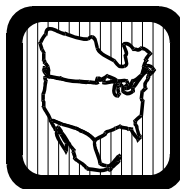


Work Plan
for Addressing
Fill-In-The-Blank
Reliability Standards

Proposed by the
Regional Reliability Standards
Working Group

October 4, 2006



North American Electric Reliability Council

Table of Contents

Executive Summary	3
Background	4
Work Plan	10
Analysis.....	18
Conclusion	19
Attachment 1	20
Attachment 2	42
Attachment 3	141

Executive Summary

The Regional Reliability Standards Working Group (RRSWG) seeks approval of the work plan contained in this document from the NERC Board of Trustees. The work plan establishes a systematic methodology for resolving all potential issues surrounding NERC Reliability Standards that contain "fill-in-the-blank" characteristics.

While gathering information to prepare the application to become the Electric Reliability Organization (ERO), NERC staff collected comments from the Federal Energy Regulatory Commission (FERC) legal and technical staff regarding the enforceability of certain NERC Reliability Standards. The standards at issue are those that depend on regional criteria or procedures not currently contained within certain Reliability Standards, but which are needed to provide additional requirements for implementing the standards within the regions. The Commission Staff has informally referred to these as the "fill-in-the-blank" standards. To the extent that a portion of the requirements exists outside the standard, Section 215 of the U.S. Federal Power Act (FPA) does not allow enforcement of a reliability standard upon a bulk power system owner, operator or user, including the setting of financial penalties and sanctions, creating a dilemma.

In May of 2006, NERC established the RRSWG to develop a detailed work plan to address the "fill-in-the-blank standards." Each of the eight regional reliability organizations (RROs) provided one individual to participate in the RRSWG (see Attachment 3 for the RRSWG roster). Each individual possessed expertise in the technical aspects of the standards in question. NERC's manager of regional standards facilitated the RRSWG efforts. This document contains the results of the RRSWG efforts in the form of the proposed work plan to resolve all the "fill-in-the-blank standards" issues.

The RRSWG first identified "fill-in-the-blank" characteristics, as described earlier. Second, the RRSWG reviewed the complete set of NERC Reliability Standards to determine which had "fill-in-the-blank" characteristics and whether or not regional standards should be developed to support continent-wide standards. Third, the RRSWG used that analysis to develop a subset of standards for which a work plan was developed for resolving the fill-in-the-blank issues.

The RRSWG concluded a need for drafting 15 NERC Standard Authorization Requests (SARs) for potential changes to 29 NERC continent-wide standards in order to resolve the potential "fill-in-the-blank issues." The RRSWG further concluded that each regional entity would need to develop four new regional Reliability Standards to support four corresponding NERC North American Standards in conjunction with this effort. This work plan details the development of the SARs necessary for removing the "fill-in-the-blank" characteristics from the continent-wide standards, identifies the resources necessary for accomplishing this effort, and provides illustrative timelines for completing the development of the regional and continent-wide standards.

Background

Many of the current "fill-in-the-blank" standards were developed when NERC translated its planning standards into the Version 0 standards. However, additional standards have been added to the Version 0 set of standards, such as the standards associated with the Phase III-IV planning standards project, which introduced new proposed standards this year. NERC's historical deference to the RRO for developing regional reliability criteria was based on different electrical characteristics of bulk power systems; diversity of system and facility designs; state, provincial and local reliability criteria; and, accepted utility practices. Many of these specific criteria and procedures were in place prior to the existence of NERC standards, and originated in the regions – and many still exist today as operating and planning agreements.

In NERC's [Petition for Approval of Reliability Standards](#) filed on April 4, 2006, with the Commission, NERC identified 25 existing Reliability Standards (see Table 1A) that establish an obligation on a bulk power system owner, operator, or user to meet one or more specific RRO criteria or procedures. These are referred to as the "fill-in-the-blank" standards. The regional criteria and procedures have neither been through an ERO-recognized development process, nor do they qualify for approval by the ERO and the subsequent applicable governmental authorities that are part of the process, prior to January 1, 2007. In the filing, NERC requested the Commission and the applicable governmental authorities in Canada to:

- Approve conditionally these 25 "fill-in-the-blank" standards for mandatory enforcement beginning January 1, 2007; and
- Allow the ERO to enforce compliance with these standards only when there has been a failure to comply with regional criteria or procedures that are part of a NERC Reliability Standard that has been approved by the Commission or the applicable governmental authorities.

Table 1A
List of Original NERC "Fill-in-the-Blank" Standards

Standard	Title
BAL-002-0	Disturbance Control Performance
EOP-004-0	Disturbance Reporting
EOP-009-0	Documentation of Blackstart Generating Unit Test Results
FAC-001-0	Facility Connection Requirements
FAC-002-0	Coordination of Plans for New Facilities
FAC-004-0 ¹	Methodologies for Determining Electrical Facility Ratings

¹ FAC-004-0 has been retired and has been replaced by FAC-008-0.

Standard	Title
MOD-001-0	Documentation of TTC and ATC Calculation Methodologies
MOD-002-0	Review of TTC and ATC Calculations and Results
MOD-004-0	Documentation of Regional CBM Methodologies
MOD-005-0	Procedure for Verifying CBM Values
MOD-008-0	Documentation and Content of Each Regional TRM Methodology
MOD-009-0	Procedure for Verifying TRM Values
MOD-010-0	Steady-State Data for Transmission System Modeling and Simulation
MOD-012-0	Dynamics Data for Transmission System Modeling and Simulation
MOD-017-0	Aggregated Actual and Forecast Demands and Net Energy for Load
MOD-019-0	Forecasts of Interruptible Demands and DCLM Data
MOD-024-1	Verification of Generator Gross and Net Real Power Capability
MOD-025-1	Verification of Reactive Power Capability
PER-002-0	Operating Personnel Training
PRC-004-1	Analysis and Mitigation of Transmission and Generation Protection System Misoperations
PRC-007-0	Assuring Consistency with Regional UFLS Programs
PRC-008-0	Underfrequency Load Shedding Equipment Maintenance Programs
PRC-009-0	UFLS Performance Following an Underfrequency Event
PRC-015-0	Special Protection System Data and Documentation
PRC-016-0	Special Protection System Misoperations

In addition to the 25 standards identified above, a set of 14 additional NERC standards (see Table 1B) exist that lack a corresponding requirement or criteria and procedures that entities within the region should follow. This requires the RROs to set regional criteria or to develop regional procedures for each of the 14 standards. These standards include:

Table 1B
List of Additional Original NERC “Fill-in-the-Blank” Standards

Standard	Title
EOP-007	Establish, Maintain, and Document a Regional Blackstart Capability Plan
IRO-001	Reliability Coordination — Responsibilities and Authorities
MOD-003	Procedure for Input on TTC and ATC Methodologies and Values
MOD-011	Regional Steady-State Data Requirements and Reporting Procedures
MOD-013	RRO Dynamics Data Requirements and Reporting Procedures
MOD-014	Development of Interconnection-Specific Steady State System Models

MOD-015	Development of Interconnection-Specific Dynamics System Models
MOD-016	Actual and Forecast Demands, Net Energy for Load, Controllable DSM
PRC-002	Define and Document Disturbance Monitoring Equipment Requirements
PRC-003	Regional Procedure for Transmission Protection System Misoperations
PRC-006	Development and Documentation of Regional UFLS Programs
PRC-012	Special Protection System Review Procedure
PRC-013	Special Protection System Database
PRC-014	Special Protection System Assessment

In the present state, the standards listed in Table 1B can be enforced by the ERO because the standard simply imposes a requirement upon the RRO to provide criteria or a procedure. However, a number of the standards listed in Table 1A rely on or reference to at least one of the standards listed in Table 1B. Therefore, when reviewing the complete set of NERC Reliability Standards to determine which had possible "fill-in-the-blank" characteristics, the standards listed in Table 1A were added to the standards listed in Table 1B to bring the total number of potential "fill-in-the-blank" standards originally noted by NERC in the April 4 [Petition for Approval of Reliability Standards](#) from 25 to 39.

On May 11, 2006, FERC issued a report titled *Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards*. In the report, FERC acknowledged the 39 standards identified in NERC's April 4 petition and further noted that "[I]n the context of the mandatory Reliability Standards required by section 215 of the FPA, fill-in-the-blank standards raise two principal concerns: (i) they are not enforceable against users, owners and operators of the grid, but rather only provide broad direction to RROs; and (ii) the specific implementing standards adopted by the RROs have not undergone an approval process under section 215 and hence cannot themselves be enforced by the Commission or ERO."

In their assessment, FERC Staff identified 28 standards as "fill-in-the-blank" standards which have the RROs as either the only entity or one of the entities identified in the Applicability section (see Table 2). Staff's concern with these standards is their unclear enforceability under section 215 of the FPA for those that apply only to an RRO. The 28 standards identified by FERC staff have total or partial applicability to RROs. Such entities are not explicitly owners, operators, or users of the bulk power system, as defined by the Energy Policy Act of 2005 (EPAct 2005), and therefore enforcement of these standards under EPAct 2005 is unclear to FERC. Coincidentally, all but one (FAC-003-1) of the standards highlighted in FERC's assessment as "fill-in-the-blank" were included in the list of 39 standards originally identified by NERC as "fill-in-the-blank" standards.

Table 2
List of FERC “Fill-in-the-Blank” Standards with Unclear Enforceability under
EPAct 2005

Standard	Title
BAL-002-0	Disturbance Control Performance (partial),
EOP-004-0	Disturbance Reporting (partial),
EOP-007-0	Establish, Maintain, and Document a Regional Black start Capability Plan
FAC-003-1	Transmission Vegetation Management Program (partial)
IRO-001-0	Reliability Coordination – Responsibilities and Authorities (partial)
MOD-001-0	Documentation of TTC and ATC Calculation Methodologies
MOD-002-0	Review of TTC and ATC Calculations and Results
MOD-003-0	Procedure for Input on TTC and ATC Methodologies and Values
MOD-004-0	Documentation of Regional CBM Methodologies
MOD-005-0	Procedure for Verifying CBM Values
MOD-008-0	Documentation and Content of Each Regional TRM Methodology
MOD-009-0	Procedure for Verifying TRM Values
MOD-011-0	Regional Steady-State Data Requirements and Reporting Procedures
MOD-013-0	RRO Dynamics Data Requirements and Reporting Procedures
MOD-014-0	Development of Interconnection-Specific Steady State System Models
MOD-015-0	Development of Interconnection-Specific Dynamics System Models
MOD-016-0	Determination of Data Reporting Requirements for Actual and Forecast Demands, Net Energy for Load, Controllable DSM (partial)
MOD-024-1	Verification of Generator Gross and Net Real Power Capability (partial)
MOD-025-1	Verification of Generator Gross and Net Real Power Capability (partial)
PRC--002-0	Define and Document Disturbance Monitoring Equipment Requirements
PRC-003-1	Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems
PRC-006-0	Development and Documentation of Regional UFLS Program
PRC-012-0	Special Protection System Review Procedure
PRC-013-0	Special Protection System Database
PRC-014-0	Special Protection System Assessment
PRC-020-1	Under-Voltage Load Shedding Program Database
TPL-005-0	Regional and Interregional Self-Assessment Reliability Reports
TPL-006-0	Assessment Data from RROs

To provide a permanent solution to the "fill-in-the-blank" issues, NERC committed to developing a detailed work plan to address the "fill-in-the-blank standards." The RRSWG set November 1, 2006, as the target date to submit the work plan to the NERC Board of Trustees for approval on November 1, 2006 and subsequently to be filed with FERC and the applicable governmental authorities in Canada by November 8, 2006. In addition, NERC provided the manager of regional standards to assist the RROs in developing appropriate and consistent regional reliability standards.

NERC's manager of regional standards facilitated the RRSWG efforts in developing this document and the associated work plan to address the "fill-in-the-blank"

standards. Each RRO provided one individual with expertise in the standards listed in Tables 1 and 2 to work as part of the RRSWG (see Attachment 3 for the RRSWG roster). The RRSWG worked together to review the existing status and consistency of the regional criteria and procedures that are required by the existing NERC standards. The group then developed this proposed course of action to address each fill-in-the-blank standard. The coordinated efforts led the RRSWG to contemplate several elements and appropriate courses of action that could be implemented as part of the work plan. For each applicable standard the group considered a) developing a uniform North American Standard to replace the "fill-in-the-blank" standard; b) requesting regions to develop Regional Reliability Standards for adoption by the ERO and the applicable governmental authorities; c) removing the reference to the regional criteria from the NERC Reliability Standards; or, d) seeking other appropriate courses of action.

The RRSWG first met May 18- 19, 2006 to develop a work plan for resolving the "fill-in-the-blank" issues. The RRSWG met regularly thereafter to develop this work plan.

On June 26, 2006, NERC filed comments with FERC regarding the May 11, 2006, *Federal Energy Regulatory Commission Staff Preliminary Assessment of the North American Electric Reliability Council's Proposed Mandatory Reliability Standards*. Among other things, as part of the comments NERC:

- Reaffirmed the standards identified in Table 1A above as "fill-in-the-blank standards"
- Added the standards identified in Table 3 below to the list of "fill-in-the-blank standards", and
- Proposed a solution to FERC's concerns with the standards listed in Table 2 above.

Table 2 addresses the Commission Staff's concerns that certain standards are unclear and possibly unenforceable under section 215 of the FPA because those standards have an RRO as either the only entity or one of the entities identified in the Applicability section.

Table 3
List of Additional NERC "Fill-in-the-Blank" Standards

Standard	Title
EOP-006-0	Reliability Coordination — System Restoration
IRO-005-1	Reliability Coordination — Current Day Operations
TOP-002-0	Normal Operations Planning
TOP-004-0	Transmission Operations

Finally, to develop a thorough understanding of the issues at hand, the RRSWG included in their analysis not only a full review of the complete set of NERC Reliability Standards to determine which of the standards had any "fill-in-the-blank" characteristics, but also each of the federal filings and reports mentioned above.

Work Plan

Extensive coordination needs to take place between NERC, regional entities, and industry participants in order for this work plan to be successful. The first step in the process involves the approval of this work plan by the NERC Board of Trustees. Once approval is received, work on the various activities identified herein will commence.

The RRSWG estimates that in addition to the activities required for developing the regional standards, 15 Standard Authorization Requests (SAR) will need to be drafted by the RRSWG, and NERC will need to staff 15 Standard Drafting Teams to accomplish the activities delineated in this work plan.

A timeline for each proposed SAR is provided in Table 4 below for illustrative purposes only. NERC staff will incorporate the recommendations of the RRSWG into a master plan for standards development once a work plan for the fill-in-the-blank standards has been approved. While developing the illustrative timeline for each SAR, the following assumptions were used:

- Standards given the highest priority are those assumed to be most critical to reliability.
- SARs will be processed according to the priority identified for each request
- From a workload perspective, a maximum of three SARs can be processed every three months.
- On average, two comment periods will be incurred. On more contentious issues a third comment period was factored in.
- Even though a standard might be able to be processed on a “fast-track,” a “normal” standards development process was assumed.
- Regional entities may begin drafting the regional standards proposed in this work plan before NERC completes its revisions of the corresponding continent-wide standards.
- The illustrative timelines provided in Table 4 and Attachment 1 of this work plan include regional activities for complying with corresponding NERC continent-wide standards.

Specific details of the work plan are:

- 1) NERC to notify each of the regional entities that regional standards need to be developed in support of NERC Reliability Standards:
 - BAL-002 - Disturbance Control Performance
 - PRC-002 - Define and Document Disturbance Monitoring Equipment Requirements
 - PRC-006 - Development and Documentation of Regional UFLS Programs
 - PRC-012 - Special Protection System Review Procedure

This will be completed by NERC's manager of regional standards within two weeks of approval of this work plan.

- 2) NERC and the regional entities to coordinate the development of regional standards in support of the NERC Reliability Standards identified in 1 above. Such work will be coordinated in conjunction with any required revisions to the NERC Reliability Standards identified in 1 above.
- 3) The RRSWG to draft Standard Authorization Requests as outlined in Table 4. As the drafting of each SAR is completed, it will be forwarded to the NERC Standards Process Manager for finalization.
- 4) Actions and illustrative timelines for completing the activities identified in 2 and 3 above are detailed in the Gantt charts provided in Attachment 1. The RRSWG assumed the formal NERC standards development procedure would be followed for revising all standards identified in this project for the purpose of creating the Gantt charts and timelines associated with each SAR.

Table 4
List of SARs to be drafted by the RRSWG

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
1	BAL-002 (Disturbance Control Performance)	Low	<p><i>BAL-002 will be revised and remain a continent-wide reliability standard supported by regional reliability standards. SAR to address:</i></p> <ul style="list-style-type: none"> • <i>FERC's May 11 comments</i> • <i>modify R2 of the NERC standard to remove reference to "sub-RRO or Reserve Sharing Group", and</i> • <i>determine what elements of contingency reserve should be included in the North American standard and what elements should be included in the regional standard.</i> 	<ul style="list-style-type: none"> • <i>November 1, 2007 thru December 14, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization.</i> • <i>November 12, 2007 thru July 3, 2008 - SAR finalization.</i> • <i>May 26, 2007 thru September 23, 2009 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>August 20, 2009 thru December 23, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standard: January 1, 2010</i> • <i>February 19, 2009 thru January 27, 2010 - Regional process or regional standard development through adoption by BOD</i> • <i>December 24, 2009 thru April 7, 2010 - Process for NERC acceptance of</i>

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
				<p><i>regional standard</i></p> <ul style="list-style-type: none"> • <i>March 4, 2010 thru July 7, 2010 - Process for FERC acceptance of regional standard</i> • <i>Effective date of regional standards: September 1, 2010</i>
2	EOP-004 (Disturbance Reporting)	Low	<p><i>EOP-004 will be revised and remain a continent-wide reliability standard. SAR to address:</i></p> <ul style="list-style-type: none"> • <i>consider changes to R1 and R3.4 to standardize the disturbance reporting requirements (requirements for disturbance reporting need added to this standard),</i> • <i>modify standard to comply with FERC's concerns identified in the May 11 report, and</i> • <i>consider changes proposed for EOP-004-1 (a quorum was not achieved for voting on EOP-004-1 and work was terminated on a relatively simple change).</i> 	<ul style="list-style-type: none"> • <i>November 1, 2007 thru December 12, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization.</i> • <i>November 12, 2007 thru June 6, 2008 - SAR finalization.</i> • <i>April 28, 2008 thru August 26, 2009 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>July 23, 2009 thru November 25, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standard: January 1, 2010</i>
3	<p>EOP-005 (System Restoration Plans)</p> <p>EOP-006 (Reliability Coordination — System Restoration)</p> <p>EOP-007 (Establish, Maintain, and Document a Regional Blackstart Capability Plan)</p>	High	<p><i>EOP-005, EOP-006 EOP-007 and EOP-009 will be revised and remain continent-wide reliability standards.</i></p> <p><i>One SAR will be written to address EOP-005, EOP-006 EOP-007 and EOP-009. Primarily, references in EOP-005, EOP-006, and EOP-009 to meet RRO/Regional requirements need modified and EOP-007 needs to be more specific.</i></p>	<ul style="list-style-type: none"> • <i>November 1, 2006 thru January 23, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization</i> • <i>December 22, 2006 thru August 16, 2007 - SAR development and finalization</i> • <i>July 6, 2007 thru November 3, 2008 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>October 1, 2008 thru February 2, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: April 1, 2009</i>

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
	EOP-009 (Documentation of Blackstart Generating Unit Test Results)			
4	FAC-001 (Facility Connection Requirements)	Medium	<p><i>FAC-001 will be revised and remain continent-wide reliability standards.</i></p> <p><i>SAR will be written to remove the phrase "to ensure compliance with NERC Reliability Standards and applicable RRO, subregional, Power Pool, and individual Transmission Owner planning criteria and facility connection requirements".</i></p>	<ul style="list-style-type: none"> • <i>May 1, 2007 thru June 11, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization</i> • <i>May 10, 2007 thru January 1, 2008 - SAR development and finalization</i> • <i>November 21, 2007 thru October 27, 2008 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>September 23, 2008 thru January 23, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: April 1, 2009</i>
5	FAC-002 (Coordination of Plans for New Facilities)	Low	<p><i>FAC-002 will be revised and remain a continent-wide reliability standard. SAR to address:</i></p> <ul style="list-style-type: none"> • <i>remove " and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements" from RI.2</i> • <i>consider concerns identified in FERC's May 11 report (fix the typo)</i> • <i>consider removing/modifying RI.4, as it is redundant with the TPL standard,</i> • <i>coordinate with FAC-001, and</i> • <i>review FERC rule on interconnecting generators and see what parts impact this standard.</i> 	<ul style="list-style-type: none"> • <i>November 1, 2007 thru December 12, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization.</i> • <i>November 12, 2007 thru July 3, 2008 - SAR finalization.</i> • <i>May 26, 2008 thru September 23, 2009 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>August 20, 2009 thru December 23, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standard: January 1, 2010</i>

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
6	IRO-001 (Reliability Coordination — Responsibilities and Authorities)	Medium	<p><i>IRO-001 will be revised and remain a continent-wide reliability standard. SAR to address:</i></p> <ul style="list-style-type: none"> • <i>remove ", sub-region, or interregional coordinating group" from R1 and</i> • <i>consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.</i> 	<ul style="list-style-type: none"> • <i>May 1, 2007 thru June 11, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization</i> • <i>May 10, 2007 thru January 1, 2008 - SAR development and finalization</i> • <i>November 21, 2007 thru October 27, 2008 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>September 23, 2008 thru January 23, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: April 1, 2009</i>
7	<p>MOD-010 (Steady-State Data for Transmission System Modeling and Simulation)</p> <p>MOD-011 (Regional Steady-State Data Requirements and Reporting Procedures)</p> <p>MOD-012 (Dynamics Data for Transmission System Modeling and Simulation)</p> <p>MOD-013 (RRO Dynamics Data Requirements and Reporting)</p>	Medium	<p><i>MOD-010 and MOD-012 will be revised and remain continent-wide reliability standards.</i></p> <p><i>MOD-011 and MOD-013 will be revised and remain continent-wide reliability standards detailing interconnection-wide requirements.</i></p> <p><i>One SAR will be written to review MOD-010, MOD-011, Mod-012, and MOD-013 for modeling requirements and reporting.</i></p>	<ul style="list-style-type: none"> • <i>May 1, 2007 thru June 11, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization</i> • <i>May 10, 2007 thru January 1, 2008 - SAR development and finalization</i> • <i>November 21, 2007 thru July 10, 2009 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>June 8, 2009 thru October 9, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: January 1, 2010</i>

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
	Procedures)			
8	<p>MOD-016 (Actual and Forecast Demands, Net Energy for Load, Controllable DSM)</p> <p>MOD-017 (Aggregated Actual and Forecast Demands and Net Energy for Load)</p> <p>MOD-019 (Forecasts of Interruptible Demands and DCLM Data)</p>	Medium	<p><i>MOD-016, MOD-017, and MOD-019 will be revised and remain continent-wide reliability standards.</i></p> <p><i>One SAR will be written to review MOD-016, MOD-017, and MOD-019 to develop uniform North American standards for reporting of actual and forecast demand and NEL data to be reported to regional entities for system modeling and analysis.</i></p>	<ul style="list-style-type: none"> • August 1, 2007 thru September 10, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization • August 10, 2007 thru April 2, 2008 - SAR development and finalization • February 21, 2008 thru June 22, 2009 - Process for development of North American Standard through adoption by NERC BOT • May 19, 2009 thru September 21, 2009 - Process for FERC acceptance of North American standard • Effective date of revised NERC standards: October 1, 2009
9	<p>MOD-024 (Verification of Generator Gross and Net Real Power Capability)</p> <p>MOD-025 (Verification of Generator Gross and Net Reactive Power Capability)</p>	Medium	<p><i>MOD-024 and MOD-025 will be revised and remain continent-wide reliability standards.</i></p> <p><i>A SAR will be written to address MOD-024 and MOD-025 to transition to uniform North American standards for generator real and reactive power output verification. Review regional requirements and identify the best practice, commonalities and differences, and whether differences are needed for reliability.</i></p>	<ul style="list-style-type: none"> • August 1, 2007 thru September 10, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization • August 10, 2007 thru April 2, 2008 - SAR development and finalization • February 21, 2008 thru October 12, 2009 - Process for development of North American Standard through adoption by NERC BOT • September 8, 2009 thru January 11, 2010 - Process for FERC acceptance of North American standard • Effective date of revised NERC standards: April 1, 2010
10	PRC-003 (Regional Procedure for	High	<i>PRC-003 and PRC-004 will be revised and remain continent-wide</i>	<ul style="list-style-type: none"> • November 1, 2006 thru January 23, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
	<p>Analysis of Misoperations of Transmission and Generation Protection Systems)</p> <p>PRC-004 (Analysis and Mitigation of Transmission and Generation Protection System Misoperations)</p>		<p>reliability standards.</p> <p>A SAR will be written to review PRC-003 and PRC-004 together to identify the specific requirements of the functional entities. Each of the regional plans needs to be reviewed to determine which requirements should be included in the North American standard.</p>	<p>for finalization</p> <ul style="list-style-type: none"> • December 22, 2006 thru August 16, 2007 - SAR development and finalization • June 6, 2007 thru February 23, 2009 - Process for development of North American Standard through adoption by NERC BOT • January 20, 2009 thru May 25, 2009 - Process for FERC acceptance of North American standard • Effective date of revised NERC standards: July 1, 2009
11	PRC-007 (Assuring Consistency with Regional UFLS Program Requirements)	High	<p>PRC-007 will be revised and remain a continent-wide reliability standard.</p> <p>SAR will be written to change "program" to "standard" IN R1.</p>	<ul style="list-style-type: none"> • February 1, 2007 thru April 25, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization. • March 26, 2007 thru November 15, 2007 - SAR finalization. • October 5, 2007 February 3, 2009 - Process for development of North American Standard through adoption by NERC BOT • December 31, 2008 thru May 5, 2009 - Process for FERC acceptance of North American standard • Effective date of revised NERC standards: July 1, 2009
12	PRC-009 (UFLS Performance Following an Underfrequency Event)	High	<p>PRC-009 will be revised and remain a continent-wide reliability standard.</p> <p>SAR will be written to change "program" to "standard" in R1.</p>	<ul style="list-style-type: none"> • February 1, 2007 thru April 25, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization. • March 26, 2007 thru November 15, 2007 - SAR finalization. • October 5, 2007 February 3, 2009 - Process for development of North American Standard through adoption by NERC BOT • December 31, 2008 thru May 5, 2009 - Process for FERC acceptance of North American standard

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
				<p><i>American standard</i></p> <ul style="list-style-type: none"> • <i>Effective date of revised NERC standards: July 1, 2009</i>
13	<p>PRC-012 (Special Protection System Review Procedure)</p> <p>PRC-013 (Special Protection System Database)</p> <p>PRC-015 (Special Protection System Data and Documentation)</p> <p>PRC-016 (Special Protection System Misoperations)</p>	High	<p><i>PRC-012 will be revised and remain a continent-wide reliability standard supported by regional reliability standards.</i></p> <p><i>PRC-013, PRC-015, and PRC-016 will be revised and remain continent-wide reliability standards.</i></p> <p><i>SAR will be written to review PRC-012, PRC-013 PRC-015, and PRC-016 together to properly reference regional standards.</i></p>	<ul style="list-style-type: none"> • <i>February 1, 2007 thru April 25, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization.</i> • <i>March 26, 2007 thru November 15, 2007 - SAR finalization.</i> • <i>October 5, 2007 February 3, 2009 - Process for development of North American Standard through adoption by NERC BOT</i> • <i>December 31, 2008 thru May 5, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: July 1, 2009</i> • <i>July 1, 2008 thru June 9, 2009 - Regional process or regional standard development through adoption by BOD</i> • <i>May 6, 2009 thru August 18, 2009 - Process for NERC acceptance of regional standard</i> • <i>July 15, 2009 thru November 17, 2009 - Process for FERC acceptance of regional standard</i> • <i>Effective date of regional standards: January 1, 2010</i>
14	TOP-002 (Normal Operations Planning)	High	<p><i>TOP-002 will be revised and remain a continent-wide reliability standard.</i></p> <p><i>SAR will be written to remove "in accordance with NERC, Regional Reliability OrganizationRRO, subregional, and local reliability requirements" from R6 and "in accordance with filed tariffs and/or regional Total Transfer Capability and Available Transfer Capability</i></p>	<ul style="list-style-type: none"> • <i>November 1, 2006 thru January 23, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization</i> • <i>December 23, 2006 thru August 16, 2007 - SAR development and finalization</i> • <i>July 6, 2007 thru February 23, 2009 - Process for development of North American Standard through adoption by</i>

RRSWG SAR	NERC Standards to be Revised	Priority	SAR to Address	Illustrative Timeline
			<i>calculation processes" from R12.</i>	<p><i>NERC BOT</i></p> <ul style="list-style-type: none"> • <i>January 20, 2009 thru May 25, 2009 - Process for FERC acceptance of North American standard</i> • <i>Effective date of revised NERC standards: July 1, 2009</i>
15	<p>FAC-012 (Transfer Capability Methodology)</p> <p>FAC-013 (Establish and Communicate Transfer Capabilities)</p>	Low	<p><i>FAC-012 and FAC-013 will be revised and remain a continent-wide reliability standards.</i></p> <p><i>SAR will be written to remove "required by its Regional Reliability Organization to establish inter-regional and intra-regional Transfer Capabilities" from Applicability section (4.1 and 4.2) of both Fac-012 and FAC-013.</i></p>	<ul style="list-style-type: none"> • <i>November 1, 2007 thru December 12, 2007 the RRSWG will draft SAR and provide to NERC Standards Process Manager for finalization.</i> • <i>November 12, 2007 thru July 3, 2008 - SAR finalization.</i> • <i>May 26, 2008 thru September 23, 2009 - Process for development of North American Standards through adoption by NERC BOT</i> • <i>August 20, 2009 thru December 23, 2009 - Process for FERC acceptance of North American standards</i> • <i>Effective date of revised NERC standards: January 1, 2010</i>

Analysis

The RRSWG began their analysis by reviewing the complete set of NERC Reliability Standards to determine which of the standards had any potential "fill-in-the-blank" characteristics. Of the initial list of 102 standards that were reviewed a list of 55 standards that warranted further discussion and analysis emerged. Attachment 2 lists the 55 NERC Reliability Standards containing language which the RRSWG deemed needed to undergo a more thorough review for potential fill-in-the-blank impacts and/or characteristics. The specific language of concern to the RRSWG is highlighted and the notes and observations of the RRSWG are provided for the 55 standards.

After extensive discussion and review, 29 of the 55 standards were determined to require modification to eliminate "fill-in-the-blank" impacts and/or characteristics.

The RRSWG then discussed the most logical approach for drafting SARs to modify the 29 standards and concluded that the most efficient process would be to strategically draft 15 SARs, seven of which would encompass multiple standards. Further, the RRSWG agreed that separate NERC Standard Drafting Teams would need to be staffed for each of the 15 RRSWG SARs.

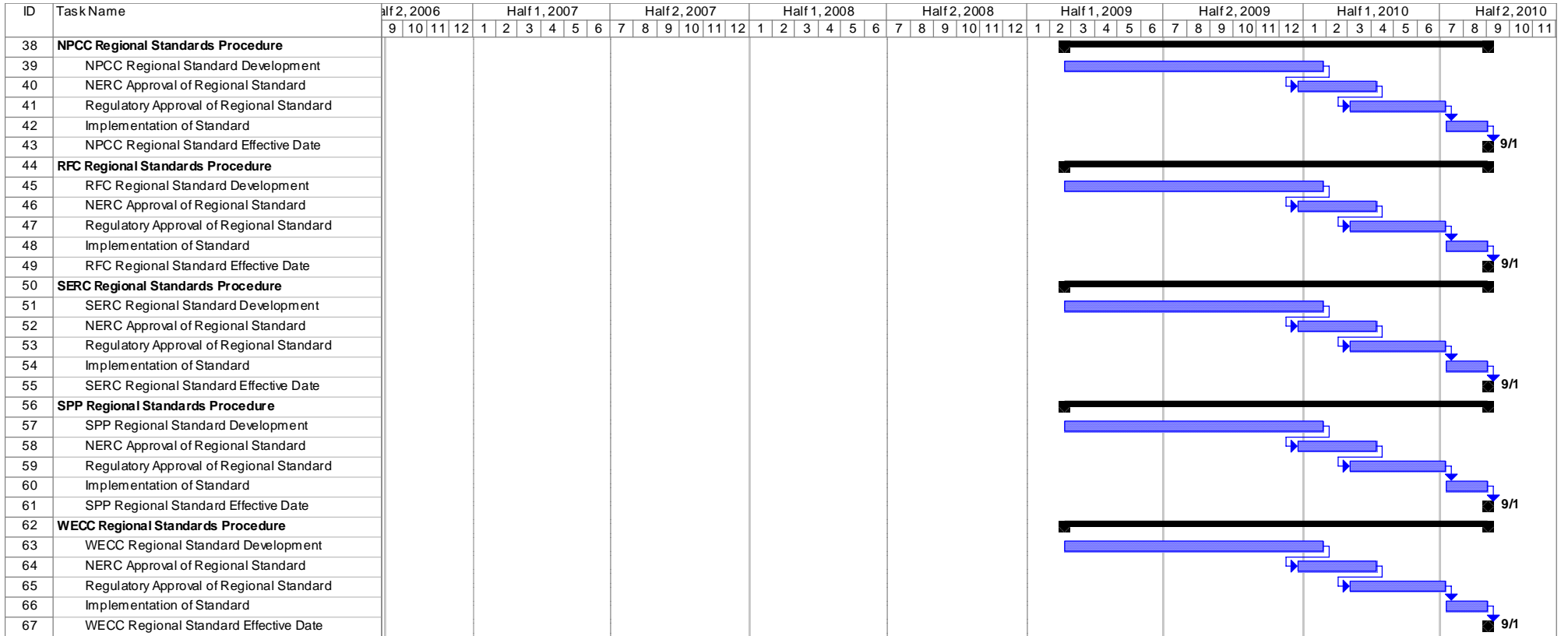
Conclusion

The RRSWG respectfully requests the NERC Board of Trustees to approve the work plan contained in this document. The work plan establishes a systematic methodology for resolving all potential issues surrounding NERC standards that contain "fill-in-the-blank" characteristics in response to concerns raised by FERC Staff.

Attachment 1

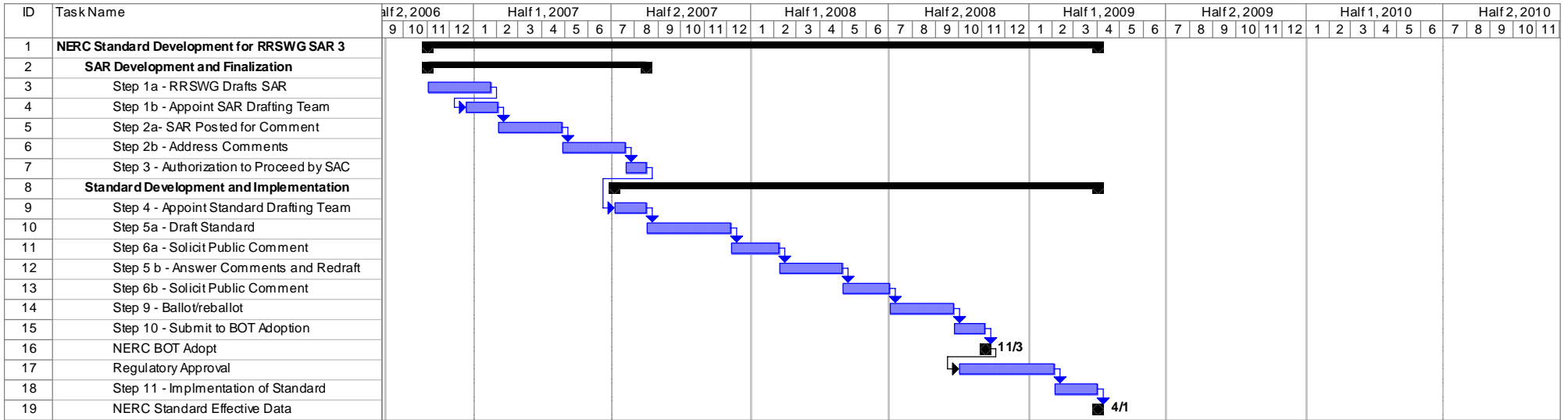
(Illustrative Gantt Charts for Revising Standards)

Gantt Chart for RRSWG SAR 1 (BAL-002-0 - Disturbance Control Performance) (Continued)

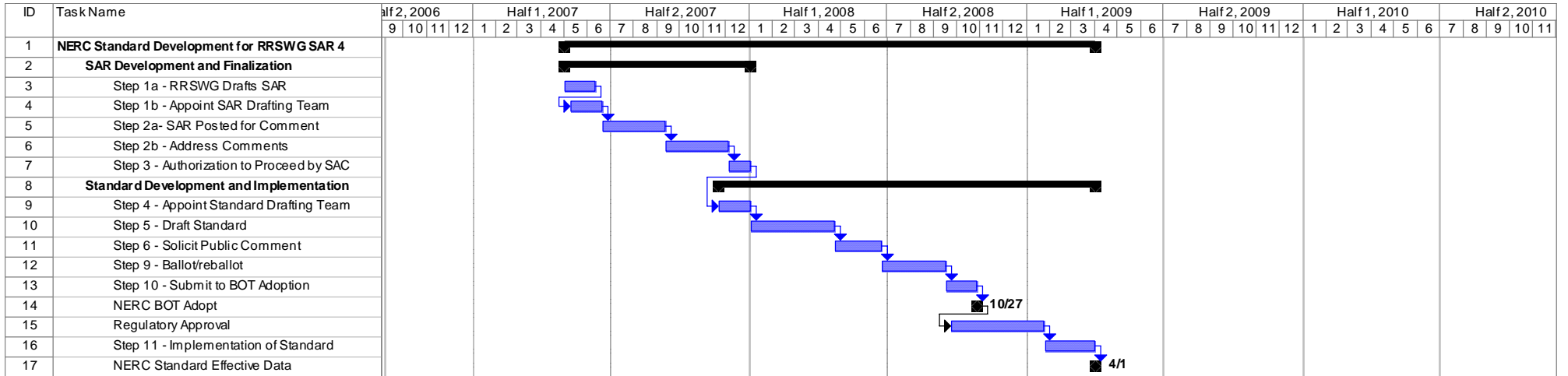


Gantt Chart for RRSWG SAR 3

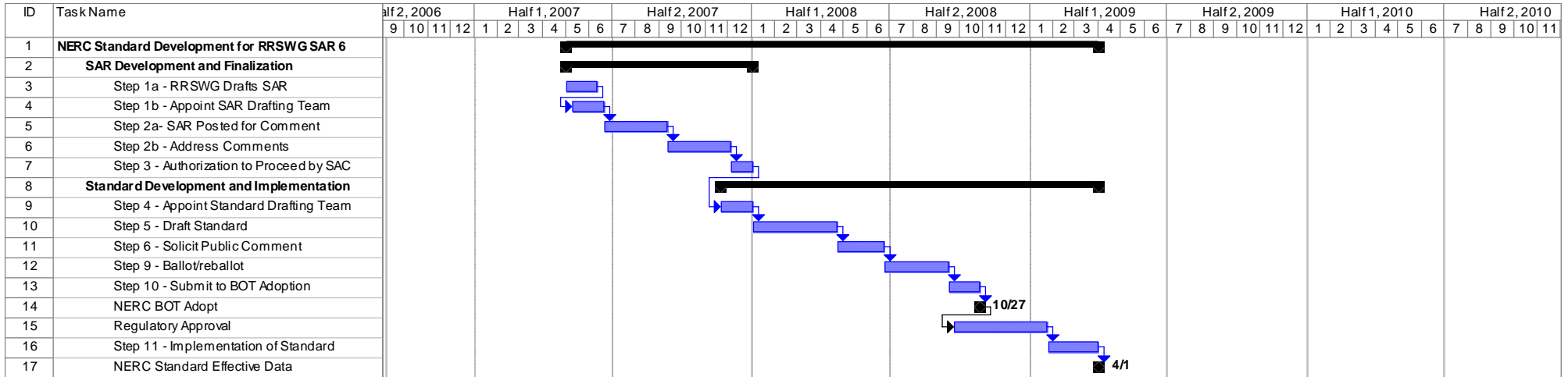
(EOP-005-0 - System Restoration Plans,
 EOP-006-0 - Reliability Coordination — System Restoration,
 EOP-007-0 - Establish, Maintain, and Document a Regional Blackstart Capability Plan,
 & EOP-009-0 - Documentation of Blackstart Generating Unit Test Results)



Gantt Chart for RRSWG SAR 4 (FAC-001 - Facility Connection Requirements)

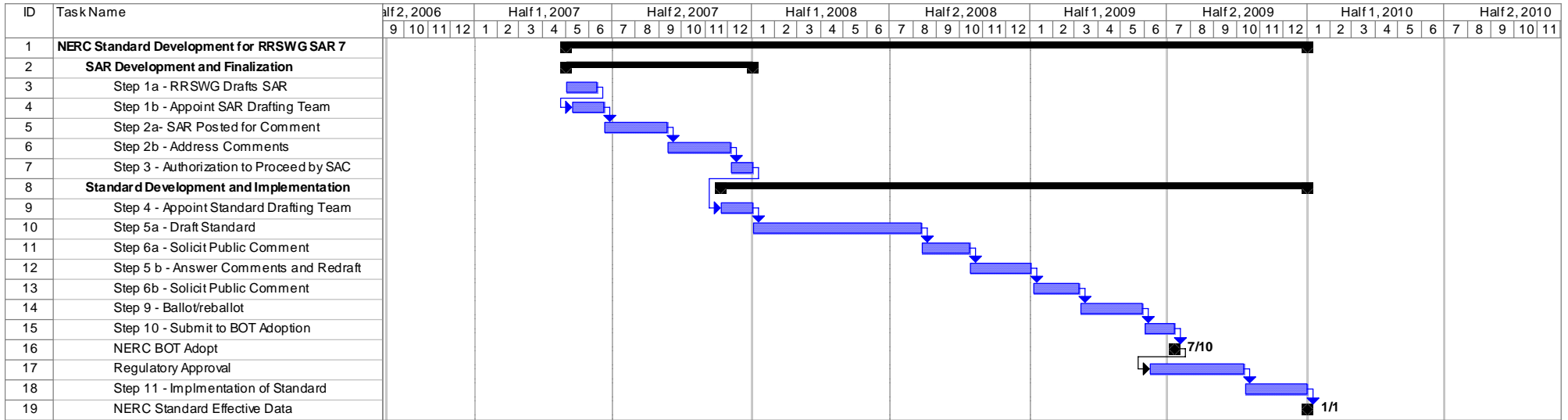


Gantt Chart for RRSWG SAR 6 (IRO-001 - Reliability Coordination — Responsibilities and Authorities)



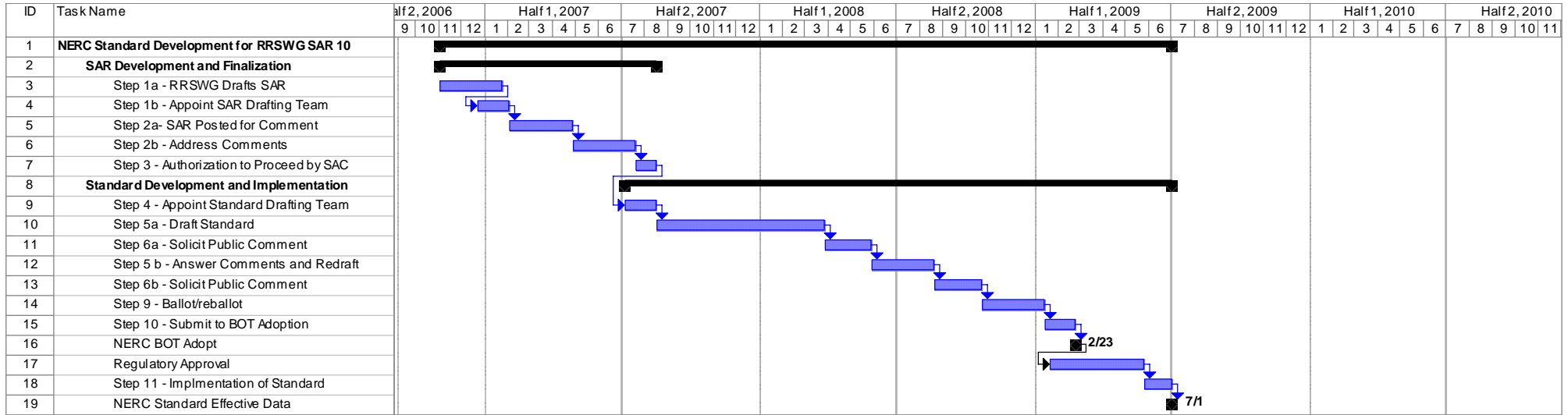
Gantt Chart for RRSWG SAR 7

(MOD-010 - Steady-State Data for Transmission System Modeling and Simulation,
 MOD-011 - Regional Steady-State Data Requirements and Reporting Procedures,
 MOD-012 - Dynamics Data for Transmission System Modeling and Simulation,
 & MOD-013 - RRO Dynamics Data Requirements and Reporting Procedures)



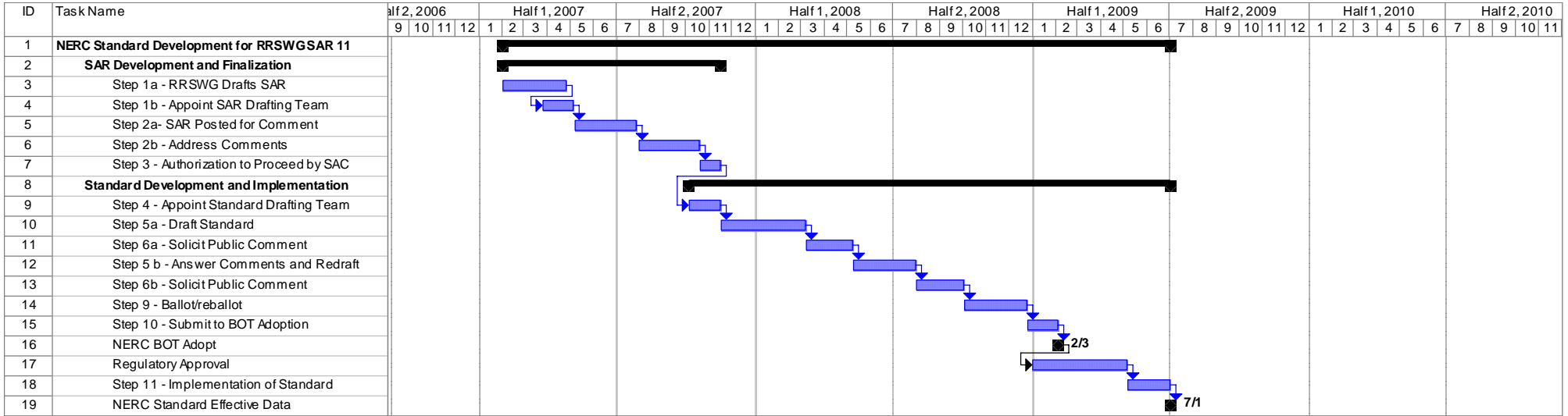
Gantt Chart for RRSWG SAR 10

(PRC-003 - Regional Procedure for Analysis of Misoperations of Transmission and Generation Protection Systems
& PRC-004 - Analysis and Mitigation of Transmission and Generation Protection System Misoperations)

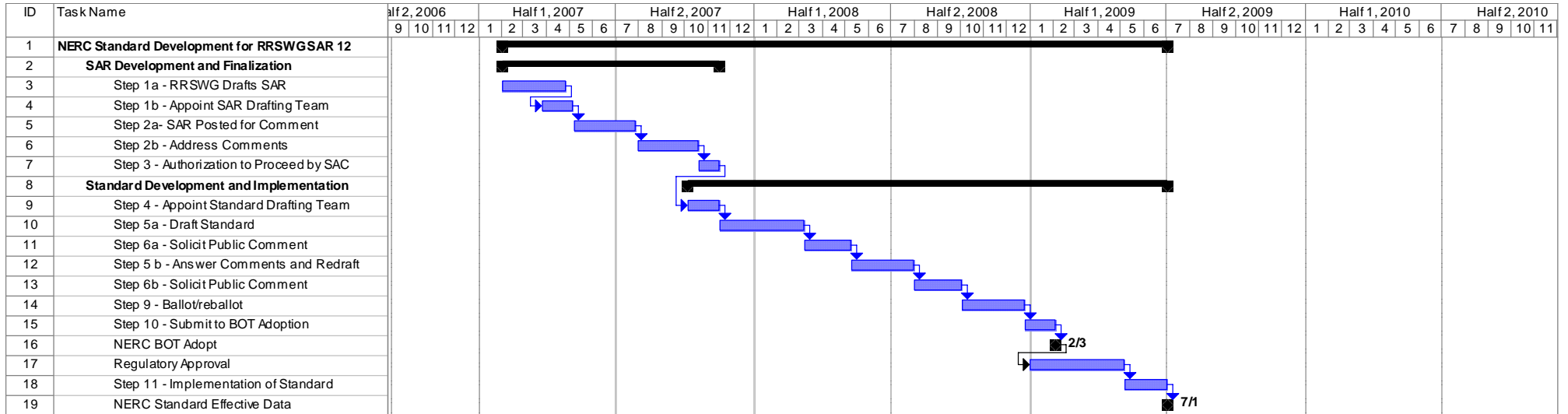


Gantt Chart for RRSWG SAR 11

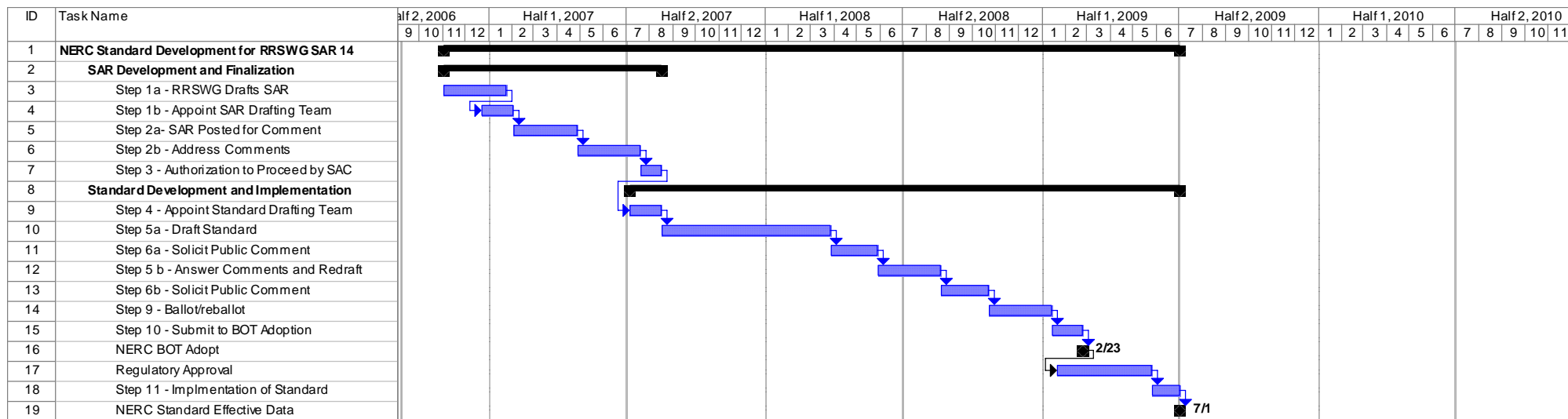
(PRC-007 - Assuring Consistency with Regional UFLS Program Requirements)



Gantt Chart for RRSWG SAR 12 (PRC-009 - UFLS Performance Following an Underfrequency Event)

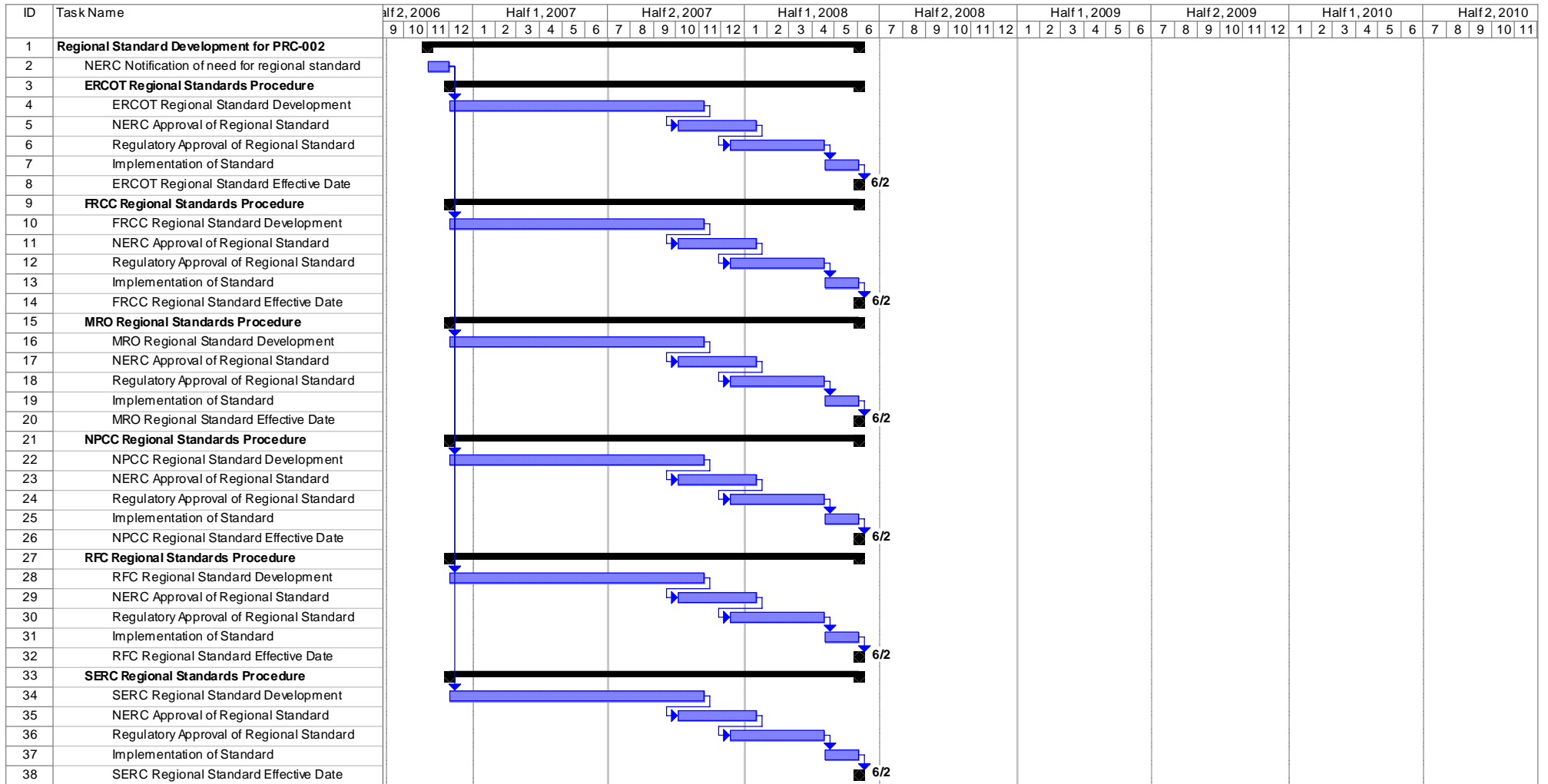


Gantt Chart for RRSWG SAR 14 (TOP-002 - Normal Operations Planning)



Gantt Chart for Regional Standard Development not associated with a RRSWG SAR

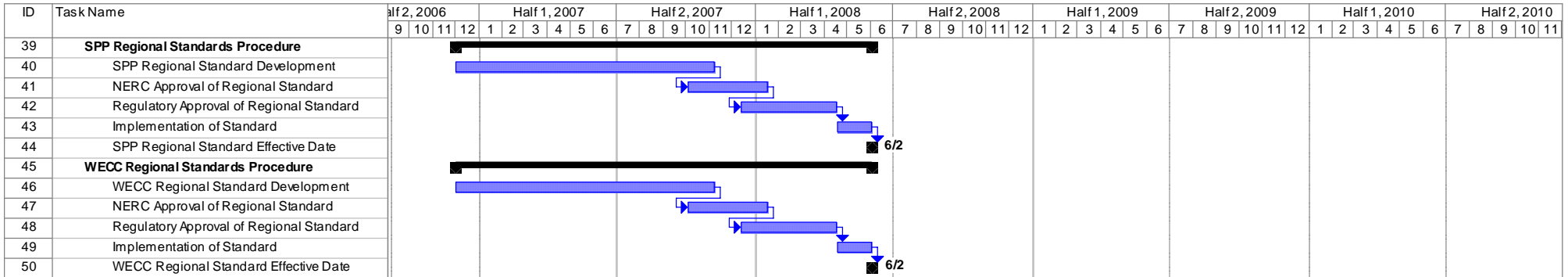
PRC-002 - Define and Document Disturbance Monitoring Equipment Requirements



Gantt Chart for Regional Standard Development not associated with a RRSWG SAR

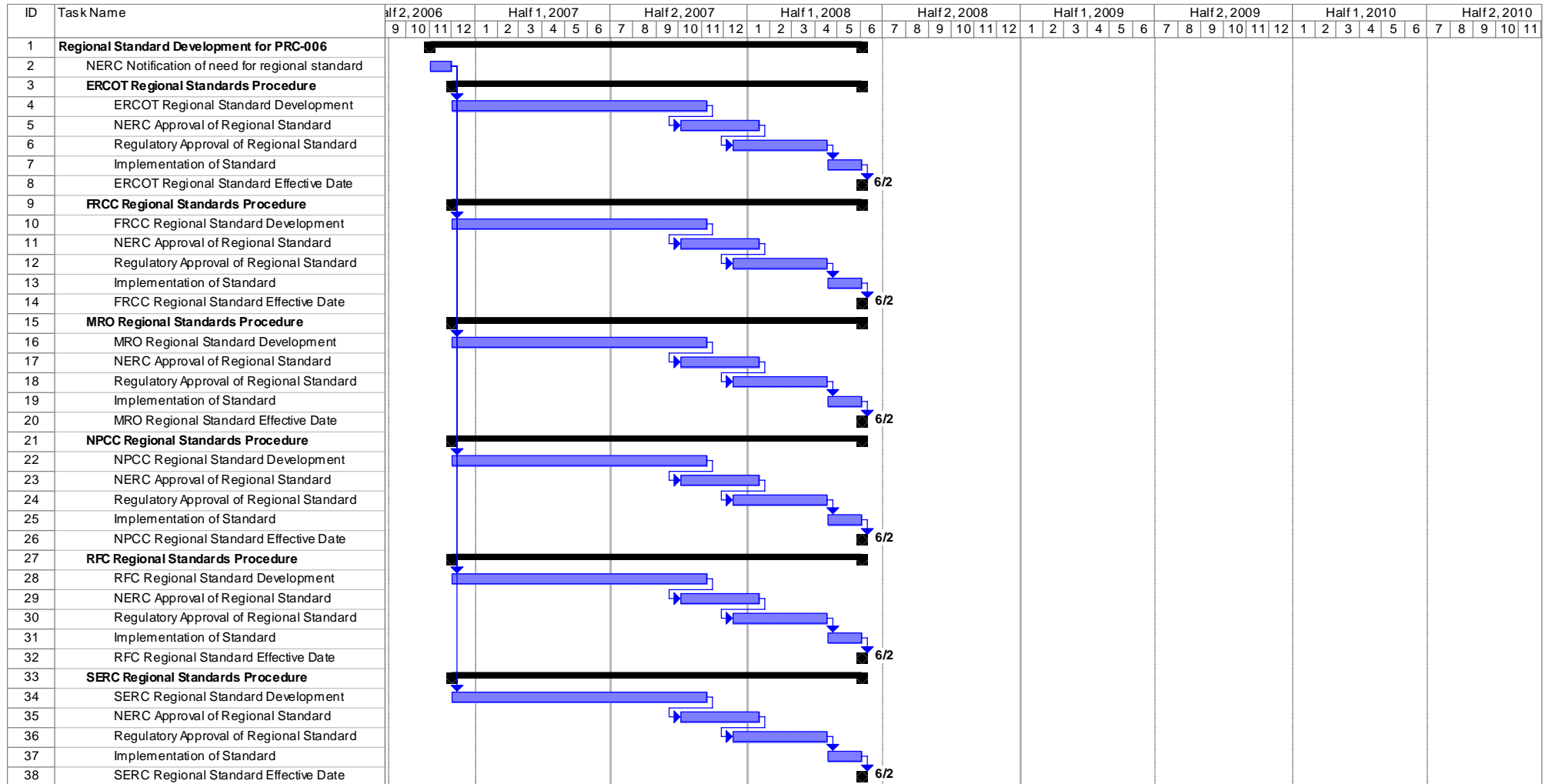
PRC-002 - Define and Document Disturbance Monitoring Equipment Requirements

(Continued)



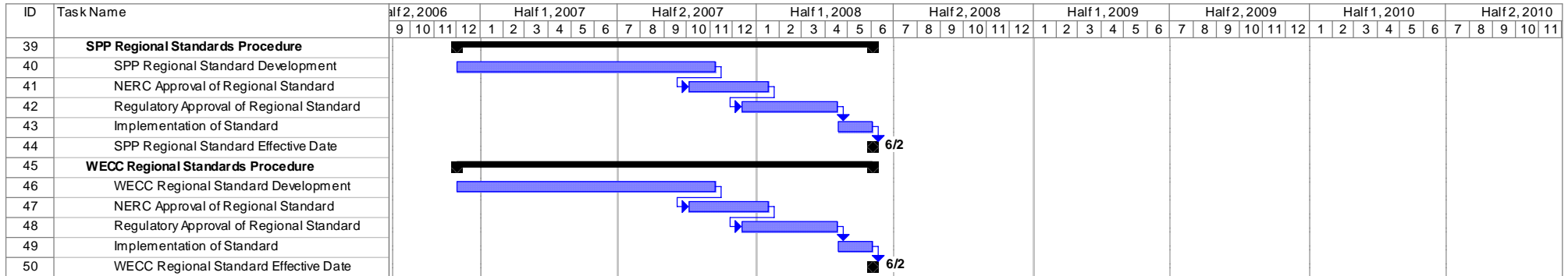
Gantt Chart for Regional Standard Development not associated with a RRSWG SAR

PRC-006 - Development and Documentation of Regional Reliability Organizations' Underfrequency Load Shedding Programs



Gantt Chart for Regional Standard Development not associated with a RRSWG SAR

PRC-006 - Development and Documentation of Regional Reliability Organizations' Underfrequency Load Shedding Programs (Continued)



Attachment 2

(NERC Reliability Standards containing language which the RRSWG reviewed for potential fill-in-the-blank impacts and/or characteristics)

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
<p>BAL-002-0</p> <p>Disturbance Control Performance</p> <p>Taylor</p>	<p>R2. Each Regional Reliability Organization, sub-Regional Reliability Organization or Reserve Sharing Group shall specify its Contingency Reserve policies, including:</p> <p>R 2.1. The minimum reserve requirement for the group.</p> <p>R 2.2. Its allocation among members.</p> <p>R 2.3. The permissible mix of Operating Reserve – Spinning and Operating Reserve – Supplemental that may be included in Contingency Reserve.</p> <p>R 2.4. The procedure for applying Contingency Reserve in practice.</p> <p>R 2.5. The limitations, if any, upon the amount of interruptible load that may be included.</p> <p>R 2.6. The same portion of</p>	<p>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.</p>	<p><i>SAR will be written to modify BAL-002 to:</i></p> <ul style="list-style-type: none"> • <i>address FERC's May 11 comment</i> • <i>modify R2 of the NERC standard to remove reference to "sub-Regional Reliability Organization or Reserve Sharing Group", and</i> • <i>determine what elements of contingency reserve should be included in the North American standard and what elements should be included in the regional standard.</i> <p><i>Regions will begin process for developing regional standard once the drafting team for the North American standard has determined what elements of contingency reserve should be included in the North American</i></p>	<p><i>Priority: High</i></p> <p><i>In the long-term, regional reliability standards will be developed in support of North American standard BAL-002.</i></p> <p><i>Each RRO will need to create a regional standard specifying their Contingency Reserve policy.</i></p> <p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to:</i></p> <ul style="list-style-type: none"> • <i>address FERC's May 11 comments</i> • <i>modify R2 of the NERC standard to remove</i>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	resource capacity (e.g. reserves from jointly owned generation) shall not be counted more than once as Contingency Reserve by multiple Balancing Authorities.		<p><i>standard and what elements should be included in the regional standard.</i></p> <p><i>A revised BAL-002 will become effective as a North American standard and regional standards in support of BAL-002 will become effective.</i></p>	<p><i>reference to "sub-Regional Reliability Organization or Reserve Sharing Group", and</i></p> <ul style="list-style-type: none"> <i>determine what elements of contingency reserve should be included in the North American standard and what elements should be included in the regional standard.</i>
EOP-004-0 Disturbance Reporting Deutsch	R1. Each Regional Reliability Organization shall establish and maintain a regional reporting procedure to facilitate preparation of preliminary and final disturbance reports.	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	<p><i>SAR will be written to modify EOP-004. SAR to:</i></p> <ul style="list-style-type: none"> <i>consider changes to R1 and R3.4 to standardize the disturbance reporting requirements (requirements for disturbance reporting need added to this standard), and</i> <i>modify standard to comply with FERC's concerns identified in the May 11</i> 	<p><i>Priority: Low (Resources are better spent on other issues as this is a reporting issue.)</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A new Version (EOP-004-1) is going to ballot. However, the only change</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		<p>shall prepare this report within 60 days. As a minimum, the 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.</p> <p>The report shall be subject to Regional Reliability Organization approval.</p>	<p><i>report.</i></p> <p><i>A revised EOP-004 will become effective as a North American standard.</i></p>	<p><i>is administrative in referencing the forms to use. The new R1 is unchanged and the new R3.3 contains the same language as the current R3.4.</i></p> <p><i>Regions currently have procedures, but not in the form of a standard. The drafting team will need to review regional requirements to determine reporting requirements for the North American standard.</i></p> <p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to:</i></p> <ul style="list-style-type: none"> <i>• consider changes to R1 and R3.4 to standardize the disturbance reporting requirements</i>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
				<p><i>(requirements for disturbance reporting need added to this standard), and</i></p> <ul style="list-style-type: none"> • <i>modify standard to comply with FERC's concerns identified in the May 11 report.</i>
<p>EOP-005-1</p> <p>System Restoration Plans</p> <p>Millard</p>		<p>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.</p> <p>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</p>	<p><i>One SAR will be written to address EOP-005, EOP-006 EOP-007 and EOP-009. Primarily, references in EOP-005, EOP-006, and EOP-009 to meet RRO/Regional requirements need modified and EOP-007 needs to be more specific.</i></p> <p><i>A revised EOP-005 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>See notes for EOP-007 below.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		include Cranking Path diagrams. 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.		
EOP-006-0 Reliability Coordination – System Restoration Taylor		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.	<p><i>One SAR will be written to address EOP-005, EOP-006 EOP-007 and EOP-009. Primarily, references in EOP-005, EOP-006, and EOP-009 to meet RRO/Regional requirements need modified and EOP-007 needs to be more specific.</i></p> <p><i>A revised EOP-006 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>See notes for EOP-007 below.</i></p>
EOP-007-0 Establish,	R1. Each Regional Reliability Organization shall establish and maintain a system [Black Start Capability Plan], as part of an		<p><i>One SAR will be written to address EOP-005, EOP-006 EOP-007 and EOP-009. Primarily, references in EOP-</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
<p>Maintain, and Document a Regional Blackstart Capability Plan.</p> <p>Millard</p>	<p>overall coordinated Regional System Restoration Plan]. The Regional SRP shall include requirements for verification through analysis how system black start generating units shall perform their intended functions and shall be sufficient to meet SRP expectations. The Regional Reliability Organization shall coordinate with and among other Regional Reliability Organizations as appropriate in the development of its BCP. The BCP shall include:</p> <p>R 1.1. A requirement to have a database that contains all blackstart generators designated for use in an SRP within the respective areas. This database shall be updated on an annual basis. The database shall include the name, location, megawatt capacity, type of unit,</p>		<p><i>005, EOP-006, and EOP-009 to meet RRO/Regional requirements need modified and EOP-007 needs to be more specific.</i></p> <p><i>A revised EOP-007 will become effective as a North American standard.</i></p>	<p><i>should be a North American Standard.</i></p> <p><i>This is currently a fill-in-the-blank standard tied to EOP-005, EOP-006, and EOP-009; every region should have procedures currently in place required by EOP-007-0; question why this is even an RRO function; they are not operating entities, should be RCs and operating entities that have the black start plan; black start plans need to be coordinated regionally. Consider to retire EOP-007 and move these elements to EOP-005; EOP-006; and EOP-009. That would remove fill-in-blank elements. Still may need to evaluate role of RRO.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>latest date of test, and starting method.</p> <p>R 1.2. A requirement to demonstrate that blackstart units perform their intended functions as required in the Regional SRP. This requirement can be met through either simulation or testing. The BCP must consider the availability of designated BCP units and initial transmission switching requirements.</p> <p>R 1.3. Blackstart unit testing requirements including, but not limited to:</p> <p>R 1.3.1. Testing frequency (minimum of one third of the units each year).</p> <p>R 1.3.2. Type of test required, including the requirement to start when isolated from the system.</p>			<p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to:</i></p> <ul style="list-style-type: none"> • <i>consider rewording of references in EOP-005, EOP-006, and EOP-009 to RRO/regional requirements and</i> • <i>define the specific requirements for R 1.2, R 1.3, etc. and either clearly define in EOP-007 or retire EOP-007 and place specific requirements in EOP-005, EOP-006, and EOP-009.</i>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>R 1.3.3. Minimum duration of tests.</p> <p>R 1.4. A requirement to review and update the Regional BCP at least every five years.</p> <p>R2. The Regional Reliability Organization shall provide documentation of its system BCPs to NERC within 30 calendar days of a request.</p>			
<p>EOP-009-0</p> <p>Documentation of Blackstart Generating Unit Test Results</p> <p>Millard</p>		<p>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.</p> <p>R2. The Generator Owner or</p>	<p><i>One SAR will be written to address EOP-005, EOP-006 EOP-007 and EOP-009. Primarily, references in EOP-005, EOP-006, and EOP-009 to meet RRO/Regional requirements need modified and EOP-007 needs to be more specific.</i></p> <p><i>A revised EOP-005 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>See notes for EOP-007 below.</i></p> <p><i>Additionally, consider developing testing requirements on a national basis – this</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		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.		<i>should not be a long term process since this is well established across the regions. The longer term task is isolating the restoration issues in the various standards as described in the EOP-007 write-up to merge into a new NERC standard which then establishes which units are Blackstart. This standard could be written independent of the units identity and focus on testing of any Blackstart unit.</i>
FAC-001-0 Facility Connection Requirements Odom		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	<i>One SAR will be written to remove superfluous and/or unnecessary language or make minor changes to wording for a number of standards and FAC-001 should be included in this work. SAR to remove the phrase "to ensure compliance with</i>	<i>Priority: Quick and Easy</i> <i>In the long-term, this should be a North American Standard.</i> <i>The RRSWG should draft</i>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		<p>Pool, and individual Transmission Owner planning criteria and facility connection requirements.</p> <p>The Transmission Owner's facility connection requirements shall address connection requirements for:</p> <p>R 1.1. Generation facilities, R 1.2. Transmission facilities, and R 1.3. End-user facilities</p>	<p><i>NERC Reliability Standards and applicable Regional Reliability Organization, subregional, Power Pool, and individual Transmission Owner planning criteria and facility connection requirements".</i></p> <p><i>A revised FAC-001 will become effective as a North American standard.</i></p>	<p><i>a SAR to review and upgrade the NERC standard. SAR to remove the phrase "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".</i></p>
<p>FAC-002-0</p> <p>Coordination of Plans For New Generation, Transmission, and End-User</p> <p>Odom</p>		<p>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:</p> <p>R 1.1. Evaluation of the</p>	<p><i>SAR will be written to modify FAC-002 to:</i></p> <ul style="list-style-type: none"> • <i>remove " and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements" from R1.2</i> • <i>consider concerns identified in FERC's May 11 report (fix the typo)</i> • <i>consider removing/</i> 	<p><i>Priority: Low</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to:</i></p> <ul style="list-style-type: none"> • <i>remove " and</i>

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		<p>reliability impact of the new facilities and their connections on the interconnected transmission systems.</p> <p>R 1.2. Ensurance of compliance with NERC Reliability Standards and applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements.</p> <p>R 1.3. 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</p>	<p><i>modifying R1.4, as it is redundant with the TPL standard,</i></p> <ul style="list-style-type: none"> • <i>coordinate with FAC-001, and</i> • <i>review FERC rule on interconnecting generators and see what parts impact this standard.</i> <p><i>A revised FAC-002 will become effective as a North American standard.</i></p>	<p><i>applicable Regional, subregional, Power Pool, and individual system planning criteria and facility connection requirements" from R1.2</i></p> <ul style="list-style-type: none"> • <i>consider concerns identified in FERC's May 11 report (fix the typo)</i> • <i>consider removing/modifying R1.4, as it is redundant with the TPL standard,</i> • <i>coordinate with FAC-001, and</i> • <i>review FERC rule on interconnecting generators and see what parts impact this standard.</i>

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		<p>shall be jointly evaluated and coordinated by the entities involved.</p> <p>R 1.4. 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.</p> <p>R 1.5. Documentation that the assessment included study assumptions, system performance, alternatives considered, and jointly coordinated recommendations.</p>		
FAC-004-0 Methodologies for Determining Electrical		R1. The Transmission Owner and Generator Owner shall each document the methodology(ies) used to determine its electrical equipment and Facility Rating. Further, the methodology(ies) shall comply with applicable	None.	<i>NERC Standard FAC-004-0 has been retired. Replacement FAC-008 does not have the fill-in-the-blank requirements /implications.</i>

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Facility Ratings		<p>Regional Reliability Organization requirements. The documentation shall address and include:</p> <p>R 1.1. The methodology(ies) used to determine equipment and Facility Rating of the items listed for both normal and emergency conditions:</p> <p>R 1.1.1. Transmission circuits.</p> <p>R 1.1.2. Transformers.</p> <p>R 1.1.3. Series and shunt reactive elements.</p> <p>R 1.1.4. Terminal equipment (e.g., switches, breakers, current transformers, etc).</p> <p>R 1.1.5. VAR compensators.</p> <p>R 1.1.6. High voltage direct current converters.</p> <p>R 1.1.7. Any other device listed as a Limiting Element.</p> <p>R 1.2. The Rating of a facility shall not exceed the</p>		

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		<p>Rating(s) of the most Limiting Element(s) in the circuit, including terminal connections and associated equipment.</p> <p>R 1.3. In cases where protection systems and control settings constitute a loading limit on a facility, this limit shall become the Rating for that facility.</p> <p>R 1.4. Ratings of jointly-owned and jointly-operated facilities shall be coordinated among the joint owners and joint operators resulting in a single set of Ratings.</p> <p>R 1.5. The documentation shall identify the assumptions used to determine each of the equipment and Facility Ratings, including references to industry Rating practices and standards (e.g., ANSI, IEEE, etc.). Seasonal</p>		

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		Ratings and variations in assumptions shall be included.		
FAC-012-1 Transfer Capability Methodology		<p>4. Applicability</p> <p>4.1. Reliability Coordinator required by its Regional Reliability Organization to establish inter-regional and intra-regional Transfer Capabilities</p> <p>4.2. Planning Authority required by its Regional Reliability Organization to establish interregional and intra-regional Transfer Capabilities</p>	<p><i>SAR will be written to remove “required by its Regional Reliability Organization to establish inter-regional and intra-regional Transfer Capabilities “from Applicability section (4.1 and 4.2) of both Fac-012 and FAC-013.</i></p> <p><i>A revised FAC-012 will become effective as a North American standard.</i></p>	<p><i>Both FAC-012-1 and FAC-013-1 were approved at the August 2 BOT meeting. FAC-012-1 became effective August 7, 2006 and FAC-013-1 will become effective October 7, 2006. Since these standards were not effective in May of this year when the RRSWG was created, the RRSWG did not include these standards in the original “fill-in-the-blank” analysis. These standards were added to the work plan after the RRSWG meeting of September 11-12 in Williamsburg, VA.</i></p>

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<p>FAC-013-1</p> <p>Establish and Communicate Transfer Capabilities</p>		<p>4. Applicability</p> <p>4.1. Reliability Coordinator required by its Regional Reliability Organization to establish inter-regional and intra-regional Transfer Capabilities</p> <p>4.2. Planning Authority required by its Regional Reliability Organization to establish interregional and intra-regional Transfer Capabilities</p>	<p><i>SAR will be written to remove “required by its Regional Reliability Organization to establish inter-regional and intra-regional Transfer Capabilities” from Applicability section (4.1 and 4.2) of both Fac-012 and FAC-013.</i></p> <p><i>A revised FAC-013 will become effective as a North American standard.</i></p>	<p><i>Both FAC-012-1 and FAC-013-1 were approved at the August 2 BOT meeting. FAC-012-1 became effective August 7, 2006 and FAC-013-1 will become effective October 7, 2006. Since these standards were not effective in May of this year when the RRSWG was created, the RRSWG did not include these standards in the original “fill-in-the-blank” analysis. These standards were added to the work plan after the RRSWG meeting of September 11-12 in Williamsburg, VA.</i></p>
<p>IRO-001-0</p> <p>Reliability Coordination</p>	<p>R1. Each Regional Reliability Organization, sub-region, or interregional coordinating group shall establish one or more Reliability Coordinators to</p>		<p><i>One SAR will be written to remove superfluous and/or unnecessary language or make minor changes to wording for a number of standards and IRO-</i></p>	<p><i>Priority: Quick and Easy</i></p> <p><i>In the long-term, this should be a North</i></p>

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<p>– Responsibilities and Authorities</p> <p>Deutsch</p>	<p>continuously assess transmission reliability and coordinate emergency operations among the operating entities within the region and across the regional boundaries.</p>		<p><i>001 should be included in this work. SAR to:</i></p> <ul style="list-style-type: none"> • <i>remove ", sub-region, or interregional coordinating group" from R1 and</i> • <i>consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.</i> <p><i>A revised IRO-001 will become effective as a North American standard.</i></p>	<p><i>American Standard.</i></p> <p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to:</i></p> <ul style="list-style-type: none"> • <i>remove ", sub-region, or interregional coordinating group" from R1 and</i> • <i>consider removing "Standards of conduct are necessary to ensure the Reliability Coordinator does not act in a manner that favors one market participant over another." from the Purpose section of the standard.</i>
<p>IRO-005-1</p> <p>Reliability Coordination</p>		<p>R14. Each Reliability Coordinator shall make known to Transmission Service Providers within its Reliability</p>	<p><i>None.</i></p>	<p><i>The notes in FERC's May 11 report state " NERC has indicated that this standard will be modified</i></p>

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<p>— Current Day Operations</p> <p>Taylor</p>		<p>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.</p>		<p><i>to address this deficiency and resubmitted for Commission approval in November 2006." The RRSWG does not need to proceed with work on this standard.</i></p> <p><i>D. Taylor need to confirm whom at NERC is responsible for revising this standard per FERC's comment.</i></p>
<p>MOD-001-0</p> <p>Documentation of Total Transfer Capability and Available Transfer Capability Calculation Methodologies</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TTC and ATC methodology. (Certain systems that are not required to post ATC values are exempt from this standard.) The Regional Reliability Organization's TTC and ATC methodology shall include each of the following nine items, and shall explain its use in determining TTC and ATC</p>		<p><i>None.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-blank" characteristics.</i></p> <p><i>Related to FAC-012 and FAC-013 (new standards).</i></p>

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Taylor	<p>values:</p> <p>R 1.1. A narrative explaining how TTC and ATC values are determined.</p> <p>R 1.2. An accounting for how the reservations and schedules for firm (non-recallable) and non-firm (recallable) transfers, both within and outside the Transmission Service Provider's system, are included.</p> <p>R 1.3. An accounting for the ultimate points of power injection (sources) and power extraction (sinks) in TTC and ATC calculations.</p> <p>R 1.4. A description of how incomplete or so-called partial path transmission reservations are addressed. (Incomplete or partial path transmission reservations are those</p>			<p><i>Those more generally address transfer capabilities instead of ATC/TTC. FAC-012 and FAC-013 also appear to be fill-in-the-blank because of reference in applicability section to RRO. Need to look at FAC-012 and FAC-013 to modify applicability section.</i></p> <p><i>MOD-002 is the related standard; however it is stated in reverse format by saying the RRO must ensure compliance within the region to the ATC/TTC methodology.</i></p> <p><i>Every region has something that met these criteria; reviewed by NERC subgroup.</i></p> <p><i>Refer these standards to</i></p>

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	<p>for which all transmission reservations necessary to complete the transmission path from ultimate source to ultimate sink are not identifiable due to differing reservation priorities, durations, or because the reservations have not all been made.)</p> <p>R 1.5. A requirement that TTC and ATC values shall be determined and posted as follows:</p> <p>R 1.5.1. Daily values for current week at least once per day.</p> <p>R 1.5.2. Daily values for day 8 through the first month at least once per week.</p> <p>R 1.5.3. Monthly values for months 2 through 13 at least once per month.</p> <p>R 1.6. Indication of the treatment and level of</p>			<p><i>the ATC/TTC drafting team to sort out reliability components and business practices; include this material in that review; correct the applicability issues; should method be provided by PA or RC or RRO?</i></p> <p><i>Is there no standard for entities to use the RRO method? Should the RRO be required to submit existing method? What would be gained? Open question whether to do regional standards now until the NERC standards are updated.</i></p> <p><i>Dave Taylor discussed the work of the RRSWG with Bill Blevins who is leading the effort to revise MOD-001 thru MOD-009. Bill agreed to have the</i></p>

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	<p>customer demands, including interruptible demands.</p> <p>R 1.7. A specification of how system conditions, limiting facilities, contingencies, transmission reservations, energy schedules, and other data needed by Transmission Service Providers for the calculation of TTC and ATC values are shared and used within the Regional Reliability Organization and with neighboring interconnected electric systems, including adjacent systems, subregions, and Regional Reliability Organizations. In addition, specify how this information is to be</p>			<p><i>RRSWG review the revised standards at an appropriate point in the drafting process.</i></p>

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	<p>used to determine TTC and ATC values. If some data is not used, provide an explanation.</p> <p>R 1.8. A description of how the assumptions for and the calculations of TTC and ATC values change over different time (such as hourly, daily, and monthly) horizons.</p> <p>R 1.9. A description of the Regional Reliability Organization's practice on the netting of transmission reservations for purposes of TTC and ATC determination.</p>			
<p>MOD-002-0</p> <p>Review of Transmission Service Provider Total Transfer</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to periodically review (at least annually) and ensure that the TTC and ATC calculations and resulting values of member</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to periodically review (at least annually) and ensure that the TTC and ATC calculations and resulting values of member</p>	<p><i>None.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-</i></p>

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<p>Capability and Available Transfer Capability Calculations and Results</p> <p>Taylor</p>	<p>Transmission Service Providers comply with the Regional TTC and ATC methodology and applicable Regional criteria.</p>	<p>Transmission Service Providers comply with the Regional TTC and ATC methodology and applicable Regional criteria.</p>		<p><i>blank" characteristics. Refer to MOD-001 above.</i></p>
<p>MOD-003-0</p> <p>Regional Procedure for Input on Total Transfer Capability and Available Transfer Capability Methodologies and Values</p> <p>Taylor</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a procedure on how transmission users can input their concerns or questions regarding the TTC and ATC methodology and values of the Transmission Service Provider(s), and how these concerns or questions will be addressed. The Regional Reliability Organization's procedure shall specify the following:</p> <p>R 1.1. The name, telephone number and email address of a contact</p>		<p><i>None.</i></p>	<p><i>In the long-term, this should be a North American Standard. A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-blank" characteristics. Refer to MOD-001 above.</i></p>

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	<p>person to whom concerns are to be addressed.</p> <p>R 1.2. The amount of time it will take for a response.</p> <p>R 1.3. The manner in which the response will be communicated (e.g., email, letter, telephone, etc).</p> <p>R 1.4. What recourse a customer has if the response is deemed unsatisfactory.</p> <p>R2. The Regional Reliability Organization shall post on a web site that is accessible by the Regional Reliability Organizations, NERC, and transmission users, its procedure for receiving and addressing concerns about the TTC and ATC methodology and TTC and ATC values of member Transmission Service Providers.</p>			
MOD-004-0	R1. Each Regional Reliability Organization, in conjunction with	R1. Each Regional Reliability Organization, in conjunction with	<i>None.</i>	<i>In the long-term, this should be a North</i>

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<p>Documentation of Regional Reliability Organization Capacity Benefit Margin Methodologies</p> <p>Taylor</p>	<p>its members, shall develop and document a Regional CBM methodology. The Regional Reliability Organization's CBM methodology shall include each of the following ten items, and shall explain its use in determining CBM value. Other items that are Regional Reliability Organization specific or that are considered in each respective Regional Reliability Organization methodology shall also be explained along with their use in determining CBM values.</p> <p>R 1.1. Specify that the method used by each Regional Reliability Organization member to determine its generation reliability requirements as the basis for CBM shall be consistent with its generation planning criteria.</p> <p>R 1.2. Specify the frequency of calculation of the</p>	<p>its members, shall develop and document a Regional CBM methodology. The Regional Reliability Organization's CBM methodology shall include each of the following ten items, and shall explain its use in determining CBM value. Other items that are Regional Reliability Organization specific or that are considered in each respective Regional Reliability Organization methodology shall also be explained along with their use in determining CBM values.</p> <p>R 1.1. Specify that the method used by each Regional Reliability Organization member to determine its generation reliability requirements as the basis for CBM shall be consistent with its generation planning criteria.</p> <p>R 1.2. Specify the frequency of calculation of the</p>		<p><i>American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-blank" characteristics.</i></p> <p><i>Refer to MOD-001 above.</i></p>

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	<p>R 1.3. generation reliability requirement and associated CBM values. Require that generation unit outages considered in a Transmission Service Provider's CBM calculation be restricted to those units within the Transmission Service Provider's system.</p> <p>R 1.4. Require that CBM be preserved only on the Transmission Service Provider's System where the Load-Serving Entity's Load is located (i.e., CBM is an import quantity only).</p> <p>R 1.5. Describe the inclusion or exclusion rationale for generation resources of each Load- Serving Entity including those generation resources not directly connected to the Transmission Service</p>	<p>R 1.3. generation reliability requirement and associated CBM values. Require that generation unit outages considered in a Transmission Service Provider's CBM calculation be restricted to those units within the Transmission Service Provider's system.</p> <p>R 1.4. Require that CBM be preserved only on the Transmission Service Provider's System where the Load-Serving Entity's Load is located (i.e., CBM is an import quantity only).</p> <p>R 1.5. Describe the inclusion or exclusion rationale for generation resources of each Load- Serving Entity including those generation resources not directly connected to the Transmission Service</p>		

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	<p>R 1.6. Provider's system but serving Load-Serving Entity loads connected to the Transmission Service Provider's system.</p> <p>R 1.7. Describe the inclusion or exclusion rationale for generation connected to the Transmission Service Provider's system but not obligated to serve Native/Network Load connected to the Transmission Service Provider's system.</p> <p>R 1.7. Describe the formal process and rationale for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional Reliability Organization's CBM methodology.</p>	<p>R 1.6. Provider's system but serving Load-Serving Entity loads connected to the Transmission Service Provider's system.</p> <p>R 1.6. Describe the inclusion or exclusion rationale for generation connected to the Transmission Service Provider's system but not obligated to serve Native/Network Load connected to the Transmission Service Provider's system.</p> <p>R 1.7. Describe the formal process and rationale for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional Reliability Organization's CBM methodology.</p> <p>R 1.8. Specify the relationship</p>		

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	<p>R 1.8. Specify the relationship of CBM to the generation reliability requirement and the allocation of the CBM values to the appropriate transmission facilities. The sum of the CBM values allocated to all interfaces shall not exceed that portion of the generation reliability requirement that is to be provided by outside resources.</p> <p>R 1.9. Describe the inclusion or exclusion rationale for the loads of each Load-Serving Entity, including interruptible demands and buy-through contracts (type of service contract that offers the customer the option to be interrupted or to accept a higher rate for service under</p>	<p>of CBM to the generation reliability requirement and the allocation of the CBM values to the appropriate transmission facilities. The sum of the CBM values allocated to all interfaces shall not exceed that portion of the generation reliability requirement that is to be provided by outside resources.</p> <p>R 1.9. Describe the inclusion or exclusion rationale for the loads of each Load-Serving Entity, including interruptible demands and buy-through contracts (type of service contract that offers the customer the option to be interrupted or to accept a higher rate for service under certain conditions).</p>		

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>certain conditions).</p> <p>R 1.10. Describe the inclusion or exclusion rationale for generation reserve sharing arrangements in the CBM values.</p> <p>R2. The Regional Reliability Organization shall make the most recent version of the documentation of its CBM methodology available on a website accessible by NERC, the Regional Reliability Organizations, and transmission users.</p>	<p>R 1.10. Describe the inclusion or exclusion rationale for generation reserve sharing arrangements in the CBM values.</p>		
<p>MOD-005-0</p> <p>Procedure for Verifying Capacity Benefit Margin Values</p> <p>Taylor</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review (at least annually) the CBM calculations and the resulting values of member Transmission Service Providers to ensure that they comply with the Regional Reliability Organization's CBM methodology. The procedure shall include the following four</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review (at least annually) the CBM calculations and the resulting values of member Transmission Service Providers to ensure that they comply with the Regional Reliability Organization's CBM methodology. The procedure shall include the following four</p>	<p><i>None.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-blank" characteristics.</i></p> <p><i>Refer to MOD-001 above.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>requirements:</p> <p>R 1.1. Indicate the frequency under which the verification review shall be implemented.</p> <p>R 1.2. Require review of the process by which CBM values are updated, and their frequency of update, to ensure that the most current CBM values are available to transmission users.</p> <p>R 1.3. Require review of the consistency of the Transmission Service Provider's CBM components with its published planning criteria. A CBM value is considered consistent with published planning criteria if the components that comprise CBM are addressed in the planning criteria. The</p>	<p>requirements:</p> <p>R 1.1. Indicate the frequency under which the verification review shall be implemented.</p> <p>R 1.2. Require review of the process by which CBM values are updated, and their frequency of update, to ensure that the most current CBM values are available to transmission users.</p> <p>R 1.3. Require review of the consistency of the Transmission Service Provider's CBM components with its published planning criteria. A CBM value is considered consistent with published planning criteria if the components that comprise CBM are addressed in the planning criteria. The</p>		

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	<p>methodology used to determine and apply CBM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumptions explained.</p> <p>R 1.4. Require CBM values to be periodically updated (at least annually) and available to the Regional Reliability Organizations, NERC, and transmission users.</p> <p>R 2. Each Regional Reliability Organization shall document its CBM procedure and shall make its CBM review procedure available to NERC on request (within 30 calendar days).</p> <p>R 3. The Regional Reliability Organization shall provide documentation of the results of the most current implementation</p>	<p>methodology used to determine and apply CBM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumptions explained.</p> <p>R 1.4. Require CBM values to be periodically updated (at least annually) and available to the Regional Reliability Organizations, NERC, and transmission users.</p>		

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	of its CBM review procedure to NERC on request (within 30 calendar days).			
<p>MOD-008-0</p> <p>Documentation and Content of Each Regional Transmission Reliability Margin Methodology</p> <p>Taylor</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TRM methodology. The Region's TRM methodology shall specify or describe each of the following five items, and shall explain its use, if any, in determining TRM values. Other items that are Region-specific or that are considered in each respective Regional methodology shall also be explained along with their use in determining TRM values.</p> <p>R 1.1. Specify the update frequency of TRM calculations.</p> <p>R 1.2. Specify how TRM values are incorporated into Available Transfer Capability calculations.</p> <p>R 1.3. Specify the uncertainties accounted for in TRM</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and document a Regional TRM methodology. The Region's TRM methodology shall specify or describe each of the following five items, and shall explain its use, if any, in determining TRM values. Other items that are Region-specific or that are considered in each respective Regional methodology shall also be explained along with their use in determining TRM values.</p> <p>R 1.1. Specify the update frequency of TRM calculations.</p> <p>R 1.2. Specify how TRM values are incorporated into Available Transfer Capability calculations.</p> <p>R 1.3. Specify the uncertainties accounted for in TRM</p>	<p><i>None.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-blank" characteristics.</i></p> <p><i>Refer to MOD-001 above.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>and the methods used to determine their impacts on the TRM values. Any component of uncertainty, other than those identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, shall benefit the interconnected transmission systems as a whole before they shall be permitted to be included in TRM calculations. The components of uncertainty identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, if applied, shall be accounted for solely in TRM and not CBM.</p> <p>R 1.3.1. Aggregate Load forecast error (not included in determining generation reliability requirements).</p>	<p>and the methods used to determine their impacts on the TRM values. Any component of uncertainty, other than those identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, shall benefit the interconnected transmission systems as a whole before they shall be permitted to be included in TRM calculations. The components of uncertainty identified in MOD-008-0_R 1.3.1 through MOD-008-0_R 1.3.7, if applied, shall be accounted for solely in TRM and not CBM.</p> <p>R 1.3.1. Aggregate Load forecast error (not included in determining generation reliability requirements).</p> <p>R 1.3.2. Load distribution error.</p>		

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	<p>R 1.3.2. Load distribution error.</p> <p>R 1.3.3. Variations in facility Loadings due to balancing of generation within a Balancing Authority Area.</p> <p>R 1.3.4. Forecast uncertainty in transmission system topology.</p> <p>R 1.3.5. Allowances for parallel path (loop flow) impacts.</p> <p>R 1.3.6. Allowances for simultaneous path interactions.</p> <p>R 1.3.7. Variations in generation dispatch.</p> <p>R 1.3.8. Short-term System Operator response (Operating Reserve actions not exceeding a 59-minute window).</p> <p>R 1.4. Describe the conditions, if any, under which TRM may be available to the market as Non-Firm Transmission</p>	<p>R 1.3.3. Variations in facility Loadings due to balancing of generation within a Balancing Authority Area.</p> <p>R 1.3.4. Forecast uncertainty in transmission system topology.</p> <p>R 1.3.5. Allowances for parallel path (loop flow) impacts.</p> <p>R 1.3.6. Allowances for simultaneous path interactions.</p> <p>R 1.3.7. Variations in generation dispatch.</p> <p>R 1.3.8. Short-term System Operator response (Operating Reserve actions not exceeding a 59-minute window).</p> <p>R 1.4. Describe the conditions, if any, under which TRM may be available to the market as Non-Firm Transmission Service.</p>		

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	<p>R 1.5. Service. Describe the formal process for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional TRM methodology.</p> <p>R2. The Regional Reliability Organization shall make its most recent version of the documentation of its TRM methodology available on a web site accessible by NERC, the Regional Reliability Organizations, and transmission users.</p>	<p>R 1.5. Describe the formal process for the Regional Reliability Organization to grant any variances to individual Transmission Service Providers from the Regional TRM methodology.</p>		
<p>MOD-009-0 Procedure for Verifying Transmission Reliability Margin Values</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review Transmission Reliability Margin (TRM) calculations and resulting values of member Transmission Service Providers to ensure they</p>	<p>R1. Each Regional Reliability Organization, in conjunction with its members, shall develop and implement a procedure to review Transmission Reliability Margin (TRM) calculations and resulting values of member Transmission Service Providers to ensure they</p>	<p>None.</p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>A SAR is not needed at this time as this standard is currently under revision and the revised standard will not have "fill-in-the-</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
Taylor	<p>comply with the Regional TRM methodology, and are periodically updated and available to transmission users. This procedure shall include the following four required elements:</p> <p>R 1.1. Indicate the frequency under which the verification review shall be implemented.</p> <p>R 1.2. Require review of the process by which TRM values are updated, and their frequency of update, to ensure that the most current TRM values are available to transmission users.</p> <p>R 1.3. Require review of the consistency of the Transmission Service Provider's TRM components with its published planning criteria. A TRM value is considered consistent with published planning</p>	<p>comply with the Regional TRM methodology, and are periodically updated and available to transmission users. This procedure shall include the following four required elements:</p> <p>R 1.1. Indicate the frequency under which the verification review shall be implemented.</p> <p>R 1.2. Require review of the process by which TRM values are updated, and their frequency of update, to ensure that the most current TRM values are available to transmission users.</p> <p>R 1.3. Require review of the consistency of the Transmission Service Provider's TRM components with its published planning criteria. A TRM value is considered consistent with published planning</p>		<p><i>blank" characteristics. Refer to MOD-001 above.</i></p>

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	<p>criteria if the same components that comprise TRM are also addressed in the planning criteria. The methodology used to determine and apply TRM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumption explained.</p> <p>R 1.4. Require TRM values to be periodically updated (at least prior to each season — winter, spring, summer, and fall), as necessary, and made available to the Regional Reliability Organizations, NERC, and transmission users.</p> <p>R2. The Regional Reliability Organization shall make</p>	<p>criteria if the same components that comprise TRM are also addressed in the planning criteria. The methodology used to determine and apply TRM does not have to involve the same mechanics as the planning process, but the same uncertainties must be considered and any simplifying assumption explained.</p> <p>R 1.4. Require TRM values to be periodically updated (at least prior to each season — winter, spring, summer, and fall), as necessary, and made available to the Regional Reliability Organizations, NERC, and transmission users.</p>		

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	<p>documentation of its Regional TRM review procedure available to NERC on request (within 30 calendar days).</p> <p>R3. The Regional Reliability Organization shall make documentation of the results of the most current implementation of its TRM review procedure available to NERC on request (within 30 calendar days).</p>			
<p>MOD-010-0</p> <p>Steady-State Data for Modeling and Simulation of the Interconnected Transmission System</p> <p>Nagle, Wilson, Myers</p>		<p>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</p>	<p><i>One SAR will be written to review Mod-010, MOD-011, Mod-012, and MOD-013 for modeling requirements and reporting.</i></p> <p><i>A revised MOD-010 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>This standard is directly related to MOD-011.</i></p> <p><i>The RRSWG should draft a SAR that coordinates the revision of this standard with the revision to MOD-</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		<p>Reliability Standard MOD-011-0_R1.</p> <p>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_R1. If no schedule exists, then these entities shall provide the data on request (30 calendar days).</p>		<p>011. MOD-011 needs to be written as a North American standard with requirements for each interconnection. Once MOD-011 is modified, the only changes needed to MOD-010 are the references to the appropriate requirements in MOD-011.</p> <p>Mak, Ken, and Steve submitted existing criteria intended to address standard to NERC.</p>
<p>MOD-011-0</p> <p>Maintenance and Distribution of Steady-State Data Requirements</p>	<p>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</p>		<p>One SAR will be written to review Mod-010, MOD-011, Mod-012, and MOD-013 for modeling requirements and reporting.</p> <p>A revised MOD-011 will become effective as a North</p>	<p>Priority: Medium</p> <p>In the long-term, this should be a North American Standard containing requirements which are</p>

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<p>and Reporting Procedures.</p> <p>Nagle, Wilson, Myers (by interconnection)</p>	<p>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:</p> <p>R 1.1. Bus (substation): name, nominal voltage, electrical demand supplied (consistent with the aggregated and dispersed substation demand data supplied per Reliability Standards MOD-016-0, MOD-017-0, and MOD-020-0), and location.</p>		<p><i>American standard.</i></p>	<p><i>interconnection-wide.</i></p> <p><i>MOD-010 and 011 are related. This is the MMWG work for the eastern interconnection. Revise NERC MOD-011 to clarify that the data reporting requirements must be uniform across each interconnection.</i></p> <p><i>The RRSWG should draft a SAR that coordinates the revision of this standard with the revision to MOD-010. MOD-011 needs to be written as a North American standard with requirements for each interconnection. Once MOD-011 is modified, the only changes needed to MOD-010 are the references to the appropriate requirements</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>R 1.2. Generating Units (including synchronous condensers, pumped storage, etc.): location, minimum and maximum Ratings (net Real and Reactive Power), regulated bus and voltage set point, and equipment status.</p> <p>R 1.3. AC Transmission Line or Circuit (overhead and underground): nominal voltage, impedance, line charging, Normal and Emergency Ratings (consistent with methodologies defined and Ratings supplied per Reliability Standard FAC-004-0 and FAC-005-0) equipment status, and metering locations.</p> <p>R 1.4. DC Transmission Line (overhead and underground): line</p>			<p><i>in MOD-011.</i></p> <p><i>This is a long-term project for NERC, WECC and ERCOT.</i></p> <p><i>Mak, Ken, and Steve submitted existing criteria intended to address standard.</i></p>

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	<p>parameters, Normal and Emergency Ratings, control parameters, rectifier data, and inverter data.</p> <p>R 1.5. Transformer (voltage and phase-shifting): nominal voltages of windings, impedance, tap ratios (voltage and/or phase angle or tap step size), regulated bus and voltage set point, Normal and Emergency Ratings (consistent with methodologies defined and Ratings supplied per Reliability Standard FAC-004-0 and FAC-005-0.), and equipment status.</p> <p>R 1.6. Reactive Compensation (shunt and series capacitors and reactors): nominal Ratings, impedance, percent</p>			

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	<p>compensation, connection point, and controller device.</p> <p>R 1.7. Interchange Schedules: Existing and future Interchange Schedules and/or assumptions.</p> <p>R2. The Regional Reliability Organizations within an Interconnection shall document their Interconnection's steady-state data requirements and reporting procedures, shall review those data requirements and reporting procedures (at least every five years), and shall make the data requirements and reporting procedures available on request (within five business days) to Regional Reliability Organizations, NERC, and all users of the interconnected transmission systems.</p>			
MOD-012-0 Dynamics		R1. The Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners	<i>One SAR will be written to review Mod-010, MOD-011, Mod-012, and MOD-013 for</i>	<i>Priority: Medium</i> <i>In the long-term, this</i>

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<p>Data for Modeling and Simulation of the Interconnected Transmission System</p> <p>Nagle, Wilson, Myers (by interconnection)</p>		<p>(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.</p> <p>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</p>	<p><i>modeling requirements and reporting.</i></p> <p><i>A revised MOD-012 will become effective as a North American standard.</i></p>	<p><i>should be a North American Standard.</i></p> <p><i>This standard is directly related to MOD-013.</i></p> <p><i>The RRSWG should draft a SAR that coordinates the revision of this standard with the revision to MOD-013. MOD-013 needs to be written as a North American standard with requirements for each interconnection. Once MOD-013 is modified, the only changes needed to MOD-012 are the references to the appropriate requirements in MOD-013.</i></p> <p><i>Mak, Ken, and Steve submitted existing criteria intended to address</i></p>

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		exists, then these entities shall provide data on request (30 calendar days).		<i>standard.</i>
<p>MOD-013-0</p> <p>Maintenance and Distribution of Dynamics Data Requirements and Reporting Procedures</p> <p>Nagle, Wilson, Myers (by interconnection)</p>	<p>R1. The Regional Reliability Organization, in coordination with its Transmission Owners, Transmission Planners, Generator Owners, and Resource Planners, shall develop comprehensive dynamics data requirements and reporting procedures needed to model and analyze the dynamic behavior or response of each of the NERC Interconnections: Eastern, Western, and ERCOT. Within an Interconnection, the Regional Reliability Organizations shall jointly coordinate on the development of the data requirements and reporting procedures for that Interconnection. Each set of Interconnection-wide dynamics data requirements shall include the following dynamics data requirements:</p>		<p><i>One SAR will be written to review Mod-010, MOD-011, Mod-012, and MOD-013 for modeling requirements and reporting.</i></p> <p><i>A revised MOD-013 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard containing requirements which are interconnection-wide.</i></p> <p><i>MOD-012 and 013 are related. This is the MMWG work for the eastern interconnection.</i></p> <p><i>Revise NERC MOD-013 to clarify that the data reporting requirements must be uniform across each interconnection.</i></p> <p><i>The RRSWG should draft</i></p>

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	<p>R 1.1. Unit-specific dynamics data shall be reported for generators and synchronous condensers (including, as appropriate to the model, items such as inertia constant, damping coefficient, saturation parameters, and direct and quadrature axes reactances and time constants), excitation systems, voltage regulators, turbine-governor systems, power system stabilizers, and other associated generation equipment.</p> <p>R 1.1.1. Estimated or typical manufacturer's dynamics data, based on units of similar design and characteristics, may be submitted when unit-</p>			<p><i>a SAR that coordinates the revision of this standard with the revision to MOD-012. MOD-013 needs to be written as a North American standard with requirements for each interconnection. Once MOD-013 is modified, the only changes needed to MOD-012 are the references to the appropriate requirements in MOD-013.</i></p> <p><i>This is a long-term project for NERC, WECC and ERCOT.</i></p> <p><i>Mak, Ken, and Steve submitted existing criteria intended to address standard.</i></p>

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	<p>specific dynamics data cannot be obtained. In no case shall other than unit-specific data be reported for generator units installed after 1990.</p> <p>R 1.1.2. The Interconnection-wide requirements shall specify unit size thresholds for permitting: The use of non-detailed vs. detailed models; The netting of small generating units with bus load, and; The combining of multiple generating units at one plant</p> <p>R 1.2. Device specific dynamics data shall be reported for dynamic devices, including, among others, static VAR controllers, high voltage direct current</p>			

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	<p>systems, flexible AC transmission systems, and static compensators.</p> <p>R 1.3. Dynamics data representing electrical demand characteristics as a function of frequency and voltage.</p> <p>R 1.4. Dynamics data shall be consistent with the reported steady-state (power flow) data supplied per Reliability Standard MOD-010-0_R 1.</p> <p>R2. The Regional Reliability Organization shall participate in the documentation of its Interconnection's data requirements and reporting procedures and, shall participate in the review of those data requirements and reporting procedures (at least every five years), and shall provide those data requirements and reporting procedures to Regional</p>			

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	Reliability Organizations, NERC, and all users of the Interconnected systems on request (within five business days).			
MOD-014-0 Development of Steady-State System Models Myers	<p>R1. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop and maintain a library of solved (converged) Interconnection-specific steady-state system models. The Interconnection-specific models shall include near- and longer-term planning horizons that are representative of system conditions for projected seasonal peak, minimum, and other appropriate system demand levels.</p> <p>R2. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop steady-state system models annually for selected study years, as</p>		None.	<p><i>This is a North American Standard.</i></p> <p><i>Not a fill-in-the-blank; it is a NERC requirement on the region. No need to revise to address any fill-in-the-blank issues.</i></p> <p><i>No action needed to be taken by the RRSWG.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>determined by the Regional Reliability Organizations within its Interconnection. The Regional Reliability Organization shall provide the most recent solved (converged) Interconnection-specific steady-state models to NERC in accordance with each Interconnection's schedule for submission.</p>			
<p>MOD-015-0</p> <p>Development of Dynamics System Models</p> <p>Myers</p>	<p>R1. The Regional Reliability Organization(s) within each Interconnection shall coordinate and jointly develop and maintain a library of initialized (with no Faults or system Disturbances) Interconnection-specific dynamics system models linked to the steady-state system models, as appropriate, of Reliability Standard MOD-014-0_R 1.</p> <p>R2. The Regional Reliability Organization(s) within each Interconnection shall develop Interconnection dynamics system models for their Interconnection</p>		<p>None.</p>	<p><i>This is a North American Standard.</i></p> <p><i>Same as MOD-014.</i></p> <p><i>No action needed to be taken by the RRSWG.</i></p>

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	<p>annually for selected study years as determined by the Regional Reliability Organization(s) within each Interconnection and shall provide the most recent initialized (approximately 25 seconds, no-fault) models to NERC in accordance with each Interconnection's schedule for submission.</p>			
<p>MOD-016-0</p> <p>Documentation of Data Reporting Requirements for Actual and Forecast Demands, Net Energy for Load, and Controllable Demand-Side Management</p>	<p>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.</p> <p>R 1.1. The aggregated and dispersed data submittal requirements shall ensure that consistent data is supplied for Reliability Standards</p>		<p><i>A SAR will be written to review MOD-016, MOD-017, and MOD-019 to develop uniform North American standards for reporting of actual and forecast demand and NEL data to be reported to RRO for system modeling and analysis.</i></p> <p><i>A revised MOD-016 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>The RRSWG should draft a SAR to develop a uniform North American standard for reporting of actual and forecast demand and NEL data to be reported to RRO for system modeling and analysis. Require entities</i></p>

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Huntley	<p>TPL-005-0, TPL-006-0, MOD-010-0, MOD-011-0, MOD-012-0, MOD-013-0, MOD-014-0, MOD-015-0, MOD-016, MOD-017-0, MOD-018-0, MOD-019-0, MOD-020-0, and MOD-021-0.</p> <p>R 1.1. The aggregated and dispersed data submittal requirements shall ensure that consistent data is supplied for Reliability Standards TPL-005-0, TPL-006-0, MOD-010-0, MOD-011-0, MOD-012-0, MOD-013-0, MOD-014-0, MOD-015-0, MOD-016, MOD-017-0, MOD-018-0, MOD-019-0, MOD-020-0, and MOD-021-0.</p> <p>R2. The documentation of the scope and details of the data reporting requirements shall be</p>			<p><i>within all regions to meet this standard.</i></p> <p><i>Standard should address quality and accuracy of the forecast; need to avoid double-counting, etc.</i></p> <p><i>MOD-016 is the NERC requirement on region; MOD-017 and 019 are the entity requirements to comply with region. Includes MOD-016 through MOD-021.</i></p>

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	available on request (five business days).			
<p>MOD-017-0</p> <p>Aggregated Actual and Forecast Demands and Net Energy for Load</p> <p>Huntley</p>		<p>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-016-0_R 1.</p> <p>R 1.1. Integrated hourly demands in megawatts (MW) for the prior year.</p> <p>R 1.2. Monthly and annual peak hour actual demands in MW and Net Energy for Load in gigawatthours (GWh) for the prior year.</p> <p>R 1.3. Monthly peak hour forecast demands in MW and Net Energy for Load</p>	<p><i>A SAR will be written to review MOD-016, MOD-017, and MOD-019 to develop uniform North American standards for reporting of actual and forecast demand and NEL data to be reported to RRO for system modeling and analysis.</i></p> <p><i>A revised MOD-017 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>The RRSWG should draft a SAR to review and upgrade the NERC standard. SAR to correct reference to Standard MOD-016 when MOD-016 is revised.</i></p>

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		<p>in GWh for the next two years.</p> <p>R 1.4. 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.</p>		
<p>MOD-019-0</p> <p>Reporting of Interruptible Demands and Direct Control Load Management</p> <p>Huntley</p>		<p>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, and Resource Planners) as specified by the documentation in Reliability</p>	<p><i>A SAR will be written to review MOD-016, MOD-017, and MOD-019 A SAR will be written to review MOD-016, MOD-017, and MOD-019 to develop uniform North American standards for reporting of actual and forecast demand and NEL data to be reported to RRO for system modeling and analysis.</i></p> <p><i>A revised MOD-019 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>The RRSWG should draft a SAR to correct reference to Standard MOD-016 when MOD-016 is revised.</i></p>

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		Standard MOD-016-0_R 1.		
<p>MOD-024-1</p> <p>Verification of Generator Gross and Net Real Power Capability</p> <p>Odom</p>	<p>R1. The Regional Reliability Organization shall establish and maintain procedures to address verification of generator gross and net Real Power capability. These procedures shall include the following:</p> <p>R 1.1. Generating unit exemption criteria including documentation of those units that are exempt from a portion or all of these procedures.</p> <p>R 1.2. Criteria for reporting generating unit auxiliary loads.</p> <p>R 1.3. Acceptable methods for model and data verification, including any applicable conditions under which the data should be verified. Such methods can include use of manufacturer data,</p>	<p>R3. The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting its gross and net Real Power generating capability per R1.</p>	<p>A SAR will be written to address MOD-024 and MOD-025 to transition to uniform North American standards.</p> <p>A revised MOD-024 will become effective as a North American standard.</p>	<p>Priority: Medium</p> <p>In the long-term, this should be a North American Standard.</p> <p>The RRSWG should draft a SAR that removes the implied fill-in-the-blank aspects (corrects references).</p> <p>This is a fill-in-the-blank. Long-term transition to a uniform North American standard.</p> <p>Regions are working on the regional requirements in response to MOD-024 and 025. Let that process go ahead. Let regions file their standards on the</p>

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	<p>commissioning data, performance tracking, and testing, etc.</p> <p>R 1.4. Periodicity and schedule of model and data verification and reporting.</p> <p>R 1.5. Information to be verified and reported:</p> <p>R 1.5.1. Seasonal gross and net Real Power generating capabilities.</p> <p>R 1.5.2. Real power requirements of auxiliary loads.</p> <p>R 1.5.3. Method of verification, including date and conditions.</p>			<p><i>existing schedule if they desire a regional standard.</i></p> <p><i>Long, long term is uniform North American standards for real and reactive power verification. Look at regional requirements and identify the best practice, commonalities and differences, and whether differences are needed for reliability.</i></p>
<p>MOD-025-1</p> <p>Verification of Generator Gross and Net Reactive Power Capability</p>	<p>R1. The Regional Reliability Organization shall establish and maintain procedures to address verification of generator gross and net Reactive Power capability. These procedures shall include the following:</p> <p>R 1.1. Generating unit exemption criteria</p>	<p>R3. The Generator Owner shall follow its Regional Reliability Organization's procedures for verifying and reporting its gross and net Reactive Power generating capability per R1.</p>	<p><i>A SAR will be written to address MOD-024 and MOD-025 to transition to uniform North American standards.</i></p> <p><i>A revised MOD-025 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>The RRSWG should draft a SAR that removes the</i></p>

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Odom	<p>including documentation of those units that are exempt from a portion or all of these procedures.</p> <p>R 1.2. Criteria for reporting generating unit auxiliary loads.</p> <p>R 1.3. Acceptable methods for model and data verification, including any applicable conditions under which the data should be verified. Such methods can include use of commissioning data, performance tracking, engineering analysis, testing, etc.</p> <p>R 1.4. Periodicity and schedule of model and data verification and reporting.</p> <p>R 1.5. Information to be reported:</p> <p>R 1.5.1. Verified maximum</p>			<p><i>implied fill-in-the-blank aspect (corrects references).</i></p> <p><i>Refer to MOD-024 above.</i></p>

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	<p>gross and net Reactive Power capability (both lagging and leading) at Seasonal Real Power generating capabilities as reported in accordance with Reliability Standard MOD-024 Requirement 1.5.1.</p> <p>R 1.5.2. Verified Reactive Power limitations, such as generator terminal voltage limitations, shorted rotor turns, etc.</p> <p>R 1.5.3. Verified Reactive Power of auxiliary loads.</p> <p>R 1.5.4. Method of verification, including date and conditions.</p>			
<p>PER-002-0</p> <p>Operating Personnel Training</p>		<p>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</p>	<p>None.</p>	<p><i>In the long-term, this should be a North American Standard. NERC is working on a new training standard. The inclusion of RRO in R3.1 is unnecessary; wait</i></p>

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Taylor		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.		<p><i>for the new standard to replace PER-002-0.</i></p> <p><i>Ensure development of new standard does not require regional differences.</i></p> <p><i>No action needed to be taken by the RRSWG.</i></p> <p><i>Regions can develop additional training requirements if they choose, but not required as fill-in-the-blank. This is not a fill-in-the-blank.</i></p> <p><i>Dave Taylor talked with John Theotonio, Marty Sidor, and Craig Lawrence concerning this standard. Craig is the NERC coordinator on this. Craig is to forward the</i></p>

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				<i>draft standard to the RRSWG for review when it is available.</i>
PRC-002-0 Define and Document Disturbance Monitoring Equipment Requirements. Zito	R1. The Regional Reliability Organization shall develop comprehensive requirements for the installation of disturbance monitoring equipment to ensure data is available to determine system performance and the causes of system disturbances. The comprehensive requirements shall include all of the following: R 1.1. Type of data recording capability (e.g., sequence-of-event, Fault recording, dynamic Disturbance recording). R 1.2. Equipment characteristics including but not limited to: R 1.2.1. Recording duration requirements. R 1.2.2. Time synchronization requirements. R 1.2.3. Data format		<i>Regions will begin process for developing a regional standard.</i> <i>Each region will finalize development of a regional standard in support of PRC-002.</i> <i>Regional standards in support of PRC-002 will become effective.</i>	<i>Priority: High</i> <i>In the long-term, this should be a Regional Reliability Standard.</i> <i>As written, it is a requirement for each RRO to develop a comprehensive set of requirements for DME and can be enforced that way.</i> <i>PRC-002 is directly related to PRC-018. PRC-018 requires the functional entities to comply with the requirements developed by each RRO. Both PRC-002 and PRC-018 are in the</i>

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	<p>requirements.</p> <p>R 1.2.4. Event triggering requirements</p> <p>R 1.3. Monitoring, recording, and reporting capabilities of the equipment.</p> <p>R 1.3.1. Voltage.</p> <p>R 1.3.2. Current.</p> <p>R 1.3.3. Frequency.</p> <p>R 1.3.4. MW and/or MVAR, as appropriate.</p> <p>R 1.4. Data retention capabilities (e.g., length of time data is to be available for retrieval).</p> <p>R 1.5. Regional coverage requirements (e.g., by voltage, geographic area, electric area or subarea).</p> <p>R 1.6. Installation requirements:</p> <p>R 1.6.1. Substations.</p> <p>R 1.6.2. Transmission lines.</p> <p>R 1.6.3. Generators.</p> <p>R 1.7. Responsibility for</p>			<p><i>final stages of being approved. Once approved, we will need to reference the new standards.</i></p> <p><i>Need regions to develop and submit regional standards. Long-term project. NERC standard requires region to have this done in 9 months from board adoption (from August 9). Regions need to do this as a regional standard, not a procedure or some other document.</i></p>

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	<p>maintenance and testing.</p> <p>R 1.8. Requirements for periodic (at least every five years) updating, review, and approval of the Regional requirements.</p> <p>R2. The Regional Reliability Organization shall provide its requirements for the installation of disturbance monitoring equipment to other Regional Reliability Organizations and NERC on request (30 calendar days).</p>			
<p>PRC-003-1</p> <p>Regional Procedure for Analysis of Misoperations of Transmission and Generation</p>	<p>R1. Each Regional Reliability Organization shall establish, document and maintain its procedures for, review, analysis, reporting and mitigation of transmission and generation Protection System Misoperations. These procedures shall include the following elements:</p> <p>R 1.1 The Protection Systems</p>		<p><i>A SAR will be written to review PRC-003 and PRC-004 together to identify the specific requirements of the functional entities.</i></p> <p><i>A revised PRC-003 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>This is a North American Standard as written which places requirements on the regions to develop a procedure and can be enforced on each region. However, PRC-004 requires functional entities</i></p>

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Protection Systems Zito	<p>to be reviewed and analyzed for Misoperations (due to their potential impact on BES reliability).</p> <p>R 1.2. Data reporting requirements (periodicity and format) for Misoperations.</p> <p>R 1.3. Process for review, analysis follow up, and documentation of Corrective Action Plans for Misoperations.</p> <p>R 1.4. Identification of the Regional Reliability Organization group responsible for the procedures and the process for approval of the procedures.</p> <p>R2. Each Regional Reliability Organization shall maintain and periodically update documentation of its procedures for review, analysis, reporting, and mitigation of transmission</p>			<p><i>to comply with the procedures the RROs develop. Craft a new PRC-003 as a North American standard containing the specific requirements for each functional entity.</i></p> <p><i>The RRSWG should draft a SAR to modify the current PRC-003 to include specific requirements for each functional entity. Each of the regional plans need to be reviewed to determine what should be included in the North American standard. The current PRC-003 defines requirements for RROs. The SAR should include revising PRC-004 to include proper references to the new PRC-003.</i></p>

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	<p>and generation Protection System Misoperations.</p> <p>R3. Each Regional Reliability Organization shall distribute procedures in Requirement 1 and any changes to those procedures, to the affected Transmission Owners, Distribution Providers that own transmission Protection Systems, and Generator Owners within 30 calendar days of approval of those procedures.</p>			
<p>PRC-004-1</p> <p>Analysis and Mitigation of Transmission and Generation Protection System Misoperations</p> <p>Zito</p>		<p>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.</p> <p>R2. The Generator Owner shall</p>	<p><i>A SAR will be written to review PRC-003 and PRC-004 together to identify the specific requirements of the functional entities.</i></p> <p><i>A revised PRC-004 will become effective as a North American standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>See PRC-003-1 above.</i></p> <p><i>The RRSWG should draft a SAR that coordinates the revision of this standard with the revision to standard PRC-003. PRC-003 needs to be written as</i></p>

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		<p>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.</p> <p>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.</p>		<p><i>a North American standard with requirements for each functional entity as appropriate. Once PRC-003 is modified, the only changes needed to PRC-004 are the references to the appropriate requirements in PRC-003.</i></p>
<p>PRC-006-0</p> <p>Development and</p>	<p>R1. Each Regional Reliability Organization shall develop, coordinate, and document an [Under-Frequency Load Shedding] program, which shall</p>		<p><i>Regions will begin process for developing a regional standard.</i></p> <p><i>Each region will finalize</i></p>	<p><i>Priority: High</i></p> <p><i>In the long-term, this should be a Regional</i></p>

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<p>Documentation of Regional Reliability Organizations' Underfrequency Load Shedding Programs</p> <p>Wilson</p>	<p>include the following:</p> <p>R 1.1. Requirements for coordination of UFLS programs within the subregions, Regional Reliability Organization and, where appropriate, among Regional Reliability Organizations.</p> <p>R 1.2. Design details shall include, but are not limited to:</p> <p>R 1.2.1. Frequency set points.</p> <p>R 1.2.2. Size of corresponding load shedding blocks (% of connected loads.)</p> <p>R 1.2.3. Intentional and total tripping time delays.</p> <p>R 1.2.4. Generation protection.</p> <p>R 1.2.5. Tie tripping schemes.</p> <p>R 1.2.6. Islanding schemes.</p> <p>R 1.2.7. Automatic load restoration schemes.</p> <p>R 1.2.8. Any other schemes that are part of or impact the UFLS programs.</p>		<p><i>development of a regional standard in support of PRC-006.</i></p> <p><i>Regional standards in support of PRC-006 will become effective.</i></p>	<p>Reliability Standard.</p> <p><i>Has to remain fill-in-the-blank. Need regional standards. Related PRC-007, PRC-008, and 009.</i></p> <p><i>This is a fill-in-the-blank standard going forward. Settings are specific to each interconnection and region.</i></p>

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	<p>R 1.3. A Regional Reliability Organization UFLS program database. This database shall be updated as specified in the Regional Reliability Organization program (but at least every five years) and shall include sufficient information to model the UFLS program in dynamic simulations of the interconnected transmission systems.</p> <p>R 1.4. Assessment and documentation of the effectiveness of the design and implementation of the Regional UFLS program. This assessment shall be conducted periodically and shall (at least every five years or as required by changes in system</p>			

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	<p>conditions) include, but not be limited to:</p> <p>R 1.4.1. A review of the frequency set points and timing, and</p> <p>R 1.4.2. Dynamic simulation of possible Disturbance that cause the Region or portions of the Region to experience the largest imbalance between Demand (Load) and generation.</p> <p>R2. The Regional Reliability Organization shall provide documentation of its UFLS program and its database information to NERC on request (within 30 calendar days).</p> <p>R3. The Regional Reliability Organization shall provide documentation of the assessment of its UFLS program to NERC on request (within 30 calendar days).</p>			
PRC-007-0		R1. The Transmission Owner and Distribution Provider, with a	<i>One SAR will be written to remove superfluous and/or</i>	<i>Priority: Quick and Easy</i>

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<p>Assuring Consistency of Entity Underfrequency Load Shedding Programs with Regional Reliability Organization's Underfrequency Load Shedding Program Requirements</p> <p>Wilson</p>		<p>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.</p> <p>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 UFLS program database.</p> <p>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</p>	<p><i>unnecessary language or make minor changes to wording for a number of standards and PRC-007 should be included in this work. SAR to change "program" to "standard".</i></p> <p><i>A revised PRC-007 will become effective as a North American standard.</i></p>	<p><i>In the long-term, this should be a North American Standard coordinated with PRC-006.</i></p> <p><i>The RRSWG should draft a SAR to revise the wording of this standard to clearly state that this standard refers back to the yet to be developed regional standard. (i.e., change 'program' to 'standard'.)</i></p> <p><i>In the interim regional procedures need converted to a standard to implement this.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		request (30 calendar days).		
<p>PRC-008-0</p> <p>Implementation and Documentation of Underfrequency Load Shedding Equipment Maintenance Program</p> <p>Taylor</p>		<p>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.</p> <p>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).</p>	<p>None.</p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>This is not a fill-in-the-blank. These NERC standards need to be reviewed and upgraded long-term. The NERC requirements are not sufficiently measurable to know if reliability objective is being met or not. Long-term SAR to review this standard.</i></p> <p><i>Once the regional standards for PRC-006 are developed, this standard is fine as written.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
<p>PRC-009-0</p> <p>Analysis and Documentation of Underfrequency Load Shedding Performance Following an Underfrequency Event</p> <p>Wilson</p>		<p>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.</p> <p>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:</p> <p>R 1.1. A description of the event including initiating conditions.</p> <p>R 1.2. A review of the UFLS set points and tripping times.</p> <p>R 1.3. A simulation of</p>	<p><i>One SAR will be written to remove superfluous and/or unnecessary language or make minor changes to wording for a number of standards and PRC-009 should be included in this work. SAR to change "program" to "standard".</i></p> <p><i>A revised PRC-009 will become effective as a North American standard.</i></p>	<p><i>Priority: Quick and Easy</i></p> <p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>See PRC-007</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		<p>the event. R 1.4. A summary of the findings.</p> <p>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 the analysis of the UFLS program to its Regional Reliability Organization and NERC on request 90 calendar days after the system event.</p>		
<p>PRC-012-0</p> <p>Special Protection System Review Procedure</p> <p>Deutsch</p>	<p>R1 Each Regional Reliability Organization with a Transmission Owner, Generator Owner, or Distribution Providers that uses or is planning to use an SPS shall have a documented Regional Reliability Organization SPS review procedure to ensure that SPSs comply with Regional criteria and NERC Reliability Standards. The Regional SPS</p>		<p><i>SAR will be written to review PRC-012, PRC-013 PRC-015, and PRC-016 together to properly reference regional standards (see notes of PRC-015 for options).</i></p> <p><i>Regions will begin process for developing a regional standard.</i></p>	<p><i>Priority: Medium</i></p> <p><i>In the long-term, this should be a Regional Reliability Standard coordinated with PRC-016.</i></p> <p><i>This is fill-in-the-blank related to PRC- 016.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>review procedure shall include:</p> <p>R 1.1. Description of the process for submitting a proposed SPS for Regional Reliability Organization review.</p> <p>R 1.2. Requirements to provide data that describes design, operation, and modeling of an SPS.</p> <p>R 1.3. Requirements to demonstrate that the SPS shall be designed so that a single SPS component failure, when the SPS was intended to operate, does not prevent the interconnected transmission system from meeting the performance requirements defined in Reliability Standards TPL-001-0, TPL-002-0, and TPL-003-0.</p> <p>R 1.4. Requirements to</p>		<p><i>Each region will finalize development of a regional standard in support of PRC-012.</i></p> <p><i>Regional standards in support of PRC-012 will become effective.</i></p>	<p><i>Justified as regional standard; network specific.</i></p> <p><i>The RRSWG should draft a SAR to remove R1.6 and capitalize "Misoperation" in the current R1.7 as "misoperation" has been added to the glossary of the standards manual. Also consider: R1 needs changed to state Regional Standard instead of Regional criteria (once they become standards).</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>demonstrate that the inadvertent operation of an SPS shall meet the same performance requirement (TPL-001-0, TPL-002-0, and TPL-003-0) as that required of the contingency for which it was designed, and not exceed TPL-003-0.</p> <p>R 1.5. Requirements to demonstrate the proposed SPS will coordinate with other protection and control systems and applicable Regional Reliability Organization Emergency procedures.</p> <p>R 1.6. Regional Reliability Organization definition of misoperation.</p> <p>R 1.7. Requirements for analysis and documentation of corrective action plans</p>			

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>for all SPS misoperations.</p> <p>R 1.8. Identification of the Regional Reliability Organization group responsible for the Regional Reliability Organization's review procedure and the process for Regional Reliability Organization approval of the procedure.</p> <p>R 1.9. Determination, as appropriate, of maintenance and testing requirements.</p> <p>R2. The Regional Reliability Organization shall provide affected Regional Reliability Organizations and NERC with documentation of its SPS review procedure on request (within 30 calendar days).</p>			
PRC-013-0	The Regional Reliability Organization that has a		SAR will be written to review PRC-012, PRC-013, PRC-015,	Priority: Medium

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
Special Protection System Database Huntley	<p>Transmission Owner, Generator Owner, or Distribution Provider with an SPS installed shall maintain an SPS database. The database shall include the following types of information:</p> <p>R 1.1. Design Objectives — Contingencies and system conditions for which the SPS was designed,</p> <p>R 1.2. Operation — The actions taken by the SPS in response to Disturbance conditions, and</p> <p>R 1.3. Modeling — Information on detection logic or relay settings that control operation of the SPS.</p> <p>R2. The Regional Reliability Organization shall provide to affected Regional Reliability Organization(s) and NERC documentation of its database or the information therein on request</p>		<p><i>and PRC-016 together to properly reference regional standards (see notes of PRC-015 for options).</i></p> <p><i>A revised PRC-013 will become effective as a North American standard.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>This is not a fill-in-the blank today. It is related to PRC-015. As long as the R1.1 to R1.3 requirements here are sufficient to meet the objective of R1 in PRC-015, we don't need additional regional specific criteria. Regions can develop additional criteria on their own initiative. We would need to revise PRC-015 as a quick fix to add the R1.1 to R1.3 criteria, so the standards are not interdependent. Very long-term we could come up with more uniform North American requirements.</i></p>

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	(within 30 calendar days).			
PRC-014-0 Special Protection System Assessment Huntley	R1. The Regional Reliability Organization shall assess the operation, coordination, and effectiveness of all [Special Protection Systems] installed in its Region at least once every five years for compliance with NERC Reliability Standards and Regional criteria. R2. The Regional Reliability Organization shall provide either a summary report or a detailed report of its assessment of the operation, coordination, and effectiveness of all SPSs installed in its Region to affected Regional Reliability Organizations or NERC on request (within 30 calendar days). R3. The documentation of the Regional Reliability Organization's SPS assessment shall include the following elements: R 3.1. Identification of group		None.	<i>This is a North American Standard.</i> <i>This is not a fill-in-the-blank.</i> <i>No action needed to be taken by the RRSWG.</i>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
	<p>conducting the assessment and the date the assessment was performed.</p> <p>R 3.2. Study years, system conditions, and contingencies analyzed in the technical studies on which the assessment is based and when those technical studies were performed.</p> <p>R 3.3. Identification of SPSs that were found not to comply with NERC standards and Regional Reliability Organization criteria.</p> <p>R 3.4. Discussion of any coordination problems found between a SPS and other protection and control systems.</p> <p>R 3.5. Provide corrective action plans for non-compliant SPSs.</p>			
PRC-015-0		R1. The Transmission Owner,	<i>SAR will be written to review</i>	<i>Priority: Medium</i>

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Huntley		<p>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_R1.</p> <p>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 procedures as defined in Reliability Standard PRC-012-0_R1 prior to being placed in service.</p> <p>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</p>	<p><i>PRC-012, PRC-013, PRC-015, and PRC-016 together to properly reference regional standards (see notes of PRC-015 for options).</i></p> <p><i>A revised PRC-015 will become effective as a North American standard.</i></p>	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>Tied to PRC-013.</i></p> <p><i>Medium to low priority.</i></p> <p><i>SAR should include elimination of R1.2 from PRC-012-0; revision of PRC-013-0, R1.1, 1.2, & 1.3 to include a specific list of items to be included in the RRO SPS database. The same list should either be added to PRC-015, R1.1. However, it may be cleaner to move PRC-015-0, R1.1 and the data portion of R1.3 to PRC-013.</i></p>

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		Regional Reliability Organization criteria to affected Regional Reliability Organizations and NERC on request (within 30 calendar days).		
PRC-016-0 Special Protection System Misoperations Deutsch		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. R2. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall take corrective actions to avoid future misoperations. R3. The Transmission Owner, Generator Owner, and Distribution Provider that owns an SPS shall provide documentation of the misoperation analyses and the	<i>SAR will be written to review PRC-012, PRC-013, PRC-015, and PRC-016 together to properly reference regional standards (see notes of PRC-015 for options).</i> <i>A revised PRC-016 will become effective as a North American standard.</i>	<i>Priority: Medium</i> <i>In the long-term, this should be a North American Standard.</i> <i>Tied to PRC-012.</i> <i>SAR is needed to cleanup verbiage. Parts can be North American in scope.</i>

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		corrective action plans to its Regional Reliability Organization and NERC on request (within 90 calendar days).		
PRC-018-0 Disturbance Monitoring Equipment Installation and Data Reporting Zito		<p>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:</p> <p>R1.1. The time associated with each sample or condition recorded by a DME device shall be synchronized to within 2 milliseconds of Coordinated Universal Time (UTC) or better. The time stamp cannot be greater than one millisecond from the time the condition reached the input device, measured with the local station's clock.</p> <p>R1.2. Recorded data from each Disturbance shall be retrievable for ten days.</p>	None.	<p><i>In the long-term, this should be a North American Standard.</i></p> <p><i>Tied to PRC-002-1 (see above).</i></p> <p><i>This standard is currently being voted on and as of July 6, 2006 was being re-circulated.</i></p> <p><i>In and of itself, this is not a regional standard but it references PRC-002-1 which is a fill-in-the-blank standard.</i></p> <p><i>SAR will be needed in the future to address changes</i></p>

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		<p>R2. The Transmission Owner and Generator Owner shall each install DMEs in accordance with its Regional Reliability Organization's installation requirements (Reliability Standard PRC-002 Requirements 1 through 3).</p> <p>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 Requirements 1.1, 2.1 and 3.1):</p> <p>R3.1. Type of DME (sequence of event recorder, fault recorder, or dynamic disturbance recorder).</p> <p>R3.2. Make and model of equipment.</p> <p>R3.3. Installation location.</p>		<p><i>in references to PRC-002 when that standard changes. Reference could be something like "Regional standard developed to support NERC Standard PRC-002.</i></p>

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		<p>R3.4. Operational status.</p> <p>R3.5. Date last tested.</p> <p>R3.6. Monitored elements, such as transmission circuit, bus section, etc.</p> <p>R3.7. Monitored devices, such as circuit breaker, disconnect status, alarms, etc.</p> <p>R3.8. Monitored electrical quantities, such as voltage, current, etc.</p> <p>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).</p> <p>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.</p>		

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		<p>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:</p> <p>R6.1. Maintenance and testing intervals and their basis.</p> <p>R6.2. Summary of maintenance and testing procedures.</p>		
<p>PRC-020-1</p> <p>Under-Voltage Load Shedding Program Database</p> <p>Zito</p>	<p>R1. The Regional Reliability Organization shall establish, maintain and annually update a database for UVLS programs implemented by entities within the Region to mitigate the risk of voltage collapse or voltage instability in the BES. This database shall include the following items:</p> <p>R 1.1. Owner and operator of the UVLS program.</p> <p>R 1.2. Size and location of customer load, or percent of connected load, to be interrupted.</p>		<p><i>None.</i></p>	<p><i>This is a North American Standard as written.</i></p> <p><i>GVZ- I would suggest the group consider that this is NOT a fill in the blank standard just something that the Region needs to do.</i></p> <p><i>No action needed to be taken by the RRSWG.</i></p>

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	<p>R 1.3. Corresponding voltage set points and overall scheme clearing times.</p> <p>R 1.4. Time delay from initiation to trip signal.</p> <p>R 1.5. Breaker operating times.</p> <p>R 1.6. 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.</p> <p>R2. The Regional Reliability Organization shall provide the information in its UVLS database to the Planning Authority, the Transmission Planner, or other Regional Reliability Organizations and to NERC within 30 calendar days of a request.</p>			
<p>PRC-021-1</p> <p>Under-Voltage Load</p>		<p>R1. Each Transmission Owner and Distribution Provider that owns a UVLS program to mitigate the risk of voltage collapse or voltage instability in</p>	<p><i>None.</i></p>	<p><i>This is a North American Standard as written.</i></p> <p><i>GVZ- In my view this is more of a short term item.</i></p>

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Shedding Program Data Zito		<p>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:</p> <p>R1.1. Size and location of customer load, or percent of connected load, to be interrupted.</p> <p>R1.2. Corresponding voltage set points and overall scheme clearing times.</p> <p>R1.3. Time delay from initiation to trip signal.</p> <p>R1.4. Breaker operating times.</p> <p>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.</p> <p>R2. Each Transmission Owner and Distribution Provider that owns a UVLS program shall provide its UVLS program data to</p>		<p><i>I would suggest the group consider that this is NOT a fill in the blank standard just something that the ERP is requiring an entity to do. No mention is being made to do something according to a RRO's standard or procedure just to provide it. It is important to leave it in the standard 'as is' to enable the collection and enforce compliance.</i></p> <p><i>No action needed to be taken by the RRSWG.</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
		the Regional Reliability Organization within 30 calendar days of a request.		
TOP-002-0 Normal Operations Planning Wilson		<p>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.</p> <p>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.</p>	<p><i>One SAR will be written to remove superfluous and/or unnecessary language or make minor changes to wording for a number of standards and TOP-002 should be included in this work. SAR to remove " in accordance with NERC, Regional Reliability Organization, subregional, and local reliability requirements" from R6 and " in accordance with filed tariffs and/or regional Total Transfer Capability and Available Transfer Capability calculation processes" from R12 .</i></p> <p><i>A revised TOP-002 will become effective as a North American standard.</i></p>	<p><i>Priority: Quick and Easy</i></p> <p><i>This is a North American Standard.</i></p> <p><i>Can be quick but is low priority</i></p> <p><i>FAC-010, FAC-011 and FAC-014(?) are out for comment until July 14 that will replace portions of this standard.</i></p> <p><i>Eliminate reference to the RRO which is basically redundant and applicable to any NERC standard, i.e. require additional checking or verification of NERC requirements.</i></p>

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				<p><i>TOP-002 is currently being modified by another STD.</i></p> <p><i>This standard needs reworded to remove "Regional Reliability Organization, subregional, and local reliability requirements" from R6.</i></p>
TOP-004-0 Myers		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.	None.	<p><i>This is a North American Standard.</i></p> <p><i>FAC-010, FAC-011 and FAC-014(?) are out for comment until July 14 that will replace portions of this standard which will remove this particular problem.</i></p> <p><i>Also, TOP-004-1 is out for comment through July 16 which removes the specific</i></p>

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				<p><i>reference.</i></p> <p><i>No action needed to be taken by the RRSWG provided that the present language is approved.</i></p>
<p>TPL-001-0</p> <p>System Performance Under Normal (No Contingency) Conditions (Category A)</p> <p>Millard</p>		<p>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).</p> <p>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</p>	<p><i>None.</i></p>	<p><i>This is a North American Standard.</i></p> <p><i>Quick fix.</i></p> <p><i>Superfluous references to RRO, do a NERC SAR to remove them and leave it up to region to add standards if they need them. Do TPL-001 through 4 together. Refer to other project to revise planning standards.</i></p> <p><i>A standards drafting team has been established to</i></p>

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		<p>respective NERC Regional Reliability Organization(s), as required by the Regional Reliability Organization.</p>		<p><i>modify TPL-001 thru TPL-004. Taylor to coordinate with Rich Schneider to ensure superfluous references are removed. No action needed to be taken by the RRSWG at this time.</i></p> <p><i>Ken suggested that "The specific elements selected (from each of the following categories) shall be acceptable to the associated Regional Reliability Organization(s)" be removed from R1.3. Also that "as required by the Regional Reliability Organization" be removed from R3.</i></p>
TPL-002-0 System		R1.3 Be supported by a current or past study and/or system simulation testing that addresses each of the following categories,,	None.	<i>This is a North American Standard.</i>

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<p>Performance Following Loss of a Single Bulk Electric System Element (Category B)</p> <p>Millard</p>		<p>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).</p> <p>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.</p>		<p><i>A standards drafting team has been established to modify TPL-001 thru TPL-004. Taylor to coordinate with Rich Schneider to ensure superfluous references are removed. No action needed to be taken by the RRSWG at this time.</i></p>
<p>TPL-003-0</p> <p>System Performance Following Loss of Two or More Bulk</p>		<p>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</p>	<p><i>None.</i></p>	<p><i>This is a North American Standard.</i></p> <p><i>A standards drafting team has been established to modify TPL-001 thru TPL-004. Taylor to coordinate</i></p>

Standard Number, Name, and Person Assigned to Evaluate	NERC Requirements for Regional Reliability Organizations to Develop Regional Criteria or Procedures (Enforceable)	Bulk Power System Owner, Operator, or User Requirements to Follow Regional Criteria/Procedures (Conditionally enforceable, excluding requirement to meet specific regional criteria or procedures)	Proposed Actions or Milestones	RRSWG notes and misc. information
Electric System Elements (Category C) Millard		Reliability Organization(s), as required by the Regional Reliability Organization.		<i>with Rich Schneider to ensure superfluous references are removed. No action needed to be taken by the RRSWG at this time.</i>
TPL-004-0 System Performance Following Extreme Events Resulting in the Loss of Two or More Bulk Electric System Elements (Category D) Millard		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.	None.	<i>This is a North American Standard.</i> <i>A standards drafting team has been established to modify TPL-001 thru TPL-004. Taylor to coordinate with Rich Schneider to ensure superfluous references are removed. No action needed to be taken by the RRSWG at this time.</i>
TPL-005-0	R1. Each Regional Reliability		None.	<i>This is a North American</i>

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Regional and Interregional Self-Assessment Reliability Reports Odom	<p>Organization shall annually conduct reliability assessments of its respective existing and planned Regional Bulk Electric System (generation and transmission facilities) for:</p> <p>R 1.1. Current year:</p> <p>R 1.1.1. Winter.</p> <p>R 1.1.2. Summer.</p> <p>R 1.1.3. Other system conditions as deemed appropriate by the Regional Reliability Organization.</p> <p>R 1.2. Near-term planning horizons (years one through five). Detailed assessments shall be conducted.</p> <p>R 1.3. Longer-term planning horizons (years six through ten). Assessment shall focus on the analysis of trends in resources and transmission Adequacy, other industry trends and developments, and reliability concerns.</p> <p>R 1.4. Inter-Regional reliability assessments to demonstrate</p>			<p><i>Standard.</i></p> <p><i>Not a fill in the blank.</i></p> <p><i>A SAR should be written to remove R1.1.3. The region can perform any study they so desire without NERC requiring them to do so.</i></p>

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	<p>that the performance of these systems is in compliance with NERC Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0, TPL-004-0 and respective Regional transmission and generation criteria. These assessments shall also identify key reliability issues and the risks and uncertainties affecting Adequacy and Security.</p> <p>R2. The Regional Reliability Organization shall provide its Regional and Inter-Regional seasonal, near-term, and longer-term reliability assessments to NERC on an annual basis.</p> <p>R3. The Regional Reliability Organization shall perform special reliability assessments as requested by NERC or the NERC Board of Trustees under their specific directions and criteria. Such assessments may include, but are not limited to:</p>			

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	R 3.1. Security assessments. R 3.2. Operational assessments. R 3.3. Evaluations of emergency response preparedness. R 3.4. Adequacy of fuel supply and hydro conditions. R 3.5. Reliability impacts of new or proposed environmental rules and regulations. R 3.6. Reliability impacts of new or proposed legislation that affects, has affected, or has the potential to affect the Adequacy of the interconnected Bulk Electric Systems in North America.			
TPL-006-0 Data From the Regional Reliability Organization Needed to Assess Reliability	R1. Each Regional Reliability Organization shall provide, as requested (seasonally, annually, or as otherwise specified) by NERC, system data, including past, existing, and future facility and Bulk Electric System data, reports, and system performance information, necessary to assess reliability and compliance with the NERC Reliability Standards		None.	<i>This is a North American Standard as written.</i> <i>Not a fill in the blank.</i> <i>No action needed to be taken by the RRSWG.</i>

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Taylor	<p>and the respective Regional planning criteria. The facility and Bulk Electric System data, reports, and system performance information shall include, but not be limited to, one or more of the following types of information as outlined below:</p> <p>R 1.1. Electric Demand and Net Energy for Load (actual and projected demands and Net Energy for Load, forecast methodologies, forecast assumptions and uncertainties, and treatment of Demand-Side Management.)</p> <p>R 1.2. Resource Adequacy and supporting information (Regional assessment reports, existing and planned resource data, resource availability and characteristics, and fuel types and requirements.)</p> <p>R 1.3. Demand-Side resources and their characteristics (program ratings, effects on annual system loads and load</p>			

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	<p>shapes, contractual arrangements, and program durations.)</p> <p>R 1.4. Supply-side resources and their characteristics (existing and planned generator units, Ratings, performance characteristics, fuel types and availability, and real and reactive capabilities.)</p> <p>R 1.5. Transmission system and supporting information (thermal, voltage, and Stability Limits, contingency analyses, system restoration, system modeling and data requirements, and protection systems.)</p> <p>R 1.6. System operations and supporting information (extreme weather impacts, Interchange Transactions, and Congestion impacts on the reliability of the interconnected Bulk Electric Systems.)</p> <p>R 1.7. Environmental and</p>			

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	regulatory issues and impacts (air and water quality issues, and impacts of existing, new, and proposed regulations and legislation.)			

Attachment 3
(RRSWG Roster)

Regional Reliability Standards Working Group

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