."									RC						No	No	No	
EOP-002-2	R8.	A Reliability Coordinator that has any Balancing Authority within its Reliability Coordinator area experiencing a potential or actual Energy Emergency shall initiate an Energy Emergency Alert as detailed in Attachment 1-EOP-002-0 "Energy Emergency Alert Levels." The Reliability Coordinator shall act to mitigate the emergency condition, including a request for emergency assistance if required.														TSP	No	No	No	
EOP-002-2	R9.	When a Transmission Service Provider expects to elevate the transmission service priority of an Interchange Transaction from Priority 6 (Network Integration Transmission Service from Non-designated Resources) to Priority 7 (Network Integration Transmission Service from designated Network Resources) as permitted in its transmission tariff (See Attachment 1-IRO-006-0 "Transmission Loading Relief Procedure" for explanation of Transmission Service Priorities):						LSE									No	No	No	
EOP-002-2	R9.1.	The deficient Load-Serving Entity shall request its Reliability Coordinator to initiate an Energy Emergency Alert accordance with Attachment 1-EOP-002-0.									RC						No	No	No	
EOP-002-2	R9.2.	The Reliability Coordinator shall submit the report to NERC for posting on the NERC Website, noting the expected total MW that may have its transmission service priority changed.									RC						No	No	No	
EOP-002-2	R9.3.	The Reliability Coordinator shall use EEA 1 to forecast the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.									RC						No	No	No	
EOP-002-2	R9.4.	The Reliability Coordinator shall use EEA 2 to announce the change of the priority of transmission service of an Interchange Transaction on the system from Priority 6 to Priority 7.									RC						No	No	No	
EOP-003-1	R1.	After taking all other remedial steps, a Transmission Operator or Balancing Authority operating with insufficient generation or transmission capacity shall shed customer load rather than risk an uncontrolled failure of componen or cascading outages of the Interconnection.	BA											TOP			**Yes PJM Procedures must address 100+ KV facilities**	**Yes PJM Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-003-1	R2.	Each Transmission Operator and Balancing Authority shall establish plans for automatic load shedding for underfrequency or undervoltage conditions.	BA											TOP			**Yes PJM and the TO procedures must address 100+ KV facilities**	**Yes PJM and the TO procedures must address 100+ KV facilities**	**Yes PJM and the TO procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-003-1	R3.	Each Transmission Operator and Balancing Authority shall coordinate load shedding plans among other interconnected Transmission Operators and Balancing Authorities.	BA											TOP			No	No	No	
EOP-003-1	R4.	A Transmission Operator or Balancing Authority shall consider one or more of these factors in designing an automatic load shedding scheme: frequency, rate of frequency decay, voltage level, rate of voltage decay, or power flow levels.	BA											TOP			**Yes PJM and the TO procedures must address 100+ KV facilities**	**Yes PJM and the TO procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-003-1	R5.	A Transmission Operator or Balancing Authority shall implement load shedding in steps established to minimize the risk of further uncontrolled separation, loss of generation, or system shutdown.	BA											TOP			No	No	No	
EOP-003-1	R6.	After a Transmission Operator or Balancing Authority Area separates from the Interconnection, if there is insufficient generating capacity to restore system frequency following automatic underfrequency load shedding, the Transmission Operator or Balancing Authority shall shed additional load.	BA											TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-003-1	R7.	The Transmission Operator and Balancing Authority shall coordinate automatic load shedding throughout their areas with underfrequency isolation of generating units, tripping of shunt capacitors, and other automatic actions that will occur under abnormal frequency, voltage, or power flow conditions.	BA											TOP			**Yes PJM and the TO procedures must address 100+ KV facilities**	**Yes PJM and the TO procedures must address 100+ KV facilities**	**Yes PJM and the TO procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-003-1	R8.	Each Transmission Operator or Balancing Authority shall have plans for operator-controlled manual load sheddin to respond to real-time emergencies. The Transmission Operator or Balancing Authority shall be capable of implementing the load shedding in a timeframe adequate for responding to the emergency.	BA											TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-004-1	R2.	A Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator or Load-Serving Entity shall promptly analyze Bulk Electric System disturbances on its system or facilities.	BA			GOP		LSE			RC			TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent analyzing disturbances
EOP-004-1	R3.	A Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator or Load-Serving Entity experiencing a reportable incident shall provide a preliminary written report to its Regional Reliability Organization and NERC.	BA			GOP		LSE			RC			TOP			No	No	No	
EOP-004-1	R3.1.	The affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator or Load-Serving Entity shall submit within 24 hours of the disturbance or unusual occurrence either a copy of the report submitted to DOE, or, if no DOE report is required, a copy of the NERC Interconnection Reliability Operating Limit and Preliminary Disturbance Report form. Events that are not identified until some time after they occur shall be reported within 24 hours of being recognized.	BA			GOP		LSE			RC			TOP			No	No	No	
EOP-004-1	R3.2.	Applicable reporting forms are provided in Attachments 022-1 and 022-2.	BA			GOP		LSE			RC			TOP			No	No	No	
EOP-004-1	R3.3.	Under certain adverse conditions, e.g., severe weather, it may not be possible to assess the damage caused by a disturbance and issue a written Interconnection Reliability Operating Limit and Preliminary Disturbance Report within 24 hours. In such cases, the affected Reliability Coordinator, Balancing Authority, Transmission Operator Generator Operator, or Load-Serving Entity shall promptly notify its Regional Reliability Organization(s) and NERC, and verbally provide as much information as is available at that time. The affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load-Serving Entity shall then provide timely, periodic verbal updates until adequate information is available to issue a written Preliminary Disturbance Report.	BA			GOP		LSE			RC			TOP			No	No	No	
EOP-004-1	R3.4.	If, in the judgment of the Regional Reliability Organization, after consultation with the Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load-Serving Entity in which a disturbance occurred, a final report is required, the affected Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator, or Load-Serving Entity shall prepare this report within 60 days. As a minimum, th final report shall have a discussion of the events and its cause, the conclusions reached, and recommendations to prevent recurrence of this type of event. The report shall be subject to Regional Reliability Organization approval.	BA			GOP		LSE			RC			TOP			No	No	No	
EOP-005-0	R1.	Each Transmission Operator shall have a restoration plan to reestablish its electric system in a stable and orderly manner in the event of a partial or total shutdown of its system, including necessary operating instructions and procedures to cover emergency conditions, and the loss of vital telecommunications channels. Each Transmission Operator shall include the applicable elements listed in Attachment 1-EOP-005-0 in developing a restoration plan												TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-005-0	R2.	Each Transmission Operator shall review and update its restoration plan at least annually and whenever it makes changes in the power system network, and shall correct deficiencies found during the simulated restoration exercises.												TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-0	R3.	Each Transmission Operator shall develop restoration plans with a priority of restoring the integrity of the Interconnection.												TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-0	R4.	Each Transmission Operator shall coordinate its restoration plans with Balancing Authorities within its area, its Reliability Coordinator, and neighboring Transmission Operators and Balancing Authorities.												TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-0	R5.	Each Transmission Operator and Balancing Authority shall periodically test its telecommunication facilities needed to implement the restoration plan.	BA											TOP			No	No	No	
EOP-005-0	R6.	Each Transmission Operator and Balancing Authority shall train its operating personnel in the implementation of the restoration plan. Such training shall include simulated exercises, if practicable.	BA											TOP			No	No	No	
EOP-005-0	R7.	Each Transmission Operator and Balancing Authority shall verify the restoration procedure by actual testing or by simulation.	BA											TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-0	R8.	Each Transmission Operator shall ensure the availability and location of black start capability within its area to meet the needs of the restoration plan.												TOP			No	No	No	
EOP-005-0	R9.	Following a disturbance in which one or more areas of the Bulk Electric System become isolated or blacked out, the affected Transmission Operators and Balancing Authorities shall begin immediately to return the Bulk Electric System to normal.	BA											TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-0	R9.1.	The affected Transmission Operators and Balancing Authorities shall work in conjunction with their Reliability Coordinator(s) to determine the extent and condition of the isolated area(s).	BA											TOP			No	No	No	
EOP-005-0	R9.2.	The affected Transmission Operators and Balancing Authorities shall take the necessary actions to restore Bulk Electric System frequency to normal, including adjusting generation, placing additional generators online, or load shedding.	BA											TOP			No	No	No	
EOP-005-0	R9.3.	The affected Balancing Authorities, working with their Reliability Coordinator(s), shall immediately review the Interchange Schedules between those Balancing Authority Areas or fragments of those Balancing Authority Areas within the separated area and make adjustments as needed to facilitate the restoration. The affected Balancing Authorities shall make all attempts to maintain the adjusted Interchange Schedules, whether generation control is manual or automatic.	BA								RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-005-0	R9.4.	The affected Transmission Operators shall give high priority to restoration of off-site power to nuclear stations.												TOP			No	No	No	
EOP-005-0	R9.5.	The affected Transmission Operators may resynchronize the isolated area(s) with the surrounding area(s) when the following conditions are met:												TOP			No	No	No	
EOP-005-0	R9.5.1.	Voltage, frequency, and phase angle permit.												TOP			No	No	No	
EOP-005-0	R9.5.2.	The size of the area being reconnected and the capacity of the transmission lines effecting the reconnection and the number of synchronizing points across the system are considered.												TOP			No	No	No	
EOP-005-0	R9.5.3.	Reliability Coordinator(s) and adjacent areas are notified and Reliability Coordinator approval is given.												TOP			No	No	No	
EOP-005-0	R9.5.4.	Load is shed in neighboring areas, if required, to permit successful interconnected system restoration.												TOP			No	No	No	
EOP-005-1	R1.	Each Transmission Operator shall have a restoration plan to reestablish its electric system in a stable and orderly manner in the event of a partial or total shutdown of its system, including necessary operating instructions and procedures to cover emergency conditions, and the loss of vital telecommunications channels. Each Transmission Operator shall include the applicable elements listed in Attachment 1-EOP-005 in developing a restoration plan.	BA											TOP			No	No	No	
EOP-005-1	R2.	Each Transmission Operator shall review and update its restoration plan at least annually and whenever it makes changes in the power system network, and shall correct deficiencies found during the simulated restoration exercises.												TOP			No	No	No	
EOP-005-1	R3.	Each Transmission Operator shall develop restoration plans with a priority of restoring the integrity of the Interconnection.												TOP			No	No	No	
EOP-005-1	R4.	Each Transmission Operator shall coordinate its restoration plans with the Generator Owners and Balancing Authorities within its area, its Reliability Coordinator, and neighboring Transmission Operators and Balancing Authorities.												TOP			No	No	No	
EOP-005-1	R5.	Each Transmission Operator and Balancing Authority shall periodically test its telecommunication facilities needed to implement the restoration plan.	BA											TOP			No	No	No	
EOP-005-1	R6.	Each Transmission Operator and Balancing Authority shall train its operating personnel in the implementation of the restoration plan. Such training shall include simulated exercises, if practicable.	BA											TOP			No	No	No	
EOP-005-1	R7.	Each Transmission Operator and Balancing Authority shall verify the restoration procedure by actual testing or by simulation.	BA											TOP			No	No	No	
EOP-005-1	R8.	Each Transmission Operator shall verify that the number, size, availability, and location of system blackstart generating units are sufficient to meet Regional Reliability Organization restoration plan requirements for the Transmission Operator's area.												TOP			No	No	No	
EOP-005-1	R9.	The Transmission Operator shall document the Cranking Paths, including initial switching requirements, between each blackstart generating unit and the unit(s) to be started and shall provide this documentation for review by the Regional Reliability Organization upon request. Such documentation may include Cranking Path diagrams.												TOP			No	No	No	
EOP-005-1	R10.	The Transmission Operator shall demonstrate, through simulation or testing, that the blackstart generating units in its restoration plan can perform their intended functions as required in the regional restoration plan.												TOP			No	No	No	
EOP-005-1	R10.1.	The Transmission Operator shall perform this simulation or testing at least once every five years.	BA											TOP			No	No	No	
EOP-005-1	R11.	Following a disturbance in which one or more areas of the Bulk Electric System become isolated or blacked out, the affected Transmission Operators and Balancing Authorities shall begin immediately to return the Bulk Electric System to normal.	BA											TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-1	R11.1.	The affected Transmission Operators and Balancing Authorities shall work in conjunction with their Reliability Coordinator(s) to determine the extent and condition of the isolated area(s).	BA											TOP			No	No	No	
EOP-005-1	R11.2.	The affected Transmission Operators and Balancing Authorities shall take the necessary actions to restore Bulk Electric System frequency to normal, including adjusting generation, placing additional generators on line, or load shedding.	BA											TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-005-1	R11.3.	The affected Balancing Authorities, working with their Reliability Coordinator(s), shall immediately review the Interchange Schedules between those Balancing Authority Areas or fragments of those Balancing Authority Areas within the separated area and make adjustments as needed to facilitate the restoration. The affected Balancing Authorities shall make all attempts to maintain the adjusted Interchange Schedules, whether generation control is manual or automatic.	BA											TOP			No	No	No	
EOP-005-1	R11.4.	The affected Transmission Operators shall give high priority to restoration of off-site power to nuclear stations.	BA											TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-1	R11.5.	The affected Transmission Operators may resynchronize the isolated area(s) with the surrounding area(s) when the following conditions are met:	BA											TOP			**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor impact Pocedures will need to be revised to include 100KV facilities
EOP-005-1	R11.5.1.	Voltage, frequency, and phase angle permit.	BA											TOP			**"**	**"**	**"**	
EOP-005-1	R11.5.2.	The size of the area being reconnected and the capacity of the transmission lines effecting the reconnection and the number of synchronizing points across the system are considered.	BA											TOP			**"**	**"**	**"**	
EOP-005-1	R11.5.3.	Reliability Coordinator(s) and adjacent areas are notified and Reliability Coordinator approval is given.	BA											TOP			**"**	**"**	**"**	
EOP-005-1	R11.5.4.	Load is shed in neighboring areas, if required, to permit successful interconnected system restoration.	BA											TOP			**"**	**"**	**"**	
EOP-006-1	R1.	Each Reliability Coordinator shall be aware of the restoration plan of each Transmission Operator in its Reliability Coordinator Area in accordance with NERC and regional requirements.									RC						**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor Impact RC will need to understand operation for a larger area
EOP-006-1	R2.	The Reliability Coordinator shall monitor restoration progress and coordinate any needed assistance.									RC						**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor Impact RC will need to understand operation for a larger area
EOP-006-1	R3.	The Reliability Coordinator shall have a Reliability Coordinator Area restoration plan that provides coordination between individual Transmission Operator restoration plans and that ensures reliability is maintained during system restoration events.									RC						**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor Impact RC will need to understand operation for a larger area
EOP-006-1	R4.	The Reliability Coordinator shall serve as the primary contact for disseminating information regarding restoration to neighboring Reliability Coordinators and Transmission Operators or Balancing Authorities not immediately involved in restoration.									RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-006-1	R5.	Reliability Coordinators shall approve, communicate, and coordinate the re-synchronizing of major system islands or synchronizing points so as not to cause a Burden on adjacent Transmission Operator, Balancing Authority, or Reliability Coordinator Areas.									RC						**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	**Yes PJM & TO Restoration Procedures must address 100+ KV facilities**	Minor Impact RC will need to understand operation for a larger area
EOP-006-1	R6.	The Reliability Coordinator shall take actions to restore normal operations once an operating emergency has been mitigated in accordance with its restoration plan.									RC						No	No	No	
EOP-008-0	R1.	Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have a plan to continue reliability operations in the event its control center becomes inoperable. The contingency plan must meet the following requirements:	BA								RC			TOP			**Yes Back-up Procedures must address 100+ KV facilities**	**Yes Back-up Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities and procedures will be required at back-up site
EOP-008-0	R1.1.	The contingency plan shall not rely on data or voice communication from the primary control facility to be viable	BA								RC			TOP			**Yes Back-up Procedures must address 100+ KV facilities**	**Yes Back-up Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities and procedures will be required at back-up site
EOP-008-0	R1.2.	The plan shall include procedures and responsibilities for providing basic tie line control and procedures and for maintaining the status of all inter-area schedules, such that there is an hourly accounting of all schedules.	BA								RC			TOP			**Yes Back-up Procedures must address 100+ KV facilities**	**Yes Back-up Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities and procedures will be required at back-up site
EOP-008-0	R1.3.	The contingency plan must address monitoring and control of critical transmission facilities, generation control, voltage control, time and frequency control, control of critical substation devices, and logging of significant power system events. The plan shall list the critical facilities.	BA								RC			TOP			**Yes Back-up Procedures must address 100+ KV facilities**	**Yes Back-up Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities and procedures will be required at back-up site
EOP-008-0	R1.4.	The plan shall include procedures and responsibilities for maintaining basic voice communication capabilities wit other areas.	BA								RC			TOP			No	No	No	
EOP-008-0	R1.5.	The plan shall include procedures and responsibilities for conducting periodic tests, at least annually, to ensure viability of the plan.	BA								RC			TOP			No	No	No	
EOP-008-0	R1.6.	The plan shall include procedures and responsibilities for providing annual training to ensure that operating personnel are able to implement the contingency plans.	BA								RC			TOP			No	No	No	
EOP-008-0	R1.7.	The plan shall be reviewed and updated annually.	BA								RC			TOP			No	No	No	
EOP-008-0	R1.8.	Interim provisions must be included if it is expected to take more than one hour to implement the contingency pla for loss of primary control facility.	BA								RC			TOP			**Yes Back-up Procedures must address 100+ KV facilities**	**Yes Back-up Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities and procedures will be required at back-up site
EOP-009-0	R1.	The Generator Operator of each blackstart generating unit shall test the startup and operation of each system blackstart generating unit identified in the BCP as required in the Regional BCP (Reliability Standard EOP-007-0_R1). Testing records shall include the dates of the tests, the duration of the tests, and an indication of whether the tests met Regional BCP requirements.				GOP											No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
EOP-009-0	R2.	The Generator Owner or Generator Operator shall provide documentation of the test results of the startup and operation of each blackstart generating unit to the Regional Reliability Organizations and upon request to NERC.			GO	GOP											No	No	No	
FAC-001-0	R1.	The Transmission Owner shall document, maintain, and publish facility connection requirements to ensure compliance with NERC Reliability Standards and applicable Regional Reliability Organization, subregional, Power Pool, and individual Transmission Owner planning criteria and facility connection requirements. The Transmission Owner's facility connection requirements shall address connection requirements for:											TO				**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	No	Low to Medium impact Publishing connection requirements will be low while study analysis may be medium
FAC-001-0	R1.1.	Generation facilities,											TO				No	No	No	
FAC-001-0	R1.2.	Transmission facilities, and											TO				**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	No	Low to Medium impact Publishing connection requirements will be low while study analysis may be medium
FAC-001-0	R 1.3.	End-user facilities											TO				No	No	No	
FAC-001-0	R 2.	The Transmission Owner's facility connection requirements shall address, but are not limited to, the following items:											TO				No	No	No	
FAC-001-0	R 2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:											TO				**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	No	Low to Medium impact Publishing connection requirements will be low while study analysis may be medium
FAC-001-0	R 2.1.1.	Procedures for coordinated joint studies of new facilities and their impacts on the interconnected transmission systems.											TO				"	"	No	
FAC-001-0	R 2.1.10.	Power quality impacts.											TO				"	"	No	
FAC-001-0	R 2.1.11.	Equipment Ratings.											TO				"	"	No	
FAC-001-0	R 2.1.12.	Synchronizing of facilities.											TO				"	"	No	
FAC-001-0	R 2.1.13.	Maintenance coordination.											TO				"	"	No	
FAC-001-0	R 2.1.14.	Operational issues (abnormal frequency and voltages).											TO				"	"	No	
FAC-001-0	R 2.1.15.	Inspection requirements for existing or new facilities.											TO				"	"	No	
FAC-001-0	R 2.1.16.	Communications and procedures during normal and emergency operating conditions.											TO				"	"	No	
FAC-001-0	R 2.1.2.	Procedures for notification of new or modified facilities to others (those responsible for the reliability of the interconnected transmission systems) as soon as feasible.											TO				"	"	No	
FAC-001-0	R 2.1.3.	Voltage level and MW and MVAR capacity or demand at point of connection.											TO				"	"	No	
FAC-001-0	R 2.1.4.	Breaker duty and surge protection.											TO				"	"	No	
FAC-001-0	R 2.1.5.	System protection and coordination.											TO				"	"	No	
FAC-001-0	R 2.1.6.	Metering and telecommunications.											TO				"	"	No	
FAC-001-0	R 2.1.7.	Grounding and safety issues.											TO				"	"	No	
FAC-001-0	R2.1.8.	Insulation and insulation coordination.											TO				"	"	No	
FAC-001-0	R2.1.9.	Voltage, Reactive Power, and power factor control.											TO				"	"	No	
FAC-001-0	R3.	The Transmission Owner shall maintain and update its facility connection requirements as required. The Transmission Owner shall make documentation of these requirements available to the users of the transmission system, the Regional Reliability Organization, and NERC on request (five business days).											TO				"	"	No	
FAC-002-0	R1.	The Generator Owner, Transmission Owner, Distribution Provider, and Load-Serving Entity seeking to integrate generation facilities, transmission facilities, and electricity end-user facilities shall each coordinate and cooperate on its assessments with its Transmission Planner and Planning Authority. The assessment shall include:		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-002-0	R1.1.	Evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems.		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-002-0	R1.2.	Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements.		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-002-0	R1.3.	Evidence that the parties involved in the assessment have coordinated and cooperated on the assessment of the reliability impacts of new facilities on the interconnected transmission systems. While these studies may be performed independently, the results shall be jointly evaluated and coordinated by the entities involved.		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-002-0	R1.4.	Evidence that the assessment included steady-state, short-circuit, and dynamics studies as necessary to evaluate system performance in accordance with Reliability Standard TPL-001-0.		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-002-0	R1.5.	Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.		DP	GO			LSE					TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-002-0	R2.	The Planning Authority, Transmission Planner, Generator Owner, Transmission Owner, Load-Serving Entity, and Distribution Provider shall each retain its documentation (of its evaluation of the reliability impact of the new facilities and their connections on the interconnected transmission systems) for three years and shall provide the documentation to the Regional Reliability Organization(s) Regional Reliability Organization(s) and NERC on request (within 30 calendar days).		DP	GO			LSE	PA				TO		TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to Medium impact Study analysis may be low to medium
FAC-003-1	R1.	The Transmission owner shall prepare, and keep current, a formal transmission vegetation management (TVM). The TVMP shall include the Transmission Owner's objectives, practices, approved procedures, and work Specifications. 1. ANSI A300, Tree Care Operations – Tree, Shrub, and Other Woody Plant Maintenance – Standard Practices, while not a requirement of this standard, is considered to be an industry best practice.											TO				No	No	No	
FAC-003-1	R1.1.	The TVMP shall define a schedule for and the type (aerial, ground) of ROW vegetation inspections. This schedule should be flexible enough to adjust for changing conditions. The inspection schedule shall be based on the anticipated growth of vegetation and any other environmental or operational factors that could impact the relationship of vegetation to the Transmission Owner's transmission lines.											TO				No	No	No	
FAC-003-1	R1.2.	The Transmission Owner, in the TVMP, shall identify and document clearances between vegetation and any overhead, ungrounded supply conductors, taking into consideration transmission line voltage, the effects of ambie temperature on conductor sag under maximum design loading, and the effects of wind velocities on conductor sway. Specifically, the Transmission Owner shall establish clearances to be achieved at the time of vegetation management work identified herein as Clearance 1, and shall also establish and maintain a set of clearances identified herein as Clearance 2 to prevent flashover between vegetation and overhead ungrounded supply conductors.											TO				No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-003-1	R1.2.1.	Clearance 1 — The Transmission Owner shall determine and document appropriate clearance distances to be achieved at the time of transmission vegetation management work based upon local conditions and the expected time frame in which the Transmission Owner plans to return for future vegetation management work. Local conditions may include, but are not limited to: operating voltage, appropriate vegetation management techniques, fire risk, reasonably anticipated tree and conductor movement, species types and growth rates, species failure characteristics, local climate and rainfall patterns, line terrain and elevation, location of the vegetation within the span, and worker approach distance requirements. Clearance 1 distances shall be greater than those defined by Clearance 2 below.											TO				No	No	No	
FAC-003-1	R1.2.2.	Clearance 2 — The Transmission Owner shall determine and document specific radial clearances to be maintained between vegetation and conductors under all rated electrical operating conditions. These minimum clearance distances are necessary to prevent flashover between vegetation and conductors and will vary due to such factors as altitude and operating voltage. These Transmission Owner-specific minimum clearance distances shall be no less than those set forth in the Institute of Electrical and Electronics Engineers (IEEE) Standard 516-2003(*Guide for Maintenance Methods on Energized Power Lines*) and as specified in its Section 4.2.2.3, Minimum Air Insulation Distances without Tools in the Air Gap.											TO				No	No	No	
FAC-003-1	R1.2.2.1.	Where transmission system transient overvoltage factors are not known, clearances shall be derived from Table 5, IEEE 516-2003, phase-to-ground distances, with appropriate altitude correction factors applied.											TO				No	No	No	
FAC-003-1	R1.2.2.2.	Where transmission system transient overvoltage factors are known, clearances shall be derived from Table 7, IEEE 516-2003, phase-to-phase voltages, with appropriate altitude correction factors applied.											TO				No	No	No	
FAC-003-1	R1.3	All personnel directly involved in the design and implementation of the TVMP shall hold appropriate qualifications and training, as defined by the Transmission Owner, to perform their duties.											TO				No	No	No	
FAC-003-1	R1.4	Each Transmission Owner shall develop mitigation measures to achieve sufficient clearances for the protection of the transmission facilities when it identifies locations on the ROW where the Transmission Owner is restricted from attaining the clearances specified in Requirement 1.2.1.											TO				No	No	No	
FAC-003-1	R1.5	Each Transmission Owner shall establish and document a process for the immediate communication of vegetation conditions that present an imminent threat of a transmission line outage. This is so that action (temporary reductio in line rating, switching line out of service, etc.) may be taken until the threat is relieved.											TO				No	No	No	
FAC-003-1	R2.	The Transmission Owner shall create and implement an annual plan for vegetation management work to ensure the reliability of the system. The plan shall describe the methods used, such as manual clearing, mechanical clearing, herbicide treatment, or other actions. The plan should be flexible enough to adjust to changing conditions, taking into consideration anticipated growth of vegetation and all other environmental factors that may have an impact on the reliability of the transmission systems. Adjustments to the plan shall be documented as they occur. The plan should take into consideration the time required to obtain permissions or permits from landowners or regulatory authorities. Each Transmission Owner shall have systems and procedures for documenting and tracking the planned vegetation management work and ensuring that the vegetation management work was completed according to work specifications.											TO				No	No	No	
FAC-003-1	R3.	The Transmission Owner shall report quarterly to its RRO, or the RRO's designee, sustained transmission line outages determined by the Transmission Owner to have been caused by vegetation.											TO				No	No	No	
FAC-003-1	R3.1.	Multiple sustained outages on an individual line, if caused by the same vegetation, shall be reported as one outage regardless of the actual number of outages within a 24-hour period.											TO				No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-003-1	R3.2.	The Transmission Owner is not required to report to the RRO, or the RRO's designee, certain sustained transmission line outages caused by vegetation: (1) Vegetation-related outages that result from vegetation falling into lines from outside the ROW that result from natural disasters shall not be considered reportable (examples of disasters that could create non-reportable outages include, but are not limited to, earthquakes, fires, tornados, hurricanes, landslides, wind shear, major storms as defined either by the Transmission Owner or an applicable regulatory body, ice storms, and floods), and (2) Vegetation-related outages due to human or animal activity shall not be considered reportable (examples of human or animal activity that could cause a non-reportable outage include, but are not limited to, logging, animal severing tree, vehicle contact with tree, arboricultural activities or horticultural or agricultural activities, or removal or digging of vegetation).											TO				No	No	No	
FAC-003-1	R3.3.	The outage information provided by the Transmission Owner to the RRO, or the RRO's designee, shall include at a minimum: the name of the circuit(s) outaged, the date, time and duration of the outage; a description of the cause of the outage; other pertinent comments; and any countermeasures taken by the Transmission Owner.											TO				No	No	No	
FAC-003-1	R3.4.	An outage shall be categorized as one of the following:											TO				No	No	No	
FAC-003-1	R3.4.1.	Category 1 — Grow-ins: Outages caused by vegetation growing into lines from vegetation inside and/or outside of the ROW;											TO				No	No	No	
FAC-003-1	R3.4.2.	Category 2 — Fall-ins: Outages caused by vegetation falling into lines from inside the ROW;											TO				No	No	No	
FAC-003-1	R3.4.3.	Category 3 — Fall-ins: Outages caused by vegetation falling into lines from outside the ROW.											TO				No	No	No	
FAC-003-1	R4.	The RRO shall report the outage information provided to it by Transmission Owner's, as required by Requirement 3, quarterly to NERC, as well as any actions taken by the RRO as a result of any of the reported outages.																		
FAC-005-0	R1.	The Transmission Owner and Generator Owner shall each have on file or be able to readily provide, a document or database identifying the Normal and Emergency Ratings of all of its transmission facilities (e.g., lines, transformers, terminal equipment, and storage devices) that are part of the interconnected transmission systems. Seasonal variations in Ratings shall be included as appropriate.			GO								TO				No	No	No	
FAC-005-0	R1.1.	The Ratings shall be consistent with the entity's methodology(ies) for determining Facility Ratings and shall be updated as facility changes occur.			GO								TO				No	No	No	
FAC-005-0	R2.	The Transmission Owner and Generator Owner shall provide the Normal and Emergency Facility Ratings of all its transmission facilities to the Regional Reliability Organization(s) and NERC on request (30 calendar days).			GO								TO				No	No	No	
FAC-008-1	R1.	The Transmission Owner and Generator Owner shall each document its current methodology used for developing Facility Ratings (Facility Ratings Methodology) of its solely and jointly owned Facilities. The methodology shall include all of the following:			GO								TO				**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	No	Medium impact rating methodoly may have been different
FAC-008-1	R1.1.	A statement that a Facility Rating shall equal the most limiting applicable Equipment Rating of the individual equipment that comprises that Facility.			GO								TO				"	"	No	
FAC-008-1	R1.2.	The method by which the Rating (of major BES equipment that comprises a Facility) is determined.			GO								TO				"	"	No	
FAC-008-1	R1.2.1.	The scope of equipment addressed shall include, but not be limited to, generators, transmission conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices.			GO								TO				"	"	No	
FAC-008-1	R1.2.2.	The scope of Ratings addressed shall include, as a minimum, both Normal and Emergency Ratings.			GO								TO				"	"	No	
FAC-008-1	R1.3.	Consideration of the following:			GO								TO				"	"	No	
FAC-008-1	R1.3.1.	Ratings provided by equipment manufacturers.			GO								TO				"	"	No	
FAC-008-1	R1.3.2.	Design criteria (e.g., including applicable references to industry Rating practices such as manufacturer's warranty, IEEE, ANSI or other standards).			GO								TO				"	"	No	
FAC-008-1	R1.3.3.	Ambient conditions.			GO								TO				"	"	No	
FAC-008-1	R1.3.4.	Operating limitations.			GO								TO				"	"	No	
FAC-008-1	R1.3.5.	Other assumptions.			GO								TO				"	"	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-008-1	R2.	The Transmission Owner and Generator Owner shall each make its Facility Ratings Methodology available for inspection and technical review by those Reliability Coordinators, Transmission Operators, Transmission Planner and Planning Authorities that have responsibility for the area in which the associated Facilities are located, within 15 business days of receipt of a request.			GO								TO				Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-008-1	R3.	If a Reliability Coordinator, Transmission Operator, Transmission Planner, or Planning Authority provides written comments on its technical review of a Transmission Owner's or Generator Owner's Facility Ratings Methodology, the Transmission Owner or Generator Owner shall provide a written response to that commenting entity within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the Facility Ratings Methodology and, if no change will be made to that Facility Ratings Methodology, the reason why.							PA		RC		TO		TP		Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-009-1	R1.	The Transmission Owner and Generator Owner shall each establish Facility Ratings for its solely and jointly owned Facilities that are consistent with the associated Facility Ratings Methodology.			GO								TO				Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-009-1	R2.	The Transmission Owner and Generator Owner shall each provide Facility Ratings for its solely and jointly owned Facilities that are existing Facilities, new Facilities, modifications to existing Facilities and re-ratings of existing Facilities to its associated Reliability Coordinator(s), Planning Authority(ies), Transmission Planner(s), and Transmission Operator(s) as scheduled by such requesting entities.			GO								TO				Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-010-1	R1.	The Planning Authority shall have a documented SOL Methodology for use in developing SOLs within its Planni Authority Area. This SOL Methodology shall:							PA								Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-010-1	R1.1.	Be applicable for developing SOLs used in the planning horizon.							PA								"	"	No	
FAC-010-1	R1.2.	State that SOLs shall not exceed associated Facility Ratings.							PA								"	"	No	
FAC-010-1	R1.3.	Include a description of how to identify the subset of SOLs that qualify as IROLs.							PA								"	"	No	
FAC-010-1	R2.	The Planning Authority's SOL Methodology shall include a requirement that SOLs provide BES performance consistent with the following:							PA								Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	Yes Procedures may have to address 100KV+ facilities	Medium impact rating methodoly may have been different
FAC-010-1	R2.1.	In the pre-contingency state and with all Facilities in service, the BES shall demonstrate transient, dynamic and voltage stability; all Facilities shall be within their Facility Ratings and within their thermal, voltage and stability limits. In the determination of SOLs, the BES condition used shall reflect expected system conditions and shall reflect changes to system topology such as Facility outages.							PA								"	"	"	
FAC-010-1	R2.2.	Following the single Contingencies identified in Requirement 2.2.1 through Requirement 2.2.3, the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading Outages or uncontrolled separation shall not occur.							PA								"	"	"	
FAC-010-1	R2.2.1.	Single line to ground or three-phase Fault (whichever is more severe), with Normal Clearing, on any Faulted generator, line, transformer, or shunt device.							PA								"	"	"	
FAC-010-1	R2.2.2.	Loss of any generator, line, transformer, or shunt device without a Fault.							PA								"	"	"	
FAC-010-1	R2.2.3.	Single pole block, with Normal Clearing, in a monopolar or bipolar high voltage direct current system.							PA								"	"	"	
FAC-010-1	R2.3.	Starting with all Facilities in service, the system's response to a single Contingency, may include any of the following:							PA								"	"	"	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-010-1	R2.3.1.	Planned or controlled interruption of electric supply to radial customers or some local network customers connected to or supplied by the Faulted Facility or by the affected area.							PA								"	"	"	
FAC-010-1	R2.3.2.	System reconfiguration through manual or automatic control or protection actions.							PA								"	"	"	
FAC-010-1	R2.3.3.	To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.							PA								"	"	"	
FAC-010-1	R2.4.	Starting with all facilities in service and following any of the multiple Contingencies identified in Reliability Standard TPL-003 the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading Outag or uncontrolled separation shall not occur.							PA								"	"	"	
FAC-010-1	R2.5.	In determining the system's response to any of the multiple Contingencies, identified in Reliability Standard TPL-003, in addition to the actions identified in R2.3.1 and R2.3.2, the following shall be acceptable:							PA								"	"	"	
FAC-010-1	R2.5.1.	Planned or controlled interruption of electric supply to customers (load shedding), the planned removal from service of certain generators, and/or the curtailment of contracted Firm (non-recallable reserved) electric power Transfers.							PA								"	"	"	
FAC-010-1	R3.	The Planning Authority's methodology for determining SOLs, shall include, as a minimum, a description of the following, along with any reliability margins applied for each:							PA								**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	**Yes Procedures may have to address 100KV+ facilities**	Medium impact rating methodoly may have been different
FAC-010-1	R3.1.	Study model (must include at least the entire Planning Authority Area as well as the critical modeling details from other Planning Authority Areas that would impact the Facility or Facilities under study).							PA								"	"	"	
FAC-010-1	R3.2.	Selection of applicable Contingencies.							PA								"	"	"	
FAC-010-1	R3.3.	Level of detail of system models used to determine SOLs.							PA								"	"	"	
FAC-010-1	R3.4.	Allowed uses of Special Protection Systems or Remedial Action Plans.							PA								"	"	"	
FAC-010-1	R3.5.	Anticipated transmission system configuration, generation dispatch and Load level.							PA								"	"	"	
FAC-010-1	R3.6.	Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Tv.							PA								"	"	"	
FAC-010-1	R4.	The Planning Authority shall issue its SOL Methodology, and any change to that methodology, to all of the following prior to the effectiveness of the change:							PA								No	No	No	
FAC-010-1	R4.1.	Each adjacent Planning Authority and each Planning Authority that indicated it has a reliability-related need for th methodology.							PA								No	No	No	
FAC-010-1	R4.2.	Each Reliability Coordinator and Transmission Operator that operates any portion of the Planning Authority's Planning Authority Area.							PA								No	No	No	
FAC-010-1	R4.3.	Each Transmission Planner that works in the Planning Authority's Planning Authority Area.							PA								No	No	No	
FAC-010-1	R5.	If a recipient of the SOL Methodology provides documented technical comments on the methodology, the Planning Authority shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the SOL Methodology and, if no change will be made to that SOL Methodology, the reason why.							PA								No	No	No	
FAC-011-1	R1.	The Reliability Coordinator shall have a documented methodology for use in developing SOLs (SOL Methodolog within its Reliability Coordinator Area. This SOL Methodology shall:									RC						**Yes RC Procedures and Reliability Plan must address 100KV+ facilities**	**Yes RC Procedures and Reliability Plan must address 100KV+ facilities**	**Yes RC Procedures and Reliability Plan must address 100KV+ facilities**	Medium impact rating methodoly may have been different
FAC-011-1	R1.1.	Be applicable for developing SOLs used in the operations horizon.									RC						No	No	No	
FAC-011-1	R1.2.	State that SOLs shall not exceed associated Facility Ratings.									RC						No	No	No	
FAC-011-1	R1.3.	Include a description of how to identify the subset of SOLs that qualify as IROLs.									RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
FAC-011-1	R2.	The Reliability Coordinator's SOL Methodology shall include a requirement that SOLs provide BES performance consistent with the following:									RC						Yes RC Procedures and Reliability Plan must address 100KV+ facilities	Yes RC Procedures and Reliability Plan must address 100KV+ facilities	No	Medium impact rating methodoly may have been different
FAC-011-1	R2.1.	In the pre-contingency state, the BES shall demonstrate transient, dynamic and voltage stability; all Facilities shall be within their Facility Ratings and within their thermal, voltage and stability limits. In the determination of SOLs, the BES condition used shall reflect current or expected system conditions and shall reflect changes to system topology such as Facility outages.									RC						"	"	No	"
FAC-011-1	R2.2.	Following the single Contingencies identified in Requirement 2.2.1 through Requirement 2.2.3, the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading Outages or uncontrolled separation shall not occur.									RC						"	"	No	"
FAC-011-1	R2.2.1.	Single line to ground or 3-phase Fault (whichever is more severe), with Normal Clearing, on any Faulted generato line, transformer, or shunt device.									RC						"	"	No	"
FAC-011-1	R2.2.2.	Loss of any generator, line, transformer, or shunt device without a Fault.									RC						"	"	No	"
FAC-011-1	R2.2.3.	Single pole block, with Normal Clearing, in a monopolar or bipolar high voltage direct current system.									RC						"	"	No	"
FAC-011-1	R2.3.	In determining the system's response to a single Contingency, the following shall be acceptable:									RC						"	"	No	"
FAC-011-1	R2.3.1.	Planned or controlled interruption of electric supply to radial customers or some local network customers connected to or supplied by the Faulted Facility or by the affected area.									RC						"	"	No	"
FAC-011-1	R2.3.2.	Interruption of other network customers, only if the system has already been adjusted, or is being adjusted, following at least one prior outage, or, if the real-time operating conditions are more adverse than anticipated in th corresponding studies, e.g., load greater than studied.									RC						"	"	No	"
FAC-011-1	R2.3.3.	System reconfiguration through manual or automatic control or protection actions.									RC						"	"	No	"
FAC-011-1	R2.4.	To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.									RC						"	"	No	"
FAC-011-1	R3.	The Reliability Coordinator's methodology for determining SOLs, shall include, as a minimum, a description of t following, along with any reliability margins applied for each:									RC						Yes RC Procedures and Reliability Plan must address 100KV+ facilities	Yes RC Procedures and Reliability Plan must address 100KV+ facilities	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-011-1	R3.1.	Study model (must include at least the entire Reliability Coordinator Area as well as the critical modeling details from other Reliability Coordinator Areas that would impact the Facility or Facilities under study.)									RC						"	"	No	"
FAC-011-1	R3.2.	Selection of applicable Contingencies.									RC						"	"	No	"
FAC-011-1	R3.3.	A process for determining which of the stability limits associated with the list of multiple contingencies (provided by the Planning Authority in accordance with FAC-014 Requirement 6) are applicable for use in the operating horizon given the actual or expected system conditions.									RC						"	"	No	"
FAC-011-1	R3.3.1.	This process shall address the need to modify these limits, to modify the list of limits, and to modify the list of associated multiple contingencies.									RC						"	"	No	"
FAC-011-1	R3.4.	Level of detail of system models used to determine SOLs.									RC						"	"	No	"
FAC-011-1	R3.5.	Allowed uses of Special Protection Systems or Remedial Action Plans.									RC						"	"	No	"
FAC-011-1	R3.6.	Anticipated transmission system configuration, generation dispatch and Load level.									RC						"	"	No	"
FAC-011-1	R3.7.	Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Tv.									RC						"	"	No	"

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FAC-011-1	R4.	The Reliability Coordinator shall issue its SOL Methodology and any changes to that methodology, prior to the effectiveness of the Methodology or of a change to the Methodology, to all of the following:									RC						Yes RC Procedures and Reliability Plan must address 100KV+ facilities	Yes RC Procedures and Reliability Plan must address 100KV+ facilities	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-011-1	R4.1.	Each adjacent Reliability Coordinator and each Reliability Coordinator that indicated it has a reliability-related need for the methodology.									RC						"	"	No	"
FAC-011-1	R4.2.	Each Planning Authority and Transmission Planner that models any portion of the Reliability Coordinator's Reliability Coordinator Area.									RC						"	"	No	"
FAC-011-1	R4.3.	Each Transmission Operator that operates in the Reliability Coordinator Area.									RC						"	"	No	"
FAC-011-1	R5.	If a recipient of the SOL Methodology provides documented technical comments on the methodology, the Reliability Coordinator shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the SOL Methodology and, if no change will be made to that SOL Methodology, the reason why.									RC						Possible impact in responding to inquiries	Possible impact in responding to inquiries	No	Minor impact
FAC-012-1	R1.	The Reliability Coordinator and Planning Authority shall each document its current methodology used for developing its inter-regional and intra-regional Transfer Capabilities (Transfer Capability Methodology). The Transfer Capability Methodology shall include all of the following:							PA		RC						Yes RC Procedures and Reliability Plan must address 100KV+ facilities	Yes RC Procedures and Reliability Plan must address 100KV+ facilities	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-012-1	R1.1.	A statement that Transfer Capabilities shall respect all applicable System Operating Limits (SOLs).							PA		RC						"	"	No	"
FAC-012-1	R1.2.	A definition stating whether the methodology is applicable to the planning horizon or the operating horizon.							PA		RC						"	"	No	"
FAC-012-1	R1.3.	A description of how each of the following is addressed, including any reliability margins applied to reflect uncertainty with projected BES conditions:							PA		RC						"	"	No	"
FAC-012-1	R1.3.1.	Transmission system topology							PA		RC						"	"	No	"
FAC-012-1	R1.3.2.	System demand							PA		RC						"	"	No	"
FAC-012-1	R1.3.3.	Generation dispatch							PA		RC						"	"	No	"
FAC-012-1	R1.3.4.	Current and projected transmission uses							PA		RC						"	"	No	"
FAC-012-1	R2.	The Reliability Coordinator shall issue its Transfer Capability Methodology, and any changes to that methodology prior to the effectiveness of such changes, to all of the following:									RC						Yes RC Procedures and Reliability Plan must address 100KV+ facilities	Yes RC Procedures and Reliability Plan must address 100KV+ facilities	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-012-1	R2.1	Each Adjacent Reliability Coordinator and each Reliability Coordinator that indicated a reliability-related need for the methodology.									RC						"	"	No	"
FAC-012-1	R2.2	Each Planning Authority and Transmission Planner that models any portion of the Reliability Coordinator's Reliability Coordinator Area.									RC						"	"	No	"
FAC-012-1	R2.3	Each Transmission Operator that operates in the Reliability Coordinator Area.									RC						"	"	No	"
FAC-012-1	R3.	The Planning Authority shall issue its Transfer Capability Methodology, and any changes to that methodology, prior to the effectiveness of such changes, to all of the following:								PA							"	"	No	"
FAC-012-1	R3.1.	Each Transmission Planner that works in the Planning Authority's Planning Authority Area.								PA							"	"	No	"
FAC-012-1	R3.2.	Each Adjacent Planning Authority and each Planning Authority that indicated a reliability-related need for the methodology.									RC						"	"	No	"
FAC-012-1	R3.3.	Each Reliability Coordinator and Transmission Operator that operates any portion of the Planning Authority's Planning Authority Area.									RC			TOP			"	"	No	"

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FAC-012-1	R4.	If a recipient of the Transfer Capability Methodology provides documented technical comments on the methodology, the Reliability Coordinator or Planning Authority shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the Transfer Capability Methodology and, if no change will be made to that Transfer Capability Methodology, the reason why.							PA		RC						**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact
FAC-013-1	R1.	The Reliability Coordinator and Planning Authority shall each establish a set of inter-regional and intra-regional Transfer Capabilities that is consistent with its current Transfer Capability Methodology.							PA		RC						"	"	No	"
FAC-013-1	R2.	The Reliability Coordinator and Planning Authority shall each provide its inter-regional and intra-regional Transfe Capabilities to those entities that have a reliability-related need for such Transfer Capabilities and make a written request that includes a schedule for delivery of such Transfer Capabilities as follows:							PA		RC						"	"	No	"
FAC-013-1	R2.1.	The Reliability Coordinator shall provide its Transfer Capabilities to its associated Regional Reliability Organization(s), to its adjacent Reliability Coordinators, and to the Transmission Operators, Transmission Service Providers and Planning Authorities that work in its Reliability Coordinator Area.									RC						"	"	No	"
FAC-013-1	R2.2.	The Planning Authority shall provide its Transfer Capabilities to its associated Reliability Coordinator(s) and Regional Reliability Organization(s), and to the Transmission Planners and Transmission Service Provider(s) that work in its Planning Authority Area.							PA								"	"	No	"
FAC-014-1	R1.	The Reliability Coordinator shall ensure that SOLs, including Interconnection Reliability Operating Limits (IROLs), for its Reliability Coordinator Area are established and that the SOLs (including Interconnection Reliability Operating Limits) are consistent with its SOL Methodology.									RC						"	"	No	"
FAC-014-1	R2.	The Transmission Operator shall establish SOLs (as directed by its Reliability Coordinator) for its portion of the Reliability Coordinator Area that are consistent with its Reliability Coordinator's SOL Methodology.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R3.	The Planning Authority shall establish SOLs, including IROLs, for its Planning Authority Area that are consistent with its SOL Methodology.							PA								**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R4.	The Transmission Planner shall establish SOLs, including IROLs, for its Transmission Planning Area that are consistent with its Planning Authority's SOL Methodology.													TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R5.	The Reliability Coordinator, Planning Authority and Transmission Planner shall each provide its SOLs and IROLs to those entities that have a reliability-related need for those limits and provide a written request that includes a schedule for delivery of those limits as follows:							PA		RC				TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R5.1.	The Reliability Coordinator shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Reliability Coordinators and Reliability Coordinators who indicate a reliability-related need for those limits, and to the Transmission Operators, Transmission Planners, Transmission Service Providers and Planning Authorities within its Reliability Coordinator Area. For each IROL, the Reliability Coordinator shall provide the following supporting information:									RC						"	"		"
FAC-014-1	R5.1.1.	Identification and status of the associated Facility (or group of Facilities) that is (are) critical to the derivation of the IROL.									RC						"	"		"
FAC-014-1	R5.1.2.	The value of the IROL and its associated Tv.									RC						"	"		"
FAC-014-1	R5.1.3.	The associated Contingency(ies).									RC						"	"		"
FAC-014-1	R5.1.4.	The type of limitation represented by the IROL (e.g., voltage collapse, angular stability).									RC						"	"		"

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FAC-014-1	R5.2.	The Transmission Operator shall provide any SOLs it developed to its Reliability Coordinator and to the Transmission Service Providers that share its portion of the Reliability Coordinator Area.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R5.3.	The Planning Authority shall provide its SOLs (including the subset of SOLs that are IROLs) to adjacent Planning Authorities, and to Transmission Planners, Transmission Service Providers, Transmission Operators and Reliability Coordinators that work within its Planning Authority Area.							PA								**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R5.4.	The Transmission Planner shall provide its SOLs (including the subset of SOLs that are IROLs) to its Planning Authority, Reliability Coordinators, Transmission Operators, and Transmission Service Providers that work withi its Transmission Planning Area and to adjacent Transmission Planners.													TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R6.	The Planning Authority shall identify the subset of multiple contingencies (if any), from Reliability Standard TPL-003 which result in stability limits.							PA								**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Similar philosophy should apply to 100KV+ facilities
FAC-014-1	R6.1.	The Planning Authority shall provide this list of multiple contingencies and the associated stability limits to the Reliability Coordinators that monitor the facilities associated with these contingencies and limits.							PA								"	"	No	"
FAC-014-1	R6.2.	If the Planning Authority does not identify any stability-related multiple contingencies, the Planning Authority sh so notify the Reliability Coordinator.							PA								"	"	No	"
INT-001-2	R1.	The Load-Serving, Purchasing-Selling Entity shall ensure that Arranged Interchange is submitted to the Interchange Authority for:						LSE									No	No	No	
INT-001-2	R1.1.	All Dynamic Schedules at the expected average MW profile for each hour.						LSE									No	No	No	
INT-004-1	R1.	At such time as the reliability event allows for the reloading of the transaction, the entity that initiated the curtailment shall release the limit on the Interchange Transaction tag to allow reloading the transaction and shall communicate the release of the limit to the Sink Balancing Authority.	BA							PSE	RC			TOP			No	No	No	
INT-004-1	R2.	The Purchasing-Selling Entity responsible for tagging a Dynamic Interchange Schedule shall ensure the tag is updated for the next available scheduling hour and future hours when any one of the following occurs:	BA							PSE	RC			TOP			No	No	No	
INT-004-1	R2.1.	The average energy profile in an hour is greater than 250 MW and in that hour the actual hourly integrated energy deviates from the hourly average energy profile indicated on the tag by more than +10%.	BA							PSE	RC			TOP			No	No	No	
INT-004-1	R2.2.	The average energy profile in an hour is less than or equal to 250 MW and in that hour the actual hourly integrate energy deviates from the hourly average energy profile indicated on the tag by more than +25 megawatt-hours.	BA							PSE	RC			TOP			No	No	No	
INT-004-1	R2.3.	A Reliability Coordinator or Transmission Operator determines the deviation, regardless of magnitude, to be a reliability concern and notifies the Purchasing-Selling Entity of that determination and the reasons.	BA							PSE	RC			TOP			No	No	No	
INT-005-1	R1.	Prior to the expiration of the time period defined in the Timing Table, Column A, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment to all reliability entities involved in the Interchange.					IA										No	No	No	
INT-005-1	R1.1.	When a Balancing Authority or Reliability Coordinator initiates a Curtailment to Confirmed or Implemented Interchange for reliability, the Interchange Authority shall distribute the Arranged Interchange information for reliability assessment only to the Source Balancing Authority and the Sink Balancing Authority.					IA										No	No	No	
INT-006-1	R1.	Prior to the expiration of the reliability assessment period defined in the Timing Table, Column B, the Balancing Authority and Transmission Service Provider shall respond to a request from an Interchange Authority to transitio an Arranged Interchange to a Confirmed Interchange.	BA													TSP	No	No	No	
INT-006-1	R1.1.	Each involved Balancing Authority shall evaluate the Arranged Interchange with respect to:	BA													TSP	No	No	No	
INT-006-1	R1.1.1.	Energy profile (ability to support the magnitude of the Interchange).	BA													TSP	No	No	No	
INT-006-1	R1.1.2.	Ramp (ability of generation maneuverability to accommodate).	BA													TSP	No	No	No	

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INT-006-1	R1.1.3.	Scheduling path (proper connectivity of Adjacent Balancing Authorities).	BA													TSP	No	No	No	
INT-006-1	R1.2.	Each involved Transmission Service Provider shall confirm that the transmission service arrangements associated with the Arranged Interchange have adjacent Transmission Service Provider connectivity, are valid and prevailing transmission system limits will not be violated.	BA													TSP	No	No	No	
INT-007-1	R1.	The Interchange Authority shall verify that Arranged Interchange is balanced and valid prior to transitioning Arranged Interchange to Confirmed Interchange by verifying the following:					IA										No	No	No	
INT-007-1	R1.1.	Source Balancing Authority megawatts equal sink Balancing Authority megawatts (adjusted for losses, if appropriate).					IA										No	No	No	
INT-007-1	R1.2.	All reliability entities involved in the Arranged Interchange are currently in the NERC registry.					IA										No	No	No	
INT-007-1	R1.3.	The following are defined:					IA										No	No	No	
INT-007-1	R1.3.1.	Generation source and load sink.					IA										No	No	No	
INT-007-1	R1.3.2.	Megawatt profile.					IA										No	No	No	
INT-007-1	R1.3.3.	Ramp start and stop times.					IA										No	No	No	
INT-007-1	R1.3.4.	Interchange duration.					IA										No	No	No	
INT-007-1	R1.4.	Each Balancing Authority and Transmission Service Provider that received the Arranged Interchange information from the Interchange Authority for reliability assessment has provided approval.					IA										No	No	No	
INT-008-1	R1.	Prior to the expiration of the time period defined in the Timing Table, Column C, the Interchange Authority shall distribute to all Balancing Authorities (including Balancing Authorities on both sides of a direct current tie), Transmission Service Providers and Purchasing-Selling Entities involved in the Arranged Interchange whether or not the Arranged Interchange has transitioned to a Confirmed Interchange.					IA										No	No	No	
INT-008-1	R1.1.	For Confirmed Interchange, the Interchange Authority shall also communicate:					IA										No	No	No	
INT-008-1	R1.1.1.	Start and stop times, ramps, and megawatt profile to Balancing Authorities.					IA										No	No	No	
INT-008-1	R1.1.2.	Necessary Interchange information to NERC-identified reliability analysis services.					IA										No	No	No	
INT-009-1	R1.	The Balancing Authority shall implement Confirmed Interchange as received from the Interchange Authority.	BA														No	No	No	
INT-010-1	R1.	The Balancing Authority that experiences a loss of resources covered by an energy sharing agreement shall ensure that a request for an Arranged Interchange is submitted with a start time no more than 60 minutes beyond the resource loss. If the use of the energy sharing agreement does not exceed 60 minutes from the time of the resource loss, no request for Arranged Interchange is required.	BA														No	No	No	
INT-010-1	R2.	For a modification to an existing Interchange schedule that is directed by a Reliability Coordinator for current or imminent reliability-related reasons, the Reliability Coordinator shall direct a Balancing Authority to submit the modified Arranged Interchange reflecting that modification within 60 minutes of the initiation of the event.									RC						No	No	No	
INT-010-1	R3.	For a new Interchange schedule that is directed by a Reliability Coordinator for current or imminent reliability-related reasons, the Reliability Coordinator shall direct a Balancing Authority to submit an Arranged Interchange reflecting that Interchange schedule within 60 minutes of the initiation of the event.									RC						No	No	No	
IRO-001-1	R1.	Each Regional Reliability Organization, subregion, or interregional coordinating group shall establish one or more Reliability Coordinators to continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.									RC						No	No	No	
IRO-001-1	R2.	The Reliability Coordinator shall comply with a regional reliability plan approved by the NERC Operating Committee.									RC						No	No	No	
IRO-001-1	R3.	The Reliability Coordinator shall have clear decision-making authority to act and to direct actions to be taken by Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities within its Reliability Coordinator Area to preserve the integrity and reliability of the Bulk Electric System. These actions shall be taken without delay, but no longer than 30 minutes.									RC						No	No	No	

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IRO-001-1	R4.	Reliability Coordinators that delegate tasks to other entities shall have formal operating agreements with each entity to which tasks are delegated. The Reliability Coordinator shall verify that all delegated tasks are understoo communicated, and addressed within its Reliability Coordinator Area. All responsibilities for complying with NERC and regional standards applicable to Reliability Coordinators shall remain with the Reliability Coordinator									RC						No	No	No	
IRO-001-1	R5.	The Reliability Coordinator shall list within its reliability plan all entities to which the Reliability Coordinator has delegated required tasks.									RC						No	No	No	
IRO-001-1	R6.	The Reliability Coordinator shall verify that all delegated tasks are carried out by NERC-certified Reliability Coordinator operating personnel.									RC						No	No	No	
IRO-001-1	R7.	The Reliability Coordinator shall have clear, comprehensive coordination agreements with adjacent Reliability Coordinators to ensure that System Operating Limit or Interconnection Reliability Operating Limit violation mitigation requiring actions in adjacent Reliability Coordinator Areas are coordinated.									RC						No	No	No	
IRO-001-1	R8.	Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall comply with Reliability Coordinator directives unless such actions would violate safety, equipment, or regulatory or statutory requirements. Under these circumstances, the Transmission Operator, Balancing Authority, Generator Operator, Transmission Service Provider, Load-Serving Entity, or Purchasing-Selling Entity shall immediately inform the Reliability Coordinator of the inability to perfor the directive so that the Reliability Coordinator may implement alternate remedial actions.	BA			GOP		LSE		PSE				TOP		TSP	**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
IRO-001-1	R9.	The Reliability Coordinator shall act in the interests of reliability for the overall Reliability Coordinator Area and the Interconnection before the interests of any other entity.									RC						No	No	No	
IRO-002-1	R1.	Each Reliability Coordinator shall have adequate communications facilities (voice and data links) to appropriate entities within its Reliability Coordinator Area. These communications facilities shall be staffed and available to act in addressing a real-time emergency condition.									RC						No	No	No	
IRO-002-1	R2.	Each Reliability Coordinator shall determine the data requirements to support its reliability coordination tasks and shall request such data from its Transmission Operators, Balancing Authorities, Transmission Owners, Generation Owners, Generation Operators, and Load-Serving Entities, or adjacent Reliability Coordinators.									RC						No	No	No	
IRO-002-1	R3.	Each Reliability Coordinator – or its Transmission Operators and Balancing Authorities – shall provide, or arrang provisions for, data exchange to other Reliability Coordinators or Transmission Operators and Balancing Authorities via a secure network.	BA								RC			TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
IRO-002-1	R4.	Each Reliability Coordinator shall have multi-directional communications capabilities with its Transmission Operators and Balancing Authorities, and with neighboring Reliability Coordinators, for both voice and data exchange as required to meet reliability needs of the Interconnection.									RC			TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact Additional facilities may be required at back up site
IRO-002-1	R5.	Each Reliability Coordinator shall have detailed real-time monitoring capability of its Reliability Coordinator Area and sufficient monitoring capability of its surrounding Reliability Coordinator Areas to ensure that potential or actual System Operating Limit or Interconnection Reliability Operating Limit violations are identified. Each Reliability Coordinator shall have monitoring systems that provide information that can be easily understood and interpreted by the Reliability Coordinator's operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant and highly reliable infrastructure.									RC						**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	No	Medium impact

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IRO-002-1	R6.	Each Reliability Coordinator shall monitor Bulk Electric System elements (generators, transmission lines, buses, transformers, breakers, etc.) that could result in SOL or IROL violations within its Reliability Coordinator Area. Each Reliability Coordinator shall monitor both real and reactive power system flows, and operating reserves, and the status of Bulk Electric System elements that are or could be critical to SOLs and IROLs and system restoration requirements within its Reliability Coordinator Area.									RC						Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	No	Medium impact
IRO-002-1	R7.	Each Reliability Coordinator shall have adequate analysis tools such as state estimation, pre- and post-contingency analysis capabilities (thermal, stability, and voltage), and wide-area overview displays.									RC						Possible	Possible	No	Analysis tools may need to be expanded
IRO-002-1	R8.	Each Reliability Coordinator shall continuously monitor its Reliability Coordinator Area. Each Reliability Coordinator shall have provisions for backup facilities that shall be exercised if the main monitoring system is unavailable. Each Reliability Coordinator shall ensure SOL and IROL monitoring and derivations continue if the main monitoring system is unavailable.									RC						Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	No	Medium impact
IRO-002-1	R9.	Each Reliability Coordinator shall control its Reliability Coordinator analysis tools, including approvals for planned maintenance. Each Reliability Coordinator shall have procedures in place to mitigate the effects of analysis tool outages.									RC						No	No	No	
IRO-003-2	R1.	Each Reliability Coordinator shall monitor all Bulk Electric System facilities, which may include sub-transmission information, within its Reliability Coordinator Area and adjacent Reliability Coordinator Areas, as necessary to ensure that, at any time, regardless of prior planned or unplanned events, the Reliability Coordinator is able to determine any potential System Operating Limit and Interconnection Reliability Operating Limit violations within its Reliability Coordinator Area.									RC						Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	No	Medium impact
IRO-003-2	R2.	Each Reliability Coordinator shall know the current status of all critical facilities whose failure, degradation or disconnection could result in an SOL or IROL violation. Reliability Coordinators shall also know the status of any facilities that may be required to assist area restoration objectives.									RC						Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities	No	Minor impact

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
IRO-004-1	R1.	Each Reliability Coordinator shall conduct next-day reliability analyses for its Reliability Coordinator Area to ensure that the Bulk Electric System can be operated reliably in anticipated normal and Contingency event conditions. The Reliability Coordinator shall conduct Contingency analysis studies to identify potential interface and other SOL and IROL violations, including overloaded transmission lines and transformers, voltage and stability limits, etc.									RC						**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	No	Medium impact More time may be spent analyzing the system
IRO-004-1	R2.	Each Reliability Coordinator shall pay particular attention to parallel flows to ensure one Reliability Coordinator Area does not place an unacceptable or undue Burden on an adjacent Reliability Coordinator Area.									RC						No	No	No	
IRO-004-1	R3.	Each Reliability Coordinator shall, in conjunction with its Transmission Operators and Balancing Authorities, develop action plans that may be required, including reconfiguration of the transmission system, re-dispatching of generation, reduction or curtailment of Interchange Transactions, or reducing load to return transmission loading t within acceptable SOLs or IROLs.	BA								RC			TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent analyzing the system
IRO-004-1	R4.	Each Transmission Operator, Balancing Authority, Transmission Owner, Generator Owner, Generator Operator, and Load-Serving Entity in the Reliability Coordinator Area shall provide information required for system studies, such as critical facility status, Load, generation, operating reserve projections, and known Interchange Transactions. This information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.	BA		GO	GOP		LSE					TO	TOP			**Yes Study Procedures must address 100+ KV facilities**	**Yes Study Procedures must address 100+ KV facilities**	**Yes Study Procedures must address 100+ KV facilities**	Medium impact More time may be spent analyzing the system
IRO-004-1	R5.	Each Reliability Coordinator shall share the results of its system studies, when conditions warrant or upon request, with other Reliability Coordinators and with Transmission Operators, Balancing Authorities, and Transmission Service Providers within its Reliability Coordinator Area. The Reliability Coordinator shall make study results available no later than 1500 Central Standard Time for the Eastern Interconnection and 1500 Pacific Standard Time for the Western Interconnection, unless circumstances warrant otherwise.									RC						No	No	No	
IRO-004-1	R6.	If the results of these studies indicate potential SOL or IROL violations, the Reliability Coordinator shall direct its Transmission Operators, Balancing Authorities and Transmission Service Providers to take any necessary action the Reliability Coordinator deems appropriate to address the potential SOL or IROL violation.									RC						No	No	No	
IRO-004-1	R7.	Each Transmission Operator, Balancing Authority, and Transmission Service Provider shall comply with the directives of its Reliability Coordinator based on the next day assessments in the same manner in which it would comply during real time operating events.	BA											TOP		TSP	**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact
IRO-005-1	R1.	Each Reliability Coordinator shall monitor its Reliability Coordinator Area parameters, including but not limited t the following:									RC						**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	**Yes RC may require additional data monitoring both internally and with other RC areas for the 100+ KV facilities**	No	Medium impact More time may be spent analyzing the system
IRO-005-1	R1.1.	Current status of Bulk Electric System elements (transmission or generation including critical auxiliaries such as Automatic Voltage Regulators and Special Protection Systems) and system loading.									RC						"	"	No	"

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IRO-005-1	R1.2.	Current pre-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.									RC						"	"	No	"
IRO-005-1	R1.3.	Current post-contingency element conditions (voltage, thermal, or stability), including any applicable mitigation plans to alleviate SOL or IROL violations, including the plan's viability and scope.									RC						"	"	No	"
IRO-005-1	R1.4.	System real and reactive reserves (actual versus required).									RC						No	No	No	
IRO-005-1	R1.5.	Capacity and energy adequacy conditions.									RC						No	No	No	
IRO-005-1	R1.6.	Current ACE for all its Balancing Authorities.									RC						No	No	No	
IRO-005-1	R1.7.	Current local or Transmission Loading Relief procedures in effect.									RC						No	No	No	
IRO-005-1	R1.8.	Planned generation dispatches.									RC						No	No	No	
IRO-005-1	R1.9.	Planned transmission or generation outages.									RC						No	No	No	
IRO-005-1	R1.10.	Contingency events.									RC						No	No	No	
IRO-005-1	R2.	Each Reliability Coordinator shall be aware of all Interchange Transactions that wheel through, source, or sink in its Reliability Coordinator Area, and make that Interchange Transaction information available to all Reliability Coordinators in the Interconnection.									RC						No	No	No	
IRO-005-1	R3.	As portions of the transmission system approach or exceed SOLs or IROLs, the Reliability Coordinator shall work with its Transmission Operators and Balancing Authorities to evaluate and assess any additional Interchange Schedules that would violate those limits. If a potential or actual IROL violation cannot be avoided through proactive intervention, the Reliability Coordinator shall initiate control actions or emergency procedures to relieve the violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall ensure all resources, including load shedding, are available to address a potential or actual IROL violation.									RC						**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent monitoring the system
IRO-005-1	R4.	Each Reliability Coordinator shall monitor its Balancing Authorities' parameters to ensure that the required amount of operating reserves is provided and available as required to meet the Control Performance Standard and Disturbance Control Standard requirements. If necessary, the Reliability Coordinator shall direct the Balancing Authorities in the Reliability Coordinator Area to arrange for assistance from neighboring Balancing Authorities. The Reliability Coordinator shall issue Energy Emergency Alerts as needed and at the request of its Balancing Authorities and Load-Serving Entities.									RC						No	No	No	
IRO-005-1	R5.	Each Reliability Coordinator shall identify the cause of any potential or actual SOL or IROL violations. The Reliability Coordinator shall initiate the control action or emergency procedure to relieve the potential or actual IROL violation without delay, and no longer than 30 minutes. The Reliability Coordinator shall be able to utilize all resources, including load shedding, to address an IROL violation.									RC						No	No	No	
IRO-005-1	R6.	Each Reliability Coordinator shall ensure its Transmission Operators and Balancing Authorities are aware of Geo-Magnetic Disturbance (GMD) forecast information and assist as needed in the development of any required response plans.									RC						No	No	No	
IRO-005-1	R7.	The Reliability Coordinator shall disseminate information within its Reliability Coordinator Area, as required.									RC						No	No	No	
IRO-005-1	R8.	Each Reliability Coordinator shall monitor system frequency and its Balancing Authorities' performance and direct any necessary rebalancing to return to CPS and DCS compliance. The Transmission Operators and Balancing Authorities shall utilize all resources, including firm load shedding, as directed by its Reliability Coordinator to relieve the emergent condition.									RC						No	No	No	
IRO-005-1	R9.	The Reliability Coordinator shall coordinate with Transmission Operators, Balancing Authorities, and Generator Operators as needed to develop and implement action plans to mitigate potential or actual SOL, IROL, CPS, or DCS violations. The Reliability Coordinator shall coordinate pending generation and transmission maintenance outages with Transmission Operators, Balancing Authorities, and Generator Operators as needed in both the real-time and next-day reliability analysis timeframes.									RC						**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent monitoring the system
IRO-005-1	R10.	As necessary, the Reliability Coordinator shall assist the Balancing Authorities in its Reliability Coordinator Area in arranging for assistance from neighboring Reliability Coordinator Areas or Balancing Authorities.									RC						No	No	No	
IRO-005-1	R11.	The Reliability Coordinator shall identify sources of large Area Control Errors that may be contributing to Frequency Error, Time Error, or Inadvertent Interchange and shall discuss corrective actions with the appropriate Balancing Authority. The Reliability Coordinator shall direct its Balancing Authority to comply with CPS and DCS.									RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
IRO-005-1	R12.	Whenever a Special Protection System that may have an inter-Balancing Authority, or inter-Transmission Operat impact (e.g., could potentially affect transmission flows resulting in a SOL or IROL violation) is armed, the Reliability Coordinators shall be aware of the impact of the operation of that Special Protection System on inter-area flows. The Transmission Operator shall immediately inform the Reliability Coordinator of the status of the Special Protection System including any degradation or potential failure to operate as expected.									RC						**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent monitoring the system for SPS conditions
IRO-005-1	R13.	Each Reliability Coordinator shall ensure that all Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities operate to prevent the likelihood that a disturbance, action, or non-action in its Reliability Coordinator Area will result in a SOL or IROL violation in another area of the Interconnection. In instances where there is a difference in derived limits, the Reliability Coordinator and its Transmission Operators, Balancing Authorities, Generator Operators, Transmission Service Providers, Load-Serving Entities, and Purchasing-Selling Entities shall always operate the Bulk Electric System to the most limiting parameter.									RC						**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Medium impact More time may be spent monitoring the system
IRO-005-1	R14.	Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability Coordinator Area, SOLs or IROLs within its wide-area view. The Transmission Service Providers shall respect these SOLs or IROLs in accordance with filed tariffs and regional Total Transfer Calculation and Available Transfer Calculation processes.									RC						No	No	No	
IRO-005-1	R15.	Each Reliability Coordinator who foresees a transmission problem (such as an SOL or IROL violation, loss of reactive reserves, etc.) within its Reliability Coordinator Area shall issue an alert to all impacted Transmission Operators and Balancing Authorities in its Reliability Coordinator Area without delay. The receiving Reliability Coordinator shall disseminate this information to its impacted Transmission Operators and Balancing Authorities. The Reliability Coordinator shall notify all impacted Transmission Operators, Balancing Authorities, when the transmission problem has been mitigated.									RC						No	No	No	
IRO-005-1	R16.	Each Reliability Coordinator shall confirm reliability assessment results and determine the effects within its own and adjacent Reliability Coordinator Areas. The Reliability Coordinator shall discuss options to mitigate potential or actual SOL or IROL violations and take actions as necessary to always act in the best interests of the Interconnection at all times.									RC						No	No	No	
IRO-005-1	R17.	When an IROL or SOL is exceeded, the Reliability Coordinator shall evaluate the local and wide-area impacts, both real-time and post-contingency, and determine if the actions being taken are appropriate and sufficient to return the system to within IROL in thirty minutes. If the actions being taken are not appropriate or sufficient, the Reliability Coordinator shall direct the Transmission Operator, Balancing Authority, Generator Operator, or Load-Serving Entity to return the system to within IROL or SOL.									RC						No	No	No	
IRO-006-3	R1.	A Reliability Coordinator shall take appropriate actions in accordance with established policies, procedures, authority, and expectations to relieve transmission loading.									RC						No	No	No	
IRO-006-3	R2.	A Reliability Coordinator experiencing a potential or actual SOL or IROL violation within its Reliability Coordinator Area shall, at its discretion, select from either a "local" (Regional, Interregional, or subregional) transmission loading relief procedure or an Interconnection-wide procedure.									RC						**Yes RC and TO need to coordinate local Procedures for 100KV+ facilities**	**Yes RC and TO need to coordinate local Procedures for 100KV+ facilities**	No	Medium impact More time may be spent monitoring the system
IRO-006-3	R2.1.	The Interconnection-wide Transmission Loading Relief (TLR) procedure for use in the Eastern Interconnection is provided in Attachment 1-IRO-006-0.									RC						No	No	No	
IRO-006-3	R2.2.	The equivalent Interconnection-wide transmission loading relief procedure for use in the Western Interconnection the "WSCC Unscheduled Flow Mitigation Plan," provided at: http://www.wecc.biz/documents/library/UFAS/UFAS_mitigation_plan_rev_2001-clean_8-8-03.pdf.									RC						No	No	No	
IRO-006-3	R2.3.	The Interconnection-wide transmission loading relief procedure for use in ERCOT is provided as Section 7 of the ERCOT Protocols, posted at: http://www.ercot.com/tac/retailisoadhoccommittee/protocols/keydocs/draftercotprotocols.htm.									RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
IRO-006-3	R3.	The Reliability Coordinator may use local transmission loading relief or congestion management procedures, provided the Transmission Operator experiencing the potential or actual SOL or IROL violation is a party to those procedures.									RC						Yes RC and TO need to coordinate local Procedures for 100KV+ facilities	Yes RC and TO need to coordinate local Procedures for 100KV+ facilities	No	Medium impact More time may be spent monitoring the system
IRO-006-3	R4.	A Reliability Coordinator may implement a local transmission loading relief or congestion management procedure simultaneously with an Interconnection-wide procedure. However, the Reliability Coordinator shall follow the curtailments as directed by the Interconnection-wide procedure. A Reliability Coordinator desiring to use a local procedure as a substitute for curtailments as directed by the Interconnection-wide procedure shall have such use approved by the NERC Operating Committee.									RC						Yes RC and TO need to coordinate local Procedures for 100KV+ facilities	Yes RC and TO need to coordinate local Procedures for 100KV+ facilities	No	Medium impact More time may be spent monitoring the system
IRO-006-3	R5.	When implemented, all Reliability Coordinators shall comply with the provisions of the Interconnection-wide procedure including, for example, action by Reliability Coordinators in other Interconnections to curtail an Interchange Transaction that crosses an Interconnection boundary.									RC						No	No	No	
IRO-006-3	R6.	During the implementation of relief procedures, and up to the point that emergency action is necessary, Reliability Coordinators and Balancing Authorities shall comply with interchange scheduling standards INT-001 through INT-004.	BA								RC						No	No	No	
IRO-014-1	R1.	The Reliability Coordinator shall have Operating Procedures, Processes, or Plans in place for activities that require notification, exchange of information or coordination of actions with one or more other Reliability Coordinators to support Interconnection reliability. These Operating Procedures, Processes, or Plans shall address Scenarios that affect other Reliability Coordinator Areas as well as those developed in coordination with other Reliability Coordinators.									RC						No	No	No	
IRO-014-1	R1.1.	These Operating Procedures, Processes, or Plans shall collectively address, as a minimum, the following:									RC						No	No	No	
IRO-014-1	R1.1.1.	Communications and notifications, including the conditions under which one Reliability Coordinator notifies other Reliability Coordinators; the process to follow in making those notifications; and the data and information to be exchanged with other Reliability Coordinators. Examples of conditions when one Reliability Coordinator may need to notify another Reliability Coordinator may include (but aren't limited to) sabotage events, Interconnection Reliability Operating Limit violations, voltage reductions, insufficient resources, arming of special protection systems, etc.									RC						No	No	No	
IRO-014-1	R1.1.2.	Energy and capacity shortages.									RC						No	No	No	
IRO-014-1	R1.1.3.	Planned or unplanned outage information.									RC						No	No	No	
IRO-014-1	R1.1.4.	Voltage control, including the coordination of reactive resources for voltage control.									RC						No	No	No	
IRO-014-1	R1.1.5.	Coordination of information exchange to support reliability assessments.									RC						No	No	No	
IRO-014-1	R1.1.6.	Authority to act to prevent and mitigate instances of causing Adverse Reliability Impacts to other Reliability Coordinator Areas.									RC						No	No	No	
IRO-014-1	R2.	Each Reliability Coordinator's Operating Procedure, Process, or Plan that requires one or more other Reliability Coordinators to take action (e.g., make notifications, exchange information, or coordinate actions) shall be:									RC						No	No	No	
IRO-014-1	R2.1.	Agreed to by all the Reliability Coordinators required to take the indicated action(s).									RC						No	No	No	
IRO-014-1	R2.2.	Distributed to all Reliability Coordinators that are required to take the indicated action(s).									RC						No	No	No	
IRO-014-1	R3.	A Reliability Coordinator's Operating Procedures, Processes, or Plans developed to support a Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan shall include:									RC						No	No	No	
IRO-014-1	R3.1.	A reference to the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.									RC						No	No	No	
IRO-014-1	R3.2.	The agreed-upon actions from the associated Reliability Coordinator-to-Reliability Coordinator Operating Procedure, Process, or Plan.									RC						No	No	No	
IRO-014-1	R4.	Each of the Operating Procedures, Processes, and Plans addressed in Reliability Standard IRO-014 Requirement 1 and Requirement 3 shall:									RC						No	No	No	
IRO-014-1	R4.1.	Include version control number or date									RC						No	No	No	
IRO-014-1	R4.2.	Include a distribution list.									RC						No	No	No	
IRO-014-1	R4.3.	Be reviewed, at least once every three years, and updated if needed.									RC						No	No	No	
IRO-015-1	R1.	The Reliability Coordinator shall follow its Operating Procedures, Processes, or Plans for making notifications and exchanging reliability-related information with other Reliability Coordinators.									RC						No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
IRO-015-1	R1.1.	The Reliability Coordinator shall make notifications to other Reliability Coordinators of conditions in its Reliability Coordinator Area that may impact other Reliability Coordinator Areas.									RC						No	No	No	
IRO-015-1	R2.	The Reliability Coordinator shall participate in agreed upon conference calls and other communication forums wi adjacent Reliability Coordinators.									RC						No	No	No	
IRO-015-1	R2.1.	The frequency of these conference calls shall be agreed upon by all involved Reliability Coordinators and shall be at least weekly.									RC						No	No	No	
IRO-015-1	R3.	The Reliability Coordinator shall provide reliability-related information as requested by other Reliability Coordinators.									RC						No	No	No	
IRO-016-1	R1.	The Reliability Coordinator that identifies a potential, expected, or actual problem that requires the actions of one or more other Reliability Coordinators shall contact the other Reliability Coordinator(s) to confirm that there is a problem and then discuss options and decide upon a solution to prevent or resolve the identified problem.									RC						No	No	No	
IRO-016-1	R1.1.	If the involved Reliability Coordinators agree on the problem and the actions to take to prevent or mitigate the system condition, each involved Reliability Coordinator shall implement the agreed-upon solution, and notify the involved Reliability Coordinators of the action(s) taken.									RC						No	No	No	
IRO-016-1	R1.2.	If the involved Reliability Coordinators cannot agree on the problem(s) each Reliability Coordinator shall re-evaluate the causes of the disagreement (bad data, status, study results, tools, etc.).									RC						No	No	No	
IRO-016-1	R1.2.1.	If time permits, this re-evaluation shall be done before taking corrective actions.									RC						No	No	No	
IRO-016-1	R1.2.2.	If time does not permit, then each Reliability Coordinator shall operate as though the problem(s) exist(s) until the conflicting system status is resolved.									RC						No	No	No	
IRO-016-1	R1.3.	If the involved Reliability Coordinators cannot agree on the solution, the more conservative solution shall be implemented.									RC						No	No	No	
IRO-016-1	R2.	The Reliability Coordinator shall document (via operator logs or other data sources) its actions taken for either the event or for the disagreement on the problem(s) or for both.									RC						No	No	No	
MOD-006-0	R1.	Each Transmission Service Provider shall document its procedure on the use of Capacity Benefit Margin (CBM) (scheduling of energy against a CBM preservation). The procedure shall include the following three components:														TSP	**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact
MOD-006-0	R1.1.	Require that CBM be used only after the following steps have been taken (as time permits): all non-firm sales have been terminated, Direct-Control Load Management has been implemented, and customer interruptible demands have been interrupted. CBM may be used to reestablish Operating Reserves.														TSP	No	No	No	
MOD-006-0	R1.2.	Require that CBM shall only be used if the Load-Serving Entity calling for its use is experiencing a generation deficiency and its Transmission Service Provider is also experiencing Transmission Constraints relative to imports of energy on its transmission system.														TSP	No	No	No	
MOD-006-0	R1.3.	Describe the conditions under which CBM may be available as Non-Firm Transmission Service.														TSP	No	No	No	
MOD-006-0	R2.	Each Transmission Service Provider shall make its CBM use procedure available on a web site accessible by the Regional Reliability Organizations, NERC, and transmission users.														TSP	No	No	No	
MOD-007-0	R1.	Each Transmission Service Provider that uses CBM shall report (to the Regional Reliability Organization, NERC and the transmission users) the use of CBM by the Load-Serving Entities' Loads on its system, except for CBM sales as Non-Firm Transmission Service. (This use of CBM shall be consistent with the Transmission Service Provider's procedure for use of CBM.)														TSP	No	No	No	
MOD-007-0	R2.	The Transmission Service Provider shall post the following three items within 15 calendar days after the use of CBM for an Energy Emergency. This posting shall be on a web site accessible by the Regional Reliability Organizations, NERC, and transmission users.														TSP	No	No	No	
MOD-007-0	R2.1.	Circumstances.														TSP	No	No	No	
MOD-007-0	R2.2.	Duration.														TSP	No	No	No	
MOD-007-0	R2.3.	Amount of CBM used.														TSP	No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
MOD-010-0	R1.	The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-011-0_R1) shall provide appropriate equipment characteristics, system data, and existing and future Interchange Schedules in compliance with its respective Interconnection Regional steady-state modeling and simulation data requirements and reporting procedures as defined in Reliability Standard MOD-011-0_R 1.			GO							RP	TO		TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Additional data and information will be required
MOD-010-0	R2.	The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-011-0_R1) shall provide this steady-state modeling and simulation data to the Regional Reliability Organizations, NERC, and those entities specified within Reliability Standard MOD-011-0_R 1. If no schedule exists, then these entities shall provide the data on request (30 calendar days).			GO							RP	TO		TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact Additional data and information will be required
MOD-011-0	R1.	The Regional Reliability Organizations within an Interconnection, in conjunction with the Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners, shall develop comprehensive steady-state data requirements and reporting procedures needed to model and analyze the steady-state conditions for each of the NERC Interconnections: Eastern, Western, and ERCOT. Within an Interconnection, the Regional Reliability Organizations shall jointly coordinate the development of the data requirements and reporting procedures for that Interconnection. The Interconnection-wide requirements shall include the following steady-state data requirements:			GO							RP	TO		TP		No	No	No	
MOD-012-0	R1.	The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-013-0_R4) shall provide appropriate equipment characteristics and system data in compliance with the respective Interconnection-wide Regional dynamics system modeling and simulation data requirements and reporting procedures as defined in Reliability Standard MOD-013-0_R 4.			GO							RP	TO		TP		**Yes Data must include BES 100KV+ facilities**	**Yes Data must include BES 100KV+ facilities**	No	Minor impact Additional data and information will be required
MOD-012-0	R2.	The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners (specified in the data requirements and reporting procedures of MOD-013-0_R4) shall provide dynamics system modeling and simulation data to its Regional Reliability Organization(s), NERC, and those entities specified within the applicable reporting procedures identified in Reliability Standard MOD-013-0_R 1. If no schedule exists, then these entities shall provide data on request (30 calendar days).			GO							RP	TO		TP		**Yes Data must include BES 100KV+ facilities**	**Yes Data must include BES 100KV+ facilities**	No	Minor impact Additional data and information will be required
MOD-016-1	R1.	The Planning Authority and Regional Reliability Organization shall have documentation identifying the scope and details of the actual and forecast (a) Demand data, (b) Net Energy for Load data, and (c) controllable DSM data to be reported for system modeling and reliability analyses.							PA								No	No	No	
MOD-016-1	R1.1.	The aggregated and dispersed data submittal requirements shall ensure that consistent data is supplied for Reliability Standards TPL-005, TPL-006, MOD-010, MOD-011, MOD-012, MOD-013, MOD-014, MOD-015, MOD-016, MOD-017, MOD-018, MOD-019, MOD-020, and MOD-021. The data submittal requirements shall stipulate that each Load-Serving Entity count its customer Demand once and only once, on an aggregated and dispersed basis, in developing its actual and forecast customer Demand values.							PA								No	No	No	
MOD-016-1	R2.	The Regional Reliability Organization shall distribute its documentation required in Requirement 1 and any changes to that documentation, to all Planning Authorities that work within its Region. The Regional Reliability Organization shall make this distribution within 30 calendar days of approval. The Planning Authority shall distribute its documentation required in R1 for reporting customer data and any changes to that documentation, to its Transmission Planners and Load-Serving Entities that work within its Planning Authority Area. The Planning Authority shall make this distribution within 30 calendar days of approval							PA								No	No	No	
MOD-016-1	R3.	The Planning Authority shall distribute its documentation required in R1 for reporting customer data and any changes to that documentation, to its Transmission Planners and Load-Serving Entities that work within its Planning Authority Area.							PA								No	No	No	
MOD-016-1	R3.1	The Planning Authority shall make this distribution within 30 calendar days of approval.							PA								No	No	No	
MOD-017-0	R1.	The Load-Serving Entity, Planning Authority, and Resource Planner shall each provide the following information annually on an aggregated Regional, subregional, Power Pool, individual system, or Load-Serving Entity basis to NERC, the Regional Reliability Organizations, and any other entities specified by the documentation in Standard MOD-016-1_R 1.						LSE	PA			RP					No	No	No	
MOD-017-0	R1.1.	Integrated hourly demands in megawatts (MW) for the prior year.						LSE	PA			RP					No	No	No	
MOD-017-0	R1.2.	Monthly and annual peak hour actual demands in MW and Net Energy for Load in gigawatthours (GWh) for the prior year.						LSE	PA			RP					No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
MOD-017-0	R1.3.	Monthly peak hour forecast demands in MW and Net Energy for Load in GWh for the next two years.						LSE	PA			RP					No	No	No	
MOD-017-0	R1.4.	Annual Peak hour forecast demands (summer and winter) in MW and annual Net Energy for load in GWh for at least five years and up to ten years into the future, as requested.						LSE	PA			RP					No	No	No	
MOD-018-0	R1.	The Load-Serving Entity, Planning Authority, Transmission Planner and Resource Planner's report of actual and forecast demand data (reported on either an aggregated or dispersed basis) shall:						LSE	PA			RP			TP		No	No	No	
MOD-018-0	R1.1.	Indicate whether the demand data of nonmember entities within an area or Regional Reliability Organization are included, and						LSE	PA			RP			TP		No	No	No	
MOD-018-0	R1.2.	Address assumptions, methods, and the manner in which uncertainties are treated in the forecasts of aggregated peak demands and Net Energy for Load.						LSE	PA			RP			TP		No	No	No	
MOD-018-0	R1.3.	Items (MOD-018-0_R 1.1) and (MOD-018-0_R 1.2) shall be addressed as described in the reporting procedures developed for Standard MOD-016-1_R 1.						LSE	PA			RP			TP		No	No	No	
MOD-018-0	R2.	The Load-Serving Entity, Planning Authority, Transmission Planner, and Resource Planner shall each report data associated with Reliability Standard MOD-018-0_R1 to NERC, the Regional Reliability Organization, Load-Serving Entity, Planning Authority, and Resource Planner on request (within 30 calendar days).						LSE	PA			RP			TP		No	No	No	
MOD-019-0	R1.	The Load-Serving Entity, Planning Authority, Transmission Planner, and Resource Planner shall each provide annually its forecasts of interruptible demands and Direct Control Load Management (DCLM) data for at least five years and up to ten years into the future, as requested, for summer and winter peak system conditions to NERC, the Regional Reliability Organizations, and other entities (Load-Serving Entities, Planning Authorities, an Resource Planners) as specified by the documentation in Reliability Standard MOD-016-0_R 1.						LSE	PA			RP			TP		No	No	No	
MOD-020-0	R1.	The Load-Serving Entity, Transmission Planner, and Resource Planner shall each make known its amount of interruptible demands and Direct Control Load Management (DCLM) to Transmission Operators, Balancing Authorities, and Reliability Coordinators on request within 30 calendar days.						LSE				RP			TP		No	No	No	
MOD-021-0	R1.	The Load-Serving Entity, Transmission Planner, and Resource Planner's forecasts shall each clearly document how the Demand and energy effects of DSM programs (such as conservation, time-of-use rates, interruptible Demands, and Direct Control Load Management) are addressed.						LSE				RP			TP		No	No	No	
MOD-021-0	R2.	The Load-Serving Entity, Transmission Planner, and Resource Planner shall each include information detailing how Demand-Side Management measures are addressed in the forecasts of its Peak Demand and annual Net Energy for Load in the data reporting procedures of Standard MOD-016-0_R 1.						LSE				RP			TP		No	No	No	
MOD-021-0	R3.	The Load-Serving Entity, Transmission Planner, and Resource Planner shall each make documentation on the treatment of its DSM programs available to NERC on request (within 30 calendar days).						LSE				RP			TP		No	No	No	
MOD-024-1	R3.	The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting i gross and net Real Power generating capability per R1.			GO												No	No	No	
MOD-025-1	R3.	The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting i gross and net Reactive Power generating capability per R1.			GO												No	No	No	
PER-001-0	R1.	Each Transmission Operator and Balancing Authority shall provide operating personnel with the responsibility an authority to implement real-time actions to ensure the stable and reliable operation of the Bulk Electric System.	BA											TOP			No	No	No	
PER-002-0	R1.	Each Transmission Operator and Balancing Authority shall be staffed with adequately trained operating personne	BA											TOP			No	No	No	
PER-002-0	R2.	Each Transmission Operator and Balancing Authority shall have a training program for all operating personnel that are in:	BA											TOP			No	No	No	
PER-002-0	R2.1.	Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System.	BA											TOP			No	No	No	
PER-002-0	R2.2.	Positions directly responsible for complying with NERC standards.	BA											TOP			No	No	No	
PER-002-0	R3.	For personnel identified in Requirement R2, the Transmission Operator and Balancing Authority shall provide a training program meeting the following criteria:	BA											TOP			No	No	No	
PER-002-0	R3.1.	A set of training program objectives must be defined, based on NERC and Regional Reliability Organization standards, entity operating procedures, and applicable regulatory requirements. These objectives shall reference the knowledge and competencies needed to apply those standards, procedures, and requirements to normal, emergency, and restoration conditions for the Transmission Operator and Balancing Authority operating positions.	BA											TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
PER-002-0	R3.2.	The training program must include a plan for the initial and continuing training of Transmission Operator and Balancing Authority operating personnel. That plan shall address knowledge and competencies required for reliable system operations.	BA											TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PER-002-0	R3.3.	The training program must include training time for all Transmission Operator and Balancing Authority operating personnel to ensure their operating proficiency.	BA											TOP			No	No	No	
PER-002-0	R3.4.	Training staff must be identified, and the staff must be competent in both knowledge of system operations and instructional capabilities.	BA											TOP			No	No	No	
PER-002-0	R4.	For personnel identified in Requirement R2, each Transmission Operator and Balancing Authority shall provide its operating personnel at least five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel.	BA											TOP			No	No	No	
PER-003-0	R1.	Each Transmission Operator, Balancing Authority, and Reliability Coordinator shall staff all operating positions that meet both of the following criteria with personnel that are NERC-certified for the applicable functions:	BA								RC			TOP			No	No	No	
PER-003-0	R1.1.	Positions that have the primary responsibility, either directly or through communications with others, for the real-time operation of the interconnected Bulk Electric System.	BA								RC			TOP			No	No	No	
PER-003-0	R1.2.	Positions directly responsible for complying with NERC standards.	BA								RC			TOP			No	No	No	
PER-004-1	R1.	Each Reliability Coordinator shall be staffed with adequately trained and NERC-certified Reliability Coordinator operators, 24 hours per day, seven days per week.									RC						No	No	No	
PER-004-1	R2.	All Reliability Coordinator operating personnel shall each complete a minimum of five days per year of training and drills using realistic simulations of system emergencies, in addition to other training required to maintain qualified operating personnel.									RC						No	No	No	
PER-004-1	R3.	Reliability Coordinator operating personnel shall have a comprehensive understanding of the Reliability Coordinator Area and interactions with neighboring Reliability Coordinator Areas.									RC						No	No	No	
PER-004-1	R4.	Reliability Coordinator operating personnel shall have an extensive understanding of the Balancing Authorities, Transmission Operators, and Generation Operators within the Reliability Coordinator Area, including the operating staff, operating practices and procedures, restoration priorities and objectives, outage plans, equipment capabilities, and operational restrictions.									RC						No	No	No	
PER-004-1	R5.	Reliability Coordinator operating personnel shall place particular attention on SOLs and IROLs and inter-tie facility limits. The Reliability Coordinator shall ensure protocols are in place to allow Reliability Coordinator operating personnel to have the best available information at all times.									RC						No	No	No	
PRC-001-1	R1.	Each Transmission Operator, Balancing Authority, and Generator Operator shall be familiar with the purpose and limitations of protection system schemes applied in its area.	BA			GOP								TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R2.	Each Generator Operator and Transmission Operator shall notify reliability entities of relay or equipment failures as follows:				GOP								TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
PRC-001-1	R2.1.	If a protective relay or equipment failure reduces system reliability, the Generator Operator shall notify its Transmission Operator and Host Balancing Authority. The Generator Operator shall take corrective action as soon as possible.				GOP											**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R2.2.	If a protective relay or equipment failure reduces system reliability, the Transmission Operator shall notify its Reliability Coordinator and affected Transmission Operators and Balancing Authorities. The Transmission Operator shall take corrective action as soon as possible.												TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R3.	A Generator Operator or Transmission Operator shall coordinate new protective systems and changes as follows.				GOP								TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R3.1.	Each Generator Operator shall coordinate all new protective systems and all protective system changes with its Transmission Operator and Host Balancing Authority.				GOP											No	No	No	
PRC-001-1	R3.2.	Each Transmission Operator shall coordinate all new protective systems and all protective system changes with neighboring Transmission Operators and Balancing Authorities.												TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R4.	Each Transmission Operator shall coordinate protection systems on major transmission lines and interconnections with neighboring Generator Operators, Transmission Operators, and Balancing Authorities.												TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R5.	A Generator Operator or Transmission Operator shall coordinate changes in generation, transmission, load or operating conditions that could require changes in the protection systems of others:				GOP								TOP			**Yes protection systems for 100KV+ facilities must follow legacy rules**	**Yes protection systems for 100KV+ facilities must follow legacy rules**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R5.1.	Each Generator Operator shall notify its Transmission Operator in advance of changes in generation or operating conditions that could require changes in the Transmission Operator's protection systems.				GOP											No	No	No	
PRC-001-1	R5.2.	Each Transmission Operator shall notify neighboring Transmission Operators in advance of changes in generation, transmission, load, or operating conditions that could require changes in the other Transmission Operators' protection systems.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-001-1	R6.	Each Transmission Operator and Balancing Authority shall monitor the status of each Special Protection System i	BA											TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
PRC-004-1	R1.	The Transmission Owner and any Distribution Provider that owns a transmission Protection System shall each analyze its transmission Protection System Misoperations and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for Reliability Standard PRC-003 Requirement 1.											TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-004-1	R2.	The Generator Owner shall analyze its generator Protection System Misoperations, and shall develop and implement a Corrective Action Plan to avoid future Misoperations of a similar nature according to the Regional Reliability Organization's procedures developed for PRC-003 R1.			GO												No	No	No	
PRC-004-1	R3.	The Transmission Owner, any Distribution Provider that owns a transmission Protection System, and the Generator Owner shall each provide to its Regional Reliability Organization, documentation of its Misoperations analyses and Corrective Action Plans according to the Regional Reliability Organization's procedures developed for PRC-003 R1.		DP									TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-005-1	R1.	Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall have a Protection System maintenance and testir program for Protection Systems that affect the reliability of the BES. The program shall include:		DP	GO								TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-005-1	R1.1.	Maintenance and testing intervals and their basis.		DP	GO								TO				"	"	No	"
PRC-005-1	R1.2.	Summary of maintenance and testing procedures.		DP	GO								TO				"	"	No	"
PRC-005-1	R2.	Each Transmission Owner and any Distribution Provider that owns a transmission Protection System and each Generator Owner that owns a generation Protection System shall provide documentation of its Protection System maintenance and testing program and the implementation of that program to its Regional Reliability Organization on request (within 30 calendar days). The documentation of the program implementation shall include:		DP	GO								TO				**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Low to medium impact depending on what loca procedures may exist for these facilities
PRC-005-1	R1.2.	Evidence Protection System devices were maintained and tested within the defined intervals.		DP	GO								TO				"	"	No	"
PRC-005-1	R2.1.	Date each Protection System device was last tested/maintained.		DP	GO								TO				"	"	No	"
PRC-007-0	R1.	The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall ensure that its UFLS program is consistent with its Regional Reliability Organization's UFLS program requirements.		DP									TO				No	No	No	
PRC-007-0	R2.	The Transmission Owner, Transmission Operator, Distribution Provider, and Load-Serving Entity that owns or operates a UFLS program (as required by its Regional Reliability Organization) shall provide, and annually update, its underfrequency data as necessary for its Regional Reliability Organization to maintain and update a UFLSprogram database.		DP				LSE					TO	TOP			No	No	No	
PRC-007-0	R3.	The Transmission Owner and Distribution Provider that owns a UFLS program (as required by its Regional Reliability Organization) shall provide its documentation of that UFLS program to its Regional Reliability Organization on request (30 calendar days).		DP									TO				No	No	No	
PRC-008-0	R1.	The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall have a UFLS equipment maintenance and testing program in place. This UFLS equipment maintenance and testing program shall include UFLS equipment identification, the schedule for UFLS equipment testing, and the schedule for UFLS equipment maintenance.		DP									TO				No	No	No	
PRC-008-0	R2.	The Transmission Owner and Distribution Provider with a UFLS program (as required by its Regional Reliability Organization) shall implement its UFLS equipment maintenance and testing program and shall provide UFLS maintenance and testing program results to its Regional Reliability Organization and NERC on request (within 30 calendar days).		DP									TO				No	No	No	
PRC-009-0	R1.	The Transmission Owner, Transmission Operator, Load-Serving Entity, and Distribution Provider that owns or operates a UFLS program (as required by its Regional Reliability Organization) shall analyze and document its UFLS program performance in accordance with its Regional Reliability Organization's UFLS program. The analysis shall address the performance of UFLS equipment and program effectiveness following system events resulting in system frequency excursions below the initializing set points of the UFLS program. The analysis shall include, but not be limited to:		DP				LSE					TO	TOP			No	No	No	
PRC-009-0	R1.1.	A description of the event including initiating conditions.		DP				LSE					TO	TOP			No	No	No	
PRC-009-0	R1.2.	A review of the UFLS set points and tripping times.		DP				LSE					TO	TOP			No	No	No	

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PRC-009-0	R1.3.	A simulation of the event.		DP				LSE					TO	TOP			No	No	No	
PRC-009-0	R1.4.	A summary of the findings.		DP				LSE					TO	TOP			No	No	No	
PRC-009-0	R2.	The Transmission Owner, Transmission Operator, Load-Serving Entity, and Distribution Provider that owns or operates a UFLS program (as required by its Regional Reliability Organization) shall provide documentation of th analysis of the UFLS program to its Regional Reliability Organization and NERC on request 90 calendar days after the system event.		DP				LSE					TO	TOP			No	No	No	
PRC-010-0	R1.	The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall periodically (at least every five years or as required by changes in system conditions) conduct and document an assessment of the effectiveness of the UVLS program. This assessment shall be conducted with the associated Transmission Planner(s) and Planning Authority(ies).		DP				LSE					TO	TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	Minor impact
PRC-010-0	R1.1.	This assessment shall include, but is not limited to:		DP				LSE					TO	TOP			No	No	No	
PRC-010-0	R1.1.1.	Coordination of the UVLS programs with other protection and control systems in the Region and with other Regional Reliability Organizations, as appropriate.		DP				LSE					TO	TOP			No	No	No	
PRC-010-0	R1.1.2.	Simulations that demonstrate that the UVLS programs performance is consistent with Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0 and TPL-004-0.		DP				LSE					TO	TOP			No	No	No	
PRC-010-0	R1.1.3.	A review of the voltage set points and timing.		DP				LSE					TO	TOP			No	No	No	
PRC-010-0	R2.	The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall provide documentation of its current UVLS program assessment to its Regional Reliability Organization and NERC on request (30 calendar days).		DP				LSE					TO	TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact
PRC-011-0	R1.	The Transmission Owner and Distribution Provider that owns a UVLS system shall have a UVLS equipment maintenance and testing program in place. This program shall include:		DP									TO				No	No	No	
PRC-011-0	R1.1.	The UVLS system identification which shall include but is not limited to:		DP									TO				No	No	No	
PRC-011-0	R1.1.1.	Relays.		DP									TO				No	No	No	
PRC-011-0	R1.1.2.	Instrument transformers.		DP									TO				No	No	No	
PRC-011-0	R1.1.3.	Communications systems, where appropriate.		DP									TO				No	No	No	
PRC-011-0	R1.1.4.	Batteries.		DP									TO				No	No	No	
PRC-011-0	R1.2.	Documentation of maintenance and testing intervals and their basis.		DP									TO				No	No	No	
PRC-011-0	R1.3.	Summary of testing procedure.		DP									TO				No	No	No	
PRC-011-0	R1.4.	Schedule for system testing.		DP									TO				No	No	No	
PRC-011-0	R1.5.	Schedule for system maintenance.		DP									TO				No	No	No	
PRC-011-0	R1.6.	Date last tested/maintained.		DP									TO				No	No	No	
PRC-011-0	R2.	The Transmission Owner and Distribution Provider that owns a UVLS system shall provide documentation of its UVLS equipment maintenance and testing program and the implementation of that UVLS equipment maintenance and testing program to its Regional Reliability Organization and NERC on request (within 30 calendar days).		DP									TO				No	No	No	
PRC-015-0	R1.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall maintain a list of and provide data for existing and proposed SPSs as specified in Reliability Standard PRC-013-0_R 1.		DP	GO								TO				No	No	No	
PRC-015-0	R2.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have evidence it reviewed new or functionally modified SPSs in accordance with the Regional Reliability Organization's procedur as defined in Reliability Standard PRC-012-0_R1 prior to being placed in service.		DP	GO								TO				No	No	No	
PRC-015-0	R3.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of SPS data and the results of studies that show compliance of new or functionally modified SPSs with NERC Reliability Standards and Regional Reliability Organization criteria to affected Regional Reliability Organizations and NERC on request (within 30 calendar days).		DP	GO								TO				No	No	No	
PRC-016-0	R1.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall analyze its SPS operations and maintain a record of all misoperations in accordance with the Regional SPS review procedure specified in Reliability Standard PRC-012-0_R 1.		DP	GO								TO				No	No	No	
PRC-016-0	R2.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall take corrective actions to avoid future misoperations.		DP	GO								TO				No	No	No	
PRC-016-0	R3.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the misoperation analyses and the corrective action plans to its Regional Reliability Organization and NERC on request (within 90 calendar days).		DP	GO								TO				No	No	No	

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PRC-017-0	R1.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall have a system maintenance and testing program(s) in place. The program(s) shall include:		DP	GO								TO				No	No	No	
PRC-017-0	R1.1.	SPS identification shall include but is not limited to:		DP	GO								TO				No	No	No	
PRC-017-0	R1.1.1.	Relays.		DP	GO								TO				No	No	No	
PRC-017-0	R1.1.2.	Instrument transformers.		DP	GO								TO				No	No	No	
PRC-017-0	R1.1.3.	Communications systems, where appropriate.		DP	GO								TO				No	No	No	
PRC-017-0	R1.1.4.	Batteries.		DP	GO								TO				No	No	No	
PRC-017-0	R1.2.	Documentation of maintenance and testing intervals and their basis.		DP	GO								TO				No	No	No	
PRC-017-0	R1.3.	Summary of testing procedure.		DP	GO								TO				No	No	No	
PRC-017-0	R1.4.	Schedule for system testing.		DP	GO								TO				No	No	No	
PRC-017-0	R1.5.	Schedule for system maintenance.		DP	GO								TO				No	No	No	
PRC-017-0	R1.6.	Date last tested/maintained.		DP	GO								TO				No	No	No	
PRC-017-0	R2.	The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the program and its implementation to the appropriate Regional Reliability Organizations and NERC on request (within 30 calendar days).		DP	GO								TO				No	No	No	
PRC-018-1	R1.	Each Transmission Owner and Generator Owner required to install DMEs by its Regional Reliability Organization (reliability standard PRC-002 Requirements 1-3) shall have DMEs installed that meet the following requirements:			GO								TO				No	No	No	
PRC-018-1	R1.1.	Internal Clocks in DME devices shall be synchronized to within 2 milliseconds or less of Universal Coordinated Time scale (UTC)			GO								TO				No	No	No	
PRC-018-1	R1.2.	Recorded data from each Disturbance shall be retrievable for ten calendar days..			GO								TO				No	No	No	
PRC-018-1	R2.	The Transmission Owner and Generator Owner shall each install DMEs in accordance with its Regional Reliabili Organization's installation requirements (reliability standard PRC-002 Requirements 1 through 3).			GO								TO				No	No	No	
PRC-018-1	R3.	The Transmission Owner and Generator Owner shall each maintain, and report to its Regional Reliability Organization on request, the following data on the DMEs installed to meet that region's installation requirements (reliability standard PRC-002 Requirements1.1, 2.1 and 3.1):			GO								TO				No	No	No	
PRC-018-1	R3.1.	Type of DME (sequence of event recorder, fault recorder, or dynamic disturbance recorder).			GO								TO				No	No	No	
PRC-018-1	R3.2.	Make and model of equipment.			GO								TO				No	No	No	
PRC-018-1	R3.3.	Installation location.			GO								TO				No	No	No	
PRC-018-1	R3.4.	Operational status.			GO								TO				No	No	No	
PRC-018-1	R3.5.	Date last tested.			GO								TO				No	No	No	
PRC-018-1	R3.6.	Monitored elements, such as transmission circuit, bus section, etc.			GO								TO				No	No	No	
PRC-018-1	R3.7.	Monitored devices, such as circuit breaker, disconnect status, alarms, etc.			GO								TO				No	No	No	
PRC-018-1	R3.8.	Monitored electrical quantities, such as voltage, current, etc.			GO								TO				No	No	No	
PRC-018-1	R4.	The Transmission Owner and Generator Owner shall each provide Disturbance data (recorded by DMEs) in accordance with its Regional Reliability Organization's requirements (reliability standard PRC-002 Requirement 4).			GO								TO				No	No	No	
PRC-018-1	R5.	The Transmission Owner and Generator Owner shall each archive all data recorded by DMEs for Regional Reliability Organization-identified events for at least three years.			GO								TO				No	No	No	
PRC-018-1	R6.	Each Transmission Owner and Generator Owner that is required by its Regional Reliability Organization to have DMEs shall have a maintenance and testing program for those DMEs that includes:			GO								TO				No	No	No	
PRC-018-1	R6.1.	Maintenance and testing intervals and their basis.			GO								TO				No	No	No	
PRC-018-1	R6.2.	Summary of maintenance and testing procedures.			GO								TO				No	No	No	
PRC-021-1	R1.	Each Transmission Owner and Distribution Provider that owns a UVLS program to mitigate the risk of voltage collapse or voltage instability in the BES shall annually update its UVLS data to support the Regional UVLS program database. The following data shall be provided to the Regional Reliability Organization for each installed UVLS system:		DP									TO				No	No	No	
PRC-021-1	R1.1.	Size and location of customer load, or percent of connected load, to be interrupted.		DP									TO				No	No	No	
PRC-021-1	R1.2.	Corresponding voltage set points and overall scheme clearing times.		DP									TO				No	No	No	
PRC-021-1	R1.3.	Time delay from initiation to trip signal.		DP									TO				No	No	No	
PRC-021-1	R1.4.	Breaker operating times.		DP									TO				No	No	No	
PRC-021-1	R1.5.	Any other schemes that are part of or impact the UVLS programs such as related generation protection, islanding schemes, automatic load restoration schemes, UFLS and Special Protection Systems.		DP									TO				No	No	No	
PRC-021-1	R2.	Each Transmission Owner and Distribution Provider that owns a UVLS program shall provide its UVLS program data to the Regional Reliability Organization within 30 calendar days of a request.		DP									TO				No	No	No	

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PRC-022-1	R1.	Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program to mitigate the risk of voltage collapse or voltage instability in the BES shall analyze and document all UVLS operations and Misoperations. The analysis shall include:		DP				LSE						TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact
PRC-022-1	R1.1.	A description of the event including initiating conditions.		DP				LSE						TOP			**No**	**No**	**No**	
PRC-022-1	R1.2.	A review of the UVLS set points and tripping times.		DP				LSE						TOP			No	No	No	
PRC-022-1	R1.3.	A simulation of the event, if deemed appropriate by the Regional Reliability Organization. For most events, analysis of sequence of events may be sufficient and dynamic simulations may not be needed.		DP				LSE						TOP			No	No	No	
PRC-022-1	R1.4.	A summary of the findings.		DP				LSE						TOP			No	No	No	
PRC-022-1	R1.5.	For any Misoperation, a Corrective Action Plan to avoid future Misoperations of a similar nature.		DP				LSE						TOP			No	No	No	
PRC-022-1	R2.	Each Transmission Operator, Load-Serving Entity, and Distribution Provider that operates a UVLS program shall provide documentation of its analysis of UVLS program performance to its Regional Reliability Organization within 90 calendar days of a request.		DP				LSE						TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Minor impact
TOP-001-1	R1.	Each Transmission Operator shall have the responsibility and clear decision-making authority to take whatever actions are needed to ensure the reliability of its area and shall exercise specific authority to alleviate operating emergencies.												TOP			**Yes Authority documents must address 100+ KV facilities**	**Yes Authority documents must address 100+ KV facilities**	No	Minor impact
TOP-001-1	R2.	Each Transmission Operator shall take immediate actions to alleviate operating emergencies including curtailing transmission service or energy schedules, operating equipment (e.g., generators, phase shifters, breakers), shedding firm load, etc.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact
TOP-001-1	R3.	Each Transmission Operator, Balancing Authority, and Generator Operator shall comply with reliability directives issued by the Reliability Coordinator, and each Balancing Authority and Generator Operator shall comply with reliability directives issued by the Transmission Operator, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances the Transmission Operator, Balancing Authority or Generator Operator shall immediately inform the Reliability Coordinator or Transmission Operator of the inability to perform the directive so that the Reliability Coordinator or Transmission Operator can implement alternate remedial actions.	BA			GOP								TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact
TOP-001-1	R4.	Each Distribution Provider and Load-Serving Entity shall comply with all reliability directives issued by the Transmission Operator, including shedding firm load, unless such actions would violate safety, equipment, regulatory or statutory requirements. Under these circumstances, the Distribution Provider or Load-Serving Entity shall immediately inform the Transmission Operator of the inability to perform the directive so that the Transmission Operator can implement alternate remedial actions.		DP				LSE									No	No	No	
TOP-001-1	R5.	Each Transmission Operator shall inform its Reliability Coordinator and any other potentially affected Transmission Operators of real-time or anticipated emergency conditions, and take actions to avoid, when possibl or mitigate the emergency.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact
TOP-001-1	R6.	Each Transmission Operator, Balancing Authority, and Generator Operator shall render all available emergency assistance to others as requested, provided that the requesting entity has implemented its comparable emergency procedures, unless such actions would violate safety, equipment, or regulatory or statutory requirements.	BA			GOP								TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-001-1	R7.	Each Transmission Operator and Generator Operator shall not remove Bulk Electric System facilities from service if removing those facilities would burden neighboring systems unless:				GOP								TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	Minor impact
TOP-001-1	R7.1.	For a generator outage, the Generator Operator shall notify and coordinate with the Transmission Operator. The Transmission Operator shall notify the Reliability Coordinator and other affected Transmission Operators, and coordinate the impact of removing the Bulk Electric System facility.				GOP								TOP			No	No	No	
TOP-001-1	R7.2.	For a transmission facility, the Transmission Operator shall notify and coordinate with its Reliability Coordinator. The Transmission Operator shall notify other affected Transmission Operators, and coordinate the impact of removing the Bulk Electric System facility.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact
TOP-001-1	R7.3.	When time does not permit such notifications and coordination, or when immediate action is required to prevent a hazard to the public, lengthy customer service interruption, or damage to facilities, the Generator Operator shall notify the Transmission Operator, and the Transmission Operator shall notify its Reliability Coordinator and adjacent Transmission Operators, at the earliest possible time.				GOP								TOP			No	No	No	
TOP-001-1	R8.	During a system emergency, the Balancing Authority and Transmission Operator shall immediately take action to restore the Real and Reactive Power Balance. If the Balancing Authority or Transmission Operator is unable to restore Real and Reactive Power Balance it shall request emergency assistance from the Reliability Coordinator. corrective action or emergency assistance is not adequate to mitigate the Real and Reactive Power Balance, then the Reliability Coordinator, Balancing Authority, and Transmission Operator shall implement firm load shedding,	BA								RC			TOP			No	No	No	
TOP-002-2	R1.	Each Balancing Authority and Transmission Operator shall maintain a set of current plans that are designed to evaluate options and set procedures for reliable operation through a reasonable future time period. In addition, each Balancing Authority and Transmission Operator shall be responsible for using available personnel and syste equipment to implement these plans to ensure that interconnected system reliability will be maintained.	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R2.	Each Balancing Authority and Transmission Operator shall ensure its operating personnel participate in the syster planning and design study processes, so that these studies contain the operating personnel perspective and system operating personnel are aware of the planning purpose.	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R3.	Each Load-Serving Entity and Generator Operator shall coordinate (where confidentiality agreements allow) its current-day, next-day, and seasonal operations with its Host Balancing Authority and Transmission Service Provider. Each Balancing Authority and Transmission Service Provider shall coordinate its current-day, next-day, and seasonal operations with its Transmission Operator.	BA			GOP		LSE								TSP	No	No	No	
TOP-002-2	R4.	Each Balancing Authority and Transmission Operator shall coordinate (where confidentiality agreements allow) its current-day, next-day, and seasonal planning and operations with neighboring Balancing Authorities and Transmission Operators and with its Reliability Coordinator, so that normal Interconnection operation will procee in an orderly and consistent manner.	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R5.	Each Balancing Authority and Transmission Operator shall plan to meet scheduled system configuration, generation dispatch, interchange scheduling and demand patterns.	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R6.	Each Balancing Authority and Transmission Operator shall plan to meet unscheduled changes in system configuration and generation dispatch (at a minimum N-1 Contingency planning) in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements.	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R7.	Each Balancing Authority shall plan to meet capacity and energy reserve requirements, including the deliverability/capability for any single Contingency.	BA														No	No	No	
TOP-002-2	R8.	Each Balancing Authority shall plan to meet voltage and/or reactive limits, including the deliverability/capability for any single contingency.	BA														No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-002-2	R9.	Each Balancing Authority shall plan to meet Interchange Schedules and Ramps.	BA														No	No	No	
TOP-002-2	R10.	Each Balancing Authority and Transmission Operator shall plan to meet all System Operating Limits (SOLs) and Interconnection Reliability Operating Limits (IROLs).	BA											TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R11.	The Transmission Operator shall perform seasonal, next-day, and current-day Bulk Electric System studies to determine SOLs. Neighboring Transmission Operators shall utilize identical SOLs for common facilities. The Transmission Operator shall update these Bulk Electric System studies as necessary to reflect current system conditions; and shall make the results of Bulk Electric System studies available to the Transmission Operators, Balancing Authorities (subject confidentiality requirements), and to its Reliability Coordinator.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R12.	The Transmission Service Provider shall include known SOLs or IROLs within its area and neighboring areas in the determination of transfer capabilities, in accordance with filed tariffs and/or regional Total Transfer Capability and Available Transfer Capability calculation processes.														TSP	**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R13.	At the request of the Balancing Authority or Transmission Operator, a Generator Operator shall perform generating real and reactive capability verification that shall include, among other variables, weather, ambient air and water conditions, and fuel quality and quantity, and provide the results to the Balancing Authority or Transmission Operator operating personnel as requested.				GOP											No	No	No	
TOP-002-2	R14.	Generator Operators shall, without any intentional time delay, notify their Balancing Authority and Transmission Operator of changes in capabilities and characteristics including but not limited to:				GOP											No	No	No	
TOP-002-2	R14.1.	Changes in real and reactive output capabilities.(Retired August 1, 2007)				GOP											No	No	No	
TOP-002-2	R14.2.	Automatic Voltage Regulator status and mode setting.(Retired August 1, 2007)				GOP											No	No	No	
TOP-002-2	R15.	Generation Operators shall, at the request of the Balancing Authority or Transmission Operator, provide a forecast of expected real power output to assist in operations planning (e.g., a seven-day forecast of real output).				GOP											No	No	No	
TOP-002-2	R16.	Subject to standards of conduct and confidentiality agreements, Transmission Operators shall, without any intentional time delay, notify their Reliability Coordinator and Balancing Authority of changes in capabilities and characteristics including but not limited to:												TOP			No	No	No	
TOP-002-2	R16.1.	Changes in transmission facility status.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R16.2.	Changes in transmission facility rating.												TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R17.	Balancing Authorities and Transmission Operators shall, without any intentional time delay, communicate the information described in the requirements R1 to R16 above to their Reliability Coordinator.	BA											TOP			No	No	No	
TOP-002-2	R18.	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.	BA			GOP		LSE						TOP			**Yes Procedures may nave to address 100KV+ facilities**	**Yes Procedures may nave to address 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-002-2	R19.	Each Balancing Authority and Transmission Operator shall maintain accurate computer models utilized for analyzing and planning system operations.	BA											TOP			**Yes Models must include 100+ KV facilities as BES facilities**	**Yes Models must include 100+ KV facilities as BES facilities**	**Yes Models must include 100+ KV facilities as BES facilities**	Minor impact similar approach should apply to 100KV+ facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-003-0	R1.	Generator Operators and Transmission Operators shall provide planned outage information.				GOP								TOP			**Yes Outage procedures must address 100+ KV facilities**	**Yes Outage procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-003-0	R1.1.	Each Generator Operator shall provide outage information daily to its Transmission Operator for scheduled generator outages planned for the next day (any foreseen outage of a generator greater than 50 MW). The Transmission Operator shall establish the outage reporting requirements.				GOP								TOP			No	No	No	
TOP-003-0	R1.2.	Each Transmission Operator shall provide outage information daily to its Reliability Coordinator, and to affected Balancing Authorities and Transmission Operators for scheduled generator and bulk transmission outages planned for the next day (any foreseen outage of a transmission line or transformer greater than 100 kV or generator greate than 50 MW) that may collectively cause or contribute to an SOL or IROL violation or a regional operating area limitation. The Reliability Coordinator shall establish the outage reporting requirements.									RC			TOP			**Yes Outage procedures must address 100+ KV facilities**	**Yes Outage procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-003-0	R1.3.	Such information shall be available by 1200 Central Standard Time for the Eastern Interconnection and 1200 Pacific Standard Time for the Western Interconnection.									RC			TOP			No	No	No	
TOP-003-0	R2.	Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of system voltage regulating equipment, such as automatic voltage regulators on generators, supplementa excitation control, synchronous condensers, shunt and series capacitors, reactors, etc., among affected Balancing Authorities and Transmission Operators as required.	BA			GOP								TOP			**Yes Outage procedures must address 100+ KV facilities**	**Yes Outage procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-003-0	R3.	Each Transmission Operator, Balancing Authority, and Generator Operator shall plan and coordinate scheduled outages of telemetering and control equipment and associated communication channels between the affected areas.	BA			GOP								TOP			No	No	No	
TOP-003-0	R4.	Each Reliability Coordinator shall resolve any scheduling of potential reliability conflicts.									RC						No	No	No	
TOP-004-1	R1.	Each Transmission Operator shall operate within the Interconnection Reliability Operating Limits (IROLs) and System Operating Limits (SOLs).												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R2.	Each Transmission Operator shall operate so that instability, uncontrolled separation, or cascading outages will no occur as a result of the most severe single contingency.												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R3.	Each Transmission Operator shall, when practical, operate to protect against instability, uncontrolled separation, or cascading outages resulting from multiple outages, as specified by Regional Reliability Organization policy.												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R4.	If a Transmission Operator enters an unknown operating state (i.e., any state for which valid operating limits have not been determined), it will be considered to be in an emergency and shall restore operations to respect proven reliable power system limits within 30 minutes.												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R5.	Each Transmission Operator shall make every effort to remain connected to the Interconnection. If the Transmission Operator determines that by remaining interconnected, it is in imminent danger of violating an IROL or SOL, the Transmission Operator may take such actions, as it deems necessary, to protect its area.												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R6.	Transmission Operators, individually and jointly with other Transmission Operators, shall develop, maintain, and implement formal policies and procedures to provide for transmission reliability. These policies and procedures shall address the execution and coordination of activities that impact inter- and intra-Regional reliability, including:												TOP			**Yes Operating procedures must address 100+ KV facilities**	**Yes Operating procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-004-1	R6.1.	Equipment ratings.												TOP			"	"	No	"
TOP-004-1	R6.2.	Monitoring and controlling voltage levels and real and reactive power flows.												TOP			"	"	No	"

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-004-1	R6.3.	Switching transmission elements.												TOP			"	"	No	"
TOP-004-1	R6.4.	Planned outages of transmission elements.												TOP			"	"	No	"
TOP-004-1	R6.5.	Development of IROLs and SOLs.												TOP			"	"	No	"
TOP-004-1	R6.6.	Responding to IROL and SOL violations.												TOP			"	"	No	"
TOP-005-1	R1.	Each Transmission Operator and Balancing Authority shall provide its Reliability Coordinator with the operating data that the Reliability Coordinator requires to perform operational reliability assessments and to coordinate reliable operations within the Reliability Coordinator Area.	BA											TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-005-1	R1.1.	Each Reliability Coordinator shall identify the data requirements from the list in Attachment 1-TOP-005-0 "Electric System Reliability Data" and any additional operating information requirements relating to operation of the bulk power system within the Reliability Coordinator Area.									RC						**Yes RC may designate additional 100+ KV facilities**	**Yes RC may designate additional 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-005-1	R2.	As a condition of receiving data from the Interregional Security Network (ISN), each ISN data recipient shall sign the NERC Confidentiality Agreement for "Electric System Reliability Data."															No	No	No	
TOP-005-1	R3.	Upon request, each Balancing Authority and Transmission Operator shall provide to other Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability, the operating data that are necessary to allow these Balancing Authorities and Transmission Operators to perform operational reliability assessments and to coordinate reliable operations. Balancing Authorities and Transmission Operators shall provide the types of data as listed in Attachment 1-TOP-005-0 "Electric System Reliability Data," unless otherwise agreed to by the Balancing Authorities and Transmission Operators with immediate responsibility for operational reliability.									RC						**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-005-1	R4.	Each Purchasing-Selling Entity shall provide information as requested by its Host Balancing Authorities and Transmission Operators to enable them to conduct operational reliability assessments and coordinate reliable operations.	BA											TOP			No	No	No	
TOP-006-1	R1.	Each Transmission Operator and Balancing Authority shall know the status of all generation and transmission resources available for use.	BA											TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-006-1	R1.1.	Each Generator Operator shall inform its Host Balancing Authority and the Transmission Operator of all generation resources available for use.				GOP											No	No	No	
TOP-006-1	R1.2.	Each Transmission Operator and Balancing Authority shall inform the Reliability Coordinator and other affected Balancing Authorities and Transmission Operators of all generation and transmission resources available for use.	BA											TOP			**Yes Procedures must address 100+ KV facilities**	**Yes Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-006-1	R2.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor applicable transmission line status, real and reactive power flows, voltage, load-tap-changer settings, and status of rotating and static reactive resources.	BA								RC			TOP			**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-006-1	R3.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide appropriate technica information concerning protective relays to their operating personnel.	BA								RC			TOP			**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-006-1	R4.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have information, including weather forecasts and past load patterns, available to predict the system's near-term load pattern.	BA								RC			TOP			No	No	No	
TOP-006-1	R5.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use monitoring equipment to bring to the attention of operating personnel important deviations in operating conditions and to indicate, if appropriate, the need for corrective action.	BA								RC			TOP			**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-006-1	R6.	Each Balancing Authority and Transmission Operator shall use sufficient metering of suitable range, accuracy and sampling rate (if applicable) to ensure accurate and timely monitoring of operating conditions under both normal and emergency situations.	BA											TOP			**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	**Yes PJM must monitor additional facilities Procedures must address 100+ KV facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-006-1	R7.	Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.	BA								RC			TOP			No	No	No	
TOP-007-0	R1.	A Transmission Operator shall inform its Reliability Coordinator when an IROL or SOL has been exceeded and the actions being taken to return the system to within limits.												TOP			**Yes PJM must monitor additional 100KV+ facilities**	**Yes PJM must monitor additional 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-007-0	R2.	Following a Contingency or other event that results in an IROL violation, the Transmission Operator shall return its transmission system to within IROL as soon as possible, but not longer than 30 minutes.												TOP			**Yes PJM must monitor additional 100KV+ facilities**	**Yes PJM must monitor additional 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-007-0	R3.	A Transmission Operator shall take all appropriate actions up to and including shedding firm load, or directing the shedding of firm load, in order to comply with Requirement R 2.												TOP			No	No	No	
TOP-007-0	R4.	The Reliability Coordinator shall evaluate actions taken to address an IROL or SOL violation and, if the actions taken are not appropriate or sufficient, direct actions required to return the system to within limits.									RC						No	No	No	
TOP-008-1	R1.	The Transmission Operator experiencing or contributing to an IROL or SOL violation shall take immediate steps to relieve the condition, which may include shedding firm load.												TOP			**Yes PJM must monitor additional 100KV+ facilities**	**Yes PJM must monitor additional 100KV+ facilities**	No	Minor impact similar approach should apply to 100KV+ facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TOP-008-1	R2.	Each Transmission Operator shall operate to prevent the likelihood that a disturbance, action, or inaction will result in an IROL or SOL violation in its area or another area of the Interconnection. In instances where there is a difference in derived operating limits, the Transmission Operator shall always operate the Bulk Electric System to the most limiting parameter.												TOP			Yes PJM must monitor additional 100KV+ facilities	Yes PJM must monitor additional 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-008-1	R3.	The Transmission Operator shall disconnect the affected facility if the overload on a transmission facility or abnormal voltage or reactive condition persists and equipment is endangered. In doing so, the Transmission Operator shall notify its Reliability Coordinator and all neighboring Transmission Operators impacted by the disconnection prior to switching, if time permits, otherwise, immediately thereafter.												TOP			Yes PJM must monitor additional 100KV+ facilities	Yes PJM must monitor additional 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TOP-008-1	R4.	The Transmission Operator shall have sufficient information and analysis tools to determine the cause(s) of SOL violations. This analysis shall be conducted in all operating timeframes. The Transmission Operator shall use the results of these analyses to immediately mitigate the SOL violation.												TOP			Yes PJM must monitor additional 100KV+ facilities	Yes PJM must monitor additional 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TPL-001-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is planned such that, with all transmission facilities in service and with normal (pre-contingency) operating procedures in effect, the Network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services at all Demand levels over the range of forecast system demands, under the conditions defined in Category A of Table I. To be considered valid, the Planning Authority and Transmission Planner assessments shall:							PA						TP		Yes Procedures must address 100KV+ facilities	Yes Procedures must address 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TPL-001-0	R1.1.	Be made annually.							PA						TP		"	"	No	
TPL-001-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.							PA						TP		"	"	No	"
TPL-001-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category A of Table 1 (no contingencies). The specific elements selected (from each of the following categories) shall be acceptable to the associated Regional Reliability Organization(s).							PA						TP		"	"	No	"
TPL-001-0	R1.3.1.	Cover critical system conditions and study years as deemed appropriate by the entity performing the study.							PA						TP		"	"	No	"
TPL-001-0	R1.3.2.	Be conducted annually unless changes to system conditions do not warrant such analyses.							PA						TP		"	"	No	"
TPL-001-0	R1.3.3.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.							PA						TP		"	"	No	"
TPL-001-0	R1.3.4.	Have established normal (pre-contingency) operating procedures in place.							PA						TP		"	"	No	"
TPL-001-0	R1.3.5.	Have all projected firm transfers modeled.							PA						TP		"	"	No	"
TPL-001-0	R1.3.6.	Be performed for selected demand levels over the range of forecast system demands.							PA						TP		"	"	No	"
TPL-001-0	R1.3.7.	Demonstrate that system performance meets Table 1 for Category A (no contingencies).							PA						TP		"	"	No	"
TPL-001-0	R1.3.8.	Include existing and planned facilities.							PA						TP		"	"	No	"
TPL-001-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.							PA						TP		"	"	No	"
TPL-001-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category A.							PA						TP		"	"	No	"
TPL-001-0	R2.	When system simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-001-0_R1, the Planning Authority and Transmission Planner shall each:							PA						TP		Yes Procedures must address 100KV+ facilities	Yes Procedures must address 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TPL-001-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon.							PA						TP		"	"	No	"
TPL-001-0	R2.1.1.	Including a schedule for implementation.							PA						TP		"	"	No	"

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TPL-001-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.							PA						TP		"	"	No	"
TPL-001-0	R2.1.3.	Consider lead times necessary to implement plans.							PA						TP		"	"	No	"
TPL-001-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.							PA						TP		"	"	No	"
TPL-001-0	R3.	The Planning Authority and Transmission Planner shall each document the results of these reliability assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.							PA						TP		Yes Procedures must address 100KV+ facilities	Yes Procedures must address 100KV+ facilities	No	Minor impact similar approach should apply to 100KV+ facilities
TPL-002-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is planned such that the Network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services, at all demand levels over the range of forecast system demands, under the contingency conditions as defined in Category B of Table I. To be valid, the Planning Authority and Transmission Planner assessments shall:							PA						TP		Yes Procedures must address 100KV+ facilities	Yes Procedures must address 100KV+ facilities	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-002-0	R1.1.	Be made annually.							PA						TP		"	"	No	"
TPL-002-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.							PA						TP		"	"	No	"
TPL-002-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category B of Table 1 (single contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).							PA						TP		"	"	No	"
TPL-002-0	R1.3.1.	Be performed and evaluated only for those Category B contingencies that would produce the more severe System results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.							PA						TP		"	"	No	"
TPL-002-0	R1.3.10.	Include the effects of existing and planned protection systems, including any backup or redundant systems.							PA						TP		"	"	No	"
TPL-002-0	R1.3.11.	Include the effects of existing and planned control devices.							PA						TP		"	"	No	"
TPL-002-0	R1.3.12.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems their components) at those demand levels for which planned (including maintenance) outages are performed.							PA						TP		"	"	No	"
TPL-002-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.							PA						TP		"	"	No	"
TPL-002-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.							PA						TP		"	"	No	"
TPL-002-0	R1.3.4.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.							PA						TP		"	"	No	"
TPL-002-0	R1.3.5.	Have all projected firm transfers modeled.							PA						TP		"	"	No	"
TPL-002-0	R1.3.6.	Be performed and evaluated for selected demand levels over the range of forecast system Demands.							PA						TP		"	"	No	"
TPL-002-0	R1.3.7.	Demonstrate that system performance meets Category B contingencies.							PA						TP		"	"	No	"
TPL-002-0	R1.3.8.	Include existing and planned facilities.							PA						TP		"	"	No	"
TPL-002-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.							PA						TP		"	"	No	"
TPL-002-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category B of Table I.							PA						TP		"	"	No	"
TPL-002-0	R1.5.	Consider all contingencies applicable to Category B.							PA						TP		"	"	No	"
TPL-002-0	R2.	When System simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-002-0_R1, the Planning Authority and Transmission Planner shall each:							PA						TP		Yes Procedures must address 100KV+ facilities	Yes Procedures must address 100KV+ facilities	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-002-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:							PA						TP		"	"	No	"
TPL-002-0	R2.1.1.	Including a schedule for implementation.							PA						TP		"	"	No	"
TPL-002-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.							PA						TP		"	"	No	"
TPL-002-0	R2.1.3.	Consider lead times necessary to implement plans.							PA						TP		"	"	No	"
TPL-002-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.							PA						TP		"	"	No	"

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TPL-002-0	R3.	The Planning Authority and Transmission Planner shall each document the results of its Reliability Assessments and corrective plans and shall annually provide the results to its respective Regional Reliability Organization(s), as required by the Regional Reliability Organization.							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-003-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission systems is planned such that the network can be operated to supply projected customer demands and projected Firm (non-recallable reserved) Transmission Services, at all demand Levels over the range of forecast system demands, under the contingency conditions as defined in Category C of Table I (attached). The controlled interruption of customer Demand, the planned removal of generators, or the Curtailment of firm (non-recallable reserved) power transfers may be necessary to meet this standard. To be valid, the Planning Authority and Transmission Planner assessments shall:							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-003-0	R1.1.	Be made annually.							PA						TP		"	"	No	"
TPL-003-0	R1.2.	Be conducted for near-term (years one through five) and longer-term (years six through ten) planning horizons.							PA						TP		"	"	No	"
TPL-003-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category C of Table 1 (multiple contingencies). The specific elements selected (from each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).							PA						TP		"	"	No	"
TPL-003-0	R1.3.1.	Be performed and evaluated only for those Category C contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.							PA						TP		"	"	No	"
TPL-003-0	R1.3.10.	Include the effects of existing and planned protection systems, including any backup or redundant systems.							PA						TP		"	"	No	"
TPL-003-0	R1.3.11.	Include the effects of existing and planned control devices.							PA						TP		"	"	No	"
TPL-003-0	R1.3.12.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems their components) at those Demand levels for which planned (including maintenance) outages are performed.							PA						TP		"	"	No	"
TPL-003-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.							PA						TP		"	"	No	"
TPL-003-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.							PA						TP		"	"	No	"
TPL-003-0	R1.3.4.	Be conducted beyond the five-year horizon only as needed to address identified marginal conditions that may have longer lead-time solutions.							PA						TP		"	"	No	"
TPL-003-0	R1.3.5.	Have all projected firm transfers modeled.							PA						TP		"	"	No	"
TPL-003-0	R1.3.6.	Be performed and evaluated for selected demand levels over the range of forecast system demands.							PA						TP		"	"	No	"
TPL-003-0	R1.3.7.	Demonstrate that System performance meets Table 1 for Category C contingencies.							PA						TP		"	"	No	"
TPL-003-0	R1.3.8.	Include existing and planned facilities.							PA						TP		"	"	No	"
TPL-003-0	R1.3.9.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet System performance.							PA						TP		"	"	No	"
TPL-003-0	R1.4.	Address any planned upgrades needed to meet the performance requirements of Category C.							PA						TP		"	"	No	"
TPL-003-0	R1.5.	Consider all contingencies applicable to Category C.							PA						TP		"	"	No	"
TPL-003-0	R2.	When system simulations indicate an inability of the systems to respond as prescribed in Reliability Standard TPL-003-0_R1, the Planning Authority and Transmission Planner shall each:							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-003-0	R2.1.	Provide a written summary of its plans to achieve the required system performance as described above throughout the planning horizon:							PA						TP		"	"	No	"
TPL-003-0	R2.1.1.	Including a schedule for implementation.							PA						TP		"	"	No	"
TPL-003-0	R2.1.2.	Including a discussion of expected required in-service dates of facilities.							PA						TP		"	"	No	"
TPL-003-0	R2.1.3.	Consider lead times necessary to implement plans.							PA						TP		"	"	No	"
TPL-003-0	R2.2.	Review, in subsequent annual assessments, (where sufficient lead time exists), the continuing need for identified system facilities. Detailed implementation plans are not needed.							PA						TP		"	"	No	"
TPL-003-0	R3.	The Planning Authority and Transmission Planner shall each document the results of these Reliability Assessments and corrective plans and shall annually provide these to its respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
TPL-004-0	R1.	The Planning Authority and Transmission Planner shall each demonstrate through a valid assessment that its portion of the interconnected transmission system is evaluated for the risks and consequences of a number of each of the extreme contingencies that are listed under Category D of Table I. To be valid, the Planning Authority's and Transmission Planner's assessment shall:							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
TPL-004-0	R1.1.	Be made annually.							PA						TP		"	"	No	"
TPL-004-0	R1.2.	Be conducted for near-term (years one through five).							PA						TP		"	"	No	"
TPL-004-0	R1.3.	Be supported by a current or past study and/or system simulation testing that addresses each of the following categories, showing system performance following Category D contingencies of Table I. The specific elements selected (from within each of the following categories) for inclusion in these studies and simulations shall be acceptable to the associated Regional Reliability Organization(s).							PA						TP		"	"	No	"
TPL-004-0	R1.3.1.	Be performed and evaluated only for those Category D contingencies that would produce the more severe system results or impacts. The rationale for the contingencies selected for evaluation shall be available as supporting information. An explanation of why the remaining simulations would produce less severe system results shall be available as supporting information.							PA						TP		"	"	No	"
TPL-004-0	R1.3.2.	Cover critical system conditions and study years as deemed appropriate by the responsible entity.							PA						TP		"	"	No	"
TPL-004-0	R1.3.3.	Be conducted annually unless changes to system conditions do not warrant such analyses.							PA						TP		"	"	No	"
TPL-004-0	R1.3.4.	Have all projected firm transfers modeled.							PA						TP		"	"	No	"
TPL-004-0	R1.3.5.	Include existing and planned facilities.							PA						TP		"	"	No	"
TPL-004-0	R1.3.6.	Include Reactive Power resources to ensure that adequate reactive resources are available to meet system performance.							PA						TP		"	"	No	"
TPL-004-0	R1.3.7.	Include the effects of existing and planned protection systems, including any backup or redundant systems.							PA						TP		"	"	No	"
TPL-004-0	R1.3.8.	Include the effects of existing and planned control devices.							PA						TP		"	"	No	"
TPL-004-0	R1.3.9.	Include the planned (including maintenance) outage of any bulk electric equipment (including protection systems their components) at those demand levels for which planned (including maintenance) outages are performed.							PA						TP		"	"	No	"
TPL-004-0	R1.4.	Consider all contingencies applicable to Category D.							PA						TP		"	"	No	"
TPL-004-0	R2.	The Planning Authority and Transmission Planner shall each document the results of its reliability assessments and shall annually provide the results to its entities' respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.							PA						TP		**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R1.	Each Transmission Operator, individually and jointly with other Transmission Operators, shall ensure that formal policies and procedures are developed, maintained, and implemented for monitoring and controlling voltage levels and Mvar flows within their individual areas and with the areas of neighboring Transmission Operators.												TOP			**Yes PJM must monitor additional 100KV+ facilities**	**Yes PJM must monitor additional 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R2.	Each Transmission Operator shall acquire sufficient reactive resources within its area to protect the voltage levels under normal and Contingency conditions. This includes the Transmission Operator's share of the reactive requirements of interconnecting transmission circuits.												TOP			**Yes PJM must monitor additional 100KV+ facilities**	**Yes PJM must monitor additional 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R3.	The Transmission Operator shall specify criteria that exempts generators from compliance with the requirements defined in Requirement 4, and Requirement 6.1.												TOP			No	No	No	
VAR-001-1	R3.1.	Each Transmission Operator shall maintain a list of generators in its area that are exempt from following a voltage or Reactive Power schedule.												TOP			No	No	No	
VAR-001-1	R3.2.	For each generator that is on this exemption list, the Transmission Operator shall notify the associated Generator Owner.												TOP			No	No	No	
VAR-001-1	R4.	Each Transmission Operator shall specify a voltage or Rreactive Power schedule at the interconnection between the generator facility and the Transmission Owner's facilities to be maintained by each generator. The Transmission Operator shall provide the voltage or Reactive Power schedule to the associated Generator Operator and direct the Generator Operator to comply with the schedule in automatic voltage control mode (AVR in service and controlling voltage). 1. The voltage schedule is a target voltage to be maintained within a tolerance band during a specified period.												TOP			No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
VAR-001-1	R5.	Each Purchasing-Selling Entity shall arrange for (self-provide or purchase) reactive resources to satisfy its reactiv requirements identified by its Transmission Service Provider.								PSE										
VAR-001-1	R6.	The Transmission Operator shall know the status of all transmission Reactive Power resources, including the status of voltage regulators and power system stabilizers.												TOP			No	No	No	
VAR-001-1	R6.1.	When notified of the loss of an automatic voltage regulator control, the Transmission Operator shall direct the Generator Operator to maintain or change either its voltage schedule or its Reactive Power schedule.												TOP			No	No	No	
VAR-001-1	R7.	The Transmission Operator shall be able to operate or direct the operation of devices necessary to regulate transmission voltage and reactive flow.												TOP			No	No	No	
VAR-001-1	R8.	Each Transmission Operator shall operate or direct the operation of capacitive and inductive reactive resources within its area – including reactive generation scheduling; transmission line and reactive resource switching; and, if necessary, load shedding – to maintain system and Interconnection voltages within established limits.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R9.	Each Transmission Operator shall maintain reactive resources to support its voltage under first Contingency conditions.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R9.1.	Each Transmission Operator shall disperse and locate the reactive resources so that the resources can be applied effectively and quickly when Contingencies occur.												TOP			No	No	No	
VAR-001-1	R10.	Each Transmission Operator shall correct IROL or SOL violations resulting from reactive resource deficiencies (IROL violations must be corrected within 30 minutes) and complete the required IROL or SOL violation reporting.												TOP			**Yes Procedures must address 100KV+ facilities**	**Yes Procedures must address 100KV+ facilities**	No	Medium impact similar approach should apply to 100KV+ facilities
VAR-001-1	R11.	After consultation with the Generator Owner regarding necessary step-up transformer tap changes, the Transmission Operator shall provide documentation to the Generator Owner specifying the required tap changes, a timeframe for making the changes, and technical justification for these changes.												TOP			No	No	No	
VAR-001-1	R12.	The Transmission Operator shall direct corrective action, including load reduction, necessary to prevent voltage collapse when reactive resources are insufficient.												TOP			No	No	No	
VAR-002-1	R1.	The Generator Operator shall operate each generator connected to the interconnected transmission system in the automatic voltage control mode (automatic voltage regulator in service and controlling voltage) unless the Generator Operator has notified the Transmission Operator..				GOP											No	No	No	
VAR-002-1	R2.	Unless exempted by the Transmission Operator, each Generator Operator shall maintain the generator voltage or Reactive Power output (within applicable Facility Ratings. 1. When a Generator is operating in manual control, reactive power capability may change based on stability considerations and this will lead to a change in the associated Facility Ratings.				GOP											No	No	No	
VAR-002-1	R2.1.	When a generator's automatic voltage regulator is out of service, the Generator Operator shall use an alternative method to control the generator voltage and reactive output to meet the voltage or Reactive Power schedule direct by the Transmission Operator.				GOP											No	No	No	
VAR-002-1	R2.2.	When directed to modify voltage, the Generator Operator shall comply or provide an explanation of why the schedule cannot be met.				GOP											No	No	No	
VAR-002-1	R3.	Each Generator Operator shall notify its associated Transmission Operator as soon as practical, but within 30 minutes of any of the following:				GOP											No	No	No	
VAR-002-1	R3.1.	A status or capability change on any generator Reactive Power resource, including the status of each automatic voltage regulator and power system stabilizer and the expected duration of the change in status or capability.				GOP											No	No	No	
VAR-002-1	R3.2.	A status or capability change on any other Reactive Power resources under the Generator Operator's control and the expected duration of the change in status or capability.				GOP											No	No	No	
VAR-002-1	R4.	The Generator Owner shall provide the following to its associated Transmission Operator and Transmission Planner within 30 calendar days of a request.			GO												No	No	No	
VAR-002-1	R4.1.	For generator step-up transformers and auxiliary transformers with primary voltages equal to or greater than the generator terminal voltage:			GO												No	No	No	
VAR-002-1	R4.1.1.	Tap settings.			GO												No	No	No	

Standard Number	Req. Number		BA	DP	GO	GOP	IA	LSE	PA	PSE	RC	RP	TO	TOP	TP	TSP	Market Facilities	Reliability Facilities	Unmonitored Facilities	Probable Impact
VAR-002-1	R4.1.2.	Available fixed tap ranges.			GO												No	No	No	
VAR-002-1	R4.1.3.	Impedance data.			GO												No	No	No	
VAR-002-1	R4.1.4.	The +/- voltage range with step-change in % for load-tap changing transformers.			GO												No	No	No	
VAR-002-1	R5.	After consultation with the Transmission Operator regarding necessary step-up transformer tap changes, the Generator Owner shall ensure that transformer tap positions are changed according to the specifications provided by the Transmission Operator, unless such action would violate safety, an equipment rating, a regulatory requirement, or a statutory requirement.			GO												No	No	No	
VAR-002-1	R5.1.	If the Generator Operator can't comply with the Transmission Operator's specifications, the Generator Operator shall notify the Transmission Operator and shall provide the technical justification.				GOP											No	No	No	