Mapping of Previous Planning Standards to Proposed New Standards

Planning Standard	Planning Standard Title	Proposed Standard	Proposed Title	Comments
ID.M1	Adequate voltage resources to meet future customer demands	VAR-003-1 NEW	Assessment of Reactive Power Resources	
ID.M2	Coordinate and optimize the use of generator reactive capability	DELETE		Already covered by TPL-001, TPL-002, TPL-003, TPL-004 Part of proposedVAR-001 (III.C.M5), VAR-002 (III.C.M6), MOD-026 (II.B.M4, II.B.M6)
IF.M2	Disturbance monitoring equipment list	PRC-018-1 NEW	Disturbance Monitoring Equipment Installation and Data Reporting	Merged with I.F.M4: See Requirements 1, 2, Measures 1, 2
IF.M3	Disturbance monitoring data reporting requirements	PRC-002-1 REVISION	Define Regional Disturbance Monitoring and Reporting Requirements	Merged with PRC-002-0 (I.F.M1): See Requirements 3, 4 and Measures 3, 4
IF.M4	Disturbance data	PRC-018-1 NEW	Disturbance Monitoring Equipment Installation and Data Reporting	Merged with I.F.M2: See Requirement 3 and Measure 3
IF. M5	Use of disturbance data to develop and maintain models	MOD-022-1 NEW	Use of Disturbance Data to Develop and Maintain Models	
IIB. M1	Regional procedures for generation equipment testing	MOD-023-1 NEW	Regional Reliability Organization Procedures for Verifying Generation Equipment Data	
IIB. M2	Verification of gross and net real power dependable capability of generators	MOD-024-1 NEW	Verification of Generator Gross and Net Dependable Capability	
IIB. M3	Verification of gross and net reactive power capability of generators	MOD-025-1 NEW	Verification of Reactive Power Capability	
IIB. M4	Test results of generator voltage regulator controls and limit functions	MOD-026-1 NEW	Verification and Modeling of Generator Excitation Systems and Voltage Controls	Merged with II.B.M6: See Requirements 1, 2 and Measure 1

Planning Standard	Planning Standard Title	Proposed Standard	Proposed Title	Comments
IIB. M5	Test results of speed/load governor controls	MOD-027-1 NEW	Verification and Status of Generator Frequency Response	Merged with III.C.M9: See Requirement 1 and Measure 1
IIB. M6	Verification of excitation system dynamic modeling data	MOD-026-1 NEW	Verification and Modeling of Generator Excitation Systems and Voltage Controls	Merged with II.B.M4: See Requirements 3, 4, 5, 6 and Measure 2
IID. M2	Reporting procedures to ensure against double counting or the omission of customer demand data	MOD-016-1 REVISION	Documentation of Data Reporting Requirements for Actual and Forecast Demands, Net Energy for Load, and Controllable Demand-Side Management	Merged with MOD-016-0 (II.D.M1): See Requirement 1.2, and Measure 1
IID. M3	Consistency of actual and forecast demands and controllable demand-side management data reported for reliability and to government agencies	DELETE		Government agencies should set requirements for reporting, not needed as a separate standard for reliability
IIE. M1	Customer (dynamic) demand characteristics to be determined and reported for reliability analyses	DELETE		There is no generally accepted method for determining characteristics. SAR should be considered when more research is done.
IIE. M2	Requirements for determining customer (dynamic) demand characteristics to be included in procedural manuals	DELETE		There is no generally accepted method for determining characteristics. SAR should be considered when more research is done.
IIE. M3	Load-serving entities to provide customer (dynamic) demand characteristics	DELETE		There is no generally accepted method for determining characteristics. SAR should be considered when more research is done.
IIIA. M2	Redundancy requirements for transmission protection systems.	PRC-023-1	Redundancy of Transmission Protection Systems	Already covered in TPL-002, TPL-003, TPL-004
IIIB. M1	Assessment of transmission control devices	DELETE		Already covered by TPL-001, TPL-002, TPL-003, TPL-004

Planning Standard	Planning Standard Title	Proposed Standard	Proposed Title	Comments
IIIB. M2	Provision of models and data for control devices for use in system modeling	MOD-028-1 NEW	Provision of Models and Data for Transmission Power Electronic Control Devices	Merged with III.B.M3: See Requirement s 1, 3 and Measures 1, 3
IIIB. M3	Periodic review of settings and operating strategies of control devices	MOD-028-1 NEW	Provision of Models and Data for Transmission Power Electronic Control Devices	Merged with III.B.M2: See Requirements 2, 3 and Measures 2, 3
IIIC. M1	Operation of all synchronous generators in the automatic voltage control mode (documentation)	VAR-001-1 REVISION	Voltage and Reactive Control	Merged with operating V0 VAR-001 & III.C.M3 & III.C.M5: See Requirement 10 and Measure 2
IIIC. M2	Operation of all synchronous generators in the automatic voltage control mode (data)	VAR-002-1 NEW	Generator Operation for Maintaining Network Voltage Schedules	Merged with III.C.M4 & III.C.M6: See Requirement 1 and Measure 1
IIIC. M3	Generator operation for maintaining network voltage schedules (documentation)	VAR-001-1 REVISION	Voltage and Reactive Control	Merged with operating V0 VAR-001 & III.C.M1 & III.C.M5 See Requirement 3 and Measure 1
IIIC. M4	Generator operation for maintaining network voltage schedules (data)	VAR-002-1 NEW	Generator Operation for Maintaining Network Voltage Schedules	Merged with III.C.M2 & III.C.M6: See Requirements 1.3, 3, 4 and Measure 2
IIIC. M5	Tap settings of generator step-up and auxiliary transformers (documentation)	VAR-001-1 REVISION	Voltage and Reactive Control	Merged with operating V0 VAR-001 & III.C.M1 & III.C.M3: See Requirement 11 and Measure 3
IIIC. M6	Tap settings of generator step-up and auxiliary transformers (data)	VAR-002-1 NEW	Generator Operation for Maintaining Network Voltage Schedules.	Merged with III.C.M4 & III.C.M6: See Requirements 5, 6 and Measure 3
IIIC. M7	Generators performance during temporary excursions in frequency, voltage, etc.	VAR-004-1 NEW	Generators Performance During Temporary Frequency and Voltage Excursions	
IIIC. M8	Coordination of generator controls with the generator's short-term capabilities and protective relays	PRC-019-1 NEW	Generator Operation for Maintaining Network Voltage Schedules	
IIIC. M9	Speed/load governing system	MOD-027-1 NEW	Verification and Status of Generator Frequency Response	Merged with II.B.M5: See Requirement 2, Measure 1

Planning Standard	Planning Standard Title	Proposed Standard	Proposed Title	Comments
IIIC. M10	Regional procedure on generator protection operation	PRC-003-1 REVISION	Regional Procedure for Transmission and Generation Protection System Misoperations.	Merged with V0 PRC-003 (III.A.M3): See Requirements 1, 2 and Measures 1, 2
IIIC. M11	Analysis of misoperations of generator protection equipment	PRC-004-1 REVISION	Analysis and Reporting of Transmission and Generation Protection System Misoperations	Merged with V0 PRC-004 (III.A.M5): See Requirements 1, 2 and Measures 1, 2
IIIC. M12	Maintenance and testing of generator protection systems	PRC-005-1 REVISION	Transmission and Generation Protection System Maintenance and Testing	Merged with V0 PRC-005 (III.A.M4): See Requirements 1, 2 and Measures 1, 2
IIIE. M1	Undervoltage load shedding program documentation	PRC-021-1 NEW	Under-Voltage Load Shedding Program Data	
IIIE. M2	Undervoltage load shedding program database	PRC-020-1 NEW	Under-Voltage Load Shedding Program Database	
IIIE. M5	Analysis and documentation of UVLS program performance	PRC-022-1 NEW	Under-Voltage Load Shedding Program Performance	
IVA. M2	Demonstrate through simulation or testing that a blackstart generating unit can perform its function	EOP-005-1 REVISION	System Restoration Plans	Merged with operating V0 EOP-005 & IV.A.M3: See Requirements 8, 9 and Measure 1
IVA. M3	Diagram the number, size, and location of system blackstart generating units and the initial transmission switching requirements	EOP-005-1 REVISION	System Restoration Plans	Merged with operating V0 EOP-005 & IV.A.M2: See Requirement 10, Measure 2
IVB. M1	Documentation of Regional load restoration policies and programs	DELETE		Very limited application, apply local standards as required.
IVB. M2	Documentation of automatic load restoration programs	DELETE		Very limited application, apply local standards as required.
IVB. M3	Assessment of the effectiveness of automatic load restoration programs	DELETE		Very limited application, apply local standards as required.
IVB. M4	Automatic load restoration equipment maintenance requirements	DELETE		Very limited application, apply local standards as required.

Mapping of Proposed New Standards to Previous Planning Standards

Proposed Standard	Proposed Title	Prior Planning Standard(s)	Drafting Team Notes
EOP-005-1	System Restoration Plans (Revision of Version 0 Standard EOP-005-0)	**IV.A.M2** – Demonstrate through simulation or testing that a blackstart generating unit can perform its function **IV.A.M3** – Diagram the number, size, and location of system blackstart generating units and the initial transmission switching requirements	Merged IV.A.M2 and IV.A.M3 into existing standard EOP-005-0 as R8, R9 and R10, M1 and M2. Replaced requirement for cranking path diagrams with requirement to document cranking paths.
MOD-016-1	Documentation of Data Reporting Requirements for Actual and Forecast Demands, Net Energy for Load, and Controllable Demand-Side Management (Revision of Version 0 Standard)	**II.D.M2** – Reporting procedures to ensure against double counting or the omission of customer demand data	Merged with existing MOD-016-0. See R1.2 and M1.
MOD-022-1	Use of Disturbance Data to Develop and Maintain Models	**I.F.M5** – Use of disturbance data to develop and maintain models	Translation to new standard.
MOD-023-1	Procedures for Verifying Generation Equipment Data	**II.B.M1** – Regional procedures for generation equipment testing	Translation to new standard.
MOD-024-1	Verification of Generator Gross and Net Real Capability	**II.B.M2** – Verification of gross and net real power dependable capability of generators	Translation to new standard.
MOD-025-1	Verification of Reactive Power Capability	**II.B.M3** – Verification of gross and net reactive power capability of generators	Translation to new standard.

MOD-026-1	Modeling of Generator Excitation Systems and Voltage Controls	**II.B.M4** – Test results of generator voltage regulator controls and limit functions **II.B.M6** – Verification of excitation system dynamic modeling data	Translation to new standard merging II.B.M4 (R1, R2 and M1) and II.B.M6 (R3, R4, R5, R6 and M2).
MOD-027-1	Verification and Status of Generator Frequency Response	**II.B.M5** – Test results of speed/load governor controls **III.C.M9** – Speed/load governing system	Translation to new standard merging II.B.M5 (R1 and M1) and III.C.M9 (R2 and M1).
MOD-028-1	Provision of Models and Data for Transmission Power Electronic Control Devices	**III.B.M2** – Provision of models and data for control devices for use in system modeling **III.B.M3** – Periodic review of settings and operating strategies of control devices	Merged III.B.M2 (R1, R3, M1, and M3) and III.B.M3 (R2, R3, M2, and M3).
PRC-002-1	Define and Document Regional Disturbance Monitoring and Reporting Requirements (Revision of Version 0 Standard)	**I.F.M3** – Disturbance monitoring data reporting requirements	Merged into existing PRC-002-0: See R3, R4, M3, and M4.
PRC-003-1	Regional Procedure for Transmission and Generation Protection System Misoperations. (Revision of Version 0 Standard)	**III.C.M10** – Regional procedure on generator protection operations	Merged into existing PRC-003: See R1, R2, M1, and M2.

PRC-004-1	Analysis and Reporting of Transmission and Generation Protection System Misoperations (Revision of Version 0 Standard)	**III.C.M11** – Analysis of misoperations of generator protection equipment	Merged into existing PRC-004: See R1, R2, M1, and M2.
PRC-005-1	Transmission and Generation Protection System Maintenance and Testing (Revision of Version 0 Standard)	**III.C.M12** – Maintenance and testing of generator protection systems	Merged into existing PRC-005: See R1, R2, M1, and M2.
PRC-018-1	Disturbance Monitoring Equipment Installation and Data Reporting	**I.F.M2** – Disturbance monitoring equipment list **I.F.M4** – Disturbance data	Translation to new standard merging I.F.M2 (R1, R2, M1, and M2) and I.F.M4 (R3 and M3). Added time synchronization requirement based on August 2003 blackout recommendation.
PRC-019-1	Coordination of Generator Voltage Regulator Controls with Unit Capabilities and Protection	**III.C.M8** – Coordination of generator controls with the generator's short-term capabilities and protective relays	Translation to new standard.
PRC-020-1	Under-Voltage Load Shedding Program Database	**III.E.M2** – Undervoltage load shedding program database	Translation to new standard.
PRC-021-1	Under-Voltage Load Shedding Program Data	**III.E.M1** – Undervoltage load shedding program documentation	Translation to new standard.
PRC-022-1	Under-Voltage Load Shedding Program Performance	**III.E.M5** – Analysis and documentation of UVLS program performance	Translation to new standard.

PRC-023-1	Redundancy of Transmission Protection Systems	**III.A.M2 –** Redundancy requirements for transmission protection systems.	Translation to a new standard.
VAR-001-1	Voltage and Reactive Control (Revision of Version 0 Standard)	**III.C.M1** – Operation of all synchronous generators in the automatic voltage control mode (documentation) **III.C.M3** – Generator operation for maintaining network voltage schedules (documentation) **III.C.M5** – Tap settings of generator step-up and auxiliary transformers (documentation)	Merged into existing standard VAR-001. Merged III.C.M1 (R10 and M2), III.C.M3 (R3 and M1), and III.C.M5 (R11 and M3).
VAR-002-1	Generator Operation for Maintaining Network Voltage Schedules	**III.C.M2** – Operation of all synchronous generators in the automatic voltage control mode (data) **III.C.M4** – Generator operation for maintaining network voltage schedules (data) **III.C.M6** – Tap settings of generator step-up and auxiliary transformers (data)	Translated to new standard merging III.C.M2 (R1 and M1), III.C.M4 (R1.3, R3, R4 and M2), and III.C.M6 (R5, R6, and M3).
VAR-003-1	Assessment of Reactive Power Resources	**I.D.M1** – Adequate voltage resources to meet future customer demands	Translation to new standard.
VAR-004-1	Generators Performance During Temporary Frequency and Voltage Excursions	**III.C.M7** – Generators performance during temporary excursions in frequency, voltage, etc.	Translation to new standard.